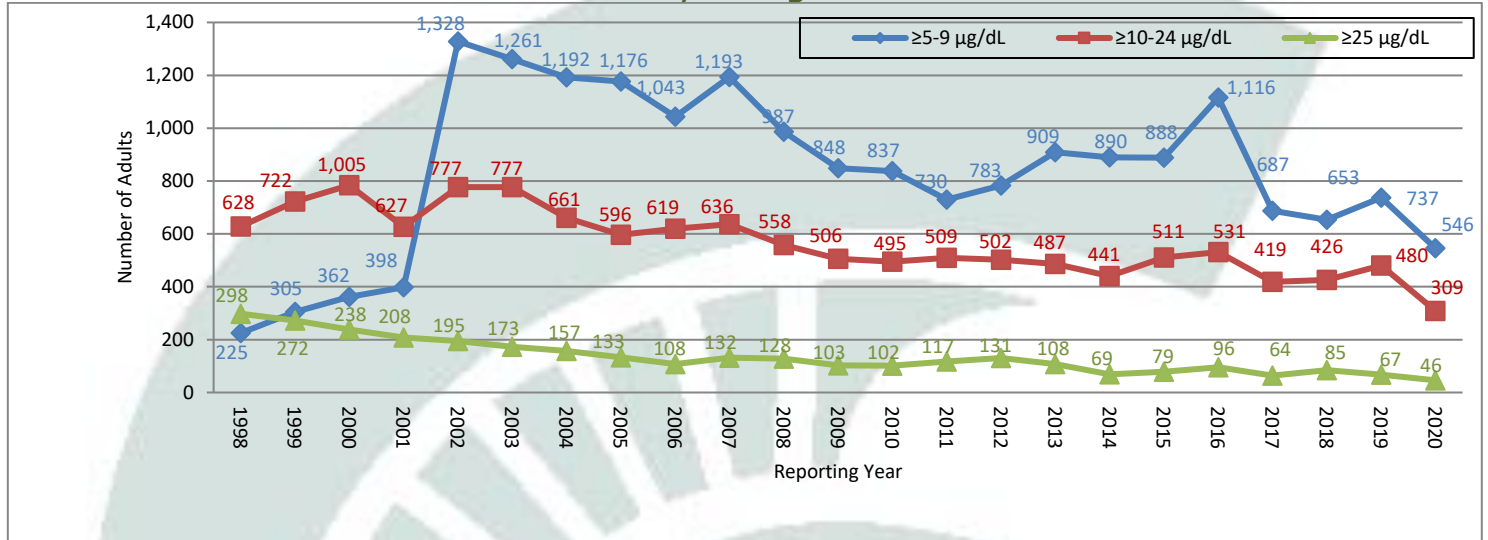


Tracking Adult Blood lead in Michigan

Additional information available at www.oem.msu.edu

Summary Statistics

Number of Individuals with Elevated Lead, Michigan 1998-2020



The adults with Blood Lead Levels (BLLs) ≥ 10 $\mu\text{g}/\text{dL}$ were likely to be male (91.1%) and white (82.9%). Their mean age was 45.4. They were most likely to live in Wayne (20.7%), Saint Clair (8.3%), and Oakland (7.7%) counties.

Work-Related Exposure Sources for Individuals with Blood Lead ≥ 10 $\mu\text{g}/\text{dL}$, Michigan 2017-2019

NORA Sector Group ^a	NAICS Code ^b	Number	Percent
Agriculture, Forestry & Fishing (except Wildland Firefighting)	11	0	–
Construction	23	92	22.7
Healthcare & Social Assistance	62, 54194, 81291	5	1.2
Manufacturing	31-33	154	37.9
Mining (except Oil & Gas Services)	21	0	–
Oil & Gas Extraction	211, 213111, 213112	0	–
Public Safety (including Wildland Firefighting)	92212, 92214, 92216, 62191	0	–
Services (except Public Safety)	51, 52, 53, 54, 55, 56, 61, 71, 72, 81, 92	64	15.8
Transportation, Warehousing & Utilities	48-49, 22	53	13.0
Wholesale & Retail Trade	42, 44-45	38	9.4
Total		406^c	100.0

^a National Occupational Research Agenda (NORA).

