



# Michigan Department of Health and Human Services (MDHHS) Blood Lead Level Test Results for Selected Flint Zip Codes, Genesee County, and the State of Michigan Summary as of January 6, 2017

## Executive Summary

This report is generated by MDHHS to track Blood Lead Level test results in Flint, Michigan.

- Blood lead level testing is an important part of our efforts to identify people who have been harmed by drinking water that contained lead. However, MDHHS recognizes that the full community of Flint must be the focus of the public health response.
- People who have had multiple tests are counted only once per year for the annual counts. People counted in 2015 who were tested again after 1/1/2016 are counted in both years.
- Counts on this report include both capillary and venous blood tests.
- As of 5/2/2016, this report will no longer include test results for “Additional Impacted Locations” (48509, 48519, 48529, and 48532) because it has been demonstrated by CDC geographers that almost none of the addresses in these areas are serviced by water from the Flint River.
- Between 10/1/2015 and 1/6/2017, 31,542 people were tested in Flint zip codes 48501-48507.
- Continued testing efforts by Genesee County Health Department, MDHHS, and local medical personnel have identified 231 children under age 18 in Flint zip codes 48501-48507 with blood lead levels greater than or equal to 5 mcg/dL (micrograms lead per deciliter of blood) since 10/1/2015.
- Of children younger than 6 years old tested between 10/1/2015 and 12/30/2016, 2.5% from Flint zip codes 48501-48507 had blood lead levels greater than or equal to 5 mcg/dL.
- Five of the 24 (20.8%) children younger than 6 years old from Flint zip codes 48501-48507 with an elevated blood lead level (tested between 10/1/2016 and 12/30/2016) in Quarter 4 of 2016 had a previous test result greater than or equal to 5 mcg/dL.

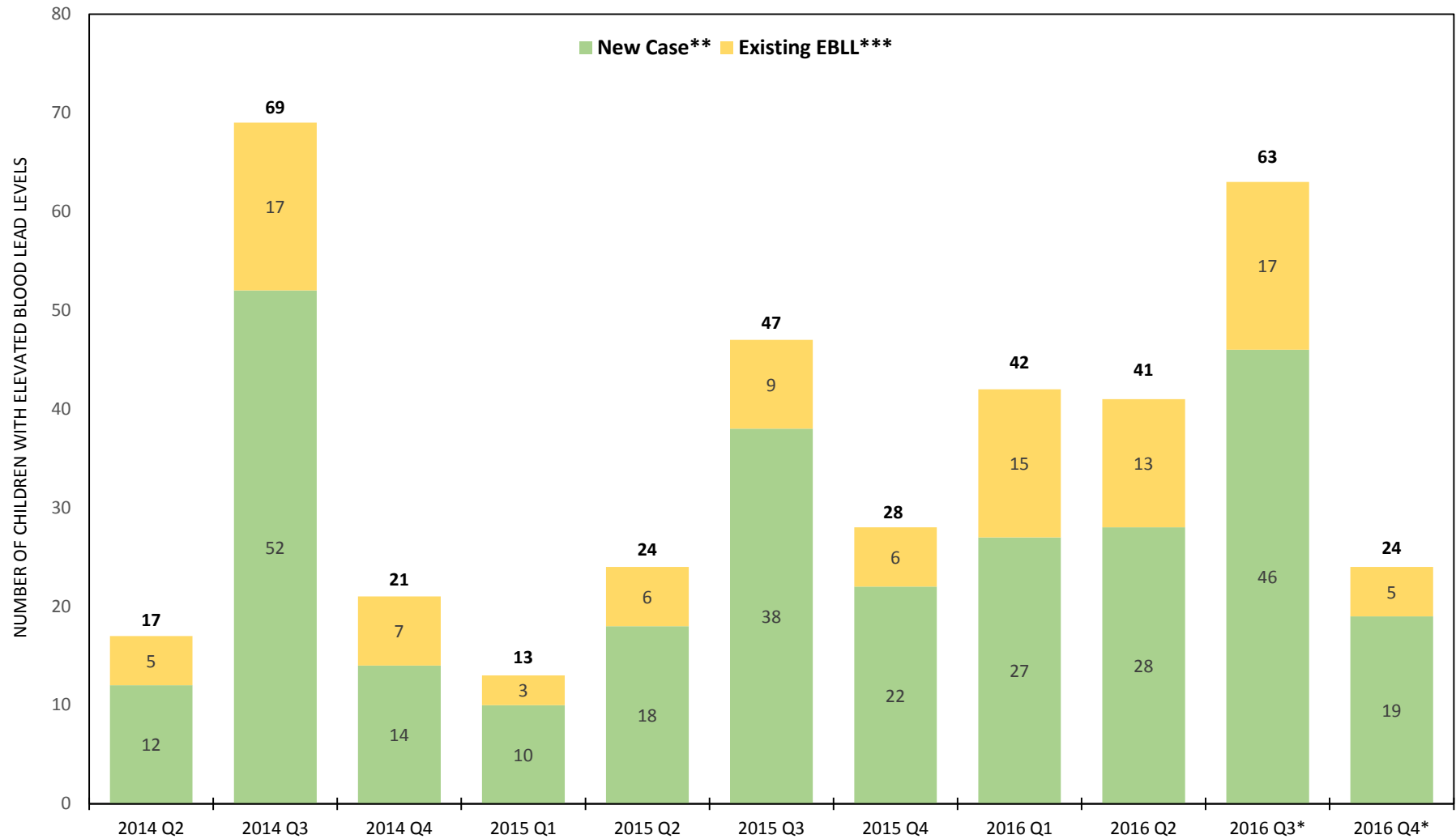
## Annual Incidence of Elevated Blood Lead $\geq 5$ mcg/dL among Children <6 Years of Age by Quarter, Michigan, 2010 - 2016



