

Housing: A Key Social Determinant of Health

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Housing: A Key Social Determinant of Health

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Division of Public Health, Bureau of Environmental and Occupational Health
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WISCONSIN DEPARTMENT
of HEALTH SERVICES

Protecting Children from Lead: Prevention, Testing, and Sources

Kimberly Schneider, RN, PHN



WISCONSIN DEPARTMENT
of HEALTH SERVICES

What Is Lead?

Lead 101



ENVIRONMENTAL HEALTH & YOU
an e-learning series



AT HOME

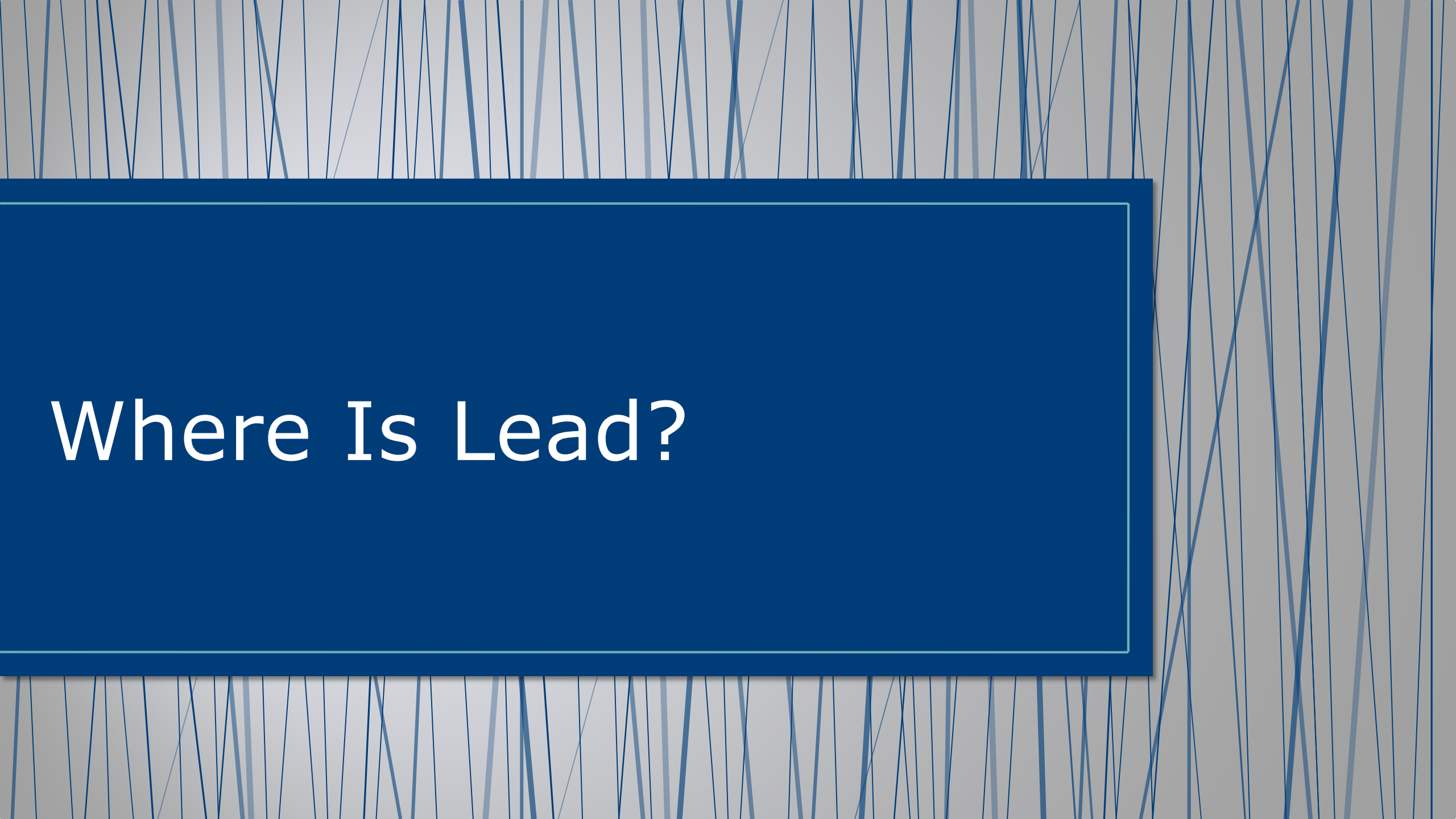


AT WORK

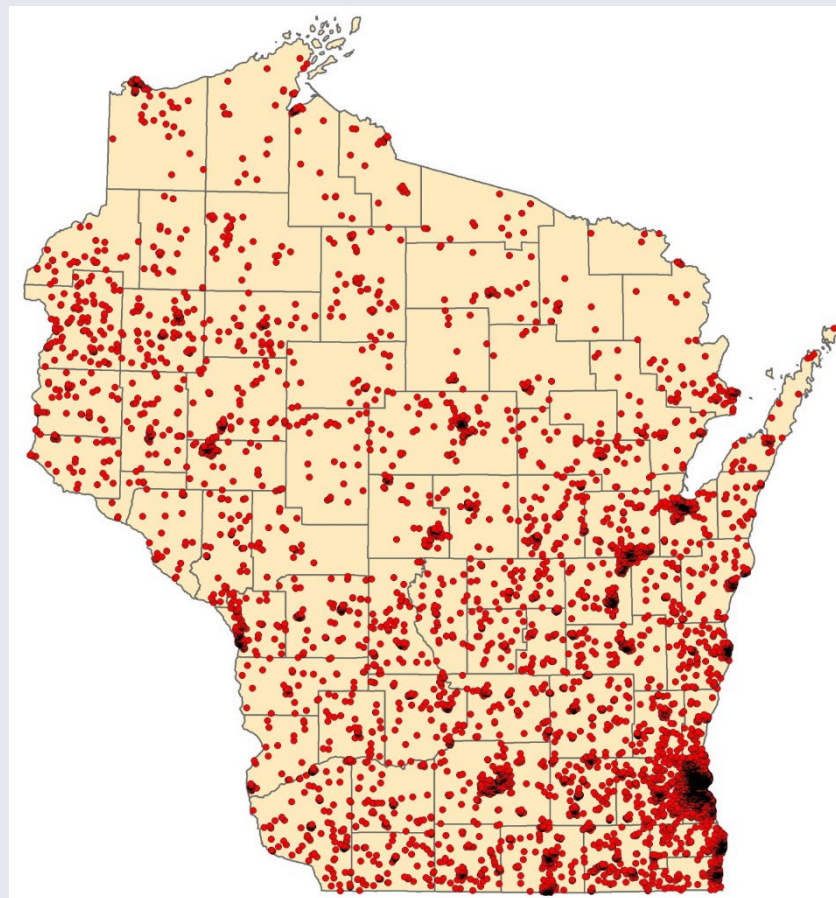


AT PLAY

BUREAU OF ENVIRONMENTAL AND OCCUPATIONAL HEALTH
Wisconsin Department of Health Services | Division of Public Health



Where Is Lead?



Lead Poisoning in Wisconsin

Each red dot represents an address associated with a lead-poisoned child, 1996–2016

Common Sources

- Lead based paint
- Bare soil
- Air
- Water
- Occupation or hobby
- Spices
- Imported items
- Older furniture or household items



Who Is at Risk?

