Introduction

The Prescription for Health program connects the medical system and the food sector by creating a relationship between clinic staff, their patients and their local farmers' market. Health care providers write "prescriptions" for their patients to eat more fruits and vegetables. Participants receive a coupon book worth $40 (four $10 coupons), which is then redeemed for tokens to spend like cash at two local farmers' markets. Participants also receive nutrition education, recipes and support.

Over the two-year program, a total of 832 low-income, food insecure participants enrolled through their primary health care clinics. Both years of the program, enrolled patients who visited their local farmers' market demonstrated, on average, a significant increase in their fruit and vegetable intake of nearly one cup. Patients and clinic staff alike reported that the "tangible" access and comprehensive support provided through the partnership helped their patients embrace healthy eating behaviors – in spite of many challenges and barriers they face.

Results demonstrate positive impacts for enrolled patients and partner organizations. Participating patients cited the access to fresh, local produce and support as key to their ability to make healthy behavior changes – and, in some cases, prevent or better control chronic illness. Ninety-three percent of patients interviewed post-program Year 2 rated their overall experience as "good," "very good" or "excellent." Many also noted positive health changes such as weight loss, increased physical activity and healthier eating habits. Clinic partners reported improvements in their capacity to address the food and nutrition needs of their most vulnerable patients. Local farmers' markets report increased revenue and new customers as a result of the program.

Key Findings:

- Both years, the average daily consumption of fruits and vegetables increased by nearly one cup per day among patients who visited their local farmers' market as measured by a pre- and post-program survey (mean=0.7 Year 1; mean=0.9 Year 2; $p<.001$).
- Participants overwhelmingly agreed that visiting the farmers' market helped them or their family members eat more fruits and vegetables (96% Year 1; 94% Year 2).
- Participants increased their awareness of other healthy food resources in the community. Both years, the number of participants who said they were aware that food stamps (Bridge/EBT cards) could be used at local farmers' markets greatly increased from pre- to post-program (48% difference from pre to post Year 1; 43% difference Year 2).
- Participants indicated that they were very likely to visit the farmers' market again in the future at the conclusion of the program (98% Year 1; 97% Year 2).

- The Prescription for Health Program had a positive economic impact on the local farmers' markets, generating over $26,000 in new sales ($5,967 Year 1; $20,279 Year 2). Prescription for Health represented 9% of total sales at the Downtown Ypsilanti Market and accounted for 23% of the total sales at the Chelsea Bushel Basket Market.

The three goals outlined in our proposal to the Kresge Foundation describe tangible outcomes for patients, clinic staff and related clinic systems and policies. This narrative report describes Washtenaw County Public Health's progress toward achieving these goals and their related activities for the two-year project period. There is a strong emphasis in this report on overall Year 2 results as well as Year 2 innovations in response to Year 1 results.

Progress on Goals and Activities

Goal 1: Increase consumption of fruits and vegetables among low-income, vulnerable patients enrolled in Prescription for Health program.

Objective 1: In year 1, up to 5 Ann Arbor/Ypsilanti area clinics will enroll at least 200 patients in program.

Objective 2: In year 2, 3 new clinics will enroll at least 150 patients in the program. Patients from year 1 will receive a "booster" dose of nutrition education and follow-up support.

In Year 2 of the program, some modifications were made to the partnerships. Health Improvement Plan trend data from 2005 to 2010 identified that there was an increase in prevalence of overweight and obese adults, from 56.6% to 62.4% in western Washtenaw County. This area is a more rural environment and observational data shows it is an increasingly poor food environment. Based on this data, two new clinics were added from western Washtenaw County, which include the University of Michigan Chelsea Family Practice Clinic and the Grace Clinic at Faith in Action. Prescription for Health patients from these two clinics were able to redeem their coupons at the Chelsea Bushel Basket Market.

In addition to the two new clinics in Chelsea, one new clinic was added from the Ypsilanti area, Hope Clinic. Packard Health and Neighborhood Family Practice participated for a second year. Seventy-nine patients (15.3% of all Year 2 PFH patients) from these two clinics were enrolled in the program for a second year.

Two of the clinics from year one, New Hope Outreach Clinic and The Corner Health Center, did not participate in the traditional Prescription for Health model in Year 2. The providers did not have the capacity to adequately support the program and thought the program efforts could have a greater impact if dedicated elsewhere, or in a different manner. The Corner Health Center continued participation but in a different way to meet the needs of their unique patient population, which is detailed on page 14.

Year 2 Clinic Partners

Clinic Name & Affiliation (if any)	Location	Population Served	Staff Involved in Program	Patients Enrolled
Chelsea Family Practice (University of Michigan Health System)	Chelsea	Adults and children	Social worker, administrative assistant, dietitian, patient account rep	147
Faith In Action	Chelsea	Adults and children	Clinic director, MD	19
Hope Clinic	Ypsilanti	Adults and children	Clinic director, nutritionist	90
Neighborhood Family Health Center (St. Joseph Mercy Health System)	Ypsilanti	Primarily adults and older adults	Social worker, nurse practitioner, MDs	106
Packard Health "Central"	Ann Arbor	Adults and children	Patient advocates	159
Packard Health "West" *Healthy Harvest Box**	Ann Arbor	Adults and children	Patient advocates, nutritionist, local food bank	31 enrolled in box pilot project
The Corner Health Center *Formative evaluation and outreach**	Ypsilanti	Adolescents & young adults	MDs, health educator, nurse practitioner, front desk staff	41 participated in modified project

Table 1

**Further explanation of these initiatives is under Goal 3.*

Implementation of this program in Year 2 was similar to Year 1, with the exception of a few key changes based on Year 1 evaluation results. These changes are further discussed on page 18.

Due to high total enrollment numbers and redemption rates in Year 2, a booster dose was not provided for all Year 1 patients as dictated in Objective 2. However, of the 79 patients from Year 1 enrolled for a second year, 66% visited the market 4 or more times to purchase fruits and vegetables and receive nutrition education.

The original plan included packaging the program into a toolkit for replication and dissemination. However, after the conclusion of the Year 2 market season, it is clear that certain areas of the program warrant additional refinement prior to further dissemination or replication. Washtenaw County Public Health and local partner organizations are currently working on solidifying program enhancements and applying for continued funding.

Description of Program Participants

In Year 2, from the beginning of June through the end of August, the clinics prescribed the program to 521 patients. This was an increase of 210 patients from Year 1. Most clinics prescribed all, or nearly all, of their allotted prescription packets.

Analysis of our Year 2 pre-program surveys finds that the program continued to reach a diverse and vulnerable population. All 521 enrolled patients completed a pre-program survey. Charts 1 through 6 depict a comparison of Year 1 and Year 2 participant age, race, household income and other relevant demographic information.

