2021 VIRTUAL LEARNING COLLABORATIVE ON CHILDHOOD LEAD POISONING PREVENTION

AUGUST 25TH, 2021
9:00AM - 4:30PM
This event is supported by the Centers for Disease Control and Prevention grant funds under Cooperative Agreement Number, NUE2EH001367-03-03. Content presented during this event is solely the responsibility of the presenters and does not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.
981 children under 6 had a confirmed elevated blood lead level above 5 μg/dL in Iowa in 2019

That is enough to fill 13.5 school buses

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00am - 9:15am</td>
<td>Welcome</td>
</tr>
<tr>
<td>9:15am - 10:15am</td>
<td>Promoting Pediatric Lead Screening: Using the Collective Impact model to close the gap in testing</td>
</tr>
<tr>
<td>10:15am - 10:30am</td>
<td>Break</td>
</tr>
<tr>
<td>10:30am - 11:00am</td>
<td>Lead in Drinking Water: Opportunities for improving Iowans’ public health</td>
</tr>
<tr>
<td>11:00am - 11:30am</td>
<td>Iowa Lead Exposures linked to Contaminated Spices</td>
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<tr>
<td>11:30am - 12:00pm</td>
<td>Baby Shoes to Work Boots - 2020 Lead Exposure in Iowa</td>
</tr>
<tr>
<td>12:00pm - 12:30pm</td>
<td>Discussion Session</td>
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<tr>
<td>12:30pm - 1:00pm</td>
<td>Lunch</td>
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<td>Time</td>
<td>Topic</td>
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<tr>
<td>1:00pm - 2:00pm</td>
<td>Its time to look upstream; the role of housing in the health of children</td>
</tr>
<tr>
<td>2:00pm - 2:15pm</td>
<td>Break</td>
</tr>
<tr>
<td>2:15pm - 2:45pm</td>
<td>Bringing Together Partners for a Successful Lead Hazard Control Program</td>
</tr>
<tr>
<td>2:45pm - 3:15pm</td>
<td>Growing a Coalition by Engaging Community Partners</td>
</tr>
<tr>
<td>3:15pm - 3:45pm</td>
<td>Black Hawk County Health Department and Waterloo Community Development Healthy Homes Collaboration</td>
</tr>
<tr>
<td>3:45pm - 4:15pm</td>
<td>Discussion Session</td>
</tr>
<tr>
<td>4:15pm - 4:30pm</td>
<td>Wrap-up &amp; closing</td>
</tr>
</tbody>
</table>
The Iowa Institute of Public Health Research and Policy strives to ensure balance, independence, objectivity and scientific rigor in all of its educational programs. All planners, faculty members, moderators, discussants, panelist and presenters participating in this program have been required to disclose any real or apparent conflict(s) of interest that may have a direct bearing on the subject matter of this program. This includes relationships with pharmaceutical companies, biomedical device manufacturers or other corporations whose products or services are related to the subject matter of the presentation topic. The intent of this policy is to identify openly any conflict of interest so that the attendees may form their own judgments about the presentation with full disclosure of the facts. In addition, faculty is expected to openly disclose any off-label, experimental and/or investigational uses of drugs or devices in their presentation. Disclosures, Conflict of Interest (COI) and Resolution of COI policies are available via the APHA’s website and in the printed program.
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This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of the American Public Health Association (APHA) and the (insert your organization). The APHA is accredited by the ACCME to provide continuing medical education for physicians.
Designation Statement: The APHA designates this live web educational activity for a maximum of 6 AMA PRA Category 1 Credit (s)™.

**Nursing (CNE) Accreditation Statement**
American Public Health Association’s Public Health Nursing Section (APHA/PHN), is accredited as an approver of nursing continuing professional development by the American Nurses Credentialing Center’s Commission on Accreditation.

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Participants must complete the evaluation online in order to earn credit hours and obtain a CE certificate. A link to the online evaluation system will be sent to all registered participants who attend the activity that will contain instructions and a personal ID number for access to the system. All online evaluations must be submitted by 09/25/21 to receive continuing education credit for this activity.
10:15AM - 10:30AM

Check out all of the resources we have put together!

https://idph.iowa.gov/Environmental-Health-Services/Childhood-Lead-Poisoning-Prevention/resources
Lead in drinking water: Opportunities for improving public health in Iowa’s schools

David Cwiertny
Director, Center for Health Effects of Environmental Contamination (CHEEC)
CHEEC: Who we are

Established through the 1987 Iowa Groundwater Protection Act, CHEEC is a multidisciplinary environmental health research center that supports and conducts research to identify, measure and study adverse health outcomes related to exposure to environmental toxins.
CHEEC: What we do

• Data Visualization & Dissemination
• Student Training & Professional Development
• Community-engaged Research Projects
• Iowa-centric Research
Drinking water is an important, but often overlooked, source of lead exposure

- Lead is a potent neurotoxin that is harmful to human health
- Children are particularly vulnerable
- There is no safe blood lead level for children
- EPA estimates that drinking water can make up 20% or more of a person’s total exposure to lead
- Infants who consume mostly mixed formula can receive 40-60% of their exposure from drinking water

Lead in Drinking Water Guidelines & Regulations

American Academy of Pediatrics
1 ppb

U.S. Food & Drug Administration
5 ppb

World Health Organization
10 ppb

United States Environmental Protection Agency
15 ppb

“For every $1 invested to reduce lead hazards in housing units, society would benefit by an estimated $17-$221, a cost-benefit ratio that is comparable with the cost-benefit ratio for childhood vaccines.” – AAP 2016
Unlike other contaminants, lead is derived from the distribution system and premise plumbing.
Why would Iowa be immune to this nationwide problem?
### How did we get here?

**A crash course in lead in water policy**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>SDWA §1416 and §1417 Lead Contamination Act (P.L. 100-572):</td>
<td>Prohibits use of materials not “lead free”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Lead free”: &lt; 0.2% solders &lt;8% for pipes &amp; fittings</td>
</tr>
<tr>
<td>1988</td>
<td>Lead &amp; Copper Rule (LCR) (40 C.F.R. Part 141 Subpart I)</td>
<td>Replaced a lead standard of 50 µg/L measured at the water utility</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Non-health based “action level” of 15 µg/L (or ppb)</td>
</tr>
<tr>
<td>1991</td>
<td>Amendments to SDWA §1417</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>Reduction of Lead in Drinking Water Act (P.L. 111-380)</td>
<td>Reduced <strong>allowable lead level</strong> in products in contact with drinking water to 0.25%</td>
</tr>
<tr>
<td>2011</td>
<td>WIIN Act (P.L. 114-322)</td>
<td>Public information, grants for repairs &amp; testing (including schools)</td>
</tr>
</tbody>
</table>
Lead & Copper Rule
(40 C.F.R. Part 141 Subpart I)

What about schools?
Unless schools are their own public water system, they are not tested under the current LCR

US GAO: “…one of the most complex drinking water regulations under the SDWA”
EPA’s proposed revisions to the LCR would require testing in schools and child cares

- Community Water Systems (CWSs) must test at **20% of K-12 schools and licensed child cares** every year.