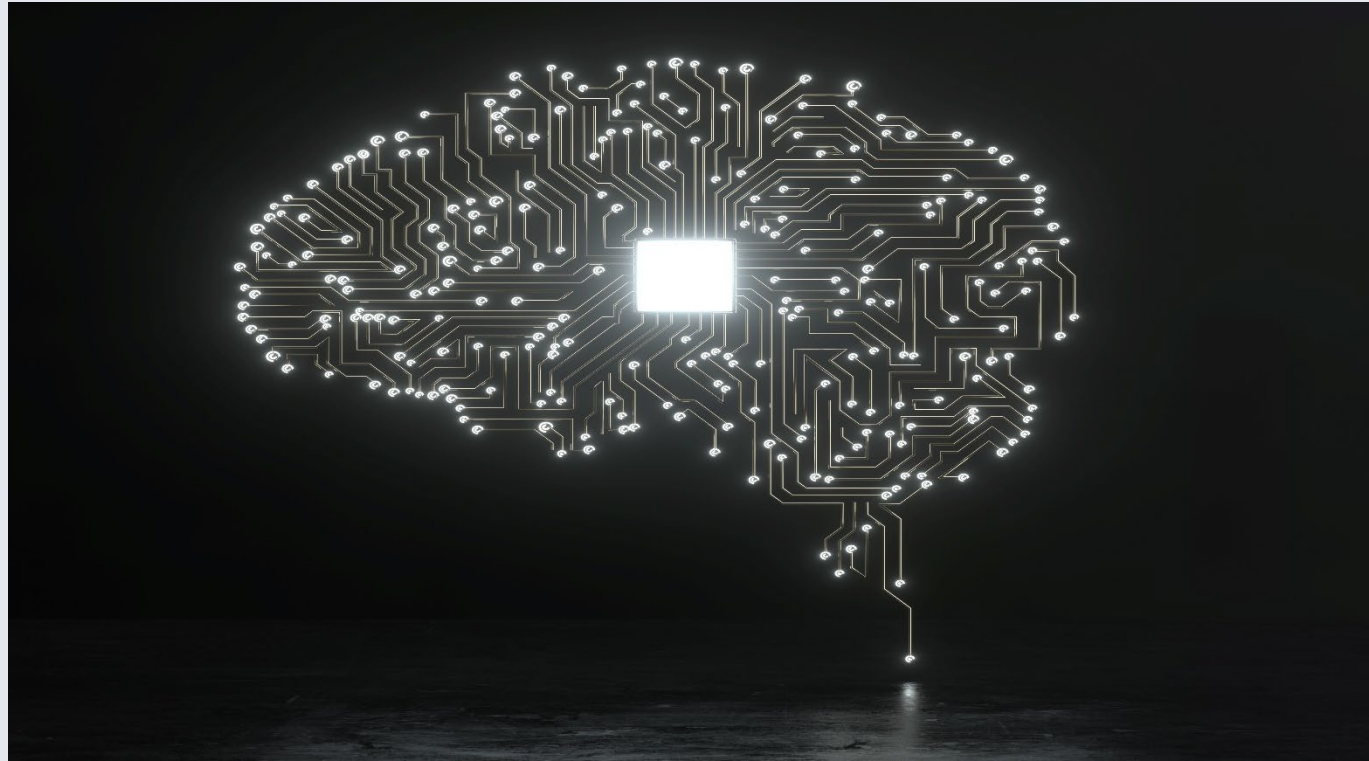
Who Is at Risk?

- Children under age 6:
 - Substantial hand to mouth behavior
 - Higher rate of absorption
 - Rapidly developing nervous system
- Fetus during pregnancy
 - Lead passes through the placenta or breast milk
 - Lead can be released from bone stores

Risk Factors

- Being eligible for Medicaid, BadgerCare, WIC
- Living or visiting a building built before 1950 or 1978 with recent or ongoing renovations
- Drinking water from lead plumbing fixtures
- Using imported items (spices, candies, cookware)
- Being exposed to take home lead (occupational or hobby)
- Being exposed to other lead hazards (potential or known)

Lead Effects



The health impacts of lead exposure

Health Effects

- Learning disabilities
- Lowered I.Q.
- Behavioral problems
- Hyperactivity
- Speech or hearing delays

What Can You Do?



WISCONSIN DEPARTMENT
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Know the Connections

- Lead can cause **developmental delays**: Encourage children to be screened regularly
- Lead poisoning can be **hard to detect**: Encourage children to be tested
- Lead poisoning overlaps with **environmental and socio-economic risk** factors

Wisconsin Blood Lead Testing Recommendations

Wisconsin recommends universal testing which includes:

- All children at age 1 and again at age 2
- Any children between ages 3 and 5 without a previous test

<https://www.dhs.wisconsin.gov/publications/p03557.pdf>

Share Information

- [What you Should Know About Your Child's Blood Lead Level](#) (National Center for Healthy Housing)
- [Know the Facts](#) (Centers for Disease Control and Prevention)
- [Look Out for Lead](#) (Department of Health Services)
- [Lead Safe Wisconsin Tools - for Outreach](#) (DHS)

Key Takeaways

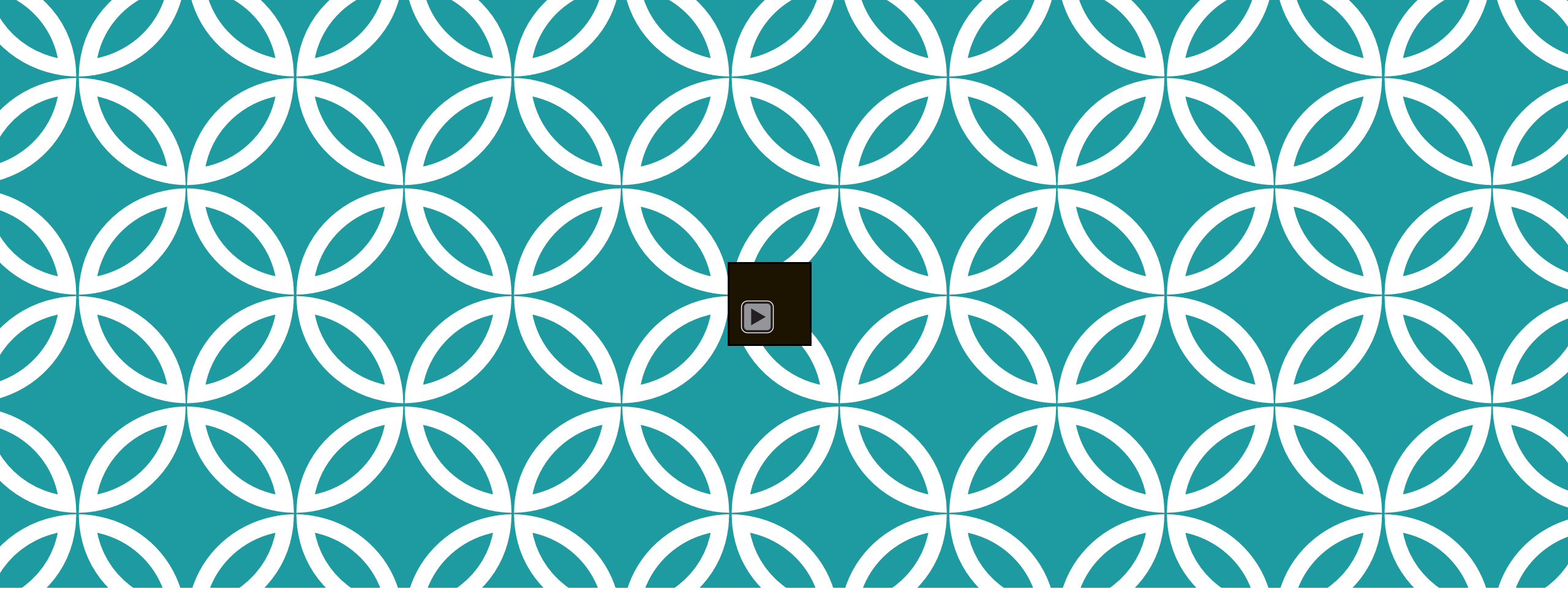
Remember

- Childhood lead poisoning is all over Wisconsin
- Children under 6 are most at risk
- Children should be tested at age 1 and 2
- Resources for families can be found at [Lead Safe Wisconsin Tools - for Outreach](#)

A photograph of three houses with gabled roofs under a blue sky with white clouds. A dark horizontal band is overlaid across the middle of the image to contain the text.

