

**Final Report of the Community Action on Lead (CAL) Project:
A Roadmap of Future Policy and Program Initiatives to
Eliminate Lead Poisoning**

July 2021

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Executive Summary

In support of the Boston Public Health Commission's (BPHC) mission to protect, preserve, and promote the health and well-being of all Boston residents, particularly the most vulnerable, the mission of the BPHC's Childhood Lead Poisoning Prevention Program (BCLPPP) is to eradicate lead poisoning in Boston. Exposure to lead can cause short- and long-term health effects and can cause both temporary and permanent lifetime effects, particularly for children. Lead exposure is an environmental and racial injustice, as it has been identified as a major environmental pathway through which racial segregation and redlining has contributed to the legacy of Black disadvantage in the United States."¹ In addition, children of color are more likely to be exposed to lead than white children across the United States, and exposure is associated with lack of kindergarten readiness, juvenile justice system involvement, incarceration as adults, and reliance on public assistance programs in adulthood.² Prevention of lead exposure is vital to addressing racial injustice and achieving health equity.

This report summarizes the recommended public policy changes, intervention/prevention program enhancements, and resource needs to address childhood lead poisoning in Boston and beyond identified by participating stakeholders during the Community Action on Lead (CAL) Project. The project took place between December 2019 and December 2020 with generous grant funding support from the National Association of County and City Health Officials (NACCHO). The CAL Project applied a community involvement process and Health in All Policies lens to reviewing existing policies, programs and resources for addressing and preventing childhood lead poisoning to identify gaps, needs, and areas of future improvement.

The CAL Project process identified gaps and needs in a number of categories including:

- Increasing outreach and partnership efforts to raise awareness of the importance of lead testing/remediation of homes and having children tested for blood lead levels frequently
- Increasing staffing to provide more capacity for lead inspections not driven by cases of lead-poisoned children and more case management support to clients
- Better connection to financial resources to deal with lead and other supports for families and property owners to avoid people 'falling through the cracks' of a referral hand-off
- Increased availability and reduced barriers to access of funding resources to remove lead
- Coalition building to advocate for larger scale policy changes to prevent lead poisoning

From this process, the workgroup identified a roadmap of program changes and potential policy advocacy efforts to be implemented over the next 2 to 10 years. These are described in detail in the last section of this report and include:

¹ Sampson, R.J., & Winter, A.S. (2016). The racial ecology of lead poisoning: Toxic Inequality in Chicago Neighborhoods, 1995-2013. *Du Bois Review*, 1-23. Retrieved on June 30, 2021, from: https://scholar.harvard.edu/files/alixwinter/files/sampson_winter_2016.pdf

² Coulton, C., García-Cobián Richter, F., Cho, Y., Park, J., & Fischer, R. (2020). Downstream consequences of childhood lead poisoning: A longitudinal study of Cleveland children from birth to early adulthood. Center on Urban Poverty and Community Development, Jack, Joseph, and Morton Mandel School of Applied Social Sciences, Case Western Reserve University. Retrieved on June 30, 2021, from: https://case.edu/socialwork/povertycenter/sites/case.edu.povertycenter/files/2020-07/Downstream_06182020_rev07082020.pdf

Short-term Programmatic Actions (current and next year)

- Increase inspection staffing to provide environmental lead inspections and intervention.
- Increase access to training resources (Moderate risk deleading and RRP training) for property owners and contractors.
- Expand case management services scope to provide ‘concierge’ integration with financial resources for property owners and supports for impacted families.

Medium and Long-Term Programmatic Actions (next 2 to 5 years)

- Establish partnerships with social services programs (WIC, DTA, food pantries), communities of faith, neighborhood associations, and other spaces where parents may frequent to both conduct outreach and build additional referral connections.
- Expand current relationships with childcare providers, subsidized housing agencies, community health centers, nonprofit homeownership support and community stability community organizations, and schools to increase outreach.
- Grow online and physical mass media outreach efforts including social media (BPHC Twitter and Facebook accounts) posts, YouTube videos, paid online advertising in social media, billboards, ads on public transportation (buses and subway), and ads on streetside solar trash bins throughout the city.
- Increase connection, coordination on case management, and data sharing with programs that administer or assist in accessing funding resources for deleading.
- Hire additional outreach workers/home health educators.
- Build on existing coalitions such as the MA Public Health Association lead stakeholder group to support policy advocacy work.
- Convene a lead advisory committee to BCLPPP from the stakeholders of the CAL Project and others.

Public Policy Priorities and Actions

Participants identified several items for further exploration that involve efforts to change existing policies, laws, and regulations at the state-wide level to reduce lead exposure. As such, they will necessarily be longer-term in nature. Action on any of these items will require working with a wide coalition of stakeholders to build support, refine ideas, and assess impacts to avoid unintended consequences, and ensure a health equity focus.

- Remove the “unknown” option from the lead disclosure forms that are completed at real estate purchase/sale.
- Require inspection and full deleading of any property before sale.
- Work with insurance companies to tie deleading to PMI and homeowner liability insurance rates.
- Increase funding available in existing deleading financial assistance programs.
- Expand access to funding assistance by removing or loosening eligibility criteria and reducing the paperwork/process burden in existing and new funding programs.
- Provide financial assistance for relocation of tenants during deleading of rental units.

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- Revive programs such as the Lead Safe Yards Project that address lead in soil through lower-cost intervention rather than excavation.
- Develop systematic processes for geographically targeted lead service line removal with a direct offer to property owners rather than relying on property owners seeking out the program.

Introduction to Lead Poisoning

Lead is a metal found in nature, which can now be found in all parts of our environment due to the variety of industrial uses to which it has been put over the past 5,000 years of human history. It is a poison when absorbed into the body where it can build up in the nervous system and internal organs such as the kidneys and liver as well as be deposited in bones where it can persist for extended periods of time. It is especially harmful to the health of babies and young children because their bodies absorb lead more easily than the bodies of adults and are still developing. In the United States, children in low income households and children who are of color are at greater risk of exposure to lead, as they may not have access to lead-safe housing.^{3 4 5}

Lead poisoning is when lead builds up in the body, usually over months or years. In children, exposure to lead can harm the brain, kidneys, and nervous system; slow growth and development; make it harder for the child to learn; damage hearing and speech; and cause behavior problems. Extreme lead poisoning can result in coma and death. Lead exposure can cause permanent impairment that can have lifelong consequences for children and society, with higher rates of crime and lowered work opportunities for children with more exposure to lead.^{6 7} Exposure can be identified through a blood test called a blood lead level, which measures how much lead is in the blood. Regular testing and early detection can allow for early intervention to prevent long-term harm while proactive environmental interventions can prevent exposure. Estimates of the value of investing in lead poisoning prevention and early intervention show substantial benefit to society.⁸ Benefits include reductions in crime; increased contributions to a productive economy; a healthier populace with lower medical costs; and a lowered need for special education, tutoring, or other extra-curricular enrichment.

The Boston Public Health Commission recommends that all children from the age of 6 months to 6 years have their blood lead level tested annually as part of routine medical checkups. Massachusetts Lead Law requires screening during that age range and mandates remediation of lead hazards in the homes of children under the age of 6 who are identified as lead poisoned. While there is no safe level of lead in the body, Massachusetts defines a child as lead poisoned when they have a blood lead level (BLL) of 10 micrograms per deciliter ($\mu\text{g}/\text{dl}$) or greater. A BLL of 5 $\mu\text{g}/\text{dl}$ is considered ‘elevated’ and of concern.

