

Report of the Second Public Meeting of the Community Action on Lead Project of the Boston Public Health Commission, October 8, 2020: Sources Other Than Paint.¹

The Community Action on Lead (CAL) Project of the Boston Public Health Commission applies a Health in All Policies² lens to look at existing policies, programs, and resources for lead poisoning prevention in Boston to accelerate progress in preventing further poisoning. It consists of public conversations about how this may be accomplished, identifying improvements that can be implemented by current in programs and policy, and regulatory or legislative changes that would address the underlying social determinants of health that create lead risks, particularly those that place different demographic or geographic groups at disproportionate risk for lead exposure.

The October meeting had 16 participants, mostly staff of health departments, but also including legal advocates, representatives from academia, lead remediation contractors, government agencies, and nonprofits, who were asked, “What can we do about sources of lead other than paint?”

The meeting began with a brief overview of what, besides paint, may be a cause of lead exposure, followed by two breakout groups: one that discussed potential sources and considered whether there are other important sources not yet mentioned and what the highest priorities among the group might be, and another that considered what are the most important interventions to develop. To encourage the free expression of opinions, participants are not linked to specific suggestions.

NON-PAINT SOURCES OF LEAD: OVERVIEW

There are many sources of potential lead poisoning other than paint. The brief overview included:

Hair dye. In 2018 the Federal Food and Drug Administration announced it was amending regulations to no longer allow “**acetate in cosmetics intended for coloring hair on the scalp** because new data available since lead acetate was permanently listed demonstrate that there is no longer a reasonable certainty of no harm from the use of this color additive.”

Water. Boston residents are served by the Massachusetts Water Resources Authority (MWRA) and Boston Water and Sewer Commission (BWSC), which ensure proper corrosion control to limit what

¹ The CAL project of the Boston Public Health Commission (BPHC) is funded by the National Association of County and City Health Officials. The first public meeting of the CAL Project was held at Boston University and was a planning meeting, intended to shape the rest of the project. The report of that meeting can be found separately. The first official meeting was held on February 18 at the Boston Public Health Commission. The October 8 meeting was held virtually and facilitated by Boston University Lecturer Rick Reibstein, who prepared this report, and CAL Project leads Paul Shoemaker and Stephanie Seller of the BPHC. Boston University student Josh Taylor assisted.

² “Health in All Policies” (HiAP) is a “collaborative approach to improving the health of all people by incorporating health considerations into decision-making across sectors and policy areas... Health in All Policies, at its core, is an approach to addressing the social determinants of health that are the key drivers of health outcomes and health inequities. Health in All Policies supports improved health outcomes and health equity through collaboration between public health practitioners and those nontraditional partners who have influence over the social determinants of health. Health in All Policies approaches include five key elements: promoting health and equity, supporting intersectoral collaboration, creating cobenefits for multiple partners, engaging stakeholders, and creating structural or process change.”

Rudolph, L., Caplan, J., Ben-Moshe, K., & Dillon, L. (2013). *Health in All Policies: A Guide for State and Local Governments*. Washington, DC and Oakland, CA: American Public Health Association and Public Health Institute. Retrieved from: http://www.phi.org/wp-content/uploads/migration/uploads/files/Health_in_All_Policies-A_Guide_for_State_and_Local_Governments.pdf

might be released from existing lead service lines. Analyses show consistent achievement of EPA's limit of 15 ppb. However, many lead advocates believe the limit should be 1 ppb. There is a Lead Hotline (617-989-7888) to call to find out how to replace a lead water service line. In the meantime, residents can flush pipes, cook only with cold water, remove strainers and flush periodically, have an electrician reground wires elsewhere that are grounded on water pipes, and consider filters. The BWSC information is translated into Arabic, Chinese (Simplified and Traditional), Vietnamese, Portuguese, French, Haitian Creole, Russian, and Spanish.

Soil. Washing children's hands when they come inside is important because of lead in soil. Doormats outside and inside all entryways and removing shoes before entering will help. Children should not play in soil right by the house, where exterior leaded paint may have come off the walls over the years: plant bushes close to the house. When lead is present in the soil at 150 – 400 ppm, maintain a healthy grass sod on play areas and cover bare soil with mulch. Place rubber mats or carpets over the soil in high wear areas such as under swings and at the bottoms of slides. Follow safe gardening practices. From 400 – 1,000 ppm, use phosphate fertilizer to lower soil pH, cover the areas with mulch, restrict access of children or pets, and growing fruiting vegetable crops but not leafy vegetables or root crops is possible. When lead is present in soil at 1,000 ppm or higher, access should be restricted.