LEAD-SAFE HOMES PROGRAM

Harry Dettinger



LION IN THE LIVING ROOM

Poem by Jonathan
Bader

What is the Lead-Safe Homes Program?

What?

The Lead-Safe Homes Program is a health services initiative with the Centers for Medicare and Medicaid Services, Children's Health Insurance Program (CHIP).



Who?

This program helps:

- Children
- Property Owners
- Contractors
- Communities

Work is done on properties where a child under the age of 19 or a pregnant woman lives or regularly visits *and* is enrolled in or eligible for Medicaid or BadgerCare Plus

How?

This program repairs owner-occupied and rental properties to make them lead-safe.

The program can cover the costs of:

- The risk assessment and clearance on properties of non-poisoned children
- The lead abatement
- Relocation of the family

ELIGIBILITY FOR LSHP

- Owner occupied or occupied rental property
- Built before 1978
- Child or pregnant woman on or eligible for Medicaid or BadgerCare Plus
- Current on property taxes

REQUIREMENTS FOR LANDLORDS

Contribute 10% of total project cost

Not sell rental property within 3 years of project

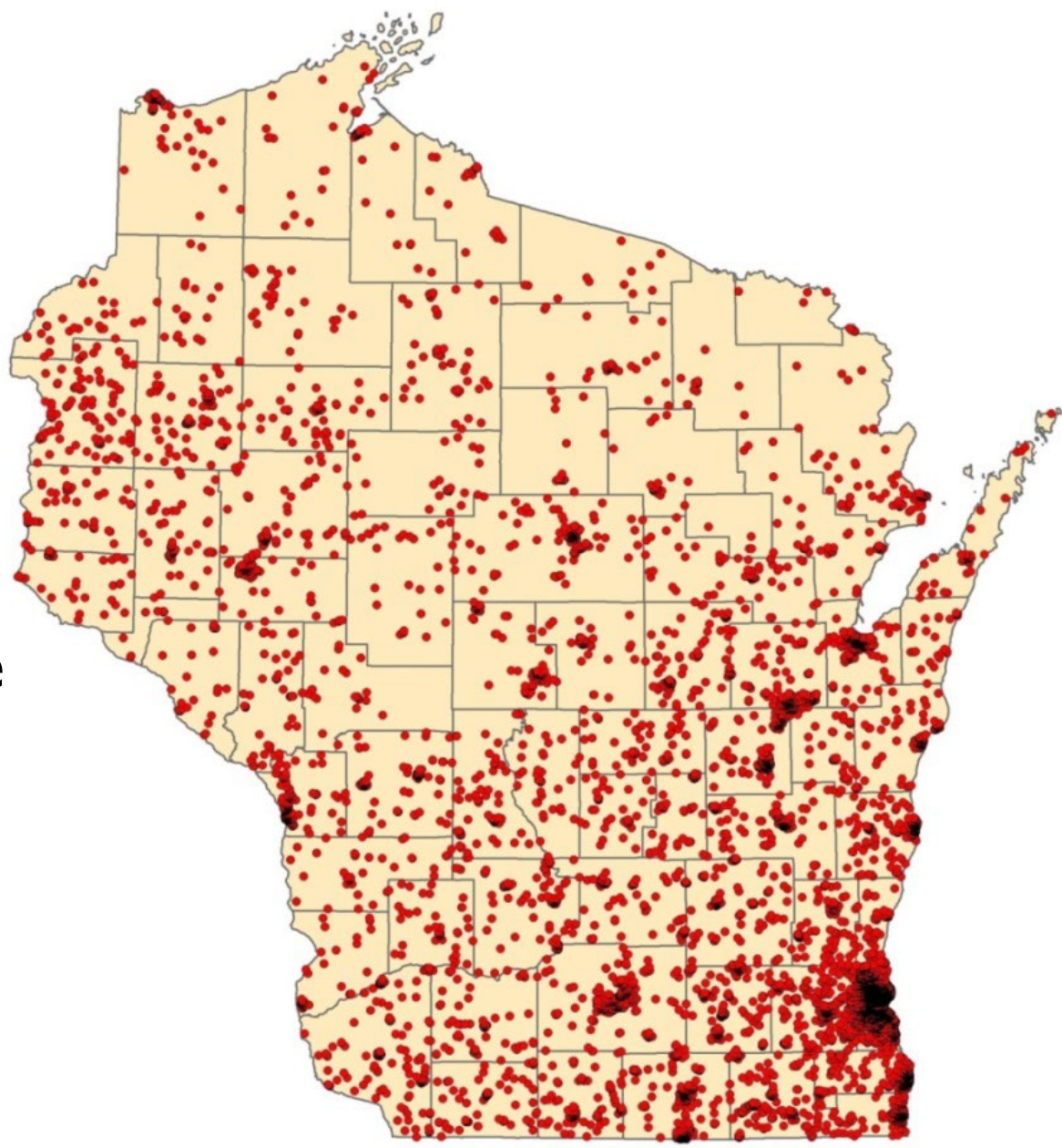
Rent to low- and moderate-income families with young children for 3 years

Keep rent at the HUD Fair Market Rent (HUD FMR)

The Problem

Each dot references a home of a lead-poisoned child.

100% PREVENTABLE



*Source: Wisconsin Blood Lead Testing Data, 1996-2016.

THE 1ST GOAL

Fix the lead-based paint hazards in the homes of all the identified Elevated Blood Lead Level (EBLL) and poisoned children in the state.

As of December 2023:

- 198 EBLL children
- 2519 Poisoned children ($>5\mu\text{g/dL}$)
 - 663 ($>10\mu\text{g/dL}$)
 - 300 ($>15\mu\text{g/dL}$)

THE FOCUS

LSHP priority levels and criteria are:

- **Priority 1**—Homes where a child has been identified with a high blood lead level and the local health department has issued orders for correction
- **Priority 2**—Homes of children that are poisoned but are not subject to lead hazard reduction work orders from the local health department
- **Priority 3**—Homes built before 1950 that do not have a lead poisoned child or lead hazard reduction work orders
- **Priority 4**—Any other eligible property



BUILDING THE LEAD SAFE COMMUNITY

PARTNERSHIPS

Statewide LSHP has:

16 Program Administrators

4 Local Health Department grantees

LSHP partners cover 52 of the 72 counties.