³ Centers for Disease Control and Prevention. (2021). National Center for Environmental Health, Division of Environmental Health Science and Practice. Retrieved on June 30, 2021, from: <https://www.cdc.gov/nceh/lead/prevention/populations.htm>

⁴ Benfer, E.A. (2017). Contaminated childhood: The chronic lead poisoning of low-income children and communities of color in the United States. *Health Affairs*. Retrieved on June 30, 2021, from: <https://www.healthaffairs.org/doi/10.1377/hblog20170808.061398/full/>

⁵ Gochfeld, M., & Burger, J. (2011). Disproportionate exposures in environmental justice and other populations: The importance of outliers. *American Journal of Public Health*, 101(Suppl 1): S53-S63. Retrieved on June 30, 2021 from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222496/>

⁶ National Bureau of Economic Research. <https://www.nber.org/papers/w13097>

⁷ Agency for Toxic Substances & Disease Registry <https://www.atsdr.cdc.gov/csem/csem.asp?csem=34&po=10>

⁸ For example, see the report by Patrick Breyse of the National Center for Environmental Health of the Agency for Toxic Substances and Disease Registry, that found preventing lead exposures for children born in 2018 would save \$84 billion. “Lead Elimination for the 21st Century”, *Jrnl of Public Health Management and Practice*, Jan/Feb 2019, https://journals.lww.com/jphmp/Citation/2019/01001/Lead_Elimination_for_the_21st_Century.2.aspx. Or see Elise Gould’s widely-cited estimate that “Each dollar invested in lead paint hazard control results in a return of \$17-\$221”, in “Childhood lead poisoning: conservative estimates of the social and economic benefits of lead hazard control”, in *Environmental Health Perspectives*, July, 2019, <https://pubmed.ncbi.nlm.nih.gov/19654928/>.

Cases of poisoned children require comprehensive intervention while intervention services are offered on a voluntary basis to families of children with an elevated BLL. Best public health practice is to address sources of lead to prevent exposure.

Most children get lead poisoning from lead paint, which is found both inside and outside of homes built before 1978. Lead paint chips and dust come from old paint that is peeling and cracking, friction from opening and closing painted windows, and home repairs or renovations. Children may swallow or eat lead paint dust and paint chips directly or indirectly by putting food or items contaminated with lead dust into their mouths. Children can also be exposed to lead through household items like toys, costume/toy jewelry, pottery/ceramics, cosmetics, and home remedies that are made using lead. Exposure can also occur through water; lead can enter water when pipes or lead-containing solder corrode, particularly if the home has main service line made of lead. Another source is contaminated soil encountered in both outdoor play and tracked into the home. Lastly, certain parental occupations and hobbies may involve lead exposure which can bring lead contamination home on clothing. Lead poisoning’s long-term societal effects – economically and socially – makes it a priority to address and prevent.⁹

Lead and Intervention Efforts in Boston

Massachusetts, and Boston in particular, have historically been leaders in the nation in addressing lead poisoning and currently maintains that position. From 2012 to 2017 the average percentage of children younger than six years tested for lead ranged from 16-18.7% nationally, but Massachusetts has consistently averaged more than 47% during that same period.¹⁰ Boston’s lead screening rate has been consistently higher than the state average. Lead poisoning rates in Boston have been steadily declining over the past 40 years due to diligent public health efforts to promote screening, early intervention, and prevention. The following table summarizes testing rates and results in Boston for calendar years 2010 and 2018 (the most recent year for which full statistics are available) from the Massachusetts Department of Public Health¹¹:

| | Pop. 9-47 months old | Total/percent screened | Number/percent BLL 5-9 µg/dl | Number/percent BLL 10-24 µg/dl | Number/percent BLL 25+ µg/dl | Percent pre-1978 housing units |
|---------|----------------------|------------------------|------------------------------|--------------------------------|------------------------------|--------------------------------|
| CY 2010 | 21,052 | 18,578 (88.2%) | 960 (5.2%) | 111 (0.6%) | 5 (< 0.1%) | 81% |
| CY 2018 | 21,508 | 16,446 (76.5%) | 214 (1.3%) | 44 (0.3%) | 3 (< 0.1%) | 79% |

⁹ For example, a study by Amherst College’s Jessica Reyes presented at the Federal Reserve Bank of Boston in 2011 found correlation between lead levels and scores on the Massachusetts Comprehensive Assessment System (MCAS): reducing blood lead levels increased scores on this standardized test of educational success, and increased lead levels corresponded with reduced scores on MCAS. <https://www.bostonfed.org/publications/communities-and-banking/2012/winter/lead-exposure-and-academic-performance.aspx>

¹⁰ According to the Centers for Disease Control National Childhood Blood Lead Surveillance Data at <https://www.cdc.gov/nceh/lead/data/national.htm>. Half the states submitted no testing data to the CDC in the most recent year reported.

¹¹ <https://www.mass.gov/lists/view-annual-screening-and-blood-lead-level-reports-and-high-risk-community-list>

However, in a resident survey conducted as part of the citywide community health assessment process, 7.9% of respondents identified lead in paint or lead in drinking water as a significant home health concern.¹² As of 2018, almost 80% of Boston's housing was built before 1978, when lead was banned in residential paint, so many Boston homes may still have lead paint indoors or outdoors. Others are served by water lines that have lead in them, lead remains in soil, and lead is freshly introduced in products and other ways. Despite Boston's success in addressing lead poisoning, the problem persists.

Screening, conducted through a blood test, is vital to identifying children who have been exposed to lead. As of 2018, only 76.5% of Boston's children under 4 years of age had blood lead level screening, which means that nearly one in four children were not screened.¹³

In Massachusetts, children with a blood lead level of 10 µg/dL or higher have lead poisoning and children with a blood lead level of between 5 and 9 µg/dL have a blood lead level of concern.¹⁴ Though the prevalence of elevated blood lead levels in the state has been declining over the years to the current 1.8% of children with a blood lead level above 5 µg/dL, that still represents 2,848 of the Commonwealth's children with elevated blood lead levels, including 493 above the 10 µg/dL threshold for poisoned. In Boston the overall rate in 2018 was similar with 281 children (1.7% of those screened) having blood lead levels of 5 µg/dL and higher; 44 of them above 10 µg/dL.

It is notable that lead exposure and lead poisoning rates are inequitably distributed across Boston. For example, between 2009 and 2013, 62% of the cases of children with a blood lead level of 5 µg/dL or greater came from just three neighborhoods – Roxbury, Dorchester, and East Boston – despite a relatively even distribution of pre-1978 housing across all 17 Boston neighborhoods.¹⁵ These neighborhoods were, and continue to be, home to predominantly people of color and lower income households, which makes Boston's children of color and children in low income households most vulnerable to lead exposure and lead poisoning, demonstrating that lead exposure and lead poisoning in Boston are a racial justice, health equity, and social equity issue.¹⁶ There is much that can be done to prevent continued lead exposure and subsequent harm of Boston's children.

The Boston Public Health Commission (BPHC) is the city's health department. Its mission is to protect, preserve, and promote the health and well-being of the citizens of Boston, particularly the most vulnerable. The BPHC's wide variety of program areas include homeless services, environmental health, substance abuse treatment, HIV/AIDS education/services, communicable disease control, mental health services, violence prevention, chronic disease and health homes, maternal and child health, tobacco control, and community outreach.

