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**Report to  
The Vermont Legislature**

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**2012 Annual Report on  
Childhood Lead Poisoning Prevention**

**In Accordance with 18 V.S.A. § 1756**

**Submitted to:** General Assembly

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## Introduction

The Vermont Department of Health is pleased to submit this progress report on the status of childhood lead poisoning prevention efforts in 2012 pursuant to 18 VSA § 1756. 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 Vermont children less than 6 years old who have been screened and tested for lead poisoning, and the number found to have elevated blood lead levels, with a special focus on 1- and 2-year-old children. Historical data on screening are also presented. In addition, the report: describes 2012 outreach and education activities intended to improve screening rates; and provides estimates of the annual public and private costs incurred in 2012 to prevent, correct, or treat lead poisoning.

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 declared that NO blood level of lead is safe and has stopped using terms such as "level of concern" and "action level." Instead, CDC calculated a reference value, based on the 97.5 percentile of the blood lead level distribution among children age 1 to 5 in the United States. The current CDC reference value is 5µg/dL. This is consistent with Vermont, which was the first state in the country to define an elevated blood lead level as 5 µg/dL or more.

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 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 are reported to the Health Department (§ 1755). The rules are available at the following site:

[http://www.healthvermont.gov/reg/docs/documents/lead\\_blood\\_testing\\_rule.pdf](http://www.healthvermont.gov/reg/docs/documents/lead_blood_testing_rule.pdf)

## Measuring Progress

Screening young children for lead in blood is a critical step in the process of reducing the incidence of elevated blood lead levels. 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. In addition, screening helps inform the development of lead poisoning prevention policies by giving the Department of Health the opportunity to track statewide trends in childhood exposure to lead.

The Vermont Department of Health's Childhood Lead Poisoning Prevention Program, now the Healthy Homes Lead Poisoning Prevention Program (HHLPPP) as of September 2011, continues to work toward the goal of universal testing of 1- and 2-year-old children in Vermont. Table 1 presents 2012 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 Results for Vermont Children ages 0-<6 years, 2012\***

Age	Population	# of Tests	% Tested	# <5 µg/dL	% < 5 µg/dL	# 5-9 µg/dL	% 5-9 µg/dL	# ≥10 µg/dL	% ≥10 µg/dL
Under 1	5,985	350	5.8%	317	90.6%	26	7.4%	7	2.0%
1	6,180	5,007	81.0%	4,607	92.0%	344	6.9%	56	1.1%
2	6,400	4,323	67.5%	4,018	92.9%	268	6.2%	37	0.9%
3	6,523	419	6.4%	363	86.6%	44	10.5%	12	2.9%
4	6,624	263	4.0%	226	85.9%	33	12.5%	*	*
5	6,754	99	1.5%	85	85.9%	11	11.1%	*	*

\*Notes:

\* Indicates fewer than 6 cases in a category that year; when counts and percent's are based on only a few cases, it is impossible to distinguish random fluctuation from true changes in data. Small numbers are also suppressed to prevent identification of individuals. Ages: < 1 year: <11 months, 1 year: 11-22.99 months, 2 years: 23-34.99 months, 3 years: 35-46.99 months, 4 years: 47-58.99 months, 5 years: 59-70.99 months. Population is the average of census estimates or counts from the 3 previous years (2009, 2010, 2011) Data includes one blood lead test per child by age; the highest venous test result or if there is no venous test, then the capillary test result. This may result in a child having two tests per calendar year. For example, a child may be born in December 2011, have their one-year old test in January 2012, and then have their two-year old test in December 2012.

In 2012, 81.0% of 1-year olds and 67.5% of 2-year olds were tested. This is a slight increase in the percent of 1- and 2-year olds screened from 2011.

