Raising Physician Awareness to Reduce Childhood Lead Exposure: The Massachusetts Community Lead Progress Report

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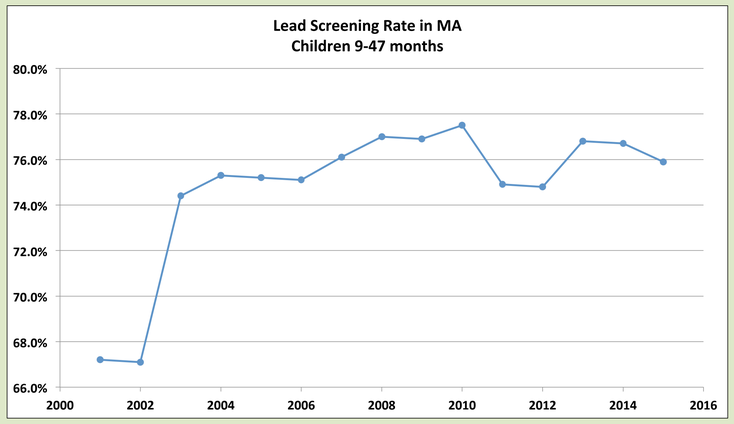
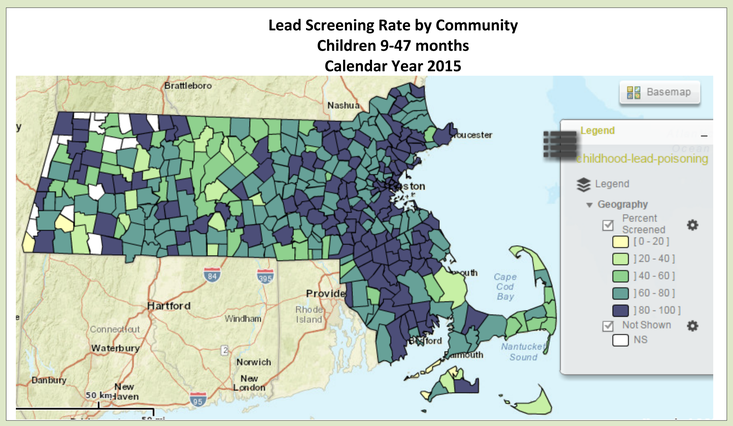
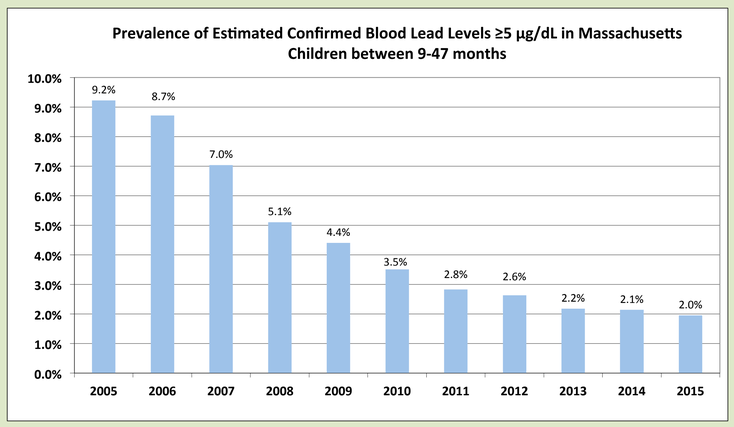
Background

Massachusetts (MA) enacted one of the nation's first Lead Laws in the 1970's. The law requires universal screening of children for lead poisoning multiple times before age 3, and the removal or covering of lead paint hazards in all homes built before 1978 where a child under 6 lives. The Childhood Lead Poisoning Prevention Program (CLPPP) offers education, environmental inspections, and community health worker services. MA screening rates are high and the prevalence of lead poisoning has been steadily decreasing since 2000.







A Public Health Need

Despite these successes, there is wide variation in screening and prevalence rates at the community level, with some communities showing a need for a more targeted approach. In addition, recent scientific evidence has demonstrated the harmful effects of long-term low-level lead exposure, including damage to overall intellectual ability, speech and language, hearing, visual-spatial skills, attention, executive functions, social behavior, and fine and gross motor skills*.

There is no safe level of lead exposure and lead remains a significant health risk for children in Massachusetts.

Boston's 2016 Childhood Lead Screening Progress Report

There is no safe level of exposure to lead. Children in Massachusetts continue to be exposed, and even low levels of lead may cause lasting harm, such as damage to the brain, kidneys, and nervous system. State law requires health care providers to screen every child and to report results. According to CDC guidelines, action should be taken when a child's level is ≥5 µg/dL.

Boston is a high-risk community

Children in high-risk communities are at greatest risk for lead poisoning due to a larger proportion of older homes and families with low to moderate income. The Massachusetts Childhood Lead Poisoning Prevention Program assesses a community's risk level annually.