¹² Boston CHNA-CHIP Collaborative (2019), <http://www.bostonchna.org/PDF/BostonCHNA%20FINAL%20091319.pdf>.

¹³ MA Department of Public Health, Public Health Information Tool (PHIT). <https://www.mass.gov/guides/phet-data-childhood-lead-poisoning>

¹⁴ Per the Massachusetts Lead Law. <https://www.mass.gov/service-details/learn-about-massachusetts-lead-law>

¹⁵ MA Department of Public Health, Bureau of Environmental Health. https://www.cityofboston.gov/images_documents/Robert%20Knorr,%20Preventing%20Childhood%20Lead%20Poisoning%20in%20MA_tcm3-48543.pdf

¹⁶ Health of Boston Report https://www.bphc.org/healthdata/health-of-boston-report/Documents/HOB-2012-2013/HOB12-13_FullReport.pdf

The BPHC's Boston Childhood Lead Poisoning Prevention Program (BCLPPP), founded in 1971 with the passage of the Massachusetts Lead Law, supports the BPHC mission by providing comprehensive case management and preventive services to Boston residents. This includes home inspections and enforcement of deleading in homes where a child is tested and found to have lead poisoning, providing comprehensive home health education and case management support to the parents of children with lead poisoning, connection of families to medical case management, providing preemptive and preventative lead inspections of homes and child care settings at the request of parents or property owners, community education, and working with partners to advocate for and implement policies to reduce lead exposure or improve service delivery.

BCLPPP enforces the Massachusetts Lead Law, which requires the removal or encapsulation of any lead hazards in any home where a child under the age of 6 lives. Homeowners and landlords are responsible for complying with the Lead Law and are required to make the home lead-safe.¹⁷ According to Massachusetts laws and the Federal Fair Housing Act, landlords cannot refuse to rent to anyone or evict anyone if they have children or if the property has lead in it. The Boston Office of Fair Housing and Equity and the Massachusetts Commission Against Discrimination enforce these housing laws.^{18 19}

When a child in Boston is screened for blood lead levels, those results are reported by the lab to the Massachusetts Department of Public (DPH) at the same time they are returned to the physician. If the child's blood lead level is poisoned (10µg/dl or greater) DPH assigns the case and pertinent information to BCLPPP. A BCLPPP Community Health Worker (CHW) reaches out to the parent to introduce the program and schedule the next steps of a home health education visit and environmental inspection. These services are mandated by law and cannot be refused. This contact frequently, but not always, happens after the family have been informed of their child's test results by their physician. At the home health education visit, the CHW discusses the lab results with the family, confirms contact information, provides education about the effects of lead poisoning, teaches about interim interventions (cleaning practices, nutritional advice) to reduce/prevent continued exposure, and conducts an initial assessment of likely sources of lead to inform the environmental inspection if it does not take place at the same time as the CHW visit. The CHW also assists the family in connecting with follow-up medical interventions including referral to the specialist Lead Clinic at Boston Medical Center if needed.

The environmental inspection is a comprehensive inspection of all possible sources of lead in the home including testing paint on all surfaces (inside and out), reviewing non-paint sources such as toys and cookware, and collecting water samples for analysis. Based on the results of the inspection, orders to correct lead hazards are written and issued to the property owner who then has a legally mandated time in which to hire a licensed deleading contractor to abate the lead hazards after which follow-up inspections are conducted to verify that the hazard has been removed before closing the case. In the case of extensive lead paint hazards, the family may need to relocate from the residence until the work is complete and verified safe by the follow-up inspection.

¹⁷ Per the Massachusetts Lead Law. <https://www.mass.gov/service-details/learn-about-massachusetts-lead-law>

¹⁸ Per the Boston Office of Fair Housing and Equity. <https://www.boston.gov/departments/fair-housing-and-equity>

¹⁹ Per the Massachusetts Commission Against Discrimination. <https://www.mass.gov/orgs/massachusetts-commission-against-discrimination>

Various city and state programs exist to assist property owners with the cost of making a property lead-safe. In Boston, the Boston Redevelopment Authority administers a program of forgivable loans for deleading based upon the income of the property owner and/or tenant of up to \$10,000 per unit.²⁰ The Boston Water and Sewer Commission also administers a program for up to \$4,000 credit toward the cost of replacing lead water service lines.²¹ At the state level there is an income tax credit of up to \$1,500 to offset the cost of deleading a property as well as the Get the Lead Out Program of loans up to \$45,000 (0% interest and not payable until sale of the property for owner-occupied) for deleading costs.²²

Though not mandated by law, these same program activities and resources are offered on a voluntary basis to families whose child has a blood lead level of 5 to 9µg/dl (referred to BCLPPP by DPH as well) or who request a lead inspection in absence of a blood lead test. Availability is based upon program capacity with poisoned child cases prioritized.

The CAL Project

With funding from the National Association of County and City Health Officials (NACCHO), the BPHC applied a Health in All Policies (HiAP) and community engagement approach to planning the next steps in lead poisoning prevention, in what was called the Community Action on Lead (CAL) Project. Health in All Policies is a collaborative approach to incorporating health considerations into decision-making and addressing the social determinants of health that drive health outcomes and inequities.²³ The purpose of the CAL Project was to review existing policies, programs, and resources for lead poisoning prevention and intervention in Boston to identify improvements that can be implemented in current programs and policies as well as areas for future policy development to have a positive impact on lead poisoning prevention. While the geographic focus was on Boston, participants and organizers understood that outcomes of the process, especially policy proposals, could have state-wide impacts and could be replicated in other states.

To achieve this purpose, the BPHC hosted four public meetings and surveyed key stakeholders to have a diverse set of stakeholders involved in developing the ultimate roadmap of next steps in lead policies and programs. The meetings were hosted by the BPHC and facilitated by Rick Reibstein of Boston University's Department of Earth and Environment with assistance by his student, Josh Taylor. Meeting participants included those with professional, academic, legal, nonprofit, medical, government, and personal perspectives and experiences with lead and lead poisoning. Participants were invited to meetings by email, following creation of a distribution list of those in the BPHC's network. Participants who were property owners who had made their homes lead-safe, contractors, or parents of children

²⁰ <https://www.boston.gov/departments/neighborhood-development/boston-home-center/get-financial-help-remove-lead-your-home>

²¹ <https://www.bwsc.org/environment-education/lead-your-water/lead-replacement-incentive-program>

²² <https://www.mass.gov/service-details/learn-about-financial-assistance-for-deleading>

²³ The Helsinki Statement on HiAP, issued at the World Health Organization's 8th Global Conference on Health Promotion in 2013, called upon governments "to ensure that health considerations are transparently taken into account in policy-making, and to open up opportunities for co-benefits across sectors and society at large." https://www.who.int/healthpromotion/conferences/8gchp/8gchp_helsinki_statement.pdf?ua=1

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with lead poisoning were invited by both email and postal mailing. Two meetings were held in person, but the COVID-19 pandemic resulted in the other two meetings being held virtually. Participation remained consistent at approximately two dozen participants per meeting.

| Meeting Date | Meeting Topic | Number of Participants |
|-------------------|---|------------------------|
| December 19, 2019 | Planning meeting | 27 |
| February 18, 2020 | Review of policies and programs to prevent lead poisoning and identifying gaps | 27 |
| October 8, 2020 | Focus on non-paint sources of lead and policies/program to address them | 16 |
| November 5, 2020 | What resources do parents and property owners need to protect children from lead exposure and lead poisoning? | 20 |

BPHC also solicited feedback from three high-priority stakeholder groups – contractors who work with lead hazards, parents of children with lead poisoning, and property owners who had deleaded their homes – through surveys distributed electronically and by postal mail. Potential respondents were given nearly two months to submit responses, with the survey open from September 1, 2020 through October 31, 2020. Responses were received from 4 contractors, 8 parents, and 14 property owners.

