Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

Final Report
2009 – 2012

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Executive Summary

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

Executive Summary

Background

The addition of fresh fruits and vegetables to the Washington WIC food package in 2009 was a welcome change. It created a strong interest among WIC staff in developing new and creative ways to encourage fruit and vegetable consumption in WIC families.

The need for effective approaches to increase fruit and vegetable intake among WIC families was clear. Both in Washington and nationally studies showed that WIC participants were not consuming the recommended amount of fruits and vegetables.

Working with the Center for Public Health Nutrition (CPHN) at the University of Washington (UW), we organized this grant around a socio-ecological model. That model says changing health behavior is most effective when diverse stakeholders work together on multiple levels. We also wanted the grant to address the major determinants of food choice – cost, taste and convenience. We were interested in how WIC could impact the local food system to increase access to fruits and vegetables not only for WIC participants, but for the larger community.

Projects

We used a competitive process where WIC agencies proposed community partnership projects. We provided a webinar to coach the interested WIC coordinators how to strengthen their project applications. We chose the projects based on the strength of their:

- Needs assessment
- Objectives
- Partnerships
- Sustainability

Twenty-six agencies applied and 12 were funded. We matched the projects with non-project controls based on urbanicity, caseload and participant demographics.

Evaluation methods included surveying all WIC participants about their and their children's fruit and vegetable intake and surveying coordinators about their perception of staff efficacy in helping participants increase their fruit and vegetable intake. We conducted quarterly interviews with community partners as well as project staff. We evaluated the strength of the partnerships.

Results

For all WIC participants (not just those at project sites) there were significant increases in reported fruit and vegetable intake between baseline and follow-up.

When urbanicity was factored in, we found no significant changes in reported fruit and vegetable intake from baseline to follow-up for WIC participants in urban environments. However, reported intake for participants in rural areas was significant; that is more WIC participants

reported no fruit and vegetable intake at follow-up compared to baseline. Participants in rural areas also had significant decreases in those reporting frequency of three or more vegetables and fruits per day.

When we analyzed the project sites matched with control sites, most project sites showed no significant change in vegetable intake from baseline to follow-up. Projects 2 and 9 saw significant decreases in vegetable intake. Project 7 was the only site for which there was a significant increase in both reported fruit and vegetable intake from baseline to follow-up. The relative "success" of project 7 is likely due to the fact that more WIC participants were involved and the project ran year round, and not just during the growing season.

The quarter 1 through quarter 3 interviews with all the partners yielded 18 themes. Challenges included problems with the project logistics such as getting supplies, problems with project design, communication and lack of partner and management engagement. In one project community members flocked to the cooking demonstrations, but not WIC participants. In another, budget cuts closed the community college where the classes were scheduled to take place; but the partnership was strong and soon the local high school joined the effort. Key staff leaving and new staff starting happened in several locations; in some instances that meant the project faltered, in others, the new staff embraced the project and it soared.

The end-of-project quarterly interview questions were different than the process questions for quarters 1 through 3. These questions focused on impact, success and sustainability. Twenty-three themes emerged. They included participant's increased knowledge and skills about food, including gardening, cooking and new foods. Participants reported liking produce they had not tried before, and eating more of it. Many partners felt an important outcome was their new understanding of WIC as a public health program and not just a program that provides checks for food. They said that increasing the community awareness of nutrition, gardening and food access was an important positive outcome. This benefits WIC participants because any positive change to the food system in their communities has the potential to improve their access to healthy food. The interviewees reported a passion they felt for their projects in terms of food equity and social justice. They talked about how to move beyond telling participants what to do towards working side by side to get it done. Many saw this work as the tip of the iceberg on what they, as a community, can accomplish if they work together.

We assessed all coordinators' perception regarding local agency staff's ability to change fruit and vegetable consumption patterns among WIC participants. While most coordinators felt that WIC staff have the skills to promote fruits and vegetables and the ability to increase knowledge and self-efficacy among participants, fewer were confident that these actions will result in actual behavior change. Even fewer were confident that their participants can fully benefit from these WIC staff skills because of limited access to fruits and vegetables. We did not separate the responses from the project coordinators vs. all coordinators. If we had done so we feel we would have seen an increase in staff confidence about increasing access from the project coordinators.

We assessed the strengths of the partnerships' collaboration and found that, for nearly all success factors, scores improved from baseline to follow-up. This suggests that partnerships improved over the project period. By the end of the grant period, we identified 11 of 20 factors as strengths

and the remaining 9 factors as borderline. These scores suggest overall good partnership functioning across all projects. The highest scores were in the factors, "members see collaboration as in their self-interest" and "shared vision." This suggests that involvement in the partnership was consistent with the mission of the organizations and they agreed about the purpose of the work.

Ten of 12 projects planned to continue activities past the grant period through volunteer efforts, outside funding or WIC funding, where allowable.

Lessons Learned

1. Think creatively about whom can be a partner.
2. Provide up-front technical assistance to WIC staff on grant writing, project planning and evaluation.
3. Assume WIC participants' knowledge and skills will be across the spectrum. Be client-centered, let them tell you what they are interested in and need.
4. Expect staff turnover and plan for it.
5. Some projects need help building skills around leading meetings and managing projects, developing clear roles and expectations, and handling partnership conflicts.
6. Use existing data for evaluation when possible. If using new measurement tools, keep it simple, easy to administer, and workable for staff.
7. Flexibility is key; problem-solving mid-stream will be called for.

Applying Lessons Learned

1. Share project activities, successes and lessons learned through in-person contact or in webinars. Develop a tool kit and menu of partnership ideas.
2. Encourage WIC coordinators to work with local partners to explore how partnerships can enhance the effectiveness and reach of WIC's mission.

Policy considerations

1. Consider requiring WIC agencies to report about community partnerships to promote fresh fruit and vegetable access in the annual nutrition education plan.
2. Ask FNS to consider expanding allowable WIC costs to include activities in these projects.

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Chapter 1

Overview

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

Chapter 1 – Overview

Background

The addition of fruits and vegetables to the WIC food package in 2009 was a welcome change in Washington State. It created a strong interest among local WIC staff in developing new and creative ways to encourage fruit and vegetable consumption in WIC families.

Throughout Washington State and the rest of the country diverse stakeholders had been coming together to build local food systems that provide access to low cost, high quality food. These groups have been shaping public policy, improving coordination between existing programs, and starting new initiatives. Washington State has an active assortment of food system groups including city, county and regional food policy councils. In 2010 Governor Christine Gregoire issued an executive order "Strengthening Washington's Food Systems Through Policy and Collaboration," which brought together five state agencies to examine food policy, programs and issues.[1]

The need for effective approaches to increase fruit and vegetable intake among WIC families was clear. In Washington in 2006-07 only 20% of low-income families reported eating fruits and vegetables five times a day or more.[2] Washington State was not unique; in a national sample of WIC participants published in 2004, 41% of toddlers did not consume any fruit and 22% did not consume vegetables on the study day.[3]

The 2009 WIC food package changes made it easier for WIC families to purchase healthy foods [4, 5] and they are now consuming more healthy foods, including fruits and vegetables.[6] However, these studies show there are still barriers to eating the recommended amount of fruits and vegetables.

The core grant team organized this grant around a socio-ecological model that says changing health behavior is most effective when diverse stakeholders work together on multiple levels. The socio-ecological model recognizes the interwoven relationship that exists between the individual and their environment.

- While individuals are responsible for making decisions about what food they and their families eat, individual behavior is determined to a large extent by social environment, that is, community norms and values, regulations, and policies.

- Barriers to healthy behaviors are shared among the community as a whole. As these barriers are lowered or removed, behavior change becomes more achievable and sustainable.

The most effective approach leading to healthy behaviors is a combination of the efforts at all levels.

Figure 1.1: The Socio-Ecological Model

Based upon this model, WIC was already addressing increasing fruit and vegetable intake in this way:

- At the Individual level, WIC nutrition education is designed to impact knowledge, attitudes and beliefs about fruit and vegetable consumption.
- At the Interpersonal level, WIC addresses families' interests and concerns about feeding relationships, infant cues and family meals.
- At the Institutions level, the state WIC office and the local WIC agencies implemented the policies that interpret the federal regulations.
- At the Structures, Policies and Systems level, the 2009 WIC food package changes helped address fruits and vegetables and access.

This grant addressed individual, interpersonal, community and institution levels. The local projects required social networking, working with families, peers and associations, and addressing individual knowledge, attitudes and beliefs. Projects and activities often targeted more than one level of the socio-ecological model. Overall:

- At the community level the projects were focused on gardens, food banks and FM.

- At the interpersonal and individual levels the projects were focused on cooking demonstrations and classes, community cooking, family meals, tasting new foods and nutrition education.

The core grant team also wanted the grant to address the major determinants of food choice – cost, taste and convenience.[7] Projects focused on cost included those that provided free produce via gardens, Community Supported Agriculture (CSA) baskets, produce to food banks and discounts at farmers markets. Projects focused on taste included those with community cooking, cooking demonstrations and food sampling. Projects addressing convenience included those with gardens, CSA, food banks and bus passes.

This grant joined the fruit and vegetable promotion efforts and expertise of local WIC agencies with local enthusiasm around food systems. The overall purpose of the projects was to:

- develop new ways to promote fruits and vegetables for families
- establish systems that would sustainably increase access to fruits and vegetables in communities

Table 1.1 shows the grant logic model.

Table 1.1: Grant Logic Model

Inputs	Outputs	Short Term Outcomes	Medium Term Outcomes	Long Term Outcomes
DOH WIC* expertise & guidance USDA funding Local WIC agency time & experience Community partners time & experience CPHN** training & technical assistance (TA)	Innovative local projects to increase fruit and vegetables are developed Projects are implemented and evaluated Effective projects are shared	Local WIC staff have increased capacity to effectively promote fruits and vegetables Community partners have increased capacity to take advantage of WIC checks for fruits and vegetables	Increased fruit and vegetable intake by WIC participants Sustained partnerships between local WIC agencies and community partners	Healthier WIC families

*Washington State Department of Health, WIC Nutrition Program

**Center for Public Health Nutrition

Goals and Objectives

Goal I: Increase the effectiveness of nutrition education for fruits and vegetables in WIC.

- Objective A: By the end of the project, at least 20% of local WIC coordinators will report increased efficacy for promoting fruits and vegetables in WIC compared to baseline.
- Objective B: By the end of the evaluation period, at least 20% of individual WIC clients who participate directly in collaborative projects will report increased behavioral capacity, self-efficacy, intention, expectation and behaviors for fruits and vegetables.
- Objective C: By the beginning of the third year of the project, the consumption of fruits and vegetables by WIC clients served in the project communities will increase by 20% compared to control communities.

Goal II: Build the capacity of local WIC agencies to garner additional nutrition education resources by building sustainable partnerships with food systems groups.

- Objective A: By the end of the first year of the project at least 10 WIC agencies will have worked with community partners to develop innovative approaches to promoting fruits and vegetables in WIC.
- Objective B: By the end of the third year of the project at least 50% of WIC staff will perceive that they can apply at least one innovative approach used in the collaborative projects to their own WIC program.
- Objective C: By the end of the third year of the project, project WIC agencies will have each engaged at least two public health or food systems groups to create a long-term plan for sustaining collaborations to promote fruit and vegetable intake in WIC clinics and communities.

Advisory Committee

The core grant team selected a diverse Advisory Committee and held several meetings in 2009 and 2010. Members came from many different areas, including state and local government, nutrition and food organizations, retailers, food policy councils, higher education, and food and hunger advocates (Table 1.2). The role of the Advisory Committee was to:

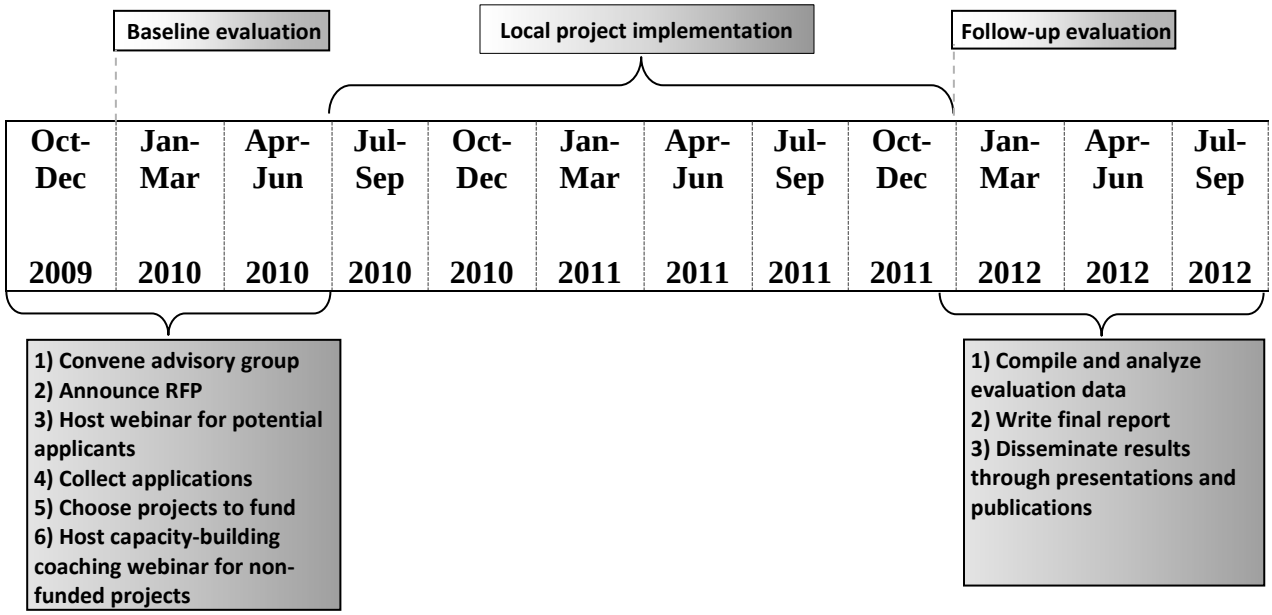
- identify potential local partners
- finalize the selection criteria for projects
- review project applications
- make recommendations for choosing projects
- assist with sharing project results and materials

Table 1.2: Advisory Committee Organizations and Roles	
Name of Organization	**Their Role/Perspective for the Grant**
Access to Healthy Foods Coalition	Food system advocates
Children's Alliance	Advocates for children, including food and hunger issues
Clark County Food Systems Council	Local food policy council
Nutrition First	Local WIC association
Washington Food Coalition	Emergency food system, anti-hunger advocates
Washington State Department of Agriculture	Small farmers, sustainable agriculture
Washington State Department of Community, Trade, and Economic Development	Emergency food distribution
Washington State Farmers Market Association	Farmers markets
Washington State Food and Nutrition Council	Food and nutrition advocates
Washington State Department of Health – Basic Food (SNAP) Nutrition Education Program	Supplemental Nutrition Assistance Program - Education
Washington State Department of Health – Maternity Support Services	Nutrition education and counseling for pregnant women on Medicaid
Washington State University Cooperative Extension	Nutrition education
State WIC office management	WIC retailers, WIC and Senior Farmers Market Nutrition Program
WithinReach	Health and nutrition advocacy, WIC outreach

Timeline

Figure 1.2 shows the timeline of the grant**.**

Figure 1.2: Timeline of the Grant



In December 2009, the state WIC office sent a memo announcing the project funding opportunity to all local WIC agencies and to potential community partners identified by the Advisory Committee. The project application deadline was March 10, 2010 (see Appendix 1, Project Application). The core grant team created a website (available at https://sites.google.com/a/uw.edu/wic-local-projects-grants/) to share information about the funding opportunity. The website served as a common area for posting materials, tools and details about the funding opportunity and later the selected projects.

In January 2010 we provided a webinar for all interested local WIC coordinators. We described the application process and timeline, gave examples of project ideas and community partners, and explained how we would evaluate applications. We knew from previous experience that many coordinators had little experience applying for grants or projects. We felt the more technical assistance we could give them early on the better would be not only their applications but their overall projects. In addition we saw this as a way of building their capacity and confidence to apply for other projects. We also believed that enhancing their skills in this way could increase both job satisfaction and broaden their career options.

An on-line evaluation showed that webinar participants agreed they would be able to:

- State the purpose and goals of the projects (100%)
- Take the steps needed to develop an application (97%)
- Make contact for additional help (93%)
- Find support materials on the project website (90%)

In March 2010 the core grant team selected the projects (see below). Implementation of the projects took 18-months, from July 1, 2010, through December 31, 2011. All projects completed:

- activities (see Chapter 2)
- evaluation measures (see Chapters 3 and 4)
- plan for sustainability (see Chapter 5)
- a final report (see Chapter 4)

January through September of 2012 we compiled the projects results and wrote the final report.

Project selection

In March 2010 we received 26 applications. We assigned two primary and two secondary reviewers in the Advisory Committee to score 6 to 7 applications. The entire Advisory Committee met to go through each application (see Appendix 2 and 3 for scoring process). Following were the steps taken:

1. Primary reviewers presented their application's strengths and weaknesses. They expressed any concerns and gave their scores.
2. Secondary reviewers added to what has already been said and gave their scores.
3. The entire Advisory Committee further discussed each application as needed.
4. Primary and secondary reviewers had the opportunity to change their scores at this point based on that discussion.
5. We recorded the total scores from primary and secondary reviewers.
6. The final score for an application was the average of all recorded scores.

After this meeting the core grant team met to make the final decisions. In addition to the Advisory Committee scores, the core team looked for diversity that took into account:

- geographical location
- urban and rural
- tribal and non-tribal
- health departments (HD) and private non-profit agencies (PNP)

We also considered the diversity of project approaches. We selected twelve projects to receive funding. See Chapter 2 for details about each of the projects.

The quality of the project applications was highly variable. Table 1.3 shows examples of strengths and weakness for each of the scoring areas for the 26 applications.

Table1.3: Strengths and Weaknesses of Project Applications

Section of Application	Strengths	Weaknesses
Knowing Your Community	• Conducted a community food assessment & used results to make case • Used WIC-specific and community data for statement of need • Cultural appropriateness of intervention described, includes Spanish classes and materials	• No evidence that WIC families want or need the project • No data used to describe community - unclear need
Objectives	• Measurable, achievable • Good job of identifying and addressing potential barriers • Clear plan that fits community needs • Variety of activities appealing to different audiences • Realistic timeframe for implementation	• No mention of how or how many WIC participants will be involved • Unclear timeline - not sure when the project runs • Impact low or unclear • Objectives not tied to fruits and vegetables • Unrealistic/over-ambitious objectives • Unrealistic measurement method (dietary recalls)
Section of Application	**Strengths**	**Weaknesses**
Partnerships	• New partnerships developed and roles clearly described • Specific commitments from partners outlined in letters of support • Strong partnerships with a wide variety of groups • Describes good use of a steering committee for duration of project	• No specific roles and commitments of partners • Project appears primarily focused on partner goals • No new partnerships developed • Partners do not appear to have been contacted yet or have knowledge of the project
Sustainability	• Strong evaluation plan • Uses faculty & college students • History of working together • Multi-faceted approach • Incorporates WIC participants into coalition participation & program planning	• No long-term funding plan • Lack of specifics regarding promoting visibility to future partners • No plan for sustaining partnerships • Aren't working with partners throughout project - just at

	• SNAP-Ed potential for future funding	beginning and at end
Capacity	• Well defined roles • Agency and partners are experienced in this work • Sufficient clinic staff support included in budget	• No clinic staff support budgeted • Part-time WIC clinic, didn't add sufficient support time in budget for project • Project includes education component but no partner described with teaching/education skills or commitment
Transferability	• Extensive plan for marketing & sharing results • Strong potential for project to transfer to other WIC agencies if it works	• No detail for promotion to partners • Specific nature of project - not likely transferable to other areas • No plan for sharing results
Budget	• Reasonable costs, tied directly to achievement of project goals • Well-documented and described expenses	• Budget not well described; missing details like hourly wages, overhead costs • Most of budget consists of huge equipment costs and insufficient project support • Questionable use of funds (contracting with an expensive grant writer)

To build project application skills among those applicants not chosen, the core grant team hosted a webinar in May 2010. We reviewed and discussed examples of low-scoring and high-scoring areas (protecting identities). We offered suggestions to improve application skills in order to increase their capacity to find other funding.

The core grant team offered technical assistance (TA) throughout the phases of each project. We individualized the TA and helped build agency capacity for facilitating groups, organizing work, and developing collaborative partnerships.

Evaluation

We used outcome measures to answer the research questions and process measures to monitor the progress of the projects. We reviewed and refined all measurement tools with the core grant team. Reflecting the multi-level approach of the overall grant, we collected data from individual WIC participants, all WIC coordinators, project coordinators who were not WIC coordinators

and community partners. Table 1.4 shows research questions and methods matched with the grant's goals and objectives.

Table 1.4: Research Questions and Methods

Objective	1. Research Questions	2. Research Measures
Goal I: Increase Effectiveness of Nutrition Education		
A. By the end of the grant at least 20% of local WIC coordinators will report increased levels of perceived efficacy for promoting fruits and vegetables in WIC compared to baseline.	• To what extent do all local WIC coordinators perceive that they can influence the fruit and vegetable consumption of WIC clients at baseline? • Do the perceptions of coordinators from agencies that have local collaborative projects change more than those agencies without local collaborative projects?	WIC Coordinator Survey (Appendix 4): Data collected from all local WIC agency coordinators at baseline and end of year three using web-based survey tool. Questions included Likert scale items about perceived efficacy to change WIC participant fruit and vegetable 1) self-efficacy, 2) expectations, and 3) behaviors.
B. By the end of the grant at least 20% of individual WIC clients who participate directly in the projects will report increased behavioral capacity, self-efficacy, intention, expectation and behaviors for fruits and vegetables.	• To what extent do WIC participants perceive that they can increase fruit and vegetable intake at baseline? • Are demographic characteristics associated with fruit and vegetable perceptions or consumption? • Are there differences in participant fruit and vegetable consumption between WIC agencies? • Are there changes in WIC participant behaviors and perceptions between baseline and the end of the local projects? • Are demographic characteristics associated with these changes?	Common Measures Client Survey (Appendix 5 and 6): Local project sites administered a common survey. Questions included basic demographic questions (gender, family size, race, ethnicity) and Likert scale items about behavioral capacity, self-efficacy, intention, expectation and behaviors for fruits and vegetables as developed by Havas and Bartholomew.[8,9]
C. By the beginning of the third year of the grant the consumption of fruits and vegetables by WIC participants served in the project agencies will increase by 20%	• Is there an overall impact on the fruit and vegetable consumption of WIC participants in project agencies compared to control agencies? • Are there specific characteristics of the project	CIMS Survey: Using fruit and vegetable screening questions added to CIMS, collected data from all participants over a one month period at baseline and one year later. Matched control agencies to project agencies based on urbanicity, ethnicity, and clinic

Table 1.4: Research Questions and Methods

Objective	1. Research Questions	2. Research Measures
compared to control agencies.	approaches that appear to be predictive of increases in participant fruit and vegetable consumption?	size.
Goal II: Build the capacity of local WIC agencies to garner additional nutrition education resources by building sustainable partnerships with food systems groups		
A. By the end of the first year of the grant at least 10 WIC agencies will have worked with local partners to develop innovative approaches to promoting fruits and vegetables in WIC.	• What types of food systems groups are interested in working with local WIC programs? • To what degree do the proposed projects appear designed to improve community empowerment, capacity, participation, relevance, access or critical consciousness?	Reviewed local project grant applications and prepared a summary table (see Chapter 2). Quarterly Interviews (Appendix 7): In-depth interviews provided information about the degree to which local project sites built local capacity, improved community empowerment, participation, relevance, access or built critical consciousness.
B. By the end of the third year of the project at least 50% of local WIC staff will perceive that they can apply at least one innovative approach used in the local collaborative projects to their own WIC program.	• To what extent will local WIC staff who were not involved in the local projects perceive that they can transfer the successful approaches to their own WIC settings? • Which approaches are most likely to be transferred?	The core grant teams had planned to complete a dissemination and training presentation at the annual Washington WIC conference. We could not complete this section due changes in the format and focus of the annual conference as described above.

Table 1.4: Research Questions and Methods

Objective	1. Research Questions	2. Research Measures
C. By the end of the third year of the project, local collaborative project WIC agencies will have each engaged at least two public health or food systems groups to create a long term plan for sustaining local collaborations to promote fruit and vegetable intake in WIC clinics and communities.	• To what extent do local project agency's annual nutrition education plans reflect partnerships with food systems or public health groups at baseline? At year three? • What are the characteristics of these plans? • To what extent have additional local WIC agencies adopted these approaches?	Nutrition Education Plans: Plans were collected and abstracted for 2010-2012. Prepared a summary table (see Table 4.14).

Sharing success

Sharing success was a key part of the project. In May 2011, the core grant team talked about the selected projects at a state WIC coordinator's meeting. Following a description of the overall grant, three WIC coordinators described their projects. The purpose of this panel was to give coordinators tangible examples of how to build partnerships with other community organizations. The presenters received positive feedback with 40 of 53 evaluations saying the presentation was "very useful" or "somewhat useful."

We planned a second presentation to showcase successful projects and encourage local WIC staff to try one of these innovative approaches in their communities. The core grant team hoped to include this at the annual WIC conferences. However due to budget constraints the state WIC office cancelled the conference. To help fill this void, the core grant team created "Local Project Spotlights." We posted these to the project website (https://sites.google.com/a/uw.edu/wic-local-projects-grants/). In addition this information was included in the coordinator's monthly email communication from the state WIC office.

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Chapter 2

Overview of the 12 WIC Community Partnership Projects

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

Washington State WIC Nutrition Program

UNIVERSITY OF WASHINGTON
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Chapter 2: Overview of 12 WIC Community Partnership Projects

The projects were geographically diverse with sites located throughout Washington State in urban and rural areas (Figure 2.1). Table 2.1 describes the 12 projects we funded. Local WIC agencies formed partnerships with a variety of local stakeholders. A number of partners were ones we would traditionally associate with food systems, e.g. Cooperative Extension, farmers markets, local farms and gardens and their related organizations. And a number of partners were not those we necessarily associate with food systems, e.g. universities, libraries, transit, senior housing, child care, Head Start, Boy Scouts and school districts.

The project "Spotlights" included in this chapter give additional details about each project. We shared these spotlights with local WIC coordinators around the state.

Figure 2.1: Locations of Projects

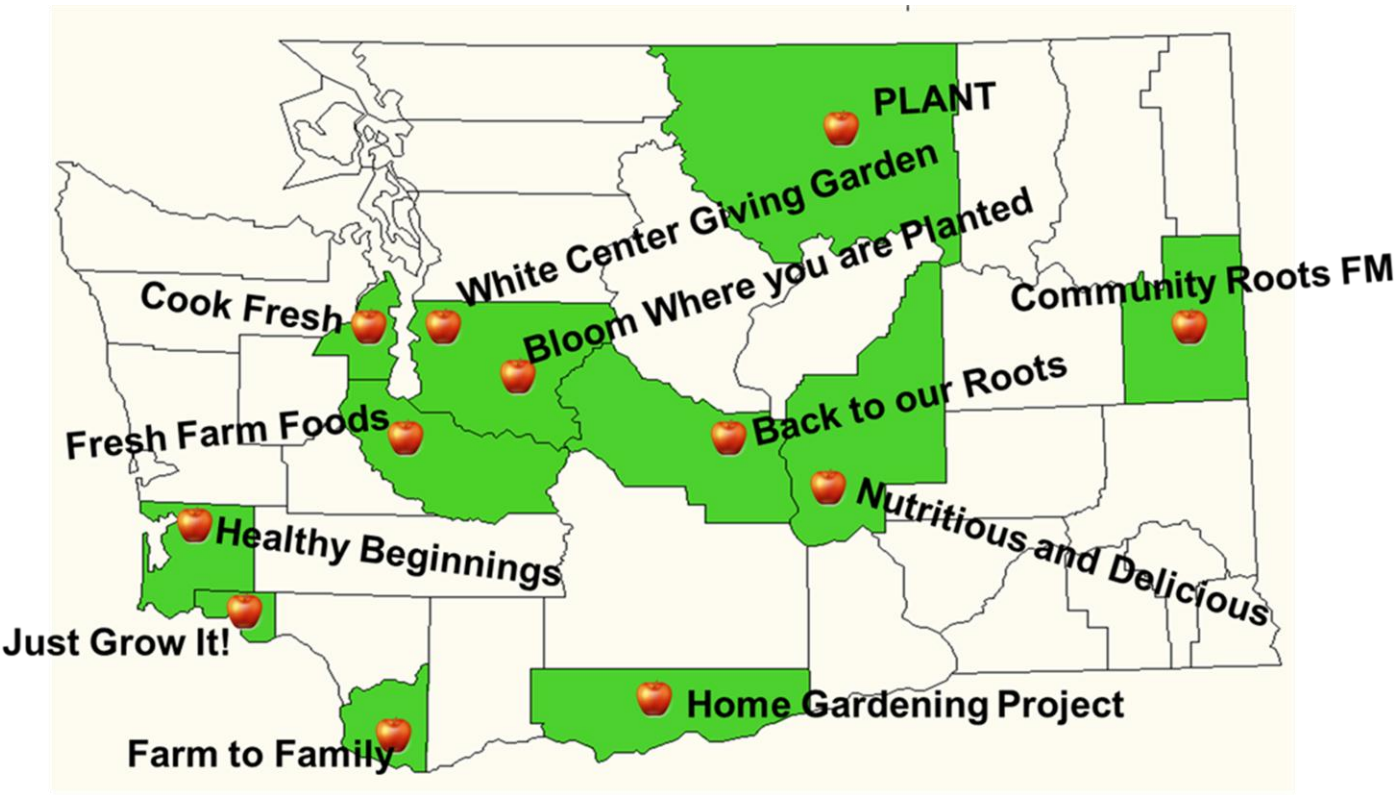


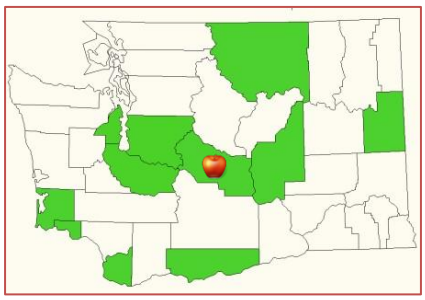
Table 2.1: Summary of Funded Community Partnership Projects

Project Name	Local WIC Agency	Geographic Location	Urban/Rural; Tribal; HD or PNP	Partners	Farmers Markets	CSA / Market Baskets	Individual Gardening	Community Gardening	Cooking Classes / Demos	Community Kitchens	Gleaning / Food Bank
Back to Our Roots	Community Health Care of Central Washington	Kittitas County (Central and Eastern WA)	Rural, PNP	1. Central Washington University 2. WSU Extension 3. Friends in Service to Humanity (FISH) Food Bank 4. Kittitas County Public Health 5. Back to Our Roots (organic gardening) 6. Roslyn Public Library 7. Friends of Roslyn Library			X		X		
People Learning Agriculture and Nutrition Together (PLANT)	Family Health Centers	Okanogan County (Eastern WA)	Rural, PNP	1. Okanogan County Community Action Council 2. Okanogan Valley Farmers Market	X		X				X
Fresh Farm Foods	Franciscan Health Group	Pierce County (Western WA)	Urban, PNP	1. Tacoma Farmers Market 2. Metro Parks 3. Pierce Transit	X						

Project Name	Local WIC Agency	Geographic Location	Urban/Rural; Tribal; HD or PNP	Partners	Farmers Markets	CSA / Market Baskets	Individual Gardening	Community Gardening	Cooking Classes / Demos	Community Kitchens	Gleaning / Food Bank
Home Gardening Project	Klickitat County Health Department	Klickitat County (South-western WA)	Rural, HD	1. Gorge Grown Food Network 2. Mid-Columbia Children's Council, Inc. 3. WSU Extension			X				
Delicious and Nutritious	Mattawa Community Medical Clinic	Grant County (Eastern WA)	Rural, PNP	1. Big Bend College 2. Mattawa Food Bank 3. Wahluke School District 4. Mattawa IGA Store					X		
Healthy Beginnings	Pacific County Health and Human Services	Pacific County (South-western WA)	Rural, HD	1. WSU Extension 2. Green Angel Gardens			X	X			

Project Name	Local WIC Agency	Geographic Location	Urban/Rural; Tribal; HD or PNP	Partners	Farmers Markets	CSA / Market Baskets	Individual Gardening	Community Gardening	Cooking Classes / Demos	Community Kitchens	Gleaning / Food Bank
Farm to Family	Sea Mar Community Health Centers Vancouver	Clark County (South-western WA)	Urban, PNP	1. WSU Extension 2. Four C's Produce 3. Vancouver Farmers Market 4. Battleground Farmers Market 5. Camas Farmers Market 6. Diane's Produce Market 7. Salmon Creek Farmers Market 8. Garden Delights 9. Storytree Farmers Market 10. Gateway Produce	X	X			X		

Project Name	Local WIC Agency	Geographic Location	Urban/Rural; Tribal; HD or PNP	Partners	Farmers Markets	CSA / Market Baskets	Individual Gardening	Community Gardening	Cooking Classes / Demos	Community Kitchens	Gleaning / Food Bank
Bloom Where You Are Planted	Public Health Seattle King County – SeaTac Health Point	King County (Western WA)	Urban, HD	1. Lutheran Family Services (Claudia) 2. Angle Lake Senior Housing 3. Easter Seals Child Care & Head Start				X	X		
White Center Giving Garden	Public Health Seattle King County – White Center	King County (Western WA)	Urban, HD	1. White Center Food Bank 2. Community Harvest of Southwest Seattle 3. Boy Scout Troop #375					X		X
Community Roots Farmers Market	Spokane Regional Health District	Spokane County (Eastern WA)	Urban, HD	1. p.e.a.c.h. Farm/Urban Abundance 2. WSU Extension	X				X		
Cook Fresh	Suquamish Tribe	Kitsap County (Western WA)	Rural, Tribal	1. Persephone Farms		X			X		
Just Grow It	Wahkiakum County Health and Human Services	Wahkiakum (South-Western WA)	Rural, HD	1. WSU Extension 2. Town of Cathlamet 3. Wahkiakum School District				X			



Back To Our Roots
Community Health of Central Washington WIC Program

Purpose: To increase skills and knowledge around cooking, nutrition, gardening, and meal preparation for WIC participants, food bank clients and other community members so that more people consume the recommended amount of fruits and vegetables.

