



What is Weatherization *Plus* Health?

Dave Finet, Executive Director
Opportunity Council



Opportunity Council

- **Private non-profit community action agency**
- **Bellingham Washington**
- **Serving a 3 county area**
- **The agency just celebrated its 43rd year**

Opportunity Council Programs

- Early Childhood Opportunities Northwest
- Childcare and Family Resources
- Community Services
- Island County Services
- Energy & Home Repair Services

Project Concept

- Utilize the existing weatherization and home repair infrastructure to deliver a healthy homes program.
- Align the technical expertise and building science components of the program with healthy homes concepts.



Improving Indoor Environments

Improving environmental conditions is often considered outside the current WX budget. Programs will need to secure supplemental flexible funding.



How was WX Plus Health Developed

Between 1999 and 2003, the Opportunity Council (OC) developed and incorporated a Healthy Homes component to its weatherization and home rehabilitation programs.

Environmental Protection Agency's (EPA's) Environmental Justice Program and Housing and Urban Development (HUD) Healthy Homes funds.

It also drew upon existing weatherization funds from the Department of Energy's Weatherization Assistance Program (DOE WAP), Health and Human Services (HHS) as well as local utility funds and was indirectly supported by the State of Washington Department of Community, Trade, and Economic Development (DCTED).



Acknowledgments

WX Plus Health was created through a team effort that includes the expertise and assistance of a talented group of practitioners: Dave Finet, John Davies, Erin Hamernyik, The Opportunity Council; Ellen Tohn, ERT Associates; Eric Oetjen, ICF Consulting; Jim LaRue, House Menders; Courtney Moriarta, Building Performance Institute; Linda Wigington & Helen Perrine, Affordable Comfort; John Snell, Peregrine Energy; Don Ryan, Alliance for Healthy Housing; Rebecca Morley, National Center for Healthy Housing and funding through HUD!

Healthy Homes Principles

7 Steps to a healthy home

The indoor
environment
should be...

- dry
- clean
- well ventilated
- combustion byproduct free

It should
have no...

- pests
- toxic
chemicals
- lead hazards

WX Plus Health Program

Three Levels

1

Basic Weatherization

In Basic Weatherization the assumption is that certain diagnostics including combustion safety, a weatherization audit system, and energy saving measures are already being delivered proficiently. It is from here that weatherization providers can build to the next level of services, Do No Harm.

2

Do No Harm

Do No Harm adds to Basic Weatherization the elements of Lead Safety Compliance, Visual Survey of Indoor Health Hazards, and an Educational Component for staff and clients. There is more time involved in eligibility, assessment, education and delivery of changes to the homes of the clients. These elements fill in the gaps previously experienced during typical weatherization work, and it is hoped that this will become the new “Base Level” for Weatherization Protocols.

3

Improve Indoor Environment

Improve Indoor Environment builds on Do No Harm, adding steps to more actively fix hazards. Lead Compliance advances to Lead Hazard Reduction & Dust Clearance, Indoor Air Quality Assessment advances to a Comprehensive IAQ treatment to improve ventilation strategies through added fresh air intake and whole house systems. The Education Component offers added one on one meetings to help inform and support changes in behavior and maintenance and to establish health network connections.

Adding Assessment Tools and Undertaking Repairs

Assessing and delivering more complicated ventilation strategies

Repairing indoor hazards with a health link (i.e. moisture/mold, asbestos, lead hazards from lead-based paint and dust, radon, pests, dust mite habitats)

Providing additional resources to maintain a healthy home (i.e., HEPA vacuums to remove dust, walk off mats, pillow and mattress covers to minimize dust mites)

Providing technical training

Additional time to start and coordinate a more complex project than standard WX

Adding a More Extensive Educational Component

Additional time is needed to deliver a more formalized education component that involves one on one discussions with residents to help them establish a workable and long term plan to maintain a healthy home. Often this entails creating a partnership where residents begin to “own” their part in reducing environmental health threats through changes in behavior and maintenance practices.

Strategies

Diagnostics

Weatherization Audit

Energy Savings

Lead Compliance

Advanced Indoor Air Quality

Basic Educational Component

Lead Hazard Reduction & Clearance

Enhanced Ventilation

Extended Education Component

Pressurized Blower Door Testing

Dust Control & Non-Toxic Cleaning



Basic Education Component

IEQ & You

IEQ & You

Informal Education for staff & clients

Informal
Education
Series

Dry

Minimizes mold growth • reduces chances of pests • low humidity

Clean

Eliminates asthma triggers • reduces chances of pests •

Well ventilated

Helps keep home dry • reduces strength of contaminants

Combustion Product free

These products are poisonous and should not be breathed •

Pest Free

Rodents, roaches carry disease and their byproducts are asthma triggers •

Toxic Chemical Free

Most chemicals found in the home are toxic to living organisms • by products can be asthma triggers

