Information About Lead Exposure in Clarksburg, West Virginia
LEPAC Conference
May 12, 2022

WEST VIRGINIA
Department of
Health & Human Resources
BUREAU FOR PUBLIC HEALTH

WV Childhood Lead Poisoning Prevention Program

WEST VIRGINIA Department of Health & Human Resources BUREAU FOR PUBLIC HEALTH

- **For this presentation, we will be looking at 3 homes that started the investigation into high levels of lead in public drinking water, corrective actions, education/outreach, and efforts to increase blood lead testing for the City of Clarksburg and Harrison County, West Virginia.**

- **The Environmental Lead Assessments (ELA's) were conducted between September 16, 2020, and April 8, 2021.**

- **The 3 homes are located inside of city limits, homes 1 & 2 are within .5 miles and homes 1 & 3 are within 3 miles.**

- **All 3 homes are served by the same public drinking water system.**

- **Note, there were environmental lead contaminants found at the homes other than lead in water.**

Childhood Lead Poisoning Prevention Program

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Action Levels for Lead:

Soil > 400ppm (parts per million)

Water > 15ppb (parts per billion)

Window Sills > 100 µg/ft² (micrograms per square foot)

Floors > 10 µg/ft² (micrograms per square foot)

Paint Chip > 5000 ppm (parts per million)

Definition:

First Draw- A sample taken after water has been sitting in pipes for at least 6 hours.

Background of Home 1

- **Home 1 was referred to the program on August 24, 2020, and the assessment was completed on September 16, 2020. The home was built around 1920.**

- **There were positive X-Ray Florescence (XRF) readings in multiple rooms inside the home, including a sunroom. On the outside of the home, the XRF readings show lead on the front porch, exterior of windows, and a shed.**

- **While there were no soil samples that exceeded the action level of 400 ppm. There were 2 samples that registered at 290 ppm and 370 ppm.**

Background of Home 1 Continued

- **A dust wipe sample for the windowsill in the child's bedroom was 1400 µg/ft². For a pocket door in the living room, the sample was 73.6 µg/ft² and a desk was 231 µg/ft².**

- **A first draw water sample of the bathroom sink was taken. The cold water test results for this home were 10.8 ppb, which is not over the current federal action level of 15 ppb.**

- **Since the lead in the water in this home was not over federal or state action levels, no other action was taken for this home.**

Test Results for Home 1

Type of Test	Results
XRF	34 positive readings
Dust Wipe	Windowsill 1400 µg/ft² (above action level of 100 µg/ft²) Pocket Door 73.6 µg/ft² (lead dust present but no comparable action level) Desk 231 µg/ft² (lead dust present but no comparable action level)
Soil	290 and 370 ppm (not above action level of 400ppm)
Water	10.8 ppb (not above EPA action level of 15ppb)

Background of Home 2

- **Home 2 was referred to the program on December 21, 2020, and the assessment was completed on January 20, 2021. The home was built around 1920.**

- **This home had positive XRF readings in multiple rooms inside the home, outside the home, on the front porch, and exterior of a garage.**

- **While there were no soil samples above the 400 ppm action level there was 1 sample that was 240 ppm in the front yard.**

- **Home 2 had ZERO positive dust wipe samples.**

Background of Home 2 Continued

- **A cold water first draw sample was taken on January 20, 2021, on the kitchen sink. Program staff were notified on February 3, 2021, that the results were 285.2 ppb.**

- **On February 10, 2021, program staff returned to the home and took additional samples on the kitchen sink (7.0 ppb), downstairs bathroom sink (4.0 ppb), and an upstairs bathroom sink (23.9 ppb). These tests were all first draw samples. The homeowners did not want further testing.**

Test Results for Home 2

Type of Test	Results
XRF	21 positive readings
Dust Wipe	0 positive our of 4 samples
Soil	2 soils samples the highest was 240 ppm (not above action level)
Water	285.2 ppb on assessment date (above the action level) Resample 3 weeks later Kitchen 7.0 ppb (not above action level) Downstairs bathroom 4.0 ppb (not above action level) Upstairs bathroom 23.9 ppb (above action level)

Background of Home 3

- **Home 3 was referred to the program on March 17, 2021, and the assessment was completed on April 8, 2021. The home was built around 1920.**

- **This home had a few positive XRF readings, no positive dust wipe samples, and no positive soil samples.**

- **A paint chip sample was above the action level (6000ppm).**

- **Possible contamination being brought home on clothing by father. Dust wipe samples were taken from both work boots (35.4 µg/ft²) and work pants (144 µg/ft²).**

- **Water results for the first draw cold water kitchen sink were 20.3 ppb.**

Reporting and Retesting Results

- **On May 7, 2021, the Childhood Lead Poisoning Program notified the Environmental Engineering Division (EED) of the Office of Environmental Health Services (OEHS) of 2 homes in Clarksburg found to have lead in public drinking water samples above the EPA action level and a third with an elevated sample.**

