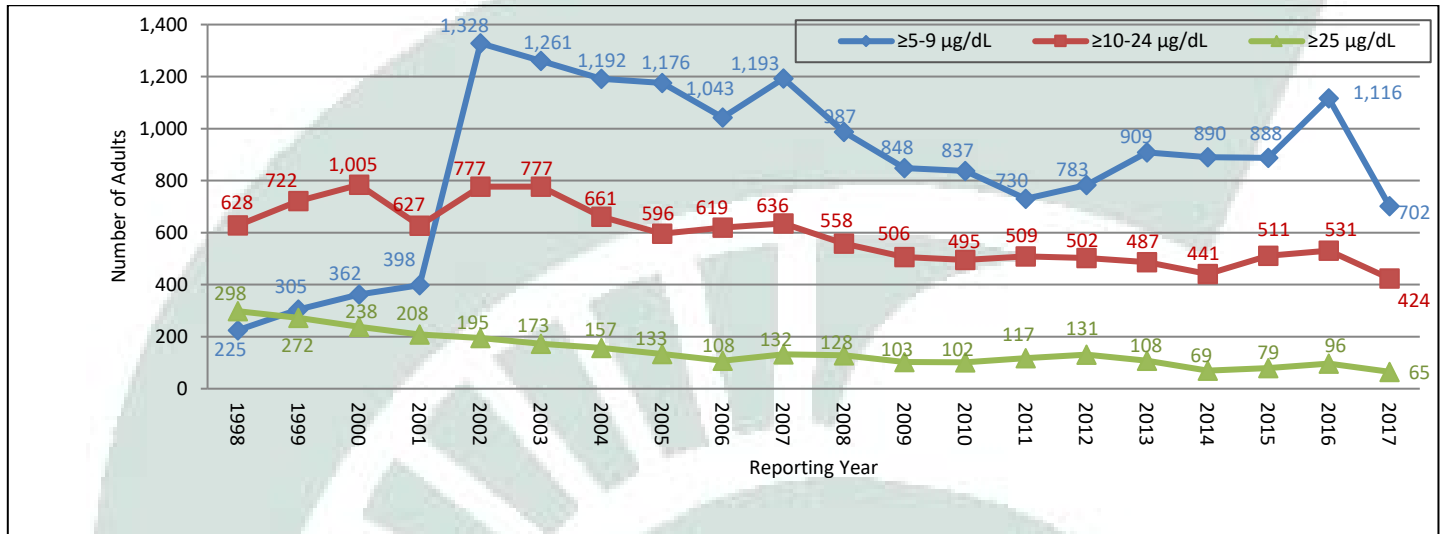


Tracking Adult Blood lead in Michigan

Additional information available at www.oem.msu.edu

Summary Statistics

Number of Individuals with Elevated Lead, Michigan 1998-2017



The adults with Blood Lead Levels (BLLs) ≥ 10 $\mu\text{g}/\text{dL}$ in 2015 and 2016 were likely to be male (92.7%) and white (76.7%). Their mean age was 45.4. They were most likely to live in Wayne (17.5%), Genesee (9.6%), and Macomb or Oakland (both 7.5%) counties.

Work-Related Exposure Sources for Individuals with Blood Lead ≥ 10 $\mu\text{g}/\text{dL}$, Michigan 2015-2016

Exposure Source --- Industry (SIC Code)*	Number	Percent
Construction (15-17)	192	35.8
Painting (17)	186	34.6
Manufacturing (20-39)	200	37.2
Fabricated and Primary Metals (33-34)	146	27.2
Transportation and Public Utilities (40-49)	52	9.7
Wholesale and Retail Trade (50-59)	33	6.1
Services (60-89)	51	9.5
Public Administration (91-97)	9	1.7
Justice, Public Order, Safety	6	1.1
Total	537 **	100.0

*Standard Industrial Classification

** Another 78 were work-related; however, the industry was unknown.



This is the ninth year since 2002 where elevated blood lead was more common in manufacturing than construction.

Exposure typically occurs where individuals perform abrasive blasting to remove lead paint on outdoor metal structures such as bridges, overpasses, or water towers; cast brass or bronze fixtures; fabricate metal products; or are exposed to lead fumes or dust from firing guns or retrieving spent bullets at firing ranges.

