wholesome wave GEORGIA®

2015 Fruit & Vegetable Prescription ® Program

Evaluation Results

Fruit and Vegetable Prescription Program® (FVRx®) 2015 Pilot in Augusta, GA | Evaluation Results

Wholesome Wave Georgia is grateful for the opportunity to work with our Fruit and Vegetable Prescription ® Program partners in Augusta, without whom none of this work would be possible. We are excited to continue these relationships as we build off of this pilot program to increase affordable access to healthy food across Georgia. Wholesome Wave Georgia would like to thank the Georgia Health Foundation for their generous support of the Fruit and Vegetable Prescription Program in Augusta in 2015.

FVRx 2015 Partners

Augusta Locally Grown

Emory School of Business

Georgia Healthy Family Alliance

Georgia Health Foundation

Good Neighbor Ministries

Harrisburg Family Healthcare

Icebox Ministries

Medical College of Georgia at Augusta University

Rebecca Woodruff

St. Luke UMC

Veggie Truck Farmers Market

Wholesome Wave

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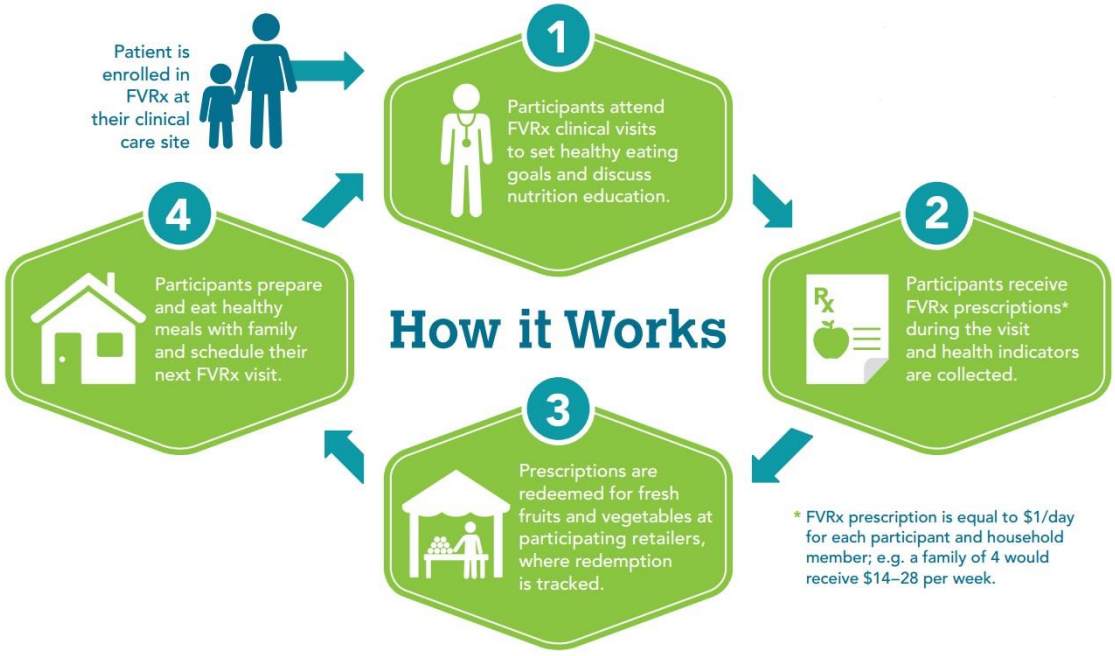
This report summarizes results from the evaluation of Wholesome Wave Georgia's Fruit and Vegetable Prescription Program (FVRx), which was piloted in Augusta, GA in 2015. The purpose of this evaluation was to document the feasibility of implementing FVRx®, including its recruitment and retention, activities, reach, and potential impacts on clinical and behavioral indicators.

