Washington State Weatherization Plus Health Enhanced Grantee Profiles:
Pierce County Healthy Homes

Pierce County Healthy Homes (PCHH), comprised of Pierce County Human Services (PCHS) and the Tacoma Pierce County Health Department (TPCHD) Partnership, is one of six public service agencies in Washington to receive an Enhanced Weatherization Plus Health (Wx + H) Grant.

The project was originally envisioned as an extension of a decade-long collaboration between PCHS and the Clean Air for Kids Partnership (CAFK, led by TPCHD) to move beyond referrals for weatherization and minor home repair to offer holistic, integrated services to improve asthma control and quality of life, and to reduce energy costs.

When CAFK public health funding dried up, PCHS stepped up and provided funding for the TPCHD. The focus of the initiative shifted to integrating CAFK's referral network and TPCHD home visit services with PCHS's existing weatherization and home repair program and clients. The project expanded from CAFK's focus on children with asthma to serving all ages, including those with Chronic Obstructive Pulmonary Disease (COPD).

PCHH provided comprehensive weatherization and/or Healthy Homes services to 43 households, exceeding the grant target of 40 projects. An additional 10 households received low-cost measures and home visits, and 84 people with respiratory conditions received services (of which 25% had COPD).

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 focus of the Wx + H Enhanced Grant initiative is assessing the effectiveness of integrating weatherization and Healthy Homes services to serve households with members who have asthma and/or 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

The initial strategy of relying heavily on TPCHD community health workers for referrals and pre-qualification was adjusted to focus on existing PCHS clients, including those receiving weatherization, energy assistance, and ECEAP (Head Start) services. This was supplemented by joint outreach events and work with clinics serving low-income households.

Potential clients were referred to TPCHD community health workers, who provided one to three home visits that focused on asthma or respiratory health management, and comprehensive assessment of other needs. Information from TPHCD visits was shared informally with PCHS outreach and auditing staff. Formal systems for sharing information and coordinating services are still being developed.

If clients had not already applied for Wx + H services, a community health worker assisted with the application. Once eligibility for Wx+H services was established, PCHS staff completed a Healthy Homes assessment and provided additional energy and Healthy Homes education that focused on energy management and green cleaning.

PCHS developed a comprehensive scope of work and contracted it out. TPCHD staff conducted follow-up visits or calls at 3, 9, and 12 months after initial intake. Follow-up visits included comprehensive case management services and detailed data collection on health conditions and needs.

Key Lessons

Meeting complex needs

Provide multiple home visits so complex issues can be addressed and the family treated as a whole. Having additional tools and resources to support meaningful action and interventions is a major morale booster for staff.

Two or three home visits in the first four months are ideal so the clients are not overwhelmed with information and to provide reinforcement. Longer-term follow-ups were beneficial for managing respiratory conditions, and for maintaining green cleaning practices and installed measures. For example, in one home where a ductless heat pump was installed, PCHS found the filters were clogged and needed to be cleaned when they conducted their final inspection three months after installation.

The program's broader focus on all respiratory conditions required developing additional expertise and training materials to address the needs of older clients with COPD.

Many of the projects required addressing complex physical (aging in place) and mental health issues (depression, hoarding). More resources for mental health triage and referral are needed.

High needs, high costs, and long-term engagement

One-third of comprehensive upgrades involved an investment in measures over $20,000. In many cases, some possible work was not done because of limited funds.

Funding Sources for Installed Measures

Funding for installed measures came from the following sources:

- DOE, Low Income Home Energy Assistance Program, BPA, Matchmaker: 70%
- Matchmaker, Wx + H: 17%
- Utility: 13%
- Other: 5%

PCHS and TPCHD staff reported a high degree of satisfaction at being able to treat the whole house and household. Long-term engagement made a big difference. PCHS staff noted that training on green cleaning and Healthy Homes practices was far more effective after weatherization and measures were installed.

The weatherization application and upgrade was a major barrier to participation

Lower-income households, especially those with a member in fragile health, are often in crisis and may have limited resources and time to meet complex administrative requirements. The multiple touches needed to complete and inspect work, and to participate in education and follow up, was a major barrier, especially for working families.

The highest-need households are very difficult to qualify for low-income weatherization

Often the highest-need households are living in rentals or very deteriorated housing. Initial referrals included more the 20 very high-need Hispanic clients who live in poorly repaired manufactured housing. Most could not be qualified because landlords were non-cooperative, their homes were so deteriorated they were not repairable, or difficulties or reluctance to comply with requirement to qualify people who are not citizens.

Integration of services was a challenge

While TPCHD and PCHS have had long-term referral relationships, services had not been formally integrated and coordinated.

The partnership tested multiple strategies to strengthen integration, including holding regular coordination meetings, deploying a web-based home visit data collection tool (Redcap) to enable data sharing among the partners, and testing the efficacy of a joint Asthma Community Health Worker (ACHW)/weatherization auditor home visit. Results were mixed. Coordination meetings were helpful, but PCHS and TPCHD were not able to establish cross-agency data sharing systems because of security issues. Also, joint home visits/audits were difficult to schedule and overwhelmed the households.

