



# 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 October 7, 2016

## 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 10/7/2016, an additional 29,979 people were tested in Flint zip codes 48501-48507.
- Continued testing efforts by Genesee County Health Department, MDHHS, and local medical personnel have identified 220 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 10/7/2016, 2.5% from Flint zip codes 48501-48507 had blood lead levels greater than or equal to 5 mcg/dL.
- Seventeen of the 67 (25.4%) children younger than 6 years old from Flint zip codes 48501-48507 with an elevated blood lead level (tested between 7/1/2016 and 9/30/2016) in Quarter 3 of 2016 had a previous test result greater than or equal to 5 mcg/dL.

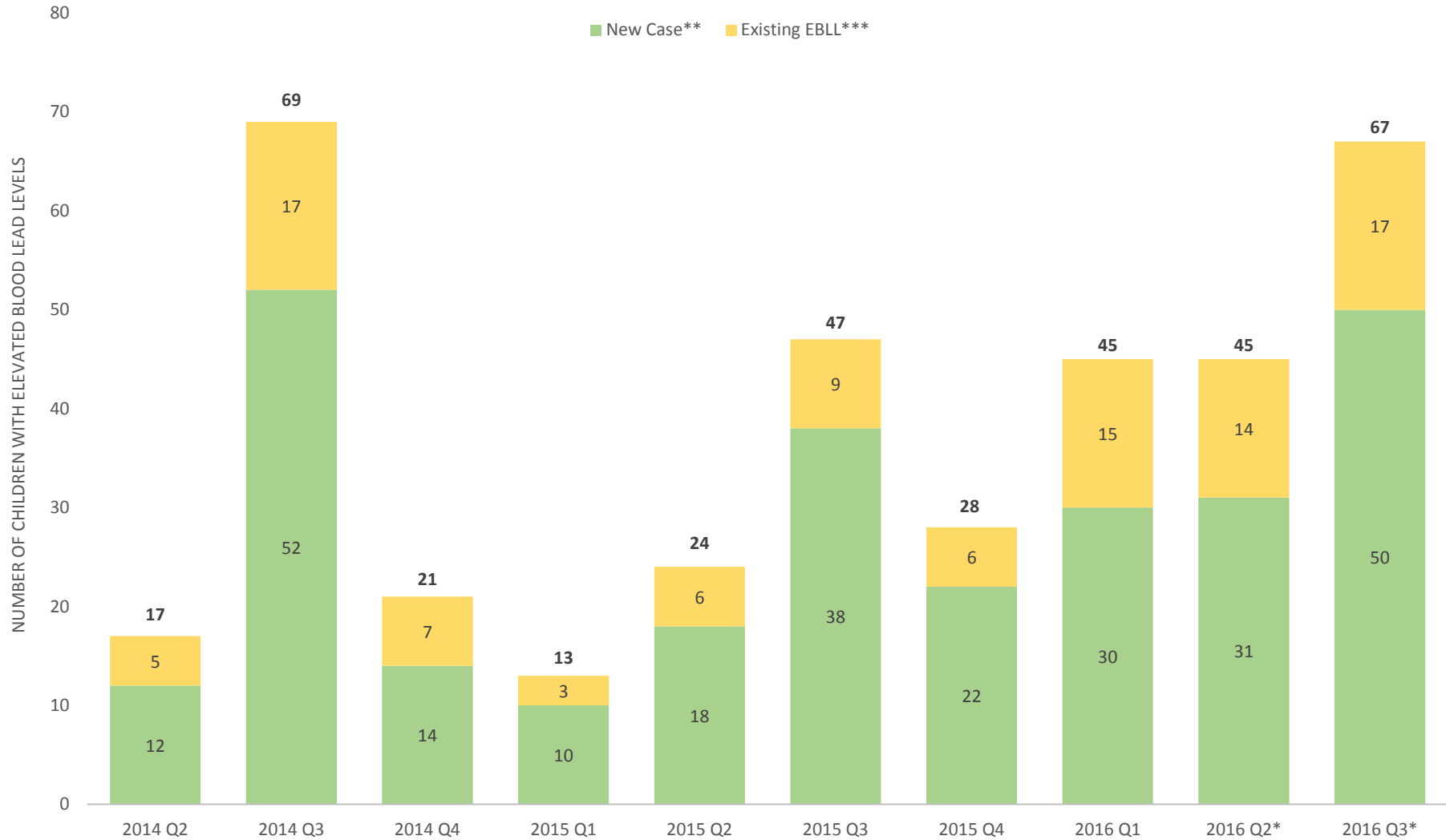
## Annual Incidence of Elevated Blood Lead $\geq 5$ mcg/dL among Children <6 Years of Age by Quarter, Michigan, 2010 - 2016



\*Data for Quarter 2 of 2016 are incomplete and subject to change. Data for Quarter 3 of 2016 will be presented when the quarter is complete.