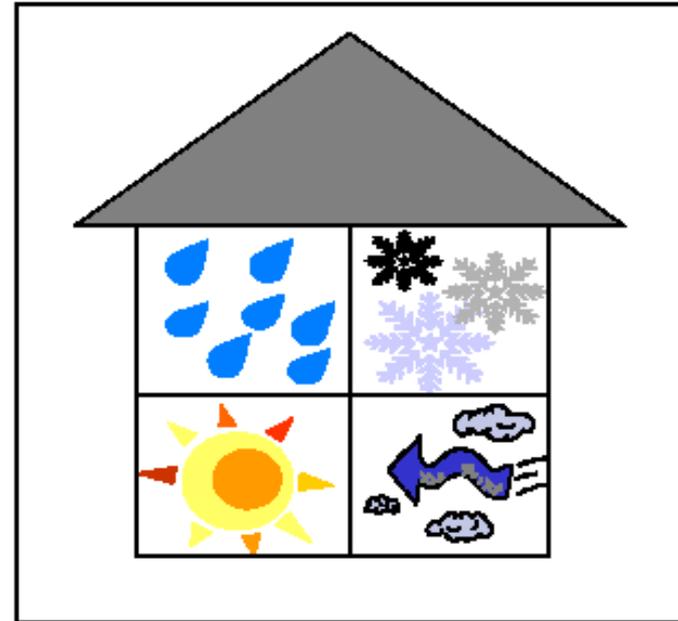
Lead Hazard Free

Paint that is older than 1978 may contain lead • peeling paint presents a health hazard

Basic Education Component

How your House Works!
1 Page Flyer

How your house works!:



An EZ guide & workbook to Home
Health principles



Healthy Homes Program

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Basic Education Component

Home Asthma Reduction
1 Page Flyer

Home Asthma Reduction Training Workbook.



Helping you to reduce asthma for
the ones you love!



NORTHWEST
AIR POLLUTION AUTHORITY



Weatherization Plus Health Documents

http://www.energyoutwest.org/tech_arc.html

Weatherization Plus Health Achievements

- Creation of the protocols, systems and tools
- Integration into our existing weatherization program
- Training and awareness delivered to people at conferences throughout the country

The problem

Ongoing funding to be able to deliver and develop the program.

Fall 2007

Jeff Freeman



Donations may be made to the:

- Donations contributed to the **Jeff Freeman Memorial Fund** will be used to address indoor environmental problems in homes of low-income people in Island, San Juan and Whatcom Counties. Households with children under 18 years old and people that have respiratory or multiple chemical sensitivities will receive priority.

The services provided may include but are not limited to:

- ⑩ Indoor environmental assessments
- ⑩ Indoor environmental education
- ⑩ Indoor environmental hazard mitigation
- ⑩ Products and materials that support the OC in delivering

Weatherization Plus Health Curriculum:

- ○ Walk-off mats
- ○ Green cleaning products
- ○ Mattress and pillow covers
- ○ Vacuum cleaners
- ○ Humidistats
- ○ Training booklets

- No more than 15% of the funds donated will be utilized for administration.

Donations from friends and families

\$6,000

Aligning Healthy Homes with Early Childhood Development

- Target households with children that have asthma that are enrolled in Head Start and Early Head Start
- 42 kids in OC Head Start have been diagnosed with asthma

The Commitment

\$100,000

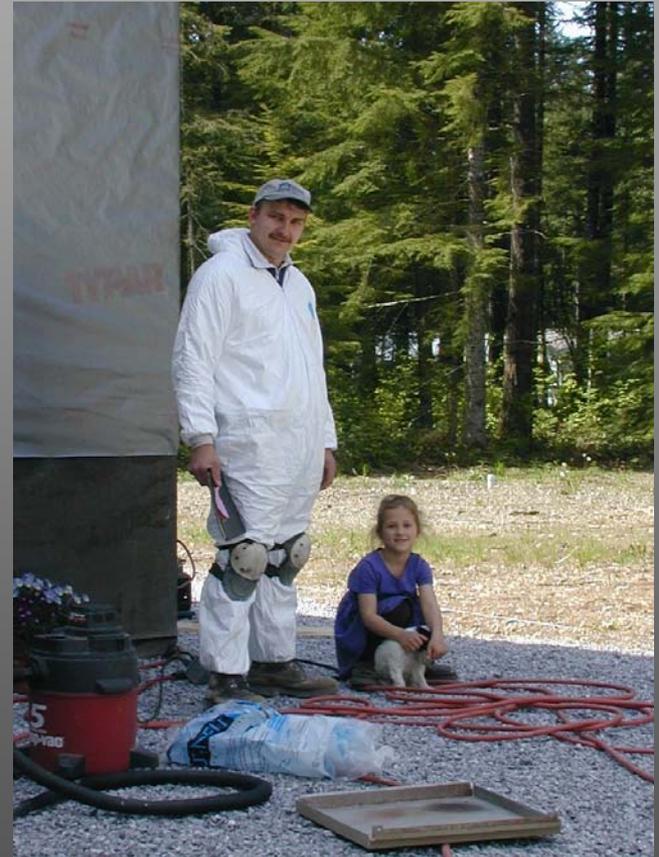
Per year in perpetuity

Fund Development

- Local asthma and allergy clinics
- Medical associations
- Health Department
- Hospital
- Private citizens
- Foundations
- Healthy Homes and or EPA

