

# Washington's Weatherization Plus Health Initiative: Making Salad Dressing from Oil and Vinegar

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  - Washington’s Low Income Weatherization Program Funders
    - Washington State Legislature (Energy Match Makers)
    - US DOE – Weatherization Assistance Program
    - US HHS – Low Income Home Energy Assistance Program
    - Bonneville Power Administration
    - Utilities and Local Resources
- Eight local weatherization agencies who piloted the program and their partners

Grantee Funded Partner	Grant Amount	Upgrade Targets		Education – Outreach Model	County Served	Agency Type
		Compre- hensive	Education Low Cost			
The Opportunity Council (OPPCO)	\$478,000	40	10	Referral	Whatcom, Island	CAP/NP Small Urban
Pierce County Human Services (PCHS) (Tacoma Pierce County Health Dept.)	\$408,042	40	35	CHW Partnership	Pierce (not Tacoma)	Public Large Urban
Yakima Valley Farm Workers Clinic (YVFWC)	\$362,955	37	113	CHW Partnership	South Yakima	CAP/NP Large Rural
Spokane Neighborhood Action Partners (SNAP)	\$218,082	28	22	Referral	Spokane	CAP/NP Large Urban
Snohomish County Human Services (SCHS)	\$137,500	18	17	Referral	Snohomish	Public Large Urban
King County Housing Authority (KCHA) (Seattle King County Public Health)	\$277,233	30	150	CHW Partnership	King (not Seattle)	Public Large Urban
Blue Mountain Action Council (BMAC)	\$53,000	5		Referral	Walla Walla	CAP/NP Small Rural
Yakama Nation Housing Authority (YNHA)	\$50,000	7		CHW Partnership (Proposed)	Yakama Nation	Tribal
<b>Total</b>	<b>\$1,984,812</b>	<b>205</b>	<b>347</b>			

## Weatherization Plus Health – Transforming Lives



*“Before our home was weatherized, it was very drafty and cold. Our electric bills were nearly \$700/month in the winter. We couldn’t afford the repairs to fix our home.”*



*“My husband’s asthma sounds better, he feels better, and he uses less rescue medicine”*

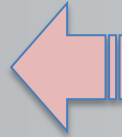


*“There is just no comparison – we are all so much healthier and have 90% less stress”*

# Low-Income Weatherization in Washington

## Wx Base Program

2,500 - 3,000  
units/year



28 local agencies



\$20–35 Million/year – multiple funders



## Wx Plus Health

- ~+250 homes received additional Wx+H measures
- +~ 200 homes received only leveraged home visit services



8 agencies: 2015 - 2017



State Matchmakers Funding  
\$2.3 million pilot 2015 - 2017



# “Typical” Range of Weatherization + Health Services

## Comprehensive Investment

### Full Scope Weatherization (\$5 - \$25,000)

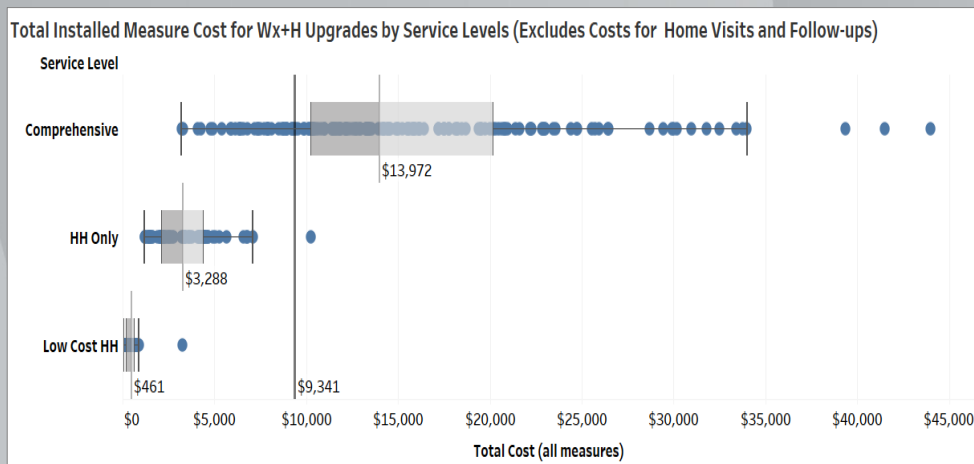
- New heating systems or repairs
- Increased Ventilation
- Insulation
- Air sealing
- Low cost (pipe wrap, showerheads, lighting)

