



# Lead, Asthma, Radon and Healthy Homes in Maryland: New Resources for Clinicians and Patients

## *Session 3: Case Presentations*

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# Objectives

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- ❖ At conclusion of this presentation, the learner should be able to:
  - Identify the changes in Maryland laws and regulations that reduce the blood lead level in a child that will trigger a response from State agencies;
  - Understand the recent trends in the State for lead levels, blood lead testing rates
  - Identify and access services to reduce home-based pediatric environmental health hazards including lead, asthma, and radon
  - Quickly identify patient needs for services related to home-based environmental health hazards

# Format

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- ❖ Three CME segments: Day 1 (offered twice), Day 2 (offered twice), Day 3 (offered once)
- ❖ Day 1: Maryland's Evolving Approach to Childhood Lead Poisoning
  - Trends in lead poisoning – blood lead levels, sources, disparities
  - New laws and regulations
  - New resources
- ❖ Day 2: Overview of Healthy Homes Approach to Children's Health
  - Epidemiology of Children's Health and Healthy Homes
  - Lead, Asthma, Radon, Injury
  - Overview of new State laws, regulations, resources
- ❖ Day 3: Case Presentations: Lead and Asthma

# Disclosure

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❖ Dr. Mitchell has no conflicts to disclose.

# Programs for Children with Lead Poisoning and/or Asthma

- ❖ 2017 – Maryland approved by Federal government for a Health Services Initiative (HSI) as an amendment to the State Plan (SPA) for Maryland Children’s Health Insurance Program (MCHP) – created two programs to address home environmental hazards
  - Healthy Homes for Healthy Kids – lead abatement funded by Medicaid/MCHP through Department of Housing and Community Development
  - Childhood Lead Poisoning Prevention and Environmental Case Management – home visiting program for children with lead poisoning and/or moderate to severe asthma



**PARENTS:**  
If your child has asthma or lead poisoning, a new program in Maryland can help ... for *FREE!*

## ***DID YOU KNOW?***

- **LEAD:** Lead can hurt your child’s development and growth, and its effects can last a long time. Lead can get into your child from paint and other things in and around your home
- **ASTHMA:** Asthma attacks are a big reason for missed school days and missed work days for parents. Asthma attacks can happen because of things in the home, like dust, pests, mold, pets, and tobacco smoke

## ***THE GOOD NEWS***

Maryland offers free visits to help make your home healthier. We can assist with helping you remove lead from your house and prevent asthma attacks in your children.

## ***YOU ARE ELIGIBLE FOR OUR NEW FREE HOME VISITING PROGRAM IF:***

- Your child has lead poisoning, has frequent asthma attacks, or both
- Your child is 18 years old or younger and lives in Maryland
- Your child gets Medicaid/MCHP or qualifies for Medicaid/MCHP

## ***CHILDHOOD LEAD POISONING PREVENTION AND ENVIRONMENTAL CASE MANAGEMENT PROGRAM***

Call Toll-Free: 866-703-3266

Email: [mdh.healthyhomes@maryland.gov](mailto:mdh.healthyhomes@maryland.gov)

Visit: <http://bit.ly/MDLeadAsthmaHelp>



# Healthy Homes for Healthy Kids Outreach Flyer

**HAS YOUR CHILD BEEN EXPOSED TO LEAD?**

There is a new program in Maryland to help families with lead poisoning. The Maryland Department of Housing and Community Development, in partnership with Maryland Department of Health will pay for the removal of lead from the home or apartment where the child lives or spends time, at no cost to the homeowner or renter.

**QUICK-CHECK ELIGIBILITY LIST**

- Under the age of 19 years 
- Blood lead level of 5 micrograms per deciliter (µg/dL) or more 
- Eligible for or enrolled in Medicaid or Maryland Children's Health Insurance Program (MCHIP)
- Live in or visit the home or apartment with a lead problem for 10 or more hours per week 

For more information about eligibility and program details: **866-703-3266**

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For more information about the program: **866-703-3266** or your local health department

**ELIGIBILITY CHECKLIST**

- Under the age of 19 years
- Blood lead level of 5 micrograms per deciliter (µg/dL) or more
- Eligible for or enrolled in Medicaid or Maryland Children's Health Insurance Program (MCHIP)
- Visit (for 10 more hours per week) or live in the home/apartment with a lead problem