\*Data for Quarters 3 and 4 of 2016 are incomplete and subject to change.

People who have had multiple tests are counted only once per year for annual counts. People counted in 2015 who were tested again after 1/1/2016 are counted in both years. Counts on this report include both capillary and venous blood tests.

## Elevated Blood Lead Levels ( $\geq 5$ mcg/dL) among Children <6 Years of Age by Quarter, Flint (48501-48507), 4/1/14 - 01/6/2017 \*



\* Data for Quarters 3 and 4 of 2016 are incomplete and subject to change.

\*\* Child has never had a previous elevated blood lead level

\*\*\* Child has a pre-existing elevated blood lead level that has not yet been brought down to <5 mcg/dL

People who have had multiple tests are counted only once per year for annual counts. People counted in 2015 who were tested again after 1/1/2016 are counted in both years. Counts on this report include both capillary and venous blood tests.

**Table 1. Incidence of elevated blood lead levels ( $\geq 5$  mcg/dL) among children less than 6 years of age, 2010 – 2016**

		<b>Michigan</b>	<b>Genesee County</b>	<b>Flint 48501-48507</b>
<b>1/1/2010 to 12/31/2010</b>	<b>Total tested for lead</b>	156,015	7,053	3,630
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	9,754	306	230
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	6.3%	4.3%	6.3%
<b>1/1/2011 to 12/31/2011</b>	<b>Total tested for lead</b>	152,334	6,760	3,145
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	7,571	252	182
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	5.0%	3.7%	5.8%
<b>1/1/2012 to 12/31/2012</b>	<b>Total tested for lead</b>	149,061	7,152	3,198
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	6,834	210	130
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	4.6%	2.9%	4.1%
<b>1/1/2013 to 12/31/2013</b>	<b>Total tested for lead</b>	148,684	7,133	3,143
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	5,747	158	96
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	3.9%	2.2%	3.1%
<b>1/1/2014 to 12/31/2014</b>	<b>Total tested for lead</b>	143,987	6,820	3,102
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	5,063	178	122
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	3.5%	2.6%	3.9%
<b>1/1/2015 to 12/31/2015</b>	<b>Total tested for lead*</b>	140,919	6,983	3,388
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	4,793	160	112
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	3.4%	2.3%	3.3%
<b>10/1/2015 to 01/06/2017</b>	<b>Total tested for lead*</b>	180,652	13,111	7,396
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	6,457	233	187
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	3.6%	1.8%	2.5%
<b>4/1/2014 to 01/06/2017</b>	<b>Total tested for lead*</b>	328,094	18,588	9,217
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	12,148	405	290
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	3.7%	2.2%	3.1%
<b>1/1/2016 to 01/06/2017</b>	<b>Total tested for lead*</b>	154,463	11,572	6,587
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	5,628	208	170
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	3.6%	1.8%	2.6%

**Table 2. Incidence of elevated blood lead levels ( $\geq 5$  mcg/dL) among children 6 to 17 years of age, 2010 – 2016**

		<b>Michigan</b>	<b>Genesee County</b>	<b>Flint 48501-48507</b>
<b>1/1/2010 to 12/31/2010</b>	<b>Total tested for lead</b>	14,730	760	400
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	665	17	12
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	4.5%	2.2%	3.0%
<b>1/1/2011 to 12/31/2011</b>	<b>Total tested for lead</b>	12,959	959	499
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	474	19	13
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	3.7%	2.0%	2.6%
<b>1/1/2012 to 12/31/2012</b>	<b>Total tested for lead</b>	12,711	1,259	561
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	351	13	9
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	2.8%	1.0%	1.6%
<b>1/1/2013 to 12/31/2013</b>	<b>Total tested for lead</b>	11,449	1,109	505
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	271	7	3
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	2.4%	0.6%	0.6%
<b>1/1/2014 to 12/31/2014</b>	<b>Total tested for lead</b>	10,563	788	372
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	285	6	5
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	2.7%	0.8%	1.3%
<b>1/1/2015 to 12/31/2015</b>	<b>Total tested for lead*</b>	10,416	1,570	1,084
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	254	10	8
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	2.4%	0.6%	0.7%
<b>10/1/2015 to 01/06/2017</b>	<b>Total tested for lead*</b>	26,869	10,409	7,876
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	467	57	44
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	1.7%	0.5%	0.6%
<b>4/1/2014 to 01/06/2017</b>	<b>Total tested for lead*</b>	39,585	11,156	8,168
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	712	60	46
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	1.8%	0.5%	0.6%
<b>1/1/2016 to 01/06/2017</b>	<b>Total tested for lead*</b>	24,104	9,643	7,286
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	415	53	39
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	1.7%	0.5%	0.5%

