Reimagining Asthma Care, Climate Resilience and Equity in Contra Costa, California:
Partnering Health Care With Weatherization to Address the Indoor Environmental Determinants of Health

Part 3 of 3 in a Webinar Series on Solutions for the Indoor Environmental Determinants of Health (IEDOH)

Hosted by
U.S. Environmental Protection Agency (EPA)

March 29, 2023, 2:00–3:30 p.m. EDT
Agenda

Welcome to a Series on Solutions for the Indoor Environmental Determinants of Health (IEDOH) in Asthma and Community Health.................................................2:00 p.m. EDT

Part 3: Reimagining Asthma Care, Climate Resilience and Equity in Contra Costa, California: Partnering Health Care With Weatherization to Address the Indoor Environmental Determinants of Health

Discussion of Questions From Audience................................................................. 30 minutes

Closing: Requests and Offers to Build National Asthma Impact.......................3:30 p.m. EDT
Who Is Here Today?
Polling Question 1

Do you know how to match asthma patients who need environmental interventions with home modifications like weatherization?

1. Yes, I know how to connect health care for asthma, like home visiting, with home modifications, like weatherization, to improve asthma.
2. No, I do not know about bridging asthma health care with weatherization to improve asthma by addressing exposures to the IEDOH.
3. I know a little and want to learn more.
Welcome to Solutions for the Indoor Environmental Determinants of Health

- EPA’s Indoor Environments Division (IED) studies, supports and spotlights technical solutions for the indoor environmental determinants of health, the IEDOH, particularly in asthma care.

- For 20+ years, with 4,500+ champion-partners, IED has proven solutions communities can use to address the IEDOH in asthma.
Welcome to Solutions for the Indoor Environmental Determinants of Health

• High-quality asthma **systems break down siloes** to address the IEDOH in asthma.

• Systems require **time, partnership, data and investment** to scale and sustain.

• Assembling community systems to address the IEDOH in asthma is a model **for the social determinants of health (SDOH).**
Solutions for the Indoor Environmental Determinants of Health

- **IEDOH solutions for asthma reflect SDOH models** for clinic–community integration, housing-related supports, and health equity priorities in health care.

- **This webinar series spotlights solutions with health care for the IEDOH** to help health care innovation stakeholders advance health equity with in-home environmental asthma care.
Join the Asthma Community Network to access Solutions for the IEDOH at AsthmaCommunityNetwork.org
Solutions for the Indoor Environmental Determinants of Health

Michael Kent
Hazardous Materials Ombudsman for Contra Costa Health Services
Reimagining Asthma Care, Climate Resilience and Equity in Contra Costa County, California:

Partnering Health Care With Weatherization to Address the Indoor Environmental Determinants of Health

Contra Costa Health Services
March 29, 2023
Take Aways

Know which way is North

Follow your passion

Get out of your silo and make friends
Population: 1,150,215
- 20% Over 60 Years Old
- 7.8% in Poverty
- 19 Cities

Population by Race
- White: 43.2%
- Hispanic Latino: 25.8%
- Asian: 18%
- African American: 9.5%
- American Indian: 1%
- Other: 2.5%
The impacts of climate change will disproportionately impact vulnerable populations already suffering health inequities.
### My Experience

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Therms</th>
<th>Reduction</th>
<th>% Total Reduction</th>
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<tbody>
<tr>
<td>2004 – 2007</td>
<td>655/yr</td>
<td>29%</td>
<td></td>
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<tr>
<td>2009 – 2012</td>
<td>464/yr</td>
<td>37%</td>
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<tr>
<td>2014 – 2018</td>
<td>291/yr</td>
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<td>56%</td>
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$40 per month savings
Health Benefits of Weatherization

- Keeps homes cooler in the summer if no air conditioning (or if power goes out) and more comfortable in the winter
- Reduce energy costs, leaving more $ for essentials, and less likely to lead to disconnection
- Keeps out particulate matter, making the air easier to breath for people with respiratory problems
- Keeps out moisture, which can help reduce insect pests and mold, both asthma triggers
2017/2018: Pilot Project

- Integrated PHNs Process with Weatherization Services
  - 6 screening questions
  - 32 referrals
  - 17 different PHNs
  - 8 completed referrals

- Regional Asthma Management and Prevention (RAMP)
  - Funded by California Department of Public Health to coordinate written report
Addressing Social Determinants of Health
Contra Costa Asthma Initiative

A business plan for a comprehensive home-based asthma program

“;

Our communities don’t get the attention we need. I feel most healthcare services are negligent towards us. I’m thankful that our communities are being targeted. It’s making a difference for my family and is very helpful.”