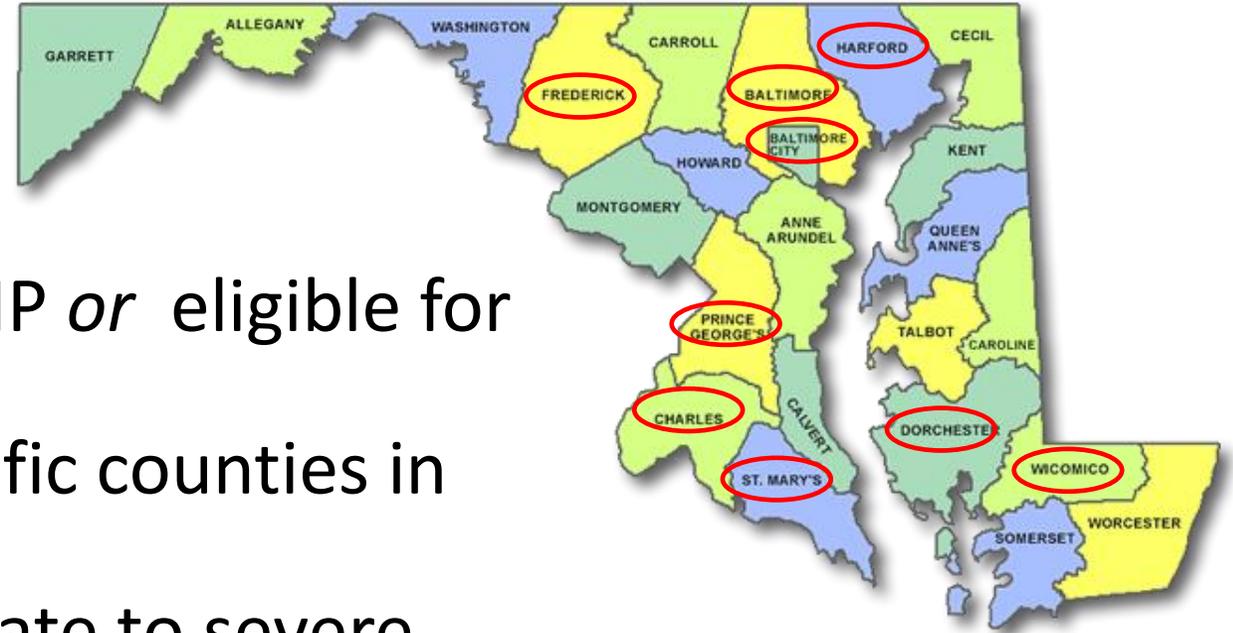
# Home Visiting Program: Eligibility

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❖ Children (0-18 years) must be:

1. Enrolled in Medicaid or CHIP *or* eligible for Medicaid / CHIP;
2. Reside in one of nine specific counties in Maryland; AND
3. Have a diagnosis of moderate to severe asthma\* **AND / OR** a BLL of  $\geq 5\mu\text{g/dL}$ .

\* Utilizes standard clinical definitions of moderate to severe asthma by age group.



# Background Data on Participants\*

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- ❖ Participant information currently available\*
  - 310 current and former participants currently uploaded
  - Mean age 8.6 years, 43% female, 57% male
  - 62% Black or African-American, 27% White, 9% Asian, 1% American Indian/Alaska Native, 0.5% More than One Race
  - 49% rent a private home, 25% own their home, 19% rent in public housing, 5% live with someone who owns the home
  - 37% of the enrolled families have one or more children with lead exposure, 72% have one or more children with asthma
    - ✓ Includes families with dual eligibility

**\*Because the program is in transition from paper records to its new online system, this does not represent all current and historic participants in the program. Data are presented for demonstration purposes only.**

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# Improving Asthma Management

# Case Presentation

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- ❖ 2019 – 2 year old with asthma (older sibling also with asthma)
- ❖ Went to ED for asthma exacerbation; also given Rx for albuterol neb and for controller medication (budesonide nebs)
- ❖ Home visit – dryer vent venting into the apartment; lint triggering asthma exacerbations
- ❖ Community health worker, case manager worked with family to address two issues
  - Confusion over medication administration with primary care provider (nebulizer ampules looked identical)
  - Dryer vent (installation of wet vent to capture lint)
- ❖ Nurse subsequently discussed with the PCP – sx's had improved; medication issues resolved

# Case Presentation

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- ❖ 4 year old child with asthma
- ❖ Spanish-speaking family
  - Roaches noted in home visit; mother also used bleach extensively as a cleaning agent, which was noted to trigger reactions as well
  - No mattress or pillow covers
  - Also noted some safety concerns, including lack of smoke and CO detectors
- ❖ Contacted primary care provider, who provided a current asthma action plan (AAP)

# Working with Families to Address Issues

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- ❖ Local health department community health worker and case manager work with family, asthma action plan (AAP) to address specific issues:
  - AAP reviewed, to ensure family understanding of medication
  - Program provided free mattress and pillow covers, safe cleaning supplies, door mat, HEPA vacuum cleaner (covered by Medicaid program)
  - Education on damp mopping, cleaning, dust control
- ❖ Over 6 visits, progressive improvement in mother's confidence in management of child's asthma

