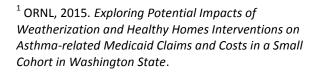
The Opportunity Council (OC) is one of six public service agencies in Washington to receive an Enhanced Weatherization Plus Health (Wx + H) Grant. OC has offered wraparound Wx + H services to its energy assistance and early childhood education clients for more than ten years, with services targeted to children under age six with asthma. The program is considered a national model and was evaluated by the Oak Ridge National Laboratory (ORNL) in a study published in 2015.¹

With the Enhanced Grant funding, OC broadened its focus to include clients of all ages with asthma, chronic obstructive pulmonary disease (COPD), or other respiratory conditions that result in high use of medical services. OC strengthened its referral network in the medical community, refined client education, and expanded follow-up services.

OC provided comprehensive weatherization and/or Healthy Homes services to 36 households – slightly below its target of 40 households. An additional 16 households received lower-cost measures, which was above its target of 10 homes.

Clients who received Wx + H services from OC



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 assessing 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.

Program Delivery Strategy

OC worked with local clinics and physicians' offices, and the Lummi and Nooksack tribes to identify families with respiratory illness who were high users of medical services. While these referrals generated some leads, most referrals came from energy assistance, weatherization, and early childhood education programs administered by OC.

After receiving a referral, OC education staff visited homes to provide an initial Healthy Homes assessment, which included an assessment of weatherization and Healthy Homes options. The OC project coordinator reviewed the rough scope and scheduled a follow-up audit to develop a full scope of work. The full team (education staff and project coordinators) review project status each week.

All those entering the program, including deferrals and renters, received low-cost measures, education, and follow up visits. All assessment and education services were provided by OC staff. Measures were installed by contractors. Follow-up calls and visits were provided at 1, 3, 9, and 12 months from the date of the first visit.





Key Lessons

Wx + H services can reduce healthcare costs, especially when heavy users of medical services are targeted

OC participated in a rigorous study conducted by ORNL of 49 households that received Wx + H services between 2006 and 2013. The study found statistically significant reductions in Medicaid costs, especially for high utilizers of medical services.

Finding and serving households with high needs and high use of medical services

Targeting high-need households requires a good definition of high users of medical services and access to medical data. This is challenging, given the importance of maintaining systems to protect medical and personal data.

High-need households are also likely to have complex medical and mental health situations. Homes are more likely to require extensive investments. A number of OC Wx + H projects would have been deferred under existing weatherization protocols. Installed-measure costs for comprehensive installations ranged from \$10,000 to \$30,000, with an average of \$18,000 per home.

OC was able to blend funding from multiple sources to complete these projects, and was particularly effective at accessing utility funding for weatherization measures.

Funding for installed measures came from the following sources:

- DOE, Low Income Home Energy Assistance Program, BPA, Matchmaker: 32%
- Matchmaker, Wx + H: 21%
- Utility: 47%

Not all measures could be addressed

One in five homes had potential measures that were not installed because of spending caps and limited funds. While there was some flexibility in Commerce's "soft cap" for Wx + H measures of \$4,000 per home, OC staff had to balance the client's needs, building science, and client preferences. For example, in some homes advanced ventilation made sense from a building science perspective, but caps were reached addressing plumbing leaks or replacing carpets.

Education needs and resources should be updated

Expanding the target population from children with asthma to include adults and those with COPD required updating educational tools and content-adjusting approaches. Older clients had more complicated needs and differing motivators (for example, appeals based on a child's health were not always relevant).

Separate and coordinate education and assessment functions

In earlier models, one person provided Healthy Homes assessment and education to occupants. However, the education component did not get the time and attention it deserved. The two functions worked best when delivered by different people who are part of the same team, and who coordinate and reinforce messages and content. Regular coordination and planning meetings were essential.

Streamline and target assessment and follow-up tools

OC reviewed building assessment tools (the Pollution Source Survey and EPA Asthma Checklist) and client questionnaires to combine and simplify them.

Referral relationships were helpful

However, these referrals required significant ongoing effort to maintain.

Evaluate the program holistically

A key finding from prior research is that the sum of the effect of Wx + H services and measures is greater than the individual parts. A corollary observation is that the mix of specific measures, services, and interventions appropriate to meet





the needs of the client varies. The ability to tailor the menu of services to meet the needs of the household makes a difference. Maintaining this flexibility is important going forward.

Benefits range from reduced medical costs to improved quality of life. It is important to capture and report common data, and to understand and tell the bigger story of how services impact quality of life. OC and contractor <u>Three³</u> are working with the WSU Energy Program to assess the health and well-being impacts for OC clients.