Project Components:

Cooking and Meal Preparation Classes in Ellensburg

- Taught by Central Washington University (CWU) Nutrition Science students in the FISH Food Bank kitchen in Ellensburg.
- Classes focused on easy, inexpensive, and nutritious cooking and used WIC-approved foods and ingredients from the food bank.

Community Kitchens

- Participants come together in the FISH food bank kitchen in Ellensburg to prepare an entire meal in bulk.
- Participants divide and take home several portions of the meal for sharing with family members and easy reheating at home.
- Participants develop cooking skills and learn about nutrition while preparing the meal.

Food and Gardening Classes in Upper Kittitas County

- Cooking and gardening classes taught in a variety of locations in Cle Elum and Roslyn.
- Cooking classes focused on simple meal preparation using seasonal vegetables.

Community: Kittitas County is a rural county in central Washington. Ellensburg, the largest city in Kittitas County, is the home of Central Washington University. According to recent survey data, Kittitas County adult and youth fruit and vegetable intake is lower than both the state and national averages. The local Food Access Coalition has identified the need for nutrition education services; anecdotal reports indicate that food bank clients are uncertain how to prepare fresh produce. Many WIC participants access the food bank regularly.

Partners	Role
Kittitas County Public Health Department	Convened partners; assisted with grant writing, provided promotional support.
FISH Food Bank	Provided kitchen space for classes and community kitchens; recruited food bank clients.
Central Washington University	Community engaged faculty developed and implemented cooking classes and demonstrations as service learning classes and worked with graduate and undergraduate students to plan, build awareness around, and implement the community kitchen, as well as introduce innovative ways of increasing fruits and vegetables in the diet.
Community Member Frank Schuchman	Teach and coordinate upper Kittitas County cooking and gardening classes.
Roslyn Public Library	Provided space for classes in upper Kittitas County.
WSU Extension	Provided meeting space and Master Gardener volunteers.

Evaluation:

- Instructors gave cooking class participants a pre and post survey about actual and intended fruit and vegetable intake.
- Community kitchen participants completed pre and post surveys about nutrition, cooking skills and intensions, and social support and confidence. Participants were also asked to share ideas for improving the community kitchen process and to make recipe suggestions.

Outcomes:

- Participants reported significant increase in their ability to consume fruits and vegetables. This was more likely if they attended 4 or more of the classes.
- 17 community kitchen classes were held at the food bank using fresh produce.
- The lack of WIC participants in the 64 cooking and meal preparation classes and the community kitchens means more work was needed with partners around project goals.
- Agency WIC coordinator change mid-project was very difficult.
- New and exciting relationships exist between WIC and community partners.

Lessons Learned:

- There is community interest in learning about nutrition and cooking.
- Because of WIC staff turnover, two important project partners didn't feel a strong connection with WIC. Partnership meetings didn't take place and goals weren't well understood. The focus of the work shifted from WIC participants to other low income families.
- The community partners were diverse and participation in the classes was good. WIC participants would have engaged in the classes if project partners had met early and regularly to set goals.

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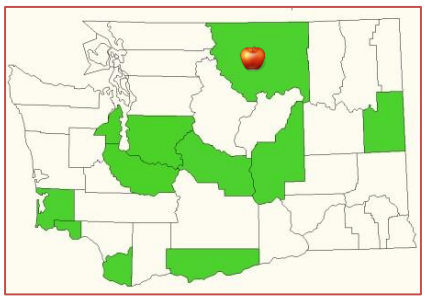


People Learning Agriculture and Nutrition Together (PLANT) – Family Health Centers, Okanogan

Purpose: To build gardens, teach simple gardening techniques, and glean fresh produce for Okanogan County's WIC participants so that their fruit and vegetables consumption is increased.

Project Components:

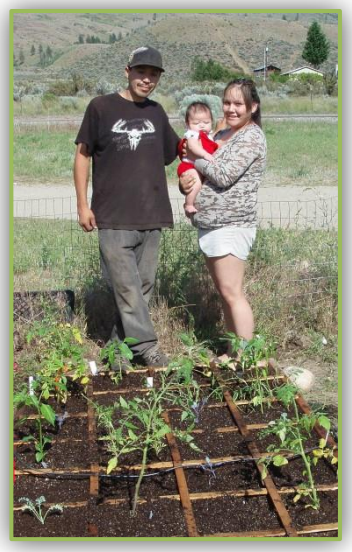
- Install garden beds at WIC participants' homes
- Provide gardening classes to new garden owners
- Assign each new garden owner an experienced garden mentor for personal support
- Gleaning from local farms for donation to food bank

Partners	Role
Family Health Center's WIC Agency	Advertising/reaching out to clients; pre/post project surveys to WIC participants; budget oversight; DOH/UW liaison; administering of funds; attend quarterly partnership meetings
Okanogan County Community Action Council	Housing and guidance of project coordinator; advertising/reaching out to clients; pre/post project surveys; attend/provide location for quarterly partnership meetings, orientations, and other meetings
Okanogan Valley Farmers Market	Provide location for gardening workshops, provide location for outreach to farmers and volunteers, attend quarterly partnership meetings

Community: Okanogan County is a primarily rural county with a population of 40,000 people. Access to fresh fruits and vegetables is limited because the county has only 9 towns with grocery stores and 5 farmers markets. Okanogan County has the largest land area of any county in Washington State.

Evaluation:

- New WIC gardeners survey – measure fruit and vegetable intake; pre-test given before garden beds are built and post-test given at end of gardening season
- Letters from new WIC gardeners committing to grow a garden in 2012
- Weigh produce gleaned before it is donated to the food bank
    - Almost 33,000 pounds of produce gleaned as of September 2011
- WIC and food bank client survey – measure fruit and vegetable intake; pre-test conducted before gleaning, post-test conducted after gleaning season ended
- Letters of support for gleaning project from local farmers



Outcomes:

- The 10 WIC participants who received gardens reported increases of fruit and vegetables by 2.9 servings per day.
- Success of the garden was best when participants chose what to plant.
- 80% of WIC garden participants will continue gardening and some will expand.
- Produce gleaned from farms to food banks: 52,986 pounds. Many WIC participants use the food bank.
- Gleaning from farmers required farmer input and had good participation from WIC participants and others.

Lessons Learned:

- Align activities with long-term vision for food security in community.
- Connection between garden mentors and new gardeners is key – new gardeners come to understand that experienced gardeners have the same challenges with pests, weather, etc.
- Garden mentorship took less time than expected by garden mentors.
- Getting permission for garden at rental units was less difficult than expected.

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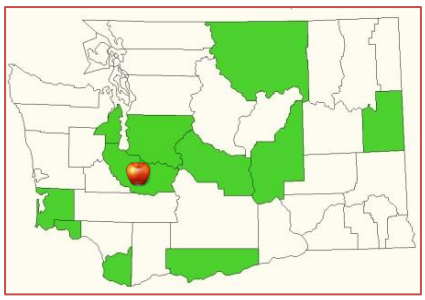
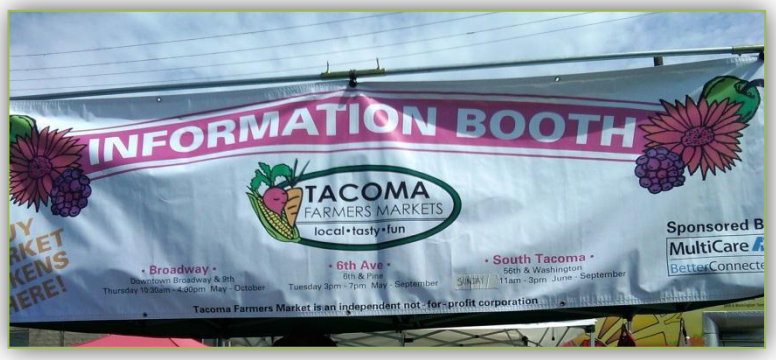


Fresh Farm Foods
Franciscan Medical Group

Purpose: To educate WIC participants and all low-income residents of South Tacoma, Lakewood, Parkland, and surrounding communities about healthy eating and to increase WIC participant access to fresh fruits and vegetables.

Project Components:

- Created colorful marketing materials to encourage WIC participants to visit the new South Tacoma Farmers Market. Materials included brochures, maps with market locations, and bus routes and schedules.
- Created a video about healthy eating, farmers markets, and the Farmers Market Nutrition Program (FMNP). Franciscan Medical Group WIC showed the video in the lobby during the farmers market season. The video is available at http://www.youtube.com/watch?v=u4_qSJevDy8
- Encouraged farmers market attendance by providing fruit and vegetable farmers market coupons, a free round-trip Pierce Transit bus pass, and a coupon for a free vegetable start to plant at home to WIC participants.
- WIC FMNP checks were distributed at the new South Tacoma Farmers Market for the first time in 2010.
- Invited WIC participants to attend "Farmers Market Chef Demos" to learn how to prepare fruits and vegetables from the market.
- The South Tacoma Farmers Market increased activities for children at the market, including face painting and family-focused cooking demonstrations.



Community: It is difficult to access fresh fruits and vegetables in South Tacoma. This neighborhood does not have a grocery store, and it is 10 miles to the closest grocery store. WIC participants tell staff that they purchase groceries at convenience stores because these stores are more accessible. Much of South Tacoma's population lives in poverty with 15% of all households earning less than $15,000 per year. South Tacoma also has high rates of obesity and other chronic diseases.

Evaluation:

- Tacoma Farmers Markets tallied redemption of Franciscan Medical Group's FMNP checks.
- FMNP check redemption rate.

Outcomes:

- FMNP check redemption was less successful at the new, smaller farmers market than at the larger market used in previous years.
- The project promoted the farmers market for WIC participants – attendance was very good and visibility of WIC in the community increased.
- Local WIC staff gained knowledge about how to do community outreach more successfully.

Lessons Learned:

- Good communication between the WIC clinic and the farmers market is essential.
- Incentives encourage WIC families to shop at the farmers market.
- Focusing on marketing of FMNP and education events helped the clinic think about marketing regular WIC services and broaden their reach into the community.

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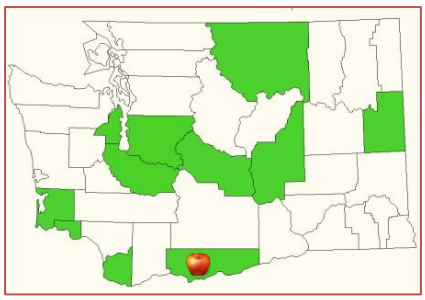

Home Gardening Project
Klickitat County Health Department

Purpose: To increase gardening experience, self-sufficiently, and access to fresh produce for WIC families so that they can eat more fruits and vegetables.

Project Components:

- Installed raised-bed gardens at the homes of 10 WIC families.
- Worked with families to get landlord approval for installing garden beds.
- Provided supplies to start and maintain garden beds.
- Matched WIC participants with experienced garden mentors. Mentors volunteered their time and were recruited with the help of community partner, Gorge Grown.
- WIC participants and garden mentors attended classes together to increase their gardening knowledge and skills and to learn the square-foot gardening method.
- A vegetable start exchange kicked off the growing season.

Community: Klickitat County is a rural county with a population of about 20,000. In 2008, the Children's Alliance identified Klickitat County as the 4th most food insecure county in Washington. In 2009, the Klickitat County Health Department (KCHD) partnered with Gorge Grown, a local non-profit, and WSU Extension to conduct a community food assessment. Assessment results showed that the high cost of food makes it difficult for many county residents to get the food they need, and families without gardens are more likely than families with gardens to eat fewer fruits and vegetables and skip a meal because food is scarce.

Evaluation:

- Pre and post surveys of participants' gardening and nutrition knowledge at the start and end of the gardening classes.
- Photo documentation of garden progress.

Outcomes:

- Garden participants reported increased knowledge of home gardening, nutrition knowledge and fruit and vegetable preference on pre- and post-surveys.
- Success depended on good relationships between gardeners and garden mentors.

Lessons Learned:

- Classes allow gardeners and garden mentors to build a relationship with one another.
- Through interaction with garden mentors, beginning gardeners learn that experienced gardeners have the same challenges with weather, pests, and weeds. This understanding decreases frustration for new gardeners.
- When WIC participants and garden mentors are located close to each other, they stay in closer contact through the growing season and their relationship grows.
- Maintaining close contact with both WIC participants and garden mentors helps ensure productive and successful gardens.

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Delicious and Nutritious - Mattawa

Purpose: To increase the effectiveness of nutrition education about fruits and vegetables for local WIC participants by partnering with the Big Bend College Esperanza EvenStart project so that WIC participants can attain knowledge and skills to prepare healthy family
meals that include locally grown fruits and vegetables.

Project Components:

- 90-minute classes, integrated into existing Esperanza EvenStart Literacy Program.
- Invitations to WIC participants who are not Esperanza participants, as well as Esperanza participants.
- 6-class blocks scheduled according to planting and harvest seasons.
- Potluck graduation ceremony following each group of 6 classes.

Partners	Role
Mattawa Community Medical Clinic WIC	Teach nutrition classes; create bulletin boards and handouts to reinforce monthly nutrition messages from classes. Mattawa Community Medical Clinic provides Ameri-corps volunteer to help with project.
Big Bend College Esperanza EvenStart Literacy Program	Provide classroom and kitchen for cooking demonstrations; computer lab for students to find and analyze recipes, plan meals and menus; allow integration of nutrition and cooking classes into literacy curriculum; provide Esperanza instructors to assist students and provide interpretation if needed; maintain time and attendance records.
The Mattawa Food Bank	Provide featured foods of the month to use in cooking demonstrations; provide nutrition information at food bank to reinforce class messages.
Mattawa IGA Market	Allow grocery store tours for class participants.
The Wahluke School District	Provide multi-purpose room and cafeteria for use during the graduation potluck celebrations.

Community: Mattawa is a rural farming community in Grant County, Washington with a population of 4,437. According to the City of Mattawa, the community is predominately Latino with very few English speakers. The majority of Mattawa WIC families (97.1%) report Hispanic ethnicity

Evaluation:

- Participant survey – given at the end of each block of classes; includes all cooking demonstrations and recipes given and asks participants to circle those tried at home and their family's reaction.
- Pictorial pre/post survey of fruit and vegetable intake – given at beginning and end of each block of classes.

Outcomes:

- All WIC participants surveyed said they tried at least one recipe at home.
- All recipes taught in class were tried by at least one participant.
- Participants experienced unfamiliar foods.
- A total of 75 WIC participants took part in the project by attending at least one of the sessions. A total of 35 recipes were demonstrated and prepared.
- Most popular recipes were those related to the WIC participant's culture.

Lessons Learned

- Be flexible in the face of change – can often find solution to problem among community partners
- Maintain strong local partnerships – working with partners across projects helps solidify relationships
- Keep the vision – across projects, vision is always healthy eating
- Make the project visible – can help forge new partnership, overcome challenges, and drive interest

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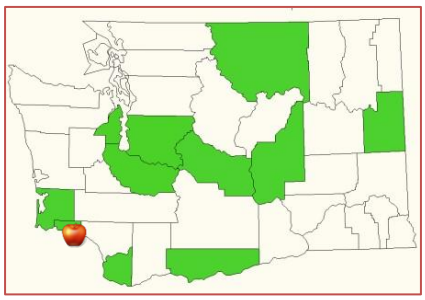

Healthy Beginnings Project
Pacific County Health and Human Services WIC Program

Purpose: To increase food system partnerships and provide resources and education so WIC families can increase access to and consume more fruits and vegetables.

Project Components:

- Outreach and technical assistance to farmers and farmers markets to become authorized to accept WIC Farmers Market Nutrition Program (FMNP) checks.
- Promote newly authorized farm stands and farmers markets.
- Provide gardening kits to WIC participants. Kits contain plant starts, seeds, container, and soil. WIC staff provides one-on-one gardening education when gardening kits are given.
- Gardening and food preservation classes taught by WSU Extension educator.
- Create community gardens at multiple sites around county.

Partners	Role
Pacific County Health and Human Services, WIC Program	Recruit and educate WIC families; distribute gardening kits and plant starts to WIC participants; provide technical assistance regarding WIC rules and regulations.
Pacific County Health and Human Services, Healthy Communities and Healthy Strides projects	Provide supervision to the project coordinator (AmeriCorp volunteer) and assist with program promotion and networking. The Healthy Strides program will assist by incorporating lessons into the current curriculum presented at local pre-school through 2nd grade at local schools.
WSU Extension, Pacific County	Provide classes about gardening, and food preservation to WIC participants.
Green Angel Farms	Assist with creation of gardening kits, including providing vegetable starts; provide consultation in selection of appropriate vegetables and growing practices for Pacific County climate.

Community: Pacific County is located in the southwestern part of Washington State and has a population of 20,920. As a rural county, only 9% of the county's residents live within one-half mile of a healthy food retailer, and there are only five WIC retailers county-wide. Prior to the Healthy Beginnings project, there were no farmers markets or farm stands that accepted WIC FMNP checks. More than three in five adults do not eat five servings of fruits and vegetables per day. Almost 20% of families living in Pacific County experience food insecurity.

Evaluation:

- Pre and post surveys of project participants to determine if project increased fruit and vegetable intake.
- Count of number of farmers markets and farm stands authorized to accept WIC FMNP checks.
- Count of number of WIC participants participating in gardening project.

Outcomes:

- Increased access to fresh produce by assisting 2 local farmers to become FMNP approved and advertising locations to WIC participants.
- 4 community gardens were built, two at Head Start offices – 12 children participated, some were WIC participants.
- 18 WIC participants attended the gardening class and took Smart Pots home.
- Established valuable partnerships with community partners for further fruit and vegetable promotion.

Lessons Learned:

- Productive synergy created when project is linked to other health-related activities in the community (e.g., Healthy Communities project).
- Gardening kits were very popular with WIC participants.
- WIC participants enjoyed food preservation classes.
- Project needs dedicated staff person to coordinate it.

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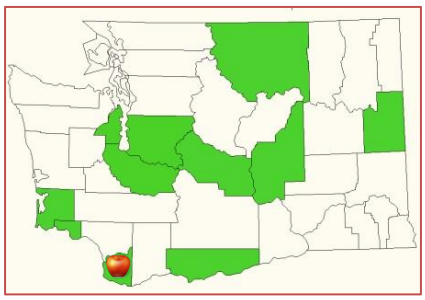

Farm to Family
Sea Mar Community Health Centers
Clark County WIC Nutrition Program

Purpose: To improve access to and affordability of local fruits and vegetables and to provide fun, hands-on nutrition education for Clark County WIC participants.

Project Components:

Cooking Classes

- WSU Extension Nutrition Educator teaches monthly cooking and nutrition education classes at WIC office.
- Classes focus on growing, selection, storage, seasonality, and quick preparation tips. In each class, WIC participants prepare a quick, easy recipe that features an in-season fruit or vegetable available at the farmers market or local farm stand.
- Class attendance counts as a WIC second education contact.
- WIC participants take home a bag of produce and the recipe so that they can make the recipe at home.

Farmers Market

- WSU Extension Nutrition Educator and WIC staff set up a booth at 3 local farmers markets every other week to provide nutrition education and free bags of produce to WIC participants.
- Education focuses on choosing, storing, preparing, and nutrition of a featured fruit or vegetable available at the market that day.
- WIC participants who visit the booth fulfill their WIC second education contact requirement.
- WIC participants take home a bag of produce with ingredients for making the featured recipe of the week.

Partners	Role
Sea Mar CHC Clark County WIC	Serve as lead agency for project; coordinate all nutrition education and administration of coupon incentives at farmers markets and local produce stores; provide WIC staff at farmers market to work alongside WSU Extension Nutrition Educator; be responsible for completing evaluations.
Farmers Markets and Local Produce Stand	Provide $3 discount to WIC participants for fruit or vegetables purchased at the farmers market or produce stand when WIC participant present the coupon; invoice the project for these coupons monthly; advertise the project.
WSU Extension, Clark County	Hire nutrition educator to teach classes at the WIC office and provide nutrition education at the farmers market; develop lesson plans and educational materials; design ways to incorporate this project into SNAP-Ed and EFNEP for sustainability and expansion to other low-income families.

Community: Clark County is home to Vancouver, the fourth largest city in Washington. Residents of Clark County struggle with overweight, obesity, and low fruit and vegetable intake similar to other communities across the state. According to the 2009 Clark County Community Choices Report Card, 64% of adults and 23% of youth are overweight, while only about one quarter report eating five servings of fruits and vegetables daily.

Evaluation:

- 8-question survey of WIC class participants about fruit and vegetable intake.
- Count of produce bags given at farmers market and classes.
- Phone survey of a sample of WIC participants who redeemed coupons.

Outcomes:

- 587 WIC families attended the Farm to Family classes at the farmers market and at 3 WIC clinics.
- 56.7% of WIC participants surveyed reported eating more fruit and 43.3% reported eating more vegetables.
- Bags of fresh produce given to WIC participants enhanced the food preparation classes.
- The local WIC agency and the farmers market will take advantage of their strong relationship to continue the project.

Lessons Learned:

- Good communication between partners and clear role definition is important to project success.
- Short, targeted, one-on-one nutrition education works best at the farmers market. WIC participants don't attend cooking demonstrations and classroom-style nutrition education at the market.
- Client outreach materials have to be clear about difference between Farm to Family project produce bags and Farmers Market Nutrition Program checks given at the market.

- Market baskets and hands-on cooking classes were popular with WIC participants.

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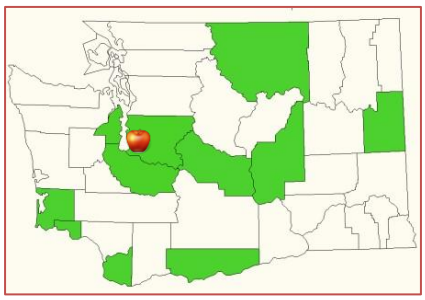

Bloom Where You Are Planted
Public Health Seattle & King County
WIC at SeaTac HealthPoint

Purpose: To increase the gardening and cooking skills of WIC families so they will be more likely to eat a variety of local and seasonal fruits and vegetables.

Project Components:

Cooking Classes

- Monthly cooking classes focused on fruits and vegetables.
- Encouraged kids to participate in classes.
- Food safety, gardening, and composting also taught.
- Both WIC participants and community members attended.

Community Garden

- Grew WIC demonstration garden.
- Harvested demonstration garden vegetables to use in cooking classes.
- Built new garden beds at current Lutheran Community Services garden to provide pea-patch gardening space for WIC families.

Community: SeaTac is a culturally diverse community south of Seattle. Access to produce is limited. There is one grocery store that serves the area surrounding the SeaTac HealthPoint WIC clinic. A community nutrition assessment completed in February 2010 suggests that typical produce items are available. However, these fruits and vegetable often don't meet the needs of SeaTac's ethnically diverse population. This assessment also showed that while food banks serving this area do provide produce when available, the food banks are not within SeaTac city limits, and the area is poorly served by the public transportation. Additionally, there is no nearby farmers market.

Partners	Role
Lutheran Family Services	Helped coordinate partners; assisted with garden maintenance and mentoring of Pea-patch gardeners; provided land for garden in addition to other gardening materials, provided cooking classroom space; and staff time and expertise applying for sustainability project funding.
Angle Lake Senior Housing	Recruited senior residents to garden two wheel-chair accessible raised beds; provided space for two cooking classes.
Easter Seals Child Development Center and Head Start	Original plan included a children's garden and garden-related children's activities. Project participation was no longer possible after staffing changes, budget cuts, and loss of the Head Start program.

Evaluation:

- Cooking class participant survey.
- Focus group at end of series of classes to find out what participants found most helpful and least helpful.

Outcomes:

- 24 Harvest Cooking classes were provided to WIC participants at the Lutheran Community Services kitchen in the WIC building; attended by both WIC children and parents, using unfamiliar foods.
- 4 families took part in the community garden next to the WIC clinic.
- Two seniors in the housing development joined in the garden work. Head Start children didn't participate as planned.
- 100% of cooking class attendants were WIC families.
- The local WIC agency is better connected with community resources around providing fresh fruits and vegetables to families.

Lessons Learned:

- Ensure open lines of communication between project partners.
- WIC pea-patch gardeners found that transportation and childcare were barriers to using the garden space.
- Involve children in cooking classes for better attendance and participation.

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PUBLIC HEALTH
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DOH 962-959 February 2012

White Center Giving Garden
Public Health – Seattle & King County
White Center Public Health WIC

Purpose: To increase access and intake of fresh fruits and vegetables among residents served by White Center Food Bank and the White Center WIC Clinic.

Project Components:

Garden

- Built 9 new raised-bed gardens between White Center Public Health and White Center Food Bank.
- Produce grown in gardens donated to White Center Food Bank.
- Grew a wide variety of produce, but intentionally included hard-to-find ethnic produce that met the needs of ethnically diverse food bank and WIC participants.
- WIC and Food Bank staff and volunteers collaborated on planting, maintaining, and harvesting the garden.
- 2011 garden output exceeded expectations. The goal set for the garden was 300 pounds of produce; the gardens produced 547 pounds of produce.

Cooking Classes

- Classes included a garden tour and preparation of quick and easy recipes featuring garden produce.
- WIC staff taught the cooking classes. Instructors read children's books and focused on including children in cooking and food preparation.
- One class focused on gardening at home. Participants were given small pots, soil, and seeds to plant at home.

Community: White Center is a culturally rich and unique unincorporated community of approximately 30,000 people located between the cities of Seattle and Burien. White Center is one of the most diverse communities in Washington State. Sixty percent of White Center residents are recent immigrants from countries such as Central America, Vietnam, Somalia, Iraq, Ethiopia, Cambodia, and Samoa. More than 25% of the population is under the age of 18. More White Center residents live below the poverty level (12%) than King County as a whole (5.6%). Food insecurity has increased in the area in recent years, and the food bank saw a

23% increase in participation from 2006 to 2009. A recent neighborhood assessment highlighted the lack of availability of fresh fruits and vegetables in White Center.

Outcomes:

- Built 9 raised garden beds between WIC clinic and food bank.
- Garden produced over 547 pounds of fresh produce for the WIC participants and the food bank. Many food bank recipients are WIC families.
- WIC participants took part in garden tours and 73 cooking/nutrition classes throughout the growing season.
- Created strong partnership with the food bank for continued operation of the community garden for WIC participants and food bank clients.

Evaluation:

- Weight of produce grown in garden.
- Survey of class participants.

Lessons Learned:

- Regular meetings with project partners.
- Good organization and clear role definition.
- Project participant with strong gardening skills is essential to increasing and maintaining garden productivity.
- Strong partnerships help the project succeed.

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Community Roots Farmers Market Spokane Regional Health District

Purpose: To help WIC families have more fruits and vegetables in their diets through:

- Better access to low-cost, locally grown fresh fruit and vegetables
- Learning how to select, store and prepare fruits and vegetables
- Learning how to use unfamiliar foods
- Supporting local farmers who provide the freshest produce

Project Components:

- Work with local, non-profit farm to establish a farm stand in prominent, accessible location near community center, Head Start center, WIC clinic, low-income housing, and schools
- Farm stand accepts Basic Food Electronic Benefits Transfer card and WIC Farmers Market Nutrition Program checks and sells produce at a reduced price to Basic Food and WIC participants.
- Provide nutrition education, taste testing, and recipe distribution that is focused on a seasonal fruit or vegetable at the farm stand
- Distribute incentive coupons for farm stand for participation in nutrition education and shopping at farm stand

Partners	Role
Spokane Regional Health District Hillyard WIC at the North East Community Center	Promote the Community Roots Farmers Market to WIC participants through WIC employee education, posters, flyers, WIC folder inserts and incentive coupons. Manage the project including program observation, evaluation, participant interviews and report writing.
People for Environmental Action & Community Health (p.e.a.c.h.)	Grow the vegetables for the farm stand, promote the farm stand to the community, setting up the Electronic Benefits Transfer pay system and provide a dedicated farmer to run the summer farm stand. Communicate lessons learned to community partners and track sales.
WSU Extension (WSU) Expanded Food and Nutrition Education Program (EFNEP)	Provide cooking curriculum and recipes with a focus on using seasonal produce available that week at the farm stand. Document participant responses to knowledge, skill and consumption questions.

Community: Hillyard is a historic neighborhood in the City of Spokane with a high percentage of its residents living in poverty. National and local data suggest price is one of the main reasons WIC participants give for not purchasing and consuming more fruit and vegetables. Access to fresh fruit and vegetables in the neighborhood is limited to a food bank, a discount grocer, a community market, and a supermarket.

Evaluation:

- Tracking use of Basic Food Electronic Benefits Transfer card, WIC Farmers Market Nutrition Program checks, and incentive coupon
- Participant survey about fruit and vegetable knowledge and Intake

Patrick weighing cherries for a customer. Patrick, a Hillyard neighborhood resident, befriended the farmers and often visited the farm stand and offered to help.

