The King County Housing Authority (KCHA) is among six public service agencies in Washington to receive an Enhanced Weatherization Plus Health (Wx + H) Grant. KCHA and Public Health – Seattle and King County (Public Health) worked together on a Healthy Homes Demonstration project funded by a HUD grant from 2009 to 2010. Demonstration results showed that weatherization plus education led to better health outcomes than education alone. Close collaboration ended when the HUD grant funding ended.

The Enhanced Grant funding allowed KCHA and Public Health to renew their collaboration and provide combined weatherization and community health and education services. Initially, the grant focused on providing expanded weatherization and Wx + H services to clients participating in the Public Health Asthma Program. When few Asthma Program participants elected or were eligible for Wx + H services, KCHA focused its efforts on serving existing weatherization clients.

KCHA and Public Health provided comprehensive services to 27 households – slightly below its goal of 30 households. An additional 21 households received assessment and education services.



Wx + Health Program

The Wx + H Program, funded by the Washington State 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 in 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.

Program Delivery Strategy

All clients exiting the Asthma Program after three initial home visits were screened and referred to Wx + H. Public Health community health workers (CHWs) provided intensive support, including notary services to encourage Asthma Program participants to sign up for Wx + H services. Upon application, the KCHA auditor completed energy and Healthy Homes assessments and developed a scope of work.

Most completed projects were referred to Public Health from KCHA's existing client queue. On referral, Public Health scheduled three home visits that focused on medication management, identifying respiratory triggers, and adopting Healthy Homes and green cleaning practices.

CHWs delivered and demonstrated low-cost
Healthy Homes measures (such as dust mite
covers, walk-off mats, and HEPA vacuums). The
initial home visits were conducted in the same
time period as the KCHA energy audit and Healthy
Homes assessment.

All weatherization and Healthy Homes measures were installed by KCHA contractors. Typically, installations lagged initial home visits by 6 to 9 months. Follow-up visits are planned.





Key Lessons

Strong support for the concept and approach KCHA and Public Health found there was strong support for the Wx + H approach and model. It was easy to explain to stakeholders. As with other Wx + H grantees, contractors, CHWs, and medical providers were willing to go the extra mile to support the program.

Integrating services was hard

The initial HUD demonstration helped put the Asthma Program and Wx + H services on parallel and simultaneous paths. This meant that clients had to meet several people and absorb a lot of information early on. This overwhelmed some clients and contributed to high dropout rates.

In contrast, the Enhanced Grant integrated services by phasing visits. For Asthma Program participants, there was an initial round of home visits for asthma management followed by facilitated referrals to weatherization and Wx + H services. KCHA clients were referred to Public Health CHWs for home visits before KCHA energy assessments.

The KCHA auditor and Public Health CHW indicated they would have benefited from the knowledge, perspective, and notes of the other partner. However, most opportunities for this exchange were missed because structures and processes for sharing information below the management level were not well established.

Client fatigue and application hurdles

The initial expectation was that most participants would transfer from the Public Health Asthma Project; ultimately, only 4 of 27 completed projects were Asthma Project referrals.

The KCHA services application process was a barrier to participation because it requires several steps and detailed documentation. Because KCHA has more demand than services available, the application process is, as KCHA staff put it, "oriented to the self-motivated."

Despite the best efforts of CHWs, most of the asthma referrals dropped out because they were ineligible, lived in rental housing, were unable to complete the application process, or were simply too fatigued from the multiple visits and requirements associated with the Public Health Asthma Project.

Lack of stable funding and staffing

Although the CHW model with weatherization has proven to be effective, it had to rely on episodic grant and pilot funding. Without predictable funding, it has been difficult to establish a smooth and efficient program. KCHA's long-term goal is to move this model from the pilot stage to a more efficient production model.

Unfortunately, this trend of intermittent funding continued. Contracting delays compressed a two-year pilot to 15 months. But just as capacity and sub-contracts for Wx + H were established in April – June 2017, grant funding ended. With the failure of the Legislature to pass a capital budget, future funding is uncertain. There is similar uncertainty with public health funding for CHW services.

Lack of stable funding has contributed to high staff turnover. Since June 2017, all lead staff for the project at KCHA and at Public Health have either retired or taken other positions.

