

Childhood
Lead Poisoning
in New Jersey

**ANNUAL
REPORT**

Fiscal Year

2014

July 1, 2013

to

June 30, 2014



CHILDHOOD LEAD POISONING IN NEW JERSEY

ANNUAL REPORT

**STATE FISCAL YEAR 2014
(July 1, 2013– June 30, 2014)**

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GLOSSARY OF TERMS AND ACRONYMS

BLL: Blood lead level.

Children: Refers to unduplicated individuals who are younger than 17 years of age, unless otherwise specified. In reference to data, each child is counted only once regardless of the number of tests that the child has had during the State Fiscal Year.

Department: Refers to the New Jersey Department of Health.

EBLL: Elevated blood lead level (10 µg/dL or greater).

Large Municipality(ies): Municipality(ies) with a population greater than 35,000 residents.

Local Boards of Health: The board of health of any municipality or the boards, bodies, or officers in such municipality lawfully exercising any of the powers of a local board of health under the laws governing such municipality.

Population Data: Census 2010 population data, unless otherwise specified.

SFY: State Fiscal Year for the period of July 1, 2013 to June 30, 2014. Thus, for any State Fiscal Year identified it begins July 1 of the preceding year and ends June 30 of the identified year.

µg/dL: Micrograms per deciliter of whole blood.

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EXECUTIVE SUMMARY

N.J.A.C. §8:51A requires the protection of children younger than six (6) years of age from the toxic effects of lead exposure by requiring lead testing pursuant to N.J.S.A. §26:2-137.1 - 137.7. This Annual Report on Childhood Lead Poisoning in New Jersey for State Fiscal Year (SFY) 2014 is submitted in compliance with N.J.S.A. §26:2-135, which requires the Commissioner of the Department of Health to issue an annual report to the Governor and the Legislature that includes a summary of the lead poisoning testing and abatement program activities in the State during the preceding SFY.

The number of children tested for lead in SFY 2014 was 205,607, which represents a decrease of 1.7% over the 212,002 children tested during SFY 2013. The SFY 2014 number of children tested also includes 90,685 children, or 42%, who are between six (6) and 26 months of age, the ages at which all children must be tested under N.J.A.C. §8:51A.

While 204,767 (99.6%) children tested during SFY 2014 had blood lead levels (BLLs) below 10 µg/dL, 837 (0.41%) children had a test result above this threshold (10 µg/dL) who required public health action (case management and environmental investigation) by the local boards of health.

There were 5,185 children reported with BLLs from 5 µg/dL to 9 µg/dL. The level 5 µg/dL is a reference level used by the Centers for Disease Control and Prevention (CDC) that indicates a need for emphasis on primary prevention activities to begin at that level. It is not an action level in terms of case management and environmental investigation by local boards of health. Given the potential that, if unaddressed by preventive action, BLLs for children between 5 µg/dL to 9 µg/dL could increase to 10 µg/dL and above, primary care providers and parents should take appropriate action -- education and retesting -- for children in this reference level. There were 2,245 children aged six (6) to 26 months in this BLL level reported during SFY 2014.

The City of Newark continues to be a geographic focus in New Jersey's efforts to eliminate childhood lead poisoning. It not only far exceeds every other large municipality in the number of children younger than six (6) years of age, but also with elevated blood lead levels (EBLLs). In SFY 2014, the City of Newark comprised 15% of the total number of children (younger than six (6) years of age) with EBLLs in the State. Further, it had the highest number of new cases (incidence) of childhood lead poisoning reported during SFY 2014.

Throughout this report, population data are obtained from the US Census 2010, to be used as the denominator. However, Superstorm Sandy might have "disrupted" the actual population numbers that were originally published by the United States Census Bureau by means of displacement of families from the nine counties that were most affected by the storm. Some families may even have moved outside of New Jersey. This would mean that the screening rates calculated for those counties, and possibly other New Jersey counties, may not be as accurate as they would have been, provided there was no change in the population.

CHAPTER ONE

TESTING CHILDREN FOR LEAD POISONING

In New Jersey, per N.J.A.C. §8:51A, all children are required to be tested at both 12 and 24 months of age. Any child older than three (3) years of age must be tested at least once before their sixth birthday (if they had not been screened at age one (1) and two (2) years). Approximately 66% of children in New Jersey had at least one blood lead test by the age of 26 months and approximately 75% had at least one blood lead test prior to reaching three (3) years of age, along with 97% having at least one blood lead test prior to reaching six (6) years of age.

This chapter describes and depicts the testing statistics and trends based on the reports of blood lead tests received by the Department from clinical laboratories. Analyses to create the figures and tables are based on individual children, counting only one test per child.