- Samples from **5 outlets at each school and 2 outlets at each child care facility**

- Complete sampling at all schools and child care facilities in CWS distribution system every five years.

- Excludes facilities built after Jan 1, 2014.

- Implementation currently paused by Biden Administration.
“Every school has lead in it, but not every water sample will.”

Dr. John Tobiason, Director, Massachusetts DEP 2016 School Testing Program
There is no safe level of lead for children. EPA encourages schools to prioritize remediation efforts based on lead sample results and to use the steps in the toolkit to pinpoint potential lead sources to reduce their lead levels to the lowest possible concentrations”. (3Ts page 36)

“...schools and child care facilities should not use sample results from one outlet to characterize potential lead exposure from all other outlets in their facility. This approach could miss localized lead problems that would not be identified.” (3Ts page 31)
CHEEC Grants to Schools Program

• Initiated Spring FY2019

• Free lead and copper testing Iowa elementary schools with older drinking water infrastructure

• **Up to $10k/school** for testing and to remove/replacement high priority drinking water outlets with unsafe levels of lead or copper.

• Comprehensive **sampling of every outlet** in each school.
What are we finding in Iowa schools?

- Oxford Junction
  - Sampled 41 water outlets on Saturday, April 27
  - Lead: 0 samples above EPA Action Level of 15 ppb, 2 above 5 ppb
  - **Copper: 8 equal to or above EPA Action Level of 1.3 mg/L**
  - Remediation: Signage & 3 new bottle fillers

- Anamosa
  - 129 water outlets for sampling on Saturday, May 18
  - **Lead: 1 sample above EPA Action level of 15 ppb**, 3 other locations between 3-8 ppb
  - Copper: 0 samples above EPA Action Level
  - Remediation: 1 new bottle filler & replacement of fixtures at 3 locations
What are we finding in Iowa schools?

• Keokuk
  • Sampled 137 water outlets on Saturday, October 19
  • **Lead: 5 samples above EPA Action level of 15 ppb**, 47 other locations between 1-14 ppb
  • Copper: 0 samples above EPA Action Level
  • Remediation: Fixture replacement, filters, no drinking at some outlets

• Dubuque
  • Sampled 105 water outlets on Saturday, December 21
  • **Lead: 5 samples above EPA Action level of 15 ppb**, 12 other locations between 1-8 ppb
  • Copper: 0 samples above EPA Action Level
  • Remediation: Fixture replacement

**Average of $2,800 per school for testing and remediation**
Opportunities exist to improve public health through school drinking water improvements

- Define safe level for lead in schools that is more consistent with EPA’s 3Ts guidance
- Financial assistance for expanded testing at all outlets in schools
- Technical and financial assistance to allow schools to respond effectively to testing results
- Ensure long-term safety of school drinking water (e.g., “Filter First” programs in Michigan)
- Leverage COVID funding to install bottle fillers with filtration
Thanks and questions

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@dcwiertny @uicheec
Iowa Lead Exposures linked to Contaminated Spices

Presenters:
Kevin Officer (for Kathy Leinenkugel), IDPH
Kelsey Marmon, Warren County Health Services
Lead in Spices – Learning Objectives

1. Learn about two common spices linked to lead poisonings in Iowa.
2. Understand how certain micro-populations and cultures utilize these spices on a daily basis.
3. Name two recommendations for reducing the risk of lead exposure from spices.
Lead in Spices

- In the U.S., there are no standards for the level of lead contamination in spices.
- The FDA limit for lead in natural-source food color additives (e.g., paprika, saffron, and turmeric) is 10 mg/kg.
- Spices are often grown in countries polluted by leaded gasoline, smelters, battery manufacturing plants, and mines.
- Lead contamination occurs from:
  - Contaminated soil & water
  - Lead dust from grinding machinery
  - Deliberate adulteration to enhance color or add weight to the product
# Lead in Spices – Permissible Limits of Lead

<table>
<thead>
<tr>
<th>WHO</th>
<th>FDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant Formula</td>
<td>Food Color Additives - Natural</td>
</tr>
<tr>
<td>0.02 mg/kg lead</td>
<td>10 mg/kg</td>
</tr>
<tr>
<td>Salt</td>
<td>Candy or other foods (action level)*</td>
</tr>
<tr>
<td>2 mg/kg</td>
<td>0.1 mg/kg, 0.5 mg/kg</td>
</tr>
</tbody>
</table>

*The FDA action levels = levels at which an investigation is undertaken, or a recall is issued for products intended for consumption by children. However, spices are not considered food intended for consumption by children.*
Who is At Risk?

Products may be used in food preparation, alternative medicines or supplements, or for cultural practices, so the at-risk population can vary:

- Immigrants or refugees who obtain products in person when visiting a foreign country or from family members who bring or send
- Immigrants or refugees who purchase products through specialty stores or online
- Non-immigrants utilizing alternative medicine practices that may obtain products manufactured in other countries and purchased online
- Non-immigrants cooking with spices processed in other countries from specialty stores or online suppliers
### EPA Consumption Survey – What We Eat in America

<table>
<thead>
<tr>
<th>Daily Consumption</th>
<th>Non-immigrant</th>
<th>Immigrant</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cumin</td>
<td>0.09 g/day</td>
<td>1.22 ± 1.14 g/portion</td>
</tr>
<tr>
<td>• Turmeric</td>
<td>0.03 g/day</td>
<td>0.60 ± 0.46 g/portion</td>
</tr>
</tbody>
</table>

In immigrant populations some spices are also used as home remedies and for ceremonial activities.

