WHOLESOME WAVE’S FRUIT AND VEGETABLE PRESCRIPTION PROGRAM®, NEW YORK CITY
2014 OUTCOMES

In collaboration with

NYC HEALTH+HOSPITALS
Laurie M Tisch ILLUMINATION FUND
ACKNOWLEDGEMENTS

Wholesome Wave is grateful for the opportunity to work with our FVRx NYC partners and hospital sites, without whom none of this work would be possible. We are excited to continue these relationships as we all work together to increase affordable access to healthy food in New York City.

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2014 FVRx NYC HOSPITAL SITES

NYC Health + Hospitals/Bellevue
NYC Health + Hospitals/Elmhurst
NYC Health + Hospitals/Harlem

2014 FVRx NYC PARTNERS

GrowNYC
Harvest Home
New York City Department of Health and Mental Hygiene
NYC Health + Hospitals
New York City Mayor’s Office

“This program has really helped with increasing awareness of the importance of fruits and vegetables in a healthy diet and increasing awareness of the abundance of farmers markets in the area that provide such a wonderful variety for the community.”

Healthcare provider, NYC Health + Hospitals/Elmhurst

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INTRODUCTION

The Fruit and Vegetable Prescription Program® (FVRx®) enables healthcare providers to give families innovative prescriptions to spend on fruits and vegetables. FVRx promotes healthy eating in underserved communities through partnerships with healthcare providers, community-based organizations, and healthy food retailers. The program combines medical advice and nutrition education with the provision of resources that make fresh fruits and vegetables affordable. Through FVRx prescriptions, patients are empowered to make healthy food choices, healthy food retailers receive direct economic benefits, and patient-provider relationships are deepened.

Following Wholesome Wave’s proven model, the FVRx NYC program aims to create communities of healthy eaters centered around NYC’s network of farmers markets. The project makes a direct link between access to, and consumption of healthy, locally grown foods, and positive health related outcomes for pediatric participants with chronic diseases.

Over the past two years, Wholesome Wave has worked with partners to integrate FVRx into the NYC Health + Hospitals integrated health care system and NYC’s network of farmers markets. In 2013, the project focused on understanding how to adapt FVRx, previously implemented only in community health centers, to run successfully within a public hospital. In 2014, FVRx NYC was implemented at three NYC Health + Hospitals locations — NYC Health + Hospitals/Bellevue, NYC Health + Hospitals/Elmhurst, and NYC Health + Hospitals/Harlem. The goal in year two was to develop and test further program modifications based on provider feedback as well as program results, while also building on established relationships with program partners to ensure that the program can be sustainably scaled in NYC.

Modifications to the program model in the second project year include: 1) testing a reduced incentive amount of $0.50 a day per household member at NYC Health + Hospitals/Elmhurst and NYC Health + Hospitals/Bellevue while continuing to provide $1 per household member per day at NYC Health + Hospitals/Harlem, 2) reducing the number of required doctors visits from a monthly to bimonthly basis while maintaining monthly visits with nutritionists, and 3) partnering with farmers market organizations, GrowNYC and Harvest Home, to assume the incentive administration responsibilities and improve the efficiency of incentive distribution and tracking processes.

The following report summarizes the successes of FVRx NYC in 2014 and highlights the efforts undertaken by Wholesome Wave and NYC collaborators. We are pleased to report continued positive results for FVRx participants and their families. Results are aligned with findings from the 2013 FVRx NYC program as well as with previous outcomes from implementation at federally qualified health centers in 12 states. The report provides evidence that Wholesome Wave reached the FVRx NYC program objectives, including:

1. Provide healthy food for pediatric patients with obesity-related chronic disease and their families;
2. Provide the education necessary for participating families to increase knowledge about the importance of fruits and vegetables in a healthy diet;
3. Measure changes in knowledge about healthy eating and local food;
4. Facilitate measurable change in shopping habits, driving new sales for local farmers markets;
5. Measure change in food security indicators of FVRx households;
How it works

1. Participants attend FVRx clinical visits to set healthy eating goals and discuss healthy weight management.

2. Participants receive FVRx prescriptions during the visit and health indicators are collected.

3. Prescriptions are redeemed for fresh fruits and vegetables at participating retailers, where redemption is tracked.

4. Participants prepare and eat healthy meals with family and schedule their next FVRx visit.

Overweight or obese pediatric patient is enrolled in FVRx at their clinical care site.