Survey Results

Contractors (4 respondents)

Contractors expressed the following:

- The feeling that the Massachusetts Lead Law is not strict enough and “leaves too much lead behind.”
- That the notification system is complex
- That the Federal dust wipe standard is too strict
- That encapsulation should be included as an accepted abatement method for walls

Contractors recommended that homebuyers:

- Have the prospective home tested and/or deleaded before purchasing
- Should review all inspection reports
- Should not accept a lead disclosure of “unknown.”

All contractors reported that they get regular testing for lead exposure.

Parents (8 respondents)

Parents expressed needs for:

- More proactive education on lead and lead hazards (before their child was exposed)
- More information and support for tenant rights
- Help understanding the process once a child is identified as having lead poisoning

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- Help navigating the enforcement, inspection, and deleading process
- Assistance getting health insurance
- Primary care physician or others to prepare parents for the process before first contact by public health

Property Owners (14 respondents)

Property owners expressed needs for:

- Support in paying for deleading or for paying for alternate housing while work is being done
- Assistance navigating the process of deleading if they rent their property to tenants
- Guidance in choosing a contractor
- Help completing paperwork
- Education about the Massachusetts Lead Law and deleading best practices
- Tying deleading financing into the purchase of the home
- The ability to pay off financial support received only when selling or moving out, rather than when refinancing for non-luxury reasons, so as to not delay necessary maintenance

One also expressed a concern that the lack of clear indication of whether or not lead is present in a property allows renovations and repairs to be done in homes that may have lead in them.

They advised other homeowners or prospective buyers to:

- Delead their homes (e.g., “[Deleading] was a lot of work but worth it.”), especially prior to move-in if possible
- Only purchase a newer home or a home that has already been delead
- Be an informed buyer: Get a lead inspection prior to making an offer
- Avoid shortcuts
- Educate themselves on lead

Themes Surfaced During Meetings

Additional Resources are Needed. Throughout the process, a recurring theme underlying all of the general concepts and specific suggestion, with few exceptions, was the need for additional funding/resources. This included expanded staffing for existing and new programs, expanded funding resources for families and property owners, and additional supports resulting from suggested policies.

The Value of Investment in Lead Poisoning Prevention. The costs of lead poisoning are extremely high for those who are exposed and their families, with estimates of the value of lead poisoning prevention indicating that investments bring substantial benefit to society.²⁴ Benefits include reductions in crime,

²⁴ For example, see the report by Patrick Breyse of the National Center for Environmental Health of the Agency for Toxic Substances and Disease Registry, that found preventing lead exposures for children born in 2018 would save \$84 billion. “Lead Elimination for the 21st Century”, *Jrnl of Public Health Management and Practice*, Jan/Feb 2019,

economic contributions, a healthier populace with lower medical costs, and a lowered need for special education, tutoring, or other extra-curricular enrichment.

A Duty to Act Affirmatively. It was stated that there is a duty to act because the harms associated with lead exposure are so serious and are also preventable. Because of the permanent nature of damage due to lead poisoning, prevention efforts must be active and vigorous. Lead and the harms it causes will not go away on their own.

Information is Key. There was a consensus that the public needs education about the harms of lead exposure, to address lack of awareness and the false perception that lead is no longer a problem. Action to create a sufficient level of information would empower individuals and move the market to reduce further unnecessary lead exposure.

Focus on Both Response and Prevention. It is vital to both respond to the needs of those already poisoned and to concurrently prevent future poisoning, requiring adequate funding for both of those efforts. Participants repeatedly recommended additional resources be devoted to accelerating progress on both fronts: response and prevention.

Address Ancillary Impacts, Too. A central tenet of a Health in All Policies approach, as there are often ancillary impacts of both response and prevention efforts. For example, in fiscal years 2013-14 (the last years for which data is available), one in four housing discrimination investigations conducted by the Boston Fair Housing Commission was related to lead paint, a concern that was repeatedly raised by meeting participants.²⁵ It is critical to look for unintended consequences and perverse incentives that may be created by changes to policy or programs just as it is important to look at health impacts of policies and programs not traditionally thought of as relating to health.

Strategies Should Be Comprehensive. Comprehensive strategies would address all the pathways by which children are exposed to lead - homes, schools, yards, water systems, and products.

Universal Housing Safety. If lead safety were accurately seen as a precondition for safe habitation, it would most effectively prevent lead exposure among children and adults alike. A goal of universal safety – in which lead safety is accurately seen as a precondition for safe habitation – can be implemented with incentives to generate market movement. The presence of a child could be made a priority in the provision of assistance. A well-crafted program could cause landlords to prefer families with children so that they can qualify. A city or state could redesign the system of incentives so that landlords respond in the manner society needs. Instituting incentives to become lead-safe is necessary to counter existing incentives to ignore the problem. Current conditions incentivize tenants who are uncertain of housing to avoid reporting hazards and financially unstable landlords to hide problems or discriminate in renting to avoid costs of compliance.

https://journals.lww.com/jphmp/Citation/2019/01001/Lead_Elimination_for_the_21st_Century.2.aspx. Or see Elise Gould's widely-cited estimate that "Each dollar invested in lead paint hazard control results in a return of \$17-\$221", in "Childhood lead poisoning: conservative estimates of the social and economic benefits of lead hazard control", in *Environmental Health Perspectives*, July, 2019, <https://pubmed.ncbi.nlm.nih.gov/19654928/>.

²⁵ Massachusetts Department of Housing and Community Development <https://www.mass.gov/doc/analysis-of-impediments-to-fair-housing-choice-2019/download>

Recommendations Identified

The ideas surfaced by the project participants were many and varied but are categorized generally below. These include local changes BPHC may be able to take unilaterally, but many recommendations also concerned actions that may be beyond the practical or legal authority of the city. It was noted that the city can advocate, perhaps with other cities, for action on the state level.

Redesign the Incentive Structure. In the system as currently designed, the property owner may perceive an interest in avoiding or delaying action to address lead hazards, or in not identifying the existence of hazards in the first place. While education and outreach can help property owners both understand the problem and existing incentives to address lead hazards,²⁶ these incentives are inadequate to change their behavior on the scale needed. Stronger incentives must be designed into the system including additional financial assistance to address lead with more relaxed qualification criteria and repayment/forgiveness options. Participants were clear in expressing the need to tip the balance such that there are clear benefits to property owners to identify and address lead hazards that outweigh the perceived benefits of ignorance of, or concealment of, a lead hazard.