Program fundraising goal

- We would like to raise \$150,000 annually to be added to the Freeman commitment.
- Overall program goal \$250,000 annually





The Next Dimension in Performance Training

Building Performance Center A Division of the Opportunity Council

- Home
- About Us
- Training
- Indoor Air Quality
- Peer Circuit Rider
- WX WA
- Projects
- Tech Archives

Welcome to the BPC's online customer service center! Get immediate access to staff rosters, training schedules, links to service providers, reservation processing and more!

The Building Performance Center is a building performance contractor that provides technical training, diagnostic services, indoor air quality investigations / mitigation and energy efficiency retrofits. We analyze and develop practical solutions to problems associated with building performance and the indoor living environment. The BPC also provides consulting services in organizational and program development.



The Building Performance Center is a certified Affiliate of the Building Performance Institute. For more information about BPI go to BPI.ORG

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- 2 **BPC Services**
Consulting, Testing, Training and more...[About US](#)
- 3 **News on Energy OutWest 2008**
What's planned for the 2008 conference in Scottsdale, Arizona.... [View](#)
- 4 **Training and Certification Calendar**
The latest news on BPI Certification and exams: [BPI](#)
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Looking to Register for Classes?

Download the registration forms here:

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[Word File](#)

[Directions to our building](#)

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BUILDING A FRAMEWORK FOR HEALTHY HOUSING

2008 National Healthy Homes Conference

A Holistic Approach to Healthy Homes in an Urban Environment



Mark Fulop
Kari Lyons

Environmental Health Section
Multnomah County Health Department
503-988-3400
3653 se 34th avenue | portland, or 97202

The Genesis of Healthy Homes

Partnering with the community to identify priority environmental concerns from a community perspective using:

- Environmental Justice Vision & Values
- Socio-ecological Framework
- Popular Education Strategies
- PACE EH Assessment as Starting Point



Environmental Justice

- **Create solutions with people of color and people in poverty being disproportionately exposed to environmental hazards**
- **Overcome health disparities**



Socio Ecological Framework

Intrapersonal (e.g. behavior change)

Interpersonal & Social

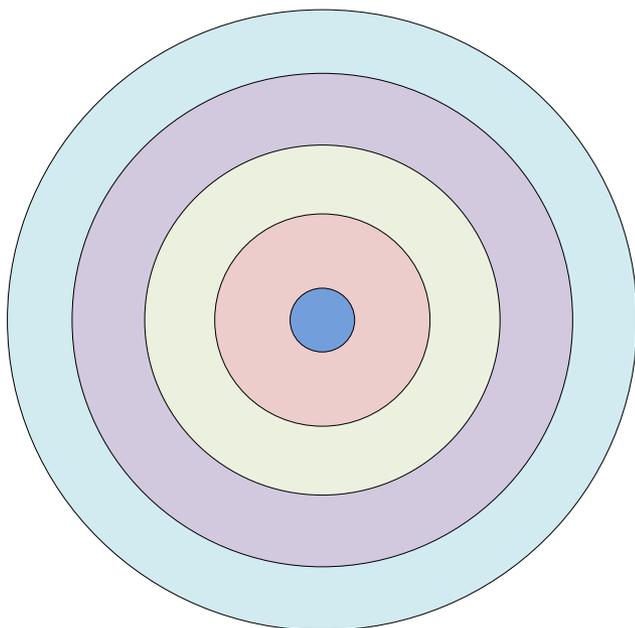
Institutional

(e.g. schools, worksites, clinical care)

Community

(e.g., economic, mass media)

Policy & Structural Change



Popular Education Strategies

- **Our strategy is to be a facilitator of a process rather than trainer that imparts knowledge.**
- **The process is to listen to community members' experiences, help them identify problems and develop solutions.**
- **Ideally solutions involve multiple community members (impacted tenants, landlords, ngo's) working in partnership as a community.**