Outcomes:

- Created access for WIC participants to small farmers market for low cost locally grown produce and for trying unfamiliar foods.
- 236 WIC participants made purchases at the market next door to the WIC clinic, many using FMNP checks.
- The farmers market tested a sliding fee scale price structure for low income families.
- EBT (SNAP) evaluation was not done.

Lessons Learned:

- Brief, one-on-one education and taste tests work better than traditional sit-down food demonstrations at the farm stand.
- Smaller value incentive coupons encourage repeat shopping at farm stand.
- Sliding scale fee structure sometimes difficult for middle and upper income customers to understand.
- Communication between community partners is critical to success.
- Be flexible. If something isn't working, don't be afraid to reassess it, make changes, and try again.

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Cook Fresh
Suquamish Tribe
WIC Program

Purpose: To increase fruit and vegetable access, knowledge, and cooking skills for Suquamish WIC families so that they can increase their fruit and vegetable intake.

Project Components:

Community Supported Agriculture (CSA) Baskets

- Persephone Farms, a local farm and CSA site in Kitsap County, provided 5 full vegetable shares of fruits and vegetables to the clinic for 18-22 weeks during the growing season.
- Suquamish WIC divided 5 CSA shares among 10 WIC participants who had agreed to participate in the project for the season.
- WIC participants picked up their produce baskets once per week.
- WIC staff provided recipes and preparation tips for the produce in the CSA basket, especially for the more unusual vegetables.
- WIC staff prepared samples of the produce for participants to taste during the produce pick-up times.

Cooking Classes

- WIC staff, CSA farmer, and experienced WIC participants taught hands-on cooking classes during the CSA season.
- Classes focused on cooking and preserving techniques featuring fruits and vegetables.
- Participants had access to free childcare during cooking classes. Suquamish tribe preschool teachers offered childcare.
- One canning and food preservation class was taught by Persephone Farms grower.

Community: The Suquamish Tribe is located on the Port Madison Indian Reservation in Suquamish, Washington, a short drive or a 30-minute ferry ride across Puget Sound from downtown Seattle. The Suquamish WIC program serves both Native and non-Native families throughout Kitsap County. Currently the Suquamish WIC program has 120 families enrolled in the program.

Evaluation:

- WIC staff gave participants a pre and post survey about fruit and vegetable intake. Surveys also asked whether participants thought the CSA and cooking classes changed their eating patterns.

Outcomes:

- Introduced WIC families to fresh produce, home cooking skills, and improved nutrition through cooking classes and free produce donated from a local farm.
- Post survey showed WIC participants and their families increased intake of fresh fruits and vegetables after attending the classes, including unfamiliar foods.
- Post survey showed WIC participants used one or more of the recipes from the classes at home.
- One WIC participant taught some of the cooking classes.

Lessons Learned:

- Providing childcare allowed some clients to participate who wouldn't have been able to otherwise.
- Participants learned a great deal from each other, and enjoyed the social time during cooking classes.
- Encouraging regular and ongoing client participation was a challenge despite the popularity of free produce.
- Participants reported enjoying the classes and the free produce. Many reported that they could not afford to buy fresh produce and were very glad to have it.
- Future cooking classes may be taught by experienced WIC participants.

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Just Grow It - Wahkiakum

Purpose: To increase the fruit and vegetable consumption of WIC participants and other community youth in order to decrease the incidence of risk factors leading to chronic conditions such as diabetes and heart disease.

Project Components:

- Youth-oriented community garden to improve nutrition skills and connect the generations through mentoring.
- Build community partnerships to broaden the use and safety of the city park.
- Invite WIC families to participate in the garden.
- Community dinners to share the bounty of the garden.

Community: Cathalmet is a charming town on the Columbia River in beautiful rural Wahkiakum County in Southwest Washington. The town's population of about 500 is mostly white with a small number of other races. Cathlamet has a historic fishing-village look with interesting structures and parks.

Partners	Role
Washington State University Extension	Provide volunteer and youth coordination through 4-H program; include a Master Gardener; provide public promotion and outreach.
Wahkiakum County Human Services	Logistical support in the form of labor, construction supervision, transport of materials; provide greenhouse for starter plants.
Town of Cathlamet	Offer a portion of Erickson Park for the garden space; use of park's outdoor community kitchen for meetings and meals from the garden.
Wahkiakum School District	Recruiting youth other than WIC to work in garden; promote activities through newsletters and school events.

Evaluation:

- Participant survey – pre- and post-surveys to measure changes in eating habits among participants who received garden crops at one-on-one WIC nutrition contacts.
- Attendance records of WIC and other participants.
- Ongoing input from stakeholders including WIC participants as to progress toward meeting of goals.

Outcomes:

- 40 WIC participants and others in the community built a community garden and attended monthly harvest luncheons. Over 62 youth and their families participated.
- Formed a strong connection between the local WIC agency, local schools, the Mayor, the food bank, 4H and other community supporters around creating access and skills for growing and preparing fruits and vegetables.

Lessons Learned

- Be flexible in the face of change – can often find solution to problem among community partners. Be flexible enough to change your objectives in order to meet your goals. (Example: We were able to reach more WIC families through education at WIC visits that included garden vegetable distribution vs. getting WIC families to maintain a garden plot.)
- Maintain strong local partnerships – working with partners across projects helps solidify relationships.
- Keep the vision – across projects, vision is always healthy eating
- Make the project visible – can help forge new partnership, overcome challenges, and drive interest.

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Chapter 3

Evaluation Tools and Protocols

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

Chapter 3: Evaluation Tools and Protocols

The multi-level evaluation plan for the grant used both quantitative and qualitative methods to gather data from local WIC staff, participants and community partners.

- We gathered quantitative data at baseline and again at the end of the grant through a variety of surveys and a review of nutrition education plans.
- We gathered qualitative data from quarterly project interviews with coordinators and their community partners.

In this chapter we describe the methods used to evaluate the grant as well as the protocols used to analyze the data gathered.

Statewide Client Survey (quantitative)

To assess changes in fruit and vegetable consumption among WIC participants in the 12 projects compared to the rest of the state (controls), we had local WIC staff ask a two-question fruit and vegetable frequency survey with participants statewide. Staff used the WIC computer system, Client Information Management System (CIMS), to record survey responses. Clinic staff completed the baseline survey in May 2010 before the projects began their work and the follow-up survey in March 2012 after the projects ended. The purpose of the survey was to answer the following research questions:

- Is there an overall impact on the fruit and vegetable consumption of WIC clients in local project agencies compared to control agencies?

- Are there specific characteristics of the local project approaches that appear to be predictive of increases in participant fruit and vegetable consumption?

The survey asked the following two questions:

1. Yesterday, how many times did you (your child) eat vegetables?
2. Yesterday, how many times did you (your child) eat fruit? Do not count juice.

Answer choices for both questions were none, 1-2, 3-4, and 5 or more.

We derived these questions from those that had been previously used to measure fruit and vegetable intake [1]. These questions work well to get responses from low-income, low-literacy populations and minimize the burden on busy WIC clinic staff. We tested the questions in WIC clinics and we determined that staff would be able to ask only two additional questions during appointments and that it wouldn't be possible to ask about number of servings.

We received no identifying information about WIC participants and the survey was exempt from review by the Washington State Institutional Review Board.

For the baseline survey we asked clinic staff to ask the questions during certification visits during one month in 2010. They were told to ask all women and all caregivers of children older than 6 months. Of 33,185 WIC participant visits, 7,959 participants completed surveys for a total response rate of 24.0%.

In an effort to get a higher response rate for the follow-up survey, the core grant team conferred with the WIC Clinic Services Advisory Committee. This committee consists of 30 local coordinators and nutritionists who provide input and practical ideas for the state WIC office on policies and other issues. From those discussions it was clear that one barrier for local agency staff was to remember to do the survey during certification appointments only. In the 2012 follow-up survey, we instructed them to do the survey at *all* appointment types for one month, excluding infants under 6 months old. The state WIC office provided reminder cards for clinic staff to post on their computer monitors and stickers to give to participants after completing the survey. These changes resulted in an improved follow-up survey response rate of 53.4%.[1]

The research team assigned Rural Urban Commuting Areas (RUCA) codes [2] to each WIC site based on clinic zip codes. They collapsed the RUCA codes into four primary areas of urbanicity: metropolitan, micropolitan, small town and rural.

Statewide Client Survey Data Analysis

The research team used descriptive statistics to calculate frequencies of vegetable and fruit intake. They used the Pearson's chi-square test to determine the significance of changes in vegetable and fruit intake from baseline to follow-up. They didn't track individual WIC participants over time. All calculations use group means, not individual level data.

Intervention-Control Data Analysis

The research team matched the 12 projects with non-project controls based on ubanicity, caseload and participant demographics (i.e., Hispanic ethnicity). Due to the low response rate on the baseline survey, some intervention sites had insufficient data to complete the analysis (see Table 4.7).

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[1] *The actual response rate for the follow-up survey could not be calculated due to the inability of CIMS to generate information about the number of appointments of all types per clinic. The response rate for the follow-up survey was calculated using only certification appointments with the formula:*

Total number of surveys taken at certification appointments (18,275) divided by total number of certifications completed over the survey administration month (33,310).

All appointment types were included in the analysis. There is no reason to believe that the response rate for the entire sample, had it been possible to calculate, is significantly different than the response rate for certification appointments.

For each outcome, they estimated a difference-in-differences (D-I-D) regression model including:

- Time (Post-period=1, Pre-period=0)
- Group (Intervention site =1, Control site =0)
- Interaction of Time by Group.

In these models, the coefficient estimate for the interaction term of Time by Group Assignment represents the estimate of differences in the outcome measure (i.e., the D-I-D estimate). The D-I-D approach takes into account changes in outcome measures that may occur irrespective of the intervention itself, assuming those changes similarly affect the intervention and control groups. The research team interpreted all D-I-D estimates as the difference in outcome in the post-period for the treatment group relative to the comparison group, taking into account group differences in outcomes in the pre-period.

Quarterly Project Interviews (qualitative)

The research team completed four sets of quarterly interviews with project coordinators and their community partners. They designed interviews to answer the following research question.
To what degree do the proposed projects appear designed to improve community empowerment, capacity, participation, relevance, access or critical consciousness?

The interviews for quarters 1 through quarter 3 focused on process evaluation and identifying the need for technical assistance. Researchers did the fourth set of interviews after the grant period ended to reflect and summarize. Detailed descriptions, protocols and analysis procedures are below. Table 3.1 shows the timeline and number of interviews conducted in each quarter.

Table 3.1: Quarterly Project Interviews

Quarter 1	**Quarter 2**	**Quarter 3**	**Quarter 4**
Fall 2010	Spring 2011	Fall 2011	Winter 2012
30 interviews	28 interviews	37 interviews	37 interviews

Interviews are exempt from review by the Washington State Institutional Review Board. See Appendix 7 for the complete interview guide.

Quarter 1 through Quarter 3 Interviews

The research coordinator did three process evaluation interviews over the 18-month grant period to look at project implementation progress, successes, challenges, strategies for overcoming challenges, and moving the work forward.

The interviews were with project leads and community partners. Each person received the questions before the telephone interviews, which lasted between 20-60 minutes. The research

coordinator conducted all interviews and took detailed notes. She immediately followed up on areas requiring technical assistance, such as helping community partners hold and plan partnership meetings. She created tables following each set of interviews to update the core grant team on progress and assistance needs.

Once all interviews were complete, UW research staff used atlas.ti software to code the interview notes. They identified emerging themes to answer the following research questions:

1. What challenges did the project teams face?
2. What successful strategies did the teams use to overcome challenges and move the projects forward?

Quarter 4 Interviews

The research coordinator conducted quarter 4 interviews in winter 2012 following the end of the projects. Questions focused on sustainability, community and participant impact, accomplishments and successes, partnerships, and dissemination. She recorded and transcribed the interviews (with verbal permission from each interviewee). The research team used atlas.ti (GmbH, Berlin, Version 7) software to code transcripts for emerging themes. The primary researcher created an initial coding structure. The research team created codes as they emerged from the data. After a second researcher coded each interview, they compared results, discussed discrepancies and came to agreement on each code. They refined the coding structure based on these discussions and used it in subsequent interviews. They determined the inter-rater reliability for each of the first 10 interviews coded by both researchers by calculating the number of agreements divided by the sum of the agreements plus disagreements. Inter-rater reliability increased from 45% at the beginning of the process to 92% at the end of the inter-rater coding process.

Common Measures Client Survey

Researchers created a common measure survey to evaluate changes in behavioral capacity, self-efficacy, intention, expectation and behaviors for fruits and vegetables among WIC participants participating in the intervention at each project. See Appendix 5 and 6 for the complete survey tool. The purpose of the survey was to answer the following five research questions:

- To what extent do WIC clients perceive that they can increase fruit and vegetables intake at baseline?
- Are demographic characteristics associated with fruit and vegetable perceptions or consumption?
- Are there differences in client fruit and vegetable consumption between local WIC agencies?
- Are there changes in WIC client behaviors and perceptions between baseline and the end of the local projects?
- Are demographic characteristics associated with these changes?

We asked local WIC staff to give the survey to only WIC participants involved in project activities at baseline and follow-up. Two projects (8 and 10) did not participate in the survey because project activities were not compatible with the pretest/post-test design. We timed the baseline and follow-up survey according to each project's planned activities and coordinated with lead staff in the WIC clinic. It was a pen and paper survey available in English and Spanish. We mailed hard copies of the surveys to each of the participating projects in advance. The Washington State Institutional Review Board reviewed the survey and administration protocol and determined it had minimal risk to study subjects.

WIC Coordinator Survey

We conducted a survey of local WIC coordinators to assess the impact of the grant on Goal I: To increase the effectiveness of nutrition education on fruits and vegetables in WIC. We designed the grant to build the capacity of WIC coordinators to connect with community partners and expand the menu of innovative approaches and energy available for promoting behavior change. We hoped that through training and sharing of information from the funded projects, non-funded WIC clinics and community partners would find new ways to support fruit and vegetable intake in WIC families. The coordinator's survey was designed to tell us the degree to which WIC coordinators report increased efficacy for promoting fruits and vegetables at the end of the project compared to baseline. The purpose of the survey was to answer the following two research questions:

- To what extent do all local WIC coordinators perceive that they can influence the fruit and vegetable consumption of WIC clients at baseline?
- Do the perceptions of coordinators from agencies that have local collaborative projects change more than those agencies without local collaborative projects?

The research team used Social Cognitive Theory (SCT) constructs to design the survey questions. These constructs include:

- reciprocal determinism
- behavioral capability
- expectations
- self-efficacy
- observational learning (modeling)
- reinforcements

The 8-question survey is in Appendix 4. The first five questions asked about coordinator confidence for increasing knowledge, self-efficacy, consumption, access and promotion of fruits and vegetables among WIC participants. Two questions asked coordinators if they have had success helping WIC participants increase fruits and vegetables in their diets and to describe that success. The eighth question asked for additional comments. The Washington State Institutional Review Board determined the survey and protocol are exempt from review.

We administered the online survey in January 2010 (baseline) and again in February 2012 (follow-up). We invited all WIC coordinators to participate in the survey in a memo from the state WIC office. Because WIC memos are sent to a listserv that has non-coordinator members, the research team couldn't calculate the response rate for either the baseline or follow-up survey. There are 87 coordinators in the state. They didn't track individual coordinators over time because of confidentiality concerns. All analyses consist of aggregate data from baseline and follow-up surveys.

Researchers collected forty-eight baseline and 76 follow-up surveys. They used descriptive statistics to calculate answer frequencies for each question, and used a chi-square test for association for comparison of baseline and follow-up surveys. They collapsed Likert scale responses (not confident, somewhat confident, confident and very confident) into the dichotomous variables (not confident and confident) for the chi-square analysis. They coded qualitative responses to the last two questions according to identified success strategies.

Nutrition Education Plan Abstraction

All WIC agencies complete an annual nutrition education plan evaluating past nutrition education activities and those planned for the coming year. By abstracting and coding plans written before, during and after projects began (2010-2012 plans) we hope to answer the following research questions:

- To what extent do local project agency's annual nutrition education plans reflect partnerships with food systems or public health groups at baseline? At year three?
- What are the characteristics of these plans?
- To what extent have additional WIC agencies adopted these approaches?

The 2011 plans are a snapshot of partnerships during the grant period. The 2012 plans represent activities after the grant period. Therefore, 2010 nutrition education plans are a baseline measurement of partnerships formed before the projects started.

All agencies use the same nutrition education plan template with a specific section devoted to activities to increase fruit and vegetable consumption. The research team reviewed these sections and included all goals that showed working with community partners in the analysis table. They coded each goal according to type of community partner.

In early 2012, the state WIC office asked all coordinators to complete a two-question survey as an amendment to their 2012 nutrition education plan. This told us about the extent to which WIC clinics had been and planned to engage with community partners to promote fruits and vegetables. The survey asked the following two questions.

- Has your WIC program worked with community partners in the past 12-18 months to promote fresh fruits and vegetables for your clients? If yes, how?

- Do you have plans to work with community partners in 2012 to promote fresh fruits and vegetables for your clients? If yes, how?

The research team coded survey responses into areas of partnership engagement and compared them to 2010-2012 nutrition education plan goals.

Collaboration Factors Inventory

The research team used the Wilder Collaboration Factors Inventory to assess progress on Goal II: Build the capacity of local WIC agencies to garner additional nutrition education resources by building sustainable partnerships with food systems groups. The inventory is a 42-question online tool for assessing partnership collaboration on 20 factors of partnership success.[3]

The research team assessed each project partnership using the tool at two time points. They conducted the baseline inventory in winter 2010 after the partnerships had worked together for approximately six months, and the follow-up survey in fall 2012 as the projects were coming to a close. They provided each member of the partnership with a link to the inventory and login information unique to their partnership. The Wilder Research website did the inventory scoring for each collaboration. They compared baseline and follow-up scores as evaluation measures. They used initial scores to assess partnership function in order to better direct technical assistance to projects.

Project Final Reports

Each project submitted a final report using a standard template in December 2011 at the end of the funding period. See Appendix 8 for the final report template. The template asked sites to provide the following information:

- Were project objectives met?
- Changes that occurred to the original project design
- Project successes
- Most important outcome
- Challenges and how they were addressed
- Lessons learned
- How the project was shared with outside groups and organizations
- Plan for sustainability
- Results of any project-specific evaluation measures

Researchers compiled and abstracted final reports to enhance data collected by other evaluation measures and information collected in quarterly interviews.

Chapter 3 – Reference Page

1. http://www.cdph.ca.gov/programs/cpns/Documents/Network-REU-Compendium-2007-2008.pdf
2. USDA's Economic Research Service - http://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/documentation.aspx
3. Mattessich, P., M.et al, *Wilder Collaboration Factors Inventory*. 2001, St . Paul, MN: Wilder Research. The tool is available at http://wilderresearch.org/tools/cfi/index.php.

Chapter 4

Evaluation Results

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

Chapter 4: Evaluation Results

Chapter 4 provides results from quantitative and qualitative evaluation measures organized by evaluation tool. Discussions about tools and protocols are in the previous chapter.

Statewide Client Survey

Statewide Analysis Results

Both women and children 6-60 months of age most frequently reported consuming fruits and vegetables one to two times per day. Table 4.1 shows the distribution of intake for vegetables for women and children at baseline and follow-up and Table 4.2 shows the same data for fruit intake.

Table 4.1: Vegetable Intake at Baseline and Follow-up

		Baseline Daily Vegetable Frequency, %					Follow-up Daily Vegetable Frequency, %			
Population Group	**Number**	**None**	**One or Two**	**Three or Four**	**Five or More**	**Number**	**None**	**One or Two**	**Three or Four**	**Five or More**
Infants/Children, 6-60 months	6,202	14.8	66.9	16.9	1.4	35,182	12.79	66.4	18.9	1.9
All women	1,749	15.4	65.3	16.7	2.6	13,184	13.7	61.1	22.0	3.3

Table 4.2: Fruit Intake at Baseline and Follow-up

		Baseline Daily Fruit Frequency, %					Follow-up Daily Fruit Frequency, %			
Population Group	**Number**	**None**	**One or Two**	**Three or Four**	**Five or More**	**Number**	**None**	**One or Two**	**Three or Four**	**Five or More**
Infants/Children, 6-60 months	6,202	7.5	60.6	28.6	3.3	34,360	6.3	59.3	30.5	3.8
All women	1,749	16.0	58.8	22.3	2.9	12,769	14.6	56.6	24.6	4.2

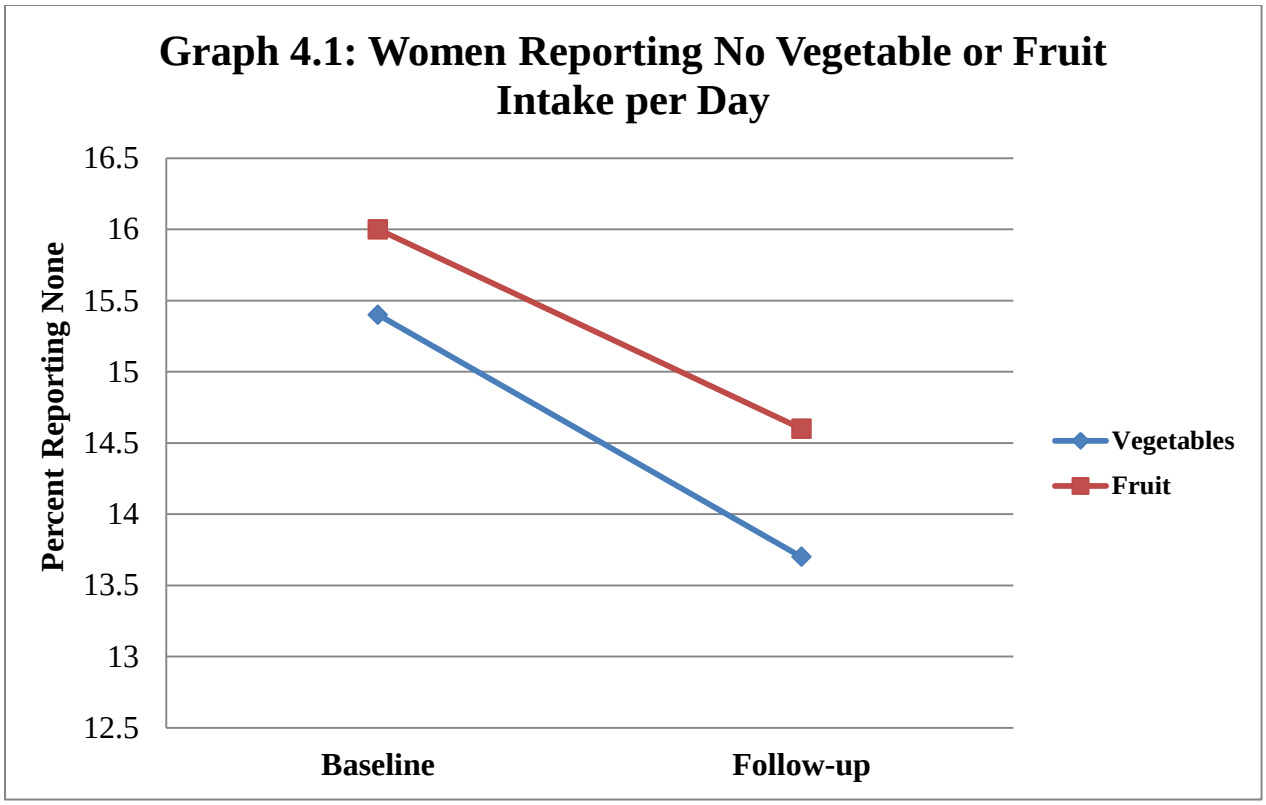
We observed several significant changes between baseline and follow-up. Table 4.3 lists the changes in reported intake of vegetables among all groups and Table 4.4 shows changes for fruit intake. Significant increases in reported fruit and vegetable intake occurred between baseline and follow-up. The only exception is for women reporting no fruit intake. While a lower proportion of women reported no intake on the follow-up survey, this change was not significant.

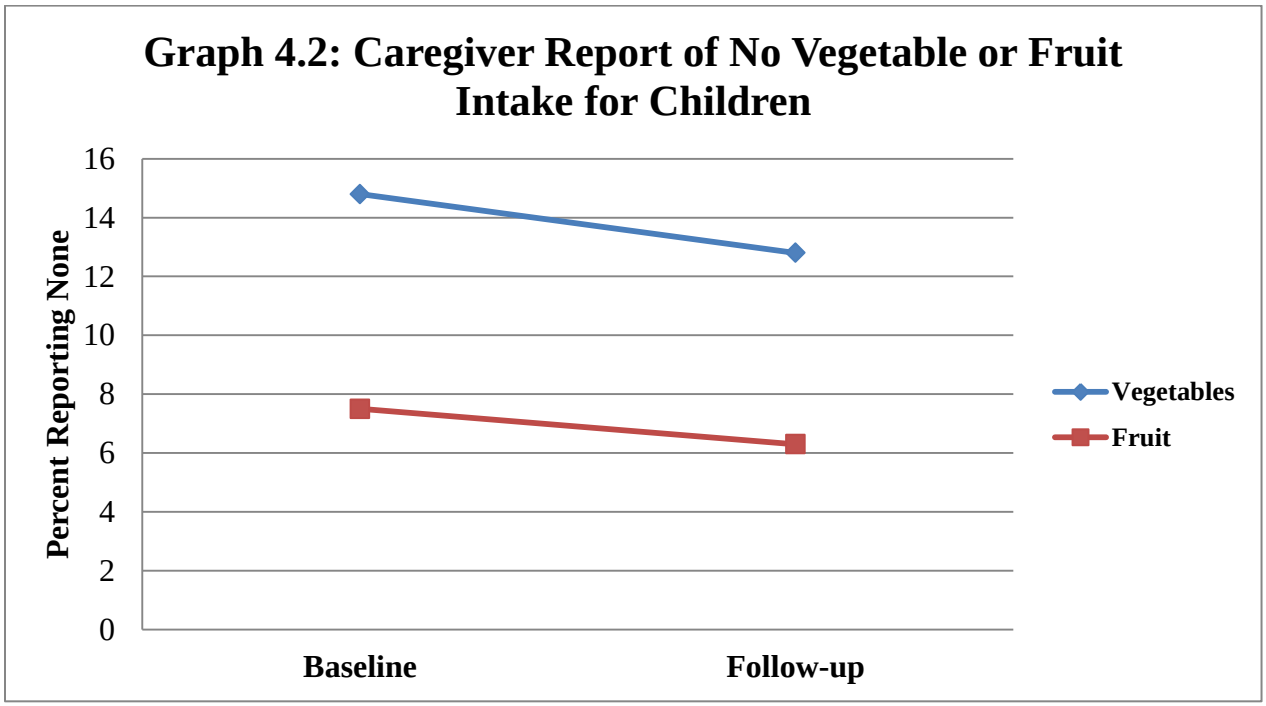
Table 4.3: Change in Vegetable Intake from Baseline to Follow-up

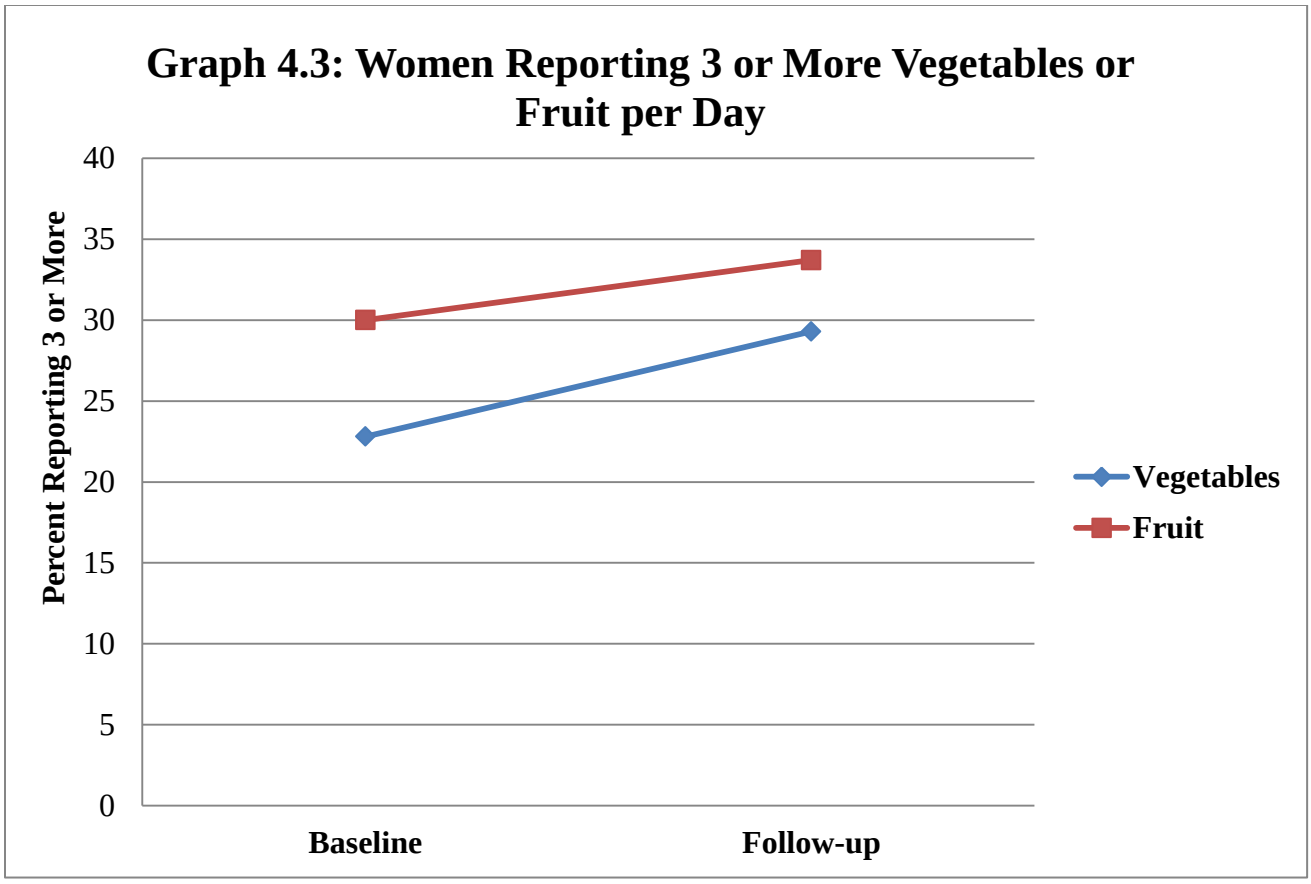
	Change in % Reporting None (versus any)					Change in % Reporting 3 or More (versus 1-2)			
Population Group	**Baseline**	**Follow-up**	**Change**	**p-value**		**Baseline**	**Follow-up**	**Change**	**p-value**
Infants/children 6-60 months	14.8	12.8	-2.0	<0.01		21.5	23.8	2.4	<0.01
All women	15.4	13.7	-1.7	0.05		22.8	29.3	6.4	<0.01

Table 4.4: Change in Fruit Intake from Baseline to Follow-up

	Change in % Reporting None (versus any)					Change in % Reporting 3 or More (versus 1-2)			
Population Group	**Baseline**	**Follow-up**	**Change**	**p-value**		**Baseline**	**Follow-up**	**Change**	**p-value**
Infants/children 6-60 months	7.5	6.3	-1.2	<0.01		34.5	36.7	2.2	<0.01
All women	16.0	14.6	-1.4	0.12		30.0	33.7	3.7	<0.01


Graph 4.1: Women Reporting No Vegetable or Fruit Intake per Day
Percent Reporting None
16.5
16
15.5
15
14.5
14
13.5
13
12.5
Baseline
Follow-up
Vegetables
Fruit


Graph 4.2: Caregiver Report of No Vegetable or Fruit Intake for Children
Percent Reporting None
16
14
12
10
8
6
4
2
0
Baseline
Follow-up
Vegetables
Fruit


Graph 4.3: Women Reporting 3 or More Vegetables or Fruit per Day
Percent Reporting 3 or More
40
35
30
25
20
15
10
5
0
Baseline
Follow-up
Vegetables
Fruit

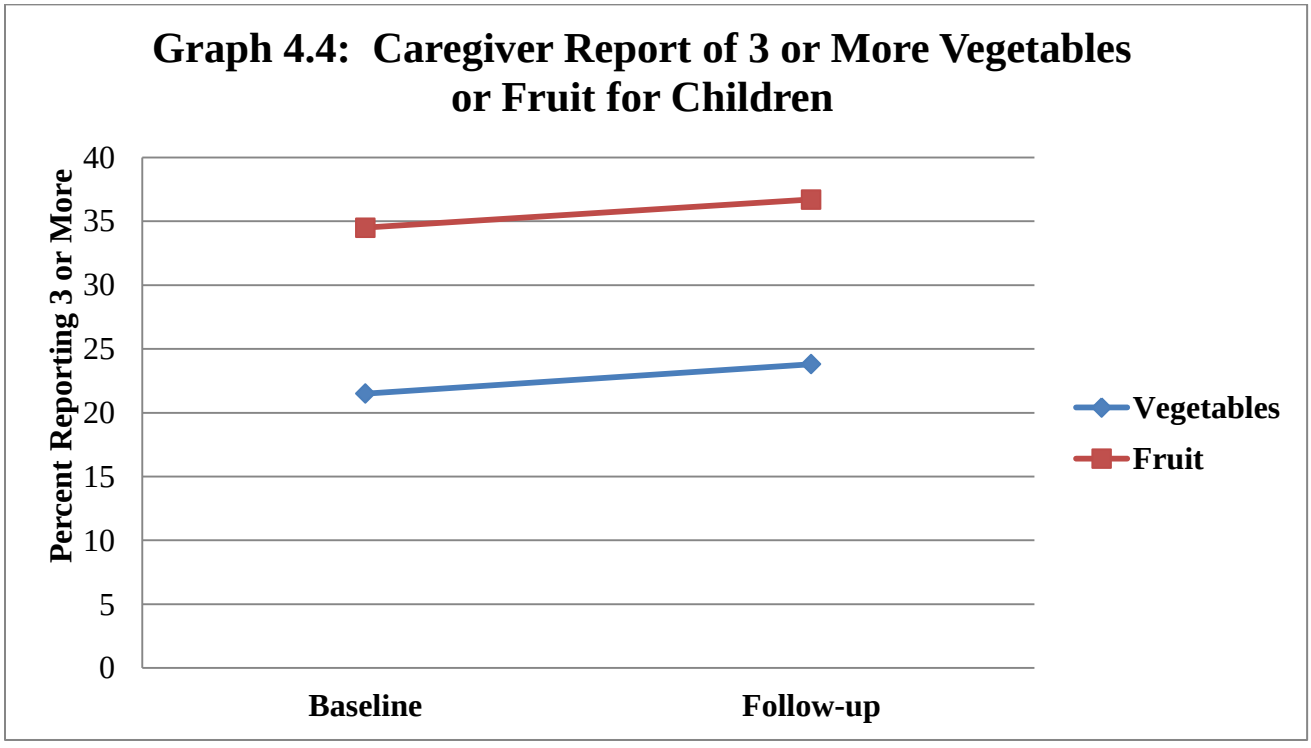

Graph 4.4: Caregiver Report of 3 or More Vegetables or Fruit for Children
Percent Reporting 3 or More
40
35
30
25
20
15
10
5
0
Baseline
Follow-up
Vegetables
Fruit

Table 4.5 shows change in the percent of respondents reporting none and those reporting 3 or more vegetables per day according to urbanicity of clinic. Table 4.6 shows the same for fruit.

