

Charles D. Baker
Governor

Karyn Polito
Lieutenant Governor



Marylou Sudders
Secretary

Report to the Legislature on Lead Testing and Prevention Services in the Commonwealth

February 2017



Statutory Charge:

Pursuant to Line Item 4000-0300 of the Fiscal Year 2017 Budget, the following report details current lead testing services in the Commonwealth and recommendations for expansion of services. Specifically, the legislative charge requires the Executive Office of Health and Human Services, in coordination with Department of Public Health and MassHealth, to report to the House and Senate Committees on Ways and Means on a plan to expand lead testing and follow-up services, including but not limited to:

- A review of all services currently offered for lead poisoning-related services;
- A plan of implementation for expanded lead poisoning-related services, including steps required to increase reimbursement opportunities for services such as lead poisoning testing, prevention, follow-up, investigation and treatment;
- Spending and revenue cost estimates for implementing such expanded services;
- Revenue maximization opportunities associated with pursuing such services; and
- An analysis of the short- and long-term cost effectiveness with providing such services.

A. Background and Current Services:

The Massachusetts Lead Law¹ is one of the nation's most comprehensive state laws for childhood lead poisoning prevention. Enacted in 1971, the Lead Law requires the removal or covering of lead paint hazards in homes built before 1978, where any child under the age of six resides – regardless of the child's blood lead level or whether the property is owner occupied. Lead paint is the largest source of lead exposure for children in Massachusetts. Massachusetts has one of the highest rates of older housing stock in the U.S., with 71% of the housing in the state built prior to 1978.

Massachusetts is a universal childhood lead screening state, with all children under age 6 required to be tested for lead poisoning. Test results are reported to the Department of Public Health (DPH), which currently spearheads prevention efforts around lead poisoning through its Childhood Lead Poisoning Prevention Program (CLPPP). Every child must be tested for lead exposure between the ages of nine to twelve months, and also at ages two and three years (high-risk communities require an additional screening at age four). Children must have their blood lead tested at least once before entering kindergarten, and in some circumstances, may also be tested again at age five (e.g. if they have a lead-poisoned sibling). Mandatory code enforcement inspections and de-leading are enforced for blood lead levels (BLL) of 25 micrograms per deciliter of blood ($\mu\text{g}/\text{dL}$) or greater, and comprehensive and clinical case management and home visiting services are provided for any child with a BLL of 10 $\mu\text{g}/\text{dL}$ or greater at no cost to the child's family.

¹ M.G.L. c. 111, §§ 189-199.

DPH also collaborates with local communities to conduct more detailed analyses of childhood lead data. For example, a census tract analysis of BLL data was conducted for the city of Boston to examine associations between neighborhood demographics such as race and income and the occurrence of elevated BLLs. CLPPP case management services are broken into three components:

1. Clinical case management

- Clinical case coordinators/nurse case manager monitor re-screening children as well as coordinate and communicate regarding treatment plans with the child's pediatrician.

2. Home visiting with family advocacy and/or social services

- DPH contracts with local grantees funded through the federal Maternal and Child Health (MCH) Block Grant to provide culturally and linguistically appropriate community health worker home visiting services.

3. Environmental code enforcement

- Code enforcement lead inspectors investigate the child's home and enforce compliance with the law, including lead abatement.
- Every child with a blood level of 10 µg/dL or greater is assigned to clinical case management and a community health worker home visit.
- Code enforcement lead inspectors are assigned to inspect the home for any child with a venous blood lead level 15 µg/dL or greater:
 - o For those children with venous blood levels that are 25 µg/dL or greater, the code enforcement activities are mandatory and cannot be refused.
 - o The primary source of lead exposure is usually lead paint in the home. When lead hazards are not identified in the home or when deleading is complete, but the child's blood lead level does not improve, an inspector will investigate alternative sources, e.g., day care, drinking water, soil, toys or utensils, food, alternative medicines, etc.

The CLPPP has received funds from the U.S. Centers for Disease Control and Prevention (CDC) to conduct childhood lead poisoning prevention activities since 1993. CLPPP is funded primarily through a State Lead Education Trust, CDC grant funding, and the federal Maternal and Child Health Block Grant.

B. Implementation Plan for Expanded Lead Poisoning-Related Services

DPH continually aims to improve its lead poisoning response efforts. A lack of reimbursement for services such as lead poisoning testing, prevention, follow-up, investigation and treatment has not been identified as a barrier to children receiving appropriate prevention and treatment services. However, to address concerns associated with the health impacts from low-level lead exposure, DPH has proposed updates to its regulations (([://www.mass.gov/eohhs/gov/laws-regs/dph/proposed-regulations/lead-regulations](http://www.mass.gov/eohhs/gov/laws-regs/dph/proposed-regulations/lead-regulations).) which include the following:

Redefine “lead poisoning” in Massachusetts as a BLL of 10 µg/dL or greater.