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# Managing Complex Cases

# Case Presentation

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- ❖ 2 year old child
- ❖ 9/3/2019 -- venous blood lead level of 25  $\mu\text{g}/\text{dL}$
- ❖ Local health department notified of elevated blood lead level by Maryland Department of the Environment
- ❖ Family contacted regarding home visiting program, lead abatement program
  - Demographic information, program eligibility determination
- ❖ Initial home visit
  - Baseline lead history module
  - Baseline environmental assessment

# Initial Visit – Lead History Exposure

Q #10	SECTION 10 – LEAD EXPOSURE HISTORY
10.1	Was your child exposed to lead in THIS residence? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
10.2	If your child was NOT exposed to lead in THIS residence, was your child somewhere else that the child CURRENTLY spends at least 10 hours per week? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know
10.3	CHW: "Can you tell me HOW, WHEN, and WHERE your child was exposed to lead?" <i>Biting window with lead paint</i>
10.4	Has this dwelling been tested for lead-based paint or lead-contaminated dust? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know (CHW: If yes): Are records available: _____
10.5	Has there been any recent painting, remodeling, renovation, window replacement, sanding, or scraping of painted surfaces inside or outside this dwelling unit? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, describe: <i>Kitchen, walls being put up</i>
10.6	Has any lead abatement (removal of components with lead based paint) work been conducted at this dwelling recently? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know If yes, describe: _____

Child exposed in the home  
Reported to bite the window  
(frame) with lead paint  
Construction (interior walls)  
reported

Reported/observed  
behaviors including sucking  
fingers, hand to mouth  
activity, condition of child's  
play area

Q #12	SECTION 12 – CHILD BEHAVIORAL RISK FACTORS	CHW Response
12.1	Does the child suck his/her fingers? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, Describe: _____	Discuss risks of Pica
12.2	Does the child put painted objects into the mouth? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, Describe: _____	Some toys painted with lead
12.3	Does the child chew/pick at painted surfaces, such as painted cribs, window sills, furniture edges, railings, door moldings, or broom handles? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, Describe: _____	Have any of these areas been tested for lead?
12.4	Are the paint conditions intact in the child's play areas? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, Describe: _____	
12.5	Does the child put soft metal objects (pewter toys, jewelry, etc.) in the mouth? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, Describe: _____	
12.6	Does the child have a favorite cup/eating utensil? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, Describe: _____	Ask if they are ceramic
12.7	Does the child have a dog, cat, or other pet that could track in contaminated soil or dust from the outside? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, Describe: _____	Ask where pet sleeps in room tour
12.8	If the child is present, note the extent of hand-to-mouth behavior observed: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, Describe: _____	

# Initial visit – Environmental Assessment

Q #13	SECTION 13 – ASSESSMENT FOR POSSIBLE LEAD IN SOIL, WATER		CHW Response
12.1	Is this dwelling located near a lead-producing industry? (such as: battery plant, smelter, radiator repair shop)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, Describe:	
13.2	Is the dwelling located within two blocks of a major roadway, freeway, elevated highway or other transportation structures?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, Describe:	
13.3	Are nearby buildings or structures being renovated, repainted, or demolished?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, Describe:	
13.4	Is there deteriorated paint on? Fences, garages, play structures, building siding, windows, trims, etc?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, Describe:	
13.5	Are there <u>visible</u> paint chips near the perimeter of the house, fences, garages, play structures?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, Describe:	
13.6	Have you burned painted wood in a woodstove or fireplace?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know If Yes, Describe:	
13.7	If yes, have you emptied ashes onto the soil?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Don't Know	

Deteriorated paint noted extensively on fences, garages, windows, trims, other  
Visible paint chips near the perimeter of the house, fences, garage, play structure

# Defects Noted on Inspection

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Windows, doors, and exterior walls with deteriorating paint, visible chips (also on the ground in the soil)



# Multi-Agency Coordination

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- ❖ Farm owned by the family – not covered under rental law (no owner requirement to abate)
- ❖ Determined eligible for Medicaid/Department of Housing and Community Development Healthy Homes for Healthy Kids program
  - Child under age 19, blood lead level  $\geq 5 \mu\text{g}/\text{dL}$ , child resided there more than 10 hour/week
  - More complicated than most due to being a working farm, so relocation during abatement more complicated
  - COVID-19
- ❖ Communication by local health department case management team with primary care provider during the process