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Case #1: SE Iowa Family – suspected exposure from spices or other imported items

- Family in SE Iowa emigrated from Nepal in 2016 - child tested and BLL 1.2 mcg/dL
- 2019-2021: Child has an elevated BLL (6-8 years of age)
- Live in 2010 apartment building since in Iowa (no LBP)
- No work-related or hobby exposures
- No pre-1978 childcare or other family housing exposures
- No other EBLs at apartment buildings in complex and age of complex makes it unlikely that there were lead water pipes
- No recent travel outside of USA
Case #1: SE Iowa Family – suspected exposure from spices or other imported items

• As of 2020, was purchasing turmeric, tea and other products from store in Illinois – family did not have any remaining products for testing.
  • Similar store in IA is regulated by DIA

• Child sometimes puts toys in mouth

• Unknown risk: family routinely used pressure cooker purchased in India in 2016
<table>
<thead>
<tr>
<th>Notes</th>
<th>Family Member (Birth Year)</th>
<th>Age at Test</th>
<th>Blood Lead Test Date</th>
<th>Blood Lead Level (mcg/dL)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016: Family Immigrates from Nepal</td>
<td>Child (2012)</td>
<td>3 yo</td>
<td>8/17/16</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>Child (2012)</td>
<td>6 yo</td>
<td>2/23/19</td>
<td>12.1</td>
</tr>
<tr>
<td></td>
<td>Child (2012)</td>
<td>6 yo</td>
<td>6/29/19</td>
<td>11.6</td>
</tr>
<tr>
<td></td>
<td>Child (2012)</td>
<td>7 yo</td>
<td>1/25/20</td>
<td>28.3</td>
</tr>
<tr>
<td></td>
<td>Child (2012)</td>
<td>7 yo</td>
<td>5/4/20</td>
<td>27.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 2020: Medical provider recommends stopping the use of spices purchased at area India supermarket</td>
<td>Child (2012)</td>
<td>7 yo</td>
<td>8/5/20</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 2020: Verified that family stopped purchasing spices and tea from area India market. Family states leftover products at home were discarded.</td>
<td>Child (2012)</td>
<td>8 yo</td>
<td>12/4/20</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dad (1981)</td>
<td>39 yo</td>
<td>1/11/21</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Child (2012)</td>
<td>8 yo</td>
<td>1/14/21</td>
<td>25.5</td>
</tr>
<tr>
<td></td>
<td>Child (2012)</td>
<td>8 yo</td>
<td>5/6/21</td>
<td>15.9</td>
</tr>
</tbody>
</table>
Case #2: Greater Des Moines Area Family – Exposure from Spices

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Result</th>
<th>Sample Type</th>
<th>Patient Address on Draw Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>7/19/2021</td>
<td>8.9</td>
<td>Venous</td>
<td>Residential Home- built 2013</td>
</tr>
<tr>
<td>4/26/2021</td>
<td>13.7</td>
<td>Venous</td>
<td></td>
</tr>
<tr>
<td>3/19/2021</td>
<td>18.2</td>
<td>Venous</td>
<td></td>
</tr>
<tr>
<td>3/18/2021</td>
<td>≥15</td>
<td>Capillary</td>
<td></td>
</tr>
<tr>
<td>8/30/2019</td>
<td>&lt;2</td>
<td>Capillary</td>
<td></td>
</tr>
</tbody>
</table>

- Child was referred to local public health for lead poisoning case management following a capillary lead level of 15 mcg/dL, later confirmed at 18.2 mcg/dL.
Case #2: Greater Des Moines Area Family – Exposure from Spices

- Other members of the family tested positive for lead poisoning
  - 8 year old = 16.7 micrograms per deciliter (venous), prior test in 2019 was <2 micrograms per deciliter
  - Father (38 yrs. old) = 14 venous, only test on record in HHLPPS
Case #2: Greater Des Moines Area Family – Exposure from Spices

• Lead exposure from use of turmeric and chili powder, both purchased in India in 2019 and used by the family on a daily basis in prepared foods.

• Results from SHL on the products were:
  • Turmeric = 4,370,000 ng/g
  • Chili powder = 120 ng/g
Spices Tested in 2021 by State Hygienic Lab

Iowa Poison Control Center Analysis

(Sample #A – Chili powder) If one gram of chili powder has a volume of 1 mL, the amount of chili powder to reach the child’s threshold would be 0.8 ounces. An adult would need to ingest 3.5 ounces.

(Sample #B - Turmeric) If one gram of turmeric has a volume of 1 mL, the amount of turmeric to reach both the child’s and the adult’s thresholds would be <1/1,000 teaspoon.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Quantity of lead in sample</th>
<th>Amount of product needed to be ingested to achieve a daily dose of:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Children 3 mcg/day</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Weight</td>
</tr>
<tr>
<td>#A Chili powder</td>
<td>120 ng/g</td>
<td>25 grams</td>
</tr>
<tr>
<td>#B Turmeric</td>
<td>4,370,000 ng/g</td>
<td>0.68 mg</td>
</tr>
</tbody>
</table>
Case #3: Ayurvedic Products & Spices used - 2021 Case

Background:

- 76 year old female, white, non-Hispanic lives in a mobile home in SE Iowa and participates in Ayurvedic medical practices.
- She was tested for blood lead in mid-February at the county health clinic due to health concerns she was experiencing.
- Her blood lead level (BLL) on 2/18/21 was 48 mcg/dL. Adult case management was started.
- A repeat BLL on 3/10/21 was 42 mcg/dL. The case plans to ask for a repeat test in the next few weeks and may also consult a neurologist.
Case #3: Ayurvedic Products & Spices used - 2021 Case

- The person routinely used Ayurvedic products purchased locally in SE Iowa and purchased products made in India off the internet.
- No other sources of lead were identified in or around the home.
- This person was part of the Ayurvedic elevated blood lead cluster in 2011. Across is a list of all tests on record at IDHP – they were all venous specimens:

<table>
<thead>
<tr>
<th>BLL Test Date</th>
<th>BLL Result (Venous)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/10/2021</td>
<td>42 mcg/dL</td>
</tr>
<tr>
<td>2/18/2021</td>
<td>48 mcg/dL</td>
</tr>
<tr>
<td>1/22/2019</td>
<td>4 mcg/dL</td>
</tr>
<tr>
<td>4/27/2018</td>
<td>4 mcg/dL</td>
</tr>
<tr>
<td>7/16/2014</td>
<td>5 mcg/dL</td>
</tr>
<tr>
<td>10/10/2013</td>
<td>6 mcg/dL</td>
</tr>
<tr>
<td>5/13/2013</td>
<td>11 mcg/dL</td>
</tr>
<tr>
<td>2/3/2012</td>
<td>8 mcg/dL</td>
</tr>
<tr>
<td>8/17/2011</td>
<td>13 mcg/dL</td>
</tr>
<tr>
<td>6/21/2011</td>
<td>17 mcg/dL</td>
</tr>
</tbody>
</table>
Case #3: Ayurvedic Products & Spices used - 2021 Case

• A home visit was made April to collect samples of various products used in October to December 2020.
• At that time the persons recall of dates and products used varied.
• Other than the turmeric spice, the person has not used these supplements in 2021.
• Samples were analyzed by the State Hygienic Laboratory in Ankeny.
• The Iowa DIA and FDA have been investigating manufactures and distributors of some of the spices and Ayurvedics products.
Case #3: Ayurvedic Products & Spices used - 2021 Case

FDA investigated product #1, which was distributed by a Nevada Co and sold online, private recall the product was done by company.