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 - 10/7/16



\* Data for Quarters 2 and 3 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**

		Michigan	Genesee County	Flint 48501-48507
<b>1/1/2010 to 12/31/2010</b>	<b>Total tested for lead</b>	156,014	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>	152,333	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>	149,037	7,152	3,198
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	6,832	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>	148,400	7,132	3,142
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	5,720	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>	143,838	6,820	3,102
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	5,051	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>	140,862	6,984	3,389
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	4,792	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 10/07/2016</b>	<b>Total tested for lead*</b>	153,622	11,944	6,910
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	5,510	214	175
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	3.6%	1.8%	2.5%
<b>4/1/2014 to 10/07/2016</b>	<b>Total tested for lead*</b>	306,101	17,621	8,817
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	11,312	386	277
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	3.7%	2.2%	3.1%
<b>1/1/2016 to 10/07/2016</b>	<b>Total tested for lead*</b>	124,064	10,279	6,047
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	4,620	188	157
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	3.7%	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>	14,729	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>	12,710	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>	11,428	1,109	505
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	269	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>	10,562	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>	10,417	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 10/07/2016</b>	<b>Total tested for lead*</b>	23,838	9,907	7,553
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	427	58	45
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	1.8%	0.6%	0.6%
<b>4/1/2014 to 10/07/2016</b>	<b>Total tested for lead*</b>	36,849	10,681	7,861
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	680	61	47
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	1.8%	0.6%	0.6%
<b>1/1/2016 to 10/07/2016</b>	<b>Total tested for lead*</b>	21,007	9,117	6,946
	<b>Number of test results <math>\geq 5</math> mcg/dL</b>	374	54	40
	<b>Percent of test results <math>\geq 5</math> mcg/dL</b>	1.8%	0.6%	0.6%

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

		Michigan	Genesee County	Flint 48501-48507
1/1/2010 to 12/31/2010	Total tested for lead	13,681	588	188
	Number of test results $\geq 5$ mcg/dL	1,459	42	18
	Percent of test results $\geq 5$ mcg/dL	10.7%	7.1%	9.6%
1/1/2011 to 12/31/2011	Total tested for lead	13,112	528	132
	Number of test results $\geq 5$ mcg/dL	1,367	43	16
	Percent of test results $\geq 5$ mcg/dL	10.4%	8.1%	12.1%
1/1/2012 to 12/31/2012	Total tested for lead	12,914	539	148
	Number of test results $\geq 5$ mcg/dL	1,414	33	11
	Percent of test results $\geq 5$ mcg/dL	10.9%	6.1%	7.4%
1/1/2013 to 12/31/2013	Total tested for lead	12,081	484	132
	Number of test results $\geq 5$ mcg/dL	1,499	54	16
	Percent of test results $\geq 5$ mcg/dL	12.4%	11.2%	12.1%
1/1/2014 to 12/31/2014	Total tested for lead	12,574	436	111
	Number of test results $\geq 5$ mcg/dL	1,420	44	12
	Percent of test results $\geq 5$ mcg/dL	11.3%	10.1%	10.8%
1/1/2015 to 12/31/2015	Total tested for lead*	13,676	1,250	811
	Number of test results $\geq 5$ mcg/dL	1,367	48	21
	Percent of test results $\geq 5$ mcg/dL	10.0%	3.8%	2.6%
10/1/2015 to 10/07/2016	Total tested for lead*	35,658	19,534	15,516
	Number of test results $\geq 5$ mcg/dL	1,590	306	250
	Percent of test results $\geq 5$ mcg/dL	4.5%	1.6%	1.6%
4/1/2014 to 10/07/2016	Total tested for lead*	51,638	20,123	15,670
	Number of test results $\geq 5$ mcg/dL	3,074	351	260
	Percent of test results $\geq 5$ mcg/dL	6.0%	1.7%	1.7%
1/1/2016 to 10/07/2016	Total tested for lead*	32,179	18,783	14,949
	Number of test results $\geq 5$ mcg/dL	1,306	285	238
	Percent of test results $\geq 5$ mcg/dL	4.1%	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	184,424	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	178,404	8,247	2,726
	Number of test results $\geq 5$ mcg/dL	9,412	314	211
	Percent of test results $\geq 5$ mcg/dL	5.3%	3.8%	7.7%
1/1/2012 to 12/31/2012	Total tested for lead	174,661	8,950	3,907
	Number of test results $\geq 5$ mcg/dL	8,597	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	171,909	8,725	3,779
	Number of test results $\geq 5$ mcg/dL	7,488	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	166,974	8,044	3,585
	Number of test results $\geq 5$ mcg/dL	6,756	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*	164,955	9,804	5,284
	Number of test results $\geq 5$ mcg/dL	6,413	218	141
	Percent of test results $\geq 5$ mcg/dL	3.9%	2.2%	2.7%
10/1/2015 to 10/07/2016	Total tested for lead*	213,118	41,385	29,979
	Number of test results $\geq 5$ mcg/dL	7,527	578	470
	Percent of test results $\geq 5$ mcg/dL	3.5%	1.4%	1.6%
4/1/2014 to 10/07/2016	Total tested for lead*	394,588	48,425	32,348
	Number of test results $\geq 5$ mcg/dL	15,066	798	584
	Percent of test results $\geq 5$ mcg/dL	3.8%	1.6%	1.8%
1/1/2016 to 10/07/2016	Total tested for lead*	177,250	38,179	27,942
	Number of test results $\geq 5$ mcg/dL	6,300	527	435
	Percent of test results $\geq 5$ mcg/dL	3.6%	1.4%	1.6%