Figure 1

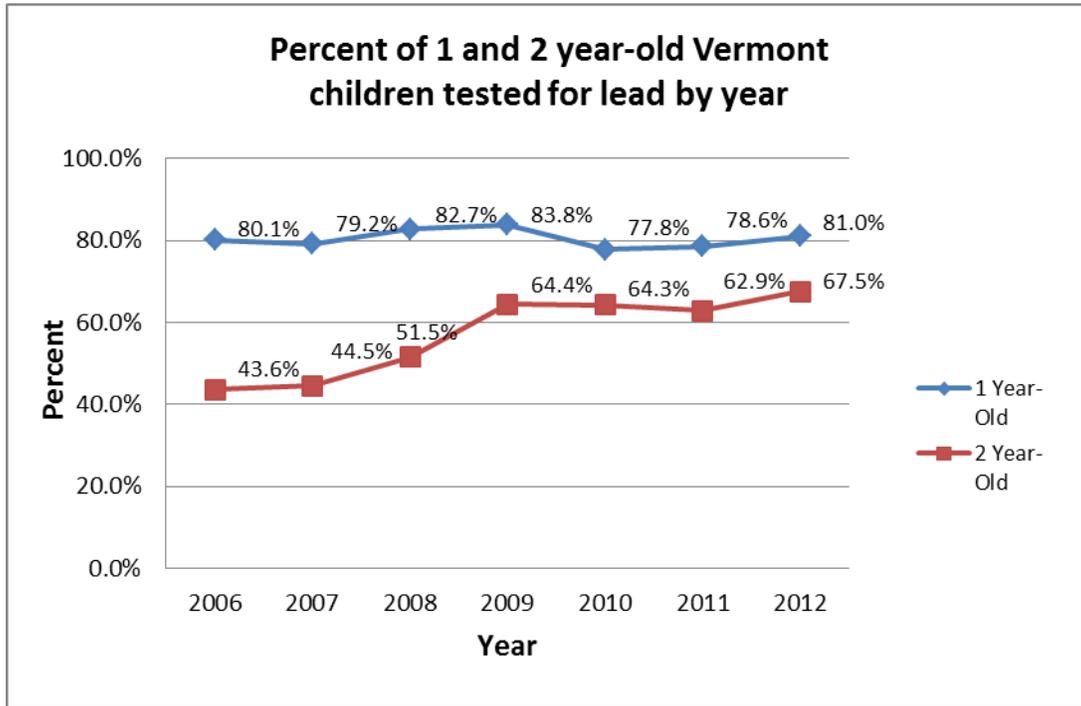


Figure 1 shows the percent of 1-year olds and the percent of 2-year olds tested each year from 2006 through 2012. For 1-year olds, the trend has held steady at about 80% for the time period. It is a high rate compared to other states but does not yet meet the goal set by Vermont law of 85%. For 2-year olds, the trend jumped more than 20% between 2006 and 2009 from 43.6% to 64.4% and has remained at about that level until increasing in 2012. The goal for 2-year olds is 75% so VDH will continue to work with providers and key stakeholders to emphasize the need to increase screening of the 2-year-old population and to meet the goal for 1-year olds

Figure 2

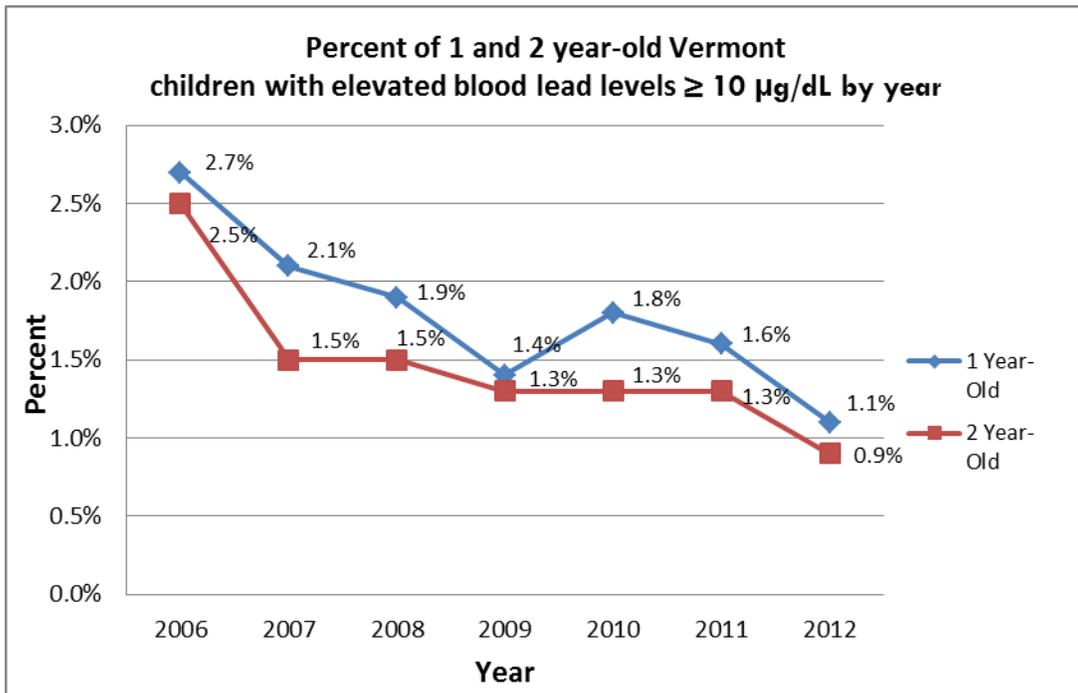


Figure 2 shows the percent of Vermont 1- and 2-year olds tested whose lead level was greater than or equal to 10 micrograms per deciliter during the period from 2006 through 2012. This data does indicate a continued lowering of high blood lead levels in Vermont.

## Barriers to Universal Screening

Much of 2012 was spent transitioning to the Healthy Homes Program and overcoming some challenges inherent in program transition. In September 2012, federal funds from CDC were cut nationwide for Healthy Homes Lead Poisoning Prevention programs. For some states, funding from CDC ended completely as of September, whereas some states including Vermont were able to receive a no-cost extension of grant funds until May 2013. The program has secured alternate funds to continue after that point and does not anticipate cutting services to families.