While changes in fruit and vegetable intake in clinics in urban environments weren't significant, those in rural areas did report significant changes. Clinics in rural areas saw significant increases in participants reporting no vegetable and fruit intake, as well as significant decreases in those reporting frequency of three or more vegetables and fruits per day. Also, micropolitan areas saw an increase in those reporting 3 or more vegetables per day but a decrease in those reporting 3 or more fruits per day. The baseline survey was done in the month of May and the follow-up survey was in March. Washington has a late growing season (June-July start) so it's unlikely that the timing of the surveys had an effect on the results.

Table 4.5: Change in Vegetable Intake from Baseline to Follow-up by Urbanicity

	Change in % Reporting None (versus Any)					Change in % Reporting 3 or More (versus 1-2)			
Population Group	**Baseline**	**Follow-up**	**Change**	**p-value**		**Baseline**	**Follow-up**	**Change**	**p-value**
Metropolitan	14.8	12.6	-2.2	0.27		20.6	25.5	4.9	0.15
Micropolitan	18.2	14.5	-3.7	0.85		24.0	27.0	3.0	0.02
Small Town	14.0	12.4	-1.6	0.64		24.1	27.0	2.9	0.89
Rural	15.0	17.7	2.7	<0.1		31.8	23.6	-8.1	<0.01

Table 4.6: Change in Fruit Intake from Baseline to Follow-up by Urbanicity

	Change in % Reporting None (versus any)					Change in % Reporting 3 or More (versus 1-2)			
Population Group	**Baseline**	**Follow-up**	**Change**	**p-value**		**Baseline**	**Follow-up**	**Change**	**p-value**
Metropolitan	9.5	8.3	-1.2	0.36		32.3	36.2	4.0	.33
Micropolitan	10.0	10.2	0.2	.62		36.5	35.1	-1.3	<0.01
Small Town	8.3	7.3	-1.0	0.81		33.8	35.9	2.1	0.39
Rural	7.4	8.3	0.9	<0.01		45.6	34.7	-10.9	<0.01

Intervention-Control Analysis Results

Table 4.7 and Table 4.8 present detailed baseline and follow-up results from the survey of fruit and vegetable intake. See Appendix 9 and 10 for details.

By using a difference-in-difference regression model as described above to compare changes between baseline and follow-up data, we compared interventions and controls. Table 4.7 shows results of this comparison of vegetable intake for each matched group.

Table 4.7: Vegetable Consumption Frequency at Baseline and Follow-up Between Intervention and Control Sites

Site ID	Odds Ratio for a change from consuming some vegetables at baseline to having none at follow-up (NS=Not significant; I=Insufficient data)	p value	Odds Ratio for a change from consuming 1 or 2 vegetables at baseline compared to 3 or more at follow-up (NS=Not significant; I=Insufficient data)	p value
Intervention/Control #1	NS		NS	
Intervention/Control #2	3.3	<0.01	0.2	<0.01
Intervention/Control #3	NS		NS	
Intervention/Control #4	NS		NS	
Intervention/Control #5	NS		NS	
Intervention/Control #6	NS		NS	
Intervention/Control #7	0.58	0.05	1.88	0.005
Intervention/Control #8	NS		NS	
Intervention/Control #9	5.59	0.05	NS	
Intervention/Control #10	NS	0.04	NS	
Intervention/Control #11	I		I	
Intervention/Control #12	I		I	

Most sites showed no significant change in vegetable intake from baseline to follow-up as compared with matched controls. Projects 2 and 9 saw significant decreases in vegetable intake as compared to the matched controls for the same period. Project 7 is the only one that showed

significant increases in reported vegetable intake as compared with the matched control from baseline to follow-up.

Although clients served by projects 2 and 9 showed significant decreases in vegetable intake over the project period, the total number of WIC participants affected by the project was small in comparison to the caseload for each agency. It isn't clear what caused a decrease in reported vegetable intake at these sites, but it is unlikely due to the intervention because these projects ultimately only affected a small number of WIC participants.

At project 2 the control is in a more urban environment. According to our urbanicity analysis, urban clinics did not report a significant decrease in fruit and vegetable intake at follow-up. But rural clinics statewide reported significantly lower fruit and vegetable intake at follow-up. This difference between intervention and control for project 2 may explain the comparative decrease in vegetable intake.

Table 4.8: Fruit Consumption Frequency at Baseline and Follow-up Between Intervention and Control Sites

Site ID	Odds Ratio for a change from having some fruit at baseline to having none at follow-up (NS=Not significant; I=Insufficient data)	p value	Odds Ratio for a change from consuming 1 or 2 fruits at baseline compared to 3 or more at follow-up (NS=Not significant; I=Insufficient data)	p value
Intervention/Control #1	NS		NS	
Intervention/Control #2	NS		0.55	0.06
Intervention/Control #3	0.34	0.002	NS	
Intervention/Control #4	NS		NS	
Intervention/Control #5	0.08	0.02	0.13	0.02
Intervention/Control #6	NS		NS	
Intervention/Control #7	NS		1.56	0.02
Intervention/Control #8	NS		NS	
Intervention/Control #9	NS		NS	
Intervention/Control #10	NS		0.41	
Intervention/Control #11	I		I	
Intervention/Control #12	I		I	

Table 4.8 shows results for fruit intake. Respondents at projects 3 and 5 showed significantly lower odds of reporting no fruit intake versus any fruit intake. However, project 3 also showed significantly lower odds of reporting fruit intake of three or more times per day versus lower intake of 1-2 times per day between baseline and follow-up. These results are not conclusive, as it is unclear why the activities of project 3 would have a moderating effect on fruit intake. The project activities at this agency focused on nutrition and cooking education.

Respondents at projects 2 and 10 also showed significantly lower odds of positively changing reported consumption to three or more fruits per day between baseline and follow-up as compared to controls. We've described above possible contributing factors for site 2. Project 10 was dedicated to increasing access to fruits and vegetables by having a new farmers market located across the road from the WIC clinic. It is unclear why reported fruit intake would have decreased during the project period at this project, but it is unlikely that it is a result of project activities.

Project 7 was again the one site that showed significant positive findings with increased odds of higher fruit intake among respondents comparing baseline to follow-up. These results are consistent with those for vegetable intake for this project.

Project 7 focused activities on only WIC participants and the proportion of participants involved was higher than at other projects. Activities were multi-faceted and targeted nutrition and cooking education while providing produce baskets to participants. Project 7 was also unique in that activities continued throughout the year, whereas most others concentrated on the summer growing season.

Quarterly Project Interviews

Quarter 1 through Quarter 3 Interview Results

During the first three interviews, partners (local WIC staff and community partners) described aspects of their projects that were going particularly well, challenges faced, and strategies used to overcome them. (See Appendix 4 for full interview questions.) Table 4.9 shows common themes and illustrative quotes. Where possible, quotes are noted as "W" (WIC) or "P" (partner agency).

Table 4.9: Themes from Quarter1 through Quarter 3 Interviews

Theme	Discussion	Supporting Quote
Facing Challenges		
With Project Implementation		
Project logistics	Interviewees reported difficulty with the logistics of project implementation. Typical challenges included delays in getting supplies, location/signage issues, unplanned needs, coordination between partners, and other unanticipated logistical issues. Most barriers were resolved by WIC project leads and their community partners, some with support from Core Project Leads at UW and State WIC. In a few instances, projects found it necessary to adjust the scope of their work or their timeline.	"It's not a well-oiled machine yet." (W) "I don't think we have had a lot of challenges. Just timing to get produce to [partner organization]. What to do with it from pick up on Sat/Sun until I drop it off at the WIC office on Tuesday for the class." (P) "Last market season we could have used some better infrastructure building and signage at the market. We were in a different location… which wasn't as visible, but then they moved us to a nice shady spot right next to the front entrance to attract more foot traffic from people coming in and out of the center." (W)
Theme	**Discussion**	**Supporting Quote**
Problems with project design	After initial implementation, interviewees identified unanticipated problems with project design. In many cases, these partners addressed these design flaws. One project decided the model itself was not sustainable.	"The cooking demo didn't go so well, it seemed like people just wanted to get a bag of produce and hurry up and be on their way." (W) "We learned a lot at the market this year: 1) we thought if we issue checks there, clients will use them there, and clients got them and left and didn't use them at the market; 2) [farmers market] prices are higher; 3) on not so nice days clients didn't turn out or came and got their checks and left quickly." (W)

Facing Challenges		
With Project Implementation - continued		
Learning curve	Some interviewees reported that they had to work to overcome their own inexperience with project components. They were counting on partners to assist them, at that times that didn't happen the way they had hoped for. They had to make a special effort to learn about gardening, teaching cooking classes, or coordinating a project of this nature. Local WIC agencies have little experience working with other organizations in the community to promote fruits and vegetables and provide nutrition education. This was a goal of the grant: to team with others to garner additional nutrition education resources that enhance WIC's mission.	"I have no previous experience with making garden beds or gardening so it has been extra time consuming because I have to do a lot of investigation to know how to set things up for the garden." (W)
With Project Partners		
Communication	Communication with partner organizations was sometimes challenging, including differences in organizational communication style, interpersonal friction, difficulty coordinating busy schedules for in-person meetings, gaps in communication between organizations and/or individuals, and not establishing clear roles and responsibilities.	"When everyone gets together it's great. It's just scheduling [that] is the biggest issue." (W) "Sometimes it's difficult to connect with [partner organization]. They already are so busy, but they always make themselves available when needed." (W) "So many different project components and partners; it's difficult to get everyone in the same room for a meeting." (P)

Theme	Discussion	Supporting Quote
Lack of partner engagement	Several interviewees from a few projects identified partner involvement in activities as a challenge. Sometime the uninvolved partner was identified as the local WIC staff, and other times it was community partners.	"The food bank is incredibly busy – they aren't involved in the project. I have been disappointed with their lack of involvement. When I was writing the grant I didn't think that they would not be involved in the partnership." (W) "Difficulty in working with the WIC coordinator. [She has] too many other tasks and is not able to give feedback as well as spend time to recruit WIC clients during the appointments." (P)
Facing Challenges		
With Project Partners - continued		
Losing staff and/or partners	Interviewees reported significant challenges with staff turnover and losing a project partner mid-way through the project. This was most debilitating to their work when the individual leaving was instrumental to project activities, such as a coordinator or the original grant writer.	"Our partners have gone through a lot of budget challenges recently. On Dec 1, Esperanza will lose funding. Big Bend College and Even Start Program have also lost funding. They won't be doing classes in their space any longer…." (W) "The supervisor who was working on writing this grant was laid off, and when I came into the position, they told me I needed to decide if I would continue with the grant or not. Let me just say that when I came into the job, the grant was already planned and written. I didn't want to be a part of it because I don't have time for it. I am spread too thin, but [project partners] stepped up and managed the coordination and said I wouldn't have to do anything related to the project." (W) "Passion is hard to transfer. The lead coordinator for the project keeps everyone motivated, so [the initial project coordinator] leaving was a big loss." (P)

Theme	Discussion	Supporting Quote
Building organizational support	Interviewees sometimes identified challenges getting fellow staff or agency leadership on board.	"I am operating independently with no guidance. My boss does not offer much support, no check-ins, or advice giving. I have no internal support." (W) "Some of the staff are not motivated. They see the farmer's market checks as more of a burden. They have a negative attitude and pass it on to clients because they are not promoting it. But others get really excited [and are] thinking about special t-shirts for staff or some other promotional items to wear to motivate staff." (W)
Facing Challenges		
With Project Partners - continued		
Time constraints	Interviewees expressed frustration with limited amount of time to work on the project. Some stated that insufficient staff time was budgeted initially because they didn't know what to expect with regard to workload.	"Everyone is so over worked. We are doing our best with limited amount of time and resources." (P) "Knowing how much time it will take. I'm having to do volunteer services for myself at this time because I have no work time left for the grant in my regular work hours." (W)
With Clients		

Low participation	The most commonly identified challenge was difficulty getting the word out about the activities and recruiting WIC participants. When recruitment worked, interviewees expressed frustration with participants not showing up to activities. Each project attempted to address barriers to WIC participation, including transportation and childcare.	"No shows are hardest part. Classes have gone well. The food is wonderful. We haven't had complaints when people do show up. The younger moms who come say that their mother never cooked so they like learning how to cook. The hardest part is just getting people to come!" (W) "Still trying to get an interest for WIC families to participate. I think it's hard for them to think about gardening now when the weather is like this. I just keep talking and coming up with different ways to try and recruit WIC families. Since 70% of our town is on WIC if I hit early childhood education programs then I think I can access families this way too." (W) "Publicity – the hype around it. It just takes a lot of time to get people to join in and have fun. This will need continued attention over many years." (P)
Theme	**Discussion**	**Supporting Quote**
Strategies for Moving the Project Forward		
Among Partners		
Strong partnerships	Strong community partnerships were overwhelmingly identified as the key to moving projects forward. Interviewees described the process of building these partnerships as the cornerstone of their success. Partners and the different personal and professional networks partners brought to the table were instrumental to trouble-shooting, overcoming challenges, as well as building broader community support and gaining donations of time and materials.	"If I have a problem or question, I can list five different organizations I can call and ask other people and see if they can help me through it." (W) "Unrelenting support from partners has been key." (P) "The farmers here have been great partners for me, along with the school district in letting me use their greenhouse. WSU Extension also gives a lot of support for running the classes. I just keep putting the word out, showing up at different events, and if people contact me then I start up a relationship with them. Everyone is welcome to participate in the community garden." (W)

Flexibility	Flexibility was identified as a key ingredient to getting the work done. Partners described situations in which creative problem solving was necessary to overcome a challenge or when activities didn't go as planned.	"Solving problems as they come up. The cooking sessions weren't working so [a project partner] discussed it with me, and we decided to streamline the cooking sessions." (P) "Regular meetings work great for tweaking aspects of the project that weren't working to keep it moving forward. We would discuss things that weren't working that we needed to fix like how to teach classes and how we are going to change to improve the classes. For example, we didn't feel like we were reaching the Hispanic population so we started offering Spanish classes once a month." (W)

Theme	Discussion	Supporting Quote
Strategies for Moving the Project Forward		
Among Partners - Continued		
Dedication and motivation of project partners	Most interviewees cited the dedication, skills, enthusiasm, and motivation of partners as key to their success.	"We have a wonderful volunteer work with us. The key is having a great volunteer like her. She has been extremely dedicated to the project. We share project responsibility, so it doesn't feel like I have to do it all by myself." (W) "WIC staff are enthusiastic and good at recruiting people." (P) "[Project lead] is a great community partner. He is really good at planning and organizing people. He knows the community very well." (W)

Good communication	Interviewees frequently cited good communication between partners as a primary key to success. Many interviewees explained that the use of regular meeting times and special "debrief" meetings was particularly helpful. Some partners reported success with these strategies after initially struggling with communication and logistics.	"The biggest challenge was the nutrition educator quitting in the middle of the project. We were able to pull together and overcome it because of our good communication." (P) "Communication between us and staff has been great. The [project-related] information at monthly staff meetings is an important part since they are the ones scheduling the classes and promoting the farmer's market to WIC clients." (W)
Getting buy-in	Interviewees credited project successes with support from within their own organization. Comments spanned from getting buy-in from upper management to having front-line staff on board and excited.	"It was an easy sell to upper management. [Our organization] is mission driven. Community involvement is huge, and our focus is to help the community. Our organization is focused on preventative services. So when I approached them with this they said yes let's focus on going out to farmer's market. The organization has also given extra money to the project. I don't have to twist their arms." (W)

Theme	Discussion	Supporting Quote
Strategies for Moving the Project Forward		
Among Partners - Continued		
Good organization, clear role definition, manageable timeline, and good planning	Interviewees said that generally good organizational processes, planning, organization, and clear role definitions helped make their projects successful. Several reported learning the importance of these strategies after initial communication problems or early disorganization, and others came with a high level of organization.	"Planning meeting helped us get ahead of the game for planning with the farmer's markets this year. Last year was a huge learning curve." (W) "Clear timeline, benchmarks, and some keeping track to make sure that its meeting deliverables of the grant." (W)

Among Clients		
Worked to engage clients	Actively engaging WIC participants in activities was identified as helping to keep the project on track and successful. At some projects, participants were encouraged to be involved with the planning and organizational activities rather than be simply "recipients" of activities.	"Cooking itself with folks has been really amazing… The participatory nature of doing it together is going well, community kitchens are not a class. We are all doing it together. I don't act as the instructor." (P) "One of the WIC family moms will do a demonstration of square foot gardening at a garden show. I love the idea of giving opportunity to WIC families to give back and share what they have learned. Some WIC family participants are thinking about becoming a Master Gardener." (W)
Meeting participants' needs	Several interviewees expressed that their project was successful because they felt that participants were enthusiastic and it was meeting their needs.	"Participants are motivated to be [at the cooking class], and they go home and practice." (W) "Over time the clientele grew and grew. Last summer, and even this year, one time clients lined up for half a block waiting for us to come." (P)

Theme	Discussion	Supporting Quote
Strategies for Moving the Project Forward		
Among Clients - Continued		
Building awareness	Successful marketing of activities both into the community and among potential participants was identified as a key to project success. Different communities identified different strategies.	"In January we started doing more outreach and met with all the schools and any local agencies that would meet with us. We must have done over 50 meetings and five 45-minute PowerPoint presentations. We tried to cover the whole entire neighborhood. We handed out over 4,000 handbills to go home with all the kids." (W)

End of Project Interviews

Coordinators and partners completed the fourth set of interviews shortly after project funding ended. Interviewees answered a different set of questions than in the three process interviews

done during the project implementation phase. The questions are in Appendix 4. We focused on evaluation in these last interviews, asking respondents to summarize and draw conclusions regarding the impact, success, and sustainability of their projects. Table 4.10 below describes specific themes that emerged.

Table 4.10: Themes from End of Project Interviews

Theme	Discussion	Supporting Quote
Outcomes		
Among Participants and Community Members		
Increased food knowledge and skills	When asked what the most important accomplishment of the project was, interviewees most often cited increases in participant knowledge around food, including gardening, cooking, food preservation, exposure to new foods, and better understanding of nutrition principles.	"I think they are a lot of times wanting to provide more nutritious foods for their families, they just don't understand how to do it… Just to give them new ideas. I think that is a good thing. Part of that is that originally, this was going to be more of a food demonstration project. But, they had much more interest when they could actually help prepare it. More hands-on." (P) "I think it really did drive home our messages in a whole new way. We have always talked and given out recipe books and all these great handouts about nutrition ed, but it really did connect food and nutrition, and that's what we need to do. Like [WIC] staff would walk clients through the garden, show them what's being grown, and maybe having picked and washed some salad greens and taking it back and make a salad. And the kids ate it and liked it. Just that kind of messaging where you connect the pieces really drives it home." (W) "For free, they could get something that they never tried and try it. Because I was doing lessons on vegetables and every week new vegetables, I was trying to pick one that wasn't familiar. Something new at the market. And they tried it, right there, and went ahead and bought it. Kale, zucchini, summer squashes, most of them didn't eat them. I prepared them in very easy ways: 1, 2, 3 ingredients. And they liked them. Even after that, they came back and bought more of that. I used really easy ingredients: oil, salt, pepper." (P)
Increased produce	Many interviewees also cited an increase in	"It was just the volume of produce that they were able to grow and donate to the food bank. [The

Theme	Discussion	Supporting Quote
availability	accessibility of fresh produce as another important outcome.	coordinator] said she was really proud of the fact that they almost doubled their amount of produce they grew from what they expected. They exceeded their goal by 247lbs of vegetables. That's amazing." (P) "As prices dropped as the season went on, it appeared that people purchased more, so that was another way to increase access." (P) "I think bringing healthier alternatives to the area. We're in a depressed area. We don't always have options for fresh fruits and vegetables, and I think a lot of different people come to our center for other reasons, and when they see that, they stop by and get tomatoes or whatever they have, and I think that's a big accomplishment." (P) "I think a large part of it is that they were being given the produce. They didn't have the monetary resources to go buy produce, so consequently they were eating more." (W) "I guess I would just say getting this really fresh and really nutrient-dense food that we grow to a population group that might otherwise not have access to it. Just because of the money of it, or maybe they can't get to the farmers market on Saturday morning. Or for whatever reason, just not having access to it. And they were really, really appreciative and totally got it." (P)
Healthier eating	Often comments about increasing knowledge and skills and increasing produce availability were followed by comments about participants increasing their fruit and vegetable intake.	"Every last one of them said they tried new foods, they tried new recipes, they're eating more fruits and vegetables. And hopefully that's a lasting change for them." (W) "Also, I was surprised to see how high their fruit and vegetable intake was. I remember thinking when we wrote that in, 'Man, I hope that's true… I hope this is possible.' With the food bank, it's hard to say, especially before we knew we were going to get so many pounds of gleaned stuff, it was kind of like, 'Are they going to get enough to feel like they increased?" And they almost all

Theme	Discussion	Supporting Quote
		said they did. I was really impressed with that." (W) "I did some follow-up surveys of whether or not they had made healthy choices in their behaviors. I don't have the results in front of me, but I know there was some increased produce consumption." (W) "They really started eating more vegetables. Some fruit because we didn't have too much fruit option, but vegetables for sure. They started eating more and even started liking more vegetables that they never tried before." (P)
Expanded community perceptions of WIC services	Many stated that they felt an important outcome was that it broadened how others in the community viewed WIC and WIC services. They felt that participation in a community partnership project helped people realize that WIC provides preventive health education and services rather than simply a program that provides food checks. These comments were balanced between coordinators who are WIC employees and community partners for whom this project was their first experience working with WIC.	"I think it has made it so that more of us are aware of what WIC is to begin with. It's probably helped too in helping us to understand that's it more than a program that gets folks milk and all of that. It's more of a community partner and has more education than what I realized. Those of us who have been involved in partnership see the broader impact of what they do in the community." (P) "I think they see us as having a broader role in WIC. We're not just talking about food, but we're changing the whole food access system. With the farmers market nutrition program, we worked to develop those relationships with the farmers markets. I think there is a lot happening that the community isn't aware of that WIC's been trying to do for years." (W) "What I think is that it would have increased how anybody looks at them [WIC]. Any time you do anything new and innovative, it shows people that you're really thinking about the problem, about how a solution can be made beyond a band aid fix. By WIC taking a new step and teaching gardening that really shows that they are taking to heart the real fact that people aren't getting good food and nutrition. To me, that's a very positive thing that they are taking those steps." (P)

Theme	Discussion	Supporting Quote
		"I think it's not just milk anymore. It seems that WIC is trying to branch out and being more interested in wider reaching health. Trying to be preventive or expanding into not just what leftovers can we give you, but what can we give you that will be more balanced foods, a wider range of foods." (W)
Built community	Frequently they stated that one of the most important outcomes was that it built community. Coordinators that reported this outcome most often were those with activities focused around a public space, such as a farmers market or a community garden.	"For our elderly population, we have that senior housing complex that's right next to the garden. And that's been cool because they come out and give advice and interact with the kids and other people in the garden… And then it's also been cool in that it's brought some new kids to actually be in the park and use the garden. A few years ago, it felt like the park was just a place where people took their dogs to run around. It wasn't really a gathering place. And now because the community garden is there, if you go there, there is always somebody there. It's more of a hub now… We have quite a few kids who after school don't really have a place to go or on evenings and weekends. You'd see them milling around town. Now that the garden is there and people are using the park, the park has become a place to be and hang out. The mayor has said that there is less vandalism after the garden went in." (P) "Also exposure to the markets. It gave people who might not think of the market as a primary source of their food or as a community space a reason to come. It kind of got ingrained in them that on the weekends this is what we do. It's a nice community space. You're dealing with local farmers, and it kind of gives you a community bond." (W)
Increased community awareness	Interviewees frequently said that one important effect of their project was to increase community awareness of nutrition, gardening, food access and larger food issues.	"Probably the most important is that it's created a community-level interest and awareness of gardening and getting vegetables into our diet. And it's kind of gone from that being in the back of the garden to 'Oh yeah, this is a community effort.' It's really raised awareness of that." (P)

Theme	Discussion	Supporting Quote
		"When we have boxes and boxes of peaches out there, the people who handed them out might have mentioned, but also there just being boxes and boxes that are farm stamped… Or, when the apples came, at one point we got 12 bins of apples in one load, so we just had a bin of apples outside and just let people pull them straight out of the bin and bag them themselves. So, I think there is just the recognition of the difference in how they got the food. They recognized the difference between what they got from the farm versus what came from Wal-Mart or Safeway." (P)
Increased food equity	Some stated that they felt an impact of their projects was increased food equity among participants. Sometimes this effect on equity had to do with increasing access to fresh fruits and vegetables or involving low-income individuals in projects in a more participatory way. Other times it had to do with helping break down stereotypes of low-income individuals.	"Committed to community health though they are, they aren't necessarily committed to a real equitable kind of everyone has power and skills to bring to the table. It's more of a 'we'll do this *for* other people rather than *with* them.' I think that informs something somehow even if it was in a small 'Really? This person is here. Interesting.' And I had been looking for that to happen and asking for that to happen with this group for probably a year before the WIC grant was in place… So I think through [the food bank] and this really participatory project, it did happen. It broke a barrier of some sort. And I might be overstating it, but it feels to me that did happen." (W) "It reduced this stigma of coming and getting WIC at the market. So, it wasn't like, "I'm on food assistance and I'm getting the cucumbers from the bottom of the barrel." It was like, "I get to get this." I think that helped the WIC clients appreciate the food more and want to come back and eat more healthy produce. And that was probably a really good marketing maneuver from the farmer." (P) "To reach low-income people, to give them chance to be involved in farmers markets because usually low-income neighborhoods don't go to farmers markets because of the expense. It's pretty expensive for them. Even if something

Theme	Discussion	Supporting Quote
		isn't very expensive, there are so many things that are expensive that they can't go there because they will be tempted to buy more than they can, especially if they come with children: 'Mommy, I want…' Mama planned to buy spinach, but she bought raspberries, now she has no money to buy anything else." (W)
Among Partners		
Broadened and strengthened networks	Interviewees spoke most about the community partnerships that were formed as a result of the project. They felt that the grant helped them to build partnerships they otherwise wouldn't have pursued or allowed them to build and deepen existing partnerships. Some felt that these partnerships were the most important outcome because it opened doors for future work together and built stronger community bonds that lead to greater impact.	"It's so funny because you don't even think about the obvious that we need to partner with these other community services, and it's just such a natural thing to do but rarely does it ever happen. For us, that opened our eyes so that for us to be able to help our community we do need to establish a partnership with these other services all the way across." (W) "It's definitely kind of opened up those silos that we had before. And looking forward to any grant funding, we realize that it has to be a collaborative effort in order to be successful. We have so many resources if we open our doors and start talking with one another and see who is the individual expert for which area." (W) "They [partnerships] were new for me. That's what was harder part, going out to find these partners, where to find them, what to say to them. I wasn't really sure who to contact. It's been a really neat learning experience for me that I think helps in the long-run when you do other projects because you already have this partnership you've had before and you can kind of build on that even if it's not the same one. Or they know someone you can partner with in the future." (W) "It's definitely had a positive impact. It's definitely increased our partnerships. Before this, we didn't really have all that much of a working relationship with those organizations. Now I can't imagine going forward without at least contacting them to see if they're interested. Realizing that we're all trying for the same thing." (W)

