
**Report to
The Vermont Legislature**

**Annual Report on
Lead Poisoning Prevention**

In Accordance with 18 V.S.A. § 1756

Submitted to: General Assembly

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Table of Contents

Introduction	3
Measuring Progress Toward Universal Screening	4
Education and Outreach Activities to Prevent Lead Poisoning	7
Estimates of Public and Private Costs	10
Future of Vermont's Lead Program & Recommendations	11
Conclusion	13

Annual Report on Lead Poisoning Prevention

Introduction

The Vermont Department of Health is pleased to submit this progress report on the status of childhood lead poisoning prevention efforts in 2011 pursuant to 18 VSA § 1756. Over the last ten years, the percentage of young children who have been screened for lead poisoning has increased and the percentage of children with elevated blood lead levels has decreased. In 2007, the Commissioner of Health established 5 micrograms per deciliter (5µg/dL) as the blood lead level of concern for alerting parents and guardians that their children may have been exposed to lead. Vermont has had the lowest threshold of concern in the nation; however on January 4, 2012, the Centers for Disease Control's Advisory Committee on Childhood Lead Poisoning followed Vermont's example and approved a resolution to lower the level of concern from 10 micrograms per deciliter (10µg/dL) down to 5.

This annual report documents the Commissioner's efforts over the past year to prevent lead poisoning in young children. It presents the latest data on the number and percentage of 1- and 2-year-old children who have been screened and tested for lead poisoning, and the number found to have lead poisoning at various levels. Historical data on screening are also presented. In addition, the report describes 2011 outreach and education activities intended to improve screening rates, and provides estimates of the annual public and private costs incurred since July 1, 1993 to prevent, correct, or treat lead poisoning.

A 2006 statewide Lead Task Force prepared a report and recommendations for the Commissioner of Health and the Attorney General. The report, *Get The Lead Out of Vermont*, led to revisions to the Lead Law (Title 18, Chapter 38) and Vermont adopted an aggressive policy to achieve universal testing of young children. The new approach required that, if fewer than 85 percent of 1-year olds and fewer than 75 percent of 2-year

olds had been screened by January 1, 2011, the Department would require by rule that health care providers ensure that such screening is conducted and the results reported to the Health Department (§ 1755). Finally, a new section on enforcement imposed civil penalties on owners of rental housing who fail to submit annual compliance statements documenting that steps have been taken to ensure that rental properties are safe from lead exposure.

Measuring Progress toward Universal Screening

Although the purpose of lead screening is to identify children with elevated blood lead levels and intervene when necessary, the ultimate goal of the Healthy Homes Lead Poisoning Prevention Program is to eliminate lead poisoning among young children. A child’s exposure to lead can easily be identified through screening, and appropriate interventions can be initiated to prevent further exposure to this harmful toxin. Universal screening is the surveillance activity used to achieve this goal, and Vermont is improving its progress toward universal screening.

The Vermont Department of Health’s Healthy Homes Lead Poisoning Prevention Program, formerly known as the Childhood Lead Poisoning Prevention Program until September 2011, continues to work toward the goal of universal screening of 1- and 2-year old children in Vermont. Table 1 presents 2011 data on the number of young children who were tested for blood lead levels and the results of those screenings.

Table 1
Blood Lead Tests and Levels for Vermont Children Ages 1 and 2, 2011

2011	Population*	# tested	% tested	% <5 µg/dL	% 5-9 µg/dL	% > 10 µg/dL
1 year-olds	6349	4993	78.6%	88.8%	8.7%	1.6%
2 year-olds	6397	4025	62.9%	89.1%	8.6%	1.3%

* Average of census estimates or counts from the 3 previous years (2008, 2009, 2010)

In 2011, 78.6% of 1-year olds and 62.9% of 2-year olds were tested. This is a slight increase in the percent of 1-year olds screened from 2010, but a slight decrease in the percent of 2-year olds screened from 2010.

Figure 1 shows the percent of 1-year olds and the percent of 2-year olds tested each year from 2006 through 2011. For 1-year olds, the trend has held steady at about 80% for the time period. It is a high rate compared to other states but does not yet meet the goal of 85%. For 2-year olds, the trend jumped more than 20% between 2006 and 2009 from 43.6% to 64.4% and has remained at about that level through 2011. The goal for 2-year olds is 75%. VDH will continue to work with key stakeholders to emphasize the need to increase screening of the 1 and 2-year-old populations. This work is presented in the discussion of recommendations at the end of this report.