NUMBERS SO FAR

2019—2023

BASIC PROGRAM NUMBERS

Applications Received: 984

Homes completed: 392 (full abatement)

Homes relocated greater than 10 days: 200

Workers trained: 411

Workers certified: 287

PEOPLE IMPACTED

Children less
than 19 years old:
1001

Adults present:
728

Children with a
blood lead level
greater than
5mcg/dL: 70

Pregnant females:
13

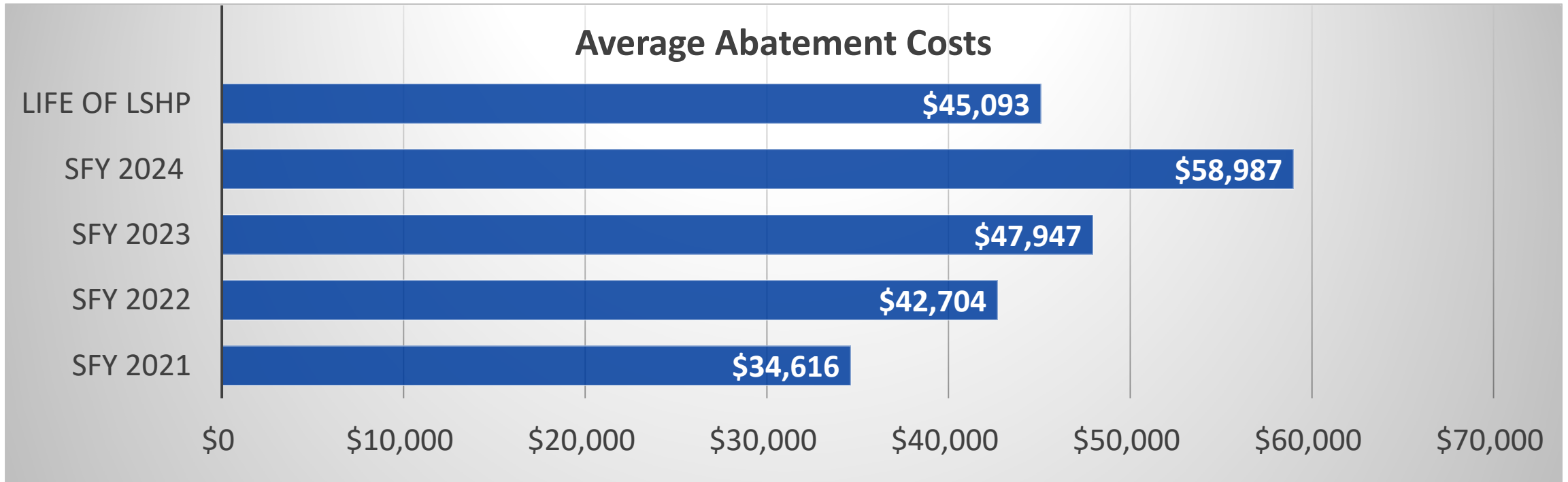
ABATEMENT NUMBERS

Common work on homes:

- Windows
- Doors
- Exterior: siding, soffit, fascia, gutters
- Floors—sealing and carpet removal
- Porches
- Soil
- Outbuildings

Homes identified with hazards:

- Paint hazards: 388
- Dust hazards: 341
- Soil hazards: 111



COST OF WORK

A photograph of three houses with a semi-transparent dark overlay. The houses are arranged in a row. The house on the left is a two-story structure with a dark roof and a balcony. The middle house is a two-story structure with a light-colored roof and a balcony. The house on the right is a two-story structure with a light-colored roof and a balcony. A vertical white line is positioned between the middle and right houses. The text 'BEFORE AND AFTER' is centered over the image.

BEFORE AND AFTER



169

















GROWTH OPPORTUNITIES

Contractor capacity

Partnership development

Braiding funds

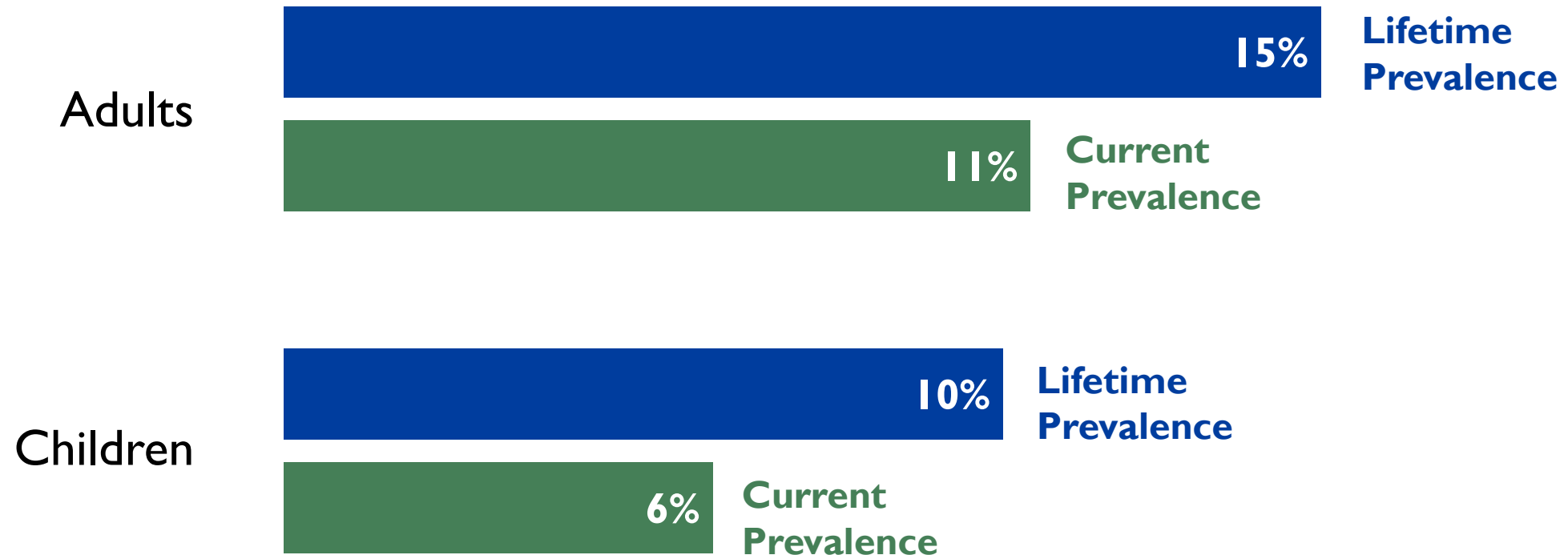
Whole home repairs

A photograph of three houses with gabled roofs under a blue sky with scattered clouds. A dark horizontal band is superimposed over the middle of the image to contain the text.