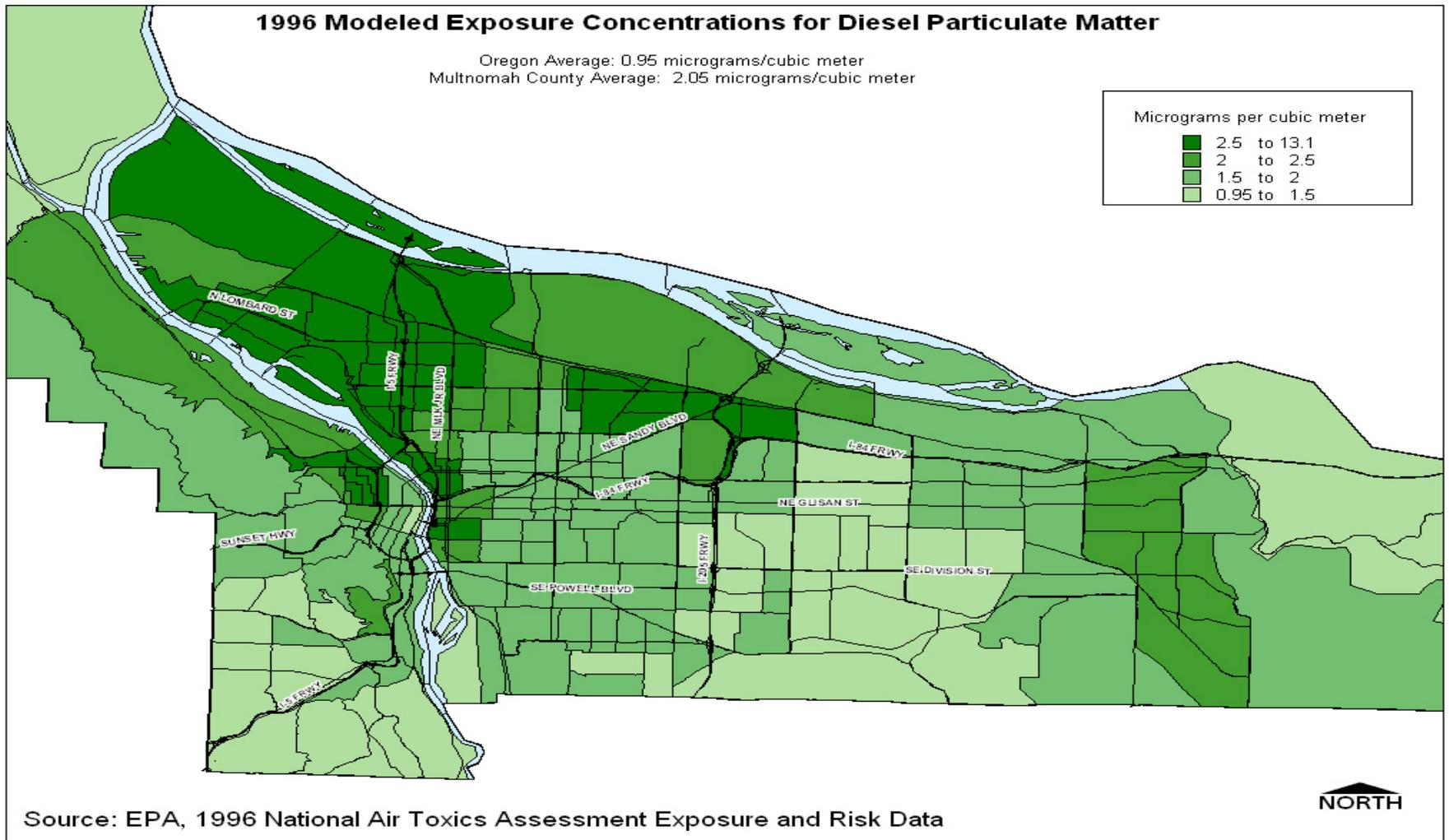


PACE Process

- **Involved communities extensively (photo voice, survey, Coalition, etc.)**
- **Looked at 4 data points**
 - **Mapping Disparities**
 - **Reviewing Housing Inspection Data**
 - **Engaging Community**
 - **Review of Literature**