Cosmetics and religious powders. New York City's Department of Health has found that lead poisoning rates are comparatively high among South Asian populations and issued advice about kohl, kajal and surma (products primarily used as eyeliner but also for religious, cultural and medicinal purposes), and sindoor (a religious powder used in Hinduism). Cultural sensitivity is recognized by the Department, which advises washing hands thoroughly after handling these products and to keep cosmetics and religious powders away from children.

Imported goods. All are subjected to electronic review, but fewer than 1% are physically reviewed. Lead solder in cans (which typically have wide seams and a silver-gray color along the seams) are an example, as these are not banned globally. Chapulines, (dried grasshoppers) and candies are also known as potential sources.

Alternative Medicines and Supplements. NYC Department of Health provides a six-page table of imported herbal "medicines" and supplements found to contain lead, mercury, or arsenic.³ The CDC has listed several of concern from Asia, Middle East, and Hispanic cultures. Health care providers should consider potential metal contamination whenever dealing with foreign-made or foreign bought health remedies, and they should ask patients about their use of prescription as well as non-prescription health remedies including supplements, vitamins, tonics, Ayurvedic products, herbs, and minerals.

Imported spices. NYC tested 1500 imported spices and found high levels of lead in spices from Georgia, Bangladesh, Pakistan, Nepal, Morocco, Vietnam, India, and Syria.⁴ Buying spices locally is recommended, and having your blood tested if you may have used leaded spices.

³ New York City Department of Health and Mental Hygiene. *Imported Products Known to Contain Lead, Mercury, or Arsenic*. Retrieved from: <https://www1.nyc.gov/assets/doh/downloads/pdf/lead/lead-herbalmed.pdf>

⁴ Hore, P., Alex-Oni, K., Sedlar, S., & Nagin, D. (2019). *A Spoonful of Lead: A 10-Year Look at Spices as a Potential Source of Lead Exposure*. *Journal of Public Health Management and Practice*, 25, p@63-570. Retrieved from: https://journals.lww.com/jphmp/fulltext/2019/01001/A_Spoonful_of_Lead_A_10_Year_Look_at_Spices_as_a.1.aspx

Amulets, charms, and jewelry. Principally of concern when children wear them and may put them in their mouths, such products may contain lead in the metal components and solder or in glazes and colorings. This is of most concern for costume jewelry and products manufactured overseas.

Hobbies. Includes hunting, recreational shooting, fishing with lead sinkers, casting, and working with stained-glass. Individuals practicing these hobbies can take steps to reduce their own exposure and exposure to children by following precautions including refraining from eating and drinking while practicing the hobby, washing hands, changing clothes after hobby activities and washing clothing separately, and having a separate area (garage, shed, etc.) from the home to practice at-home hobbies such as casting with lead or working with stained glass. Politics are a significant consideration in addressing hobby-related lead exposure due to current political discourse around firearms ownership.

Workplace. Professions that may involve lead include painting or home renovation or repair, plumbing, construction, car or radiator repair, welding and cutting, electronics, municipal waste incineration, demolition, working with scrap metal, lead compound manufacturing; manufacturing of rubber products, batteries, and plastics; lead smelting and refining; working in brass or bronze foundries. The lead dusts can be transferred to children or whoever does the wash. Individuals can reduce lead exposure risks through use of personal protective equipment and engineering controls on the job and by careful attention to reducing 'take home' lead by changing clothing after work and laundering work clothing separately.

Ceramic Ware. Found in wares from Mexico, Turkey, Ecuador, Uzbekistan, and elsewhere. Lead is often used to enhance oranges, reds, and yellows in glazes and colorings. Sometimes there is a label "not intended for use with food" that is on the package and not the item. Highly acidic foods or heat can accelerate leaching of lead from the ceramics. Such products should not be used to store food or drink.

Toys. To illustrate how consumers can protect themselves, a computer program that compiles alerts from the Consumer Product Safety Commission (CPSC) was shown.⁵ In order to keep up with toys that might present a danger to children, it is necessary to be aware of this information source. The presentation revealed a wide variety of products that have been recalled due to lead. Lead has been found in low price imported plastic and metal toys and costume jewelry around the country.