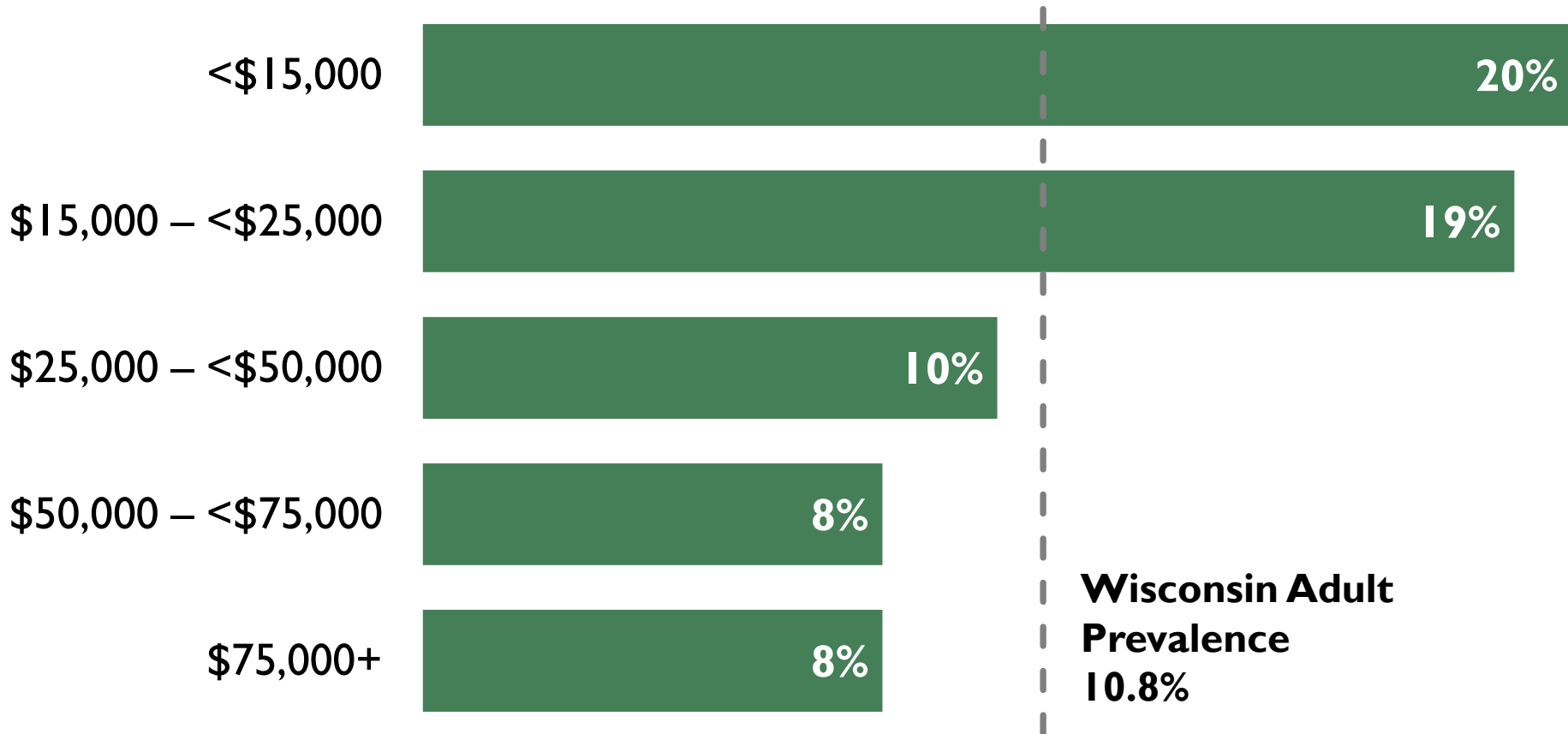
ASTHMA-SAFE HOMES PROGRAM

Molly Zemke, MPH

15% of Adults and 10% of Kids Reported **Ever Being Diagnosed** with Asthma

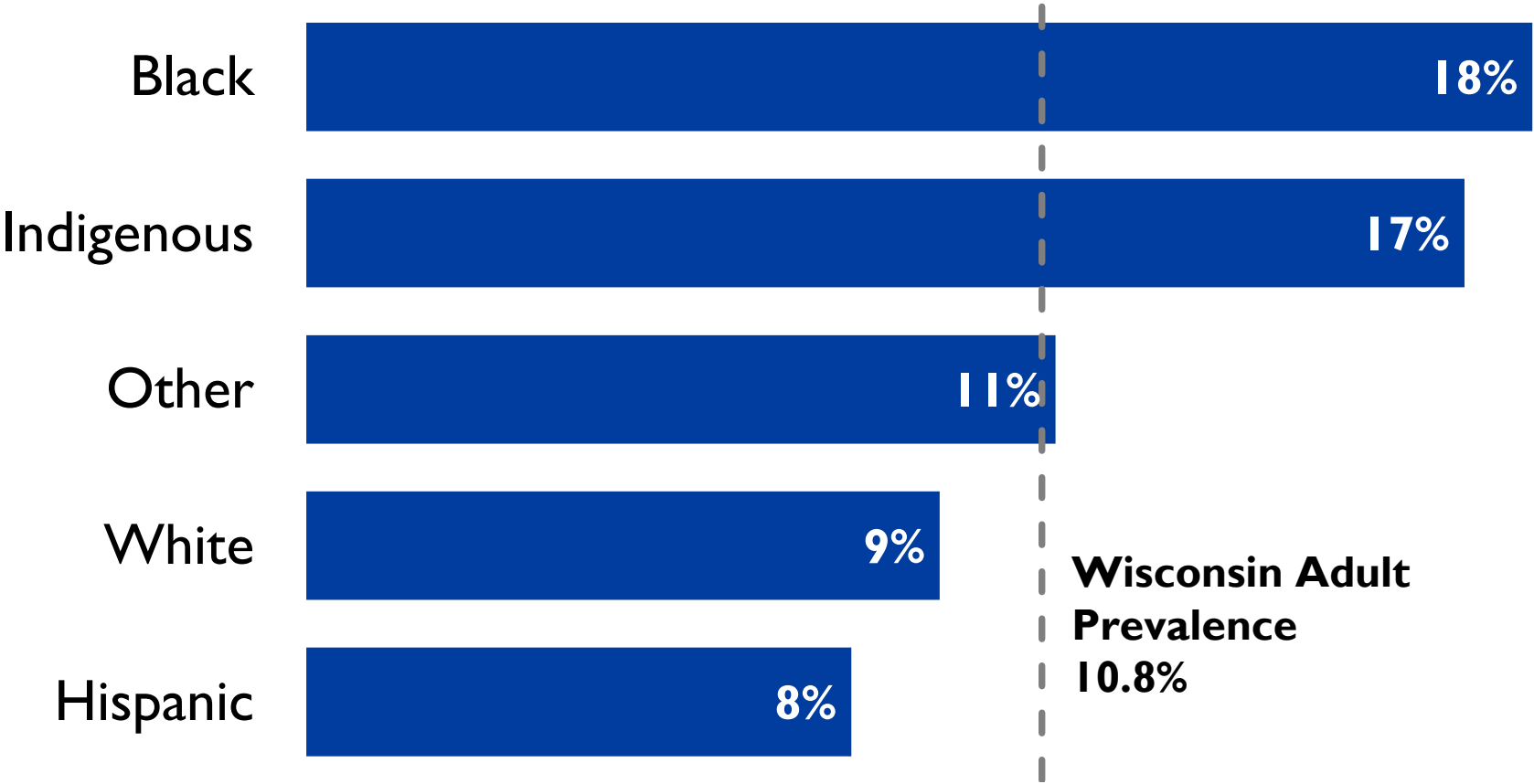


Asthma Disparities by Income

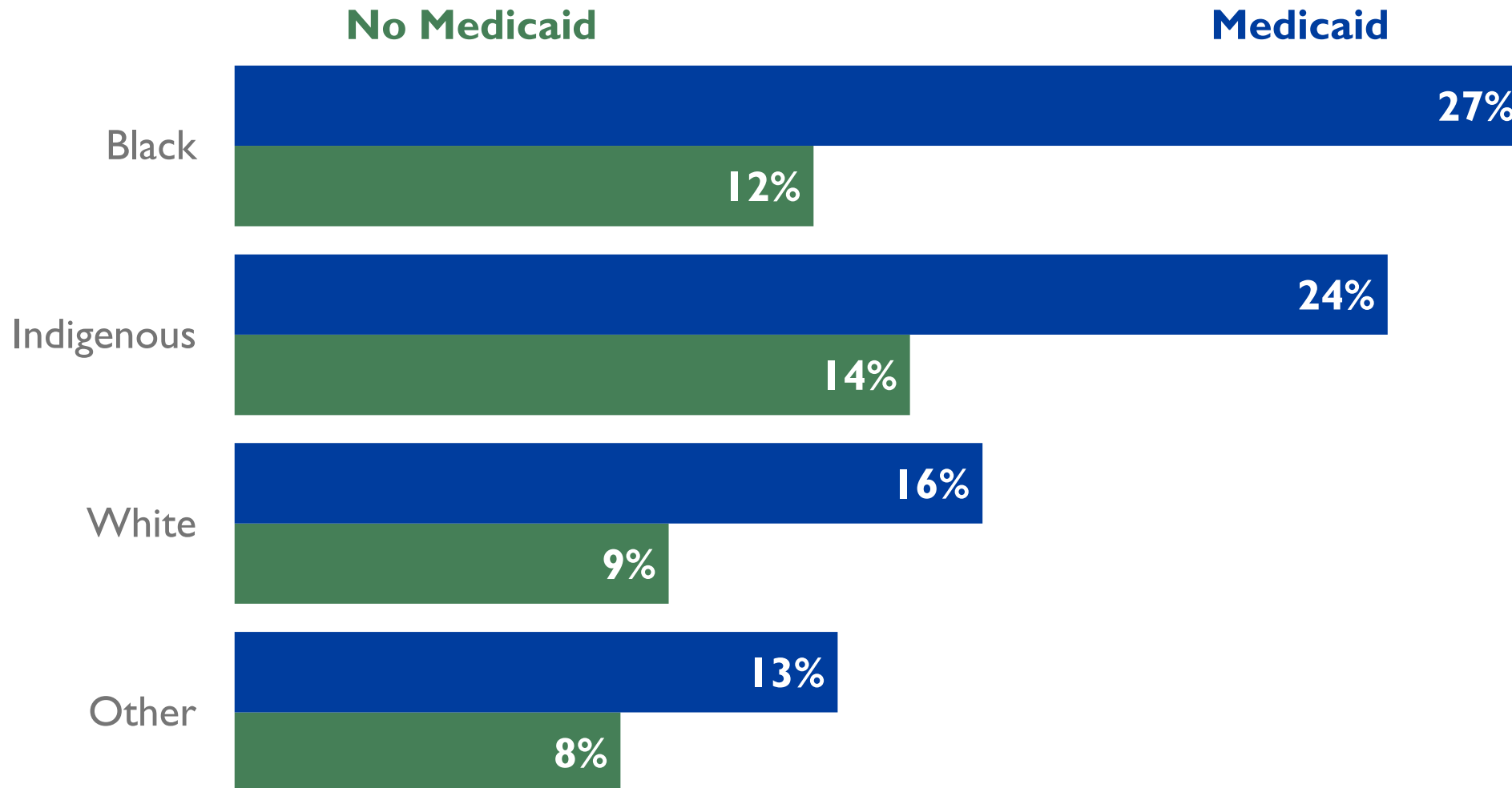


**Wisconsin Adult
Prevalence
10.8%**

Asthma Disparities by Race and Ethnicity



Asthma Rates Among People with Medicaid Are Doubled When Looking by Race



Housing and Asthma Disparities

- Children who live in substandard housing are more likely to be exposed to asthma triggers at home.
- This disproportionately impacts children from low-income neighborhoods and underserved racial and ethnic groups.



Indoor Air Pollutants Are Major Asthma Triggers

- Dust mites
- Mold
- Cockroaches and other pests
- Household pets
- Particulate matter
- Household chemicals

Home Characteristics and Asthma Triggers

Checklist for Home Visitors

Using this Home Assessment Can Help Make Homes Healthier.

A trained home visitor can help find common asthma triggers in homes and discuss ways to reduce and remove triggers. Removing asthma triggers in the home, along with proper medical care can improve health.

The checklist is organized into a Core Assessment plus two appendices (Dust Mite Module and Mold and Moisture Module). The Core Assessment can be used for all types of housing and climates, but the additional modules can be used if dust mites or mold/moisture issues are suspected by the trained home visitor. The suggested action items in this checklist are generally simple and low cost.



Glossary of Asthma Triggers Commonly Found in Homes

Combustion by-products

Triggers: Particles and gases that are formed when fuel is burned.

Where Found: Gas cooking appliances, fireplaces, woodstoves, candles, incense, cigarettes, and unvented kerosene and gas space heaters.

Dust Mites

Triggers: Body parts and droppings.

Where Found: Mattresses, bedding, carpeting, curtains, upholstered furniture, and stuffed toys. Dust mites are too small to be seen with the naked eye. They can survive in a range of climates, but they prefer high humidity.

Mold

Triggers: Mold spores, fragments, and odors.

Where Found: Indoor mold growth is often found in areas with more moisture such as kitchens, bathrooms, and basements, or areas where water damage has occurred. There are many types of mold and they can be found in any climate.

Pests

Triggers: Cockroaches—Body parts and droppings. Rodents—Fur, skin flakes, and urine.

Where Found: Areas with food and water such as kitchens, bathrooms, and basements.

Pets with fur

Triggers: Fur, skin flakes, and saliva.

Where Found: Throughout entire home.

Secondhand Smoke

Triggers: Mix of smoke from the burning end of a cigarette, pipe, or cigar and the smoke exhaled by a smoker.

Where Found: Anywhere that smoking is allowed.