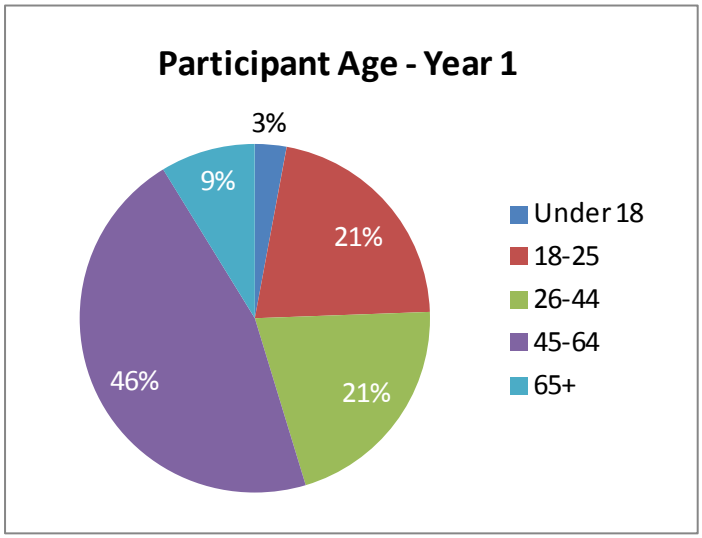

Chart 1

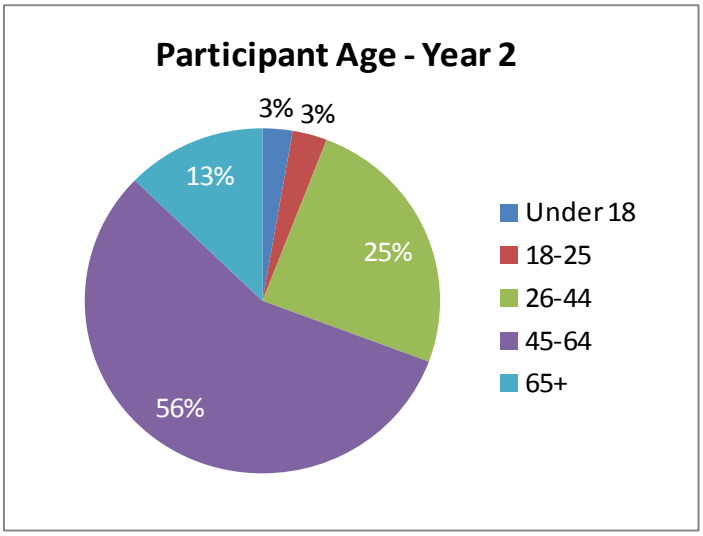

Chart 2

Due to the removal of the Corner Health Center (a youth health center) as a primary enrolling clinic, the percentage of patients enrolled under the age of 25 was smaller in Year 2.

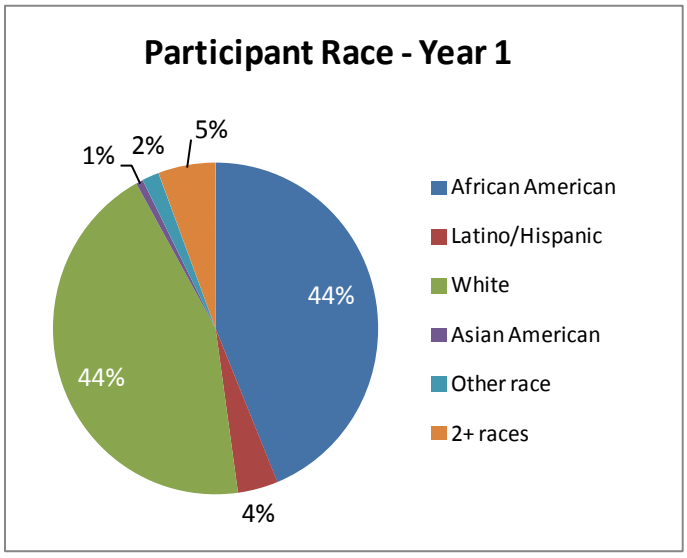

Chart 3

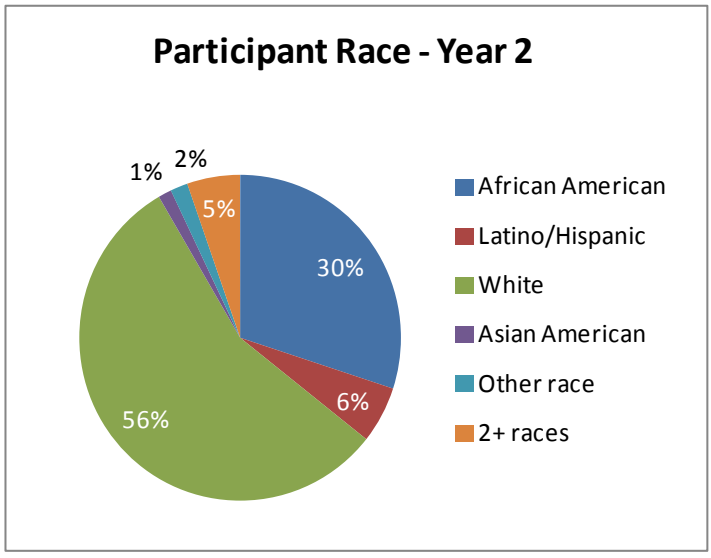

Chart 4

The addition of two health clinics in Chelsea led to a higher percentage of Caucasian patients in Year 2. Ninety percent of the Chelsea patients identified themselves as Caucasian/White, while only 2% identified themselves as African American/Black. This is a significant difference from the Ypsilanti clinics, where 40% of patients identified themselves as Caucasian/White and 43% identified themselves as African American/Black.

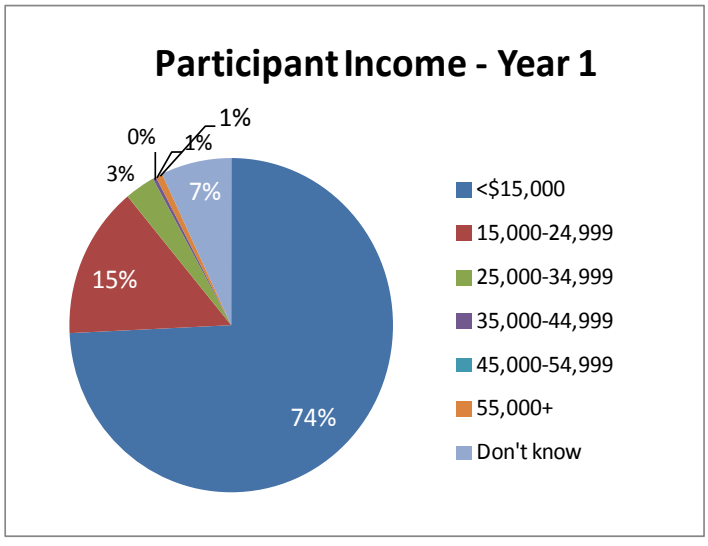

Chart 5

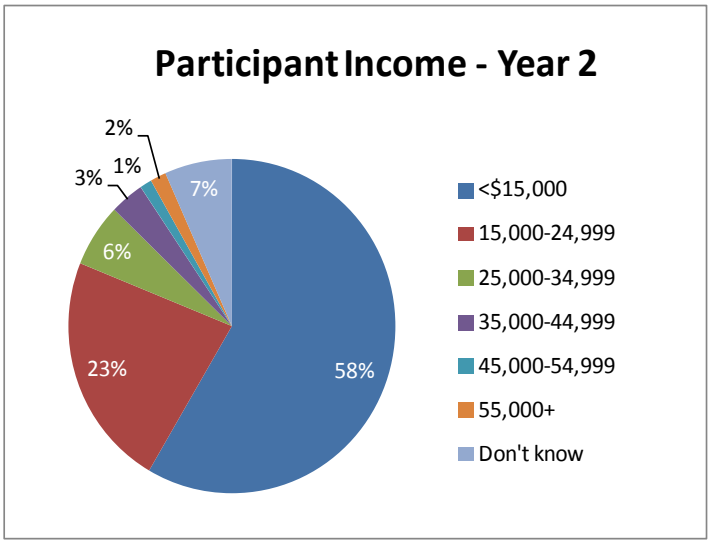

Chart 6

While Year 2 shows a decrease in the number of patients reporting a yearly income of less than $15,000, the majority (81%, compared with 89% in Year 1) still reported an income of less than $25,000.