**Table 3. Incidence of elevated blood lead levels ( $\geq 5$  mcg/dL) among adults at least 18 years of age, 2010 – 2016**

		<b>Michigan</b>	<b>Genesee County</b>	<b>Flint 48501-48507</b>
<b>1/1/2010 to 12/31/2010</b>	<b>Total tested for lead</b>	13,681	588	188
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	1,459	42	18
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	10.7%	7.1%	9.6%
<b>1/1/2011 to 12/31/2011</b>	<b>Total tested for lead</b>	13,112	528	132
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	1,367	43	16
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	10.4%	8.1%	12.1%
<b>1/1/2012 to 12/31/2012</b>	<b>Total tested for lead</b>	12,912	539	148
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	1,413	33	11
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	10.9%	6.1%	7.4%
<b>1/1/2013 to 12/31/2013</b>	<b>Total tested for lead</b>	12,081	484	132
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	1,499	54	16
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	12.4%	11.2%	12.1%
<b>1/1/2014 to 12/31/2014</b>	<b>Total tested for lead</b>	12,576	436	111
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	1,419	44	12
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	11.3%	10.1%	10.8%
<b>1/1/2015 to 12/31/2015</b>	<b>Total tested for lead*</b>	13,684	1,250	811
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	1,368	48	21
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	10.0%	3.8%	2.6%
<b>10/1/2015 to 01/06/2017</b>	<b>Total tested for lead*</b>	39,731	20,786	16,270
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	1,872	329	261
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	4.7%	1.6%	1.6%
<b>4/1/2014 to 01/06/2017</b>	<b>Total tested for lead*</b>	55,427	21,369	16,423
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	3,311	371	271
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	6.0%	1.7%	1.7%
<b>1/1/2016 to 01/06/2017</b>	<b>Total tested for lead*</b>	36,488	20,046	15,712
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	1,630	309	250
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	4.5%	1.5%	1.6%

Table 4. Total incidence of elevated blood lead levels ( $\geq 5$  mcg/dL), 2010 – 2016

		Michigan	Genesee County	Flint 48501-48507
1/1/2010 to 12/31/2010	Total tested for lead	184,426	8,401	4,218
	Number of test results $\geq 5$ mcg/dL	11,878	365	260
	Percent of test results $\geq 5$ mcg/dL	6.4%	4.3%	6.2%
1/1/2011 to 12/31/2011	Total tested for lead	178,405	8,247	3,776
	Number of test results $\geq 5$ mcg/dL	9,412	314	211
	Percent of test results $\geq 5$ mcg/dL	5.3%	3.8%	5.6%
1/1/2012 to 12/31/2012	Total tested for lead	174,684	8,950	3,907
	Number of test results $\geq 5$ mcg/dL	8,598	256	150
	Percent of test results $\geq 5$ mcg/dL	4.9%	2.9%	3.8%
1/1/2013 to 12/31/2013	Total tested for lead	172,214	8,726	3,780
	Number of test results $\geq 5$ mcg/dL	7,517	219	115
	Percent of test results $\geq 5$ mcg/dL	4.4%	2.5%	3.0%
1/1/2014 to 12/31/2014	Total tested for lead	167,126	8,044	3,585
	Number of test results $\geq 5$ mcg/dL	6,767	228	139
	Percent of test results $\geq 5$ mcg/dL	4.0%	2.8%	3.9%
1/1/2015 to 12/31/2015	Total tested for lead*	165,019	9,803	5,283
	Number of test results $\geq 5$ mcg/dL	6,415	218	141
	Percent of test results $\geq 5$ mcg/dL	3.9%	2.2%	2.7%
10/1/2015 to 01/06/2017	Total tested for lead*	247,252	44,306	31,542
	Number of test results $\geq 5$ mcg/dL	8,796	619	492
	Percent of test results $\geq 5$ mcg/dL	3.6%	1.4%	1.6%
4/1/2014 to 01/06/2017	Total tested for lead*	423,106	51,113	33,808
	Number of test results $\geq 5$ mcg/dL	16,171	836	607
	Percent of test results $\geq 5$ mcg/dL	3.8%	1.6%	1.8%
1/1/2016 to 01/06/2017	Total tested for lead*	215,055	41,261	29,585
	Number of test results $\geq 5$ mcg/dL	7,673	570	459
	Percent of test results $\geq 5$ mcg/dL	3.6%	1.4%	1.6%