# Case Presentation

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- ❖ Child of 19 months with an elevated lead level (7  $\mu\text{g}/\text{dL}$ )
- ❖ Family of 4 adults, 2 children in their own home
- ❖ Family reports problems with asthma
- ❖ Note holes in walls or ceiling, chipping, flaking, and peeling paint, and pests (mice)
- ❖ Also noted recent disturbance of painted surfaces due to painting, remodeling, renovation
- ❖ Child noted to have hand-to-mouth activity, including painted objects, and to have pets that could track in dust or soil from outside

# Challenges to Relocation

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- ❖ Healthy Homes for Healthy Kids program through Department of Housing and Community Development will cover relocation if remaining in home would endanger child
- ❖ This family had a significant number of pets (dogs), making relocation more complex
- ❖ Case manager at local health department worked with family over many months to address the issue, enabling family ultimately to begin to address the issues in the home

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# Improving Information Sharing, Provider Engagement

# Electronic Records for New Lead, Asthma Cases

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- ❖ Local health departments now using an electronic record for enrollment, case management
- ❖ Will make it easier to provide systematic data to health care providers on clinical/environmental information from local health departments

# Working with Primary Care Community

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- ❖ Want to improve communication between primary care providers, local health departments
  - Discussions with CRISP on using Care Alerts, Smart Alerts to notify providers, local health departments about children with asthma who are discharged from emergency departments, hospitals for asthma
  - Outreach to clinicians through clinicians' letter, CME to make them aware of new resources, opportunities for both asthma and lead
- ❖ Goal is to ensure that children are rapidly identified, linked to care, and families made aware of opportunities for home visiting programs, lead abatement resources

# A Community Centered Medical Home

Primary Care Providers

Managed Care Organizations

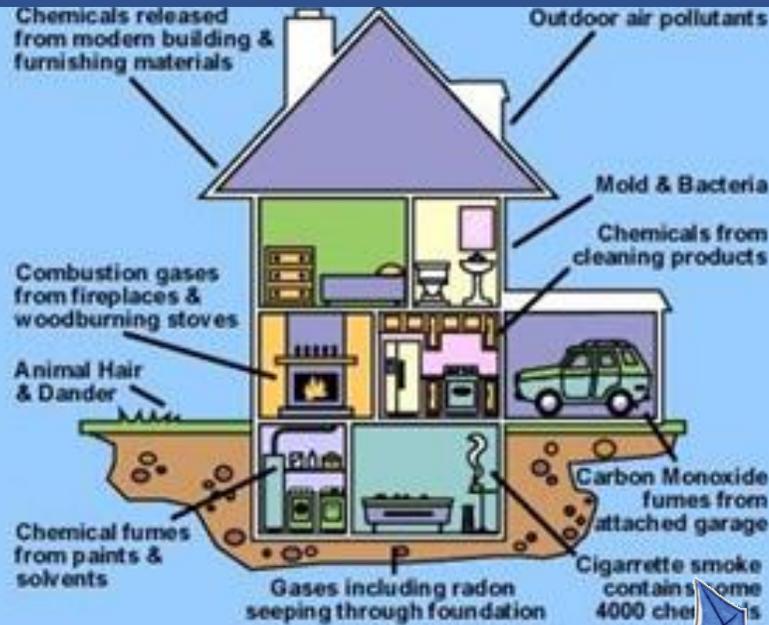
Pharmacy

Local Health Departments

School Health/Childcare

State Health Department

Partner Agencies: MDE, DHCD, DHS, MSDE



## Families



# Resources

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## ❖ Maryland Department of Health

Lead Poisoning Prevention Home Page (<https://phpa.health.maryland.gov/OEhfp/eh/Pages/Lead.aspx>)

Asthma Home Page (<https://phpa.health.maryland.gov/OEhfp/eh/Pages/asthma.aspx>)

Healthy Homes for Healthy Kids and Home Visiting Programs  
(<https://phpa.health.maryland.gov/OEHFP/EH/Pages/CHIPEnvCaseMgmt.aspx>)

Data -- Maryland Environmental Public Health Tracking  
(<https://phpa.health.maryland.gov/oehfp/eh/tracking/Pages/home.aspx>)

Environmental Health Help Line: 1-866-703-3266

[mdh.healthyhomes@maryland.gov](mailto:mdh.healthyhomes@maryland.gov)

## ❖ Maryland Department of the Environment

Center for Lead Poisoning Prevention Home  
(<https://mde.maryland.gov/programs/LAND/LeadPoisoningPrevention/Pages/index.aspx>)

Phone inquiries: 410-537-3825

Email: [mdclr.mde@maryland.gov](mailto:mdclr.mde@maryland.gov)

Radon Program Home (<https://mde.maryland.gov/programs/Air/RadiologicalHealth/Pages/radon.aspx>)

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- Maryland Department of Housing and Community Development

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