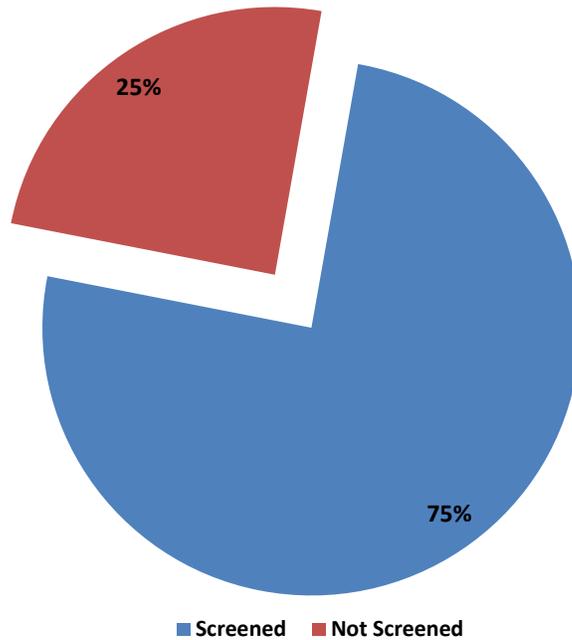
The figures and tables highlighting children between six (6) and 26 months of age closely represent the testing rates. However, the data displayed throughout these figures and tables also include children who were tested during SFY 2014 as their second test at two (2) years of age, while they may have been tested at one (1) year of age during SFY 2013.

The Department uses the range of six (6) to 26 months of age to also include data on tests that are performed earlier than 12 months of age or later than 24 months of age, as not all children are tested exactly at one (1) and two (2) years of age.

Figures 1a and 1b represent the percentages of children who had a lead test performed prior to turning three (3) and six (6) years of age, respectively, during SFY 2014.

Figure 1a

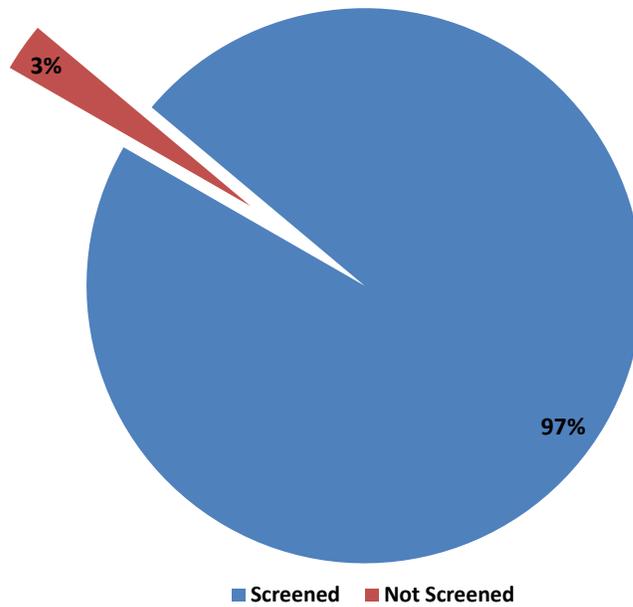
Percentage of Children* Who Turned Three (3) years of Age during SFY 2014 and Had at Least One Blood Lead Test in their Lifetime



*Number of children born in New Jersey between July 1, 2010 and June 30, 2011 (106,244); Source: Birth Registry data

Figure 1b

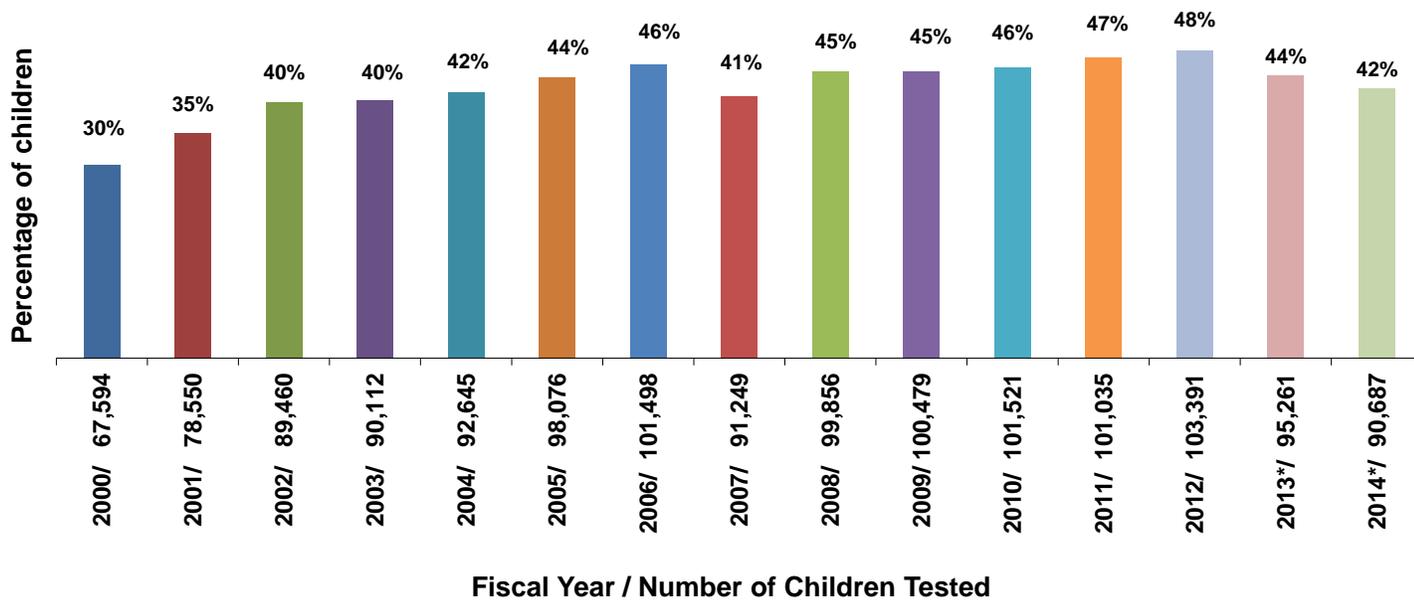
Percentage of Children* Who Turned Six (6) years of Age during SFY 2014 and Had at Least One Blood Lead Test in their Lifetime



