



Topic: Infant and Child Health

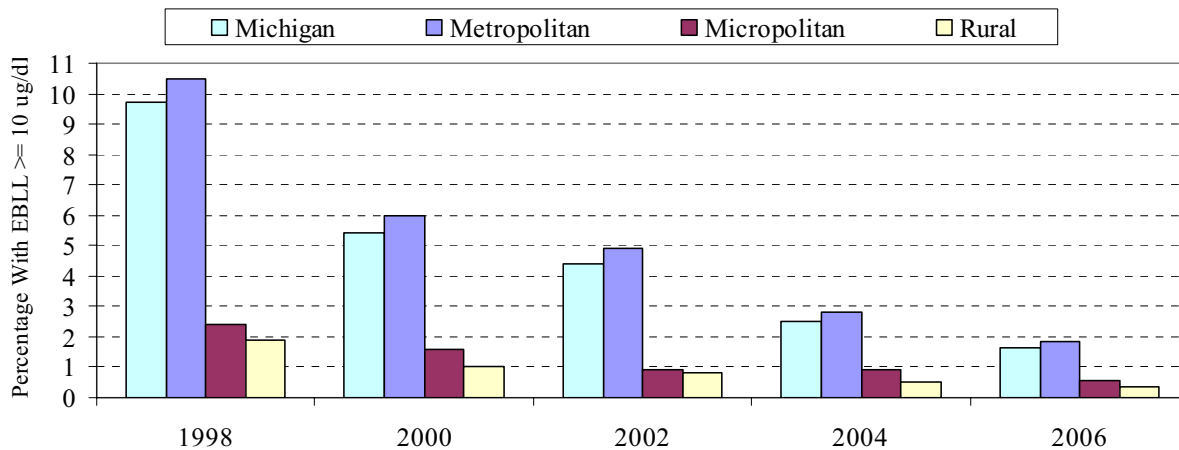
27. Children’s Blood Lead Levels

Lead exposure remains one of the most serious environmental threats to a child’s health and has significant physical, cognitive, and behavior effects. For children under six years of age, CDC has defined an elevated blood lead level (BLL) as $>10 \mu\text{g}/\text{dL}$, but serious health effects have been seen at even lower levels. Data show that average BLLs in children decreased since the late 1970s but that elevated BLLs remain more common among low-income children, urban children, and those living in older housing.

The dramatic decline in BLLs from the late 1970s through the early 1990s resulted primarily from the phase-out of leaded gasoline and the resulting decrease in lead emissions, although other exposures also decreased. While air lead levels and lead emissions continued to decrease during the 1990s, most of this decline occurred before 1995. The primary remaining sources of childhood lead exposure are deteriorated lead paint and soil and dust in and around old housing. Lead poisoning also occurs as a result of remodeling and renovation activities in older homes. New housing construction and the demolition and rehabilitation of older housing, using lead safe work practices, may be contributing to a continued decline in BLLs.

How are we doing?

**Percentage of Tested Children Under Age 6 Years
With Venously Confirmed Elevated Blood Lead Levels
Greater Than or Equal to 10 $\mu\text{g}/\text{dL}$**



An estimated 1.4% of the population of children tested in Michigan from birth to six years is lead-poisoned, with the majority of these children eligible for publicly funded services such as Medicaid, MI Child, WIC, Head Start and Early Head Start. This rate has substantially decreased from 1998 when the percentage was 9.7%. CDC indicates that lead poisoning in children should be eliminated by 2010, a goal that Michigan is working toward achieving. Preliminary data for 2008 indicate that the number of children tested for lead poisoning has increased while the number of children poisoned continues to decline.



How does Michigan compare with the U.S.?

Michigan ranks seventh in the nation in the number of children lead poisoned, primarily due to deteriorating housing stock and the resulting dust and debris. While significant strides have been made during the last ten years, the number of Michigan children poisoned is still above the national rate.

How are different populations affected?

Lead poisoning is more likely to be seen in low-income populations living in sub-standard or deteriorating housing, so while it is found in children statewide; it tends to be concentrated in older urban areas. All children living in the City of Detroit are considered to be at-risk, but risk is found statewide. Fourteen communities across Michigan have been identified as high-risk due to the high percentage of pre-1950 housing and greater prevalence of poisoned children. Children can be poisoned if exposed to lead hazards during renovation or remodeling of houses built before 1950. Children may also be exposed as result of cultural practices.

What is the Department of Community Health doing to improve this indicator?

The Department has identified 14 communities that represent the areas of greatest risk. Several activities occurring in these target communities include: coalition activities aimed at eliminating childhood lead poisoning through public education and outreach, advocacy, and building community partnerships, local efforts to increase testing of children within the community, and securing additional funding for lead hazard abatement services.

Case management training was conducted at four local health departments and was attended by public health nurses from seven local public health agencies. These trainings assure that lead poisoned children from the represented areas can receive comprehensive case management services. The training focuses on the eight components of effective case management which includes: client identification and outreach; individual assessment and diagnosis; service planning and resource identification; linkage to needed services; service implementation and coordination; monitoring of service delivery, and advocacy.

The Childhood Lead Poisoning and Control Commission has been re-established with four priority areas identified by the members. These four priority areas include increased testing of high-risk children, legal protections and liabilities, lead hazard abatement loans and credits and sustainable funding.

Print material has been developed detailing the two new lead laws in Michigan that will have a significant impact on renovation and remodeling activities across the state.

Secondary prevention efforts will be increased. These efforts will focus on children who have BLLs below the CDC defined level of concern and pregnant women. Intensive education and outreach to these potentially at risk families will hopefully result in fewer children becoming poisoned. Efforts to improve awareness of different cultural practices are essential to assuring appropriate interventions and outreach activities targeting a variety of ethnic populations.