PARTICIPATING HOSPITALS

NYC Health + Hospitals/Bellevue is America’s oldest public hospital. With more than 800 inpatient beds, NYC Health + Hospital/Bellevue’s primary service area population is over 1.8 million. Poverty rates among families served by the hospital are significantly higher than among households in New York City overall. Of the eight primary service area neighborhoods, four have higher rates of diabetes, five have higher rates of high cholesterol, and three have higher rates of obesity and hypertension than NYC as a whole.

NYC Health + Hospitals/Elmhurst is a 545-bed teaching hospital that serves a community of nearly 900,000 in Western Queens County. The hospital’s service population is predominately economically disadvantaged and medically underserved, and the majority of participants are uninsured or on Medicaid. Hypertension, diabetes, and heart disease prevention and treatment are among the hospital’s priority healthcare needs.

NYC Health + Hospitals/Harlem is a 286-bed teaching hospital, with a primary service area population of over 340,000 in Central/East Harlem, Washington Heights/Inwood, and the South Bronx. The hospital provides health care to a primarily economically disadvantaged community. NYC Health + Hospitals/Harlem has identified diabetes, heart disease, hypertension, and obesity as community health priorities.
FVRx NYC ENROLLED PATIENTS AND FAMILIES

FVRx participants had existing provider relationships at the hospitals. Over three-quarters of participants had been coming to the hospital for more than 5 years, and 14% had been coming for 2-5 years.

Over half (56%) of FVRx participants were female. On average, participants were 9 years of age.

All but three participants (98% of participants) had public health insurance.

68% of participants received SNAP benefits and 23% received WIC benefits.

28% of participants’ primary caretakers had some college education or higher.

Demographic Breakdown

- Hispanic or Latino: 67%
- Black/African or Caribbean-American: 27%
- Asian or Pacific Islander: 4%
- White/Caucasian: 1%

My son is pre-diabetic, so we’ve been trying to lower his weight. Nothing has worked all these years, until this year. [The program] It is perfect. It’s helped a lot for us also. My husband is diabetic. It serves us. Now that I have the program, I buy all my vegetables there [at the market]. I’m taking advantage of the opportunity. We will be trying to change our eating habits, eating more healthily, learning how to eat healthy.

Parent of FVRx participant, NYC Health + Hospitals/Elmhurst
FVRx NYC 2014 OBJECTIVES

1. Provide Healthy Food for Patients at Risk of Obesity-Related Chronic Disease and Their Families

The three hospitals enrolled 192 participants, impacting 904 family members (465 children and 439 adults) who shared prescription benefits. This is a 66% increase in the number of enrolled participants from the inaugural FVRx NYC season in 2013.

FVRx Participants: Clinical Visits and Program Completion

Participants made an average of 2.8 visits, which represents almost one visit per month over the course of the 4-month intervention. Participants who made at least 3 health center visits and reported at least 6 farmers market visits during the program were considered to have completed the intervention. Overall, 49% of NYC Health + Hospitals participants completed the program. Program modifications including reduced incentive amounts at two hospitals and reduced doctor visits did not seem to impact program completion rates or the number of health center visits.

2. Provide the Education Necessary for Participating Families to Increase Knowledge About the Importance of Fruits and Vegetables in a Healthy Diet

FVRx participants and their families receive nutrition education on the importance of fruits and vegetables (FV) in their diets during monthly clinical visits. The primary care provider encourages healthy behavior change through goal setting with the patient. The nutritionist follows up with a nutritional assessment and discusses healthy eating and lifestyle behavior changes, including advice on replacing less healthy foods with fruits and vegetables.