### Additional Healthy Homes Measures (\$4000)

- Hard surface flooring
- Duct cleaning or deep cleaning
- Advanced ventilation
- Roofs, repairs, mold abatement, and plumbing - sometimes

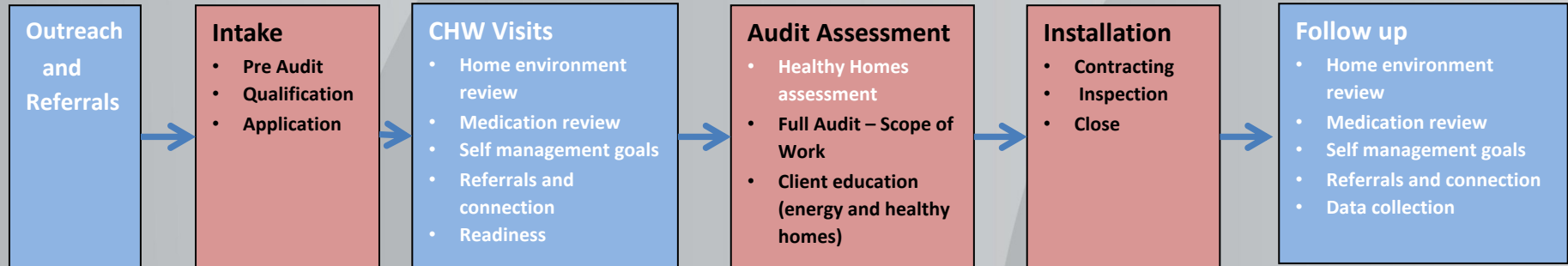
## Education – follow up with Support Measures

- Energy and Healthy Homes Education
- Condition specific health education if CHW Model
- Resources to meet goals (~\$400)
  - Filtered (HEPA) Vacuum
  - Green Cleaning Kits
  - Mattress Dust-Mite Covers
  - Air filters
  - Humidity gauges (CHW)
  - Medication Spacers/Nebulizers (CHW)

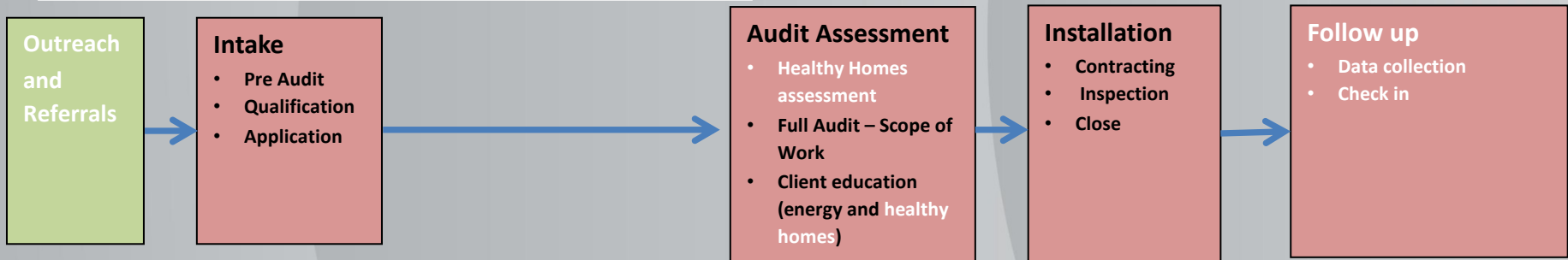


# Integrating Health into LI Weatherization: Two Models

## CHW (public health) Agency Partnership (3)



## Community Referral – Agency Delivery (5)



- **Community Health Workers and Home Visits meet an essential need (Pierce County Results)**
  - 88% of clients had medical management/provider recommendations
  - 48% of clients had medication management recommendations
- **Medical review and medication management needs were not addressed in Agency Delivery Model**



## Oil and Vinegar - Cultural Differences and Culture Change

	Weatherization Agency	Public Health - Medical Clinic
Orientation	Buildings, Energy and sometimes IAQ	Person, Health Condition and Socio-economic Needs
Assessment	What does the building need? Is it weatherization ready?	What behavior change is possible? What services are needed?
Client Education	Secondary – energy and building	Primary - health and person
Scope Development	Compliance to rules and specifications and SIR	Equity and need – not so much on cost effectiveness
Health data	Not trained - adverse	Key interest and focus
Progress is	Complete the project	Move to the next step (incremental)
Follow – up visit	A Poorly Funded Requirement	Continue Service – Maintain Relationship