Most participants were food insecure; with 58% reporting that they cut or skipped meals because of lack of money to purchase food. A little over half (54%) reported receiving food stamps.

One-third (34%) of patients lived alone, and 35% have at least one child in the home. The majority of participants (73%) were female.

Fruit and Vegetable Consumption

Information from our pre-program survey showed that self-reported fruit and vegetable intake was very low among enrolled patients (Charts 7 and 8). In Year 1, prior to participation in the program, average daily fruit and vegetable intake was 1.8 cups per day. Our post-program interviews demonstrated a statistically significant increase in fruit and vegetable consumption ($p < .001$). On average, patients reported an increase of .7 cups from pre- to post-program measurement. The average intake post-program was 2.5 cups per day.

In Year 2, prior to participation in the program, average daily intake of fruits and vegetables was 1.6 cups per day. Our post-program measurement again showed a significant increase in fruit and vegetable consumption ($p < .001$). On average, patients reported an increase of almost one cup from pre- to post-program measurement (.9 cups per day). The average intake post-program was 2.5 cups per day.

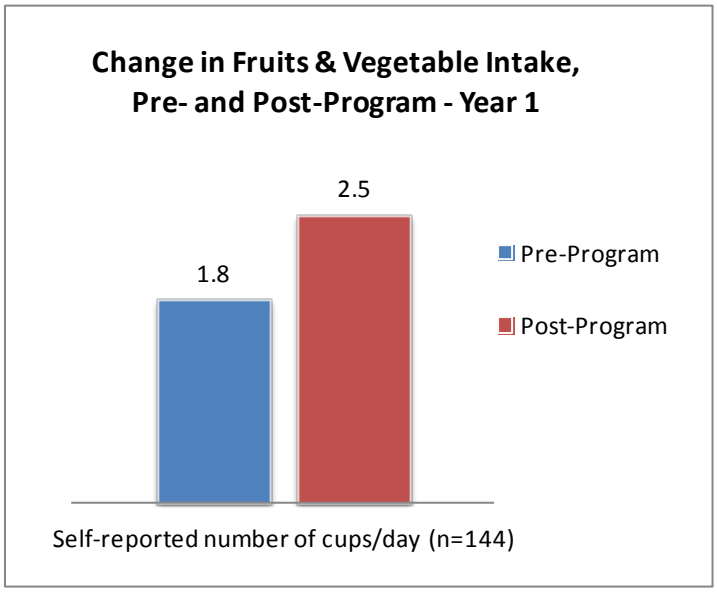

Chart 7

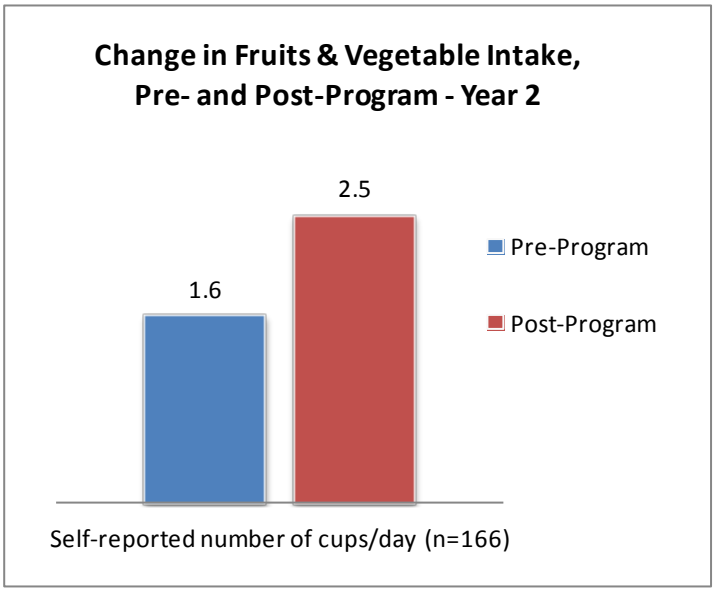

Chart 8

Nutrition Education "Doses" and Coupon Redemption

The goal was for each patient to receive four "doses" of nutrition education and to use all four of their $10 coupons. A nutrition education "dose" was given to the patient each time they visited the farmers' market to redeem a coupon. In Year 1, over one third (35%) of patients enrolled did not visit the market. For Year 2, additional strategies were implemented to decrease the number of "zero visit" patients, resulting in only 19% of those enrolled not visiting the market. Charts 9 and 10 show the total number of farmers' market visits for enrolled patients each year.

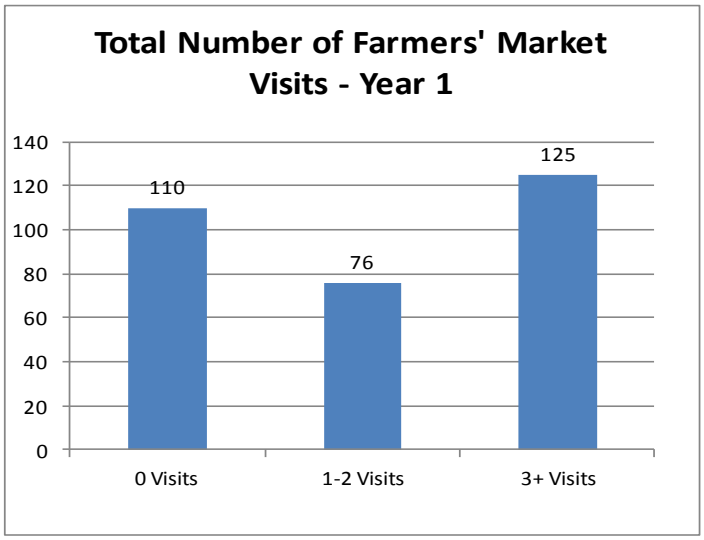

Chart 9

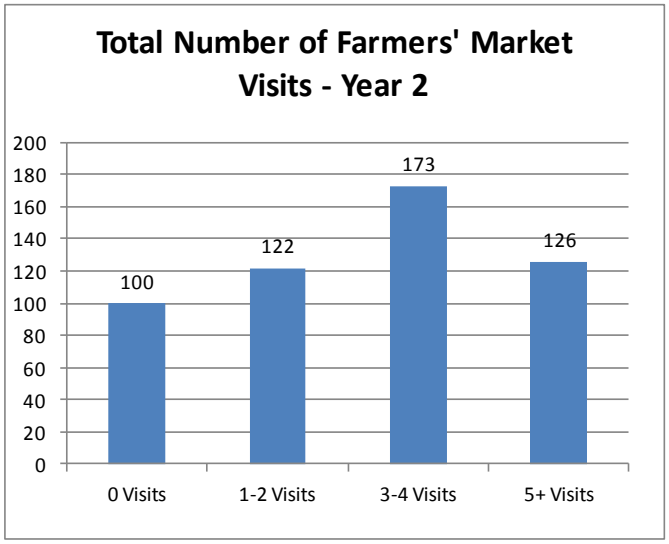

Chart 10

In Year 1, 40% (125 patients) of patients enrolled completed three or more doses of nutrition education. In Year 2, the proportion of enrolled patients completing three or more doses was improved to 57% (299 patients). Also in Year 2, 126 patients were given a second coupon booklet with four additional $10 coupons, allowing them to use up to eight $10 coupons throughout the market season. This second booklet was offered to all patients who finished their first booklet of four $10 coupons before the end of September.

Looking more closely at farmers' market visits across the different clinics, we see variations in both number of patients enrolled in the program and amount of success in making multiple visits to the market (Charts 11 and 12).

