The Yakima Valley Farmworkers Clinic (YVFWC) is one of six public service agencies in Washington to receive an Enhanced Weatherization Plus Health (Wx + H) Grant. YVFWC has operated the Asthma Home Visiting Program (AHVP) for 14 years as part of its mission as a community and migrant health center to provide healthcare services to lowincome households. AHVP has successfully reduced emergency and urgent care visits for clients with newly diagnosed or uncontrolled asthma by providing medication management and education to help reduce environmental asthma triggers (such as keeping homes dry, clean, and well ventilated).

The Wx + H grant was targeted to remove financial barriers that prevented some clients from following through on recommendations in asthma action plans, especially for higher-cost weatherization and repair. The Enhanced Grant also supported efforts to coordinate services between YVFWC AHVP and YVFWC's Northwest Community Action Center (NCAC), which provides low-income households with weatherization, improved ventilation, moisture control, and green cleaning measures. The grant also supported additional home visits and follow-up services.

YVFWC AHVP and NCAC worked together to provide comprehensive weatherization and Healthy Homes services to 14 households, and a more limited package of Healthy Homes measures to 28 households. YVFWC AHVP provided assessments, home visits, and/or low-cost measures to an additional 67 households.

Program Delivery Strategy

YVFWC AHVP screened its patients to find incomequalified households where one or more member has newly diagnosed or uncontrolled asthma. Service areas include Toppenish, Grandview, and Prosser. Of these screened households, 100 received AHVP visits and low-cost measures such as green cleaning kits. NCAC also took referrals from its weatherization and energy assistance

Wx + Health Program

The Wx + H Program, funded by Washington State's Energy Matchmaker Program, integrates investments in energy efficiency and Healthy Homes improvements in low-income households with education and services to reduce energy bills; increase home durability; and improve occupant health, safety, and well-being.

The initial focus of the Wx + H Enhanced Grant initiative is to assess the effectiveness of integrating weatherization and Healthy Homes services to serve households with members who have asthma or other respiratory illnesses. Enhanced grants are intended to support pilot projects to develop, test, and deploy new measures, strategies, and partnerships to deliver services.

applicants, but fewer than five met the requirement for uncontrolled asthma.

The AHVP used a focused protocol of three initial visits. The first visit focused on asthma awareness and an initial review of triggers. The second visit explored triggers in more detail. The third visit was recap.

Generally, but not always, the NCAC energy auditor completed an energy audit and healthy home assessment between the second and third home visit. The auditor developed a scope work for Healthy Homes and weatherization measures.

Most measures were installed by crews. Where possible, the work was done in phases so Healthy Homes measures could be installed as early as possible. The crews then circled back to complete weatherization measures. Follow-up visits occur at 6 and 12 months from the initial home visit. Given delays in installing measures, final follow-up visits are occurring about 9 month after final inspection for comprehensive projects and 6 months for Healthy Homes-only projects.





Key Lessons

The AHVP model is effective at reducing emergency room and urgent care visits, and had a positive impact on clients

The program has tested referral protocols and established solid referral relationships with the YVFWC medical clinic system and with local hospitals. The AHVP has also tested tools and protocols for providing home visit services focused on asthma.

NCAC found the collaborating with the AHVP and linking its work to respiratory health generated a much more positive response than its ongoing weatherization work. This included client letters and feedback given during follow-up visits, good press, and feedback from community stakeholders.

Working in an agricultural area

The partnership with AHVP was essential to meet the unique needs of clients in agricultural areas. Healthy Homes education and measures needed to address pesticide exposure (taking shoes off before entering the home) and smoke from extensive wildfires (keeping windows closed and ventilation systems on). Many of the clients were agricultural workers and were very difficult to schedule. There were also heightened concerns over citizenship issues.

Rental homes/landlords

A significant proportion of homes served by the AHVP are rentals. Landlords are less willing to meet the conditions to receive low-income Wx + H services.

Rental properties comprised the largest share of those who were not eligible for comprehensive services. But the collaboration with AHVP ensured that households who did not qualify for weatherization and Healthy Homes measures were still able to receive education and low-cost measures.

A phased approach

YVFWC set its initial service targets and plan with the expectation that Enhanced Grant funds could be used for weatherization measures. When this turned out not to be the case, NCAC found that it had insufficient funding to complete comprehensive upgrades on all the homes it committed to. NCAC moved to a phased approach where Healthy Homes measures were prioritized and installed first. The phased approach meant the program served more households, but fewer homes received comprehensive upgrades or comprehensive upgrades were delayed.

Coordination

Although the YVFWC AHVP and NCAC programs had an informal referral relationship, they had not worked together closely before. NCAC established a new connection with the clinic. Joint meetings over the course of the grant resulted in raising general awareness of each program's services.

There was fairly close coordination between NCAC intake staff and the AHVP program staff. A plan for AHVP and NCAC auditors to team up to do a joint assessment of potential weatherization and Healthy Homes service needs during the second asthma home visit did not materialize due scheduling and staffing issues.