- How taken: 2 capsules twice daily,
- Duration used: October-December 2020

- How taken: 1/3 to 1 cup of water with 1 teaspoon herb powder, boiled down to 1/3; with 5 drops of Mahanaryana oil added
- Duration used: October-December 2020

<table>
<thead>
<tr>
<th>Sample</th>
<th>Quantity of lead in sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 mayyograj capsule</td>
<td>12,200 mg/kg</td>
</tr>
<tr>
<td>#2 maharsnadi tablet</td>
<td>260 ng/g</td>
</tr>
<tr>
<td>#3 dashmool powder</td>
<td>240 ng/g</td>
</tr>
<tr>
<td>#4 mahanaryana oil</td>
<td>100 ng/g</td>
</tr>
<tr>
<td>#5 dhanventara tablet</td>
<td>3900 ng/g</td>
</tr>
<tr>
<td>#6 turmeric bulk spice</td>
<td>45 ng/g</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Amount of product needed to be ingested to achieve a daily dose of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children 3 mcg/day</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Weight</td>
</tr>
<tr>
<td>0.24 mg</td>
</tr>
<tr>
<td>11.5 grams</td>
</tr>
<tr>
<td>12.5 grams</td>
</tr>
<tr>
<td>30 grams</td>
</tr>
<tr>
<td>0.769 grams</td>
</tr>
<tr>
<td>66.7 grams</td>
</tr>
</tbody>
</table>

- How taken: 1 tablet twice daily
- Duration used: used prior to October 2020 for a few months
Bulk Turmeric – purchased locally, Iowa 2021 Ayurvedic case

- An adult would have to ingest over 9 ounces.
References


• FDA: "DETENTION WITHOUT PHYSICAL EXAMINATION OF SPICES AND SPICE PRODUCTS DUE TO LEAD CONTAMINATION“ Published Date: 07/09/2021 www.accessdata.fda.gov/cms_ia/importalert_1143.html

References

• 2019 Journal article: Turmeric means “yellow” in Bengali: Lead chromate pigments added to turmeric threaten public health across Bangladesh.  

  https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7047762/
FDA Importation Surveillance: “DETENTION WITHOUT PHYSICAL EXAMINATION OF SPICES AND SPICE PRODUCTS DUE TO LEAD CONTAMINATION“
Published Date: 07/09/2021
www.accessdata.fda.gov/cms_ia/importalert_1143.html

- Bangladesh
- Canada
- China
- India
- Indonesia
- Lebanon
- Syrian Arab Republic
- Thailand
- Trinidad & Tobago
- Vietnam
- Yemen
Alarming Levels of Lead Found in Certain Traditional Cosmetics and Turmeric

December 12, 2019

Health officials are warning families to avoid dangerous products and get kids tested

Alarming levels of lead have been found in traditional cosmetics used in Hindu and Muslim religious practices and South and Southeast Asian cultures. High lead levels have also been found in the spice turmeric, particularly in smaller batches brought in from overseas.

Frequently Asked Questions: Lead in Traditional Cosmetics and Turmeric

English | Amharic | Arabic | Farsi | Hindi | Nepali | Pashto | Somali | Spanish | Urdu

Infographics

- Turmeric may contain lead
- Colored powders (sindoor, kumkum, tikka, roli) may contain lead
- Pottery (barro) may contain lead
- Kohl may contain lead

# Iowa Lead Exposures linked to Contaminated Spices

<table>
<thead>
<tr>
<th>Kelsey Marmon, RN, CCNC</th>
<th>Kevin Officer (for Kathy Leinenkugel)</th>
</tr>
</thead>
</table>
| Warren County Health Services  
301 N. Buxton, Ste. 203  
Indianola, IA 50125  
p: (515) 961-1074  
c: (515) 537-8783  
f: (515) 961-1083  
[link](mailto:kelseym@warrencountyia.org) | Iowa Department of Public Health  
321 E. 12th Street  
Des Moines, Iowa 50319  
p: 800-972-2026  
[Kevin.officer@idph.iowa.gov](mailto:Kevin.officer@idph.iowa.gov)  
[Kathy.Leinenkugel@idph.iowa.gov](mailto:Kathy.Leinenkugel@idph.iowa.gov) |
Baby Shoes to Work Boots
2020 Lead Exposure in Iowa
Learning Objectives:

1. Identify most common industries in Iowa where adult lead exposure occurs.
2. Gain a better understanding of adult lead data and factors influencing data trends.
3. Learn case guidelines and interventions for adult lead exposures when children are involved.
No safe blood lead level in children or adults has been identified.

– Center for Disease Control & Prevention (CDC)
Venous Blood lead level 5 micrograms per deciliter or higher

Current CDC reference value for all ages

Note: “reference” level is not the same as “action” level.
Lead 101

• Lead is a dose toxin, long term health impacts determined by:
  • How much
  • How long
  • Vulnerability of the person
Lead In, Lead Out

Lead in the Environment that has a route into your body

Lead enters the body much faster than it leaves the body.

Lead into the Body

Lead leaves the Body

If you are exposed to lead on a regular basis, your blood lead level and total “body load” of lead will be elevated.
Adults (16+) compared to Preschoolers

Oral Absorption:

- Adults: 10%
- Preschoolers: 30-50%
Adults compared to Preschoolers

Respiratory Absorption:

Up to 100% of lead inhaled is absorbed, depending on particle size.
Adults compared to Preschoolers

Health Impacts:

[Diagram showing adults and preschoolers with a label 'DIFFERENT']
Lead is Bad for both Adults & Children

**Adults**

- **Brain**
  - Memory loss, lack of concentration, headaches, irritability, depression
- **Body**
  - Fatigue, joint and muscle pain
- **Cardiovascular**
  - High blood pressure
- **Digestive system**
  - Constipation, nausea and poor appetite
- **Nervous system**
  - Damage including numbness and pain in the extremities
- **Reproductive system**
  - Men: Decreased sex drive and sperm count, and sperm abnormalities. Women: Spontaneous miscarriage

**Children**

- **Brain**
  - Behavior problems, lower IQ, hearing loss, learning disabilities
- **Body**
  - Decreased bone and muscle growth
- **Kidneys**
  - Damage
- **Nervous system**
  - Damage
- **Blood**
  - Anemia
ABLES
Adult Blood Lead Epidemiology & Surveillance
Lead poisoning of adults through work is nothing new.

Many of the basic prevention messages are still the same as 100 years ago.