Figure 1

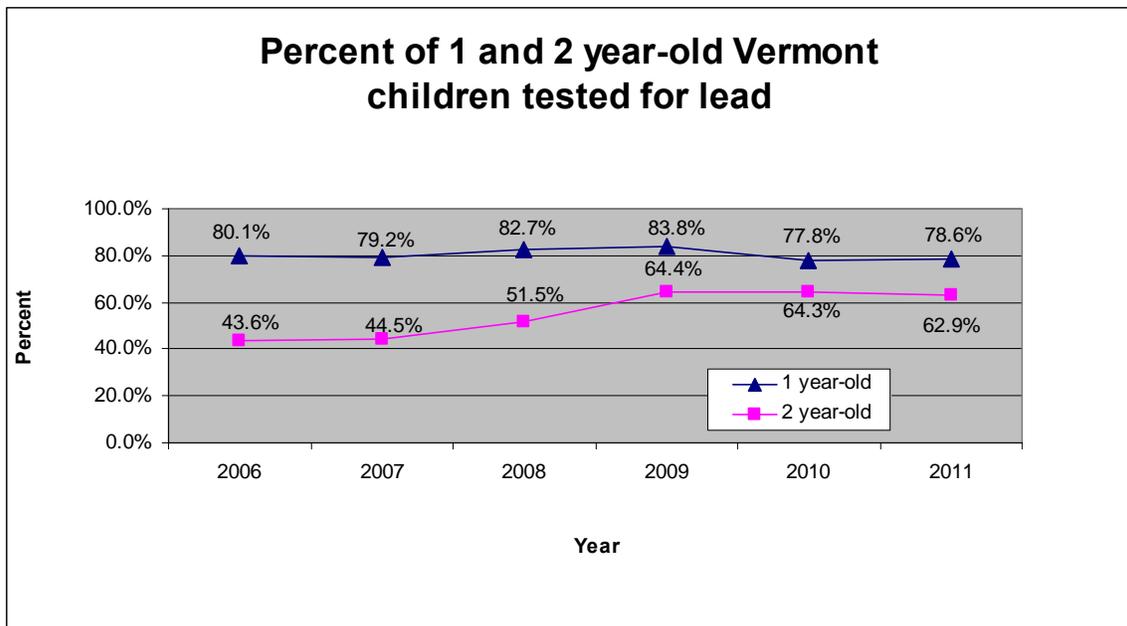
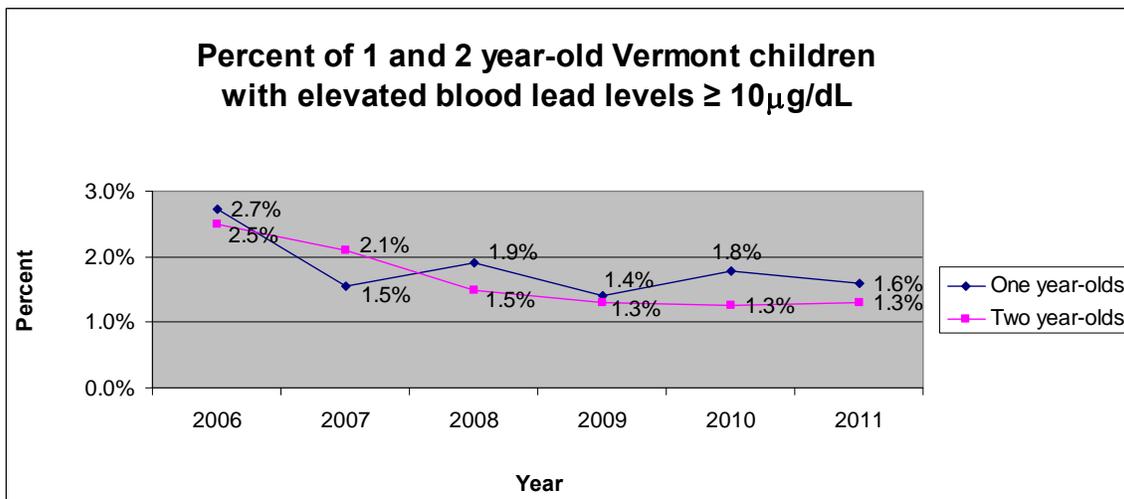