Mapping



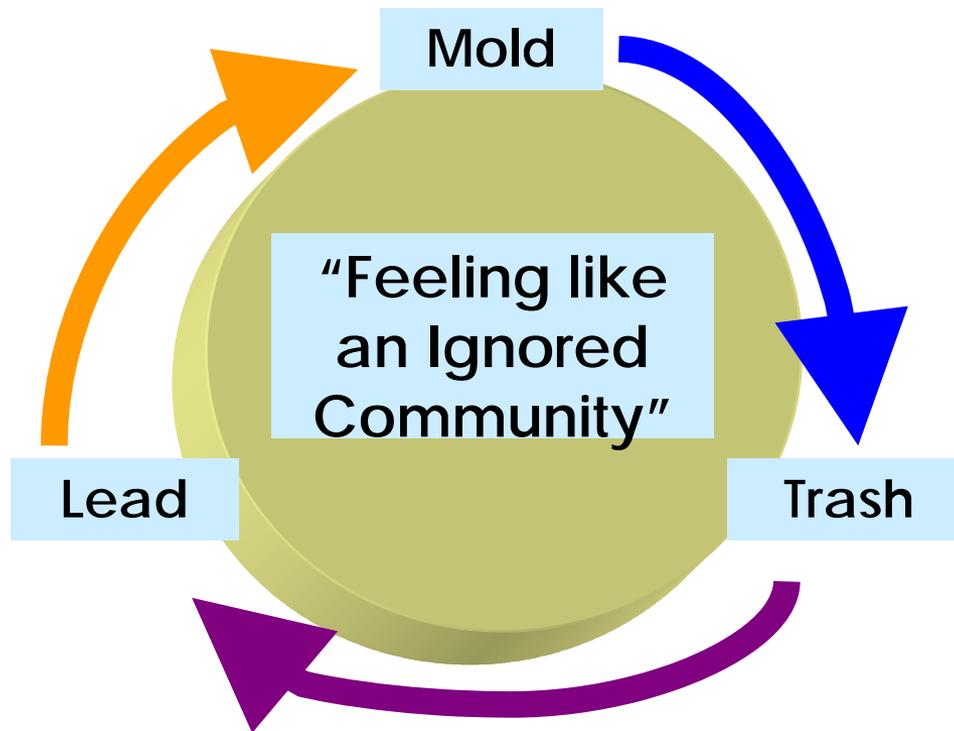
Data Point Inspection Reports

- **39% potential air quality citations (water leakage, mold, mildew, ventilation)**
- **23% insect or rodent infestation citations**
- **17% trash/debris/unsanitary condition citations**
- **5% bare wood exposed citations (potential lead issues)** *Approximately 311 Inspected, July '03 – June '04



Community

- Focus Groups, Surveys, Photo Voice



Research Literature

Substandard housing conditions are intimately linked with three of the leading pediatric health concerns:

- **Asthma**
- **Lead poisoning**
- **Household Injuries**

Estimated 40% of doctor diagnosed asthma is due to residential exposure

Meta-analysis Megan Sandel MD MPH
Boston University Medical School



PACE Outcomes

- **OPAL - Organizing People-Activating Leaders** launched as a 501c(3) to work for Environmental Justice in Portland
- **Multiple funding resources to address PACE issues (EPA, HUD, CDC, General Funds).**
- **Healthy Homes Summit Convened in May 2007 as a precursor/catalyst for policy activities**
- **Hired community members as staff & consultants.**



The Healthy Homes Model

- **Utilizes the strength of the family**
- **Accesses services of partnering community agencies**
- **Reduces environmental triggers**
- **Complements clinic interventions**
- **Addresses structural causes (leaks, ventilation, substandard carpets)**



The Team & Model

TEAM

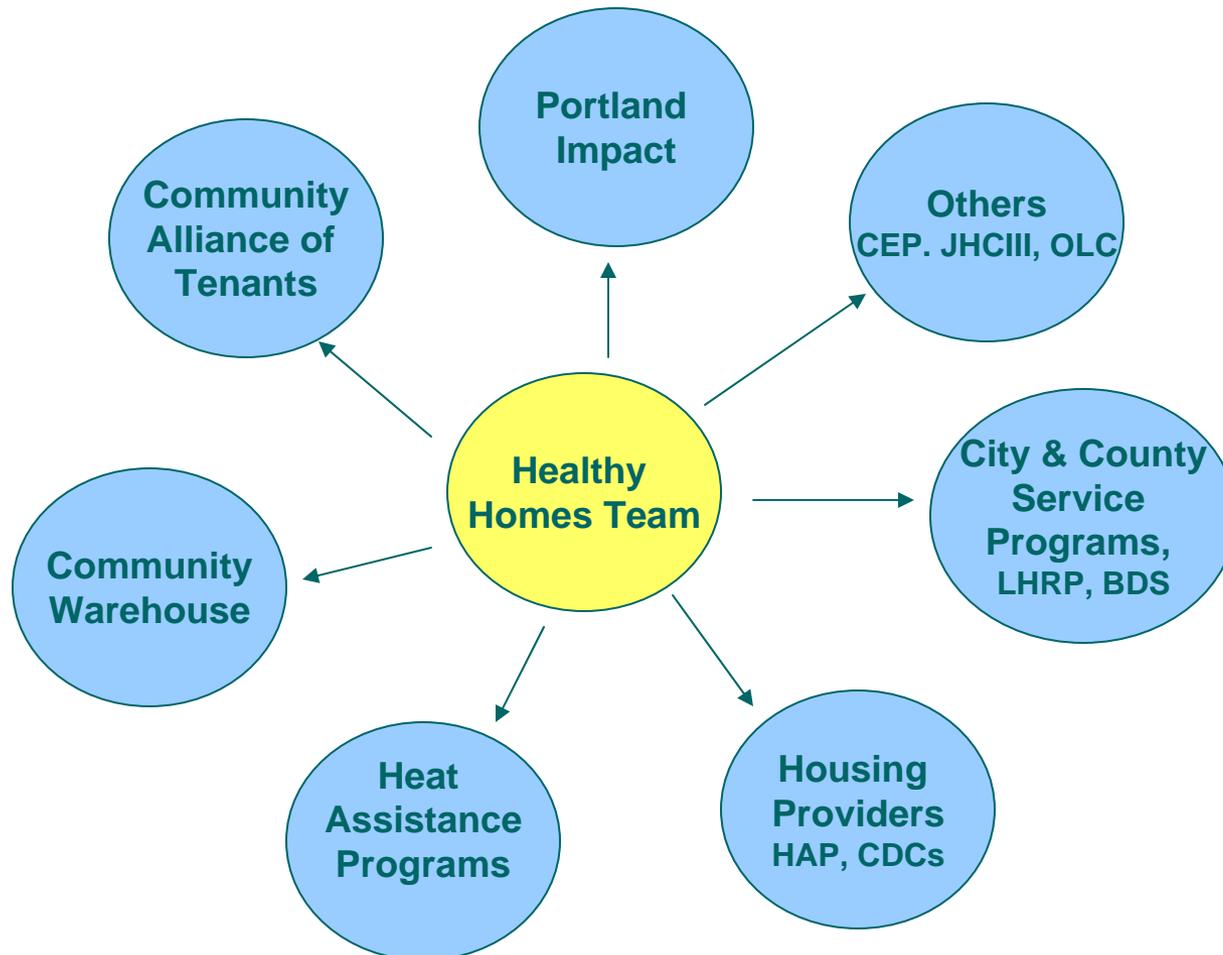
- **Bilingual Community Health Nurse, Asthma Certified**
 - **Bilingual Community Outreach Workers**
 - **Environmental Health Specialist**
-