(except take a bath more often)
IDPH adopted use of the CDC/NIOSH case definition in April 2016

Adult Reference Level or Elevated Blood Level (EBL) = 5 mcg/dL or higher

www.cdc.gov/niosh/topics/ables/ReferenceBloodLevelsforAdults.html
## Prevalence Rate of Elevated Blood Lead Levels by State, 2019

<table>
<thead>
<tr>
<th>State (a)</th>
<th># of Cases</th>
<th># of Employed Adults</th>
<th>Prevalence Rate Per 100,000 Employed Adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona</td>
<td>218</td>
<td>3,384,504</td>
<td>6.4</td>
</tr>
<tr>
<td>Colorado</td>
<td>66</td>
<td>3,062,098</td>
<td>2.2</td>
</tr>
<tr>
<td>Connecticut</td>
<td>276</td>
<td>1,842,164</td>
<td>15.0</td>
</tr>
<tr>
<td>Florida</td>
<td>1,220</td>
<td>10,016,060</td>
<td>12.2</td>
</tr>
<tr>
<td>Illinois</td>
<td>1,345</td>
<td>6,190,757</td>
<td>21.7</td>
</tr>
<tr>
<td>Iowa</td>
<td>726</td>
<td>1,691,016</td>
<td>42.9</td>
</tr>
<tr>
<td>Maryland</td>
<td>249</td>
<td>3,143,967</td>
<td>7.9</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>489</td>
<td>3,706,556</td>
<td>13.2</td>
</tr>
<tr>
<td>Michigan</td>
<td>546</td>
<td>4,735,826</td>
<td>11.5</td>
</tr>
<tr>
<td>Minnesota</td>
<td>594</td>
<td>3,009,156</td>
<td>19.7</td>
</tr>
<tr>
<td>Missouri</td>
<td>1,706</td>
<td>2,981,683</td>
<td>57.2</td>
</tr>
<tr>
<td>Montana</td>
<td>36</td>
<td>514,917</td>
<td>7.0</td>
</tr>
<tr>
<td>New Jersey</td>
<td>244</td>
<td>4,333,333</td>
<td>5.6</td>
</tr>
<tr>
<td>North Carolina</td>
<td>633</td>
<td>4,883,875</td>
<td>13.0</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>159</td>
<td>1,780,551</td>
<td>8.9</td>
</tr>
<tr>
<td>Vermont</td>
<td>33</td>
<td>334,070</td>
<td>9.9</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>587</td>
<td>3,001,215</td>
<td>19.6</td>
</tr>
<tr>
<td>All participating states</td>
<td>9,127</td>
<td>58,611,753</td>
<td>15.6</td>
</tr>
</tbody>
</table>

**Source:** Adult Blood Lead Epidemiology & Surveillance (ABLES)

*(shown is data at BLL 10+)*
Report based on the highest blood lead level in the calendar year of an Iowa resident 16 years of age or older at the time of test.

Test results reported in micrograms per deciliter (mcg/dL)

IDPH Adult Blood Lead Epidemiology & Surveillance Program data as of April 2021 – subject to revision.

2015 Public Health Reference Level 5 mcg/dL
2020 Data COVID Impact? (Possibly from less testing and work interruptions)

<5: down
5 to 9: down
10 to 19: down
20+: down
Testing: down
Typical Adult Exposure Sites

- Work involving Lead
- Hobbies involving Lead
Some of the Industries With Adult Pb Exposures in Iowa

- Plumbing fixture Mfg
- Industrial Machinery Mfg
- Iron, Brass & Aluminum foundry
- Valve & Pipe fittings
- Lead smelter/Primary
- Storage Battery Mfg
- Lead Pigment Mfg
- Inorganic Chemicals Mfg
- Radiator Shops
- Stained Glass Artisans
- Firing Range Employees/users
- Residential Construction Industry (Renovators, Home Repairs, Painting Contractors)
- Industrial Construction
### Battery Plant Manufacturing

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Workers tested, 3 major battery plants</td>
<td>660</td>
<td>21%</td>
<td>704</td>
<td>18%</td>
<td>-44</td>
</tr>
<tr>
<td>Pct of total adults tested</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># 5+ EBL</td>
<td>535</td>
<td>81%</td>
<td>632</td>
<td>90%</td>
<td>-97</td>
</tr>
<tr>
<td>Pct of Battery plant workers tested</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># 10+ EBL</td>
<td>300</td>
<td>45%</td>
<td>480</td>
<td>68%</td>
<td>-180</td>
</tr>
<tr>
<td>Pct of Battery plant workers tested</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># 20+ EBL</td>
<td>33</td>
<td>5%</td>
<td>143</td>
<td>20%</td>
<td>-110</td>
</tr>
<tr>
<td>Pct of Battery plant workers tested</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># 40+ EBL</td>
<td>1</td>
<td>**</td>
<td>0</td>
<td>**</td>
<td>1</td>
</tr>
</tbody>
</table>

**Kudos: ** One battery plant had 93 workers tested in 2020, with a total of 617 BLLs reported.

Based on the highest BLL for each worker in 2020, blood lead tests ranged from 1-12 mcg/dL:

- **8 workers at 10-12 mcg/dL**
- **57 workers at 5-9 mcg/dL**
- **28 workers at 0-4 mcg/dL**
Annual Blood Lead Testing: Persons with a Confirmed Elevated BLL Adult (16 and Older) - 2019
Hover over a County to see the County Name and values for that County.

Iowa Public Health Tracking Portal
EBL data shown is > 10 µg/dL
Numbers Tested shown if hover over county (on the live portal)
Less than 6 EBL numbers per county are not shown per portal data confidentiality protocols.
2020 data pending on this data portal

https://tracking.idph.iowa.gov/Health/Lead-Poisoning/
Workers in the Construction Industry at risk for Lead Exposure

- Millwrights
- Welders
- Demolition work
- Lead abatement
- Plumbers
- HVAC maintenance and repair

- Electricians
- Carpenters
- Residential and industrial Painters
- Renovation, and remodeling work
- Industrial coatings
Most homes built before 1978 contain some lead-based paint and residual lead dust, regardless of prior renovations.

Homes built before 1950 used paint that had a higher concentration of lead.

Assume a house built before 1978 has lead present until testing is done to prove it isn't.

