



## Washington's Enhanced Weatherization Plus Health (Wx+H) Pilot Program

**Financing Source:** Legislative authorization funded by state budget  
**Financing Amount:** \$4.3 million (WA FY 2015-2017)  
**Focus:** Healthy housing

### Financing Mechanism

In 2015, the Washington State Legislature passed House Bill 1720 ([HB 1720](#)), which expanded the purpose of the Matchmaker Low-Income Residential Weatherization Program to include healthy housing improvements.<sup>1</sup>

In the pilot program, Basic Wx+H, the Washington (WA) Department of Commerce set aside \$4.3 million to develop a Weatherization Plus Health Program (Wx+H). It budgeted \$2.3 million for the Wx+H Enhanced program, a competitive grant to pilot research-based interventions for energy efficiency and healthy homes services targeted to individuals with respiratory conditions. It allocated the remaining \$2 million to all weatherization agencies, including participants in the Wx+H Enhanced program. The Basic Wx+H program allowed recipients to use the funds for weatherization, develop the capacity to deliver Wx+H services, or install a minimum set of health and safety measures in homes eligible for services but where complete weatherization was not feasible.

### Funding Operations

The Matchmaker Program is funded through the state's capital budget. At a minimum, it establishes a one-to-one or greater leverage of utility and other program investments in low-income weatherization. Local agencies also leverage additional funding from utilities, landlords, and housing repair programs to provide weatherization services.

Eight grantees received Enhanced Wx+H funding through the FY 2016-2017 capital budget. Delays in funding the FY 2018-2019 capital budget, a drop in the core funding for the Matchmaker Program, and delays in selection and contract awards for grantees meant that most services occurred between late spring 2016 and June 2017, with most grantees reducing services between July 2017 and February 2018. The department set aside an additional \$125,000 as bridge funding to complete home visits and maintain pilot grantees' capacity.<sup>3</sup>

In 2018, the department began the gradual integration of additional healthy homes measures into the existing weatherization program. In 2018, all weatherization programs were invited to participate in services similar to those in the Enhanced pilot; 15 local agencies have elected to provide the new Plus Health services, projecting \$1.3 million for work on over 300 homes. Funds were allowed to be spent from the Low Income Home Energy Assistance Program (LIHEAP) weatherization contracts and/or Washington State Matchmaker program allocations.

### Program Overview

The Enhanced Wx+H pilot represented a new approach to leveraging state and local resources and support to expand measures and services available through Low Income Weatherization. One long-term objective was to develop integrated service models eligible for reimbursement from Medicaid or other sources that engaged medical and public health services. The department encouraged pilot sites to experiment with different combinations of partners, weatherization and healthy homes interventions, and other activities that could have a measurable impact on client medical costs, including:

- Strategies to target high-need households whose residents had asthma or other respiratory conditions, since those conditions had well-documented, evidence-based interventions and outcomes;
- Comprehensive weatherization and healthy homes assessments and upgrades, including any 14 optional low-cost and high-cost measures in homes occupied by residents with respiratory conditions;

<https://nchh.org/tools-and-data/financing-and-funding/sustainable-financing-mechanisms/>

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- Coordination between asthma management and healthy homes-related education services through community health workers (CHWs) and/or agency staff home visits at three, six, and 12 months;
- Low-cost green cleaning kits and other supplies;
- Leveraged funding for additional repairs and healthy homes measures; and
- Coordinated services with community partners including public health medical or mental health case management services.

Enhanced Wx+H grantees applied the standard weatherization eligibility requirements for enrollment. They also implemented changes in their procedures to target occupant and unit needs, expand the pool of weatherization contractors trained to install new healthy homes measures, and increase staff training (including receipt of a certificate of completion for the *Essentials for Healthy Homes Practitioners* training offered through the [National Healthy Homes Training Center and Network](#)).<sup>4</sup> In 2018, this training requirement was changed to the Building Performance Institute's *Healthy Homes Evaluator* training.

The 2016 Basic Wx+H pilot program policy established an approved list of 14 measures with a cap on installed measure costs (IMC) at \$2,500 per unit unless prior approval was obtained from the department. Basic healthy homes measures included client education, green cleaning kits, dust mite covers, walk-off door mats, adjustments to water heater temperatures, carbon monoxide and smoke detectors, mechanical/exhaust ventilation, HEPA vacuum cleaners, furnace filters, removal of toxic household chemicals, pest mitigation, and mold and moisture abatement.

The 2016 Enhanced Wx+H pilot program grantees had both a higher installed measures cap (\$4,000) and additional approved measures. These included low-VOC flooring, plumbing repairs, roof repair or replacement, provision of gutters and downspouts, comprehensive cleaning, fall and slip prevention measures, provision of dehumidifiers, and crawlspace sealing.<sup>5</sup> The 2018 program increased the installed measures cap to \$8,000.

## Program Operations – How They Work

In the 2016 pilot, two Enhanced Wx+H service models emerged:

1. *Community health worker (CHW) partnerships*: Three grantees established partnerships with local public health departments and other health organizations experienced in offering community-based home visiting services. Wx+H funding was used to maintain these organizations' general capacity to support CHW services.<sup>6</sup>
2. *Referral-based models*: Five grantees collaborated with community health partners for consultation and referrals but provided all program services (weatherization, healthy homes, and home visits/education) in-house. These programs were more likely to focus on energy efficiency, healthy homes measures, and management of environmental triggers but less likely to address case management needs or health and medication management.