Revive and Expand Already Demonstrated Programs and Strategies. Boston can build on the foundation of what it has already done over the last five decades. In the past, BCLPPP implemented large-scale educational campaigns that included billboards, subway signage, and extensive outreach. Two successful projects called *Lead Safe Yards* and *Humphrey's Place Project* addressed lead in soil through means other than excavation and removal. Boston's Article 89 (2013), which encourages urban agriculture and produced BPHC's *Soil Safety Guidelines for Commercial Urban Farming*, could be expanded.²⁷ The Boston Water and Sewer Commission's Lead Replacement Incentive Program could also be expanded.²⁸

Expand BCLPPP Services. An increase in BCLPPP staffing would support additional case management, training, inspections, and enforcement. Expanded staffing will not only support current intervention programs but allow for additional primary prevention efforts including:

- On-demand lead inspections of homes, even when a lead-poisoned child is not present
- Expanded outreach and education efforts in the community to promote testing and early intervention
- More case management/concierge service to parents and/or property owners navigating the system of services and resources to respond to lead hazards

Increase Accountability in Industries that Use Lead in Products. Participants commented that there needs to be more accountability on the part of manufacturers and importers who put lead in commerce. While testing equipment has become affordable, the fact that consumer products containing lead continue to be identified in homes and on store shelves indicates that widespread testing is not taking

²⁶ Some real estate professionals see it differently than others. For examples of reasons to address the lead problem instead of ignoring it see the *Real Property Management Boston Blog*: <https://www.rpm-boston.com/deleading-rental-properties-in-massachusetts>.

²⁷ Article 89 Urban Agriculture <http://www.bostonplans.org/getattachment/8405c72c-7520-43ad-a969-0e27dddade7a2>

²⁸ Boston Water and Sewer Commission's Lead Replacement Incentive Program <https://www.bwsc.org/environment-education/lead-your-water/lead-replacement-incentive-program>

place and that suppliers/manufacturers are not being effectively held accountable. If product recalls are not effective or it is found that lead has been placed in commerce recklessly²⁹, legal action may be the mechanism needed to reduce the profit incentive for endangering others.

Expand Inspections and Testing. All residences built before 1978, particularly those with children living in them, should be tested. Testing tells us where lead is, so it is essential to avoiding exposures. Require testing for lead in water as well as in paint. Testing could take place at real estate transactions or upon request by a resident or property owner.

Strengthen Disclosure Requirements. Currently, owners of properties built before 1978 are required to disclose to prospective tenants or buyers whether the property contains lead, but they can declare the status as “unknown” which renders disclosure requirements ineffective. Meeting participants frequently and strongly recommended requiring disclosure that eliminates this “I Don’t Know” option and require that the results of lead testing be provided to the purchaser or lessee. Suggestions raised to implement this included:

- Policy change to simply require the removal of the option from real estate transaction disclosure forms
- Require testing as part of permitting rental property and either require disclosure of results or record them on a publicly accessible database
- Mandate lead testing as part of the real estate sale process like the current requirement to assess a septic system

Participants recommended that technical and financial assistance with testing be provided, as well as outreach to educate the regulated population about the value of testing, available resources to help, and the reasons why it can be a significant liability not to test. Members of the regulated population may believe that testing will expose them to liabilities and that avoiding testing that may result in certain knowledge of the presence of lead will harm their business, but providing actual information about lead provides significant liability protection to the regulated party, a fact that is not commonly appreciated.

Expand Water and Soil Testing. Drinking water should be tested. The Commonwealth has a program, though voluntary, for testing water in schools. Free residential water testing options should be made available to those wishing to assess their home drinking water. Water testing should also be available for childcare facilities. Water testing programs should include assistance with addressing high levels – such as providing filters – as interim control until the source of lead can be addressed. Similarly, soil testing should be freely and widely available for residences and conducted comprehensively in playgrounds.

²⁹ The term “reckless placement” refers not just to selling noncompliant products but also to the common-law concept of selling a product that a reasonable person would not sell without proper warning, when the harm from using that product without adequate warning is foreseeable. The primary example is companies that put lead in paint, that have largely escaped liability for knowingly providing a dangerous product, (except for the recent Con-Agra case in California). <https://law.justia.com/cases/california/court-of-appeal/2017/h040880.html>.

Expand Product Testing. Sufficient testing of products should occur so that people receive adequate information about these sources to help them avoid purchasing them or using them.³⁰ Participants recommended having events in high-risk communities that invite residents to bring items to test for lead. Priority items would include those product categories already identified as frequently containing lead,³¹ and toys or other products with which children may come in contact. On the state and national level, participants recommended the creation and promotion of a regularly updated database of products containing lead and the creation, and enforcement of, a regulation that limits excessive lead content in products. Such a regulation could be used to alert manufacturers and suppliers to violations and issue “stop sale” orders and penalties for repeat offenders. Taking legal action to increase accountability for placing lead in commerce without proper warning or protection, when its presence in the product is known or should have been known, would be a further incentive for manufacturers and suppliers to ensure their products are free of lead.

Expand Blood Lead Level Testing in Babies and Young Children. Although pediatricians recommend testing of all children, and all children receiving Medicaid are required to be tested, only half all the children six and under in Massachusetts are currently tested for lead in their blood, and, as previously mentioned, only approximately 3 in 4 Boston children are tested annually. Participants recommended improving lead screening by offering it through non-clinical settings such as daycare, preschool, and kindergarten facilities in a model like 2020/2021 COVID testing sites. It is particularly important to seek out immigrant and foster care children who may be falling through the cracks. Undocumented immigrants may be reluctant to come forward with information for fear of being discovered and deported, and legal immigrants may be reluctant to receive assistance for fear of being identified as a “public charge” and then being denied eligibility for citizenship.

Expand Blood Lead Level Testing in Older Children and Adults. Older children and adults are not as vulnerable to lead poisoning as very young children, but they may still be at risk. Certain occupations and hobbies expose individuals of all ages to the potential for lead exposure. Efforts should be made to encourage testing of older children and of any adults who may have exposure risks.

Training medical professionals to ask about occupations and hobbies that may increase risk as well as identify the signs of lead poisoning will be a valuable way to spread awareness and prompt more frequent questioning and testing. Outreach to professionals performing intake, diagnosis or other aspects of patient care is also needed to boost capacity to rapidly identify lead poisoning when it is occurring, and to follow up on the cause to prevent future harm.

Expand Education and Outreach. Participants strongly recommended a renewed and refreshed approach to educating the public about lead poisoning and lead poisoning prevention, including sharing “success stories” about the benefits of taking action. Participants noted many communities who should

³⁰ Josh Taylor, with the help of Rick Reibstein, has written a program that compiles alerts from the Consumer Product Safety Commission pertaining to products found with lead. Those with coding skills may find the work, posted at the open source site <https://github.com/JoshuaatBU/LeadScraper>, to be a useful model for developing their own version of an alert compiler.