**Table 1 – Characteristics of Iowa Housing Compared to Other States**

<table>
<thead>
<tr>
<th>State</th>
<th>% Pre-1940 housing units</th>
<th>% Pre-1950 housing units</th>
<th>% Of pre-1950 housing that is rental</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illinois</td>
<td>22.6</td>
<td>31.8</td>
<td>37.5</td>
</tr>
<tr>
<td>Nebraska</td>
<td>25.3</td>
<td>32.3</td>
<td>30.0</td>
</tr>
<tr>
<td>Vermont</td>
<td>30.0</td>
<td>34.5</td>
<td>39.2</td>
</tr>
<tr>
<td>Maine</td>
<td>29.1</td>
<td>35.8</td>
<td>35.8</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>29.4</td>
<td>39.2</td>
<td>46.3</td>
</tr>
<tr>
<td><strong>Iowa</strong></td>
<td><strong>31.6</strong></td>
<td><strong>39.3</strong></td>
<td><strong>26.1</strong></td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>30.3</td>
<td>40.3</td>
<td>31.3</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>34.5</td>
<td>42.8</td>
<td>43.6</td>
</tr>
<tr>
<td>New York</td>
<td>31.2</td>
<td>43.1</td>
<td>52.1</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>34.6</td>
<td>51.4</td>
<td>46.7</td>
</tr>
<tr>
<td><strong>National Average</strong></td>
<td><strong>15.0</strong></td>
<td><strong>22.3</strong></td>
<td><strong>37.3</strong></td>
</tr>
</tbody>
</table>

Source: State of Iowa Strategic Plan for the Elimination of Childhood Lead Poisoning in Iowa, July 2010

**Probability of a House Containing Lead**

**HUD Lead Paint Safety Field Guide, March 2001**
Rarely are residential construction workers in Iowa tested or monitored for lead exposure.

Lead-contaminated dust and paint found in pre-1978 housing that is disturbed during renovation, remodeling and painting is one of the biggest risks of lead exposure for Iowa workers.
Iowa Adult Women Exposures –2020 Data

• 1038 women tested, 121(12%) EBL
  • 484 were 16-45 years old (usual reproductive age range)
    • 55 (5%) EBL

• 204 women tested known to be work-related (all ages)
  • 121 of 204 (59%) EBL (all ages)
  • 101 of 204 tested were 16-45 years old
    • 55 of 101 EBL (54%)

Lead can pass from a mother to her unborn baby
• Increase the risk of miscarriage
• Cause babies to be born early or underweight
• Hurt the baby’s brain, kidneys and nervous systems
• Cause learning or behavior problems for children

Current BLLs do not reflect how much lead is stored in the mother’s body from past exposure
Women and Lead Exposure

• CDC Guidelines for the Identification and Management of Lead Exposure in Pregnant and Lactating Women – Nov. 2010

“Pregnant women with blood lead concentrations of 10 μg/dL or higher should be removed from occupational lead exposure.”

The OSHA Lead Standards state that the examining physician has broad flexibility to tailor protections to the worker’s needs.

IA 2011 Indoor Firing Range
Take-Home Lead Case

12 month old with BLL 30, lived in 1998 apartment
BUT dad worked for firing range

- Dust wipes showed take-home lead, including
  - Dad’s work sweat-shirt: 370 µg/ft sq
  - Dad’s work blue jeans: 340 µg/ft sq
  - Child’s car seat arm area: 540 µg/ft sq
  - Dad’s work shoes (bottom, sides): 7700 µg/ft sq
- Dad tested at 22 µg/dL
- Firing range inspection by OSHA - fined for non-compliance

Compare to the EPA dust lead hazard level for floors of 40 µg/ft sq
(new std is 10 µg/ft sq)
MAP OF IOWA RANGES
Iowa Shooters LLC
IAShooters.com

Green = public ranges
Red  = members-only ranges
Yellow = businesses.

Left: Screen shot of map 5/4/21

Right: https://www.iowadnr.gov/Hunting/Places-to-Hunt-Shoot/Iowa-Shooting-Ranges
Use Caution With Ayurvedic Products

Ayurvedic medicine is a traditional system of healing arts that originated in India. It involves using products such as spices, herbs, vitamins, proteins, minerals, and metals (e.g., mercury, lead, iron, zinc). Some preparations combine herbs with minerals and metals. These products are commonly sold on the Internet or in stores and are represented as "Indian" or "South Asian."

"Consumers should know that Ayurvedic products are generally not reviewed or approved by the Food and Drug Administration (FDA)," says Nina Levy, Director of the Division of New Drugs and Labeling Compliance in the Office of Compliance, part of FDA's Center for Drug Evaluation and Research (CDER).

Most Ayurvedic products are marketed either for drug uses not approved by FDA or as dietary supplements. As such, consumers should understand that these products have not been approved by FDA before marketing.

"The bottom line," Levy says, "is that consumers need to be on guard when purchasing any product using lead and iron, zinc.”
2021 Ayurvedic Investigation:
Older woman with history of exposure in 2011

BLL 2021: 48 mcg/dL
- highest BLL in 2011 was 17 mcg/dL
- BLLs 4-11 mcg/dL from 2012 -2019

2021 products purchased through internet, made in India, distributed by business in Nevada

Pb content: 12,200 mg/kg
(12,200,000 ppb)

Compare to EPA lead in water alert level of 15 ppb
When should adults be tested?

Adults should consider getting tested for lead at work or by their personal medical provider if they:

• Work with lead
• OSHA requires some employers to provide “medical monitoring”
• Have a hobby that exposes them to lead
• Do renovation, repair or painting on a home built before 1978
• Recently moved to the US from a foreign country
• Use foods, spices, cosmetics, etc. from other countries with known lead risk
• Use Ayurvedic or non-traditional medicine products (teas, powders, salves or lotions) especially those not made in the US
• Have a child or other household member with an EBL
• Have medical signs or symptoms that could be from lead exposure

Some states recommend screening for risk and testing pregnant women
Adult Blood Lead Epidemiology & Surveillance (ABLES)

The Iowa Adult Blood Lead Epidemiology and Surveillance (ABLES) is a program in the Iowa Department of Public Health Acute Disease Prevention, Emergency Response, and Environmental Health Division that helps employers, workers, medical providers, and families learn about the risks of Iowa adult lead exposure in the workplace, community, or at home. ABLES is part of the Iowa Occupational Health & Safety Surveillance Program (OHSSP).

Iowa Department of Public Health ABLES

The IDPH ABLES Program collects all blood lead test results for Iowa adults 16 years of age or older as required by Iowa Administrative Code 641: Chapter 1. This information is used to report:

- The number of Iowa adults with lead exposure
- How Iowa adults get exposed
- Progress on objectives stated in Healthy Iowans: Iowans Health Improvement Plan 2017-2021

The program also helps clinical laboratories and medical providers comply with adult blood lead reporting requirements.