The program was also significantly handicapped by a long vacancy of the Program Chief position, despite a national search for a candidate. This leadership position, which was vacant for 18 months, was filled by a new Program Chief in August 2012.

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. 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.

## **2012 Education and Outreach Activities**

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.

### **Programmatic Activities**

- In 2012, the Lead Program created the Healthy Homes Strategic Plan. This concluded a year-long planning process that the program undertook to transition to the Healthy Homes Program and develop goals to address home-hazard-based health conditions for Vermonters. Rather than have a singular approach to home health hazards, the program has expanded to address related health problems that are caused or increased by the home. The planning meetings were hugely successful and had participation from a total of thirty-five different external partners including representation from eight different state agencies and departments. Six divisions of VDH also participated.
- The Healthy Homes Lead Poisoning Prevention Program began the *Public Health Stat* process, a performance improvement process that is data-driven and structured to focus on specific strategies for identified problems. Through cross-divisional, content-based meetings, key decisions makers come together to do program planning and resource

allocation around high priority Department-wide goals, such as lead poisoning prevention.

- The program began to work with external partners and internal partners to include lead and healthy homes concepts in ongoing outreach efforts.
- The program started development of new educational materials and a website that includes information about lead and healthy homes.

### **Targeted Education**

- All children with a confirmed blood lead level of 10 µg/dL or greater are visited by the Health Department case manager. In 2012, the Childhood Lead Poisoning Prevention Program case manager visited the homes of 38 new children. The case manager conducted 114 follow-up visits on existing cases.
- Postcards reminding parents and guardians to have their children tested for lead are sent to families of 10-month-old children (5,253 postcards in 2012) and 22-month-old children (5,332 postcards in 2012) 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 (678 packets in 2012). 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.
- An ongoing separate dust wipe kit project that functions as an identification tool used by district offices, some Head Start home visitors, and an external partner, Lead Safe and Healthy Homes in Bellows Falls. 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.

### **Screening Outreach**

- VDH continues to work with the Vermont Chapter of the American Association of Pediatrics under a grant to provide for purchase of in-office lead testing machines known as *Lead Care II* for selected pediatric practices. The grant supports not only purchase of the machines but also peer-to-peer education support for the providers with the goal of further reducing known barriers to blood lead screening.
- 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.

- 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 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 letter with accompanying materials about provider requirements was created to be sent to all pediatricians and family physicians in Vermont and to practices in New Hampshire, Massachusetts, and New York that serve Vermont residents. The letter reminds providers about the importance of testing all 1- and 2-year olds, reviews testing recommendations, and presents the new CDC reference value.

## **Future of Vermont's Lead Program and Recommendations**

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 and giving technical assistance to providers.

- Continue the activities listed above in the Education and Activities section.
  - Offering dust wipe kits

- Providing outreach to families with children who have who tested between between 5-9 µg/dL
- Conducting environmental investigations and case management of children with a blood lead level at or above 10 µg/dL
- Sending postcards with information to all families whose child was born in Vermont at ages 10- and 22-months
- Use the Lead Tab on 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 contact these identified providers who have not been testing 1- and 2-year olds.
- Seek additional funding opportunities for lead poisoning prevention programs.
- Maintain and create partnerships with internal and external partners, such as:
  - Vermont Housing and Conservation Board
  - Children’s Integrated Services
  - Burlington Lead Program
  - Lead Safe and Healthy Homes in Bellows Falls
  - Head Start
- Work with Town Health Officers regarding their role in identifying lead hazards in their communities.

## **Estimates of Public and Private Costs**

### **Private Costs**

It is extremely 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 3,151 rental properties and child care centers for which EMP affidavits were filed in 2012, 25% of these properties were in good condition, 50% were in fair condition, and 25% were in poor condition. Properties in good condition require an estimated \$200 in annual maintenance costs to comply with EMP requirements; properties in fair condition likely require \$340 in annual maintenance costs; and properties in poor condition entail approximately \$520 in annual maintenance costs. This results in an estimated cost of: \$1,102,850.
- In 2012, 683 properties filed a compliance statement for the first time. 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). 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 \$426,875.
- Therefore, a conservative estimate for the total cost to landlords for all properties that complied with the Lead Law in 2012 is \$1,529,725.

### **Public Costs**

In the public sector, the Childhood Lead Poisoning Prevention Program expended about \$365,000 received from the CDC in 2012. The Vermont Housing and Conservation Board expended about \$1,000,000 from the Department of Housing and Urban Development (HUD) in 2012, and the Burlington Lead Program expended about \$353,793. Therefore, from these organizations, roughly \$ 1,718,793 in federal funds were spent on reducing lead poisoning in 2012.

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.

## **Conclusion**

Lead poisoning is still a serious problem in Vermont. Since 2006, however, progress has resulted in limiting exposure to lead for young children, heightening both public and health care provider education, and reducing hazards in the home. Despite challenges in 2012, such as the loss of CDC funding and the expansion to the Healthy Homes Program, VDH and its partners have demonstrated a strong commitment to the program and to protecting children from the harmful effects of lead.