Theme	Discussion	Supporting Quote
		"Partnerships are another thing that was one of our biggest accomplishments. Getting that information out there and building those connections…" (W) "I definitely credit this program with getting us all together. And once we are together, the ideas keep flowing. As long as we can continue to find pockets of money here and there, we can keep doing more and more and more." (W)
Community connections lead to new opportunities	Interviewees who spoke to the grant helping to build and strengthen partnerships also spoke about how their broadened networks led to greater opportunities for their organization or for the project. They saw these opportunities as a major benefit of forming these partnerships.	"Because of our ties with them, we were able to pull in funding and volunteers from the Campbell Group, which is a timber company in our area. They're giving some funding and volunteers to help with the fencing. It's pretty wonderful." (W) "I got a grant announcement for that in the last few days, and I passed that along to folks who I thought might be interested within the community garden and the [city]. And the [city] jumped on it." (P) "And then it's expanded a relationship with the markets for me at Extension in that not only do they want us to come back and do this, but they've asked us to come and do some other kinds of education around food preservation or kids preparing vegetables for snacks or something like that." (P) "I've sent [a community partner] a couple grant possibilities because she's pursuing grant funding. When things come across my desk that sound promising, I'll ship them her way. And she's asked me questions that are in a public health domain, so it has created that linkage." (W)
Cost sharing to sustain projects	When discussing plans for project continuation past the grant period, some talked about how all or part of the work would be funded by partner organizations going	"We have a volunteer group that's named themselves Friends of Garden that is continuing the community garden." (P) "So what we've determined is that [the food bank director] is really interested and had approached

Theme	Discussion	Supporting Quote
	forward. This "adoption" of activities by partner organizations speaks to the project's perceived value. Sometimes these "adopting" organizations were the WIC clinic, other times they were community partner organizations, and in other projects, they were volunteers.	me before the grant ended to say that he would like it to continue the community kitchen piece that I'm involved with, and that he would support it as he could. So anything that wasn't designated commodities and restricted to us, he would be happy to provide to us if that would help us be able to keep it going. And what I expressed to the participants was that once the funding was gone if they could see their way clear of putting in a dollar or three sometime, even if it couldn't be every time, if they could decide it was something they could support, kind of an ownership piece. They decided that was something they could do, and in fact, some of them had even started handing me a few bucks here and there and saying, 'This is for the kitty. This is for later.'" (W) "And every organization has decided that they can do a little bit in kind in order to help this progress, so that just leaves the produce budget , basic materials, and then to cover a little bit of staff time. Everyone has had something different to give, so that has worked out really well too." (W)
Lessons Learned		
Strategies for Success		
Partners build capacity	Interviewees commented that forming partnerships helped them build capacity in order to accomplish the work more efficiently and/or effectively.	"By convening with [community partner #1] and [community partner #2] and by having all these community partners, your capacity grows exponentially when you have more folks involved and more people who know other people and can network." (W) "Three years ago, [my organization] wasn't gardening, and WIC wasn't gardening three years ago. And [community partners] weren't handing out food at the food bank because that's not what they did. But, we all have the goal and by meshing different aspects of what we all have, it really turned into something that was beneficial for everyone. So, it's really just thinking of things in a new light and different angle where we can all work together to meet our goal. I think that's

Theme	Discussion	Supporting Quote
		how all partnerships are. You just need to think about it as you can't do all of the things yourself, but you can do this and you can tie A up with what they can do with B and pretty soon, you can get the full goal met, which is actually the goal that everyone is trying to reach." (P)
Multiple hats	Many attributed some of their successes to project coordinators and partners wearing multiple hats in the community. They said that the project was enhanced by partners being involved in many different activities in the community. This was expressed most often by interviewees from small, rural communities.	"That's one thing too that we're so fortunate to be a small community. Folks here wear more than one hat… For example, [one committee], which is a project of the Health Department, we have a member who is a member of [that committee], and he also happens to be a member of [a community partner organization], and he also happens to sit on the board of… our food bank. So different people wear different hats. The word about our program gets brought up at all those different meetings. Word of mouth out here is always better than anything else." (W) "In [our] county we have [a food systems group], which actually I'm a part of. And then [the coordinator] from here at WIC in [our] county has been coming very regularly so that she can be in the know as far as food is concerned. We wind up crossing paths in several different organizations but they are all intertwined." (P) "One thing builds on another even though they aren't directly related because they are the same people involved in these projects." (W)
Taking ownership	Interviewees also expressed that having partners and/or participants take ownership of the project and be fully invested in its outcome increased successes.	"I think within the WIC community, the value of getting local leadership early. While it's a WIC-led effort, the coordinator from this past year, in particular did a really terrific job bringing in leadership from schools and community members who were interested in helping. When she brought in that leadership, she also brought in some ownership. All of these folks, if they had just been asked by the WIC clinic, 'Hey, can you help us?' I think it would have fallen flat. But Melissa went out and said, 'Hey, I need you to get some leadership for this school program. And I need you to help us get this… group going.' She

Theme	Discussion	Supporting Quote
		gave specific tasks that people could take ownership of and push forward. It wasn't like here's a job, do it. She brought them in and did a great job of giving them ownership of their part, and that's why it kept going and was so successful." (P)
Institutional learning	One possibly unanticipated outcome described by interviewees was how these projects shaped their own thinking or their organization's approach to doing this kind of work. In these cases, they described how these projects provided a space for experiential learning that allowed them to take the work in new directions.	"I don't think that we have hit upon any great success to getting WIC participants to have a garden. I think we need to rethink that. Maybe we need to look at a way that throughout the summer we can have a way to get produce samples to WIC clients. At least that is the lesson I learned from it here: 'No, I'm not going to convince this group of people to go out and garden, but when I have a big basket of produce sitting on the counter between me and them, it really, really improved the ability I had to educate them, to get them to try new things.'" (W) "And then, just being able to think about how to market. That was a learning curve too… It kind of helped when WIC was in the market because our caseload numbers were going down. So, right after that is when we started noticing the decline. We had this experience where we thought… A lot of the things that we learned from marketing at the farmers market could then be applied to marketing our clinic to increase our caseload." (W) "I don't think we understood how fundamental that cooking piece was to teaching fruit and vegetable acceptance. For me, it's always been more of a theoretical thing and not a practical thing. But now we realize that if you take food from a garden and prepare it for clients in a classroom setting, it makes a huge difference in their willingness to accept that item and to maybe grow it at home… I think this reinforced our need to do the SNAP-Ed plan and the need to reinforce to our WIC staff, who are somewhat reluctant, the need to do cooking classes. It takes a lot of time, and it's hard when you have a busy schedule of clients to see." (W)

Theme	Discussion	Supporting Quote
		"Getting this grant and being able to do this project moved the mission and my own vision of the work forward. Just being able to be out there and experience that. I would say that this project was wildly successful not because the farmers market was successful but because it changed my vision of the work, and that will be obvious in the next five years or so." (W)
Facing Challenges		
Low participation	Many projects struggled with low participation. Many interviewees expressed frustration with this and felt they had done everything possible to reach people. Sometimes low participation was specific to WIC participants and at other times it was generalized to all clients.	"I think it had a bigger impact on others in the community than it actually ended up having on WIC with more participation by community members, 4H kids, school classrooms, and the general population of the community. I was impressed with how many plots ended up being taken. It's a rural community, I seldom think of people needing a garden plot." (W) "Our project included doing a series of cooking classes, gardening classes, canning classes, that kind of thing. There wasn't a huge turnout. Like I said before, that was kind of hard. Sometimes you'd have some interest but having follow-through… we learned that childcare was a good thing to have." (P) "Participation was still a challenge. We offered child care, and I know that helped with some of the families who said that helped and that they couldn't have done it without childcare. I'm surprised it wasn't utilized more and we still had five families drop out. It was mostly in the beginning, but it was one or two at a time. It varied as to the reasons. For someone it was like, 'My child just started soccer practice, and I just can't get there.'" (W)
Partners participation	Interviewees from two projects reported they received less support and participation from partners than they had originally planned. While this problem affected only a small	"I think they are just busy. It is something that is just on the periphery of their awareness, and they have tons of work, and they have to hurry and do it." (W) "Demographically speaking, they are the perfect partner. Leadership-wise, I don't have a lot of

Theme	Discussion	Supporting Quote
	number of projects and could primarily be attributed to loss of project leadership due to staff turnover, the effect was dramatic.	confidence. As a small non-profit, they lost something like half of their operating budget this year… They kind of have to get back on their feet before taking anything big on." (W)
Finding funding for project continuation	The last interviews were conducted as grant funding was ending. Several interviewees cited difficulty finding funding to continue their work.	"Well, I'm not sure. The last meeting I was at, they were saying that they weren't sure if funding would follow through. At the time, I was with [the farmers market]. I have since been laid off with the assumption that if WIC is back at the market, I'll be asked back. If not, then not." (P) "We'd like to have the classes continue. It's a strong possibility. We're planning to have that happen if we get some funding to buy food." (P) "… once these projects end, I do worry about sustainability. You build gardens or create plots of land where people can garden, and I don't know what is going to happen to those pieces of land. WIC doesn't have the time for gardening, so we can't assure that those plots are going to be farmed. And it is part of our overall vision and mission, but once you lose funding, you do fall off track quickly." (W)
Institutional rules/regulations	Several interviewees cited different institutional rules and regulations that they felt created barriers to getting the work accomplished.	"We didn't do food demos this year. The health department was having an issue with it. They said that we could have chefs come in and do demos, we just couldn't hand out samples, and that kind of killed the whole process." (W) "[The health department] is a very deep organization with lots of regulations and red tape, and other food systems can have none of that so that there can be hold-ups… and if you don't have either a WIC person or a food systems person who is aware of it, then it kind of pops up on you and then there could be problems… There are just so many of them, that no one knows until you break it." (P) "The real WIC checks that people use at the store. They have fruit and vegetable check for $6 or

Theme	Discussion	Supporting Quote
		more. And probably 50% of clients who came to the farmers market were very disappointed that they couldn't use that check at the farmers market… That was one that people really wanted. They said, "Why? It says vegetables. Why can't we use it for vegetables?" Because there's no way to cash it, that's why… Maybe there is a way to increase the amount or make it so they could spend it here and there." (P) "Environmental health [at the health department] is also a big part of our food system, so they also need to realize that making it easier to give samples can reduce barriers to increasing exposure to fresh fruit and vegetables." (W)
Vision for the Future		
Build food-related skills	Many expressed a need for building cooking and gardening skills among WIC participant and other low-income clients.	"I always think back to this one woman who said, 'I can put two huge boxes of carrots on the table in a food insecure environment, and I've provided access, but I can't make people take them. I can't make people eat them.' So, you have to work on both ends. That's what I was saying about doing it in one place. Put the carrots out, but also engage clients, educate them, form relationships, form trust. It's so much bigger than throwing them a carrot." (W) "When we started doing gleaning, not only did we start getting ample peaches and things like that, but we also started getting greens that no one had heard of or other produce that people aren't used to using. So, we think by adding the cooking and food preservation classes, it's actually going to help them utilize the stuff that we get gleaned." (P) "I think realizing that a lot of this population doesn't know how to cook and they have a very limited repertoire of the fruits and vegetables that they eat. So, if you're going to grow fennel, you have to tell people what to do with it, whether it's cooking classes or samples or tasting or recipes or whatever. You have to find ways to introduce these things to people. They have to be able to do

Theme	Discussion	Supporting Quote
		something with it." (P)
More intensive and comprehensive interventions	Many saw these projects as simply the tip of the iceberg for changing eating behaviors. They talked about needing a more intensive and/or comprehensive approach to start to see changes in fruit and vegetable consumption.	"We would certainly like to eventually be able to spread that throughout the community and make that more wider reaching into the community than what we are doing right now. If there was an option of doing that, expanding the gardening piece and finding ways to reach more people." (W) "It is also important to me that there's consistency so that we are reaching the same family over and over again and hopefully helping them create a taste or a habit than just a food bank-type giveaway. They get hungry for it, if you will." (P) "When you're giving those messages to clients and imparting knowledge and skills, perhaps because of that trust, they'll stop and take it in. Maybe or maybe not, they'll change their behavior, but that takes a long, long, long time. Changing food systems is a long, arduous effort. While it might be a quick fix to put a box of carrots on the table, it's not a quick fix to change your clients' behavior into accepting carrots." (W)
WIC takes a broader role	When thinking about the future of this type of work, interviewees emphasized the need for local WIC agencies to be engaged with the community to develop solutions for improving population health and issues related to foods. Most comments like these were made by WIC clinic staff.	"I think that the most important thing for them to know would be that WIC can be a part of the food systems work. I don't think that people often think that WIC can be a part of it. The fact that the people managing and coordinating WIC are usually really interested in food and food systems, so there's the interest there. And we can be part of it." (W) "To me, it just makes sense that every WIC clinic should have a garden and that should just be part of the funding and part of the job." (W) "It just seems like there is a lot of emphasis put on nutrition education, but it also seems that in terms of people seeing WIC as a little bit better than a food stamp program, but instead a program

Theme	Discussion	Supporting Quote
		that is dedicated to helping families eat healthier. And I think the farmers market checks do that, and the classes do that, but having some sort of outreach component of WIC that helps connect with the community in a really concrete way. That would basically do this, but ongoing." (W)
Improved access to healthy foods	Interviewees often pointed out during these interviews that there is a need for improvements to accessing healthy foods for low income people. Also discussed was that WIC participants and others do desire healthy foods but often lack access to these foods due to high cost or unavailability.	"And so I think that WIC should know that about their clients. WIC and USDA in a broader sense should know that food assistance clients in general, like the rest of us, want to feed their families well. And they are probably sick of hearing 'Hey, you ought to eat better' and 5-a-day when they are food insecure… and we're still giving them these messages, so it's like, 'Okay, thanks for the information. You've really stressed me out and made me feel guilty.' I think that is such a key message." (W) "One thing that came to my awareness is that something that the larger WIC community can hear is that our clients want more fresh fruits and vegetables. I think that the checks they get from us, they get plenty of juice. They get plenty of milk and different things, but it's really not a lot of fresh fruits and vegetables. But the feedback that we got was kind of overwhelmingly was that our clients really appreciate more access." (W) "What WIC need to know is that our clients want the healthy foods. They want the fruits and vegetables. A lot of them want organic, or sustainably grown, or ecologically responsible vegetables. And a lot of them want organic milk too if you want to throw that in there. But, I think that's a key thing. They really do want that." (W) "Well, I think that WIC clients really perceive fruits and vegetables as being expensive items. They don't often have the disposable money to purchase them, so they tend to get only what they can get on their WIC coupons, which isn't a lot. So their fruit and vegetable intake is so low. We know that, so we need to find ways to increase access to fruit and vegetables by working to

Theme	Discussion	Supporting Quote
		increase the value of the WIC fruit and vegetable checks or doing something at a policy level to make it easier for WIC clients to get to farmers markets." (W)
Taking an equitable approach	Many also saw increasing food equity as an important part of the work as it moves forward.	"Part of the mission of my farm is that we take, typically young but not always, wannabe farmers and put them in an apprenticeship role… More and more, I hear from them that these food access issues and these food justice issues are very important to a lot of them. They come with concerns about that and want to incorporate that into their own farm mission—how to bring food to groups like WIC. These apprentices are all so fired-up about the WIC project. They want to help with it, are really curious about it. It is very inspiring to them and has really fueled their ideas so that when they go out and start their own farms, they are going to go out and look for these same kinds of alliances." (P) "I think where this project missed the mark was that we didn't get any client input except what was said at the booth. Maybe we should have had a couple WIC clients as part of the planning process. This is an interest of others if the project continues." (P)

Common Measure Client Survey

Projects experienced many challenges with the correct administration of this survey.

- At the beginning, two of the 12 projects did not plan to use this survey as an outcome measurement because the use of individual repeated surveys did not fit with the intervention plans.
- None of the other 10 sites had their participants complete the survey in a way that provided useable data.
    - Several projects had communication gaps between outgoing and incoming staff.
    - In other cases, staff misunderstood the intent of the survey and who was to complete them.
    - Others simply forgot to give the survey because they were so heavily involved with starting their projects and the day to day work of WIC.

We collected 64 usable pretest/posttest surveys (32 matched pairs) among three projects. Because of data quality issues and low survey numbers, we didn't analyze this data. The reasons for the incorrect administration differed. Table 4.11 presents each project's challenges and reasons for incomplete and/or missing survey data.

Table 4.11: Common Measure Client Survey: Results and Challenges

Site	Intended Survey Respondents	Contributing Project Challenges	Survey Outcome
1	Class participants	Very few current WIC participants attended classes; anecdotal reports of class participants currently enrolled in WIC who didn't report WIC participation.	No surveys completed.
2	Gardening participants	Mistakenly administered survey to all WIC participants, not specifically to intervention group.	No matched pretest/posttest surveys.
3	Farmers market participants	Forgot to administer survey in year 1. Misunderstanding between project and state about timing of activities led to no posttest surveys in year 2.	No surveys completed.
4	Gardening participants	Loss of project lead staff. Lack of communication among exiting and entering staff members about status of survey administration.	No surveys completed.
5	Class participants	Very little repeat attendance at classes. No matching pretest and posttest surveys.	No matched pretest/posttest surveys.

Site	Intended Survey Respondents	Contributing Project Challenges	Survey Outcome
6	Class participants; gardening participants	Loss of project lead staff. Lack of communication among exiting and entering staff members about status of survey administration.	26 matched pretest/posttest surveys. Unclear whether sample had participated in intervention.
8	Class participants	Staff forgot to give surveys. Very little repeat attendance to classes.	No matched pretest/posttest surveys.
11	Class participants	Staff forgot to administer posttest survey in year 1.	16 matched pretest/posttest surveys from year 2.
12	Garden participants	Loss of project lead staff. Lack of communication among exiting and entering WIC staff members about status of survey administration. New staff administered test to participants receiving fruit and vegetable education, not garden participants as intended.	22 matched pretest/posttest surveys.

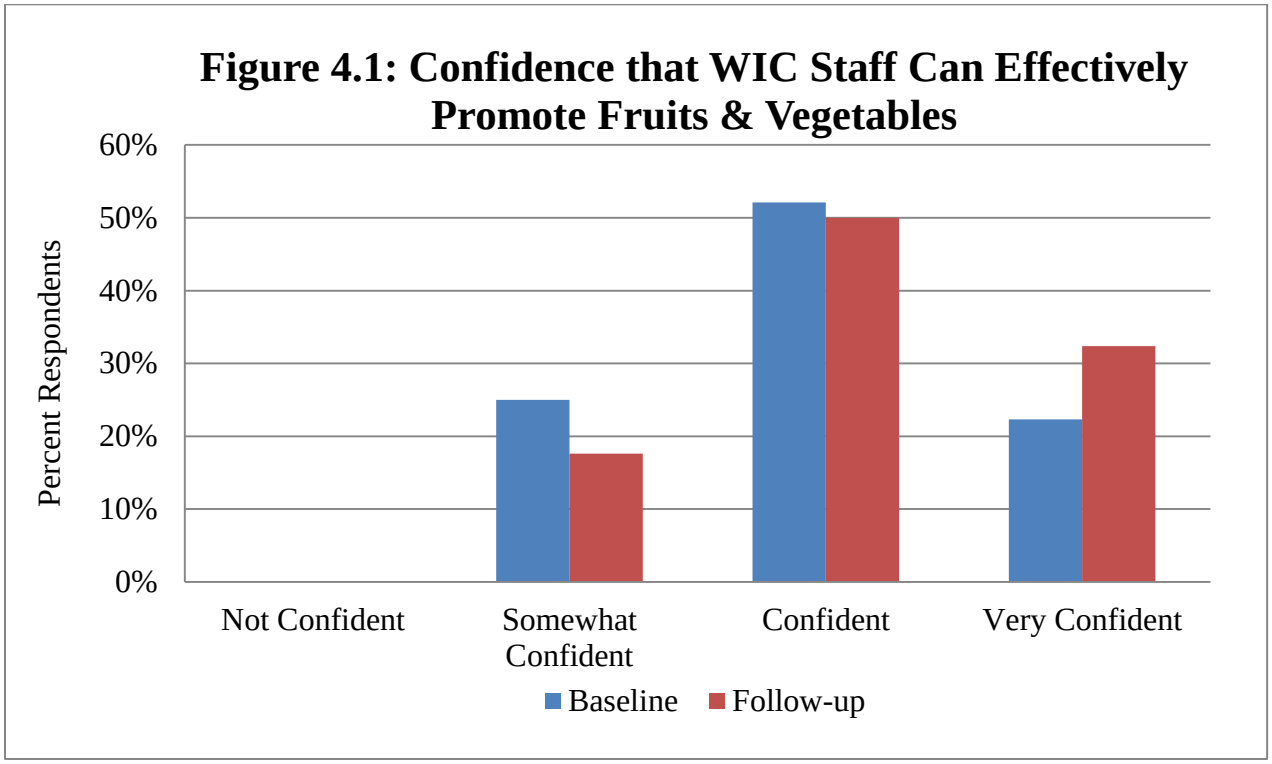
WIC Coordinator Survey

Figure 4.1 through Figure 4.5 provides a window into WIC coordinators' perceptions regarding local WIC staff ability to change fruit and vegetable consumption patterns among participants. These graphs show the spread of responses across a Likert scale of confidence: not confident, somewhat confident, confident, and very confident.

- Coordinators appear confident that WIC staff have the necessary skills to promote fruits and vegetables and that WIC can increase participants' knowledge.
- Fewer coordinators report that they are confident they can increase participants' self-efficacy to eat more fruits and vegetables.
- When asked about WIC staff's ability to increase actual consumption of fruits and vegetables, WIC coordinators report more ambivalence.
- When asked about their participants' access to fresh fruits and vegetables, very few coordinators (<10% in both baseline and follow-up surveys) report that they are very confident, in contrast to increasing knowledge, in which 40% reported high confidence.

These results suggest that while most coordinators feel that WIC clinic staff have the skills to promote fruits and vegetables and the ability to increase knowledge and self-efficacy among WIC participants, fewer are confident that these actions will result in actual behavior change.

Even fewer are confident that their participants can fully benefit from these WIC staff skills because of limited access to fruits and vegetables.



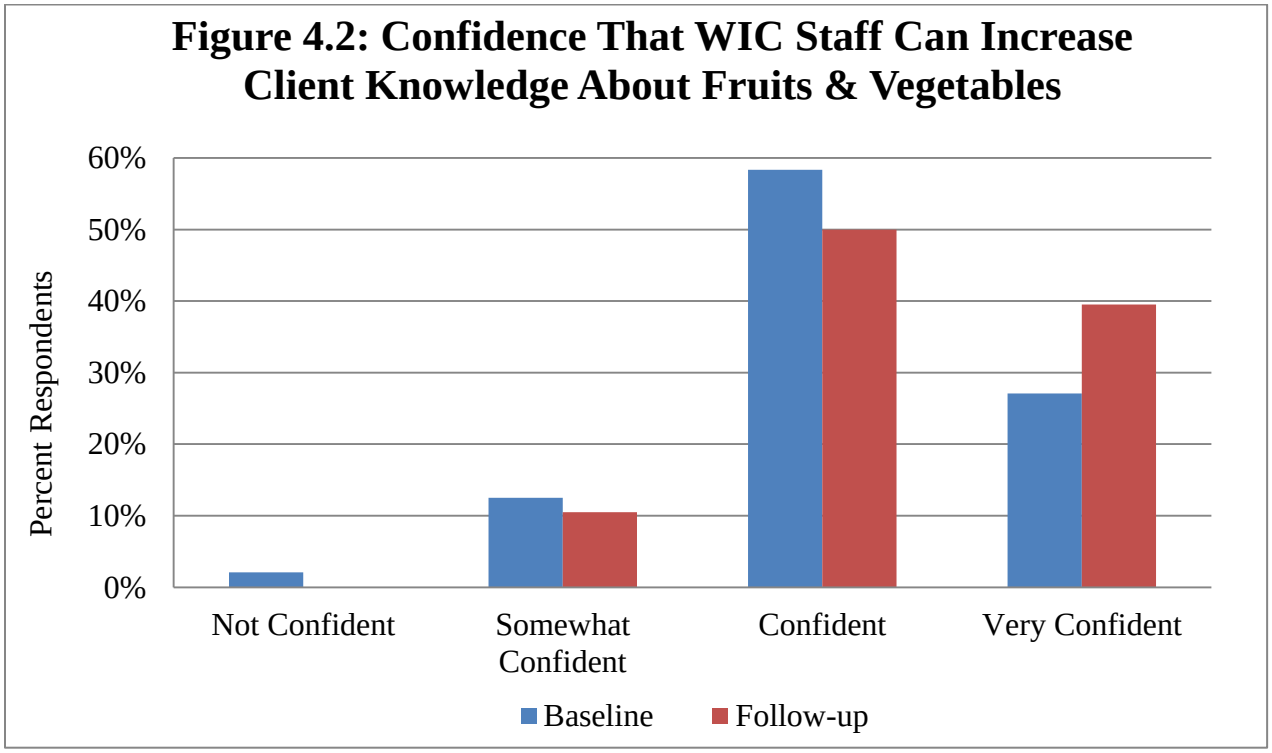


Figure 4.3: Confidence That WIC Staff Can Increase Client Self-Efficacy to Eat More Fruits & Vegetables

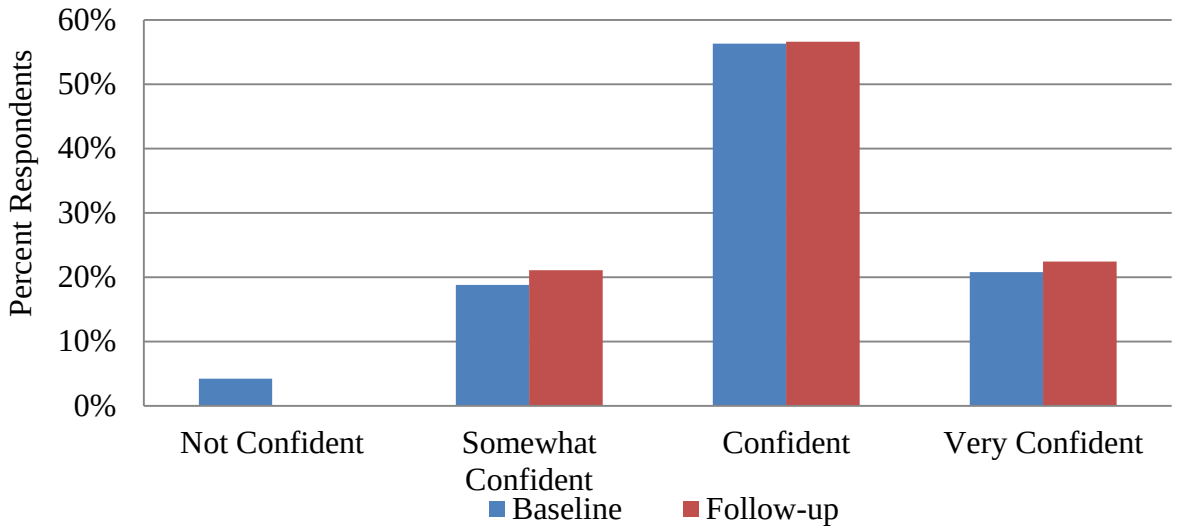
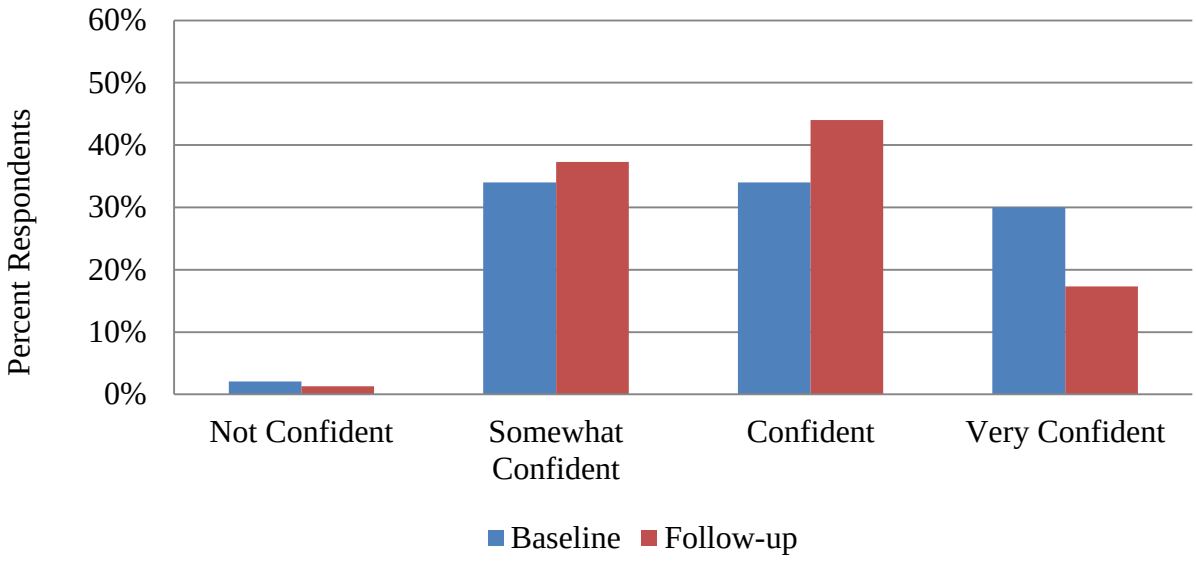
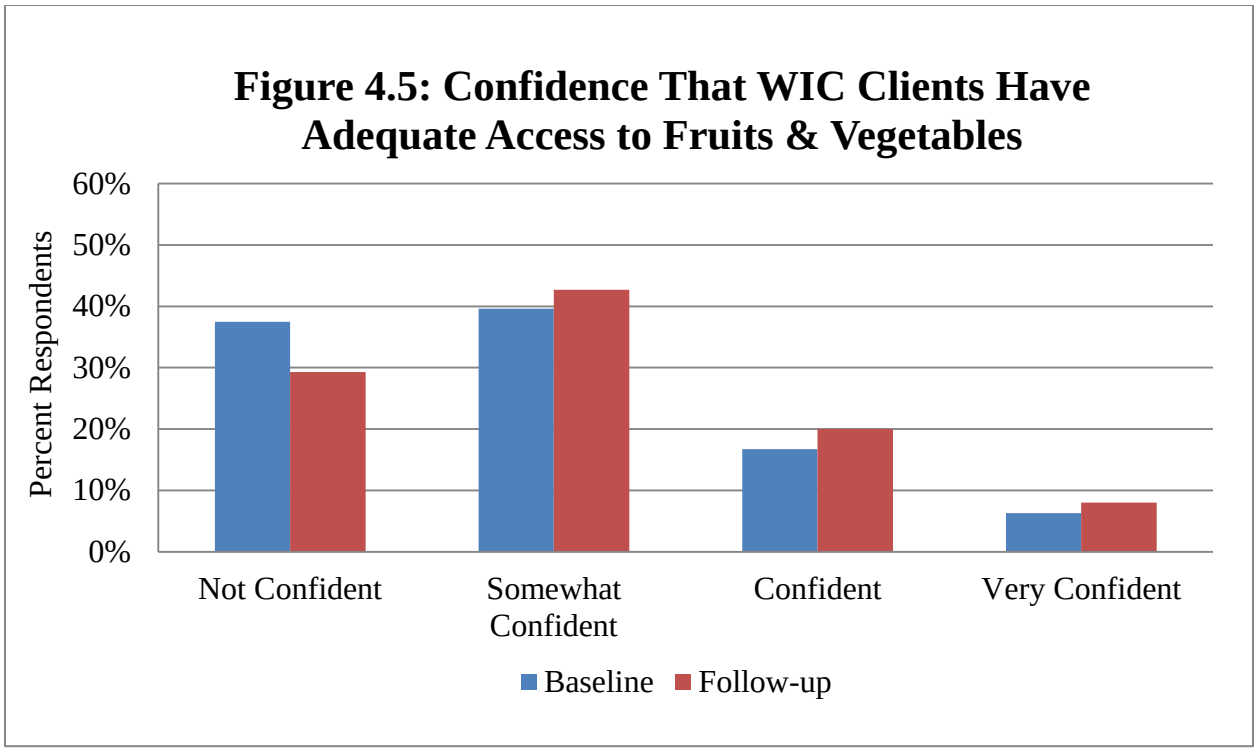
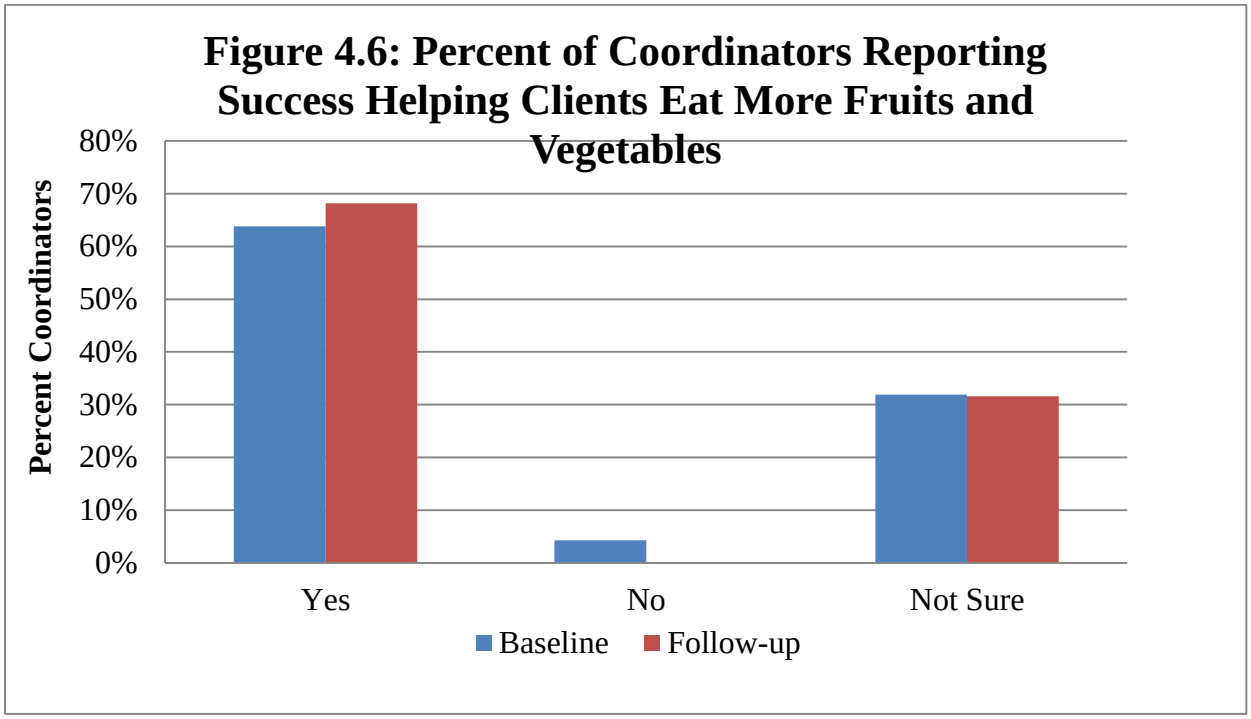


Figure 4.4: Confidence That WIC Staff Can Increase Client Consumption of Fruits & Vegetables





We asked coordinators if they have had success helping WIC participants increase their fruit and vegetable intake. Responses were very nearly the same from baseline to follow-up survey. Figure 4.6 shows that most coordinators felt they had been successful.