Current DPH regulations define “lead poisoning” in children as a concentration of lead in whole venous blood of 25 µg/dL or greater. The Lead Law directs CLPPP to use code enforcement for properties where a lead-poisoned child resides (e.g., mandatory lead inspections, requirements to delead, property owner liability, and court enforcement, if necessary). At present, the occupants of a property may refuse a code enforcement lead inspection if a child’s BLL is lower than 25 µg/dL, increasing the possibility of continued lead exposure for a child with an already elevated BLL. Lowering the “lead poisoning” level from 25 µg/dL to 10 µg/dL will broaden the protection of children by expanding the number of properties where CLPPP would require inspection and remediation of violations of the Lead Law, increasing the number of lead-safe units. Lead screening data from calendar year 2014 indicates that 662 children were reported to CLPPP with BLLs of 10 µg/dL or greater.

Establish a “Blood Lead Level of Concern” as a BLL of 5-9 µg/dL and extend lead exposure prevention services to all families with a child having a BLL of 5 µg/dL or greater.

Current language in state regulations refers to “Blood Lead Level in Excess of the Level Considered Dangerous to a Child’s Immediate Health” as below the level defining lead poisoning (15–24 µg/dL). DPH proposes that this definition be renamed to “Blood Lead Level of Concern” and be lowered to 5-9 µg/dL to conform to CDC recommendations and definitions.

Require that venous blood tests be used to confirm lead poisoning in children for more reliable identification of elevated BLLs.

CDC guidelines recommend that initial capillary test values of 5 µg/dL or greater be confirmed by testing a venous blood sample. DPH regulations currently recommend, but do not require, venous testing to confirm lead screening in children. About half of all tests in Massachusetts are capillary; however, approximately 75% of capillary test results that are 10 µg/dL or greater are false positives.

Convene an Interagency Working Group to Address Childhood Lead Exposure.

In conjunction with regulatory initiatives, DPH will convene a working group to address strategies to increase screening rates of preschool children and to increase coordination within DPH programs that serve children and families, including WIC and Early Intervention. The working group will also include other state agencies that provide services to children and families that could advance lead screening, intervention, Healthy Homes activities, incentives for de-leading, and education about lead in drinking water, including the Department of Children and Families, the Department of Transitional Assistance, the Department of Housing and Community Development, and the Department of Environmental Protection. In addition, MassHealth can provide clinical leadership and other expertise to the Working Group, including technology assessments of interventions and therapies for the treatment of lead poisoning.

C. Spending and Revenue Estimates associated with Expanded Services

CLPPP does not seek direct reimbursement for services that it provides. Childhood blood screening is conducted by health care providers during childhood visits and is covered by private health insurance or MassHealth. MassHealth reimburses for lead testing primarily through the CLPPP. The state labs are enrolled as a MassHealth provider and MassHealth pays them on a fee-for-service basis based on the clinical lab fee schedule. MassHealth covers standard treatments for lead poisoning. In addition to elimination of exposures for most children with lead poisoning, treatment will typically consist of follow-up blood lead monitoring and, for those with elevated levels, neurodevelopmental monitoring. Chelation therapy, which removes heavy metals from the blood, is used with caution and only in cases with extremely elevated levels.

Lead inspections are conducted by CLPPP staff funded through the Lead Education Trust and the CDC CLPPP grant. Additional regional community health worker (and limited inspection) services are funded through the MCH Block Grant that DPH receives. Cost estimates with deleading are the responsibility of the family and can create a burden for families with limited financial means. Costs associated with long-term effects of lead poisoning are distributed through the system and may impact WIC, Early Intervention, Head Start, and schools.

CLPPP's proposed regulations to lower the definition of lead poisoning from 25 to 10 µg/dL and to establish a blood level of concern of 5 µg/dL underwent administrative review, were presented to the Governor's Advisory Committee and Public Health Council, and were available for public comment until late September. The comments have been reviewed and the regulations are being finalized.

D. Cost Estimates Associated with Providing Expanded Services

DPH estimates that the total cost of lowering the definition of lead poisoning to 10 µg/dL is approximately \$487,000 annually to support lead inspectors and environmental analysts, with an additional one-time projected cost of \$60,000 to purchase testing equipment. The CLPPP's case management and blood lead database tracks blood lead screening and environmental data, as well as assigns work to staff for case management. This database must be replaced as it will no longer be supported by the existing software vendors. Current database functionality including, but not limited to, customized data elements and work flow design will be critical for staff deployment and case management in the event of a lowered definition of lead poisoning. The estimated total to develop the database has ranged from \$500,000 to \$1,000,000.

CLPPP will address short-term costs of providing expanded services through reserves in the Lead Education Trust. The Trust is funded through an annual \$25 surcharge assessed to licenses for lead inspectors and other housing-related professionals (e.g., realtors) and a \$100 surcharge to mortgage brokers, mortgage lenders and small loan agencies as established by Chapter 482 of the Acts of 1993. CLPPP will need to evaluate the actual costs associated with providing expanded services in order to determine the long-term impact and requirements for sustainability.

The Childhood Lead Poisoning Prevention Program and the Department of Public Health are committed to addressing the impacts of lead exposure on children in the Commonwealth, including the disproportionate impact on lower-income communities. The Executive Office of

Health and Human Services looks forward to continuing this work to strengthen its screening and enforcement efforts in the future.