³¹ For more information about products that contain lead, see the October meeting report at <https://www.bphc.org/whatwedo/healthy-homes-environment/lead-poisoning-prevention/Documents/Meeting%20%20Report.pdf>.

be targeted, and many forms that the outreach and education could take. Outreach should stress the overall value of lead poisoning prevention. Meeting participants commented on the importance of people knowing that the benefits of investing in lead poisoning prevention are very large. It should stress the actions that people can take, and the resources available to them, such as BWSC's lead service line replacement financing assistance and City of Boston Office of Neighborhood Development financial support. Outreach should involve not just informing the regulated population of legal requirements and the affected population of legal rights, but also producing narratives that tell a story of overcoming problems that need not persist. Specific population/approach recommendations by participants were:

- *Central information clearinghouse and concierge service.* There are many places to find relevant information, but a central point of contact used by those in need could make a positive difference. Much more attention is needed to support navigating lead-related processes. A “concierge” or “case manager” type service could be provided for those who need one-on-one support from initial contact/intake through accessing and using various resources for process like medical intervention and home deleading. Investing more resources in assisting people with all the programs available will improve the effectiveness of those programs.
- *Outreach to doctors and community health organizations.* Providing information about lead and resources to address it to those in the medical system could improve capacity for early intervention, making the medical response more preventive than reactive. Medical providers could better spread awareness to patients about lead poisoning and sources of lead exposure. This is critical given anecdotal accounts of clinicians assuming lead poisoning is a problem of the past that has been solved or “doesn’t happen in this community”.
- *Outreach to churches and social organizations.* These community networks serve as a trusted source of information for many and could be effective in spreading information to vulnerable populations who may not be reached by other means.
- *Outreach to property owners and real estate professionals.* It is crucial to prevention efforts that property owners and real estate professionals understand the benefits of lead safety for themselves and the community, know of all assistance available, and have an ongoing voice in identifying unmet needs. Courses targeting real estate agents as part of their continuing education requirements, could be a mechanism for this outreach. A course developed under a U.S. Environmental Protection Agency grant that was provided throughout New England for several years, focused on lead, achieved measurable changes in outlook and claimed behavior by real estate agents who learned about the requirements of state and federal laws around lead and housing discrimination. Though the Disclosure Act did not produce the information needed about lead in residences, education could help more owners to understand the reasons to disclose, including possible protection for them from liability and lawsuits. Education to these two groups can correct misconceptions about, and increase the positive impacts of, existing laws and financial resources for deleading.
- *Outreach to tenants.* Tenant education on rights, particularly antidiscrimination laws and resources, is a critical need for many. Connections to available legal and social work resources should be established and/or strengthened for efficient referrals. Such work can also mobilize community members to advocate for additional resources where gaps exist.

- *Outreach to pregnant individuals.* Reaching this group is especially important because lead exposure is particularly harmful during pregnancy and for babies and small children. Prenatal visits and other pregnancy-related services (e.g., WIC and pregnancy support online communities) provide an opportunity to educate pregnant people about safe and healthy housing for their child, and to ensure this is on their radar before their child has an elevated blood lead level.
- *Outreach to hobby communities.* Many hobby activities involve potential exposure to lead. Outreach to fishing clubs, shooting clubs, and crafting clubs (e.g. stained glass, metal working, casting) would provide a way to access adults whose hobbies place them more at risk for lead exposure.
- *Occupational health outreach.* Outreach to organizations and companies whose industries expose their employees to lead hazards could be a way to increase employer and employee knowledge of practices that support worksite safety. Work populations exposed to lead pose risks of taking lead dusts home to their families. Take-home occupational dusts could be addressed by targeting where it happens. Education could be developed for workers in those sectors shown to be experiencing high levels of exposure in the state’s occupational health lead registry and prevention of take-home dusts can be incorporated into workplace protection programs. Further, integrating occupational health with community and family health would provide additional protection to workers and their families.
- *General Considerations*
 - Identify individuals, such as pediatricians or faith leaders, that your target audience trusts, to support message delivery.
 - Provide advice in a way that is not accusatory. Recognize that advice to change behavior can cause discomfort.
 - Tell narratives, including stories about successes, such as how property owners easily took care of the problems, how tenants obtained safe housing, how compensation for harm was received.
 - Provide the information in forms people can understand. Using pictures to illustrate helps, as well as translation into languages spoken by the target audience. Work through community organizations.
 - Hold innovative events, such as pop-up clinics.
 - Use social media, billboards, radio/print/TV media.
 - Have staff offer to speak at meetings of relevant organizations and public events and encourage others to spread the word about available information, resources, and immediate actions that can be taken.
 - Work to counter both the lack of awareness of requirements and available resources. Work to generate understanding of the importance of lead poisoning prevention.

Increase Aid to Families Impacted by Lead

- *Assistance in Accessing Educational Enrichment.* Children harmed by lead should receive educational support to counteract the learning and developmental effects of lead exposure. Educational enrichment for lead-harmed children could include both special education and tutoring, as well as support for families to enroll their child in extra-curricular programs that

provide stimulation and growth. Such programs can enhance the child’s potential to grow despite the harm they have experienced.³²

- ***Provide One-on-One Assistance.*** The meeting participants stressed the importance of providing one-on-one service to families to support the child’s development, such as a case manager, through the central clearinghouse as referenced above. Families impacted by lead are often dealing with a full constellation of issues and dedicated support service can help make sure they take advantage of all resources available to them. Current programming focuses on education about lead mitigation in the home, connection to medical follow-up, medical case management, and coordination with the inspection/enforcement process but relies upon referral to others for the process of accessing various financial assistance sources to support deleading work.
- ***“Wrap Around” Services. Respond Immediately When Children Have Elevated Levels.*** When a child has an elevated blood lead level, the focus is on that specific child and the immediate needs of environmental remediation and medical management. Additional components should be included such as:
 - Evaluation of the blood lead levels of other children who live in the same environment
 - Relocation of children, particularly those with elevated levels, from the home before and during deleading work to prevent continued exposure
- ***Address the Fears of Immigrant Families.*** It is essential to provide privacy protections for immigrant families, as there may be fears of reporting to ICE and/or deportation or being classified as a “public charge” for accessing services. Additionally, expanded program connection to anti-discrimination legal resources could be built into a “concierge” case management model.

Increase Assistance to Property Owners.³³ Meeting participants identified a need to increase financial assistance available to property owners to make their homes lead-safe. This could be funded through a registration fee (or occupancy permit fee) and fees on transfer of real estate. A meeting participant drew a parallel between the way states and municipalities have regulated septic systems (requiring testing at the time of property transfer) and implementing a similar model for lead with associated financial supports for deleading. Concerning rentals, there is precedent for lead registration and a system of registration already established. There could be additional value to prioritizing and increasing assistance to residences with children and waiving the fee to create an incentive to counter discrimination.

Providing assistance without any upfront investment required to make a home lead-safe, at least for certain populations, would ensure that low-income property owners do not experience barriers to

³² This CDC publication describes early intervention programs and federal assistance available to states. [Educational Interventions Children Affected by Lead.pdf \(cdc.gov\)](#)

³³ The current cost of deleading was described as prohibitive for many pocketbooks, although the cost has declined by 50–90% as a result of the 2017 changes in state law. The Commonwealth has a “Delead on my Own” program, which authorizes owners to perform their own low- and moderate-risk deleading, after training and inspection, but it does not have enough participation. It may be that not enough people know that this is an option.

protecting the health of their families or their tenants.³⁴ Similarly, reducing or removing barriers to accessing deleading assistance (income eligibility criteria, requirement to have a child in residence, etc.) could increase use of these resources in a primary prevention rather than response context. This will likely necessitate expansion of the funding pool available for this work.³⁵

Some property owners may find that a barrier to deleading is the need to relocate their families or their tenants while work is being done. Providing financial assistance to help with relocation would reduce this financial barrier.