- Contra Costa Health Plan asthma pilot participant
• 2018/2019: Awarded Phase I Technical Assistance Grant to Develop Business Plan to Expand Services to Improve Health Outcomes for Asthma

• 2019/2020: Awarded Phase II Technical Assistance Grant
  • Research feasibility of integrating Project into the State health care billing system
Current Asthma Initiative Project

• Grant from State of California Department of Health Care Services through the Sierra Health Foundation
  Three years, 150 assessments

• Grant from the Bay Area Air Quality Management District
  One year, 38 assessments augmented

• Grant from the Bay Area Air Quality Management District through the Automobile Emissions Research and Technology Fund by the California Attorney General’s Office
  Two years, 70 assessments near sources of transportation

• Grant from the US EPA to local community clinics to conduct asthma education
  Two years, 60 home education visits
### Home Visits

#### 2-3 Home Visits for Asthma Education
Coordinate with PCP on Asthma Action Plan; medication usage training; environmental triggers training; follow up with PCP and care managers

#### Consumer Supplies to reduce asthma triggers
e.g. green cleaning supplies, hypo-allergenic mattress and pillow covers, integrated pest management, food storage containers

### Home Assessment

#### Environmental assessment
Identify home-based asthma triggers and write remediation scope

### Trigger Remediation

#### Remove asthma triggers from home
Moisture issues (mold removal, ventilation, plumbing leaks)
Allergens (carpet removal/cleaning), and
Irritants (HVAC, combustion gases, VOCs)

### EE/Weatherization

#### Lower energy bills and improve comfort of home
*Leveraged funds*
Lighting, heat pumps, energy-efficient appliances, HVAC

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<table>
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<tr>
<th>Program Component</th>
<th>Staffing Organization</th>
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<tbody>
<tr>
<td>2-3 Home Visits for Asthma Education</td>
<td>Contra Costa Health Services</td>
</tr>
<tr>
<td>Consumer Supplies to reduce asthma triggers</td>
<td>Single-Family: County Weatherization</td>
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Coordination of Health/Energy Programs

**Referral Source**
- Primary Care Doctor
- Asthma-related ED Visits
- Public Health
- County Weatherization
- Association for Energy Affordability (AEA)

**Clinical Coordination w/ asthma specialist (1-2 visits in clinic or virtual)**

**Home Visit 1:** CHW & PHN (Initial patient assessment)
- CCHP CHW/RN conducts outreach to member to enroll in Asthma program and coordinate with Asthma specialist if needed

**Home Visit 2+**
- CHW + AEA

**OR**
- Refer to County Weatherization
- Refer to AEA

**Home Visit/Phone Visit for follow-up**
- Home Site Visits

**Assessment Types**
- Spirometry
- Allergy Testing
- Asthma Control Test
- Knowledge Questionnaire
- Asthma Medical Baseline

**Assessment Types**
- Environmental Trigger Assessment
- Scope of Work Development

**Assessment Types**
- Asthma Control Test (F/u)
- Knowledge Questionnaire (F/u)
- Medical Assessment (F/u)
Next Steps
Take Aways

- Know which way is North
- Follow your passion
- Get out of your silo and make friends
Questions?

Contact Information:

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Contra Costa Health Services
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925-250-3227 (c)
Discussion

Audience questions for EPA IED and Contra Costa County
Polling Question 1

Do you know how to match asthma patients who need environmental interventions with home modifications like weatherization?

1. Yes, I know how to connect health care for asthma, like home visiting, with home modifications, like weatherization, to improve asthma.

2. No, I do not know about bridging asthma health care with weatherization to improve asthma by addressing exposures to the IEDOH.

3. I know more than I did before, and I have some ideas about how to partner in my community to match asthma patients who need environmental interventions with home modifications.