FVRx® Overview

FVRx® is a multicomponent clinic-based program intended to increase access to healthy foods among low-income Americans. Key partners in this pilot implementation included Wholesome Wave Georgia, the project funder; the Harrisburg Family Healthcare Center and the Medical College of Georgia, the clinic partners; and the Veggie Truck Farmers' Market and G.R.O.W. Harrisburg, the farmers' market partners. Over the course of the 6-month program, participants met with medical students on a monthly basis at the Harrisburg Family Healthcare Center, a clinic that provides healthcare services to medically underserved populations in the Augusta area. Under the supervision of a clinician, the medical students provided basic healthcare services to participants and counseled them on chronic disease prevention strategies, including the importance of eating a healthy diet. Clinicians also provided all participants with a prescription for fruits and vegetables, which could be redeemed for produce at the Veggie Truck farmers' market (Figure 1). FVRx® participants also received monthly cooking education classes and transportation to all program activities. For detailed information about the program model used in this pilot, the program partners, or the methods used to evaluate this pilot, please refer to the FVRx® Pilot Protocol, which can be obtained from Wholesome Wave Georgia upon request.

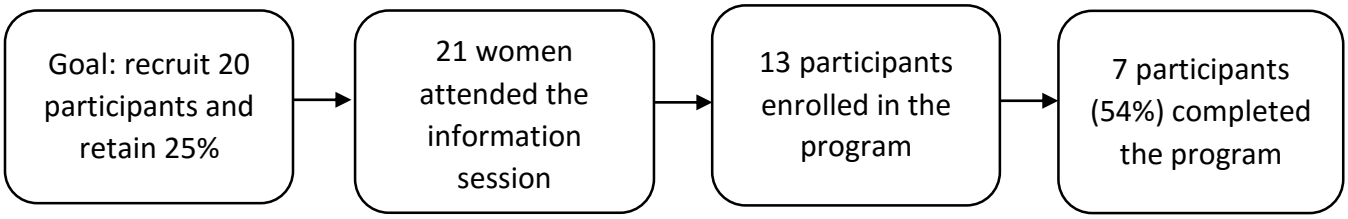
Figure 1. FVRx® Program Overview



FVRx® Recruitment and Retention

The goal for this pilot was to recruit 20 participants and retain 25% of them over the course of the program. Of the 21 women who expressed interest in the program and attended the initial information session, 13 enrolled in the program and 7 women (54%) completed the program (Figure 2). Reasons for not completing the program included having either personal or family health concerns or moving away from the clinic site.

Figure 2. Recruitment and Retention for the FVRx® Pilot Program



FVRx® Activities

Attendance: Both clinic and farmers market attendance were highest at the beginning of the program and declined over time. At the start of the program, all 13 (100%) participated in at least one program component. By the end of the program, 7 participants (54%) were regularly attending the clinic visits and farmers' markets.

> *"It was eye opening to me as to what types of food was actually grown and sold here in the local markets. The fruits and veggies were organic and not processed and much healthier for me and my family. I found that cooking with them was a lot easier than I ever thought!" – FVRx Participant*

Prescription redemptions: Over the course of the pilot program, approximately $6,503 worth of FVRx® prescriptions were distributed to participants. Of this total, $5,336 (82%) were redeemed by participants, for an average of $671 in prescription redemptions per participant. Wholesome Wave Georgia estimates that prescriptions were used to purchase approximately 2,525 pounds of produce, or 10,821 servings of fruits and vegetables, over the course of the pilot program. The most commonly purchased fruits included watermelons, yellow peaches, muscadine grapes, plums, and scuppernong grapes. The most commonly purchased vegetables included cucumbers, eggplants, zucchini, yellow squash and butternut squash.

Satisfaction: FVRx® participants reported high levels of satisfaction with all aspects of the program. All 7 participants who completed the program (100%) reported that they were either satisfied or very satisfied with the program overall, the clinic visits, the amount they could purchase with their prescriptions, and the education sessions.

FVRx® Reach

Most FVRx® participants were African American or Black women (n=7, 54%) from a variety of age ranges. Most participants (n=11, 85%) were receiving some form of public assistance, such as SNAP, WIC, and Medicaid.

> *"I did not realize how little we were eating of fresh fruits and veggies. We always bypassed most of them because they were more expensive than the canned ones. But for the last 2 weeks we have had at least 4 servings a day with the variety of things we've gotten" – FVRx Participant*

FVRx® Impacts

Shopping at Farmers' Markets

At the start of the program, 6 participants (86%) had heard of the Veggie Truck Farmers Market, though most participants reported that they never shopped there (n=4, 57%) or shopped there once a month or less (n=3, 43%). By the end of the program, all participants reported that they shopped at the Veggie Truck Farmers Market 2-3 times per month (n=2, 29%) or once a week (n=5, 71%). 6 participants (86%) reported that they shop at farmers markets more frequently as a result of the FVRx® program, and all 7 participants (100%) reported that they are more likely to shop at a farmers' market in the future as a result of the FVRx® program.