Responses to the two qualitative questions on the survey, which asked respondents to describe what made them successful, are summarized in Table 4.12. Responses were coded according to type of activity respondents reported as successful. At baseline, 37 of 48 respondents completed these long-response questions. At follow-up 57 of 76 respondents completed at least one.

Open-ended responses on both baseline and follow-up surveys described many traditional nutrition education approaches, such as pamphlets, bulletin boards, and one-on-one counseling that aimed to increase WIC participants' knowledge about fruits and vegetables. These more traditional methods of nutrition education were cited most often. The second most often cited successful method identified by coordinators was to increase access to fruits and vegetables, such as by increasing availability of these items in local stores or decreasing the price of items. Most respondents said availability of fruits and vegetables on the WIC checks or the Farmers Market Nutrition Program (FMNP) checks are effective ways to improve access to fruits and vegetables. Some clinics reported their own activities that fell outside traditional WIC services, such as working with a local store to carry more produce. The number of clinics reporting cooking classes or cooking demonstrations as effective increased from baseline to follow-up. They held classes and demonstrations both in the clinic as a WIC class or at the farmers market at the same time as the distribution of FMNP checks. Less often they mentioned promoting gardening among participants and training and education for WIC clinic staff.

Table 4.12: Successful Methods Identified by WIC Coordinators for Promoting Fruits and Vegetables

	Traditional nutrition education	Increase access to fruit & veg (e.g., increase availability, decrease price, etc.)	Cooking education and/or food demos	Gardening (education or providing gardens)	Staff education
Illustrative Quotes	"One to one discussions with WIC clients as they come in to their appointments. We take the time to find out what they have purchased with the WIC fruit and vegetable checks and promote the local healthy corner store and visited with clients there." "We do facilitated group discussions once per week, but the topic varies. Sometimes we touch on fruit and vegetables as healthy choices for families. WIC certifiers discuss the importance of fruits and vegetables and the RDs often talk about specific ways	"Since the WIC program provides the voucher for fresh fruits & veggies, this is the most significant action we have made to really be able to 'put our works into action.' Everyone knows they should eat more - but if they don't have the resources, it's not going to happen." "Client participation in the WIC Farmers Market program has made the biggest impact on the increase consumption of seasonal fresh fruits and vegetables."	"Our WIC nutrition assistants have been doing WIC nutrition education cooking classes using fresh fruits and vegetables during the past year. Client comment cards indicate that the clients enjoy these classes and plan to try the recipes at home." "Hands on cooking demonstration classes are effective. Handing out food samples during farmer's market check distributions."	"The most important outcome of this project is the fact that we were able to educate individuals on a way to become more self-sufficient. Teaching individuals how to garden is a great step towards having those lessons taught to their children. Those children will be better off nutritionally and in their confidence to be self-reliant because of it." "Last year a Master Gardener provided garden plots for families interested in growing and preserving the fruits and vegetables they grew. Many WIC families learned how to make jams and jellies plus preserve vegetables by canning."	"Chef Training to engender the high interest that the staff have in cooking, tasting fruit and veggies."

	families can include more. We give out various recipe booklets including the Dole 5-a-day cookbook."				

Table 4.13 shows the results of the chi-square test for association between baseline and follow-up surveys. Within the table, "confident" refers to both "very confident" and "confident" survey responses. We collapsed Likert scale responses (not confident, somewhat confident, confident, and very confident) into dichotomous variables for analysis.

Table 4.13: Comparison of Baseline and Follow-up Responses for Coordinator Survey

Survey Question	Baseline Survey Confident Responses N (%)	Follow-up Survey Confident Responses N (%)	p-value*
In general, how confident are you that WIC can increase clients' knowledge about the benefits of fruits and vegetables?	41 (85.4%)	68 (89.5%)	0.695
In general, how confident are you that WIC can help clients believe that they really can find ways to eat more fruits and vegetables?	37 (77.1%)	60 (78.9%)	0.983
In general, how confident are you that WIC can increase the consumption of fruits and vegetables in WIC families?	30 (63.8%)	46 (61.3%)	0.932
In general, how confident are you that your WIC clients have adequate access to affordable, high quality fruits and vegetables in their communities?	11 (22.9%)	21 (28.0%)	0.677
In general, how confident are you that the staff at your WIC agency have the skills to effectively promote fruits and vegetables to WIC clients?	36 (75.0%)	61 (82.4%)	0.445

* Chi-square test of association

We found no significant associations, which indicate that no changes occurred in coordinator confidence regarding fruit and vegetable promotion during the project period.

Because of confidentiality concerns, researchers didn't design the survey to identify the coordinators participating in the projects. If we had identified coordinators, we could have then compared changes in this group to other coordinators in the state. That would have provided a clearer picture of whether these projects changed coordinators' attitudes around fruit and vegetable promotion.

Nutrition Education Plan Abstraction

The research team drew from three years of nutrition education plans for all local WIC agencies in Washington State. The WA Nutrition Education Plan (NEP) asks local WIC agencies to document in detail how they will promote fruits and vegetable for WIC participants in the current year. They also report on outcomes for fruit and vegetable related efforts from the previous year. The core grant team was interested in looking at whether the 12 projects encouraged other local WIC agencies to work with community partners to increase education about or access to fruits and vegetables. The NEP does not have a section for reporting partnerships nor did we define it. The researchers simply abstracted the plans noting the number and type of partnerships. Table 4.14 lists the number and type of partnerships referenced by all clinics including the projects. Reported partnerships increased in 2011 and returned to near 2010 levels in 2012.

WIC agencies reported partnerships with food organizations more frequently than public health organizations. Most partnerships were with local farmers markets and farm stands. These partnerships almost always focused on giving WIC participants Farmers Market Nutrition Program (FMNP) checks at the farmers market in an effort to increase check redemption. The number of partnerships with farmers markets and farm stands increased in 2011, but decreased again in 2012. While the partnerships formed as part of the 12 projects contributed to this increase in 2011, the end of projects didn't cause the decrease in 2012.

There are at least two possible contributing factors to the 2012 decline.

- First, two projects were inconsistent in their 2012 Nutrition Education Plan about continuing partnerships.
    - They reported about continuing partnerships in their last quarterly interview (also completed in early 2012) and the 2012 nutrition education plan addendum survey (discussed below).
- Second, due to proposed cuts in the state budget, it wasn't clear to clinics if the FMNP would be available during the 2012 season or if the number of checks available at each clinic would be less. It's possible that clinics reported fewer partnerships with farmers markets and farm stands in 2012 because they were uncertain about the future of the FMNP. Coordinators didn't know if they could continue partnerships with farmers markets if funding cuts for the program happened. For example, one WIC coordinator wrote the following when asked about future plans: "Will work with Farmer Market

contact to hand out FM checks this year, depending on availability" and "We will be finding out soon whether or not we are getting farmers market checks for our clients."

While farmers markets were the most common partnerships, clinics seemed to engage in more diverse partnerships in 2011, such as with municipalities, Native American tribal programs and Head Start. Some of these unique partnerships carried forward to 2012; some did not.

While the nutrition education plans provide a good picture of the intent of local WIC agencies to engage in community partnerships around promoting fruits and vegetables, it's unclear if these plans reflect the true work happening in communities. For instance, four of the 12 projects didn't report any partnerships in 2011 even though they were actively engaged in partnership activities. It's possible that other clinics across the state don't report on their nutrition education plans about activities they are currently doing or are planning.

Table 4.14: Number of Community Partnerships Reported in Washington Local Agencies' Nutrition Education Plans

	2010	2011	2012
Total Number Nutrition Education Plans Received	**80**	**81**	**73**
Total Number of Partnerships Reported[1]	**44**	**65**	**46**
Number of Partnerships Reported by Projects[2]	**1**	**16**	**6**
Percent of Clinics Reporting Partnership	**45%**	**60%**	**48%**
Number of Public Health Partnerships	**3**	**7**	**6**
WSU Extension	2	3	2
County Health Department	1	--	--
Municipality (parks, transit)	--	2	--
Native American Tribal Programs and Coalitions	--	1	2
Head Start	--	1	2
Number of Food-related Partnerships	**41**	**58**	**40**
Local farmers market/farm stand	37	50	38
Local grocery or farm store	2	2	1
Farm	1	2	--
Community garden	1	3	--
Not-for-profit organization	--	1	1

Of 85 WIC agencies and sub agencies, 79 completed the 2012 nutrition education plan addendum survey. Forty-one agencies (51.9%) said that they had worked with community partners in the past 12-18 months to promote fresh fruits and vegetables. When asked whether they planned to work with community partners in 2012, 37 agencies (46.8%) said yes. Both responses are consistent with information obtained from the nutrition education plans. There are discrepancies for individual agencies between what they reported on the nutrition education plans and on the survey. This could be partly due to changes in the agency planning and

[1] Some agencies reported more than one partner organization.
[2] Some agencies did not include project activities in their nutrition education plans.

partnership development in the two months between the survey and the due date for nutrition education plans. Five of those surveyed commented that they were still making their plans for the year and would provide information later.

Table 4.15: Number of Agencies Reporting Planned Activities in Each Area

Partners	Number of Responses[3]
Farmers Market	14
Home and/or Community Gardening Groups	8
WSU Extension	5
Food Bank	3
Head Start	2
Community Coalitions	2
Local Non-profit Organization	1

Collaboration Factors Inventory

Table 4.16 shows summary scores for all projects combined at baseline and follow-up. Some sites had a very low number of respondents at either baseline or follow-up. In some cases, partners declined participation in the inventory or were unresponsive. In other cases, the projects experienced a loss of partners during the grant period, which limited the number of partners participating in the inventory. In cases with low response, partnership scores for the project alone were not a meaningful measurement of partnership function. However, taken together these scores provide a glimpse at how well these collaborations functioned, whether partnerships improved over time, and point to areas of strength and opportunity.

Wilder Research provides the following key for interpreting partnership scores.

- Scores of 4.0 to 5.0 – Strengths, don't need attention
- Scores of 3.0 to 3.9 – Borderline, deserves discussion
- Scores of 1.0 to 2.9 – Concerns that should be addressed

For nearly all success factors, scores improved from baseline to follow-up, suggesting that partnerships improved over the project period. We saw decreasing scores in only two factors: 1) "unique purpose" and 2) "sufficient funds, staff, materials, and time." It's reasonable that partners reported lower scores of sufficient funds, staff, materials and time when the grant funding was ending and partnerships were looking for new funding sources to keep the projects going.

By the end of the grant period, we identified 11 of 20 factors as strengths, and the remaining 9 factors as borderline. These scores suggest overall good partnership functioning across all projects. The highest scores were in the factors "members see collaboration as in their self-

[3] Total number of agencies reporting specific partnerships is less than total number reporting intent to engage in partnerships because some respondents did not respond to requests for additional information on the survey form.

interest" and "shared vision." This suggests that involvement in the partnership was consistent with the mission of the organizations and they agreed about the purpose of the work.

Table 4.16: Average Scores of Collaboration Success Factors for All Projects at Baseline and Follow-up

Collaboration Success Factors	Baseline	Follow-up
History of collaboration or cooperation in the community	3.8	3.9
Collaborative group seen as a legitimate leader in the community	3.9	3.9
Favorable political and social climate	4.1	4.2
Mutual respect, understanding, and trust	4.1	4.2
Appropriate cross section of members	3.6	3.9
Members see collaboration as in their self-interest	4.3	4.4
Ability to compromise	3.8	3.9
Members share a stake in both process and outcome	4.0	4.1
Multiple layers of decision-making	3.5	3.5
Flexibility	3.9	4.2
Development of clear roles and policy guidelines	3.3	3.6
Adaptability	4.0	4.1
Appropriate pace of development	3.7	3.8
Open and frequent communication	3.7	3.9
Established informal relationships and communications links	4.3	4.1
Concrete, attainable goals and objectives	4.0	4.2
Shared vision	4.2	4.3
Unique purpose	4.3	4.2
Sufficient funds, staff, materials, and time	3.5	3.2
Skilled leadership	4.0	4.1

Project Final Reports

Sustainability Plan, Key Successes and Lessons Learned

Table 4.17 shows self-identified successes and project-specific evaluation results, lessons learned, and the sustainability plan for all projects. We drew the information in this table from project final reports and quarterly interviews. Some sites created, administered and analyzed evaluations unique to their project. Below are the results of those evaluations. We provided technical assistance to projects initially for developing evaluation tools and protocols. In two cases, graduate students from local universities worked on the project evaluation for their graduate theses. The quality varies on the site-specific evaluations; we show the data below as it appears on their final reports.

Table 4.17: Sustainability Plan, Key Successes and Lessons Learned

Project Name	Successes and Evaluation Findings	Lessons Learned	Sustainability Plan
Back to Our Roots	• Following food bank cooking demos, participants reported a significant increase in their ability to consume fruits and vegetables. Food bank staff didn't document number of WIC participants served. • "Established relationships between WIC and partners in the Kittitas Community." • Participants attending 4+ food bank cooking demos (versus 1-3) were no more likely to have increased fruit and vegetable intake as measured by 24-hour recall.	• Would have liked to have food bank cooking demo participants attend 6 lessons to build confidence and skills as classes progressed. • Loss of WIC coordinator interrupted efforts to engage WIC participants. Project partners need to meet regularly to stay focused on promoting cooking classes to WIC participants.	• Cooking and gardening classes in the northern part of the county to continue as is with small attendance fee for participants if no additional grant funding can be found. • Food bank cooking demos to continue as is. Planning and implementing food demos now incorporated into a twice-per-year Food Management class for nutrition students. Student lab fees pay for food for demos and some food is donated by food bank. The food bank continues to provide space for the demos at no charge. • Community kitchens to continue as is. Attendees contributing to common fund to purchase food. Food bank to continue to provide free space. • New community kitchens started on CWU campus

			and at a 55 and older community residence.
People Learning Agriculture and Nutrition Together (PLANT)	• 10 gardens were built for WIC participants at their homes plus 1 demonstration garden at the WIC local agency. • WIC participants who had gardens reported increasing their fruit and vegetable intake by 2.9 servings per day. • 80% of garden participants said they planned to continue gardening and expand their garden beds. • 52,986 lbs. of produce was gleaned from 10 farms and distributed to 8 local food banks for WIC participants and others.	• Each garden and each gardener is different. Ask WIC participants which foods they would like to grow so that the garden meets their needs. • Ask farmers participating in gleaning how they would like gleans to be handled. It is also very important to train the gleaners well.	• Gleaning from local farms for donation to food banks to continue. • 10 additional families (not necessarily WIC families) to be provided with gardens, materials and instruction. Under new funding, project will expand recruitment to families with school-aged children. • Food preservation classes to be provided at food bank. WIC participants will be encouraged to attend. • Funding for gardens, gleaning and food preservation classes obtained through Walmart Foundation.
Project Name	**Successes and Evaluation Findings**	**Lessons Learned**	**Sustainability Plan**
Fresh Farm Foods	• Farmers Market Nutrition Program (FMNP) redemption decreased over the project period. Project staff speculate this is because checks were distributed at the new, small market instead of the larger local market. The local WIC agency distributed FMNP checks directly to participants at the market in 2011 - $8,472 in FMNP checks were spent. • "The most important outcome was the	• Good communication between the WIC clinic and the market was essential. • Need to create incentive for WIC participants to shop at the farmers market by promoting educational events and giveaways. • Need outreach materials available in Spanish.	• Without additional funding, project will not continue. • Marketing materials will continue to be used by WIC clinic and farmers market. • Partners committed to continuing relationship to foster other activities and opportunities.

	community partnership developed between [the farmers market] and the WIC agency. Tacoma Farmers Market has gained a lot of community support because of involvement with the WIC program." • WIC participants accessed this new farmers market in an area of town where no market previously existed. The resulting market stability means continued access for WIC participants and becomes a part of the local WIC agency's fruit and vegetable promotion and nutrition education.		
Home Gardening Project	• Garden participants reported increased knowledge of home gardening, nutrition knowledge and fruit and vegetable preference on pre/post survey. Home gardens were built for WIC participants and Head Start families (numbers of WIC families not available, though recruitment focused on WIC primarily).	• Partner new gardener and mentor within close physical proximity; maintain close contact with both. • Hands-on gardening education classes and workshops help build relationships between new gardener and garden mentor.	• Switching focus from home gardening to community gardening. Opening recruitment up to all low-income individuals, including WIC participants. • Local community garden group received grant to build additional garden beds. Some new beds will be reserved for WIC participants and other low-income members of the community. • Still in planning stages. Considering continuing with garden mentors who are also community gardeners at site. Would like to offer community gardening classes.

Project Name	Successes and Evaluation Findings	Lessons Learned	Sustainability Plan
Delicious and Nutritious	• All WIC participants surveyed said they had tried at least one recipe at home. All class attendees were WIC participants. • All recipes taught in class were tried by at least one participant. • "Moms were willing and enthusiastic about trying new fruits and vegetables and then preparing them for their family at home. The teachers of the classes were excited and actively participating as well."	• Use colorful and exciting materials in the language participants speak. • Demonstrate basic cooking methods (i.e., grating cheese, stirring quick bread batter, measuring incredients, etc.).	• Received SNAP-Ed funding to continue cooking and nutrition classes.
Healthy Beginnings	• Established several community gardens throughout the county serving WIC participants and others. • "I felt that one of the most important outcomes of this project related to the development of new community partners. We began to meet with groups that we had not previously been involved with such as the Master Gardeners and a community garden group in the north end. We also strengthened partnerships we did have, particularly with the WSU extension office."	• Provide good oversight and mentorship of AmeriCorp volunteers and other staff.	• Two groups active at north and south ends of the county working to create community gardening space not located at WIC clinics. Several sections of these gardens will be reserved for WIC participants at no cost. • WIC will add gardening and nutrition about fresh fruits and vegetables into existing nutrition education curriculum and will include in their WIC Nutrition Education Plan.

Project Name	Successes and Evaluation Findings	Lessons Learned	Sustainability Plan
Farm to Family	• 56.7% of WIC participants surveyed reported eating more fruit. 43.3% of WIC participants surveyed reported eating more vegetables. Surveys were given only to WIC participants, who made up 100% of the cooking class participants. • "The most important outcome of this project is the relationships built and strengthened between community organizations in Clark County, including WIC, WSU Extension, and farmers markets."	• Good communication and pre-season meeting makes everything run more smoothly. • Partners would like to include all low-income community members in nutrition education and produce-bag giveaway.	• Farmers market and WSU Extension to continue partnership to provide produce bags and nutrition education at the farmers markets. Will open to all low-income members of the community. • WIC clinic may provide staff to continue WIC cooking classes.
Bloom Where You Are Planted	• When surveyed, 79% of WIC cooking class participants said they learned "a lot more" about fruits, vegetables and cooking. Classes were held at the WIC clinic for WIC participants only. • 86% of WIC participants surveyed reported that they will increase their fruit and vegetable intake due to the class. • 92% of WIC participants surveyed reported preparing at least one of the cooking class recipes at home. • "Project provided for the development of new	• Staff turnover is challenging. Good communication between partners is essential to overcoming this challenge. • "The WIC staff is incredibly busy, making it hard for them to prioritize grant goals/tasks without advanced planning. It was a challenge at times to clear WIC schedules in order to accommodate grant work."	• Lutheran Community Services (LCS) to continue offering cooking classes at their kitchen in the same building with WIC. They have applied for several grants to continue activities. LCS will work with WIC staff to recruit WIC participants. • LCS will continue management of p-patch community gardens on property at WIC clinic and encourage WIC participants to take part.

	partnerships and improved communication and collaboration among community agencies and personnel."		
White Center Giving Garden	• Garden produced 547 pounds of vegetables donated to the food bank (nearly double projected amount). Some food bank clients are WIC participants. • "Creating relationships with coordinators from other vegetable garden programs."	• Schedule partnership meetings early in the project and meet regularly. Ask for technical assistance with meeting facilitation and building a structure early in the process if needed. • Staff changes created a challenge.	• WIC clinic is moving locations and no longer located next to food bank. • Food bank to take on responsibility for garden. Will fold garden management into existing volunteer activities. • WIC clinic to promote garden and food bank to participants.
Project Name	**Successes and Evaluation Findings**	**Lessons Learned**	**Sustainability Plan**
Community Roots Farmers Market	• "We know that the nutrition education has an impact on purchasing patterns. When the nutrition educator prepared baked kale chips, the market sold out in 30 minutes. And clients continued to ask for more each week." • "Without a doubt the most important outcome has been increasing access to high quality, fresh, organic vegetables and fruit for low-income families and seniors in the Hillyard area of Spokane. The people who came to the market really valued the service, experience and product that they	• Creating the infrastructure for the market (outreach/promotional materials, evaluation, tracking mechanisms and logistics of running the market every week) was quite challenging. • Other farmers were not interested in selling at the market because of the lower prices offered by the non-profit, volunteer farm. Most farms are for profit businesses. • "The market format was not an effective approach to distributing fresh, organic produce as originally envisioned. The work involved in creating the infrastructure and outreach for the market was tremendous."	• Project will not continue. P.e.a.c.h. Farm decided farm stand model was too labor intensive to continue. Is exploring partnerships with Head Start centers to start delivery of free produce boxes for Head Start families, some of which are WIC participants.

	received."		
Cook Fresh	• 100% of WIC participants who completed a survey reported increased intake of fruits and vegetables. • 62.5% of WIC participants reported trying 2 or more new fruits and vegetables. • 68.8% of WIC participants reported trying one or more of the recipes made in class. • "Additionally, WIC moms had the opportunity to meet each other and share their own ideas and recipes. During the second season, two of the participating mothers taught (and were paid for) three of the **Cook Fresh! c**ooking classes!"	• Providing child care allowed some women to participate who would not have been able to otherwise. • Participants learned a lot from each other and enjoyed the social time of the classes.	• Have applied for funding from Suquamish Tribe to continue free produce baskets and cooking classes. Will open recruitment to all tribal members, including WIC.
Project Name	**Successes and Evaluation Findings**	**Lessons Learned**	**Sustainability Plan**
Just Grow It	• "Improved community awareness of the need for increased produce availability in Wahkiakum County for many of the county residents." • "Transitioning the community garden to a vibrant local group that is committed to continuing the effort of increasing nutritious food availability directly through gardeners as well as	• Diverse community involvement and buy-in help ensure sustainability. • Having garden produce available for WIC participants to take home and try after their WIC appointments was a great strategy. It provided a talking point at appointments, and staff could share tips and recipes for cooking it later that night.	• Community garden to continue as is. Reserving several garden beds for low-income community members. • Partnership with food bank developing. Discussing possibility of relocating the food bank close to the garden to facilitate donation of produce to the food bank.

	local food banks." • Mayor reports the park that contains the garden now has less vandalism since the garden was placed. • 40 WIC participants in county took part in the community garden as well as others.		

Table 4.18 is a summary of outcomes according to specific goals, objectives and research questions.

Table 4.18: Evaluation Outcomes According to Goals, Objectives and Research Questions

Objective	Research Questions	Outcome
Goal I: Increase Effectiveness of Nutrition Education		
A. By the end of the project, at least 20% of local WIC coordinators will report increased levels of perceived efficacy for promoting fruits and vegetables in WIC compared to baseline.	• To what extent do all local WIC coordinators perceive that they can influence the fruit and vegetable consumption of WIC participants at baseline? • Do the perceptions of coordinators from agencies that have collaborative projects change more than those agencies without projects?	• No statistically significant change in coordinators perceptions was seen from baseline to follow-up. • Coordinators reported relatively high levels of confidence that local WIC staff can effectively promote and increase knowledge and self-efficacy toward fruits and vegetables in WIC participants. • Coordinators reported less confidence that WIC staff can change WIC participant consumption or that they have access to fruits and vegetables. • Project coordinators were not identified in the survey. The second research question is not answerable with current data.
B. By the end of the evaluation period at least 20% of individual WIC participants who took part directly in the projects will report increased behavioral capacity, self-efficacy, intention, expectation and behaviors for fruits and vegetables.	• To what extent do WIC participants perceive that they can increase fruit and vegetable intake at baseline? • Are demographic characteristics associated with fruit and vegetable perceptions or consumption? • Are there differences in WIC participants' fruit and vegetable consumption between WIC agencies? • Are there changes in WIC participant behaviors and perceptions between baseline and the end of the projects?	• No usable data was gathered due to problems with data collection at projects.

	• Are demographic characteristics associated with these changes?	
Objective	**Research Questions**	**Outcome**
C. By the beginning of the third year of the project, the consumption of fruits and vegetables by WIC clients served in the projects will increase by 20% compared to control agencies.	• Is there an overall impact on the fruit and vegetable consumption of WIC participants in project agencies compared to control agencies? • Are there specific characteristics of the project approaches that appear to be predictive of increases in participant fruit and vegetable consumption?	• Project #7 is the only site for which there was a statistically significant increase in both fruit and vegetable intake by WIC participants from baseline to follow-up.
Goal II: Build the capacity of local WIC agencies to garner additional nutrition education resources by building sustainable partnerships with food systems groups.		
A. By the end of the first year of the project, at least 10 local WIC agencies will have worked with local partners to develop innovative approaches to promoting fruits and vegetables in WIC.	• What types of community organizations are interested in working with WIC? • To what degree do the proposed projects appear designed to improve community empowerment, capacity, participation, relevance, access or critical consciousness?	• 12 local WIC agencies worked with community partners on innovative approaches to promoting fruits and vegetables. • Diverse community partners included WSU Cooperative Extension, local farmers markets, food banks, agricultural education organizations, farmers, gardening groups, social services, nonprofits and colleges and universities. • Interviews with project coordinators and community partners indicate the projects improved community capacity through building lasting relationships between the WIC agency and community partners.
B. By the end of the third year of the project at least 50% of WIC staff will perceive that they can apply at least one innovative	• To what extent will local WIC staff who were not involved in the projects perceive that they can transfer the successful approaches to their own WIC settings?	• Due to a procedural change of the Washington State WIC Nutrition Program, training of WIC staff not involved in the projects was

approach used in projects to their own WIC program.	• Which approaches are most likely to be transferred?	not completed.
Objective	**Research Questions**	**Outcome**
C. By the end of the third year of the project, agencies will have each engaged at least two public health or food-related organizations to create a long term plan for sustaining collaborations to promote fruit and vegetables intake in WIC clinics and communities. (See Table 4.14)	• To what extent do project agency's annual nutrition education plans reflect partnerships with community food organizations or public health groups at baseline? At year three? • What are the characteristics of these plans? • To what extent have additional WIC agencies adopted these approaches?	• 10 of 12 projects planned to continue activities past the grant period. All 12 reported developing significant relationships with public health and food-related community partners. • The characteristics of these plans were that WIC partnered more with food organizations than public health organizations. Most partnerships were with local farmers markets and farm stands. These partnerships almost always focused on giving WIC participants Farmers Market Nutrition Program (FMNP) checks at the farmers market in an effort to increase check redemption. The partnerships were not about nutrition education but about sustaining collaboration to promote fruit and vegetable intake. • Nutrition education plans revealed an increase in partnerships formed with public health and food-related groups in 2011, but not in 2012.

Chapter 5

Discussion and Conclusion

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

Chapter 5: Discussion and Conclusion

Discussion

The primary purpose of this project was to learn how to establish sustainable partnerships with local food systems groups to enhance WIC nutrition education and improve the diets of WIC participants. Overall, the project advanced knowledge in this arena, but progress was uneven.

Goal I: Increase the effectiveness of nutrition education for fruits and vegetables in WIC.

We measured progress at both the local WIC staff and participant levels using the WIC coordinator's survey and the WIC CIMS participant survey.

Coordinators: At both baseline and follow-up, coordinators reported more confidence in WIC's ability to increase knowledge than to change behavior. While local WIC coordinators reported high levels of confidence that their staff can increase participants' knowledge of fruits and vegetables, they were less certain that staff actually help participants to change behavior patterns. They perceived access to fruits and vegetables as a major problem with about three-quarters of coordinators reporting that they had low confidence in their participants' access to high quality fruits and vegetables. Altogether we saw no change in WIC coordinator perceptions from baseline to follow up. Due to local agency staff turn-over and some data that wasn't reliable, it was not possible to measure the change in the perceptions of WIC coordinators over time.