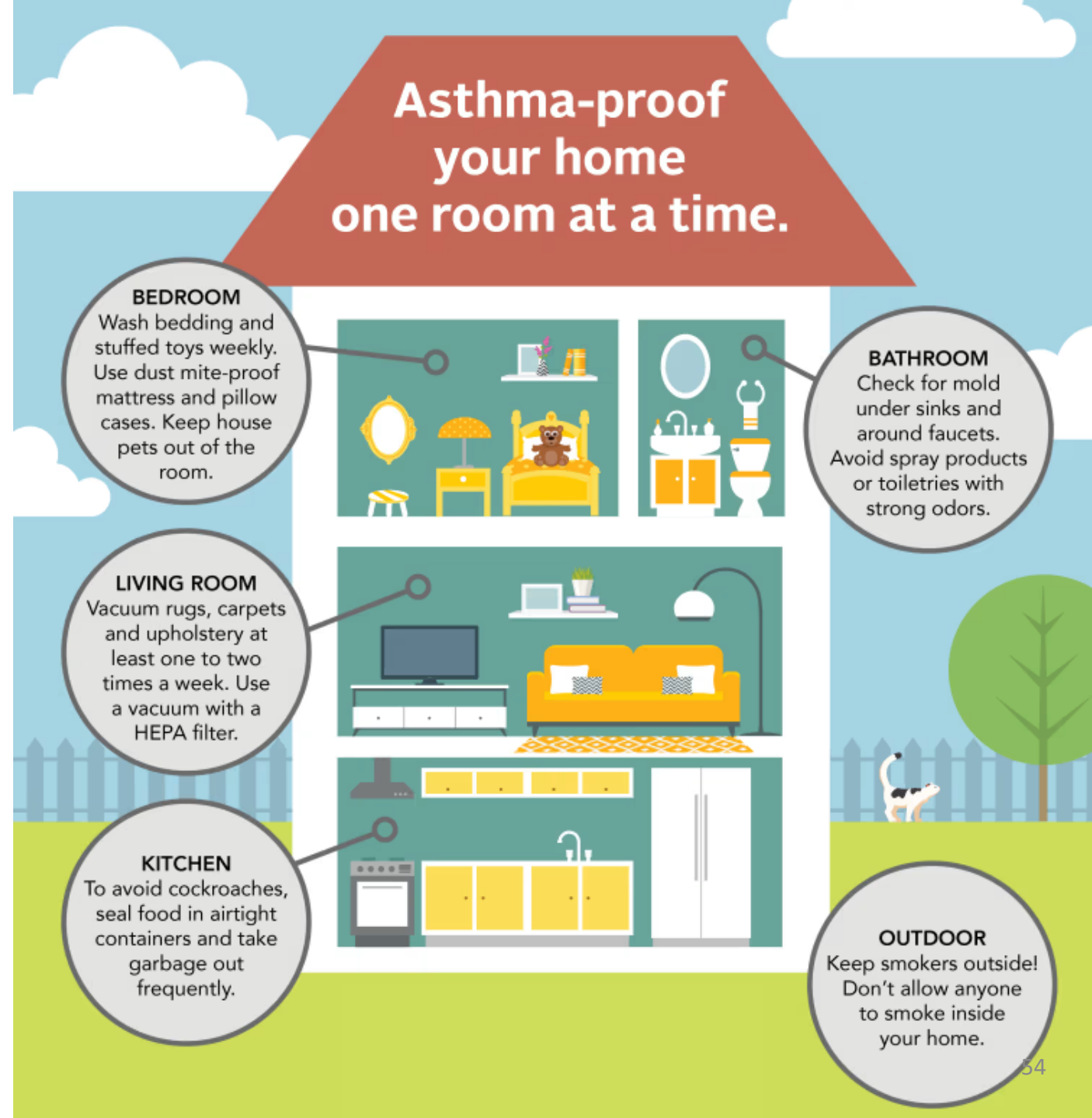
Volatile organic compounds (VOCs)

Triggers: Chemical vapors that come from household items.

Where Found: Products such as cleaning agents, deodorizers, air fresheners, perfumes, paints, nail polish, and nail polish remover.



Asthma home visitors can assist families in reducing their exposure to indoor air pollutants and improve a child's asthma control.



Program Overview

- Asthma education home visits
- Asthma-trigger reduction durables
- Home environmental assessment
- Home repair services
- Service provider training to expand workforce
- State program administration

Introducing Wisconsin's Asthma-Safe Homes Program



Create Your Asthma-Safe Home

Delivering free in-home asthma services
to help families breathe easier

Learn how to control your asthma and live your best life with the Wisconsin Department of Health Services' Asthma-Safe Homes Program. This program provides free, in-home asthma education and home repair services to eligible families.

To be eligible, participants must:

- Live in Milwaukee or Kenosha counties.
- Be eligible for Medicaid state health insurance.
- Be 2-18 years old or pregnant.
- Have poorly controlled asthma.

This program provides:

- Education on how to manage asthma.
- A home assessment to look for asthma triggers.
- Up to \$1,000 of asthma supplies for your home.
- Up to \$5,000 in eligible home repairs.

These services can help you or your child use less medication, make fewer trips to the emergency department, avoid overnight stays at the hospital, and miss less school and work.

Ask your health care provider, school nurse, pharmacist or asthma educator for a referral.

Questions?

 dhs.wi.gov/asthma/ashp.htm

 DHSasthmaSafeHomes@wi.gov

 608-266-1112

How to access the services



1. Ask your health care provider, school nurse, pharmacist or asthma educator for a referral to the Asthma-Safe Homes Program.



2. Meet an asthma educator for two to six sessions and get home supplies. If eligible, you will be referred for a detailed home assessment.



3. Receive home repairs if the assessment uncovers major asthma triggers. Repairs are available to renters or owners.



Asthma-Safe Homes Program
Division of Public Health
Wisconsin Department of Health Services
P-03351 (03/2023)



Client Eligibility Criteria

Children aged 2–18 years or pregnant individuals who are:

- Eligible for Medicaid.
- Referred due to uncontrolled asthma.
- Living in Wisconsin and in a program service area.



Program Components

Referral

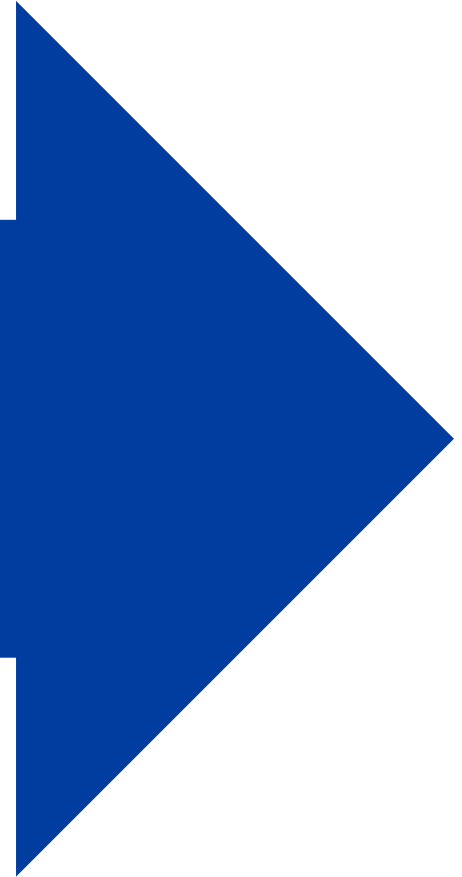
- Client is referred to asthma educator.
- DHS checks Medicaid status.
- Educator verifies client qualifies based on asthma screening.

Education

Asthma educator conducts home visits to provide self-management education, durables (up to \$1000), and basic home assessment with recommendations.

Home assessment and repairs

Assessor completes comprehensive home assessment to identify and address asthma triggers (up to \$5000) in sub-set of referred homes.



2024–2025 Program Service Providers

Asthma Education

- A Breath of Hope (Racine)
- Children's Wisconsin (Milwaukee)
- Kenosha County Public Health
- Newcap (Brown)
- One Choice Concepts – Breathe Easy MKE (Milwaukee)
- Rock County Public Health
- Sixteenth Street Community Health Centers (Milwaukee)

Home Repair/Remediation

- Mondragon Poured-In-Projects (Milwaukee)
- Newcap (Brown)
- Revitalize Milwaukee
- Rock County Public Health
- Weatherization Services (Milwaukee, Racine, and Kenosha)

Year 1 Program Participation



180 clients completed at least two home visits



Majority of clients were renters (**74%**) and lived in multi-family homes (**54%**)