The AHVP did use the statewide Weatherization Information Data System for some reporting and information sharing. Coordination between weatherization staff and community health workers on specific projects, beyond scheduling, was limited.

Staff turnover

The lead implementation staff at NCAC and AHVP turned over during the projects. As with many of the grantees, staff turnover presented a challenge when developing and sustaining regular communication, and providing day-to-day coordination.





Culture change

The Wx + H program required a significant change in how NCAC auditors, inspectors, and contractors approached their work. It was hard to move auditors and crew off the mindset that there were strict limits on health and safety expenditures.

Auditors were in the practice of automatically walking away from projects if costs for repairs and health and safety measures exceeded 25% of total costs. Instead, auditors should look for reasonable opportunities to address these issues in addition to meeting energy savings targets.

Intake staff were challenged by the idea that the program was not available to all people eligible for weatherization because it was targeted to those with uncontrolled asthma. But by the end of the grant period, staff were beginning to understand this constraint.

Contracting

NCAC is a crew-based weatherization agency. Wx + H required new contracts for pest control and comprehensive cleaning, measures NCAC crews did not provide. Unlike other agencies, YVFWC was able to use a request for qualifications process to get new contractors on board prior to start up.

While NCAC crews installed flooring, it was challenging to source low-VOC flooring locally.

It was also more complicated to sequence work appropriately. Typically, pest management work needed to occur before the crew could go onsite, and comprehensive clean up would occur after weatherization work.

Going Forward

One of the important outcomes from Wx + H was raising mutual awareness of the AHVP and Weatherization Service, which is likely to strengthen future ongoing referral patterns and relationships. Additional Wx + H funding will allow the AHVP to provide follow-up visits to existing clients.

Additional dedicated funding is needed to continue to provide coordinated services and home visits. Currently, this funding is not likely because this is not a priority for the region's Accountable Community of Health (Medicaid 1115 Waiver); in addition, future Matchmaker funding is uncertain. There are no local plans to do follow-up research.

If Matchmaker funding becomes available, YVFWC is not likely to go forward with a fully integrated services model with the AHVP. However, there is interest in having more flexibility to integrate additional Healthy Homes measures into existing weatherization projects.

Our Partners

The Enhanced Grant enabled three programs within the YVFWC to work closely together. The YVFWC medical clinics have a strong and well-developed relationship with AHVP. The Enhanced Grant supported the addition of Healthy Homes measures to weatherization services provided by NCAC crews and contractors, and the integration of services into the work of AHVP.

Services provided by the lead and each of these partners are summarized in Table 1. Table 2 lists eligible Healthy Homes measures.

Budget

- Enhanced Wx + H Grant: \$362,955
- Leveraged resources: Home visit services from the Asthma Home Visit Program

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Table 1. Services Offered by YVFWC and Partners

Service	YVFWC – AHVP	YVFWC – NCAC	YVFWC – Medical
Outreach and referrals	X	X	X
Intake screening/qualification	х	X	
Initial Healthy Homes assessment	x	Х	
Energy audit/assessment		X	
Service coordination	X	Х	
Weatherization		X	
Healthy Homes measures	X	Х	
Client education and follow-up	X	x	
Additional services (repair, social)	х	X	

LEAD = X, Support = x, Green shading indicates new partner or existing partner in new role

Table 2. Percentage of Wx + H Projects with Healthy Homes and Weatherization Measures Installed (n=42)

Plus Health Measures			Weatherization Measures		
	All Grantees	Farm Workers		All Grantees	Farm Workers
Green cleaning kit	94%	98%	Air sealing	77%	57%
Bedding (dust mite)	71%	95%	Floor insulation	44%	19%
Mechanical ventilation	65%	69%	Attic insulation	54%	21%
HEPA vacuum	65%	57%	Wall insulation	12%	10%
Walk-off mats	65%	95%	Windows	17%	2%
CO detector	57%	86%	Door	19%	10%
Low VOC flooring	33%	79%	Duct insulation	20%	2%
Smoke detector	24%	33%	Duct repair	10%	
Advanced ventilation	18%	36%	Duct sealing	33%	17%
HEPA/MEPA filter	17%	24%	HVAC - replace	33%	
HVAC cleaning	17%	7%	Furnace T and Cn	22%	2%
Air filter	15%	19%	HVAC - repair	13%	2%
Plumbing repair	13%	7%	Thermostat	15%	5%
Gutter, downspout	13%	7%	Passive venting	44%	17%
Moisture/mold abatement	13%	19%	Lighting	33%	31%
Roof repair, replace	11%	7%	WH low cost	52%	24%
Pest mitigation	9%	5%	Water heater	12%	17%
Comprehensive cleaning	8%		Electrical repair	13%	
Crawlspace	7%		Wx repair	1%	
Slip/fall prevention	5%	2%			
Dehumidifier	2%	2%			

Darker cell colors indicate higher rates of installation.

Blank cells indicate that a measure was not installed by the grantee.