Participants: For the state as a whole, there were significant increases in fruit and vegetable consumption from baseline to follow-up. There were several activities happening at the same time within the Washington State WIC Nutrition Program that may help explain this positive finding.

- WIC added fresh fruits and vegetables to their food package in October 2009, seven months before the baseline measurement for the CIMS survey. It is possible that fruit and vegetable consumption increased because participants purchased more produce or because stores offered more choices and better quality since the policy change.
- State WIC staff reported more excitement around promoting fruits and vegetables after the food package change.
- In 2009-2010, the Farmers Market Nutrition Program (FMNP) enjoyed good support from the state and added to the number of farmers markets and farm stands allowed to take FMNP checks.
- In 2010, the Supplemental Nutrition Assistance Program (SNAP) changed their income guidelines and saw increased participation.

Rural communities saw a reversal to the trend toward increased fruit and vegetable consumption. It's unclear why this might have happened. The economic downturn has affected rural communities in Washington more severely. Families may have less money for fruits and vegetables because of higher rates of unemployment in these areas.

There were no increases in fruit and vegetable consumption for project sites as compared to control sites, except for project 7. One reason for this could be that project 7 gave the survey to all WIC participants at each site, whereas many projects focused their work on only a handful of WIC participants. Maybe the scope of this evaluation measure was too broad to detect an effect of project activities. Project 7 is different than other project sites because it targeted only WIC participants and had wider participation. They also carried out project activities throughout the calendar year, rather than only during the growing season. This project saw significant increases in both fruits and vegetables as compared to a control site. It is possible that the reach and consistency of project activities caused this positive shift in consumption patterns. However, it's probable that there were local changes going on at the same time that contributed. The county where this WIC clinic is located has a longstanding active food systems council that developed several initiatives that increased access to healthy foods. There is organizational and individual overlap between those working on the WIC fruit and vegetable community partnership project and those working on other local initiatives. It's likely that these factors enhanced outcomes.

Local project coordinators and community partners said in quarterly interviews that working together helped them be successful. This was especially true of smaller communities where individuals wear multiple hats. They said that having more than one role allowed sharing of ideas and activities that contributed to success. One community partner noted: "One thing builds on another even though they aren't directly related because they are the same people involved in these projects."

We found that quantitative measures of nutrition education and fruit and vegetable intake were disappointing. On the other hand, qualitative measures show that local projects *felt* they had a positive impact on education and behavior. Even though the Common Measures Client Survey and CIMS participant survey didn't show the results we expected, local agency project coordinators and partners felt that participants increased knowledge and skills around growing and preparing food and were eating healthier. Local project staff also noted that the activities of the project led to better access to fresh produce, a broader view of WIC's role in the community, and generally helped to build community by bringing people together.

Goal II: Build the capacity of local WIC agencies to garner additional nutrition education resources by building sustainable partnerships with food systems groups.

Before we started this project, we didn't know if local WIC clinics could successfully step outside their accustomed roles to build partnerships with food systems groups. These 12 local project sites show that collaborative partnerships are possible and desirable in WIC.

The results of the quarterly interviews with project coordinators and community partners were clear: almost all of those participating in the projects felt like they broadened and strengthened their professional networks to build capacity and led to new opportunities. Many stated that this was the most important outcome of the project. They felt that connections with partners built

capacity that would carry into the future and help in other projects. One project partner said: "I definitely credit this program with getting us all together. And once we are together, the ideas keep flowing. As long as we can continue to find pockets of money here and there, we can keep doing more and more and more."

Further, it seems that these partnerships will persist through time. For several projects that were continuing, they had no additional grant money to support the work. Instead project partner organizations stepped up and took on various parts of the work, sharing the cost among partners and organizing the work in a way that is more sustainable than dependence on continued grants. Even partners on the two projects that won't continue reported they felt the partnership was beneficial and that they will look for new ways to work together while focusing on new endeavors.

The results of the Wilder Collaboration Factors Inventory show project partners worked well together. Comparison of baseline to follow-up results shows upward trends; scores improved in 18 of the 20 collaboration factors. This suggests that success improved over the course of the project which led to stability and sustainability.

The nutrition education plans also reflect working with other agencies. Most efforts to promote fruits and vegetables focused on traditional methods. However, some WIC coordinators wrote about activities to increase WIC participant access to fresh fruits and vegetables, including working with the local store to carry more fresh produce or partnering with gleaning programs to hand out fruit at the WIC clinic. Others wrote about new efforts to provide cooking and gardening classes to WIC participants directly or to partner with local gardening groups. Many coordinators felt that the new fruit and vegetable checks, in combination with the FMNP checks, dramatically increased participant access to these foods.

WIC coordinators were not the only group to identify a need to work on barriers to fruit and vegetable access among WIC participants. Local project coordinators and their partners also talked about this in quarterly interviews. Several projects specifically designed activities to improve access. They also reported a need for skill-building around food, including gardening and food preservation. They pointed out that access to healthy foods is not effective in changing behaviors if skills aren't in place to grow and prepare the foods. Some interviewees eloquently painted a vision for a future in which WIC actively works with community members to find local solutions for promoting fresh fruits and vegetables. They said that ongoing efforts like these collaborative projects would strengthen WIC's ability to improve health.

Sustainability

Ten of 12 local projects are planning to continue project activities past the grant period. Two projects have evaluated the long-term sustainability of the project and concluded that the model piloted is not the most effective or efficient way of reaching people and carrying out the shared vision of the partnership. Both of the discontinuing projects identify the new partnerships formed

as a positive outcome of the work and one that will persist even though the project activities won't. Local WIC staff and partners at both of these sites report that they plan to draw on the relationships built with this project in similar future work.

Of the 10 local project sites that are continuing, some found their projects so successful that they are continuing as is. Others are continuing the most successful parts of the project. Several projects decided they wanted to expand to include all low-income community members. This was especially true if the project had strong community partners whose organizational focus was either the general public or low-income individuals (e.g., farmers and farmers markets, Cooperative Extension, community action agencies, etc.).

Transferability

WIC agencies around the nation can benefit from this projects' test of WIC working with others in the community. One of the two main goals of this project was to "build the capacity of local WIC agencies to garner additional nutrition education resources by building sustainable partnerships with food systems groups." Evaluation outcomes detailed in chapter four demonstrate that this project was successful in reaching that goal. Twelve local WIC agencies worked with a combined total of 42 different local community partners to develop innovative ideas for promoting fruits and vegetables. This kind of work is outside of the normal scope of a typical WIC agency and some of it is outside the scope of WIC allowable costs. While the work of WIC often connects local WIC agencies with social service and healthcare providers for the purposes or coordination of services and referral, WIC agencies rarely engage organizations working to improve food systems outside of farmers markets. The recent focus on promoting fruits and vegetables in WIC and the blossoming interest in more connected and sustainable food systems creates local environments that are ripe for these types of synergistic partnerships.

Individual project activities are transferable where the concept fits with the focus and capacity of the WIC clinic and community partners and addresses the needs of the community. Funding of these types of projects may need to be sought outside the WIC grant, as some of the costs of the projects listed here are not WIC allowable. Each WIC agency designed their project to meet the unique needs of one community and to align with the mission and expertise of the participating community organizations. The individual success of each project depends on a variety of local factors, not necessarily the overall project concept. For instance, after establishing and running the Community Roots Farmers Market, the participating non-profit farm and the project partners decided that the market was not a good use of resources; they wanted to try a different model to increase access to fruits and vegetables for low-income children. Their decision doesn't mean this was a bad model or that the same or similar project wouldn't work in a different community with different partners and needs. Similarly, the gleaning part of the PLANT project might not work in more urban areas with less access to farms. This work is inherently local. While these 12 projects offer us a menu of ideas for creative ways WIC clinics can work with partners in their communities to promote fruits and vegetables, none would fit all settings.

Sharing project activities, successes, and lessons learned will help other WIC clinics explore how to work with local community groups. The core grant team has shared progress and success stories at every state WIC meeting from 2010 to present. In addition, monthly newsletters sent to WIC coordinators included project profiles, progress reports and the link to our WA RQNS grant website. Local WIC agencies as well as their partners share their work at numerous community meetings. Learning about these projects may spark a unique idea that is a perfect fit.

Regardless of the project or combination of local partners that results, the success of these 12 projects shows:

1. It is possible to form constructive partnerships with diverse community organizations and impact behavior changes across the SEM.

2. The State WIC office encourages local agencies to seek opportunities to impact behavior change at all levels of the SEM.

The Washington State WIC Program already has an example of impacting across the SEM which helps WIC participants as well as others. The example is breastfeeding promotion and support. WIC could broaden its impact if it worked across the SEM in nutrition education and referral. WIC's influence on the food system, which is not a part of its mandate, but is part of its reality, could also be used to the benefit of all, as these projects have shown.

Following is a description of how the components of the WIC Program (assessment, breastfeeding promotion and support, nutrition education and nutritious foods) impact across the SEM.

At the individual and interpersonal level assessment, breastfeeding promotion, nutrition education and referral have a strong individual and family focus. The food WIC provides is intended for the individual participant. The WIC Program is largely designed to impact at this level.

At the community and institution level:

- The State WIC office and local WIC programs work to increase breastfeeding. We are often asked to give information about the benefits of breastfeeding. Local WIC staff:
    - Partner with hospitals for breastfeeding education events for health care providers and others.
    - Sponsor community breastfeeding events, such as Breastfeeding at the Park day and Beautiful Breastfeeding baby contests
    - Lead or are part of local breastfeeding coalitions
    - Team up with participants for World Breastfeeding Week marches.

State staff were instrumental in the development of "Washington Steps up for Breastfeeding". This state Department of Health-wide initiative focuses on breastfeeding education and policies for health care providers, hospitals, child care and worksites. The State WIC Office also contracts with the Breastfeeding Coalition of Washington.

- With regard to nutrition education WIC's influence at the community and institution level is less clear. WIC is seen as a trusted source of nutrition education, and its education materials are largely available on the Web. Many other groups, including Headstart, health care providers and schools use these materials. However, there are no similar community or institution level efforts around nutrition education comparable to what we see with breastfeeding promotion. This is likely due to the passion around breastfeeding promotion that is not mirrored for nutrition education.

- The Washington WIC Program has an impact on referral at the community and institution level. This is brought about by a contract with WithinReach. This private nonprofit organization provides outreach and referral for all families in Washington to improve health. A longstanding partnership with WIC and other government agencies has resulted in a robust database, call center and Web presence where all families, including WIC families, can access information about health care, nutrition and other resources.

- WIC's impact on improving the intake of nutritious foods has been well established at the individual level. Its impact at the community and institution level is less clear.
  - Many farmers' markets managers in Washington State have said that without WIC FMNP their market would not exist.
  - A study in May 2012 showed changes in the WIC food package were associated with the increased availability of healthful food in 2 low-income neighborhoods in Philadelphia.[i]

At the Structures, Policies and Systems level WIC's role in assessment, breastfeeding promotion, nutrition education, referral and providing nutritious food is spelled out in federal regulations. While this level doesn't specifically identify the WIC role in the "food system" per se, regulations around contracts with retailers, minimal stock levels and allowable WIC foods do impact the food system.

The State WIC office encourages local WIC leadership to think outside the box on how WIC can impact the broader community. We know this is can be daunting. The daily challenges of providing excellent participant centered WIC services can be exhausting. There is always more outreach to potentially eligible participants and coordination with other programs that can be done. There isn't often a lot left over (energy-wise or funding-wise) after providing basic WIC services, Some of the activities done in these projects like gardening and gleaning aren't allowable WIC costs. And some, like cooking demonstrations and classes are WIC allowable.

One of the outcomes we hoped to achieve with this grant was to demonstrate that other unlikely partners, like the Boy Scouts, food banks managers and volunteers, seniors, famers, high schools and colleges, restaurant owners and Parks and Recreation staff, can be valuable partners in addressing needs of WIC participants and the broader community.

Here is how one local project site WIC coordinator puts it:

> *I think that it will be important to let the WIC community and people interested in doing food systems work know that this kind of project was possible… sometimes when I'm talking to other WIC coordinators or others in WIC, they don't really know that you can think out of the box. Like, 'You know, you can make that a second contact. Well why not? Why can't you do that?' I get the sense that people feel like they have to do things the way they have always done it and it has to be really regimented. There are ways to really make it work in the WIC program.*

And last but not least, we wanted to give local WIC leadership a chance to spread their wings. While many of our local WIC leaders are seasoned professionals, many are at early stages of their careers. Giving opportunities to both seasoned and new WIC leaders provides a richness and depth of opportunity they can use in other parts of their careers and personal lives, and hopefully support job satisfaction.

This grant shows that forming food systems partnerships is not only possible within the day-to-day work of WIC, but these partnerships are valuable in their work to safeguard the health of low-income women, infants and children.

Limitations

Like any project that depends on the ability of individuals and organizations to partner, in this project we saw challenges, changes of direction, and areas where expectations and reality didn't match.

Not all evaluation measures were usable. As reported in Chapter 4, there were multiple errors with the administration of the Common Measures Client Survey resulting in no usable data from that survey.

CPHN project staff familiar with local projects, project coordinators and community partners conducted the interviews. This could have biased responses if interviewees over-reported the positive and under-reported the neutral or negative outcomes. On the other hand, CPHN staff doing interviews added depth and richness to the data analysis. Familiarity with the local project sites allowed them to probe deeper into specific areas of interest.

Survey data relies on self-report intake. Self-report data has the potential for bias from inaccurate recall or desire to report in a socially acceptable way.

Client survey intervention-control matching may have missed other impacts on fruit and vegetable intake. We matched controls to project sites based on urbanicity, Hispanic ethnicity and clinic size. It's possible that other differences between the control and intervention groups affected the data about fruit and vegetable intake.

Response rate for client survey was low. Response rate for baseline was 24.0%. Response rate for the follow-up survey improved and was approximately 53.4%. (We can't accurately calculate the exact response rate for the follow-up survey. See Chapter 3.) After discussing this low response rate with state and local WIC staff, we believe that the low response rate is due to WIC staff forgetting to do the survey with WIC participants. However, it's possible that selection bias exists and those participants who chose to respond to the survey had different fruit and vegetable consumption patterns than those who did not. The survey was only available in English. Because local WIC staff read the survey to WIC participants, this tool relied on interpretation into a language the participant understood. This method leaves open the possibility of lower response from speakers of languages other than English, as well as misinterpretation of the survey questions.

Lessons Learned

The Washington WIC Nutrition program and its university partners learned several lessons as a result of this project. These lessons will inform future work.

1. *Think creatively about whom can be a partner.*

The "traditional" partners such as food banks, farmers markets and Cooperative Extension were important partners in a number of projects. And we saw senior citizens, colleges and universities, a Boy Scout troop, a high school shop class, a metro bus line, a library and a mayor all involved.

Many of these partners never envisioned WIC as a partner. A positive consequence from this grant was that community partners gained an expanded view of and appreciation for the WIC program.

2. *Provide up-front technical assistance to local WIC staff on grant writing, project planning and evaluation.*

We gave a training webinar for local WIC agencies and community partners interested in applying for a project in January 2010, 2 months prior to the application deadline. Most felt the training was helpful. WIC staff and community partners were diverse; some had extensive grant-writing experience while others had none. We feel that providing trainings and technical assistance builds skills that help to level the playing field and foster successful projects. Many coordinators said this was their first experience in writing a project proposal and they were happy to learn new skills that could be useful in their careers.

3. *Assume* participants *knowledge and skills will be across the spectrum. Be* participant *centered, let them tell you what they are interested in and need.*

It's easy to assume participants know about or know how to do certain things that may be second nature for WIC clinic staff. This includes familiarity with particular fruits and vegetables, and how to cook. It can be challenge to find out what they know or do not know in a way that does not belittle those who do know. And yet, as with anything, the best approach is to be participant-centered. This means letting them tell us about their interests and for us to then respond.

WIC participants are busy with work and young families; they must see value added to spend time in additional activities. Coordinators and partners expressed frustration at how few WIC participants took part in their projects. Assessing community-specific reasons for low participation and changing activities to meet participants' needs is essential. This includes having written materials in their language and being culturally appropriate.

A number of local WIC coordinators noted that participants learned cooking or gardening better if they actually did the activity, rather than being shown or told. One noted,

> "I think it really did drive home our messages in a whole new way. We have always talked and given out recipe books and all these great handouts about nutrition education, but it really did connect food and nutrition, and that's what we need to do. Like [WIC] staff would walk clients through the garden, show them what's being grown, and maybe having picked and washed some salad greens and taking it back and make a salad. And the kids ate it and liked it. Just that kind of messaging where you connect the pieces really drives it home."

On the other hand, some participants didn't want the "classes" part; they wanted to sample the food or collect their baskets and leave. Meeting all participants' needs is a challenge.

4. *Expect staff turnover and plan for it.*

One or two key people can make or break a partnership. This is true of the partners as well as of the local WIC staff. Staffing changes were very disruptive if it involved a lead position. Several local projects had staff changes that slowed activities and led to communication challenges. Shared control of project planning and coordination and better communication may have minimized some of the effects of these changes.

5. *Some projects need help building skills around leading meetings and managing projects, developing clear roles and expectations, and handling partnership conflicts.*

For some WIC staff, these projects were their first time working collaboratively with a diverse group of partners. Others had experience and needed less support. Working with local WIC staff

to build these skills enhanced the overall impact of WIC, as project staff apply new skills to other job areas or projects.

6. *Use existing data for evaluation when possible. If using new measurement tools, keep it simple, easy to administer, and workable for local agency staff.*

Several evaluation tools used were challenging for WIC clinic staff, resulting in deviations from the evaluation protocol that made the data unusable (e.g., the Common Measures Client Survey, described in Chapter 4). Local staff turnover further complicated efforts to correctly use the tools. The core grant team realized that one of the reasons for a low response rate in the participant survey recorded in CIMS is that local WIC staff don't routinely use the survey tab in the computer system, so they often forgot. In our future work, we should try to streamline and simplify evaluation measures, using data already collected as part of the program when possible.

7. *Flexibility is key; problem solving mid-stream will be called for.*

As with so much in life, the best laid plans can be scuttled by unanticipated change. In addition to staffing changes and the diverse needs of participants, things like the recession and the weather impacted this grant.

While budget and planning priorities are always subject to change, this grant took place during the worst economic downturn since the Great Depression. The impact on the state office, WIC agencies and community partners was huge. Many partners lost funding from other sources and in some cases they had to totally or partially curtail their work on the projects. Public sector WIC agencies lost local funding as public revenue was diverted to support local police or emergency response. Private sector agencies also faced severe budget reductions. At the state level, we did not carry out the planned in-person sharing and training activities because of travel restrictions and competing budget priorities. We were fortunate that none of the funded agencies stopped doing WIC during this time.

The spring and summer of 2011 were unusually wet (even for Washington) and the growing season was late. This impacted the gardening and farmers market related projects.

Applying Lessons Learned

This project has broad implications for the future of WIC. Connecting with local community partners could not only broaden WIC's reach and role in the community, but may enhance the value of taxpayer dollars. Below are possible future activities.

1. *Share project activities, successes, and lessons learned through in-person contacts or in webinars.* This would give local WIC staff and coordinators in-depth training for developing their own local partnerships.

2. *Develop a tool kit and menu of partnership ideas.* A tool-kit with ideas from the projects would assist other agencies who are interested in this type of work. The tool-kit could include working with community partners on breastfeeding promotion as well as nutrition education.

3. *Encourage WIC coordinators to talk with local partners to explore how partnerships can enhance the effectiveness and reach of WIC's messages.* Because each community is unique, agencies and their community partners would decide how to best meet the community's needs.

We get regular inquiries from agencies asking if they can buy seeds, small pots, etc. to promote gardening with their participants. We tell them no. And yet, as we saw in this grant, for a certain group of participants, gardening is truly an avenue for them to expand their family's access to fruits and vegetables. Several participants who gardened with these projects expressed interest in becoming Master Gardeners. Gardening also it is a great activity with young children on many different levels.

One coordinator said, "To me, it just makes sense that every WIC clinic should have a garden and that should just be part of the funding and part of the job." And, as a Department of Agriculture program, allowing WIC costs for fruit and vegetable gardening is an interesting fit.

The other change in allowable costs we recommend is that time spent planning, implementing and evaluating community partnerships be allowed. This would need to be closely tied to WIC goals, e.g. nutrition education or breastfeeding promotion. Allowing these networking and partnering costs is currently implied as part of outreach or maintaining an up-to-date referral system. Explicitly allowing these costs would sanction the partnership work that the Socio-Ecological model says is the key to behavior change.

Policy Considerations

1. *Consider requiring WIC agencies to report about local partnerships in the annual nutrition education plan.* Currently local agencies report on past and future activities to promote fruits and vegetables. We attempted to get them to report about their work with community partners in an addendum to the nutrition education plan, but we were only partly successful in getting accurate responses. Also currently Washington WIC agencies receive earmarked funding to improve maternity care practices to support breastfeeding. They are asked to report on this in the nutrition education plan as well. Explicitly asking them to report on work with community partners could be incorporated into the nutrition education plan. This will help us track if some of our 12 projects have reached their goal of transferability to other WIC agencies.

2. *Ask FNS to expand allowable WIC costs to include activities in these projects.* Some of the activities done by the projects are allowable WIC costs. Nutrition education, cooking demonstrations and cooking classes are all allowed. Giving away baskets of fruits and vegetables and purchasing garden supplies and time gardening are not allowed. This will help us track if some of our 12 projects have reached their goal of transferability to other WIC agencies.

Conclusion

This report describes a unique effort to connect local WIC agencies with food systems partners to build capacity for promoting fruits and vegetables in the diets of WIC families. It also shows the power and challenges of engaging at multiple levels as described in the Socio-Ecological model of behavior modification.

Results show that partnerships between WIC and community agencies can be rewarding. It's less clear to what extent the project affected participant knowledge, attitudes or eating behaviors. This is in part because of the difficulty local WIC staff experienced in completing project evaluation surveys.

What is notable from our other evaluation measures is the coordinators and community partners involved in the local projects feel that the partnerships formed were very valuable. This community capacity goes beyond the single project that brought individuals and organizations together.

We should further study the SEM to address the challenging problems of promoting good nutrition for low income families.

Chapter 5 – Reference Page

1. [i] Hiller, A, et al, *The Impact of WIC Food Package Changes on Access to Healthful Food in 2 Low-Income Urban Neighborhoods* J Nutr Educ & Behavior, 2012. **44**(3): p. 210-216.

Appendices

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

Appendix 1

Project Application

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

WIC Fruit & Vegetable Community Partnerships

Grant Application

- **Please submit electronically in MS WORD format to: sandra.cruz@doh.wa.gov or by FAX to 360-236-2320 Attn: Sandra Cruz.**
- **Please limit your grant application to 5 pages (not counting Letters of Commitment, timeline Attachment A, or supporting documents for budget), single-spaced with 1-inch margins and a minimum font size of 12 point. Do not submit additional attachments beyond those requested.**
- **APPLICATION DUE by 5:00 pm March 10, 2010. Late applications will not be accepted.**

Agency name _____

Project Title _____

Name of person submitting application _____

Phone number _____Email address _____

Please provide a summary of your project, in 300 words or less, and include the following:

- "The purpose of _____ (name of project) is to _____ (verb) for _____ (intended beneficiaries) so that _____ (intended outcome)."
- Describe how you will work with your partners to plan, carry out and evaluate your project
- Explain how you think the project will be able to continue after the grant period ends.

1. About Your Community *(Possible points = 10)*

- What is the need in your community?
- What information did you use to identify this need?

2. Project Objectives *(Possible points = 25)*

- If needed, provide more information than what is in the summary above.
- What is the time frame in which you will run the project?
    - Keep in mind the overall time line for all projects is July 1, 2010 to December 31, 2011 = 18 months.
    - Complete the timeline template in Appendix A.
- Provide details of specific project objective(s). (for guidance, refer to sample objectives and guidelines for developing "SMART" objectives - Appendix B.)
- Describe how you will measure each objective.
- What barriers might exist and how will you address them?

3. <u>Partnerships</u> ***(Possible points = 15)***

- Define the roles of each partner-including lead WIC agency.
- Attach letters of commitment from all non-WIC partners. The letters should include how they will help share the results of your project with other communities (for guidance, see sample letter of commitment - Appendix C.)

4. <u>Capacity</u> ***(Possible points = 10)***

- Describe how the resources and experiences of staff and partners will help you meet your project's objectives.
- About the WIC agency:
- About each partner:

5. <u>Sustainability</u> **(*Possible points = 25)***

- Describe how your agency and partner(s) will continue this project after the end the grant.
- Who are possible future supporters?
- Describe how you will monitor what is going well and what is not going well.
- How will you capture the "lessons learned" so that you will be able to share them with others?

6. **<u>Transferability</u>** ***(Possible points = 5)***

   - Describe how you will share your project results with other communities.
   - How will you promote project visibility during and after the project to future partners?

7. **<u>Budget</u>** Explain in detail your project budget. Include justification for each item listed and supporting documents (reports, quotes from suppliers, etc). ***(Possible points = 10)***

Item #	Description	Cost Detail	Quote Attached Y/N
1			
2			
3			
4			
5			
6			

What kind of expenses might you include?

- Salaries + benefits, training, travel
- Consulting fees
- Office space, supplies, copy/printing, equipment
- Educational materials for clients, food for demonstrations, kitchen supplies and equipment
- Garden soil, fencing, supplies

Additional comments:

Please call Sandy at (360) 236-3660 right away if you have questions.

Appendix items:
A) Timeline template for completion
B) Information about developing SMART objectives
C) Sample partner letter of commitment
D) Scoring sheet (for reference only – do not complete

Appendix A Project Timeline

Please list the specific tasks that you will conduct during each quarter of the project. **Add additional rows as needed.**

Task	July-Sept 2010	Oct-Dec 2010	Jan-March 2011	April-June 2011	July-Sept 2011	Oct-Dec 2011

SAMPLE :

Task	July-Sept 2010	Oct-Dec 2010	Jan-March 2011	April-June 2011	July-Sept 2011	Oct-Dec 2011
Convene Partners & Stakeholder group	-Invite partners and stakeholders to participate -Convene first meeting	-Convene meeting -ongoing communication with partners/stakeholders	-Convene meeting -ongoing communication with partners/stakeholders	-Convene meeting -ongoing communication with partners/stakeholders	-Convene meeting -ongoing communication with partners/stakeholders	
Test and finalize evaluation plan	-refine evaluation plan and tool(s)	-test tools	-refine tools and finalize evaluation plan			
Establish marketing plan for WIC clients	Develop plan to invite WIC clients to participate	Invite participants	Invite participants			
Conduct evaluation				Conduct evaluation	Conduct evaluation	
Schedule Dinners			Schedule 2 dinners	Schedule 2 dinners		
Hold dinners				Hold 2 dinners	Hold 2 dinners	
Compile evaluation results & present to stakeholders					Compile evaluation results – written report	Present results to stakeholders

Appendix B Writing a S.M.A.R.T. Objective

Before you write an objective, determine the needs of your target audience. Conducting a needs assessment will give you some ideas of what your project should focus on. Once you have a basic idea of the program focus you are ready to write an objective.

S.M.A.R.T. objectives are:

- **Specific** - Identifies a specific goal or action to be achieved.
- **Measurable -** Quantifies the amount of change to be achieved.
- **Achievable -** Can be achieved given the target audience stages of change, the time frame allotted, and proposed activities.
- **Realistic -** Is practical given available resources.
- **Time bound -** Specifies a time in which the objective will be achieved.

Consider this S.M.A.R.T. objective

By September 2010, participants will increase preference for fruits and vegetables by 50%.

Specific - identifies **increasing preference for fruits and vegetables** as the goal.

Measurable - identifies that participants will increase preference by **50%**.
Consider what you can actually measure when creating an objective. If you cannot measure your results you cannot demonstrate that they have been achieved.

Achievable - For this example target audience, the objective is achievable.

Realistic - For this example target audience, the objective is realistic.

Time bound - The objective specifies **by September 2010**.

Behavioral versus a Factor-Based Objective

Changing dietary behaviors can take a long time, longer than a SNAP-Ed contract year. Measuring a behavioral outcome like consumption may not tell you what is influencing your audience's dietary habits. You may be more successful in evaluating intermediate factors that lead to long term behavior change in dietary habits. Dietary factors like knowledge, preference, confidence, or skill in food shopping and preparation.

How do I decide which factor to measure? Ask yourself:

1. What is important to my target audience (maybe you need to gather more information)?
2. Will knowledge change attitudes or behavior?
3. What does research say about influencing your target audiences' behavior?
4. Given your audience, how ready are they to increase consumption of fruits and vegetables as a dietary change in their lives?
5. How much change do you think is realistic in the time you have with your target audience?
6. What changes would need to happen before you would see a behavior change?
7. Can I measure the factor I am thinking about?

Common Factors of Consumption

Factor	Description
Knowledge	Understanding the need for a variety of fruits and vegetables daily
Skills	Demonstration of ability to prepare, shop, menu plan, etc.
Preference	A desire for a certain fruit and vegetable over others based on taste, custom, knowledge, or perceived benefit
Self-efficacy/attitude/ confidence	A belief in one's ability to make a change A belief that increased consumption of fruits and vegetables will improve my health

Behavioral Outcomes

Outcome	Description
Consumption	Change in overall quantity consumed of a food or food group
Goal Achievement	Achieve healthy lifestyle goals as defined by the 2005 Dietary Guidelines.

Measuring an Objective
It is especially important to consider what is measurable when writing your objective. Think about how you will be able to determine if you have achieved your objective. Below is an example of how simple changes to wording can change the measurability of an objective.

Consider which objective will be easier to measure.

Objective one
By September 2010, 50% of participants will increase preference for fruits and vegetables.

To measure

- You will need to match pre and post test results of participants to determine if each has increased preference of fruits and vegetables, and then determine if 50% of the participants increased their preference.

Or

Objective two
By September 2010, participants will increase preference for fruits and vegetables by 50%.

To measure

- You will need to determine an average baseline level of fruit and vegetable preference. After the program you will re-test and find the new average level of preference of participants. Then you can determine if there was a change between the baseline and the retest.

Which objective is easiest to measure?

Objective two is easier to measure because you do not need to match each individual survey to determine if each participant increased preference. You can simply determine if the average level of preference increased.

Sample SMART Objectives:

- By the end of the project, WIC project participants will increase their intake of fruits and vegetables by an average of one serving per day.
- By the end of the project, at least 80 WIC families will have participated in a community kitchen.
- By the end of the project, at least 20 WIC families will have signed up to be "garden keepers."
- By the end of the project, at least 10 local farmers will sign an agreement to participate in the new farmers market once per week for one year.

Appendix C Sample Letter of Commitment

Date

Dear (Fertile County WIC Coordinator),

On behalf of Fertile County Master Gardeners (FCMG), I am pleased to write this letter of Commitment for *Growing Our Community*, a local collaborative community garden project with Fertile County WIC. The project fits perfectly with our mission, which is to "educate the public on best practices in consumer horticulture and environmental stewardship."

For the last five years, we have worked closely with local school communities to develop school gardens. Our experience in teaching adults and children about effective gardening practices, and in securing long-term partnerships and resources for developing and maintaining school gardens, will be useful and very applicable to our work with WIC families in this new project.

Our specific commitments to *Growing Our Community* include:

- provide use of our organization meeting space at 101 Spring Street for planning meetings, free of charge
- conduct appropriate monthly gardening classes for WIC parents and children
- work with participants to plan a garden that is culturally appropriate and that includes plants/seeds that are most likely to thrive in the local garden environment
- assist in securing funds for garden supplies
- recruit volunteers to oversee all aspects of the garden development and operation
- participate in leadership meetings
- assist with development of a plan for the ongoing sustainability of the community garden

We believe that our community is ready for a community garden and look forward to playing an active role in its development and ongoing operation.