Fruit and Vegetable Consumption

Prior to the start of the FVRx® program, participants reported consuming fruits and vegetables 3.9 times per day on average. The most commonly reported barriers to eating more fruits and vegetables were cost (reported by 6 participants, 86%) and lack of access (reported by 5 participants, 75%). Fruit and vegetable consumption increased over the course of the program from 3.9 daily servings at baseline to 5.1 daily servings at follow-up (Figure 3). All 7 participants who completed the program (100%) reported that they ate more fruits and vegetables and tried new fruits and vegetables as a result of the FVRx® pilot.

Blood Pressure and Body Mass Index (BMI)

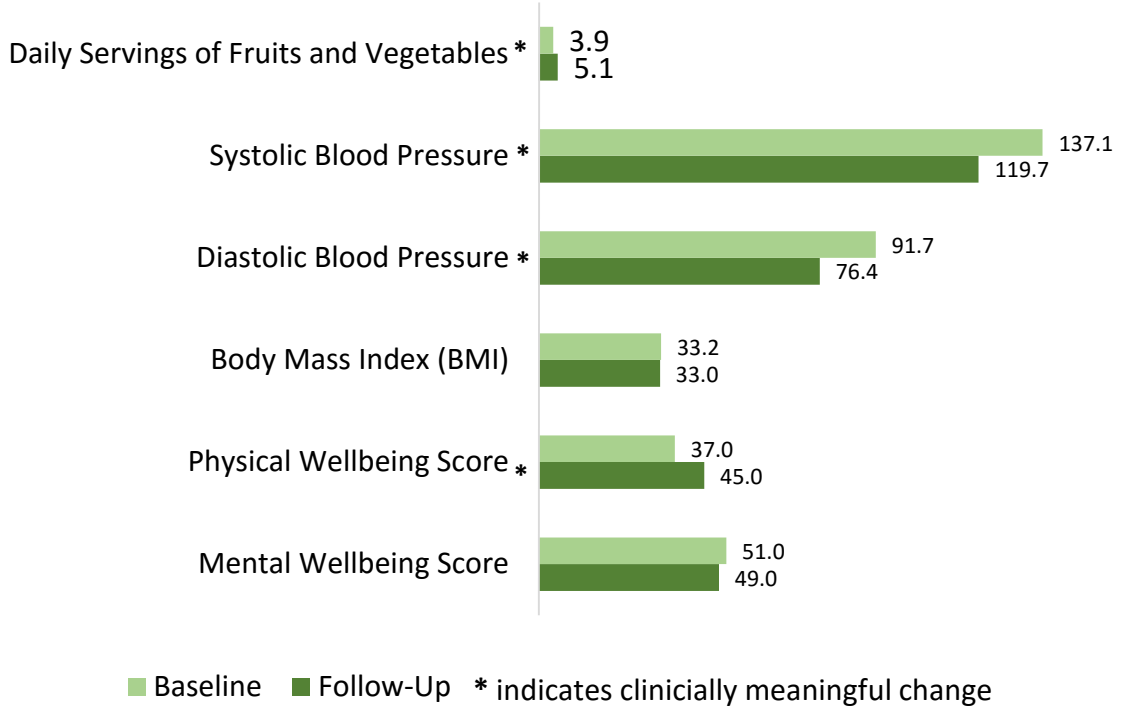
Among the 7 FVRx® participants who completed the pilot program, the average systolic and diastolic blood pressure measurements were in the pre-hypertensive or hypertensive range at 137.1 and 91.7 mmHg respectively. By the end of the program, both average systolic and diastolic blood pressure had dropped to 119.7 and 76.4 mmHg respectively, which is in the normal range (Figure 3). Average BMI among FVRx® participants did not change over the course of the program (33.2 at baseline compared to 33.0 at follow-up); most women were overweight or obese at both time points (Figure 3).