Figure 2 shows the percent of Vermont 1- and 2-year olds tested whose lead level was greater than or equal to 10 micrograms per deciliter during the period from 2006 through

2011. In 2007, the percent of 1-year olds who were tested and had blood lead levels ≥ 10 $\mu\text{g/dL}$ fell below 2% and has stayed below the 2% mark each year, ending at 1.6% in 2011. For 2-year olds tested, those with blood lead levels ≥ 10 $\mu\text{g/dL}$ fell below 2% in 2008, moved to 1.3% in 2009 and has remained at 1.3% through 2011.

Figure 2



While these data do not show a significant improvement from the previous year’s data, they do indicate a continued commitment toward addressing lead issues in Vermont. As discussed below, this commitment will be evident through plans for program initiatives during the upcoming year.

During 2011, the Lead Program encountered a number of additional barriers and challenges. Through a funding change at the federal level, it became necessary for the Childhood Lead Poisoning Prevention Program to transition to the Healthy Homes Lead Poisoning Prevention Program. This process, which is still ongoing, took considerable resources to develop a strategic plan for expanding its focus from solely lead to include other areas of health hazards in homes. Through this transition, there have been delays in moving to a new surveillance system that will allow the program to capture data about other housing-related health hazards in addition to lead. However, the program is

progressing along its path to Healthy Homes, and many of these obstacles are expected to resolve in this coming year.

Aside from the general barriers to the program, a number of historical barriers to the testing requirements have been identified and continue to persist. When surveyed, providers have indicated that difficulty obtaining blood samples from infants and young children poses a barrier to testing. Fortunately, new testing methods have made screening easier for young children and providers. For example, blood can now be collected on filter paper, rather than a tube or pipette. Providers have also voiced concerns about inadequate cost reimbursement for lead screening and a lack of insurance coverage for the procedure. There have also been some inaccurate beliefs about who is at risk for lead poisoning and who is not at risk. Finally, parental opposition to testing poses another barrier to universal testing. Because lead screening of 1- and 2- year olds is a nationally recognized standard of pediatric care, Vermont's universal testing requirement is consistent with this standard. The Department of Health's efforts to educate providers and parents about the health risks of lead are discussed below.

Education and Outreach Activities to Prevent Lead Poisoning

The Vermont Department of Health conducts a variety of lead education and outreach activities targeted to multiple audiences and designed to prevent lead poisoning, encourage lead screening of 1- and 2-year-old children, and support case management for children with elevated blood lead levels.

- Staff from the Maternal Child Health Division and the Healthy Homes Lead Poisoning Prevention Program coordinate with the leadership of the Vermont Chapters of the American Academy of Pediatrics (AAP) and the American Academy of Family Physicians (AAFP) to improve blood lead screening rates and reduce

childhood lead poisoning. A service offered to health care providers by the Health Department and promoted through AAP and AAFP is a lead screening page on the Immunization Registry. This page gives health care providers easy access to their young patients' blood lead results with the date of test, child's age at testing, and the test results. Providers can quickly assess if they are meeting the lead testing requirements for a particular patient.

- VDH continues to work with the Vermont AAP under a grant to provide for purchase of in-office lead testing machines known as *Lead Care II* for selected pediatric practices. AAP chapter members identify and conduct outreach to practices that would like to increase their lead testing rates. The grant supports not only purchase of the machines but also peer-to-peer education with the goal of further reducing known barriers to blood lead screening.
- Postcards reminding parents and guardians to have their children tested for lead are sent to families of 10-month-old children (5,255 postcards in 2011) and 22-month-old children (5,174 postcards in 2011) who were born in Vermont.
- Educational materials and testing recommendations are sent to parents whose child has a blood lead level in the range from 5 µg/dL through 9 µg/dL (731 packets in 2011). The materials include a request form for a free dust wipe kit that enables families to send floor and windowsill dust samples to a laboratory to test for lead. Lab results are sent directly back to the families accompanied by appropriate lead literature.
- All children with a confirmed blood lead level of 10 µg/dL or greater are visited by the Health Department case manager. In 2011, the Childhood Lead Poisoning Prevention Program case manager visited the homes of 44 children.
- Health Department district office programs encourage parents to make sure their children are screened. At appropriate WIC appointments, WIC staff distribute lead fact sheets and remind parents to have children tested at the 12-month and 24-month Well Child visits with their health care provider. As a back-up measure, children in WIC who are not tested by their providers at 12- and 24-months may be screened by district staff at their 18-and/or 30-month WIC appointments.