Healthy Eating Education

91.4% of parents of FVRx participants reported that they were told about the importance of fruits and vegetables at every clinical visit or more often. Survey results also indicate that while many participants (over 70%) ate most of their FV in fresh form at the beginning of the intervention, they increased the proportion of the FV they ate in fresh form by the end of the FVRx program period.

Body Mass Index (BMI)

Although significant changes in BMI were not expected over the short FVRx season, this measure is included in data collected during health center visits. Of the 94 participants who completed the intervention and had their BMI measured at the first and last visits, 42.6% decreased their BMI.

Knowledge about the Importance of Fruits and Vegetables in Diet

Measuring changes in knowledge about fruits and vegetables is an important component of the program’s evaluation. FVRx participants were asked how much they felt they knew about the importance of FV in their families’ diets. Even though participants reported much higher self-reported knowledge about FV at baseline than in 2013, almost two-thirds (58%) of patient households reported significantly increased knowledge by the post-survey.
3 Measure Changes in Knowledge about Healthy Eating and Local Food

Participants significantly increased their knowledge about healthy eating and local foods. A number of questions on the pre- and post-surveys measured knowledge change about healthy eating and local foods. From pre- to post-survey, 62.7% of participant households reported increasing their knowledge about where to buy locally grown produce in their area.

Other questions examined changes in knowledge about fruits and vegetables grown locally, how to prepare fresh fruits and vegetables, and about the farmers markets participating in the FVRx program. All showed significant knowledge increases from pre- to post-survey.

4 Facilitate Measurable Change in Shopping Habits, Driving New Sales for Local Farmers Markets

Wholesome Wave continued to partner with the NYC Department of Health and Mental Hygiene (DOHMH) to use Health Bucks as a mechanism for providing FVRx incentives. Participants received FVRx prescriptions during their monthly clinical visits, and redeemed their prescriptions for Health Bucks at two designated market sites for each hospital run by GrowNYC and Harvest Home. Health Bucks could be used at more than 140 farmers markets in New York City to purchase fresh fruits and vegetables.

FVRx participants spent a total of $39,990 in Health Bucks at farmers markets across the city during the program period. The average spent per participant household by each hospital is: $97.09 at NYC Health + Hospitals/Bellevue, $236.65 at NYC Health + Hospitals/Elmhurst, and $271.46 at NYC Health + Hospitals/Harlem.

FVRx participants redeemed 84% of Health Bucks received during the program period, which is significantly higher than the average redemption rate for Health Bucks distributed through other community-based organizations, and is higher than the average redemption rate of Health Bucks distributed by other purchasing organizations.

Before beginning the FVRx program, 52% of all FVRx participant households reported that they had never or rarely shopped at farmers markets, and only 14% said they shopped at farmers markets weekly or more. When asked at the end of the program, these percentages shifted dramatically, with 58% reporting shopping at farmers markets weekly or more, and 3% reporting rarely or never.

Use of Farmers Markets by Participants

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<th>PRE- FVRx PROGRAM</th>
<th>DURING FVRx PROGRAM</th>
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<tr>
<td>Rarely or Never</td>
<td>14%</td>
<td>3%</td>
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<tr>
<td>Once a month</td>
<td>16%</td>
<td>13%</td>
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<tr>
<td>2–3 times per month</td>
<td>52%</td>
<td>58%</td>
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<td>Weekly or more</td>
<td>18%</td>
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“A lot has changed. It’s only been a month since starting the program, but a lot has changed! We have so many more fruits and vegetables.”

Parent of FVRx Patient, NYC Health + Hospitals/Elmhurst
FVRx participants’ shift to shopping at farmers markets, not surprisingly, resulted in high amounts of produce being purchased at these venues. Almost three-quarters (73%) of those who completed the post-surveys reported that they purchased most or all of their fresh produce at the farmers markets during the market season.

FVRx participant households were also asked how often they had recently purchased their fresh fruits and vegetables at farmers markets. Results indicate that participant households purchased fresh fruits and vegetables from farmers markets during the season at a much higher rate than before the season started.