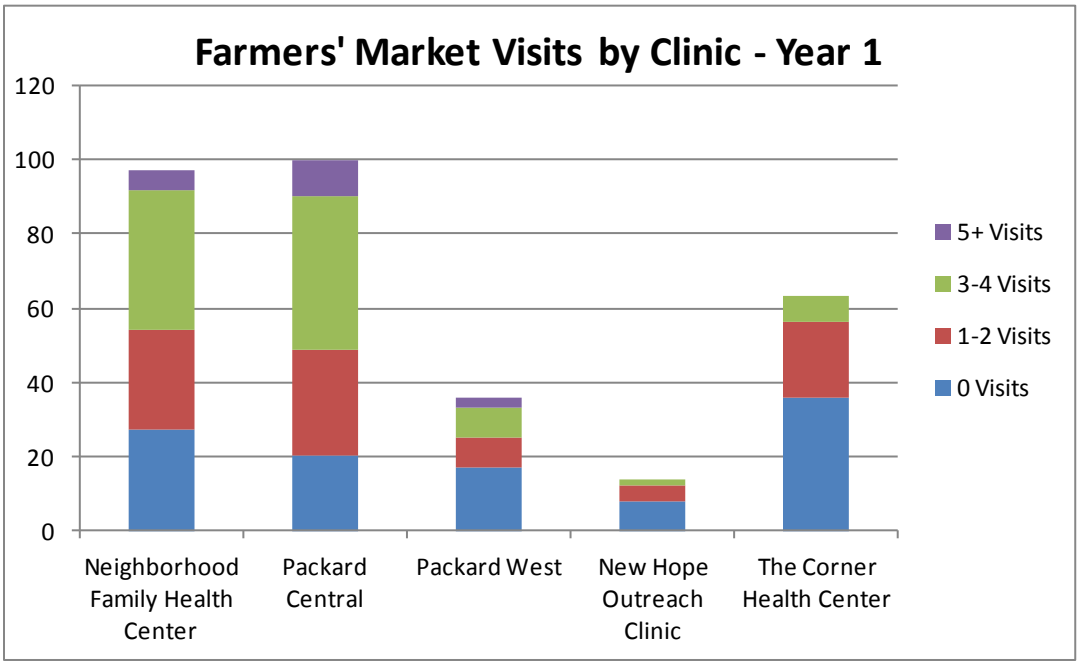

Chart 11

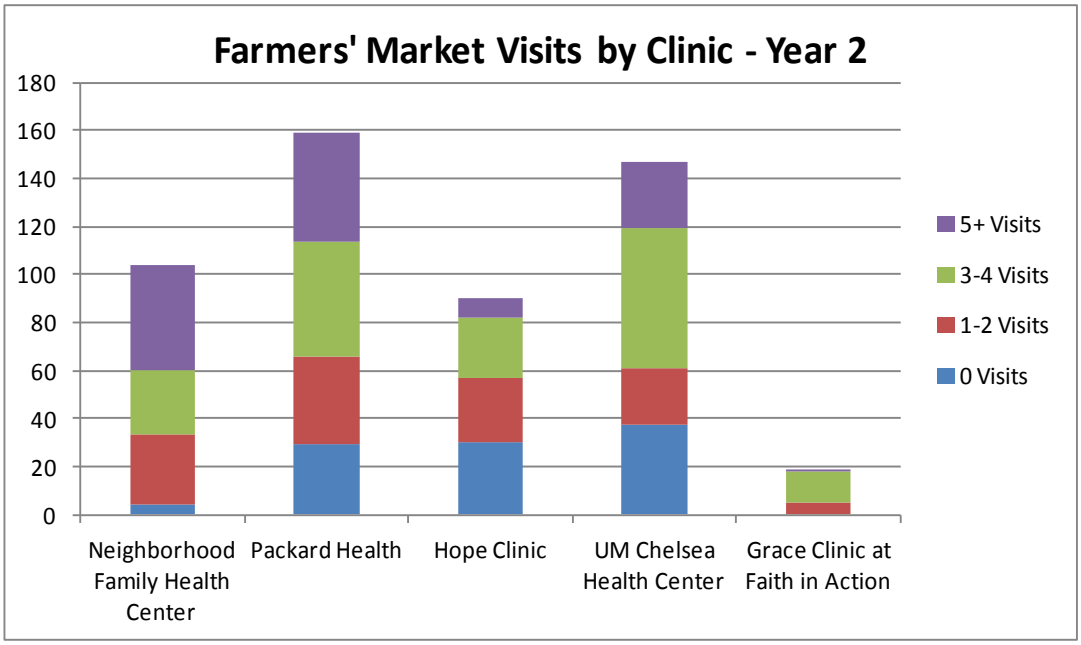

Chart 12

In Year 2, Neighborhood Family Health Center saw the greatest success with the program in terms of patient visits. This success was due to systematic changes in the program enrollment process at this clinic. These changes are further described under Goal 3. Faith in Action is a very small volunteer clinic serving patients only one day per month. This clinic enrolled the fewest patients overall – in part due to its small size, but also because the organization assumed a significant organizational restructuring and was unable to fulfill its commitment as was previously expected.

Goal 2: Increase the ability of clinic staff to address patient nutritional needs by helping patients get connected to the local food system.

Objective 1: In Year 1, develop specific implementation plans for each clinic site by assessing current clinic efforts to deliver nutrition education, staff training needs and clinic environment.

Objective 2: In Year 1, develop and deliver training curriculum for clinic staff, including medical and non-medical staff.

Objective 3: In Year 2, repeat activities listed above at 3 additional clinics. Provide "booster" training and/or consultation at clinics from Year 1. Clinics added in Year 2 will receive technical assistance and materials to carry out booster programming for their patients and staff the following year.

Clinic Training

As in Year 1, implementation plans were developed for the new clinics based on trainings and discussions with clinic staff. In the spring of Year 2, the program team visited each new clinic (UM Chelsea Family Practice, Faith in Action and Hope Clinic) for a meeting with key staff who would be involved with the program. These meetings followed a protocol based on the grant goals and objectives. We discussed the following with each clinic:

- Program goals, objectives and logistics
- Existing internal clinic nutrition resources
- Connections to external healthy food access resources (WIC, food stamps and Double Up Food Bucks, food pantries, etc.)
- Potential for clinic policy, procedure or other change to support healthy eating among patients

Based on these meetings, we refined flow charts describing in detail how the program would be implemented at each clinic (provided as an attachment). Although we gave clinic staff some flexibility on how they selected patients to enroll in the program, the guidelines were to enroll low-income patients who may have a chronic condition and/or food access difficulties.

Shortly before program implementation, we conducted brief trainings with the staff at each new clinic. These trainings varied somewhat based on the amount of time clinic staff allotted and the number of staff involved in the program. For example, at UM Chelsea Family Practice, we attended a physician staff meeting to explain the program to the clinicians and key support staff, and with Faith in Action we explained the process over the phone with the key staff person.

Regardless of training length, some core components were shared at all trainings:

- The flow chart/implementation plan specific to each clinic that described how the program would work
- A demonstration of how to "prescribe" the program to patients
- Overview of bigger picture food access issues and other healthy food resources in the community

For returning clinics (Neighborhood family Health Center and Packard Health), we met with key staff, provided updated materials and support for Year 2 implementation and discussed any proposed changes.