Going Forward

OC has a long-term commitment to providing Healthy Homes services.

Continue program integration with local medical providers

OC is committed to maintaining its long-standing partnerships with other organizations that provide complementary services, along with mechanisms to coordinate and leverage services where appropriate. This includes the Lummi and Nooksack tribes, the Northwest Clean Air Agency (woodstove replacement in some areas), the City of Bellingham (repair services), Whatcom County Health Department, PeaceHealth Medical Group, Molina Health Care, and Unity Care NW. This will improve the referral process and help with identifying high-need and high-use clients.

In the long-term, OC hopes to explore strategies to integrate community health worker visits into the delivery model. OC has been an active participant in the region's Accountable Community of Health, which is exploring community collaborations and new services to reduce Medicaid costs and improve outcomes.

OC sensed that they were on the cusp of being able to deliver and sustain much more effective and integrated relationships with the medical community when grant funding ended and future funding was suspended when the Legislature failed to pass the capital budget.

Improved outreach and education

OC outreach staff learned a great deal from serving a broader client base and from the experience of enhanced grantees serving older and complex clients. They have strengthened outreach and client support services and tools.

Healthy homes measures

OC is committed to serving this population and providing additional measures if Commerce maintains flexibility and OC can secure funding.

Measuring results

OC is partnering with Three³ and the WSU Energy Program to ensure systems are in place to capture and analyze program services and outcomes data, focusing on medical and healthcare utilization. Three³ conducts research on the integration of environmental, social, and economic sustainability. They were lead researchers on the ORNL study and will build on that work.

Services provided are summarized in Table 1. Table 2 summarizes installed Weatherization and Healthy Homes measures.

Budget

- Enhanced Wx + H Grant: \$556,000
- Leveraged resources include funds from CDBG Home Repair; HUD Lead Hazard Control; City of Bellingham Mobile Home Repair; Lummi Tribe for energy efficiency and repairs; Puget Sound Energy for energy efficiency, durability, and health; and Northwest Clean Air Agency Wood Smoke Reduction Program

Contact Information

Ross Quigley, Director Home Improvement Department 360-734-5121; ross quigley@oppco.org



Copyright © 2017 Washington State University Energy Program 905 Plum Street SE, P.O. Box 43165, Olympia, Washington 98504





Table 1. Services Offered by OC and its Partners

Service	ос	Local Clinics, Medical Providers	Three ³	Tribes	Community Partners
Outreach and referrals	х	х		х	
Intake – screening, qualification	х				
Initial Healthy Homes Assessment	х				
Energy audit/assessment	Х				
Service coordination	х			х	
Weatherization	х				
Healthy homes measures	Х				
Client education/follow-up	Х				
Additional services (repair, social)	X			х	х
Data collection and analysis	X		х		

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

Table 2. Percentage of Projects with Installed Weatherization or Healthy Homes Measures (n=36)

Plus Health Measures			Weatherization Measures			
	All Grantees	OPPCO		All Grantees	OPPCO	
Green cleaning kit	94%	90%	Air sealing	77%	77%	
Bedding (dust mite)	71%	80%	Floor insulation	44%	40%	
Mechanical ventilation	65%	53%	Attic insulation	54%	51%	
HEPA vacuum	65%	63%	Wall insulation	12%	9%	
Walk-off mats	65%	84%	Windows	17%	9%	
CO detector	57%	43%	Door	19%	3%	
Low VOC flooring	33%	18%	Duct insulation	20%	17%	
Smoke detector	24%	18%	Duct repair	10%	11%	
Advanced ventilation	18%	18%	Duct sealing	33%	23%	
HEPA/MEPA filter	17%	8%	HVAC - replace	33%	54%	
HVAC cleaning	17%	10%	Furnace T and Cn	22%	9%	
Air filter	15%	4%	HVAC - repair	13%	14%	
Plumbing repair	13%	14%	Thermostat	15%		
Gutter, downspout	13%	12%	Passive venting	44%	31%	
Moisture/mold abatement	13%	18%	Lighting	33%	63%	
Roof repair, replace	11%	10%	WH low cost	52%	77%	
Pest mitigation	9%	16%	Water heater	12%	6%	
Comprehensive cleaning	8%		Electrical repair	13%	14%	
Crawlspace	7%	8%	Wx repair	1%	3%	
Slip/fall prevention	5%	2%				
Dehumidifier	2%	4%				

Darker cell colors indicate higher rates of installation.

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