Provide the Information That Will Move the Market

- ***Time-Limit Letters of Compliance.*** Participants that have professional experience said that landlords and sellers use Letters of Compliance as positive sales points. However, if a home with a Letter of Compliance is not maintained it may no longer be safe, so the status of compliance should be revisited at regular intervals. Making Letters of Compliance time-limited would support that.
- ***Expand the Lead-Safe Homes Registry.*** The existing lead-safe homes registry could be rapidly expanded if:
 - testing were required before sale
 - property owners were incentivized to be on the existing lead safe registry. The truly lead-safe stock of housing is currently invisible, generating no effective market pressure to increase its value, as a consequence of the lack of information about the housing stock caused by the ability to claim unknown lead status on the disclosure forms. The lead-safe registry could be expanded to welcome and feature test information (certified by licensed professionals) from homes that have not had a lead problem and were not under order to delead. This would provide owners with a reason to invest in lead safety.

Work with Banks and Insurance Companies. The city could look for opportunities to work with the insurance industry (and state insurance commissioner) to identify insurance incentives for deleading, such as discounts for lead-safe housing. For example, current home insurance companies typically do not consider the presence of lead in a home, but they could write a lead exclusion clause that would provide an incentive to delead. Another example could be to create state insurance laws that limit what insurance companies can exclude so that they are incentivized to offer customers a discount for being lead-safe due to the reduced liability risk – similar to a car insurance discount for low mileage or having an anti-theft device installed. Some insurance companies in New Hampshire, one meeting participant commented, are now requiring inspections or deleading to maintain home insurance. Mortgage lenders could also require deleading before lending. Finally, investing in local action to reduce lead risks could be a recognized means of compliance with the Community Reinvestment Act.

³⁴ Many owners have problems making even small investments, and some fear the uncertainty of what the ultimate cost will be, once they acknowledge the lead issue or embark upon deleading.

³⁵ Action to create lead safe residences everywhere will benefit public health and reduce the problem of discrimination against families with children. It can also reduce the stigma against receiving assistance. But assistance to higher-income sources or residences without children must not compromise the ability to assist high-risk and low-income populations.

Create a Permanent Lead Advisory Committee. Participants recommended establishing an ongoing advisory committee to work with BPHC on lead issues. This committee could be responsible for:

- Reviewing programs' progress and commenting upon new plans.
- Investigating questions like why people do not seek out help, why property owners do not take action, why children are not screened, whether people know about legal and other resources they can use, and whether people feel authorities can be trusted.
- Helping review new outreach materials, program designs, and affected and regulated population needs.
- Helping with the implementation of proposed actions and leading policy change advocacy efforts.

Roadmap of Next Steps

Taking the themes and specific suggestions surfaced and prioritized by the stakeholder group throughout the CAL Project, the BPHC Environmental & Occupational Health Division has developed the following roadmap of next steps to eliminate lead poisoning in Boston. This is comprised of specific local programmatic actions that can be taken over the short, medium, and long term to improve lead poisoning prevention efforts and larger efforts involving developing programs or policies at the city or state level which will take longer effort and a larger coalition to achieve.

Short-term Programmatic Actions

In parallel with the meeting process throughout 2019 and 2020, the Boston Public Health Commission's Environmental and Occupational Health Division has begun to work on several efforts to address the gaps and recommendations identified by meeting participants. These are all currently moving forward:

- **Increase inspection staffing to provide environmental lead inspections and intervention.** Through new hires and cross-training of existing inspection staff, the program is actively expanding the pool of Licensed Lead Inspectors from 3 to 6. This doubling of staffing will allow the program to continue offering a high level of environmental intervention for cases of lead-poisoned children and expand capacity to offer on-demand lead inspections for concerned tenants and property owners in the absence of a poisoned child.
- **Increase access to training resources for property owners and contractors.** The office has been engaged in a process of revising the training curriculum and registration process for both their Moderate Risk Deleading class and their Renovation Repair and Painting certification classes. Participants will soon be able to register for classes online and have the option of taking the classes in person or online. Future actions will be to identify additional training staff to allow for more frequent course offerings.

- **Expand case management services scope.** The program will begin a process of in-house training for existing and new health educators working with lead-impacted families to increase their scope of knowledge about existing financial resources/processes for addressing lead so that they can provide a more “concierge” service helping their clients and their landlords better navigate the system and work with referral contacts at the various city and state agencies such as the Boston Department of Neighborhood Development and MassHousing to whom the program refers cases.

Medium and Long-Term Programmatic Actions

In the medium term (the next 2 to 5 years) there are a number of activities and initiatives the process identified that can be carried out by the BPHC, community partners, and those working on the issue of lead elsewhere in Massachusetts. These include:

- **Enhance/expand outreach and improve coordination with other programs and partners.** The insights gained through this project, combined with the COVID-19 pandemic, have highlighted the importance of an enhanced outreach strategy and strengthening partnership connections. In particular, the weakness of relying on ‘the usual processes’ of outreach via community meetings/events and historic partnership connections was highlighted by the disruption of COVID-19. To that end, the program will work to:
 - Establish partnerships with social services programs (WIC, DTA, food pantries), communities of faith, neighborhood associations, and other spaces where parents may frequent to both conduct outreach and build additional referral connections for supporting BCLPPP client families. For example, the office has been exploring options for working with food pantries and WIC programs to support distribution of lead poisoning educational materials to their clients and connect them with BPHC services.
 - Expand current relationships with childcare providers, subsidized housing agencies, community health centers, nonprofit homeownership support and community stability community organizations, and schools to increase outreach around preemptive testing of homes for lead/deleading and testing children for blood lead level.
 - Grow online and physical mass media outreach efforts including social media (BPHC Twitter and Facebook accounts) posts, YouTube videos, paid online advertising in social media, billboards, ads on public transportation (buses and subway), and ads on streetside solar trash bins throughout the city. The focus of these efforts will be the messages that lead poisoning is still a public health threat to children and that parents should have their children tested and property owners should have their homes assessed and deleading to prevent children from being exposed. The focus will primarily be on online efforts due to the more direct and hands-on nature of that work as well as lower cost, but the program is aware of the often deep digital divide necessitating the maintenance and expansion of efforts not based on the internet as well.
 - Increase connection, coordination on case management, and data sharing with programs that administer or assist in accessing funding resources for deleading such as the Boston Department of Neighborhood Development (DND), MassHousing, the US Department of Housing and Urban Development. Closer collaborative work between the programs will speed up the process of deleading, reduce client frustration, and

prevent property owners from missing out on options/resources to get the lead out of their homes. Partners such as DND also offer first time home buyer classes and similar venues where BCLPPP can reach out directly to prospective property owners.