Finally, the program provides resources:

- For doctors, nurses, and other medical providers who care for lead-exposed adults

Questions

• Kathy Leinenkugel, ABLES Manager
  • 515-380-0331
  • Kathy.Leinenkugel@idph.iowa.gov
  • idph.iowa.gov

Online Information & Resources

Childhood Lead: idph.iowa.gov/Environmental-Health-Services/Childhood-Lead-Poisoning-Prevention
Adult Lead: idph.iowa.gov/Environmental-Health-Services/Occupational-Health-and-Safety-Surveillance/Adult-Blood-Lead-Epidemiology
Lead Data: idph.iowa.gov/Environmental-Health-Services/Environmental-Public-Health-Tracking
Send your questions for presenters in the chat!
12:30PM - 1:00PM

Check out all of the resources we have put together!

https://idph.iowa.gov/Environmental-Health-Services/Childhood-Lead-Poisoning-Prevention/resources
2:00PM - 2:15PM

Check out all of the resources we have put together!

https://idph.iowa.gov/Environmental-Health-Services/Childhood-Lead-Poisoning-Prevention/resources
Bringing Together Partners for a Successful Lead Hazard Control Program

Presented by: Elizabeth Kemp & Kim Glaser
• This presentation will explain how to identify partners and how ECIA has been successful.
Iowa Council of Government Map

https://www.iowacog.com/
ECIA Service Area
Cedar, Clinton, Delaware, Dubuque, and Jackson Counties
ECIA SERVICES

Individual Services

- Housing (Rental) Assistance
- Homeless Assistance
- Food Insecurity Hotline
- Transit Services
- Home Buyer Down Payment Assistance
- Business Loans – expansion and new start-up projects

City Services

- SUPPORT SERVICES
  - City Treasurer Duties
  - Audit Assistance
  - Mayor/City Council Orientation

- TECHNICAL SERVICES
  - Brownfields Assessment & Cleanup
  - Building Inspections & Code Enforcement
  - City Code Updates & Ordinances
  - Economic Development
  - Grant & Loan Application
  - Transportation & Planning
• 2017 Clinton awarded $1,650,000 for lead hazard control and $150,000 healthy homes supplemental funds
  • City of Maquoketa is a partner in this award and is included in the target area and commits to contributing to the required match
  • 54 housing units were made lead safe at program close end of 2020

• 2019 Dubuque County awarded $2,999,996 lead hazard control and $300,000 healthy homes supplemental funds
  • Delaware County requests to be included in the target area 2020 and commits to contributing to the required match
  • Goal is to make 120 Lead safe by program by July 2023

• 2020 Clinton awarded $2,400,000,000 for lead hazard control and $400,700 healthy homes supplemental funds
  • City of Maquoketa is a partner in this award and is included in the target area and commits to contributing to the required match
  • Goal is to make 86 units lead safe by program close July 2024
Elizabeth Kemp ekemp@ecia.org or 563-690-5720
Kim Glaser kglaser@ecia.org or 563-690-5774

ECIA https://www.ecia.org/
Siouxland Healthy Homes Coalition

Growing a Successful Coalition = Community Partnerships

Alicia Sanders
Environmental Specialist
EBL Inspector/Risk Assessor
Learning Objective

- Provide tools for coalition building as well as sustaining a coalition.
Siouxland Healthy Homes Coalition

- 3 Phases:
  1. Growing the Coalition.
  2. How Can the Coalition Help You?
  3. Sustaining and Continuing to Grow the Coalition.
A Healthy Community for All.

Phase 1: Growing the Coalition

The Siouxland Healthy Homes coalition began meeting in July 2013. Previously was the Siouxland Childhood Lead Poisoning Prevention Coalition.

A Few Months Before the Meeting:

Recruitment, invite individuals and organizations.

Schedule meeting.

Promote the meeting.

Research and follow the National Center for Healthy Homes standard of 7 principles (more principles have been added since 2013).

The fun begins...
Phase 1: Growing the Coalition

- **The first meeting:**
  - 20 people attended.
  - Presentation about what is a healthy home. Shared information from the National Center for Healthy Housing and the CDC (presentation included information about childhood lead poisoning prevention).
  - After the presentation we discussed and learned about each agency and how that agency fits into the idea of Healthy Homes.
  - Discussed recruitment of individuals and agencies.
  - Discussed meeting days/times.
  - Healthy homes is a topic that the group wants to continue to work on and grow.

- **Homework:**
  - Coalition members were tasked with thinking about goals/objectives for next meeting.
  - Recruitment of members.
Phase 2: How Can the Coalition Help You?

- Researched the CDC’s “Developing a Healthy Homes Program”.
  - The Coalition Created: Vision, Mission Statement and Core Values.

- 2014 Survey to professionals who conduct home visits.
  - Utilized survey monkey.
  - 35 surveys received.
  - Questions were focused on the 7 principles of a healthy home.

- Due to the survey:
  - 2014: Bi-monthly newsletters.
  - 2015: Healthy Homes Checklist (English and Spanish).
  - Both can be found at [www.siouxlanddistricthealth.org](http://www.siouxlanddistricthealth.org) search for “Healthy Homes”.

- Meetings began to have “Presentations”.
  - Presenters from area agencies.
  - Topics included a variety of healthy homes issues: Pest Management, City of Sioux City HUD grant, Iowa Poison Control Center, Radon, Prescription Take Back programs, Animal Control, etc.
Phase 2: How Can the Coalition Help You?

Healthy Homes Issues the coalition has worked on:

- **Prescription take back programs:**
  - Contacted pharmacies and area hospitals.
  - Promote the DEA prescription take back program in spring and fall.
  - In partnership with Jackson Recovery Centers and the City of Sioux City Police Department; a prescription drug take back lock box is now offered at the Sioux City Police Department (2015).

- **Hoarding:**
  - Created a hoarding resource hand out.
  - A separate hoarding coalition started meeting at area hospitals.

- **Radon:**
  - Promote testing.
  - Worked with area builders to encourage radon systems in new homes.
Phase 2: How Can the Coalition Help You?

Healthy Homes Issues the coalition has worked:

- **Emergency Contact Information:**
  - Magnet created to assist emergency personnel when responding to residences.
  - Partnered with local Emergency Responders to create magnet.
  - Funds to create magnets provided by a local grant.

- **Partner with the City of Sioux City HUD/Lead Grant**
  - Representative would share updates at coalition meetings.
  - Newsletter focused on lead prevention and promoting the HUD grant.
  - Annual letters to property owners includes flyer about HUD grant.

- **Childhood Lead Poisoning Prevention Education.**
  - Always on-going.
  - Included in every bi-monthly newsletter, every coalition meeting, and on the coalition checklist
Phase 3: Sustaining and Continuing to Grow the Coalition

- Continue partnerships.
- 2013 – 2020 Continued to hold bi-monthly coalition meetings.
- Continue to send out bi-monthly coalition newsletters.
- In 2018 conducted a second survey to in-home professionals:
  - A lot of staff changes from 2014.
  - Survey questions were the same.
  - Not as many responses in 2018.
  - Responses were very similar to the 2014 survey.
  - Newsletters and coalitions meetings were focused on survey responses.
- January 2020: Presentations to realtors:
  - Geared towards lead education when buying/selling a home.
  - Also provided Healthy Homes information.
  - Realtors became members of the coalition.
Phase 3: Sustaining and Continuing to Grow the Coalition

- This will be an interesting year!
- The coalition has not met since January 2020.
- Potentially begin meeting again in fall 2021 or winter 2022.
  - Follow Phase 1.
  - Recruitment of new/existing members.
    - Coalition members have moved on.
    - Roles have changed.
    - More people are at home now.
  - Promotion and education to other agencies.
  - Update newsletters, checklist, provide additional resources.
  - Setting new goals.
- On-going: newsletters, checklist, education and outreach, partnering with agencies, childhood lead poisoning prevention.
- 2021: Began partnering with Maternal Child Health Program.
Where You Can Find Us:

- [www.siouxlanddistricthealth.org](http://www.siouxlanddistricthealth.org)
  - Search for “Healthy Homes” or
  - Search for “Lead”.
Thank You!