We asked parents of FVRx participants about the types and amounts of food that household members had eaten over the last four months to measure change in food security indicators. From pre- to post-survey, indicators of food insecurity decreased, with more households reporting that they had enough of the kinds of foods they wanted to eat by the end of the FVRx intervention.

It actually helps with the gap in how we pay for our food, because the food stamps that I get are not enough to cover and get everything.

Parent of FVRx participant, NYC Health + Hospitals/Harlem

Results from questions regarding other indicators of food security suggest that FVRx decreased the number of households that worried about running out of food before they had money to purchase more, and increased their ability to afford to eat balanced meals.
Other Household Food Security Indicators from Pre- to Post-Survey

Percent of Respondents

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<th>Pre-survey</th>
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<tr>
<td>We worried about whether our food would run out before we got money to buy more</td>
<td>19.4%</td>
<td>8.6%</td>
<td>9.2%</td>
<td>6.9%</td>
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<tr>
<td>We couldn’t afford to eat balanced meals</td>
<td>48.4%</td>
<td>38.7%</td>
<td>55.2%</td>
<td>39.1%</td>
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N=93. A Wilcoxon signed-rank test showed significant improvement in whether households worried about their food running out before they got money to buy more (Z = -3.214, p = .001), and a significant decrease in the number of households that reported not being able to afford to eat balanced meals (Z = -2.762, p = .006).

In the post-survey, parents of FVRx participants were asked about their satisfaction with their child’s healthy weight program related to their participation in FVRx. Similar to 2013 results, the vast majority (99%) agreed or strongly agreed that they were happier with their healthy weight program because of their participation in FVRx. The consistency of results with 2013 data suggests that reducing the number of doctor visits did not negatively affect patient satisfaction.

Providers were also surveyed on their overall satisfaction with implementing FVRx, and they rated their satisfaction at 8.3 on a 1-10 scale, with 10 being the highest satisfaction. Providers also reported that they felt successful at improving patient knowledge about the importance of fruits and vegetables in a healthy diet.

I like that it is a full spectrum of everything...You get the doctor’s perspective, you speak to the nutritionist, you speak to the farmers. I like that it’s a rounded program.

Parent of FVRx participant, NYC Health + Hospitals/Harlem
CONCLUSIONS

Overall, data from the 2014 FVRx NYC program season are consistent with national FVRx data, and show that FVRx NYC can be successfully implemented within public hospitals to improve access to healthy foods in underserved communities for pediatric participants and their families. FVRx participants demonstrated improved health outcomes and families increased their knowledge about healthy eating and the importance of fruits and vegetables in their diet.

Participants received nutrition counseling nearly once a month over the four-month intervention, which is above the national average frequency for healthy weight programs. Families were empowered to apply healthy eating recommendations from providers in combination with the fruit and vegetable prescriptions spent at nearby farmers markets, making tangible improvements to their diets.

Participating families significantly increased their frequency of visits to farmers markets from the beginning to the end of the FVRx program. Families also increased the proportion of fruits and vegetables they purchased from farmers markets, which brought increased revenue to local and regional farms.

The impact of the program is seen not only in positive health-related outcomes, but also in an increase of families’ food security, participants’ satisfaction with the healthy weight management care received, and in strengthened relationships between providers and participants.

Wholesome Wave’s goal is to build a robust FVRx model for scaling within NYC Health + Hospitals and throughout New York City. Findings from the 2014 FVRx NYC program have informed plans for Year 3, with continued programming in New York City in 2015. Results from this project are also helping to inform our national policy advocacy, aimed at gaining support for FVRx as a proven strategy for addressing obesity and diet-related disease, substantially reducing associated healthcare costs while improving participants’ health outcomes and quality of life.

For more information, visit www.wholesomewave.org, call (203) 226-1112 or email fvrx@wholesomewave.org.

Many participants expressed their gratitude for being a part of the FVRx program and for helping them see the importance of eating fruits and vegetables daily...
I look forward to changing more lives next year, one pediatric patient at a time.

Mercy Adebanjo, Nutritionist, NYC Health + Hospitals/Harlem