The majority of clients (77%) of the 2016 pilot Enhanced Wx+H program came from existing weatherization of energy assistance programs. Referrals from healthcare providers, clinics, the Indian Health Service, and asthma programs accounted for 16% of the enrolled projects. These referrals often did not meet the federal weatherization eligibility requirements for low-income, or the properties themselves were not suitable for weatherization. In addition, referral partners may not have been familiar with weatherization program requirements.

By the pilot's completion, Enhanced Wx+H funded interventions in 254 homes where at least one household member had a respiratory condition, with an additional 211 homes receiving services funded through community partners or other Department of Commerce grants. The former were more likely to receive a package of comprehensive weatherization and healthy homes interventions as well as post-intervention follow-up home visits. The latter tended to receive a lower-cost package (under \$1,000) of healthy homes services because they did not qualify for the more comprehensive services or dropped out of the pilot before the units could be completed. Thus, the profile of households receiving services from the pilot was not significantly different from those who would have qualified for other low-income weatherization services.<sup>7</sup>

Excess moisture and ventilation, cleaning, and general household conditions represented the most common concerns identified during the in-home pollution source survey (PSS) that informed decisions about interventions. Many of the homes with the greatest needs exceeded the weatherization caps on the costs of services and only qualified for healthy homes or low-cost interventions. Nineteen percent of the projects completed served "high need" homes; i.e., those where the PSS identified three or more hazards of major concern. "A total of \$723,000 (36%) of the \$1.98 million Enhanced Wx+H grant funds passed through to local agencies went toward IMCs. The remainder of the grant was used for outreach, education, assessments, home visits, program development, and administration."<sup>8</sup>

### Billing for Services

The per-unit costs varied widely, with installed measure costs (IMC) ranging from \$74 to \$44,003 for all upgrades:

- Median IMC for all Wx+H projects: \$9,341
- Median IMC for healthy homes-only projects: \$3,288

- Median IMC for comprehensive projects: \$13,972
- Median IMC for all single-family weatherization projects (FY 2016 -2017): \$10,200.<sup>9</sup>

The Department of Commerce directly contracts with local weatherization agencies. Weatherizing agencies may subcontract with CHWs and other contractors to fulfill the terms of their contract with Commerce.

## Outcome and Evaluation

The Department of Commerce has contracted for three evaluation studies from Washington State University (WSU). The first two, on early stages of implementation and later lessons learned, have been published. The final evaluation on costs and benefits is expected in 2019.

One of the goals of the Enhanced Wx+H pilot was to participate in ongoing Medicaid waiver or Accountable Communities of Health processes. Four of the eight grantees had modest success and also gained general encouragement for coordination of services, but they received no direct funding for measures or services.<sup>10</sup>

### Return on Investment

While no formal evaluation of return on investment has been published for Weatherization Plus Health, the weatherization work through the Washington Weatherization Assistance Program experiences a 20% reduction in energy consumption and an average reduction of \$324 per year in energy bills.<sup>11</sup>

In 2017, WSU assessed the feasibility of matching Medicaid utilization records with client records from the pilot. They concluded that the match would be marginal and not likely to detect changes in utilization rates due to client conditions, variations in the housing-level treatments, and the large share of low-income weatherization clients whose health costs are covered through Medicare, disability, or military systems.<sup>12</sup>

## Lessons Learned

Asthma programs and weatherization services providers have traditionally approached respiratory illness through different paths. Integrating both services can create a connection that results in greater efficiency and positive results. The pilot demonstrated that there was a demand for services for residents with respiratory conditions among the existing weatherization clientele; however, building and maintaining the partnerships with healthcare providers, funding, and standardized procedures for referrals and interventions require a longer time frame than the pilot anticipated. Caps on weatherization expenditures acted as a barrier to provide comprehensive services to high-need households. “Those with the highest medical need and most complex issues were often in situations where the home was not treatable due to structural concerns, clutter, or mental or other health-related barriers. Rather than getting higher levels of services, many of these clients only received low-cost measures and education. [...] Systems for capturing and maintaining personal identifiers were inconsistent and not always well maintained.”<sup>13</sup> If these barriers can be removed, the healthy homes interventions continue to hold promise for better health for residents served by the program.

## For More Information

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Weatherization Plus Health website: <https://www.commerce.wa.gov/growing-the-economy/energy/weatherization-and-energy-efficiency/matchmaker/weatherization-plus-health-wxh/>

<sup>1</sup> Washington State Legislature. (2015). *House bill report HB 1720*. Retrieved from <http://lawfilesextra.leg.wa.gov/biennium/2015-16/Pdf/Bill%20Reports/House/1720%20HBR%20PL%2015.pdf>

<sup>2</sup> Schueler, V. (2018, July 23). Weatherization Plus Health pilot: Implementation and lessons learned [WSUEEP18-002]. Olympia, WA: Washington State University Energy Program. Retrieved from <http://www.commerce.wa.gov/wp-content/uploads/2018/08/WxHSummaryReport1.pdf>

<sup>3</sup> Schueler, V. (2018, July 23). Weatherization Plus Health pilot: Implementation and lessons learned [WSUEEP18-002] [page 15]. Olympia, WA: Washington State University Energy Program. Retrieved from <http://www.commerce.wa.gov/wp-content/uploads/2018/08/WxHSummaryReport1.pdf>

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