- **Hire additional outreach workers/home health educators.** BCLPPP has two staff whose responsibilities are to provide case management for families with children with lead poisoning and to conduct outreach with childcare providers and social services agencies in the Boston community. Additional staff will allow for greater reach to Boston residents, with the goal of increasing awareness and preventive efforts and will be critical to building and maintaining the expanded community partnerships described above. This will require internal budget advocacy in coordination with policy advocacy work described below to make resources for additional staff available.
- **Build on existing coalitions to support advocacy work.** The MA Public Health Association (MPHA) has a coalition working to support the elimination of lead poisoning. They have built a coalition to support *An Act Modernizing Childhood Lead Poisoning Prevention (S1234/H2010)*, sponsored by Sen. Julian Cyr and Rep. Andy Vargas, which would provide funding for the MA Department of Public Health Childhood Lead Poisoning Prevention Program to support service provision and restarting their proactive prevention program. The coalition is also supporting the adequate funding of the Get the Lead Out Loan Program (financial assistance for deleading), have endorsed An Act Ensuring Safe Drinking Water at Schools, and, in partnership with Lawyers for Civil Rights and 40 public health and community health organizations, submitted a public letter to MA Attorney General Maura Healey to urge her to file a lawsuit against lead paint companies to hold them accountable for their deceptive and damaging marketing campaigns.³⁶ BCLPPP currently participates in and works with this coalition and will leverage that relationship with MPHA and the group they have built (including recruiting more allies to the group) to move forward the long-term policy ideas described here.
- **Convene a lead advisory committee.** BCLPPP will plan to bring the stakeholder group that participated in this project back together in late 2021 or early 2022 for a progress update report and to seek additional comments and suggestions as the program moves forward on these goals. This nucleus can be built out to a standing advisory group supporting the program's efforts by offering insight and feedback. The program will also reach out to the BPHC's overarching community advisory processes such as the Community Advisory Plan, Health Equity Advisory Committee, and strategic planning process.

Public Policy Priorities and Actions

The workgroup process identified the following long-term policy change items that are worthy of more detailed exploration moving forward. Several of these possible policy actions overlap or present separate alternative solutions to the same issue and may have unintended consequences, making a careful evaluation of potential impacts to racial equity, environmental justice, and health a critical first step before moving forward with any of these. For example, we wish to be very cautious that efforts to

³⁶ MA Public Health Association <https://mapublichealth.org/priorities/essential-public-health-services/>

proactively address lead hazards do not contribute to gentrification and displacement through the unintended consequence of driving conversion of rental units to condo developments.

For this work, BCLPPP could coordinate with the BPHC’s Office of Intergovernmental Relations, the MPHA-lead coalition described above, and a larger network of advocates and stakeholders (including participants in this project) interested in the topics. The timeline for these is likely to be 3 or more years to fully explore these including conducting impact assessments, convening additional stakeholder groups, drafting policy guidance, and educating key decision-makers. Some advocacy efforts are already ongoing in the Commonwealth related to these policy change items.

- **Address lead through the real estate transaction process.** There are several points in the process of purchase/sale of real estate where lead hazards could be identified and/or removed to make homes safer before a child moves in and is exposed. These include:
 - **Remove the “unknown” option from the lead disclosure forms that are completed at real estate purchase/sale.** As mentioned in this report, this “I don’t know” option renders disclosure requirements ineffective. Requiring a conclusive statement that a home does or does not contain lead will encourage property owners not only to test for lead (it will be effectively required) but to delead the property as a potential selling feature, particularly if confirmation of deleading or a test showing no lead present is coupled with waivers of liability for seller and buyer.
 - **Require inspection and full deleading of any property before sale.** As a step more comprehensive than strengthened disclosure, real estate regulations in the state could be updated to require that all properties must have documentation of an inspection showing no presence of lead hazards prior to closing the real estate transaction. As an example of a similar requirement on the local level, the City of Malden, MA has an ordinance requiring any lead service line to the property be removed prior to property sale and in other circumstances.³⁷ A similar requirement could be passed for Boston while a larger requirement looking at all lead hazards would likely require action state-wide.
 - **Work with insurance companies to tie deleading to PMI and homeowner liability insurance rates.** Removing of lead (or verifying that lead is not present) represents a reduced risk to the insurance carrier that claims will be made against the liability policy and improves the possible resale value in the event of default on mortgage payments. Such a benefit could be formalized as an incentive to customers in the form of a premium discount such as current “safe driver discounts” on auto insurance.

- **Expand financial support for deleading.**
 - **Increase funding available in existing deleading financial assistance programs.** Several programs exist at the city and state level that provide funding to pay for lead abatement work in various types of properties. The funding pools available to these programs should be expanded to allow for both keeping up with rising project costs due to inflation and to allow for more deleading projects. This will involve a combination of advocacy around the annual city and state budgets as well as current and ongoing

³⁷ <https://www.cityofmalden.org/223/Removal-of-Lead-Pipes-Ordinance>

advocacy work at the state level to increase certain fees and fines which are used to fund these resources. This work is already ongoing through the MPHA coalition described above and BCLPPP is part of that work.

- **Expand access to funding assistance.** With more funds available, more property owners would be able to get financial support to make their properties lead-safe. Particularly for low-income property owners, providing assistance to make a home lead-safe without any upfront investment required, would reduce barriers to preventing lead poisoning.³⁸ Beyond simply making more money available, this means reducing eligibility restrictions and process (paperwork) barriers to accessing these resources. Some barriers identified that could be reduced/removed included paperwork needed to verify income eligibility, the income eligibility requirements themselves, restrictions on who can do the work and how the contracting process is done, and the practice of placing a lien on a property (many property owners are reluctant to enter into this due to how it might impact their ability to refinance a primary mortgage or further borrow against the value of the property) to secure repayment of a 0% interest loan at sale of the property. Achieving this goal of reducing barriers to access will require advocating for streamlining processes and relaxing eligibility requirements for existing programs and the establishment of new programs which are often tightly tied to state regulations or legislation.
- **Provide financial assistance for relocation during deleading.** Removing a lead-poisoned child and their family from a home with lead hazards prior to and during deleading work is important for preventing continued exposure. Given that relocation costs can be prohibitive for some property owners, providing financial assistance for relocating would further reduce barriers to making homes lead-safe. BCLPPP will work with advocates to establish a state program/resource to help property owners cover some or all costs of relocation.
- **Revive programs that address lead in soil.** BCLPPP's Humphrey's Place and Lead Safe Yards Projects demonstrated low-cost means of removing lead from soil. Programs built on the knowledge gained from these projects could support property owners in improving soil safety. In particular, an expanded program providing technical assistance and access to resources to use landscaping practices to reduce lead exposure risk from contaminated soil can offer a low-cost interim alternative to excavation and disposal of tons of surface soil from residential yards. Implementation of such a program will be contingent upon increased staffing levels (see above) and increased budget support for the program and intervention resources via either grants or, more preferably, continuing city or state support.
- **Develop systematic processes for geographically targeted lead service line removal.** While financial assistance programs do exist (e.g., the Boston Water and Sewer Commission's Lead Replacement Incentive Program), funds are limited, and replacement only occurs at the request of property owners. If the BWSC and the Massachusetts Water Resources Authority were to create a program or process by which they replaced a pre-identified number of lead service lines

³⁸ Many owners have problems making even small investments, and some fear the uncertainty of what the ultimate cost will be, once they acknowledge the lead issue or embark upon deleading.

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each year, significant progress would be made on ensuring that every home's water is safe to drink. This could be done in conjunction with existing water and sewer line replacement/relining/improvement projects or as a stand-alone process by which Boston Water and Sewer (BWSC) notifies all property owners in a pre-selected set of streets each year that BWSC will replace their lead service line at no cost to them if they opt in for the work to be done. This will require additional funding support from the city or state level to cover the costs of removal, replacement, and repair of landscaping. One example of how this type of project has been implemented by the City of Boston was a shift to proactive systematic street repair work rather than being driven by response to complaints when they found that most complaints weren't coming from neighborhoods most in need of repairs, but rather from those already most connected to resources.