- The Early and Periodic Screening, Diagnosis and Treatment (EPSDT) program of the Department of Health's Division of Maternal and Child Health routinely sends letters advising parents that age-appropriate screening tests are recommended and covered by Medicaid. Lead screening tests are listed in this EPSDT information sent to parents.
- A dust wipe kit project that started in late 2009 continued throughout 2011. Designed as a true prevention effort, this project began with its focus on pregnant women and families receiving WIC assistance whose children were 6 months of age. Over time the project has expanded to include other distribution modes from Head Start home visitors to public distribution based on phone requests. The focus still remains on families with young children. By identifying lead in dust before a child is crawling or walking, families can take steps to remove or minimize exposure to lead dust hazards. This project was supported by the Attorney General's Office using funding from a settlement in a consumer products case.
- *Henry and Fred Learn about Lead*, a rhyming book for children, continued to be distributed in 2011. This book has been distributed in a variety of ways with the greatest number going to pediatric practices who give them to their young patients. In addition, the Burlington Lead Program has been provided copies to distribute to families with whom that program works. In 2011, Burlington Lead and VDH also collaborated in a shared booth at Kids Day in Burlington where children received the book. A YouTube video that features Henry and Fred is available on the health department website along with an electronic version of the entire book as well as an offer to request a free hard copy version of the book.
<http://www.healthvermont.gov/enviro/lead/index.aspx>
- The Health Department developed a poster for use during the 2010 National Lead Poisoning Prevention Week. The poster was intentionally designed to include the Prevention Week theme for 2010, *Lead-Free Kids for a Healthy Future*, but to avoid including the actual dates of the week so as not to "date" the poster. Poster graphics complement other lead educational materials to provide a consistent visual theme for our target audience of families with young children and pregnant women. This same

poster was again used for several 2011 National Lead Poisoning Prevention Week displays in district offices, and the poster remains available in multiple sizes for use throughout the year not only in district offices but also in health provider offices and other locations.

Estimates of Public and Private Costs

It is difficult to estimate the costs incurred since 1993 by the public and the private sector to prevent, correct, and treat lead poisoning. With regard to the private sector, the Healthy Homes Lead Poisoning Prevention Program (HHLPPP) uses the following algorithm to estimate the costs incurred by landlords to ensure their rental properties comply with Essential Maintenance Practices (EMP). HHLPPP assumes that among the 3,715 rental properties and child care centers for which EMP affidavits were filed in 2011, 25% of these properties were in good condition, 50% were in fair condition, and 25% were in poor condition. Further, HHLPPP assumes that properties in good condition require \$200 in annual maintenance costs to comply with EMP requirements; properties in fair condition require \$340 in annual maintenance costs; and properties in poor condition require \$520 in annual maintenance costs. Using this formula, the amount spent for these properties in 2011 is estimated to be \$1,300,260.

First-time filing of a compliance statement likely incurs start-up costs to bring a property into compliance (e.g., installing window well inserts and buying a HEPA vacuum). Approximately 772 properties filed a compliance statement for the first time in 2011. The algorithm assumes an average of \$625 for each new property being brought into compliance. Additional start-up costs for new properties being brought into compliance is \$482,500. Therefore, a conservative estimate for the total cost to landlords for all properties that complied with the Lead Law in 2011 is \$1,782,760.

In the public sector, the Childhood Lead Poisoning Prevention Program expended about \$365,000 received from the CDC in 2011, the Vermont Housing and Conservation Board expended about \$1,000,000 from the Department of Housing and Urban Development

(HUD) in 2010, and the Burlington Lead Program expended about \$500,000. Therefore, about \$1,864,492 in federal funds were spent on reducing lead poisoning in 2011.