How many children in Boston have elevated blood levels compared to the state?

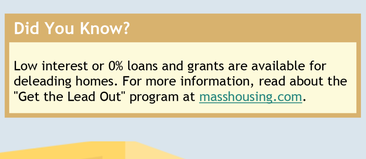
A childhood blood lead level ≥5 µg/dL indicates the child's exposure is higher than 97.5% of children nationally and that the child is in need of intervention according to the Centers for Disease Control and Prevention (CDC).

Percentage of Children with First-Time Blood Lead Levels ≥5 µg/dL

Are all children in Boston screened for lead?

Screening is the only way to know if a child has been exposed to lead. All blood lead results must be reported to the state health department.

Screening Rate



What portion of Boston's housing may have lead paint hazards?

Lead-containing paint was banned in 1978. Prior to that year, many household paints contained dangerous levels of lead. The number of homes built before 1978 is a contributing factor to a community's rate of elevated blood lead levels.

Percentage of Homes Built Before 1978
(American Community Survey 2011-2015 estimates)

Resources

For information about blood lead testing, Massachusetts lead poisoning prevention regulations, and annual and high-risk data reports, visit mass.gov/dph/clppp.

To access screening data, results at the census tract level, and inspection data by address, visit mass.gov/dph/matracking.

For information about lead in drinking water, visit mass.gov/dph/lead-sources.

For medical information and advice on protecting children from environmental hazards, visit www.pehsu.net.

Call the Massachusetts Childhood Lead Poisoning Prevention Program at 1-800-532-9571

Your role in protecting children from lead

Even though initial symptoms may not be obvious, the effects of elevated blood lead levels can be profound. The health outcomes of lead exposure can include slowed growth and development, learning difficulties, damage to hearing and speech, and behavior problems.

1. Ensure children are screened for lead.

Any child can be exposed to lead, regardless of income, background or neighborhood. All children in Massachusetts are required to be screened for lead. Children must be screened between 9-12 months, at age 2, at age 3, and again at age 4 if they live in a high-risk community.

Did You Know?

Capillary tests are prone to contamination. Venous tests are always confirmatory and recommended over capillary tests. An alcohol swab alone will not decontaminate a child's hand. Always wash the child's hand with soap and water first.

2. Report complete demographic data.

Data such as race and ethnicity enable the Childhood Lead Poisoning Prevention Program to identify vulnerable populations that would benefit from targeted outreach and prevention activities.

3. Always confirm capillary tests ≥5 µg/dL with a venous test.

In 2016, **235 children in Boston did not receive this follow-up test.** Elevated venous results trigger necessary prevention services provided by the Childhood Lead Poisoning Prevention Program. Without a follow-up test, children may not receive these services and may continue to be exposed to lead.

4. Educate parents on lead hazards and deleading resources.

Children in Massachusetts are primarily exposed to lead through lead paint in older homes. Unsafe home renovations are a common cause of childhood lead exposure. To protect children, the Massachusetts lead law requires all homes with children under 6 to be de-leaded.

Did You Know?

Low interest or 0% loans and grants are available for deleading homes. For more information, read about the "Get the Lead Out" program at masshousing.com.

Sources of Lead

Call the Massachusetts Childhood Lead Poisoning Prevention Program at 1-800-532-9571

The Childhood Lead Screening Community Progress Report

Pediatric physicians serve a critical role in preventing childhood lead exposure in their communities. The MA Department of Public Health has developed a direct mailing tool for physician outreach. It provides community-specific indicators of childhood lead screening and exposure, highlighting areas of needed improvement in physician screening, follow-up, and prevention. The progress report focuses on awareness of the CDC reference level of 5 µg/dL and the dangers of low-level lead exposure, educating physicians on their role in preventing lead exposure by screening all children, following proper blood lead testing practices, and educating parents on available resources.

Outreach Goals

Increase physician awareness of:

- CDC reference value and the dangers of low-level lead exposure
- High risk community status
- Physicians' role in preventing exposure by educating parents
- Limitations of capillary blood lead tests and methods to improve test reliability

Performance measures:

- Increase screening rates
- Increase adherence to the screening schedule
- Increase the use of initial venous tests
- Increase venous confirmation testing for children with an initial capillary test of ≥5 µg/dL
- Decrease the incidence of blood lead levels ≥5 µg/dL

Evaluation

The progress report will be mailed annually to pediatric physicians in MA. A quantitative and qualitative evaluation will be completed using a random sample of physicians to assess knowledge and behavior before and after receiving the progress report. The evaluation will also seek recommendations from physicians for future outreach activities.

Contact and Resources

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Access the Community Lead Progress Report on the CLPPP Website: www.mass.gov/dph/clppp

Environmental Public Health Tracking Website: www.mass.gov/dph/matracking

*Educational Services for Children Affected by Lead Expert Panel. Education interventions for children affected by lead. Atlanta: U.S. Department of Health and Human Services; 2015.