

US EPA ARCHIVE DOCUMENT

## **Community- and Family-Level Factors Influence Caregiver Choice To Screen Blood Lead Levels of Children in a Mining Community**

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**Background and Objectives:** The Bunker Hill Superfund site, in Kellogg, Idaho, formerly a lead mine (1884-1981) and smelter (1917-1981), has widespread lead contamination of concern for child exposure and health risks. The U.S. Environmental Protection Agency has used child blood lead levels to inform the clean-up standards since 1983. The goal of this research project was to define community- and family-level factors that influence caregiver choice to screen child blood lead levels.

**Methods:** This study used mixed methods of formative research and was composed of three research components: (1) preliminary interviews using community-based participatory research methods to define key research questions; (2) quantitative analysis of a child blood lead screening survey; and (3) ethnographic community rapid assessment methods forming the in-depth interview process and qualitative analysis.

**Results:** The survey showed the likelihood of child blood lead screening increases 34 percent with each 1-year increase in current age of the child (95% CI, 1.08-1.67, p value = 0.009), and decreases 45 percent with annual household income greater than \$10,000 (95% CI, 0.35-0.88, p value = 0.013). Across all levels of interviews, Kellogg's long history as a mining town influences attitudes and actions of caregivers to access child blood lead screening through instilling stigmas, parental blame, and a sense of shame about lead exposure and resultant health effects.

**Conclusion:** Health communication and environmental followup should prioritize methods to reduce parental feelings of blame, shame, guilt, and stigmas associated with the health effects of lead in a way that respects the pride of former mine workers, their families, and the history of the town.