Contact Information:

Alicia Sanders
asanders@siouxlanddistricthealth.org
712-279-6119
BLACK HAWK COUNTY HEALTH DEPARTMENT AND WATERLOO COMMUNITY DEVELOPMENT: HEALTHY HOMES COLLABORATION

Andrea Magee
Black Hawk County Health Department
Healthy Homes Coordinator
(319) 292-2224
amagee@blackhawkcounty.iowa.gov

Matt Chesmore
Waterloo Community Development
Senior Rehabilitation Specialist
(319) 291-4429
matt.chesmore@waterloo.ia.org
LEARNING OBJECTIVE:
Discuss increase in positive EBL outcomes due to collaborative efforts in the city of Waterloo between Waterloo Community Development and the Black Hawk County Health Department.
Waterloo Community Development and Black Hawk County Health Department Collaboration

Waterloo Community Development
- Recent recipient of an approximately $3 million grant from the U.S. Department of Housing and Urban Development (HUD).
- Focus on keeping families and their children safe from lead-based paint and other home health and safety hazards.
- 3-year grant, goal of serving over 100 families.
- Emphasis on serving low-moderate income neighborhoods with homes older than 1978.

Black Hawk County Public Health
- Certified Lead Inspection/Risk Assessors (LIRA).
- Healthy Homes Assessors
- Conduct education and outreach activities
- Clinical service for blood tests for children.
History of the Partnership

• Waterloo Community Development
  • Waterloo Eliminates Lead Hazards
    • 2003, 2007, 2011

• Lead Hazard Control and CDBG Funding

• Current Model
  • Black Hawk County
  • ~ 4 years
    • 2017 & 2020
  • 2nd Grant Cycle
Lead-Based Paint Hazard Control Program

Why learn about your child's lead level?

Lead can be very harmful to children.

- Low to moderate levels of lead may damage a child's brain and nervous system. This may cause problems with hearing, behavior, and learning.
- High levels of lead may cause convulsions, brain damage, and death.

Lead may be around your home.

- There are many possible sources, including paint, water, food, and soil. Some cosmetics, hobby supplies, antiques, and toys may also be sources.

Free testing for exposure to lead is available at the Black Hawk County Health Department: 319-291-2413.

For more information on any of our housing programs, contact us at 291-4426.

City of Waterloo Available Programs

- Lead-based Paint Hazard Control
- Housing Rehab Loan Program
- Emergency Repairs Program
- Home Buyer Program

What the test results mean:

- If blood lead level is... A child needs...
  - 0-9 mcg/dL: No further action. Re-screen as recommended.
  - 10-14 mcg/dL: Follow-up testing within 3 months.
  - 15-19 mcg/dL: Follow-up testing within 2 months.
  - 20-49 mcg/dL: Medical evaluation and care. Inspection for and removal of lead hazards in the child's environment.
  - 50 mcg/dL or higher: Medical evaluation and care. Immediate hospitalization and treatment. Inspection for and removal of lead hazards in the child's environment.

City of Waterloo Health Department

The City of Waterloo will contract with Black Hawk County Health Department to identify lead hazards in your home. Free of charge. A licensed contractor will remove any identified hazards through our program. All Lead Program clients must meet income eligibility requirements. See chart on back for income limits.

Housing Rehab Loan Program

The Housing Rehabilitation Program helps to correct housing code violations, improve energy efficiency, and provide a safer and healthier environment for the residents of Waterloo. Lead-based paint hazards must be addressed.

Emergency Repairs Program

Funds are used to eliminate safety and health code violations, which include but are not limited to the following types of repairs:

- Heating, Roofing, Plumbing, Electrical

Home Buyer Program

Waterloo Housing Partnership

The Home Buyer Program is designed to assist low-income households, one time only per household. When purchasing a home with down payment assistance, Lead-based paint hazards must be addressed.
• Program goal is to provide services to increase community awareness about the hazards of lead exposure and increase the number of children assessed and appropriately blood tested for lead poisoning through monitoring and surveillance.

• Lack of resources to communities (rural) when it comes to remediation/mitigation repairs regarding funding for residents with EBL child.

• Referrals are given to WCD when child meets criteria for environmental investigation where lead hazards can be identified and remediated.
Healthy Homes (LHC) and CLPPP

Referrals

• Waterloo Children and families
• Provide information on the Healthy Homes (Lead-Based Paint Hazard Control Program

Alerts via HHLPS (Healthy Homes and Lead Poisoning Surveillance System)

• Environmental investigation is required after two venous levels of 15-19mcg/dL or one venous level over 20 mcg/dL
• Contact family and property owner to give information on WCD program, if interested Community Development will take homeowner and/or tenants through qualifying process
• EBL cases take priority, lead inspection/risk assessment is set up and conducted
• Repairs are made to property and clearance testing followed
Referrals

- Reducing and or mitigating lead exposure for families, EBL children and future inhabitants
- Improving quality of life of homeowners and renters who live in the community
- Neighborhoods may increase housing value as home improvements are made
- BHCHD has referred 32 families to WCD since 2018
- 4 have utilized program for lead hazard remediation
Benefits

• Reduces lead exposure for children, especially those identified through CLPPP with EBL
• Collaboration between various organizations within the community
• Provides a safer and healthier home for family and children to live
• Identifies lead hazards and other necessary repairs needed to make home safer.
Challenges

- Hesitation from area landlords to participate in program
- Limitation regarding meeting qualifications
- Finding quality contractors who meet or willing to complete the lead abatement certification
Outcomes

• Reducing and or mitigating lead exposure for families, EBL children and future inhabitants
• Improving quality of life of homeowners and renters who live in the community
• Benefits the community interactions and stabilizes Waterloo neighborhoods
Thank You!

Any Questions
DISCUSSION SECTION

Send your questions for presenters in the chat!
THANK YOU!

Check out our website!
Don't forget to fill out your CEU evaluation.
The recording of today's learning collaborative will be posted online for viewing with CEUs available until October 16th!