- **4 – 6 Home Visits over six months**
- **Incentives** (Vacuum cleaners, mattress covers)
- **Partnership Leverage** (i.e, relocation, heat assistance)
- **Landlord partnership or advocacy**
- **Pre and Post Evaluation**

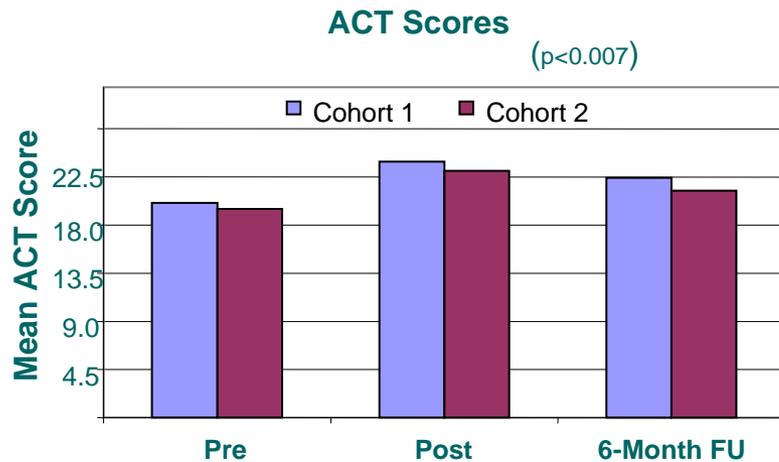
MODEL



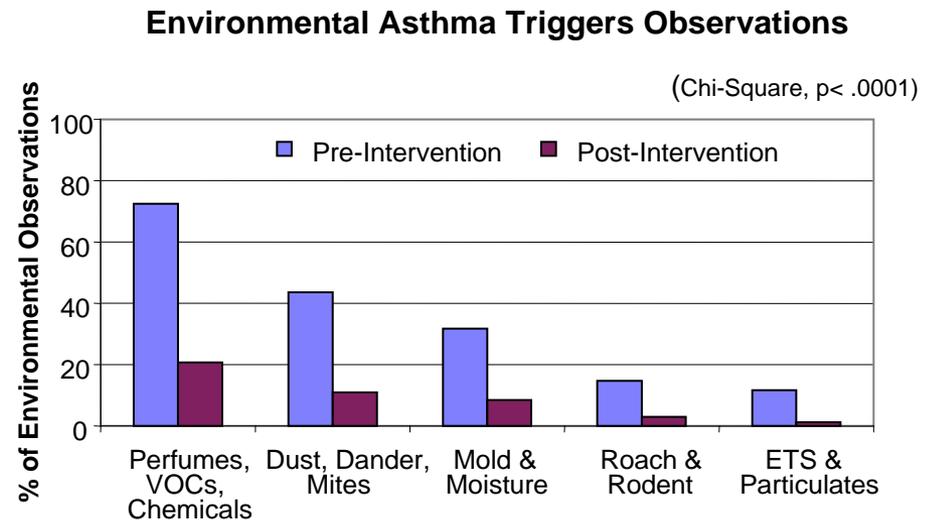
Healthy Homes Collaborative Network of Community Referrals



Improved Asthma Control



- We reduced asthma related ER visits by nearly one half when comparing a baseline period with the intervention period.