Background

Surveillance of blood lead levels (BLLs) of Michigan citizens is based on regulations promulgated October 11, 1997 by the Michigan Department of Health and Human Services (MDHHS) that require laboratories to report all blood lead analyses, both among adults and children. The Adult Blood Lead Epidemiology and Surveillance (ABLES) Program was founded nationally in 1992 and tracks laboratory reports of elevated BLLs in U.S. adults in 41 states. ABLES in Michigan is maintained by Michigan State University in collaboration with MDHHS and the Michigan Occupational Safety and Health Administration (MIOSHA).

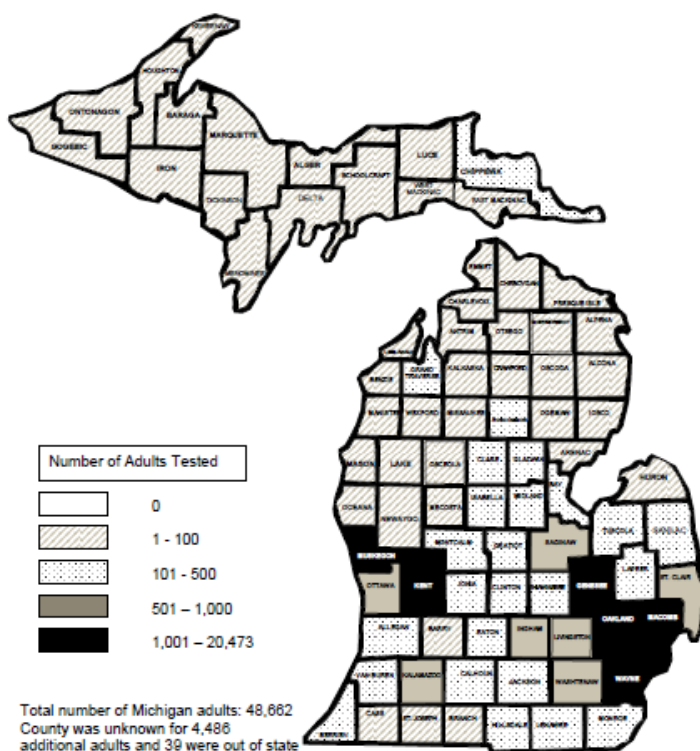
Follow up of Elevated Blood Lead Testing, Michigan 2012-2017

Seventeen MIOSHA and two federal OSHA inspections were conducted and reports completed at nineteen companies referred by ABLES due to elevated blood lead laboratory reports.

*Thirteen of the nineteen (68.4%) received lead related citations for violation of lead-related standards.

- *4 of 5 shooting ranges (one police department)
- *2 construction operations
- *1 metal storage warehouse
- *1 brass/bronze foundry
- *1 recycling services
- *1 motor vehicle supplies and parts wholesaler
- *1 finish carpentry contractor
- *1 automotive parts and accessories store
- *1 secondary nonferrous metals
- 1 plumbing fixture fitting and trim manufacturer
- 1 recyclable material merchant wholesaler
- 1 metal heat treating plant
- 1 remediation services
- 1 marine cargo handling

Geographic Distribution of Adults Tested for Lead in Michigan by County of Residence, 2015-2016



Genesee and Wayne counties had the highest number of adults tested with 20,473 and 4,229 respectively.

Elevated Blood Lead Narratives, Michigan 2012-2017

- A male in his mid-50s, employed at a police department, had an elevated BLL of 50 $\mu\text{g}/\text{dL}$ in February 2012. The employee was involved in a cleanup of a firing range.
- A male in his mid-30s, employed as a HiLo driver at a metal storage warehouse, had an elevated BLL of 69 $\mu\text{g}/\text{dL}$ in August 2013. He reported that the warehouse stored aluminum, aluminum alloys, zinc and lead, which were stacked from the floor to the ceiling.
- A male in his late 30s, employed at a hazardous waste treatment and disposal company, had an elevated BLL of 61 $\mu\text{g}/\text{dL}$ in October 2013. His job assignment was to go to shooting fields or target practice fields and recover all the lead bullet pellets and to grind those up into a machine that separates the dirt from the lead.
- A male in his late 30s, employed at an industrial machinery and equipment merchant wholesaler, had an elevated BLL of 56 $\mu\text{g}/\text{dL}$ in May 2014.
- Two men in their 30s employed by a remediation services company had elevated BLLs, 33 and 34 $\mu\text{g}/\text{dL}$ in June 2016, after working at an indoor police department firing range.
- A male in his early 70s, doing renovation work in a farmhouse, had an elevated BLL of 89 $\mu\text{g}/\text{dL}$ in July 2016.
- A male in his mid 30s, doing renovation work of a 102-year-old house, had an elevated BLL of 44 $\mu\text{g}/\text{dL}$ in March 2017.

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