Neighborhood Family Health Center Implementation Change

The Neighborhood Family Health Center in Ypsilanti did some "soul-searching" after receiving the Year 1 market results indicating that almost 30% of patients enrolled in the program never visited the market. Clinic staff considered these results carefully and wanted to improve program utilization in Year 2. After this consideration, the clinic staff decided to restructure their enrollment process.

Once prescribed the program at their initial clinic visit, the patient returned to the clinic for a group enrollment meeting on market day, just before the market opened. At this group enrollment, patients received a more detailed explanation of the program, a map and information about the market and any assistance necessary to complete the pre-program survey. This process proved more efficient for the clinician processing enrollments, since multiple patients could enroll simultaneously. After the initial meeting, patients continued to meet weekly prior to the start of the market to share ideas, sample recipes and discuss health topics and goal progress.

The group setting provided social support, encouraged market visits and reinforced the importance of eating healthier. The new enrollment process and social support component increased the program utilization to 97% in Year 2. Furthermore, the coordinating clinician reported that after a few weeks, group members enthusiastically initiated their own dialogue and shared ideas or recipes with little or no facilitation from her.

Clinic Staff Involvement with Farmers' Market

During Year 2 of the program, staff members at each of the participating clinics were offered "staff appreciation" coupons to visit their local farmers' market. Over 30 staff, with representatives from each participating clinic, attended the market. The Prescription for Health team also invited collaborating clinicians to assist at some of the monthly special events at the markets focused on chronic disease management. By visiting their local markets, clinicians were better able to speak with patients about the program, including what they could expect and how to use the coupons. Moreover, many staff members that were not directly involved in the program learned more about it and became more effective at promoting the program as well as the local farmers' market to their patients. Prescription for Health enrollees also enjoyed connecting with clinicians at the market and discussing how their fruit and vegetable purchases were an important part of their chronic disease management strategy.

Group Discussion with Partner Organizations

In early September 2012, representatives from each of the participating clinics, farmers' market managers and the Prescription for Health team gathered for a three-hour semi-structured group discussion. During this informal focus group, each representative shared his or her program experience and reflections. Rich qualitative data was gathered regarding program outcome and process strengths, lessons learned and successes and challenges thus far.

The data collected overwhelmingly shows that staff from the partner organizations felt the program had a positive impact on multiple levels, including patients, clinic staff, markets and individual farmers. Clinic representatives relayed experiences from patient follow-ups during which the patients described how they changed what they were eating through participation in the program and learned new strategies for eating healthier. One dietitian discussed how simply having fruits and vegetables on hand in the house made a difference in her patients' eating habits and nutrition. The improved access and purchasing resulting from Prescription for Health participation meant patients were coming to her with new vegetables and recipes to try and looking for ways to incorporate the foods into their diet. This was a major change in the tone of many of her patient consultations and even led her to study up on local produce and healthy recipes so she could serve as a resource for supporting their dietary changes.

Staff from all clinics described the importance of training all of their frontline staff about the program and the role of posters or other marketing materials in waiting and exams rooms encouraging patients to "ask me about Prescription for Health." These prompts helped initiate conversations with an available staff member about nutrition, local food resources and specifically Prescription for Health.

Clinic staff explained that their physicians were often pressed for time addressing the multiple reasons for the patients' office visit and struggled to engage in very detailed discussions of the program. With the implementation of broader staff training and "staff appreciation" coupons, patients could talk to medical assistants, patient advocates, social workers, dieticians and administrative staff about food issues in general and the Prescription for Health program. An area for improvement echoed by many clinic staff was the need for a more well-defined screening process to determine if Prescription for Health was a good fit for the patient, which would also help decrease the number of 'zero visit' patients by ensuring enrollment of individuals with access and availability to visit the market.

Other key findings from this interview session include:

- Clinic staff discussed the merits of various enrollment and follow-up strategies, such as check-in calls with patients and the group enrollment and support successfully implemented at one clinic site.

- The importance of encouragement, support, "nudges" and positive reinforcement in addition to providing the concrete means to adopt healthy behaviors.

- Positive feedback about patients' "new favorite" vegetables like kale and kohlrabi – how recipes, support and opportunities to try new foods without pressure of wasted food dollars were instrumental in overcoming multiple barriers and led to enthusiasm for new healthy food behaviors.

- Potential for strengthening the partnerships between the medical setting and the food and farmers' market setting. Strategies included improving communication about activities, hours and procedures more broadly among partners. For example, keeping all partners up to date on other partners' contact information and sharing information such as what's currently in season at the market. Growers, for instance, are often making decisions about what or how much produce to bring to market. If growers knew which recipes were featured or sampled each week, they could adjust their inventories accordingly. Other ideas included integrating the Prescription for Health team into the clinic setting and scaling back their presence at the weekly markets and better coordination of community resources (e.g. community advocates, SNAP enrollment assistance, recipes, events, materials, etc.)

Overall the clinic and market representatives were very excited about this partnership between the health system and food system and strategies for strengthening and integrating it more fully. Partners for both systems see tremendous potential for strengthening their relationships and discussed many ideas regarding programs, services and workshop opportunities offered through the market and associated organizations that would be of interest to patients as well as powerful complements to the Prescription for Health program. Examples of such included raised-bed backyard gardens, fresh food preservation, growing in the winter season using mini-hoop house technology and more.

Goal 3: Create new clinic and community systems and/or policies that reinforce connections to local healthy food resources.

Objective 1: In Years 1 and 2, work with clinics to develop policies or systems related to patient access to healthy foods.

Objective 2: In Years 1 and 2, work with Washtenaw County Food Policy Council to identify policies that would strengthen cross sector collaboration and increase access to healthy foods for low income, vulnerable populations.

Referral to Other Healthy Food Resources

The Prescription for Health program worked collaboratively with other local food assistance programs and agencies in an effort to ensure low-income populations had access to healthy, affordable foods. Staff updated and distributed the Healthy, Affordable Food at Farmers' Markets in Washtenaw County guide (provided as an attachment) to program participants, as well as partner agencies. This guide listed dates, times and locations of all farmers' markets within Washtenaw County. It also explained the various food assistance programs available at each market.

A key part of the program was to ensure that participants who may qualify for Bridge Card/EBT/Food Stamps were able to apply. The Prescription for Health table at the Downtown Ypsilanti Farmers' Market was situated next to staff from another agency with the capability to screen potential food stamp applicants, as well as apply for benefits right at the market. This scenario made cross-referrals seamless and easy, and greatly increased the awareness of food stamp eligibility and availability for use at the market, as is evidenced in the charts below.