- **On May 20, 2021, additional samples were taken at the residence. An upstairs bathroom cold water sink first draw result was 15.5 ppb. Timed tests on the kitchen cold water sink at initial, +30 sec, +60 sec and +90 sec were 12.4, 55.1, 11.5 and 6.9 ppb, respectively.**

Test Results for Home 3

Type of Test	Results
Dust Wipe	Boots 35.4 µg/ft² (lead dust present but no comparable action level) Pants 144 µg/ft² (lead dust present but no comparable action level) Laundry 5.98 µg/ft² (lead dust present but no comparable action level) Stairs 9.54 µg/ft² (negative by .46 µg/ft²) Miniblinds 9.28 µg/ft² (lead dust present but no comparable action level)
Soil	4 samples highest was 180 ppm (not above action level)
Paint Chip	6000 ppm (above action level)

Test Results for Home 3 Continued

Type of Test	Results
Water	20.3 ppb on assessment date (above action level) Resample 6 weeks later Upstairs sink 15.5 ppb (above action level) Kitchen initial 12.4 ppb (below action level) Kitchen +30 sec 55.1 ppb (above action level) Kitchen +60 sec 11.5 ppb (below action level) Kitchen +90 sec 6.9 ppb (below action level)

Reporting and Retesting Results Continued 1/2

- **The OEHS received test results from the Clarksburg Water Board (CWB) of samples collected in the meter pit (before the property) that were collected on May 12, 2021. These test results include samples taken that day at Homes 1, 2 and 3. These test results were 21 ppb, 30 ppb, and 8,940 ppb, respectively. All results were above EPA action level of 15 ppb.**

Home	Test Results
Home 1 Before Meter	21 ppb (above action level)
Home 2 Before Meter	30 ppb (above action level)
Home 3 Before Meter	8,940 ppb (above action level)

- **CWB most recent line inventory submitted in 2019 indicated the presence of no lead lines in their system.**

Reporting and Retesting Results Continued 2/2

- **The OEHS test results, and the Clarksburg Water Board test results were emailed to the EED on June 9, 2021.**

- **OEHS pushed water system to notify customers. Water system felt this was not necessary because they were not out of compliance with EPA's Lead and Copper Rule.**

- **On July 2, 2021, The Bureau for Public Health (BPH), Office of Environmental Health Services (OEHS), issued an ADMINISTRATIVE ORDER EE-21-12 to the Clarksburg Water Board (CWB).**

Actions Taken

- **This Order required the CWB to provide alternate sources of drinking water and/or point of use filters where known lead service lines exist.**

- **The Order also required the CWB to submit a corrective action plan to the OEHS Director.**

- **The Order further required CWB to conduct additional water testing in the area, conduct lead service line replacement, and conduct Lead Public Education.**

- **The Order is still in effect and ordered actions are ongoing.**

Education, Outreach, and Testing

- **In July 2021, the U.S. Environmental Protection Agency (EPA) Region 3 (R3) enforcement reached out to the Agency for Toxic Substances and Disease Registry (ATSDR) R3 to discuss options to support further an assessment of the exposures to lead in this community, including increasing child blood lead testing.**

- **ATSDR R3 began coordinating with the National Center for Environmental Health's (NCEH) Lead Poisoning Prevention and Surveillance Branch (proposed).**

- **NCEH began facilitating discussions with the West Virginia Department of Health and Human Resources (WV DHHR) Bureau for Public Health (BPH) Office of Maternal, Child, and Family Health (OMCFH) Childhood Lead Poisoning Prevention Program (CLPPP).**

Interagency Partnerships

A strategic planning/communication team was established and continues to conduct regularly scheduled meetings to coordinate federal, state, and local efforts and provide support towards this effort.

Members include:

- **WV DHHR BPH OMCFH CLPPP**
- **WV DHHR BPH Office of Environmental Health Services (OEHS)**
- **WV DHHR Office of Communications**
- **WV DHHR WV Women, Infants, and Children (WIC) Office of Nutrition Services**
- **WV DHHR BPH Commissioner's Office**
- **Harrison-Clarksburg Health Department**
- **Center for Disease Control and Prevention (CDC)/ NCEH**
- **ATSDR Region 3**
- **EPA Region 3**
- **HUD Region 3**

Challenges

- **Incomplete blood lead reporting from healthcare providers;**
- **Low levels of testing in the Medicaid population;**
- **Delays in data reporting due to data system uploads and data cleaning issues;**
- **Low concern level/awareness of lead risks to children and the importance of blood lead testing;**
- **Lack of resources for community members to access residential lead mitigation and/or remediation.**

Screening Rates

Table 1. Harrison County Screening Rates 2016-2021 for Children <72 months

Year	Screening Rate
2016	25.3%
2017	21.1%
2018	18.5%
2019	22.7%
2020	26.9%
2021	26.0%

Blood Lead Screening Data for Harrison County

- **TOTAL TESTS for all children <72 months in Harrison County**

TOTALS	All of 2021	BLL Greater than or Equal to 3.5	BLL Greater than or Equal to 5	July 1, 2021, to December 31, 2021	BLL Greater than or Equal to 3.5	BLL Greater than or Equal to 5
2021	1038	96	67	485	45	32