Overall Health and Wellbeing

The Medical Outcomes Survey Short Form 36 (SF-36) is considered the gold standard in generic quality of life metrics. It has been used in over 400 randomized controlled clinical trials and is a useful tool in evaluating benefits of treatments. The data from 8 subscales is summarized in 2 composite scales: Physical Health Composite Score (PCS), a measure of physical health-related wellbeing, and Mental Health Composite Score (MCS), a measure of mental health-related wellbeing. Both measures require a change of 6 or more points for clinical significance. Among the 7 FVRx® participants who completed the pilot program, physical health-related wellbeing improved from a score of 37.0 at baseline to 45.0 at

follow-up, indicating clinically meaningful improvement. Improvements in the bodily pain and general health subscales may be driving these improvements in overall physical wellbeing.

Figure 3. Change in Behavioral and Clinical Indicators over the Course of the Program among FVRx® Participants (N=7)



Conclusions and Recommendations

1. **FVRx® was a feasible and acceptable method of increasing access to healthy foods among low-income women in Augusta, GA.** Although the program enrolled fewer participants than expected, it succeeded at reaching low-income women (e.g., 85% were receiving public assistance) and exceeded its goal of retaining 25% of participants. By the end of the program, approximately half of participants (n=7, 54%) were attending clinic visits and redeeming prescriptions. These successes in retention may be due in large part to the high satisfaction levels reported by participants regarding the FVRx® program (e.g., 100% of participants reported they were satisfied or very satisfied with all aspects of the program). Program partners unanimously agreed to extend the FVRx® pilot season by several months and to continue offering the FVRx® program in future years.

2. **FVRx® shows promise for increasing farmers' market attendance and fruit and vegetable consumption among participants.** At baseline, all participants reported that they had either never shopped at the Veggie Truck Farmers' Market (n=4, 57%) or shopped there infrequently (n=3, 43%). By the end of the program, participants had redeemed approximately $5,336 worth of prescriptions at the market and all participants who completed the program reported shopping at the market either 2-3 times per month (n=2, 29%) or on a weekly basis (n=5, 71%). Additionally, all 7 participants who completed the program (100%) reported that they are likely to shop at a

farmers' market in the future as a result of FVRx®. These changes in shopping behaviors may be partly responsible for participants' self-reported increases in fruit and vegetable consumption from 3.9 daily servings at baseline to 5.1 daily servings at follow-up. These results suggest that the FVRx® pilot program shows promise for changing participants' shopping patterns, driving new customers to purchase their produce from local farmers, and increasing participants' consumption of fruits and vegetables.

3. **FVRx® shows promise for improving some chronic disease-related clinical outcomes among participants.** This evaluation documented reductions in participants' blood pressure over the course of the program. Average blood pressure among all participants decreased from baseline values, which were in the pre-hypertensive range, to values in the normal range by the end of the program. These results are promising, as maintaining healthy blood pressure levels may help prevent chronic diseases, including heart disease and stroke. Although these improvements cannot be attributed solely to participation in the FVRx® program, they are in the direction we would expect if the program was working as planned, as eating a diet rich in fruits and vegetables and receiving adequate medical care are important strategies in helping patients control high blood pressure.

   FVRx® partners chose to assess changes in participants' BMI over the course of the program because this approach is consistent with prior FVRx® evaluations that have been conducted elsewhere and because other FVRx® sites have found some evidence of modest improvements in weight-related indicators. However, this evaluation did not find evidence of a clinically meaningful change in average BMI among participants over the course of the program. These findings are not surprising, given the program's relatively short duration of 6 months, its limited intensity, and the fact that it primarily focuses on fruit and vegetable consumption, as opposed to other behavioral factors associated with weight status (e.g., physical activity levels and other aspects of dietary intake). Taken together, these results suggest that FVRx® shows promise at improving more proximal chronic disease-related risk factors, such as blood pressure levels, but that changes in more distal risk factors, such as BMI, may require more intensive, longer-term intervention approaches.

4. **FVRx® shows promise for improving physical health-related wellbeing among participants.** FVRx® participants reported clinically meaningful improvement in their physical health-related wellbeing. For example, from baseline to follow-up, participants' reported a 9-point average improvement in the PCS score, a measure of physical well-being. These changes appear to have been driven by improvements in overall health and bodily pain domains of the physical well-being measure, suggesting that FVRx® participants felt better about their overall health and experienced less bodily pain over the course of the FVRx® program. While we cannot attribute these changes solely to the FVRx® program, these findings are consistent with what would be expected insofar as the program improved participants' access to health care and strengthened their relationships with health care providers.