We've enjoyed working with WIC in planning this project and look forward to hearing from you once decisions are made about funding of local projects. If funded, I agree to help share information about the project.

Sincerely,

Susie Seed, Manager
Fertile County Master Gardeners

Appendix D

Fruit and Vegetable Community Partnership Grants
Proposal Score Sheet
For Information Only-Do Not Complete

Instructions:
1.) For questions worth 5 points, give
0-1 points if you answer the question "no,"
2-3 points if you answer the question "somewhat,"
4-5 points if you answer the question "yes."

For questions worth 10 points, give
0-1 points if you answer the question "no,"
2-6 points if you answer the question "somewhat,"
7-10 points if you answer the question "yes."

2.) Provide comments under strengths, weaknesses and recommendations on page 3.

Reviewer Name:		
Project Title:	**Score**	**Value**
About Your Community 1. Is the need for the project clearly described and reflective of the community's assets and opportunities?		10
About Your Community Score (#1) ***Enter here*→**		**10**
Project Objectives 2. Are objectives measurable, realistic and achievable and tied to the goal of increasing fruit and vegetable consumption?		15
3. Does the project plan reflect clear and concise thinking about how the project will work?		10
Project Objectives Score (add #s 2 and 3) ***Enter here*** →		**25**
Partnerships 4. Does the project work plan describe the engagement of partners?		10
5. Do letters of commitment from proposed partners reflect specific commitments?		5
Partnerships Score (add #s 4 and 5) ***Enter here*→**		**15**
Capacity 6. Are the time commitments and experience (planned or existing) of staff and partners adequate to achieve the project's objectives?		5
7. Have sufficient resources either been secured or identified to achieve the project's objectives?		5
Capacity Score (add #s 6 and7) ***Enter here*→**		**10**
Sustainability 8. Are the plans for continuation of the project after USDA funding ends clearly described and realistic?		5
9. Does the project work plan include plans for sustaining partnerships?		5

	Score	Value
1. Does the project work plan include plans for promoting project visibility to partners who may be able to sustain it after grant funding ends?		5
2. Is the project evaluation plan realistic and designed to effectively monitor progress?		10
Sustainability Score (add #s 8-11) ***Enter here*→**		**25**
Transferability 3. Does the proposal describe a commitment for sharing project work with other communities?		5
Transferability Score (#12) ***Enter here*** →		**5**
Budget 4. Does the project budget appear realistic for the scope of work proposed?		5
5. Is the budget clearly described?		5
Budget Score (add #s 13 and 14) ***Enter here*→**		**10**
Total Score (Add scores for all shaded rows) *Enter here*→		**100**

Scoring Guidance

Score	Quality	Recommendation	Questions/Revisions
90-100	Excellent	Definitely should be funded	Minor, if any
80-89	Strong	Should be considered for funding	Minor
70-79	Good	Could be considered for funding	Will probably need revisions
60-69	Mediocre	Not to be funded without revisions	Major
< 60	Weak	Should not be funded	Would require rewrite

Recommendation:

_____Full Funding

_____Partial Funding (at what level?) $_____

_____No Funding

General Comments:

Strengths:

Weaknesses

Recommendations/Revisions (if any)

Appendix 2

Application Scoring Process

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

WIC Fresh Fruit and Vegetable Local Projects
Application Scoring and Grant Selection Instructions
March, 2010

Step 1: All grant applications are posted on a Google Documents site. The link to the documents is:

https://docs.google.com/leaf?id=0B-LqN1QKJTeCN2FiNmZlYTMtMmQwNi00YjkxLWEwMTYtNzU1MDdhNzJlNjUy&hl=en

Each application is numbered.
The site contains all applications, none were eliminated.

Step 2: Each Advisory Group member has been assigned 6-7 total applications for review. Each proposal has two primary reviewers and two secondary reviewers. You will receive an email copy, and a copy is also on the Google Documents site.

Step 3: You may download and print your assigned applications, or review them directly online. For each application, use the **Individual Proposal Scoring Sheet** to score each individual section of the application. You will receive an email copy, and this sheet is also on the Google Documents site. **Please bring these individual scoring sheets with you to the March 25 meeting-we will collect and keep these.** You do not need to send them in ahead of time**.**

Step 4: Write the total score of the applications you were responsible for reviewing on the **Reviewer Scoring Summary Sheet**. You will receive an email copy of this sheet via email, and it is posted on the Google Documents site. Please email or fax this sheet to Mary Podrabsky ***no later than 5:00 pm, Monday March 22.*** email: marypod@u.washington.edu fax: 206-221-5596

Step 5: All reviewers will meet on March 25 for a meeting at the Tumwater DOH offices. Computers will be available to all reviewers and all applications will be available electronically. All members will be given the results of the online scoring.

The group will go through each application as follows:

- -*primary reviewers:* Begin by reviewing strengths, weaknesses and concerns and give their scores
- -*secondary reviewers:* add to what has already been said and give their scores
- -*entire group:* discuss if needed
- -entire group privately scores application-primary and secondary may change their scores at this point based on the discussion

- **Step 6:** After the March 25th meeting, project leadership team will look at the overall scoring, funding requests and other factors such as geographic representation and make a final decision about grant awards.

Please don't hesitate to contact me if you have any questions about the process:

Mary Podrabsky
206-221-4528
marypod@u.washington.edu

Appendix 3

Project Scoring Sheet

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

Fruit and Vegetable Community Partnership Grants
Proposal Score Sheet
For Information Only-Do Not Complete

Instructions:
1.) For questions worth 5 points, give
0-1 points if you answer the question "no,"
2-3 points if you answer the question "somewhat,"
4-5 points if you answer the question "yes."

For questions worth 10 points, give
0-1 points if you answer the question "no,"
2-6 points if you answer the question "somewhat,"
7-10 points if you answer the question "yes."

2.) Provide comments under strengths, weaknesses and recommendations on page 3.

Reviewer Name:		
Project Title:	**Score**	**Value**
About Your Community 1. Is the need for the project clearly described and reflective of the community's assets and opportunities?		10
About Your Community Score (#1) ***Enter here*→**		**10**
Project Objectives 2. Are objectives measurable, realistic and achievable and tied to the goal of increasing fruit and vegetable consumption?		15
3. Does the project plan reflect clear and concise thinking about how the project will work?		10
Project Objectives Score (add #s 2 and 3) ***Enter here*→**		**25**
Partnerships 4. Does the project work plan describe the engagement of partners?		10
5. Do letters of commitment from proposed partners reflect specific commitments?		5
Partnerships Score (add #s 4 and 5) ***Enter here*→**		**15**
Capacity 6. Are the time commitments and experience (planned or existing) of staff and partners adequate to achieve the project's objectives?		5
7. Have sufficient resources either been secured or identified to achieve the project's objectives?		5
Capacity Score (add #s 6 and7) ***Enter here*→**		**10**
Sustainability 8. Are the plans for continuation of the project after USDA funding ends clearly described and realistic?		5
9. Does the project work plan include plans for sustaining partnerships?		5

	Score	Value
10. Does the project work plan include plans for promoting project visibility to partners who may be able to sustain it after grant funding ends?		5
11. Is the project evaluation plan realistic and designed to effectively monitor progress?		10
Sustainability Score (add #s 8-11) ***Enter here*→**		**25**
Transferability 12. Does the proposal describe a commitment for sharing project work with other communities?		5
Transferability Score (#12) ***Enter here*** →		**5**
Budget 13. Does the project budget appear realistic for the scope of work proposed?		5
14. Is the budget clearly described?		5
Budget Score (add #s 13 and 14) ***Enter here*→**		**10**
Total Score (Add scores for all shaded rows) *Enter here*→		**100**

Scoring Guidance

Score	Quality	Recommendation	Questions/Revisions
90-100	Excellent	Definitely should be funded	Minor, if any
80-89	Strong	Should be considered for funding	Minor
70-79	Good	Could be considered for funding	Will probably need revisions
60-69	Mediocre	Not to be funded without revisions	Major
< 60	Weak	Should not be funded	Would require rewrite

Recommendation:

_____Full Funding

_____Partial Funding (at what level?) $_____

_____No Funding

General Comments:

Strengths:

Weaknesses

Recommendations/Revisions (if any)

Appendix 4

WIC Coordinator Survey

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

Appendix 4: WIC Coordinator Survey

Dear WIC Coordinator: Thank you for taking the time to fill out this survey. We are interested in your overall perceptions about the promotion of fruits and vegetables in local WIC agencies. Your answers to these questions will help us improve the Fruit and Vegetable Community Partnership Initiation Project. Nothing you say in this survey will in any way affect your job at WIC.

Please check only one answer.

1.) In general, how confident are you that WIC can increase clients' knowledge about the benefits of fruits and vegetables?
    a. Not confident
    b. Somewhat confident
    c. Confident
    d. Very confident

2.) In general, how confident are you that WIC can help clients believe that they really can find ways to eat more fruit and vegetables?

    a. Not confident
    b. Somewhat confident
    c. Confident
    d. Very confident

3.) In general, how confident are you that WIC can increase the consumption of fruits and vegetables in WIC families?

    a. Not confident
    b. Somewhat confident
    c. Confident
    d. Very confident

4.) In general, how confident are you that your WIC clients have adequate access to affordable, high quality fruits and vegetables in their community?
    a. Not confident
    b. Somewhat confident
    c. Confident
    d. Very confident

5.) In general, how confident are you that the staff at your local WIC agency have the skills to effectively promote fruits and vegetables to WIC clients?

a. Not confident
b. Somewhat confident
c. Confident
d. Very confident

6.) Have you had any success helping WIC clients to increase their fruit and vegetable consumption?

a. Yes
b. No

Not sure

If yes, please describe what made you successful. For example, you may have worked with others in the community to improve access or resources for obtaining fruits and vegetables, conducted hands on activities such as gardening, cooking, food tasting or shopping tours, or used educational or informational methods such as facilitated group discussion, education materials (name specific materials), recipes or websites.

_____

_____

_____

_____

7. Please put any general comments about the promotion of fruits and vegetables in WIC here:

_____

_____

_____

Thank you very much for helping us with this important project!

Appendix 5

Common Measures Client Survey – English

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

Appendix 5: Common Measures Client Survey – English

WIC Client Fruit and Vegetable Survey

1.) It is important to eat fruit and vegetables every day
☐ agree
☐ somewhat agree
☐ not sure
☐ somewhat disagree
☐ disagree

2.) I think that I can eat fruit and vegetables every day
☐ agree
☐ somewhat agree
☐ not sure
☐ somewhat disagree
☐ disagree

3.) I think I can eat fruit for dessert
☐ agree
☐ somewhat agree
☐ not sure
☐ somewhat disagree
☐ disagree

4.) I think that I can eat vegetables or salad
☐ agree
☐ somewhat agree
☐ not sure
☐ somewhat disagree
☐ disagree

5.) I like to eat fruit and vegetables every day
☐ agree
☐ somewhat agree
☐ not sure
☐ somewhat disagree
☐ disagree

Yesterday, how many times did you eat vegetables? Include all cooked and uncooked vegetables, salads, and boiled and mashed potatoes. Do not count French fries or chips.
☐ none
☐ one time
☐ two times
☐ three or more times

Yesterday, how many times did you eat fruit? Do not count juice.

☐ none
☐ one time
☐ two times
☐ three or more times

Yesterday, how many times did you drink fruit juice? Fruit juice is a 100% juice beverage like orange juice, apple juice or grape juice. Do not count punch, Kool-Aid, sports drinks and other fruit flavored drinks.

☐ none
☐ one time
☐ two times
☐ three or more times

6.) How many servings of fruit and vegetables should you eat each day? (check box)

☐ 0-2
☐ 3-5
☐ 6-8
☐ 9-11

7.) What is your age?

☐ 18-24
☐ 25-29
☐ 30-34
☐ 35+

8.) What is your race or ethnicity? Please check all that apply.

☐ American Indian/Alaska Native
☐ Asian
☐ Black or African American
☐ Hispanic or Latino
☐ White
☐ Native Hawaiian or Pacific Islander
☐ Multi Racial
☐ Other

9.) How many family members/individuals currently live in your home? _____

Appendix 6

Common Measures Client Survey – Spanish

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

Appendix 6: Common Measures Client Survey – Spanish

Frutas y Verduras Estudio para Clientes de WIC

1) **Es importante para comer frutas y verduras cada día**
   - ☐ Estoy de acuerdo
   - ☐ Algo de acuerdo
   - ☐ No estoy seguro
   - ☐ Algo de desacuerdo
   - ☐ No estoy de acuerdo

2) **Pienso que puedo comer frutas y verduras cada día**
   - ☐ Estoy de acuerdo
   - ☐ Algo de acuerdo
   - ☐ No estoy seguro
   - ☐ Algo de desacuerdo
   - ☐ No estoy de acuerdo

3) **Pienso que puedo comer fruta para el postre**
   - ☐ Estoy de acuerdo
   - ☐ Algo de acuerdo
   - ☐ No estoy seguro
   - ☐ Algo de desacuerdo
   - ☐ No estoy de acuerdo

4) **Yo pienso que puedo comer verduras o ensalada**
   - ☐ Estoy de acuerdo
   - ☐ Algo de acuerdo
   - ☐ No estoy seguro
   - ☐ Algo de desacuerdo
   - ☐ No estoy de acuerdo

5) **Me gusta comer frutas y verduras cada día**
   - ☐ Estoy de acuerdo
   - ☐ Algo de acuerdo
   - ☐ No estoy seguro
   - ☐ Algo de desacuerdo
   - ☐ No estoy de acuerdo

¿Ayer, cuantas veces comiste verduras? Incluye todas las verduras cocidos y crudos, ensaladas, y papa hervido o puré de papa. No cuentas papas fritas (chips/french fries).

- ☐ Nada
- ☐ Una vez
- ☐ Dos veces
- ☐ Tres veces o más

¿Ayer, cuantas veces comiste fruta? No incluye jugo.

☐ Nada
☐ Una vez
☐ Dos veces
☐ Tres veces o más

¿Ayer, cuantas veces tomaste jugo? Jugo de fruta es 100% bebida como el jugo de naranja, jugo de manzana o jugo de uva. No incluyes Kool-Aid o bebidas de deportes como el Gatoraid.

☐ Nada
☐ Una vez
☐ Dos veces
☐ Tres veces o más

6) ¿Cuántas porciones de frutas y verduras debes comer cada día? (marca la cajita que aplica)

☐ 0-2
☐ 3-5
☐6-8
☐9-11

7) ¿Cuál es su edad?

☐ 18-24
☐25-29
☐30-34
☐35+

8) ¿Cuál es su raza o etnicidad? Marca todos que aplican.

☐ American Indian/Alaska Native
☐ Asian
☐ Black or African American
☐ Hispanic or Latino
☐ White
☐ Native Hawaiian or Pacific Islander

☐ Multi Racial
☐ Other

9) ¿Cuántas personas viven en su casa? _____

Appendix 7

Quarterly Interviews

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

Quarters 1-4 Interview Questions

Interview Questions	Q1	Q2	Q3	Q4
Tell me about yourself and how you got involved in the project.	X			
Tell me about how the project is going.	X	X	X	
Tell me about how many WIC individuals' families you have reached with your project.		X		
Do you feel that all different types of WIC clients are interested in participating, or that it's more appealing to some than others?		X		
Tell me about the aspects of your project implementation that are going particularly well.	X	X		
Tell me about the aspects of your project, if any, that are proving to be difficult to deal with.	X	X	X	
Tell me about what has helped to move your project forward.	X	X	X	
Tell me about how you have been able to overcome challenges.	X	X	X	
Tell me about the level of support you are receiving related to the project.	X	X	X	
Tell me about your new/continuing partners. Who do you recommend interviewing as part of understanding how the partnership is progressing?	X	X	X	
Tell me about your experience with filling out the Fruits & Vegetable Survey tab on CIMS during the month of May 2010.	X			
Tell me about your interest level in having monthly support calls between the 12 different project sites to enhance cross site resource sharing and collaboration. *		X		
How will your project continue in 2012? If it will continue, what resources will be used to continue it?				X
What parts of this project will be incorporated into ongoing or new work in your community or other communities?				X
Please describe the most important accomplishment of this project.				X
What impact, if any, has this project had on WIC clients? On others in the community?				X
How has your organization worked with this project's community partners in the past? How do you envision working with these same partners in the future?				X
What impact, if any, has this project had on relationships with community partnerships?				X
How has your work informed other initiatives in your community or in the state?				X
What are the most important things that you have learned from doing this project that need to be heard by (1) the WIC community; and (2) people interested in doing food systems work?				X
How do you think that this project has impacted how others see WIC's role in either public health or food systems?				X
Is the project part of a larger vision for your community, such as that carried out by a food policy council, Healthy Communities initiative, or other community initiative?				X

* This question was added based on feedback received during quarter 1 interviews.

Appendix 8

Project Final Report Template

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

WIC Fruit and Vegetable Community Partnerships Grant
Final Report Template – July 26, 2011

Agency Name:	
Project Title:	
Contact Name:	
Phone:	**Email:**

The following questions ask about the progress of your project. To avoid unnecessary repetition, please write in the answer space, "answered above" if you feel that you have previously answered the question in this report.

List project objectives: *(pre-filled from grant application for each project site)*	**Were objectives met (yes/no)?** *If no, please explain.*

Describe any changes that occurred to the original project design. *Include reasons for changes.*

Describe project successes. *Include any contributing internal or external factors.*

Describe the most important outcome of this project.

Describe project challenges and how you addressed those challenges. *Include any contributing internal or external factors.*

Describe "lessons learned." *What would you have done differently? What would you do the same? What advice would you give another clinic starting a similar project?*

Describe how you shared your progress with outside groups and organizations. E.g., websites, presentations, brochures, posters, email list distribution, etc.

Describe how you will continue the project past the end of the grant period. *Include funding sources, new partnerships, and any modifications to the original project activities.*
Sustainability statement from grant application (pre-filled):

Please describe the outcome of any project evaluations. *Attach any supporting documents (photos, summary sheets, evaluation tools, etc.)*		
EVALUATION MEASURE (pre-filled from grant application) List additional measures not in original grant application; do not include surveys received and returned to DOH.	**RESULTS**	**COMMENTS**
WIC Client Feedback (some options below): 1. Brief client survey (what did they like, what didn't they like) 2. Collect client comments via comment box 3. Informal client feedback about project		

Appendix 9

Intervention and Matched Control Daily Vegetable Intake Frequency at Baseline and Follow-up

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

Appendix 9: Intervention and Matched Control Daily Vegetable Intake Frequency at Baseline and Follow-up												
				Baseline Daily Vegetable Intake, %					Follow-up Daily Vegetable Intake, %			
Site	Caseload	Urbanicity	Response Rate (# surveys)	None	One or Two	Three or Four	Five or More	Response Rate (# surveys)	None	One or Two	Three or Four	Five or More
Intervention Site #1[1]	900	Rural	14.3% (1)	0.0	0.0	100.0	0.0	4.4% (21)	23.8	61.9	9.5	4.8
			17.6% (25)	4.0	76.0	20.0	0.0	50.3% (197)	6.6	54.8	36	2.5
Control Site #1	1085	Rural	11.1% (16)	12.5	75.0	12.5	0.0	42.6% (194)	10.3	68.0	19.6	2.1
Intervention Site #2	2000	Rural	35.5% (67)	6.0	65.7	28.3	0.0	37.9% (311)	29.9	62.4	7.7	0
			28.4% (29)	6.9	51.7	37.9	3.5	60.8% (155)	14.8	55.5	26.5	3.2
			48.9% (43)	4.7	62.8	23.3	9.3	50.8% (92)	18.5	65.2	16.3	0.0
			77.8% (7)	14.3	42.9	42.9	0.0	85.7% (21)	4.8	57.1	38.1	0
Control Site #2	1,695	Rural / Urban	31.9% (94)	33.0	60.6	6.4	0.0	71.3% (604)	18.9	63.3	17.1	0.8
Intervention Site #3	7,500	Urban	8.3% (67)	11.9	61.2	19.4	7.5	26.2% (495)	10.1	70.1	16.6	3.2
			4.3% (26)	7.7	65.4	26.9	3.9	31.9% (518)	13.3	68.2	16.6	1.9
Control Site #3	1,695	Rural / Urban	23.1% (201)	19.4	63.2	16.9	0.5	65.9% (1,316)	12.6	66.7	18.6	2.1
Intervention Site #4	750	Rural	5.9% (2)	50.0	50.0	0.0	0.0	53.7% (81)	19.8	64.2	14.8	1.2
			16.7% (11)	0.0	72.7	27.3	0.0	43.9% (77)	7.8	60.0	29.9	1.3
Control Site #4	768	Rural	33.6% (49)	16.3	63.3	14.3	6.1	71.4% (261)	13.4	59.0	23.8	3.8

[1] Each row of data represents a specific clinic. Some intervention sites had more than one clinic participating in the intervention. Clinics are represented separately under each project site.

Appendix 9: Intervention and Matched Control Daily Vegetable Intake Frequency at Baseline and Follow-up												
				Baseline Daily Vegetable Intake, %					Follow-up Daily Vegetable Intake, %			
Site	**Caseload**	**Urbanicity**	**Response Rate (# surveys)**	**None**	**One or Two**	**Three or Four**	**Five or More**	**Response Rate (# surveys)**	**None**	**One or Two**	**Three or Four**	**Five or More**
Intervention Site #5	500	Rural	37.8% (14)	21.4	50.0	28.6	0.0	56.8% (141)	5.7	69.5	20.6	4.3
Control Site #5	690	Rural	40.7% (25)	39.1	47.8	13.0	0.0	72.7% (26)	3.9	76.9	11.5	7.7
Intervention Site #6	600	Rural	41.5% (17)	0.0	100.0	0.0	0.0	77.5% (75)	10.7	66.7	20.0	2.7
			40.0% (2)	0.0	100.0	0.0	0.0	0.0	-	-	-	-
			0.0	-	-	-	-	82.8% (141)	19.9	67.4	11.4	1.4
Control Site #6	947	Rural	55.6% (87)	13.8	63.2	23.0	0.0	83.7% (328)	15.9	59.8	22.0	2.4
Intervention Site #7	9,000	Rural / Urban	10.3% (19)	5.3	68.4	26.3	0.0	72.2% (413)	8	58.8	30.5	2.7
			79.0% (215)	15.8	63.3	17.7	3.3	49.1% (1,420)	11.1	63.8	22	3.1
			34.5% (30)	6.7	80.0	10.0	3.3	63.6% (160)	8.8	66.9	20.0	4.4
Control Site #7	8,291	Rural / Urban	19.7% (155)	9.0	63.9	23.9	3.2	57.8% (961)	9.2	60.8	27.3	2.8
			18.8% (120)	12.5	65.8	20.0	1.7	64.8% (1,182)	7.5	62.9	25.6	4.1
Intervention Site #8	521	Urban	17.5% (15)	26.7	60.0	6.7	6.7	60.7% (191)	18.3	64.9	15.7	1.1
Control Site #8	***550***	Urban	39.4% (26)	15.4	57.7	26.9	0.0	30.6% (56)	8.9	55.4	33.9	1.8

Appendix 9: Intervention and Matched Control Daily Vegetable Intake Frequency at Baseline and Follow-up												
				Baseline Daily Vegetable Intake, %					Follow-up Daily Vegetable Intake, %			
Site	**Caseload**	**Urbanicity**	**Response Rate (# surveys)**	**None**	**One or Two**	**Three or Four**	**Five or More**	**Response Rate (# surveys)**	**None**	**One or Two**	**Three or Four**	**Five or More**
Intervention Site #9	2,113	Urban	7.4% (29)	13.8	58.6	20.7	6.9	51.2% (423)	11.4	51.5	34.5	2.6
Control Site #9	2,030	Urban	24.4% (91)	16.5	73.6	8.8	1.1	16.6% (109)	2.8	67.9	28.4	0.9
Intervention Site #10	2,300	Urban	17.5% (80)	1.3	81.3	17.5	0.0	52.1% (494)	14.2	64.8	18.2	2.8
Control Site #10	2,571	Urban	1.3% (3)	0.0	100.0	0.0	0.0	62.0% (387)	7.5	49.1	36.7	6.7
			15.8% (37)	5.4	64.9	29.7	0.0	73.4% (455)	11.4	53.4	30.6	4.6
Intervention Site #11	200	Rural	64.0% (16)	75.0	18.8	6.3	0.0	84% (46)	17.4	54.4	21.7	6.5
Control Site #11	157	Rural	11.4% (4)	25.0	75.0	0.0	0.0	42% (37)	16.2	75.7	5.4	2.7
Intervention Site #12	150	Rural	72.7% (8)	12.5	50.0	37.5	0.0	93.8% (34)	5.9	64.7	29.4	0.0
Control Site #12	180	Rural	17.2% (5)	0.0	100.0	0.0	0.0	36.5% (24)	4.2	83.3	12.5	0.0

Appendix 10

Intervention and Matched Control Daily Fruit Intake Frequency at Baseline and Follow-up

Revitalizing Quality Nutrition Services

Washington WIC Fruit and Vegetable Community Partnership Grant

2009 – 2012

Appendix 10: Intervention and Matched Control Daily Fruit Intake Frequency at Baseline and Follow-up												
				Baseline Daily Fruit Intake, %					Follow-up Daily Fruit Intake, %			
Site Name (I=Intervention; C=Control)	**Caseload**	**Urbanicity**	**Response Rate (# surveys)**	**None**	**One or Two**	**Three or Four**	**Five or More**	**Response Rate (# surveys)**	**None**	**One or Two**	**Three or Four**	**Five or More**
Intervention #1	900	Rural	14.3% (1)	0.0	0.0	100.0	0.0	4.4% (21)	9.5	61.9	14.3	14.3
			17.6% (25)	8.0	48.0	32.0	12.0	50.3% (197)	7.1	57.6	33.3	2.0
Control #1	1085	Rural	11.1% (16)	6.3	43.8	43.8	6.3	42.6% (194)	12.1	40.9	40.9	6.1
Intervention #2	2000	Rural	35.5% (67)	6.0	65.7	28.3	0.0	37.9% (311)	14.1	66.4	19.2	0.3
			28.4% (29)	6.9	37.9	51.7	3.5	60.8% (155)	7.7	54.8	35.5	1.9
			48.9% (43)	48.9	4.6	41.9	37.2	16.3	4.3	68.8	24.7	2.2
			77.8% (7)	14.3	57.1	28.6	0.0	85.7% (21)	4.8	23.8	71.4	0.0
Control #2	1,695	Rural / Urban	31.9% (94)	8.3	62.5	27.1	2.1	71.3% (604)	9.6	61.1	26.4	2.9
Intervention #3	7,500	Urban	8.3% (67)	20.6	61.8	13.2	4.4	26.2% (495)	10.1	59.9	25.4	4.6
			4.3% (26)	23.1	50.0	23.1	3.9	31.9% (518)	6.5	56.5	31.3	5.75
Control #3	1,695	Rural / Urban	23.1% (201)	13.4	56.7	24.9	5.0	65.9% (1,316)	13.2	56.7	26.9	3.2
Intervention #4	750	Rural	5.9% (2)	0.0	50.0	50.0	0.0	53.7% (81)	10.3	65.4	19.2	5.1
			16.7% (11)	9.1	18.2	63.6	9.1	43.9% (77)	4.2	49.3	42.3	4.2
Control #4	768	Rural	33.6% (49)	4.0	48.0	44.0	4.0	71.4% (261)	5.7	58.0	31.3	4.5

Appendix 10: Intervention and Matched Control Daily Fruit Intake Frequency at Baseline and Follow-up												
				Baseline Daily Fruit Intake, %					Follow-up Daily Fruit Intake, %			
Site Name (I=Intervention; C=Control)	**Caseload**	**Urbanicity**	**Response Rate (# surveys)**	**None**	**One or Two**	**Three or Four**	**Five or More**	**Response Rate (# surveys)**	**None**	**One or Two**	**Three or Four**	**Five or More**
Intervention #5	500	Rural	37.8% (14)	21.4	28.6	50.0	0.0	56.8% (141)	1.5	59.7	33.6	5.2
Control #5	690	Rural	40.7% (25)	17.4	73.9	8.7	0.0	72.7% (26)	12.5	66.1	19.3	2.1
Intervention #6	600	Rural	41.5% (17)	5.9	41.2	47.1	5.9	77.5% (75)	8.2	56.2	32.9	2.7
			40.0% (2)	0.0	0.0	100.0	0.0	0.0	-	-	-	-
			0.0	-	-	-	-	82.8% (142)	9.2	57.0	31.0	2.8
Control #6	947	Rural	55.6% (87)	10.3	55.2	32.2	2.3	83.7% (328)	17.3	50.1	27.6	4.3
Intervention #7	9,000	Rural / Urban	10.3% (19)	5.3	63.2	26.3	5.3	72.2% (413)	4.8	57.6	34.7	2.9
			79.0% (215)	4.7	62.8	28.4	4.2	49.1% (1,420)	7.0	56.7	32.3	4.0
			34.5% (30)	3.3	66.7	30.0	0.0	63.6% (160)	6.3	60.6	30.6	2.5
Control #7	8,291	Rural / Urban	19.7% (155)	2.6	63.2	32.3	1.9	57.8% (961)	9.2	60.8	27.3	2.8
			18.8% (120)	8.3	54.2	35.8	1.7	64.8% (1,182)	7.5	62.9	25.6	4.1
Intervention #8	521	Urban	17.5% (15)	23.5	64.7	11.8	0.0	60.7% (191)	10.5	58.0	24.3	7.2
Control #8	***550***	Urban	39.4% (26)	15.4	42.3	30.8	11.5	30.6% (56)	3.6	51.8	42.9	1.8

Appendix 10: Intervention and Matched Control Daily Fruit Intake Frequency at Baseline and Follow-up												
				Baseline Daily Fruit Intake, %					Follow-up Daily Fruit Intake, %			
Site Name (I=Intervention; C=Control)	**Caseload**	**Urbanicity**	**Response Rate (# surveys)**	**None**	**One or Two**	**Three or Four**	**Five or More**	**Response Rate (# surveys)**	**None**	**One or Two**	**Three or Four**	**Five or More**
Intervention #9	2,113	Urban	7.4% (29)	20.7	44.8	31.0	3.5	51.2% (423)	7.5	41.7	42.9	8.0
Control #9	2,030	Urban	24.4% (91)	6.6	60.4	29.7	3.3	16.6% (109)	1.3	53.3	36.0	9.3
Intervention #10	2,300	Urban	17.5% (80)	2.5	48.8	48.8	0.0	52.1% (494)	9.6	55.5	28.4	6.5
Control #10	2,571	Urban	1.3% (3)	0.0	100.0	0.0	0.0	62.0% (387)	7.5	49.1	36.7	6.7
			15.8% (37)	8.1	62.1	24.3	5.4	73.4% (455)	11.4	53.4	30.6	4.6
Intervention #11	200	Rural	64.0% (16)	11.8	58.8	29.4	0.0	84% (46)	6.5	47.8	39.1	6.5
Control #11	157	Rural	11.4% (4)	0.0	100.0	0.0	0.0	42% (37)	30.6	44.4	19.4	5.6
Intervention #12	150	Rural	72.7% (8)	12.5	37.5	37.5	12.5	93.8% (34)	8.8	41.1	47.1	2.9
Control #12	180	Rural	17.2% (5)	0.0	60.0	40.0	0.0	36.5% (24)	8.3	75	16.7	0.0

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