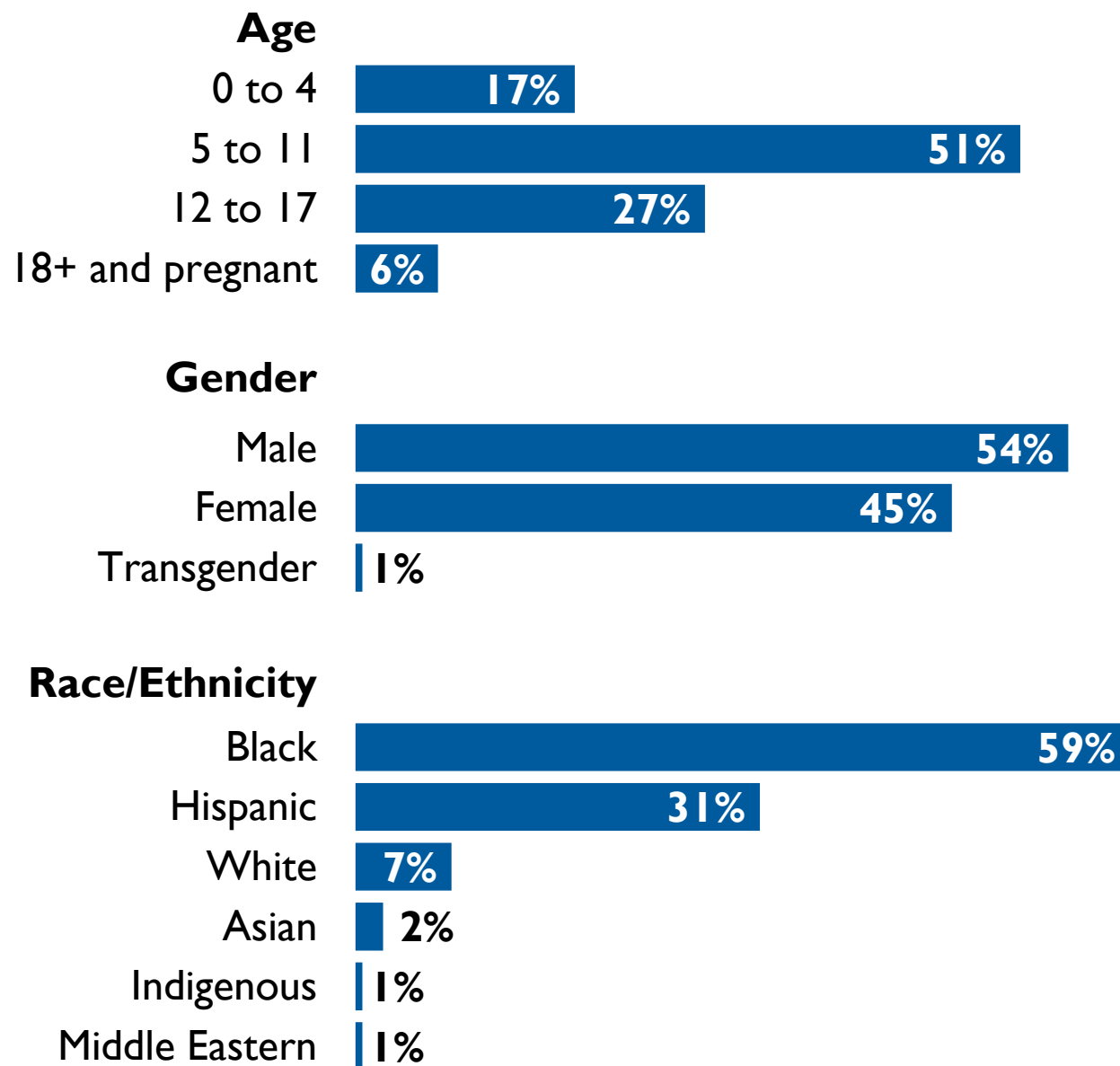


31 home assessments were completed



23 homes had completed repairs

Demographics of participants who completed asthma education n=192



Average number of ED visits in past 3 months by Asthma Control Status

3-month post-intervention

Baseline

0.0

0.2

0.4

0.6

0.8

1.0

All clients (147)

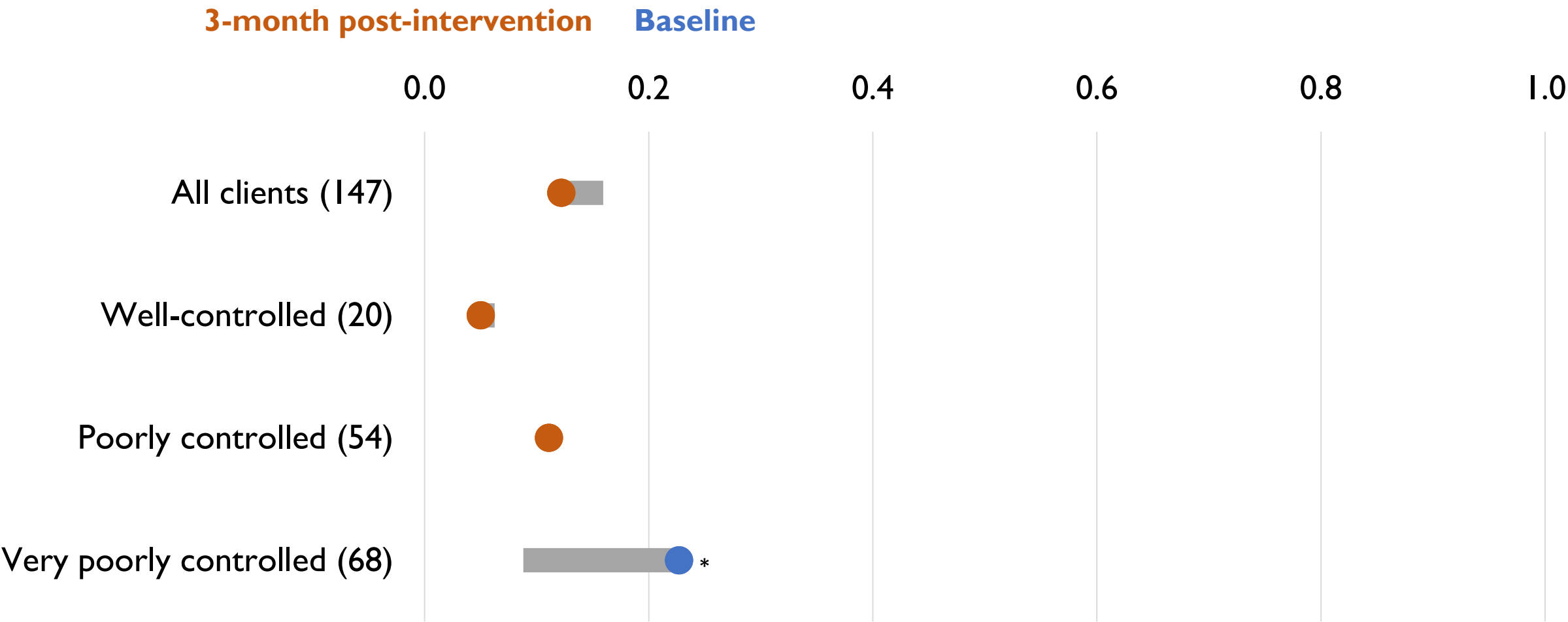
Well-controlled (20)

Poorly controlled (54)

Very poorly controlled (68)



Average number of Hospitalizations in past 3 months by Asthma Control Status



Common Asthma-Related Repairs

- Kitchen and bathroom exhaust installation
- Carpet removal
- Mold remediation
- Moisture control measures such as gutter repair, leak repair, and waterproofing
- Professional pest control

Contact Us

Childhood Lead Poisoning Prevention Program	Lead-Safe Homes Program	Asthma-Safe Homes Program
DHSLeadPoisoningPrevention@dhs.wisconsin.gov	DHSLeadSafe@dhs.wisconsin.gov	DHSAsthmaSafeHomes@dhs.wisconsin.gov
https://www.dhs.wisconsin.gov/lead/index.htm	https://www.dhs.wisconsin.gov/lead/lshp.htm	https://www.dhs.wisconsin.gov/asthma/ashp.htm