^b North American Industry Classification System (NAICS).

^c Another 179 were work-related; however, the industry was unknown.

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

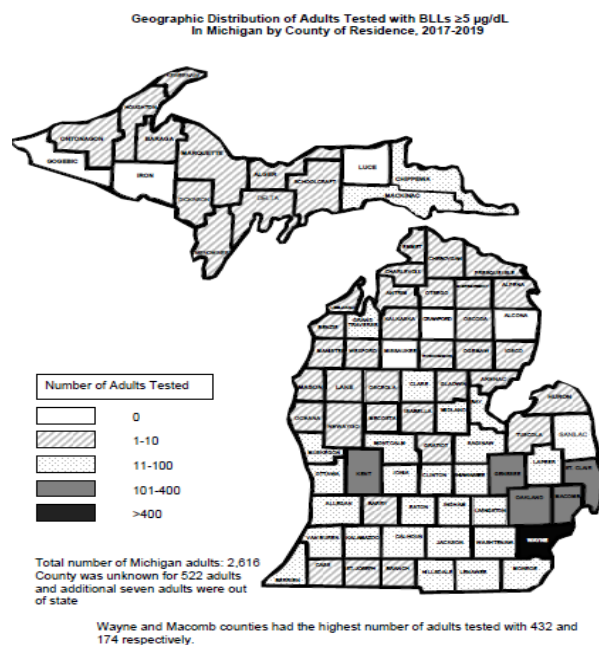
Surveillance of blood lead levels (BLLs) of Michigan citizens is based on regulations promulgated October 11, 1997 by the Michigan Department of Health and Human Services (MDHHS) that require laboratories to report all blood lead analyses, both among adults and children. The Adult Blood Lead Epidemiology 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 2012-2020

Twenty-six MIOSHA and two federal OSHA inspections were conducted at 28 companies referred by ABLES due to elevated blood lead laboratory reports.

*Twenty-one of the 28 (75%) received citations for violation of the lead-related standard.

- *5 of 6 shooting ranges (one police department)
- *2 construction operations
- *1 metal storage warehouse
- *2 brass/bronze and copper foundries
- *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 of 2 recyclable material merchant wholesalers
- *1 copper rolling, drawing and extruding manufacturer
- *1 industrial machinery and equipment merchant wholesaler
- *1 fabricated structural metal fabricator
- *1 storage battery manufacturer
- *1 of 2 remediation services
- 1 plumbing fixture fitting and trim manufacturer
- 1 metal heat treating plant
- 1 marine cargo handling
- 1 motor vehicle transmission and power train parts manuf.



Elevated Blood Lead Narratives, Michigan 2012-2020

- 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 was to go to outdoor target practice sites to recover the spent lead bullets and grind them in a machine that separated the dirt from the lead.
- 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, renovating a 102-year-old house, had an elevated BLL of 44 $\mu\text{g}/\text{dL}$ in March 2017.
- A female in her late 40s, employed at a foundry, had an elevated BLL of 40 $\mu\text{g}/\text{dL}$ in July 2018 and 38 $\mu\text{g}/\text{dL}$ in September 2018.
- A male in his late 30s, employed at an industrial recycling services company, had an elevated BLL of 50 $\mu\text{g}/\text{dL}$ in September 2019 and 30 $\mu\text{g}/\text{dL}$ in November 2019.
- A male in his late 30s, employed at a remediation services company, had an elevated BLL of 39 $\mu\text{g}/\text{dL}$ in December 2020 and 33 $\mu\text{g}/\text{dL}$ in January 2021. He reported he did lead paint abatement and stripping.

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