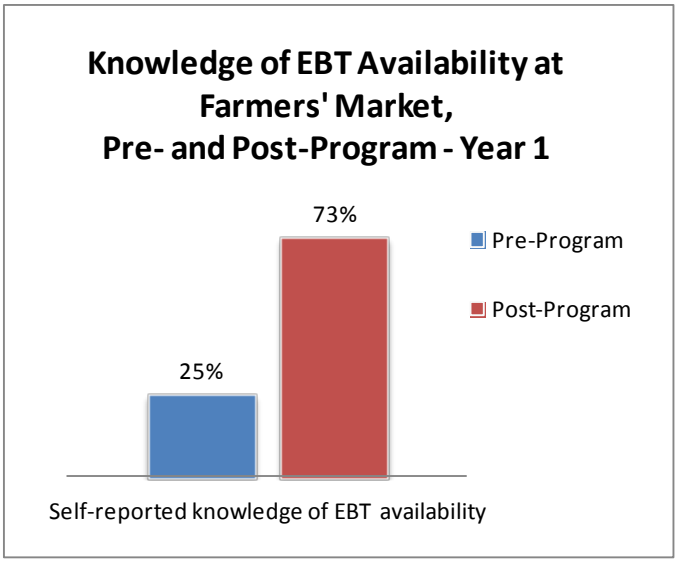

Chart 13

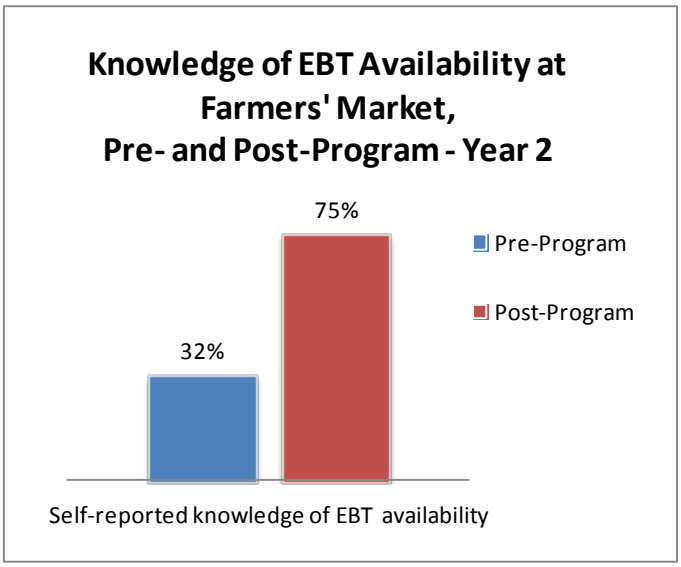

Chart 14

Neighborhood Family Health Center Support Group

As described under Goal 2, the Neighborhood Family Health Center in Ypsilanti developed an enrollment system that produced exceptional program results. While enrolled patients that visited their local markets demonstrated positive changes at all of the clinic sites, the Neighborhood enrollment model is particularly successful at reducing the number of enrolled patients that never visit their local farmers' market ("zero visit"). This system focused on chronic disease management included goal setting and concrete social support to help program participants make health behavior changes, fully utilize the program and achieve their goals. Among those actively participation in the support group, 88% (15 of 17) reported meeting one or more of their program goals:

- Adding more fruits and vegetables to snacks
- Increasing the amount of fruits and vegetables in my diet
- Shopping more frequently for fresh fruits and vegetables
- Visiting the farmers' market at least four times during the season
- Losing weight
- Increasing exercise

Based on this success and high interest from participants, the clinic plans to continue the group model for chronic disease management and support and will focus on physical activity, stress reduction and smoking cessation during the winter months.

Corner Health Center Outreach

In Year 1, more than half (57%) of the patients enrolled in the Prescription for Health program at the Corner Health Center did not redeem any of their coupons or visit the farmers' market. Notably, this clinic serves adolescents and young adults, especially those who are parenting. The average age of enrolled participants from the Corner in Year 1 was 20 years, compared to 44 years overall among the five Year 1 clinics. In Year 2, the Prescription for Health team worked with the Corner staff to implement a modified program and explore why the Year 1 redemption rate was low and what could be done to develop program strategies better suited to a younger population (the formative evaluation and outreach project cited in Table 1).

During Year 2, health providers at the Corner continued to give patients prescriptions/referrals to visit the local farmers' market. The Prescription for Health team developed a brief survey and informal discussion questions for use with patients. The team also implemented a recommendation that clinic staff gave in Year 1 to provide more support to help patients make an initial visit to the farmers' market. For three weekly market days in August, Prescription for Health staff were present in the Corner waiting room to engage patients in discussion and to offer surveys, tokens and walks to the market for any interested patients and their companions (family, friends, children, etc.). This clinic is located approximately two blocks from the local farmers' market. Several participants walked with staff to visit

the market, and many more met staff at the market to spend their free tokens and talk about their experience. Throughout the season, 41 Corner patients visited the market a total of 106 times. Nearly half of these visits (45%) took place on the three afternoons in August when Prescription for Health staff were present to accompany patients to the market.

Similar to the experience with Neighborhood Family Health Center where group enrollment and support were instituted during Year 2, this experience at the teen health center reinforces the need for systems that provide greater and more concrete support when working with patients, particularly young people, who face significant challenges to eating healthier. When asked why they thought the Corner patients enrolled Year 1 did not actually visit the farmers' market, Year 2 participants expressed surprise and bewilderment, but they also recommended strategies for helping their peers gain comfort and familiarity with the local market as a healthy food source (e.g. information about what to expect and what is available there). A total of 67 Corner patients completed formal surveys; ten patients provided feedback *after* shopping at the market; and many had informal conversations with team members before and after their visits.

Healthy Harvest Box – Pilot Project

Healthy Harvest Box was a collaborative pilot project between Public Health, Food Gatherers (a local food rescue and food bank organization) and Packard Health West. This pilot project investigated whether the concept and framework of Prescription for Health was transferable to other models of delivery. The project embraced the idea of prescribing fresh fruits and vegetables to low-income, chronic disease patients struggling with food access or food insecurity. Aiming to increase access to and consumption of fresh produce, the pilot project adapted Prescription for Health materials, methods and processes and applied them to a fresh food box model. Enrolled patients were offered monthly boxes of produce for pick up at the clinic, theoretically reducing transportation and other barriers that prevented some participants from reaching their local farmers' market.

Two staff members at Packard Health (the nutritionist and a patient advocate) identified and enrolled 31 patients in the program between June and August. On the fourth Wednesday of every month beginning June 27th and ending November 28th (six monthly boxes), Food Gatherers prepared boxes, one for each participant, filled with 16-20 pounds of fresh fruits and vegetables and delivered them to the food pantry at Packard Health West. Enrolled participants picked them up between 1:00 and 2:00pm. In addition to the variety of produce, each box included easy-to-read information, developed by a Food Gatherers' registered dietitian, explaining the items in the box, their nutritional value, preparation tips and healthy recipes.

Analysis of the 31 pre-program surveys indicates that similar to Prescription for Health, this pilot program reached a low-income population at high risk for or struggling with chronic illness. The majority (73%) identified themselves as female and reported an average age of 50 years. Twenty-seven percent

of the patients lived alone; 43% lived in a two-person household; and 30% lived in a household with three or more persons. One-third had at least one child living in the household. Most participants were food insecure; 70% reported that they cut or skipped meals because of lack of money to purchase food. Half (50%) reported receiving SNAP benefits and 90% had an annual income of less than $25,000. Fruit and vegetable intake was low among enrolled patients, with more than half of participants consuming less than 1 cup of fruits and vegetables the day prior to the survey.

Of the 31 enrolled patients, 84% picked up their box four or more times, and the average number of box pickups among patients was 4.5 boxes. Chart 15 shows the number of box pickups made by the 31 enrolled patients. Among those patients who were not able to complete all six pickups, the most common barrier was transportation, although many expressed that they often were able to arrange pickup on a different day or by a friend or family member after missing the designated pickup period.