NON-PAINT SOURCES OF LEAD: PRIORITIES

We first discussed how to prioritize non-paint sources of lead and which non-paint sources would be the focus for the remainder of the discussion. The group agreed that preventing harm to children must be a priority, as well as equity and environmental justice. Several in the group also pointed out that exposure to lead probably correlates with other exposures and/or unsafe housing conditions as well. In both the larger group and in breakout rooms, attendees discussed which non-paint sources of lead they would like to prioritize. The small breakout groups reported back to the main group with their top sources of concern. Participants then voted for their top 3 priorities with results as follows (16 voting):

⁵ The compiler was created by Boston University student Josh Taylor and Rick Reibstein for the public domain and requires further development to be user-friendly.

Non-Paint Source of Lead	Votes (%)
Soil	75%
Water	69%
Toys, jewelry, and amulets	44%
Workplace and hobby	38%
Imported goods, spices, and candy	31%
Cosmetics and religious powders	25%
Home remedies and traditional medicines	6%
Lead glazed ceramic ware, pottery, leaded crystal	6%
Guns, ammunition	6%

Based on votes, the group prioritized soil, water, and toys, jewelry, and amulets for the rest of the discussion. The final comments of the first session were general: the facts about lead speak for themselves. They must be communicated and can be communicated with sensitivity. The programs should seek the help of those who are the trusted voices in the community.

NON-PAINT SOURCES OF LEAD: INTERVENTIONS

Participants were then provided with information about what resources that are currently at work to address lead poisoning.

- The City of Boston has BPHC’s Childhood Lead Poisoning Prevention Program (BCLPPP), which performs case management and inspections. When a case of lead exposure is identified, the program contacts the family to gather information about the home and anywhere else the child spends significant time and thus may have been exposed. BCLPPP sends a health educator and an inspector to address every case of lead poisoning in the city by providing in-home education, connection to medical care if needed, and inspection of the home for lead hazards. The environmental inspection includes testing of painted surfaces, investigation of potential non-paint sources, and collection of water samples for testing by the state.
- The Boston Water and Sewer Commission has a lead service line replacement program which provides up to \$3,000 to help property owners pay for line replacement.
- The City of Boston has a soil safety program for urban agriculture that requires soil testing for certain uses.
- The City of Boston banned the use of lead-coated copper on public buildings and banned products containing lead coated copper from markets after finding that weathering of lead coated copper produced a source of lead poisoning.
- In 1995 the city conducted two pilot projects to address lead in soil. The Lead Safe Yards Project tested the use of landscaping techniques to cover soil to reduce exposure and the Humphrey’s Place Project demonstrated that phytoremediation (using plants to extract lead from soil) was effective at reducing lead in soil without the need for excavation.

The Question Posed

Participants were asked the following: What resources are needed to address prioritized sources of lead? How can we be more effective? What policy changes, improvements to current programs & services, new programs or services, are needed?

The Response

It was observed that while the pandemic is taking up our attention it is also increasing public focus on public health, and environmental injustice particularly. It makes sense to act to create a wider network for action with other agencies and parties, to do outreach on this issue. Action to get the political attention to implement and enforce is feasible and needed.

Addressing lead in sources other than paint represents an informational challenge in two ways. One is whether we understand which sources are presenting the highest risks. Can we say, for example, what the percentages are for each category? It is necessary to understand how specific impacts are happening or can happen. The other is how to communicate the information. What about refugee and immigrant families and others hard to reach? What if simply communicating the information is not all that is necessary, but people need help in getting the action to occur, such as a landlord's cooperation, navigating a bureaucracy, finding a specialist, or needing the time or money to implement advice? Agencies should promote awareness through educational campaigns, providing brochures of possible exposures with information from reputable sources, and providing assistance when the recipients don't have the capacity needed for action. One initial recommendation is for agencies to hire Information Officers, whose job it is to reach out, particularly to those hard-to-reach communities, and share what the agency can learn.

Proposals from the Group

Water

- Test water in homes and childcare facilities, as well as in schools
- Make cold water filters widely used (where needed)
- Draw more attention to lead service line replacement funding offered by BWSC. Increase funding available through this program. There is a need to address the disconnect where a tenant's child is at risk of exposure, but it is the property owner who must make the decision and investment in replacing a lead service line.
- Require lead service line replacement – either by a systematic public program, requirement by a certain date, or as a condition of real estate transaction.
- Provide money to cities and towns to phase out lead service lines over a certain time period

Soil. There is a connection with renovations, much of the lead comes from renovations of the exterior of a building. Of importance are education and outreach, assistance to homeowners, working with landlords, and offering services for testing.