Community Involvement

- **Involvement of community in all planning, development and policy work**
- **Empowered community members to represent their story in the legislative process.**
- **Building Agency Capacity through coaching, joint programming, training and convening.**



Capacity Building

- **HH Collaborative met bi-monthly & strengthened interagency collaboration**
- **Assisted agencies conceive, write and implement grants (evaluation/advisory)**
- **Provided training and technical assistance on new program efforts**



Policy Advancement

- **Gresham: Top down approach established a systematic Inspection Program. Our Role: supporting development of implementation plan.**
- **Portland: City Appointed Taskforce developed recommendations for code/enforcement, education & LL/T mediation. Our Role: leadership on steering committee.**
- **State: Making health and housing a priority with goals of legislation to improve property maintenance regulations (title 29) & pass legislation that supports managed care reimbursement of chronic respiratory disease (continuing legislative “buzz”)**



Healthy Homes 2008-2009

	Goals	Community Connections	Sustainability of Project	Staffing
CDC Healthy Homes	<ul style="list-style-type: none"> Influence & Support Policy Maintain Partnership Coalition Pilot Education Projects Collect & Report Data Provide National Leadership 	<ul style="list-style-type: none"> City Of Portland & Gresham Healthy Homes Partners Health Equity Initiative County/State Policy Makers 	<p>This Section of work is supported for the next two years by the CDC grant.</p>	<p>Key Staff</p> <ul style="list-style-type: none"> Health Policy Analyst Health Educator <p>Consultants</p> <ul style="list-style-type: none"> Health Economist (I) Community Connector (I)
Home Visiting Model	<ul style="list-style-type: none"> Build Reimbursement Model Influence State Legislation Continue Home Visits Plan for Expansion Cross Department Collaboration AE Cert. for Outreach Workers 	<ul style="list-style-type: none"> Care Oregon MCHD Clinics and Programs State Asthma Program State Policy Makers 	<p>This project is currently funded but the goal is to create a model of funding that includes general funds, 3rd party reimbursement and State Health funds.</p>	<p>Key Staff</p> <ul style="list-style-type: none"> Public Health nurse Community Health Workers <p>Consultants</p> <ul style="list-style-type: none"> Environmental Health Specialist Program Evaluator (I)
Lead Prevention	<ul style="list-style-type: none"> Leadline Information & Referral EBL Case Management Limited Outreach & Education EPA Lead Screening Grant Coordination with other Agencies 	<ul style="list-style-type: none"> City Lead Partners Regional water Districts State Lead Program 	<p>This work continues to be a mix of City, County & State Funds. With some grant money in the mix. The EPA money will continue through this County fiscal year</p>	<p>Key Staff</p> <ul style="list-style-type: none"> Environmental Health Specialist Community Outreach Worker
Environmental Education	<ul style="list-style-type: none"> Vector Education & Outreach Food Safety Education & Outreach Environmental Conference Global Climate Change Community Connection & Liaison EH Community Inspections (?) Food Handlers 	<ul style="list-style-type: none"> Health Equity Initiative Community Partners Workgroups such as EJ Taskforce; Nail Salon, DEQ/PATS 	<p>This continues to be part of our core County General Funds and also is woven into most of our grants</p>	<p>Key Staff</p> <ul style="list-style-type: none"> Health Educator
Capacity Building	<ul style="list-style-type: none"> Grants & Admin Reports Grants tracking & QA/I Articles, presentations, Awards Internal and partnership Capacity 	<ul style="list-style-type: none"> Funding Agencies Community Partners MCHD Departments National Organizations 	<p>This continues to be part of our core County General Funds and also is woven into most of our grants</p>	<p>Key Staff</p> <ul style="list-style-type: none"> Program Administrator Analyst Health Educator

(I) – Ideal Staffing

Future Directions

- **Institutionalizing HH home-visits with 3rd party reimbursement**
- **Moving from community participation to popular / empowerment education**
- **Developing a coalition that creates as sustainable identity**
- **Working collaboratively to ensure the implementation of Gresham & Portland Policies**



Lessons Learned

- **Leadership matters:** A genuine & committed champion willing to fight for a long term agenda
- **Strategy matters:** Use empowerment methodology from the start. Be systematic & systemic
- **Partnerships matter:** Community is the driver
- **Data matters:** Involve Evaluators & Economists early
- **Communication matters:** Stay relational and genuine
- **Your lens matters:** Wear your Environmental Justice & Health Disparities “glasses”





BUILDING A FRAMEWORK FOR HEALTHY HOUSING

2008 National Healthy Homes Conference

From Lead to Healthy Homes

Connecticut Children's Medical Center

Successful Lead Project

- 2003 HUD grants (2) - \$5.6 million
 - 1122 Inspections (40% over)
 - 742 units cleared (27% over)
 - \$9.5 million matching (85% over)
 - On-time completion
- 2006 HUD grants (2) - \$7 million
 - “Green” status



