



## PREVENTION OPPORTUNITIES UNDER THE BIG SKY

### ELEVATED BLOOD LEAD LEVELS REPORTED IN MONTANA CHILDREN, 2008

Exposure to lead can cause long-lasting adverse health effects.<sup>1</sup> Since 2000, blood lead levels  $\geq 10\mu\text{g}/\text{dl}$  in children  $\leq 13$  years have been reportable in Montana. To be confirmed, the blood lead testing must be done with a venous blood sample. This issue of *Montana Public Health* describes the reported cases of elevated childhood blood lead levels in 2008 in Montana.

**Reported cases** From January 1 through December 31, 2008, nine cases of children with elevated blood lead levels were confirmed and reported to the Department of Public Health and Human Services (DPHHS). Three of these were continuing cases, previously reported in 2007. In the first of these cases, the blood lead level had decreased to  $11.1\mu\text{g}/\text{dl}$  in June 2008 from a high of  $24.2\mu\text{g}/\text{dl}$  reported in June 2007. The lead level in this case had dropped to  $13.1$  following removal of a fence painted with lead-based paint at the child's home. In the second case, the blood lead level had decreased to  $10.0\mu\text{g}/\text{dl}$  in August 2008 from a high of  $19.0\mu\text{g}/\text{dl}$  reported in November 2007. In the third case, the blood lead level had increased to  $18.0\mu\text{g}/\text{dl}$  in July 2008 from  $15.0\mu\text{g}/\text{dl}$  reported in December 2007. Intervention activities for the latter two cases have not been recorded. The six new cases identified in 2008 had blood lead levels ranging from  $10.0\mu\text{g}/\text{dl}$  to  $18.0\mu\text{g}/\text{dl}$ .

**TABLE: Characteristics of reported cases with elevated blood lead levels, Montana, 2008**

Number:	9
Sex:	5 boys, 4 girls
Age:	15 months to 6 years (median 4 years)
County of Residence:	Bighorn (1), Glacier (1), Lewis and Clark (2), Lincoln (1), Roosevelt (2), Silver Bow (2)
Reporting Source:	Indian Health Service (4), East Helena Lead Education and Abatement Program (2), Butte WIC Program (2), Private Practice Physician (1)

**Environmental assessment** An environmental assessment was documented in 2008 for only three of the nine cases. Lead paint in homes was identified in all three instances, and removed from two of the homes. Paint removal is pending for the home of the third case. Exposure

that occurred prior to adoption and immigration into the United States was identified as the source of lead in one additional case. Information about environmental assessment for the other five cases is pending from local and tribal health departments.

**Frequency of screening** Although the small number of reported cases with elevated blood lead levels may mean that exposure to lead is rare for children in Montana, these findings should be interpreted with caution. While it is possible that lead exposure and elevated blood lead levels occurred in only six MT counties, it is also possible that children with lead exposure and elevated blood levels have not been screened and identified in other counties.

The Medicaid program pays for blood lead testing for Medicaid-enrolled children. Because all Medicaid-enrolled children are considered to be at risk, a rule requires that these children be tested at least once by age 12 months and again by age 24 months.<sup>2</sup> Despite this, according to Montana Medicaid payment data, during the time period January 1 to December 31, 2008, only 453 (2.6%) of 17,224 Medicaid-enrolled children aged 3 years and younger had at least one blood lead test done.<sup>3</sup>

Laboratories that conduct blood lead testing in Montana, including reference laboratories that received specimens from Montana, report blood lead test results to DPHHS. Of the 1963 blood lead tests done by these labs for Montana children  $\leq 13$  years in 2008, 1883 (96%) were submitted by the following: Butte-Silver Bow WIC program (886), the Indian Health Service (518), the East Helena Lead Education and Abatement program (211), and the DPHHS Lead Poisoning Prevention Program (268). Only 80 tests ordered by other providers and clinics were reported to DPHHS.

**Risk factors for lead exposure** In the United States, living in poverty and residing in dwellings built prior to 1960 have been identified as important risk factors for childhood lead exposure.<sup>1</sup> In Montana:

- 17% of children under 18 years of age and over 20% of children under 5 years live below the poverty level, and
- 37% of residential and 40% of commercial structures used as dwellings were built prior to 1960.

The number of children in Montana with these risk factors is large; the number of blood lead screening tests done in Montana is small. It is likely that enhanced surveillance would identify other children with preventable lead exposures.

**Identification and mitigation** Adverse health effects due to lead are preventable. Prevention requires attention to both screening, to identify cases, and environmental investigation, to mitigate exposure.

When a child with an elevated blood lead level is identified it is essential to:

- determine and mitigate the likely source(s) of lead exposure;
- repeat blood lead testing at intervals to assure that lead exposure(s) are not continuing; and
- test other children in the household to determine if exposure for them has also occurred.

#### **Recommendations to identify and mitigate lead poisoning**

- Assess children for risk characteristics for exposure to lead
- Determine blood lead level for children at risk
- Report children  $\leq 13$  with blood lead levels  $\geq 10$  micrograms/dl
- Identify and remove the lead exposure(s) that resulted in the elevated blood lead level
- Repeat venous blood lead testing to assure that the lead level decreases
- Provide education material\* to parents/caregivers

\* Materials available from Montana Lead Poisoning Prevention Program

For more information, contact your local health department or Janet Stetzer, RS, CLS, Coordinator, Montana Lead Poisoning Prevention Program, 406-444-0695, [jstetzer@mt.gov](mailto:jstetzer@mt.gov).

#### References:

1. CDC. Screening young children for lead poisoning; guidance for state and local public health officials. Atlanta, GA: CDC, 1997.
2. Social Security Act, Section 1905 (r) 1 (42 USC, Section 1936d).
3. DPHHS. Annual EPSDT participation report (Form HCFA – 416), Helena, MT: DPHHS, 2008.

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1400 Broadway  
Helena, MT 59620-2951  
Anna Whiting Sorrel, Director, DPHHS  
Steven Helgerson, MD, MPH, State Med. Officer  
Jane Smilie, MPH, Administrator, PHSD