- **UNIQUE CHILDREN <72 months in Harrison County**

TOTALS	All of 2021	BLL Greater than or Equal to 3.5	BLL Greater than or Equal to 5	July 1, 2021, to December 31, 2021	BLL Greater than or Equal to 3.5	BLL Greater than or Equal to 5
2021	941	60	43	441	28	21

Blood Lead Screening Data for Clarksburg

- **TOTAL TESTS for all children <72 months in Clarksburg**

TOTALS	All of 2021	BLL Greater than or Equal to 3.5	BLL Greater than or Equal to 5	July 1, 2021, to December 31, 2021	BLL Greater than or Equal to 3.5	BLL Greater than or Equal to 5
2021	476	65	48	243	34	26

- **UNIQUE CHILDREN <72 months in Clarksburg**

TOTALS	All of 2021	BLL Greater than or Equal to 3.5	BLL Greater than or Equal to 5	July 1, 2021, to December 31, 2021	BLL Greater than or Equal to 3.5	BLL Greater than or Equal to 5
2021	420	42	31	209	21	18

Outreach and Education

ATSDR and EPA have played an integral role toward creating awareness to the Clarksburg community concerning the importance of blood lead testing and flushing water lines. Infographics were created and disseminated to over 4,500 families.

The Harrison-Clarksburg Health Department and the WVCLPPP coordinated with the Harrison County school system and Unicare to provide several blood lead testing events.

WVCLPPP participated in several outreach events to provide education and conducted a focus group at a local church.

Testing Event Outcomes

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Table 3. Blood Lead Screening Testing Event Summary

Date	Location	Total Tested	Adult	Teens	Children (< 12y)	Children (< 6y)
8/16/21	Harrison-Clarksburg Health Department	16	0/16	0/1	0/0	0/0
12/1/2021	North View Elementary School	35	1/19	0/3	6/9	2/4
12/9/2021	Nutter Fort Elementary School	14	0/4	0/0	0/7	0/3
12/16/2021	Adamston Elementary	12	0/6	0/0	0/4	0/2
3/5/2022	"Repack the Backpack" Meadowbrook Mall	44	0/12	0/5	1/14	5/13

Ongoing by Appointment or Walk In (if available) - Harrison-Clarksburg Health Department, 330 West Main Street, Clarksburg WV

Collaborations

Addressing Challenges of Low Concern and Low Screening Rates through Collaborative Learning

Michigan CLPPP shared their experiences throughout the Flint Registry Water Crisis and offered insights on best practices and resources, which include:

- Coordination with state Medicaid managed care organizations to incentivize testing;
- Creating a state response plan;
- Building trust in the community;
- Engaging the faith-based communities;
- Finding strong community advocates.

Collaborations Continued

Addressing Challenges of Low Screening Rates through Collaborative Learning

Wisconsin CLPPP shared the sample provider report card packet they send to providers and discussed how they are able to obtain the information through their data sharing agreement with the state Medicaid program.

- Future meetings to be scheduled to discuss how they obtained funding to provide testing at WIC offices.

Addressing Challenges of Low Screening Rates

- **April 4, 2022, Childhood Lead Screening rule §64-42 was amended to update the blood lead reference value and require universal testing for all WV children (https://apps.sos.wv.gov/adlaw/csr/rule.aspx?rule=64-42).**
- **Collaborate with the Bureau for Medical Services to collect data and establish a process for creating the provider report card.**
- **Collaborate with the HealthCheck Program to perform an audit of Medicaid providers and provide additional academic detailing.**

Provider Education Opportunities

Provider Education Opportunities

Villanova University's Mid-Atlantic Center for Children's Health and Environment (MACCHE)

- One of ten Pediatric Environmental Health Specialty Units (PEHSU) in the country
- Funded by ATSDR and in part by the EPA
- Provides education to families and providers about children and environmental hazards
- Using the ECHO model, MACCHE is creating podcasts to educate nurses and providers in WV about the harms of lead exposure
- Coordination in progress to hold an education session at the West Virginia University United Hospital Center

Community Partnerships

Community Partnerships

- Prevention Solutions
  - Disseminated fliers to partners within Harrison County
- Legal Aid
  - Created a flier and disseminated to families within Clarksburg
- Partnership of African American Churches
  - Provided list of African American Churches
    - Focus group conducted at Immaculate Conception Catholic Church
- Dunbar School Foundation STOP Program
  - Works within the African American community to increase vaccinations for children and Covid-19 vaccinations
  - Working with Pastoral Leadership of WV to help gain the trust of the community
    - History of lack of trust with the Clarksburg Water Board
    - Upset about the 30,000 new lines that have been brought into the area.

Challenges to Access Residential Lead Remediation

- **WVCLPPP, OEHS, and HUD R3 are working toward finding an agency that has the capacity to apply for the Healthy Homes and Lead Hazard Control Grant.**

- **WVCLPPP and OEHS have not been able to apply for the grant:**

    - At present, WVCLPPP does not have the capacity to maintain the grant.
    - OEHS cannot apply due to conflicts of interest since they license the contractors that would bid for the contract.

Questions?

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