Why Healthy Homes

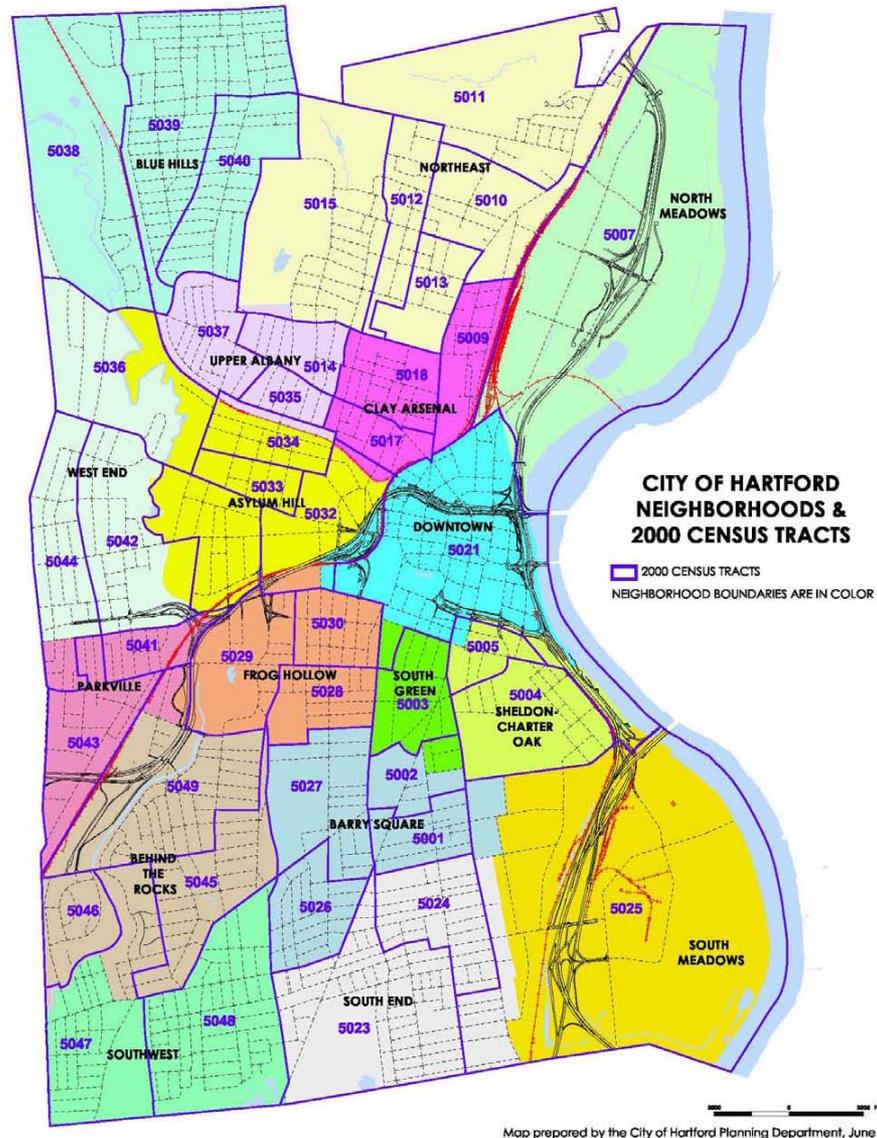
- Health Needs of Population
- Knowledge and Skill Base
 - CT Children's Medical Center
 - U. of Connecticut Health Center
- Interest in Community Centered Work
- Willie Sutton Approach

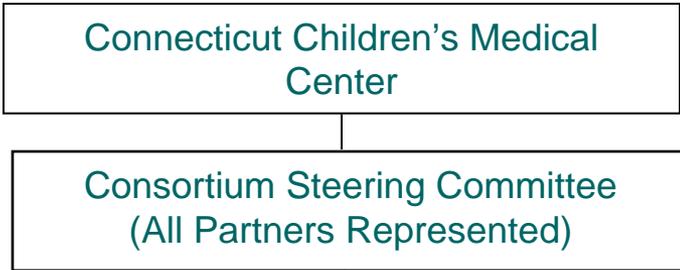


Healthy Homes Process

- 2006 Application - old structure
- 2008 – CBPR Model
 - Neighborhoods
 - Community Partners
 - Technical Partners
 - Design by Group







(Sub-contracts)

(Collaboration)



Technical Expertise

- Lead
 - Inspection/design
 - Abatement
 - Education on lead
 - Training
- Healthy Homes
 - Assessment
 - Allergen sampling
 - Remediation - IPM, Mold, Radon, Soot, Safety, etc.
 - Statistics
 - Education on many issues
 - Training



Regulatory Environment

- Lead
 - HUD
 - EPA
 - State – Inspection, Design, Abatement, Blood tests, Orders
 - Housing Codes
- Healthy Homes
 - Smoke Detectors
 - Housing codes



Objectives / Benchmarks

- Lead
 - Inspection count
 - Cleared unit count
 - LOCCS drawdown
 - Education sessions
 - Training sessions
- Healthy Homes
 - Assessment count
 - Unit count with various remediations
 - Reduce allergens
 - Reduce asthma
 - Reduce injury
 - Build local capacity
 - Sustainability



Outcomes

- Capacity of community partners
 - Assessment
 - Remediation
 - Education
- Integration into on-going programs
- Residents engaged in HH issues