- Bring back the Lead Safe Yards program and Humphrey's Place Project to continue to address lead in soil.
- Build on the foundation of Boston's Article 89 (2013), which encourages urban agriculture. Continue efforts such as the Soil Safety Guidelines for Commercial Urban Farming BPHC created for the Boston Redevelopment Authority⁶ and provide more education and advice for urban gardeners,⁷ and funding for testing and addressing.
- Playgrounds should be a focus for testing and remediation efforts.

Products.

- Provide ways for people to get their toys checked, such as:

⁶ City of Boston. *Soil Safety Guidelines for Commercial Farming*. Retrieved from:

<http://www.bostonplans.org/getattachment/d37db157-5bc8-479c-aa73-dc462441519a>

⁷ Pioneer Valley Planning Commission. *Article 89 Made Easy: Urban Agriculture Zoning for the City of Boston*.

<https://www.pvpc.org/sites/default/files/doc-municipal-strategies-increase-food-access2594.pdf>

- Having toy drives to get inspected for lead
- Offering free lead testing at the same time as collecting toys for a charity drive
- Having a “bring a toy to get a toy” event, or if your toy fails on lead, you get a new one
- Putting regulations on manufacturers and suppliers
- It is necessary to assess the level of concentration in products, either through the development of testing services where people bring products or tests which can be performed in the home.
- Create a database of products containing lead that can be continuously updated
- Share information about lead in cosmetics, spices, and imported foods with family and community health programs, so that they ask questions and inform their patients and clients.
- Identify and use the most effective ways to reach recent immigrants
- Current federal protections against lead in imports is inadequate. Improve legislation by:
 - Mandating testing of products and actual inspections so that existing standards can be enforced
 - Requiring suppliers to test for lead
 - Implement state-level legislation
- Identify which stores are sources of lead exposure
- Disseminate information from product recalls, and study them to find out how to make them work.

Property Owners.

- Require inspection and compliance before property owners can rent their properties, for soil and water as well as paint
- Enforce anti-discrimination law to make sure landlords don’t refuse to rent to families with children
- Make lending agencies and mortgagors part of ensuring compliance
- Require lead safety when transferring property ownership, like Title 5 (septic)
- Increase education on lead among property owners

Family daycare. Ensure inspection of all facilities without de minimis exceptions.

Workplaces.

- Target education to workers shown to be experiencing high levels of exposure in the state’s occupational health lead registry and incorporate this into workplace protection programs.
- Integrate occupational health with community and family health.
- Require investigations of potential exposure and testing of actual exposure.
- Provide technical consulting on how to eliminate the source.
- Provide workers with training focused on how not to bring dust home.

It was noted that Boston University School of Public Health and MassCOSH are working on a pilot project on workplace lead exposure. Contact Grant Tore for info at gdt@bu.edu. It was also noted that materials/examples currently exist for PSAs on how to avoid work-based exposures to lead

Hobbies.

- Provide targeted outreach to those exposed because of shooting or fishing, including resources
- Engage hobby communities (shooting & fishing clubs, online craft communities, etc.) as allies in spreading safety and health messages

Intervention suggestions were condensed into a live poll, in which participants were asked to select their “top 3” options generated by the discussion, with results as follows (15 voting):

Intervention	Votes (%)
Targeted public education about non-paint lead sources (greater focus on immigrant communities, occupations, gardening, other at-risk groups or activities)	67%
Testing services or screening event to identify and dispose of lead-containing items	47%
Legislation for imported goods, spices, etc.	33%
BPHC Lead Safe Yards Program (bring it back)	33%
Additional resources directed to municipalities to systematically replace lead service lines	33%
Workplace lead testing and technical assistance program to remove lead from their process	33%
Work with retailers to test products and push manufacturers to remove lead	20%
Funding for staff capacity and resources	20%
Evaluation of replacement rate of lead service lines	13%
Research: how the pandemic and response is impacting exposure to non-paint sources of lead	13%

The meeting concluded with an invitation to join us at our third meeting on November 5 from 4-6pm. The meeting will focus on identifying gaps in currently available resources for families.

For additional information, to submit comments, or register for the meeting, email leadpoisoning@bphc.org or call 617-534-5965.