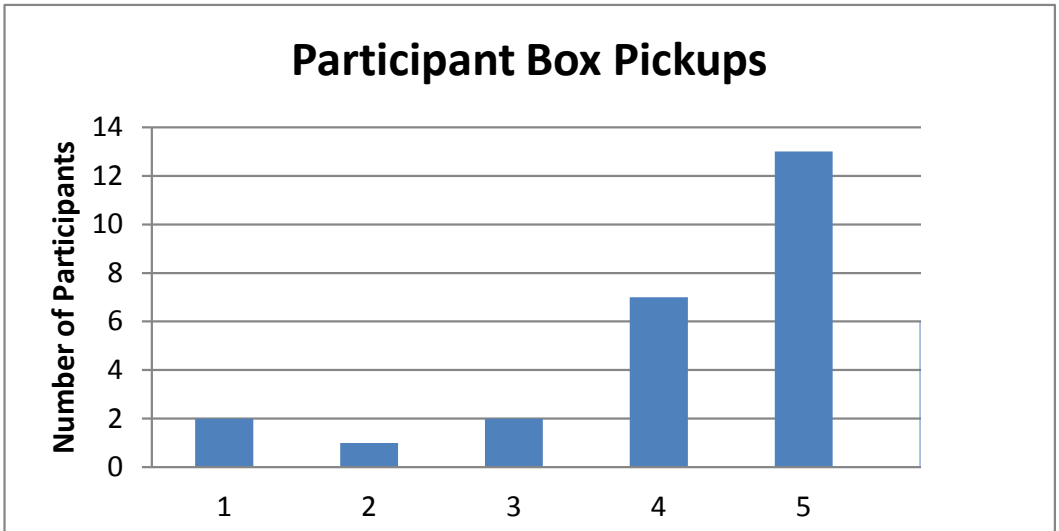

Chart 15

As with Prescription for Health, post-program phone interviews were conducted to measure program outcomes. Interviews were completed for 24 of the 31 participants (77%). The majority of patients reported a positive experience; 83% of respondents rated their experience as “very good” or “excellent” and no respondents indicated their experience was “poor” or “fair.” All patients interviewed said that the program helped them to eat more fruits and vegetables and expressed a willingness to participate again in the future. Patients indicated that they found the access to fruits and vegetables, recipes and handouts to be the most helpful aspects of the program, explaining that the program helped them to stretch their food budget, improved their nutrition and provided access to otherwise unaffordable, fresh and high quality produce. Many patients described the difference the program made in terms of encouraging them to eat healthier and try new recipes; providing information about how to lose weight or control blood sugar; and offering a dependable source of healthy food.

A comparison of daily intake of fruits and vegetables reported by patients on pre-program surveys and post-program interviews indicates **an average increase of nearly 1 cup in fruit and vegetable consumption (0.7 cup)**. Given the small sample size, statistical tests for significance are not considered valid.

Additional Healthy Harvest Box highlights include:

- Over 70% of those interviewed post-program said they would be willing to pay some amount of out-of-pocket money or a portion of their SNAP benefits to participate in the program, demonstrating participant enthusiasm and support for the pilot.
- Almost 80% of those interviewed post-program reported doing something new or different because of the information provided through the handouts received in their boxes, with qualitative data describing many of the new vegetables and recipes patients tried.

When asked about their fruit and vegetable consumption habits in the winter season, over 60% of respondents reported eating fewer fresh or fewer overall fruits and vegetables during the winter. Of those interviewed post-program, 50% reported changes in where they get their fruits and vegetables during the winter, explaining that the lack of farmers markets or ability to grow their own means increased reliance on grocery stores, which some participants indicated were too expensive or difficult to reach.

Washtenaw Food Policy Council

The Washtenaw Food Policy Council was initiated in May 2012 and to date there have been three formal Council meetings. The Prescription for Health program coordinator attends these meetings and is actively involved in the Council's work. A Healthy Food Access Policy Action Team has been formed and is eager to review the results of the Prescription for Health final report to look for additional opportunities to work toward system and policy changes that make healthy food more affordable and accessible to vulnerable residents and to strengthen the local food economy. For example, the potential willingness of program participants to use a portion of their SNAP benefits to purchase produce boxes is information that will be shared with the Council to help foster policy changes. A presentation of final results will be scheduled with the Council's Policy Action Team in the spring of 2013.

Year 1 Lessons and Year 2 Innovations

A number of lessons were learned following the implementation of Year 1 and an examination of the evaluation results.

- Enrollment in the program does not always result in farmers' market visits. More than one-third (35%) of all Year 1 patients enrolled did not visit their local farmers' market. Additionally, clinic partners Year 1 hesitated to promote Prescription for Health widely within their clinics for fear of creating too much demand. Given that many prescriptions went unredeemed in Year 1, the team and partners agreed to step up promotion and "over prescribe" the subsequent year.

- Those patients visiting the market at least three times reported a significant increase of about a cup in their fruit and vegetable consumption though post-program interviews. This finding reinforced the need for Year 2 innovations seeking to reduce the number of enrolled patients that never visit the market (zero visits).

- Qualitative data from clinicians and patients suggested a need for additional emphasis on chronic disease prevention and management and stronger linkages to these themes needed to take place at the farmers' market to enhance clinic education and continuity with the program.

- The Year 1 experience and post-program evaluation indicated that the lack of privacy and fast pace of interactions at the market inhibited opportunities for patient-focused health interactions at the farmers' market.

In response, program modifications targeting multiple levels were included in the Year 2 implementation plan.

Efforts to Improve Redemption

In Year 2, new strategies enhanced awareness and utilization of the program within and between partner organizations as well as among clinic patients, enrolled patients and community members. Activities included a monthly electronic newsletter for partners and patients, reminder postcards mailed to enrolled patients; an in-person evaluation discussion with partner organizations; and increased signage and prompts within clinic settings. In addition, the Prescription for Health team offered and promoted private consultation by phone or email with the team nutritionist and designed the post-program evaluation to investigate more thoroughly which program elements are most critical to success.

Newsletters – Enrolled patients who provided a working email address and clinic partners received a monthly electronic newsletter. Newsletters introduced staff, served as reminders about market locations and hours and highlighted available produce and market events. This helped keep participants informed of the fruits and vegetables currently in season; promoted monthly special events focused on

chronic disease prevention and management; and other healthy food resources and supports. These regular emails also helped to solidify connections with enrolled patients and partner organizations.

Special Events Focused on Chronic Disease Prevention and Management – The Prescription for Health team facilitated four monthly events focused on chronic disease prevention and management at each of the two markets. At each event, the team led themed discussions, offered prevention and management strategies and solicited success stories and challenges from participants. Participating patients received $5 in bonus tokens to spend at the market and incentives that fit with the monthly themes, such as pedometers and salt-free seasoning packets from a market vendor. Clinic staff consulted on the content of these events and participated where appropriate, such as offering blood pressure checks.

Special events were extremely well received and well attended. Total attendance from these four events was over 360, and many patients cited something they learned, shared or confirmed at these events during the post-program interviews. The four monthly themes and attendance were: 1) weight loss and physical activity with 74 attendees, 2) diabetes with 87 attendees, 3) blood pressure with 113 attendees and 4) fruit and veggies all year with 89 attendees. The final event, fruits and veggies all year, focused on ideas for eating more produce during the winter months and included information on freezing or canning. The special events provided patients with opportunities to have more in depth discussion about chronic diseases with the program team and to share tips and strategies with their peers.

Individual Consultation with the Registered Dietitian – To provide an opportunity for private, nutrition counseling at a time most convenient for patients, the team dietitian offered to "meet" with patients by phone or over email. Business cards with contact information were available at the market table and special events. While many patients expressed enthusiasm for this option, few took advantage of it. Qualitative data from the post-program interviews suggest the majority of patients did not recall hearing about this option, and others "forgot" or were "too busy" to follow up.

For enrolled patients who redeemed their first four coupons to the market and had the opportunity to redeem another four coupons, a brief one-on-one counseling session with the dietitian was required. When "second booklets" became available to active program participants, the team provided extra staffing on market days, which allowed the dietitian to meet with patients more privately to discuss their individual goals and progress. Additionally in Year 2, the program team began using a motivational interviewing technique (called Ask-Tell-Ask), which was helpful in creating a patient-focused discussion about goals and how the program could help in attaining these goals.