In addition, a study completed by Dartmouth College as part of the *Get the Lead Out of Vermont* Task Force Report in 2006 estimated direct health care costs of all children with elevated blood lead levels at \$51,814 per year, and special education costs at \$219,841 a year (considered to be an underestimate because special education costs were calculated only for those children with blood lead levels 25 µg/dL or greater). The Dartmouth report also estimated more than \$79 million per year in lost future earnings of children whose blood lead levels are 5 µg/dL or greater.

Screening costs incurred by families, insurers and providers are not represented in these cost estimates.

Future of Vermont's Lead Program & Recommendations

Since 1993, Vermont's Childhood Lead Poisoning Prevention Program has been supported by federal funds from the Centers for Disease Control and Prevention. This federal program and its funding ended in August, 2011. The CDC transitioned these funds to a new program called Healthy Homes Lead Poisoning Prevention. Vermont was awarded funding through this competitive cooperative agreement and has begun its transition to Healthy Homes. The funding proposal focused on three primary environmental health areas: (1) reduction of lead exposure and poisoning, (2) reduction of asthma triggers and (3) strengthening Vermont's corps of Town Health Officers to improve the safety of rental housing. While the continued funding at a federal level for this program has been uncertain, the Department of Health has maintained its commitment toward preserving the Healthy Homes program.

New rules requiring mandatory screening for blood lead levels in 1- and 2-year-old children, and reporting of these results, were adopted in January of 2011. These rules

describe a process for monitoring and enforcing compliance of screening. Since that time, the lead program has encountered several barriers to implementing and enforcing these rules. The program was handicapped by an eight-month vacancy of the Program Chief position, in spite of a national search for a candidate. As a result of this vacancy, new outreach and enforcement activities have been delayed until a new Program Chief has been hired. Nevertheless, during the past year, the program demonstrated its commitment to screening young children for elevated lead levels by partnering with the Maternal Child Health Division and the American Academy of Pediatrics in an ongoing effort to assist medical practices that have expressed barriers to testing. For example, through this collaborative work, outside grant funding was obtained to support the delivery of LeadCare II machines to physicians to facilitate onsite testing.

In the upcoming year, the Health Department will continue to work in the following areas to prevent lead poisoning by making homes safer for children, and to increase screening for 1 and 2 year olds by educating parents, giving technical assistance to providers, and enforcing the lead testing rules. Many of these activities continue the work referenced above.

- Continue the activities listed above to improve screening rates through work with the Maternal Child Health Division and the Vermont chapters of the American Academy of Pediatrics and the American Academy of Family Physicians.
- Use the Lead Tab as part of the web-based immunization registry to help identify medical providers who have not been testing 1- and 2-year olds.
- Collaborate with District Offices to identify medical providers who have not been testing 1- and 2-year olds.
- Develop and implement an enforcement protocol for the new mandatory testing rules.
- Offer dust wipe kits to families as a way to identify risk areas in their homes and assist families in prevention of lead exposure. Dust wipe kits are targeted at families with pregnant women and/or young children who live in a pre-1978 home.

- Help families with children who have an elevated blood lead level between 5-9 µg/dL identify lead exposure by using a dust wipe kit.
- Provide a targeted educational mailing about lead poisoning to families with children who have an elevated blood lead level between 5-9 µg/dL.
- Conduct case management and surveillance of children with elevated lead levels
- Seek additional funding opportunities for lead poisoning prevention programs.
- Continue to work with the Lead Poisoning Prevention Committee, now the Healthy Homes Advisory Committee, as an advisory body to the Health Department.
- Maintain a partnership with the Vermont Housing and Conservation Board Lead Hazard Reduction Program to prevent lead poisoning.

Conclusion

In 2011, the Health Department demonstrated an ongoing commitment to universal lead screening of all 1- and 2-year-old children through efforts to educate and facilitate testing with provider practices, education and outreach targeted to families with young children, and the many other efforts to identify and overcome barriers to universal screening described above. These efforts are expected to result in continued improvement and measureable progress toward universal testing and the prevention of lead poisoning in Vermont.