Wx + H model requires culture change

Long-time energy auditors and outreach staff really struggled with the new processes and prioritizing measures. Auditors needed to audit differently and look beyond energy savings to health needs, and not walk away immediately if there are repair needs. The program is more complex to keep track of. While there was some initial resistance, in June staff noted that the new way of doing business was starting to click with staff.

Contracting processes were a hindrance

As a public agency, PCHS could not initiate contracts until contracts with Commerce were approved. Procurement processes for municipal agencies are very strict and time consuming. Consequently, contracts for some new services were delayed until the last quarter of the project. Existing capacity was strained, leading to delays in completing projects. The average elapsed time from audit to final inspection was 10 months.

Going Forward

PCHS/TPCHD staff engaged in the project are committed to continuing the work, if possible

They felt inspired to see client health and quality of life improve as a result of deep investments in the home. They noted that clients took more responsibility for their health and gained a greater understanding of how their home worked.

During follow-up visits, clients were excited about getting a new, lightweight HEPA vacuum, which they could also use to clean the filter of their new ductless heat pump and refrigerator coils.

There was a strong sense that even if dedicated funding for Wx + H did not continue, program staff would integrate lessons from Wx + H into ongoing program operations. These include:

- Providing mental health training for weatherization program staff
- Providing low-cost education and green cleaning kits
- Including cold plasma filters on ductless heat pump installations
- Maintaining a relationship with TPCHD

Community health worker capacity

Although the value added was high, resources are not sufficient to maintain the asthma community health worker (ACHW) capacity. During the grant, the home visit process was hampered by a lack of consistent, long-term funding for community health workers. Initial delays in Wx + H funding resulted in losing two community health workers to retirement. The rehiring delayed start up until October 2016.

Just when the new hires were getting up to speed in June 2017, failure of the legislature to pass a capital budget (which funds the Matchmaker Program) meant another round of lay-offs.

There is some interest in maintaining ACHW services through Pierce County's Medicaid Waiver – Accountable Community of Health process, but those efforts have yet to yield any stable funding.

Grant Partners

Pierce County Human Services

PCHS provides a wide range of social and human services to Pierce County (excluding the City of Tacoma). The Low Income Weatherization Program is located in the Home and Family Services Division. Seven other divisions offer complementary services, including housing rehabilitation loans,

aging and disability services, and the Head Start Program. Where possible, other PCHS programs prioritized Wx + H clients for services such as enhanced repairs or woodstove replacement. They were also a strong source for referrals.

Tacoma Pierce County Health Department Clean Air for Kids

CAFK is a partnership of local healthcare providers, Mary Bridge Children's Hospital, and schools that provides referrals for ACHW home visits. ACHWs provide asthma and environmental assessments, education, green cleaning supplies, and asthma management plans to families. The program has served 150 to 200 families per year.

Under the original proposal, Wx + H was intended to supplement CAFK. With the loss of public health funding, CAFK home visits were provided only by a small program funded by, and targeted to, the Mary Bridge Children's Hospital Health System. Wx + H was important in maintaining minimum capacity for asthma home visits by TPCHD.

Puget Sound Asthma Coalition (PSAC)

The PSAC was formed in 2011 by CAFK and other partners, and has grown to include more than 30 organizations and individual members. The coalition supports improved care and prevention services through advocacy, education, outreach, coordination, and standardization of care.

Services provided by the lead and partner organizations are summarized in Table 1. Table 2 lists eligible Healthy Homes measures.

Budget

Enhanced Wx + H Grant: **$408,042**

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Table 1. Services Offered by PCHH and its Partners

Service	PCHS	TPC Health Dept.	Puget Sound Asthma Coalition 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**	**X**	
Medical support and management		X	**X**
Weatherization	**X**		
Healthy homes measures	**X**	x	
Client education/follow-up	**X**	**X**	
Additional services (repair, social)	**X**	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 Measure Installed (n=43)

Plus Health Measures			Weatherization Measures		
	All Grantees	PCHS		All Grantees	PCHS
Green cleaning kit	94%	88%	Air sealing	77%	77%
Bedding (dust mite)	71%	62%	Floor insulation	44%	56%
Mechanical ventilation	65%	65%	Attic insulation	54%	60%
HEPA vacuum	65%	79%	Wall insulation	12%	2%
Walk-off mats	65%	87%	Windows	17%	7%
CO detector	57%	54%	Door	19%	16%
Low VOC flooring	33%	6%	Duct insulation	20%	23%
Smoke detector	24%	4%	Duct repair	10%	26%
Advanced ventilation	18%	8%	Duct sealing	33%	44%
HEPA/MEPA filter	17%	17%	HVAC - replace	33%	60%
HVAC cleaning	17%	4%	Furnace T and Cn	22%	47%
Air filter	15%	33%	HVAC - repair	13%	16%
Plumbing repair	13%	21%	Thermostat	15%	26%
Gutter, downspout	13%	10%	Passive venting	44%	47%
Moisture/mold abatement	13%	6%	Lighting	33%	47%
Roof repair/replace	11%	21%	WH low cost	52%	65%
Pest mitigation	9%		Water heater	12%	12%
Comprehensive cleaning	8%		Electrical repair	13%	19%
Crawlspace	7%		Wx repair	1%	
Slip/fall prevention	5%	10%			
Dehumidifier	2%	2%			

Darker cell colors indicate higher rates of installation.

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