Though the pre-program meetings and trainings, the program team emphasized the importance of creating clinic systems to provide concrete support to patients and to carefully screen patients to ensure visiting the farmers' market was feasible for them; however, early in the second season an evaluation discussion and networking meeting was scheduled for partner organizations to share their successes and

challenges face to face. (Year 1, key informant interview were conducted with clinic staff. This process was modified in Year 2 to build stronger relationships among partners.)

Additional Year 2 initiatives aimed at exploring and reducing the number of "zero visits," were discussed in more detail under Goal 3. These included the group enrollment process implemented at Neighborhood Family Health Center, the Healthy Harvest Box pilot project at Packard Health West and the formative evaluation and outreach carried out at the teen and young adult health center (The Corner Health Center).

Evaluation

Systems were in place throughout the two-year grant to monitor proposed outcome and process measures, document activities and implement modifications where necessary. Lead by the program evaluator, the Prescription for Health team developed the following evaluation overview to guide procedures and communicate with partners about progress and milestones.

GOAL 1: Increase consumption of fruit and vegetables among enrolled patients

Outcome measures include the percent of enrolled patients reporting:

- an increase of at least one serving per day of fruits and vegetables
- increased knowledge of chronic disease management through healthy eating
- greater access to produce
- increased skill in preparing meals using fruits and vegetables

Process measures include numbers of:

- enrolled patients
- participating clinics
- "doses" of nutrition education per patient

GOAL 2: Increase the ability of clinic staff to address patient nutritional needs and connect them to the local food system

Outcome measures include the percent of clinic staff who report increased awareness of healthy food resources and an increased ability to assist their patients. Process measures include clinic planning meetings and trainings and percentages of enrolled patients who visit their local farmers' market to redeem coupons.

GOAL 3: Create or strengthen clinic and community systems and policies that reinforce local healthy food resources

Outcome measures include clinics that report new or improved policies and/or systems that support healthy eating and connections to local food resources. Process measures include planning and partner meetings as evidenced by relevant agendas and notes.

Key evaluation instruments included the prescription card and pre- and post- program surveys and interviews. The team developed these tools by researching validated instruments, modifying them to suit the program goals and testing them with members of the target population. SPSS (a statistical software program) was used to collect and analyze data.

The prescription card served as a primary enrollment and visit-tracking tool. Initially, the clinician used the card to document the reason for the prescription and to set goals with the patient. Once the patient was enrolled, the prescription card was transferred to the program team; the team then used it to track market visits and patient-centered discussions on site at the farmers' market. These cards were kept in a locked cabinet when not in use. Visit data was entered into SPSS from the cards.

A brief pre-program survey (patient self report) was used at enrollment to collect basic demographic information, health information and healthy eating knowledge, attitudes and behaviors. Pre-program fruit and vegetable intake was also captured. Patients completed the pre-program surveys in written format at the initial clinic visit or group enrollment session. Year 2 questions to measure self-rated health and readiness to change healthy eating behaviors were added to the pre-program survey.

Patient outcomes were measured using post-program interviews administered by phone (patient self report). Phone interviews allowed for a more detailed discussion of the program's impact on patients and provided the primary source of quantitative and qualitative data on patient outcomes. Both years, interviews were conducted after the end of the market season (November and December). Year 1, the team attempted to reach all 311 enrolled participants; 208 (67%) were successfully interviewed. Given the large number of enrolled patients in Year 2 (521), the team targeted a random sample of patients. SPSS was used to select representative samples of patients who visited the market and patients who did not visit; 289 patients (55% of enrolled patients) were selected for post-program interviewing. A total of 192 patients were interviewed post program Year 2, which represents 37% of all those enrolled.

Significantly, the Year 2 post-program interviews with patients allowed for incorporating additional questions about the importance of key program elements and potential, future modifications. Respondents, for example, were asked if they would still visit the farmers' market if they received coupons or tokens, but there was no Prescription for Health staff presence at the weekly markets. Results suggest that staff presence is most critical for an initial visit or visits when patients are not familiar with the market.

Clinic staff outcomes were assessed through key informant interviews (Year 1) and a semi structured group interview (Year 2). Year 1 clinic staff interviews were discussed in the Year 1 update and contributed to Year 2 modifications and innovations. The Year 2 evaluation process was modified to facilitate stronger linkages and share implementation experiences among partner organizations. Details of the Year 2 dinner discussion with partner organizations are found starting on page 11.

Final Evaluation Results

Final quantitative and qualitative results will be summarized in a brief outcome report that can easily be shared with the Kresge Foundation, partner organizations and other stakeholders. The report will be available on the Washtenaw County Public Health website and disseminated via appropriate community distribution lists (listservs) and umbrella organizations, such as the Michigan Association for Local Public Health and the Michigan Farmers Market Association.

The results will also be presented at numerous conferences and workshops. The project coordinator and other team members have received numerous inquiries from people in both locally and nationally who had heard of the program and are eager to learn of our overall results.

Prescription for Health team members presented the program at three important conferences in 2012:

- Michigan Hospital Association Green Health Care conference – September 2012, Ann Arbor, MI
- Michigan Premiere Public Health Conference – October 2012, Big Rapids, MI
- American Public Health Association (APHA) Conference – October 2012, San Diego, CA

Each of these conferences as well as other networking opportunities has generated inquiries and interest in the program. Some organizations are implementing similar projects and want to discuss successes and troubleshoot challenges. Most, however, are looking to develop programs and have questions about replication strategies. The first presentation of 2013 is scheduled for February 5th with the Ecology Center's Healthy Food in Health Care Program and its partners in Detroit and will feature discussion of Prescription for Health's two-year results. In addition, staff will be presenting the Year 2 results at the Local Food Summit in Ann Arbor on February 22, 2013.

Conclusion

The Prescription for Health Program has expanded tremendously over the past two years. Results demonstrate clear successes and significant opportunities. The Kresge Foundation's funding has allowed the program team and partners to provide critical resources and support to hundreds of low-income, food insecure residents – many of whom are at high risk for developing chronic illness, or are already struggling to manage chronic illness with incredibly limited resources.

Moving forward, the program team and partner organizations are looking to build on what is currently working and expand where needed.

- Among enrolled patients who visited their local farmers' market, post-program evaluations demonstrated significant increases in fruit and vegetable consumption from pre- to post-program both years.

- Innovative group enrollment strategies piloted in Year 2 and the additional formative evaluation and outreach carried out at the teen health center clearly point to the need for increased and systematic social support to make the best possible use of resources.
- Building and maintaining strong linkages between partners is essential to reducing duplication of effort and maximizing the resources available to assist community members.
- Evaluation results have greatly improved our understanding of effective strategies to increase access to fresh fruits and vegetables for low-income residents. For some residents, their local farmers' market is not a feasible source of healthy food. For most, it is only a seasonal option. Year 2 pilot projects demonstrated viable options for increasing the availability of produce year round, such as through the Healthy Harvest Food Box. Fresh food boxes may also eliminate transportation barriers for some.
- Although community economic development was not a planned outcome of the program, Prescription for Health contributed significantly to the vitality of local markets and the income of vendors where the program was available. This strengthens the local food economy.

In the future, stronger organizational partnerships and additional systems and policy changes designed to offer concrete social support to participants will likely reduce or even eliminate the number of enrolled patients who never visit the market. Adding a fresh food box component will help address transportation barriers for some participants and improve off-season access for many. WCPH and partner organizations are actively pursuing additional, collaborative funding to solidify these program enhancements and to bring the program to scale.