Avoid restrictions that limit participation

The 2009 to 2010 HUD grant was designed as a structured research project. The research design imposed several restrictions on program design and targets, including serving limited geography (the Highline area of Seattle), language, and use of detailed data collection and reporting tools to meet research requirements.

However, this research focus, which was important to rigorously evaluate outcomes, led to high dropout rates and limited participation. Dropout rates were high when transitioning households from the Asthma Program, but were quite low once households were in the KCHA Wx + H program.





Clients relocate before the end of the intervention

Low-income households tend to relocate frequently. This is a challenge for Wx + H, which delivers services over an extended period (12 - 18 months). Potential clients were asked to commit to staying in their home for at least one year to emphasize the importance of receiving all follow-up services. Initial indications suggest this is working.

Focus on single-family houses

It is difficult to provide Wx + H measures to individual units in multifamily buildings, where only a few occupants may have asthma but the rules require that the whole building be treated. Therefore, KCHA limited services to single-family homes.

Going Forward

Future plans are uncertain. KCHA is working with Public Health to complete follow-up visits. If the Matchmaker Program is funded, KCHA would like the option to provide Healthy Homes measures to supplement weatherization services, and intends to maintain informal referral relationships with Public Health and medical providers. Formal integration would require dedicated funding and a significant investment to build capacity.

Partners

King County Housing Authority is public agency that provides low-income housing services to areas of King County outside of the City of Seattle. KCHA owns and manages almost 3,500 units of subsidized housing and has financed 5,680 additional units. It also operates the Low Income Weatherization and Repair Program

Seattle – King County Public Health is a public health agency serving all of King County. Public Health has been a leader in CHW and home visit programs, and provides services to manage asthma and respiratory disease. It is also is the

lead agency for the King County Accountable Community of Health

Other recruitment, referral, and outreach partners include: HealthPoint, Molina Healthcare of Washington, Neighborcare Health, Community Health Plan of Washington, Bellevue School District, and the American Lung Association of the Mountain Pacific.

Services provided by these partners are summarized in Table 1. Table 2 lists eligible Healthy Homes measures.

Budget

- Enhanced Wx + H Grant: \$277,233
- Leveraged resources: \$125,000 from Public
 Health Seattle/King County asthma education
 visits and products delivered to participants
 leaving the existing Asthma Program.

Contact Information

Heather Eklund, Weatherization Coordinator King County Housing Authority 206-214-1363; heathere@kcha.rog



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Table 1. Services Offered by KCHA and Public Health

Service	КСНА	Public Health	Medical Community Partners	
Outreach and referrals	X	x	x	
Intake screening/qualification	X	X		
Initial Healthy Homes assessment	X	X		
Energy audit/assessment	X			
Service coordination	X			
Weatherization	X			
Healthy Homes measures	X	Х		
Client education and follow-up	Х	Х		
Additional services (repair, social)	X	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=27)

Plus Health Measures			Weather	Weatherization Measures		
	All Grantees	КСНА		All Grantees	КСНА	
Green cleaning kit	94%	100%	Air sealing	77%	60%	
Bedding (dust mite)	71%	100%	Floor insulation	44%	68%	
Mechanical ventilation	65%	73%	Attic insulation	54%	68%	
HEPA vacuum	65%	100%	Wall insulation	12%	28%	
Walk-off mats	65%		Windows	17%	28%	
CO detector	57%	54%	Doors	19%	16%	
Low VOC flooring	33%	46%	Duct insulation	20%	36%	
Smoke detector	24%	12%	Duct repair	10%	12%	
Advanced ventilation	18%	4%	Duct sealing	33%	48%	
HEPA/MEPA filter	17%		HVAC - replace	33%	52%	
HVAC cleaning	17%		Furnace T and Cn	22%	24%	
Air filter	15%	4%	HVAC - repair	13%	8%	
Plumbing repair	13%	8%	Thermostat	15%	16%	
Gutter, downspout	13%	4%	Passive venting	44%	44%	
Moisture/mold abatement	13%	8%	Lighting	33%	40%	
Roof repair, replace	11%	15%	WH low cost	52%	60%	
Pest mitigation	9%	8%	Water heater	12%	4%	
Comprehensive cleaning	8%		Electrical repair	13%	8%	
Crawlspace	7%	38%	Wx repair	1%	8%	
Slip/fall prevention	5%					
Dehumidifier	2%					

 ${\it Darker cell colors indicate higher rates of installation.}$

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