- The Weatherization Plus Health model requires major cultural changes for most weatherization agencies and public health – medical partners
  - They need to be planned for and addressed
- These cultural differences are general not universal observations



## Making Salad – Dressing (Sum is greater than the parts)

- **LI Weatherization support CHW – Healthy Homes Educators**
  - Clients have resources to act on recommendations
  - CHW make better home recommendations (especially IAQ)
  - Reinforces health improvement messages
  - Client behavior changes more likely after measure interventions
  - Lower energy use → Better IAQ = Less stress → More resources for other needs
- **CHW – Educators support LI weatherization**
  - Navigating the Weatherization application process
  - Weatherization readiness for high need clients → Services for those that aren't ready
  - Medication and medical management needs
  - Health data collection
  - Follow up for maintaining efficiency improvements and behaviors



# Thinking Holistically – HEPA Vacuums

- Light weight portable high efficiency HEPA vacuums are expensive but?
- Health potential
  - Regular vacuuming is critical for respiratory trigger management
    - Floors and curtains
  - Ease of use for elderly, frail and medically vulnerable
  - Keeping visible – not in the closet
- Energy efficiency potential
  - Highly efficient (but not a big contributor to energy use (weekly use))
    - Market transformation – bulk purchases
  - Potential side benefits for maintaining energy efficiency measures
    - Cleaning Ductless Heat Pump Filters
    - Appliances



## But Does It Work: Pierce County Healthy Homes Initial Results

- **Taking Action:** 86% of households getting follow up home assessments reported taking two or more actions to reduce environmental triggers or improve medical management
- **Respiratory Control:** 65% reported improvement (47% reported a significant improvement in ACT results). The percentage of those in whose respiratory conditions were in control increased from 42% to 67%.
- **Quality of Life:** 70% reported an improvement in Quality of Life as measured by AQLQ and CCQ (38% of improvements were significant)

Mean Change in Asthma Control Test and COPD Assessment Test

Significant improvement (> 3)	All Persons	Persons with Asthma	Person with COPD
N=	45	32	13
Significantly better	47%	50%	38%
Better	18%	16%	23%
No Change (-1,0,+1)	13%	16%	8%
Worse	16%	16%	15%
Significantly worse	7%	3%	15%

Change in Mean Quality of Life Index for Asthma and COPD Clients

Significant improvement (>1.0)	All Persons	Persons with Asthma	Person with COPD
N=	37	30	7
Significantly better	38%	47%	0%
Better	32%	33%	29%
No Change (-1,0,+1)	14%	13%	14%
Worse	11%	7%	29%
Significantly worse	5%	0%	29%

One year post - ~ 60% completed follow up data collection

# What's Next

- Near Term
  - Continuation funding for FY 18-19 delayed but approved
  - 8 pilot grantees returning – 7 new agencies testing the waters
    - FY 2019 targets: \$1.3 million Wx+H budget/289 projects
- Long Term
  - Commerce is seeking major funding increases to support:
    - State wide implementation
    - Strengthen and expand multi-faceted interventions and community partnerships
- Research and Evaluation
  - Pierce County Case Study (with Tacoma Pierce County Public Health Department)
  - Opportunity Council Medicaid data (with Three Cubed)
  - State-wide Benefit Cost Analysis (2019)
    - How to estimate health benefits with limited and funky data



## Washington State University Energy Program

*Go Cougs!*

*Vince Schueler*

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## Resources: Washington Weatherization Plus Health

### Weatherization Plus Health Program Description

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

### Weatherization Plus Health Implementation Report (July 2018)

<http://www.energy.wsu.edu/documents/WxHSummaryReport.pdf>

### Weatherization Plus Health Pilot Program Profiles

[http://www.energy.wsu.edu/documents/WxHEnhancedProfileBMAC\\_12-20-17.pdf](http://www.energy.wsu.edu/documents/WxHEnhancedProfileBMAC_12-20-17.pdf)

[http://www.energy.wsu.edu/documents/WxH%20EnhancedProfileKCHA\\_12-20-17.pdf](http://www.energy.wsu.edu/documents/WxH%20EnhancedProfileKCHA_12-20-17.pdf)

[http://www.energy.wsu.edu/documents/WxHEnhancedProfilePierce\\_12-20-17.pdf](http://www.energy.wsu.edu/documents/WxHEnhancedProfilePierce_12-20-17.pdf)

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