* Number of children born in New Jersey between July 1, 2007 and June 30, 2008 (115,919); Source: Birth Registry data

Figure 2

Trend in Percentage of Children (six (6) to 29 months of age) Tested by SFY
($n=222,837^1$ and $n=214,727^2$)



¹ The denominator for SFY 2000 through SFY 2010 uses the number of children who were one (1) and two (2) years of age, based on US Census 2000 data.

² The denominator for SFY 2011 to SFY 2014 uses the number of children who were one (1) and two (2) years of age, based on US Census 2010 data.

*For SFY 2013 and 2014 the data are for age group six (6) to 26 months.

CHAPTER TWO

PROFILE OF BLOOD LEAD TESTS PERFORMED AND PREVALENCE OF CHILDHOOD LEAD POISONING

In this chapter, the figures and tables identify the statistics of testing performed for various ages and the prevalence of lead poisoning among children in SFY 2014.

Tables 1 and 2 show the testing statistics by county and municipality, respectively, of residence for children six (6) to 26 months of age. The range of screening percentage on Table 2 is 2.2% to 69.9%, with a median screening rate of 35.5%. Figure 3 shows the prevalence of lead poisoning among children six (6) to 26 months of age. The analyses behind the formulation of the tables are based on the number of children, reported during SFY 2014, which counts the highest BLL reported per child. The figures and tables in this chapter include children who were tested for a second time during SFY 2014 around two (2) years of age as required by law.

Tables 3 and 4 display the testing statistics and the prevalence of lead poisoning among the children who were tested at younger than six (6) years of age during SFY 2014.

The Department maintains a database containing all blood lead tests reported on children. In order to exhibit the distribution of lead tests and the prevalence of lead poisoning among children, Figures 4a, 4b, 5 and Table 5 focus on the entire population of children who were tested and reported during SFY 2014.

Figures 6a and 6b depict the trend in the number of children reported with an EBLL by SFY.

The children in the age groups of younger than six (6) years of age and younger than 17 years of age may have had one or more blood lead tests performed during their lifetime, either as routine lead testing or as a follow-up to an elevated blood lead test. However, the analyses of data for the tables for these age groups were based on the number of individual children reported during SFY 2014, counting the highest BLL reported per child.

Table 6 depicts changes in screening and number of children reported with EBLL, by SFY, within the children between the ages of six (6) and 26 months residing within the nine Counties that were declared as the most affected by Superstorm Sandy.

Table 1**SFY 2014: Number of Children (six (6) to 26 months of age) by BLL and County of Residence**

County	Total Children*	% Tested	BLL (µg/dL)						Total
			<5	5 - 9	10 - 14	15-19	20-44	≥ 45	
ATLANTIC	6,521	41.5%	2,588	98	12	4	4		2,706
BERGEN	19,955	37.5%	7,344	133	6	7	1	1	7,492
BURLINGTON	10,166	18.9%	1,872	47	2	2	2		1,925
CAMDEN	13,215	26.7%	3,441	64	10	4	3		3,522
CAPE MAY	1,822	21.8%	384	11	2		1		398
CUMBERLAND	4,368	36.9%	1,515	81	13	1	3		1,613
ESSEX	21,569	49.5%	10,093	499	47	16	23		10,678
GLOUCESTER	6,862	13.7%	917	16	1	1	3		938
HUDSON	17,288	46.5%	7,792	198	25	10	7		8,032
HUNTERDON	2,316	34.0%	760	24	2	1			787
MERCER	8,591	36.8%	3,008	121	25	4			3,158
MIDDLESEX	19,965	32.9%	6,415	119	18	5	5	3	6,565
MONMOUTH	13,371	30.2%	3,971	57	10	3	2		4,043
MORRIS	10,700	24.1%	2,532	38	9				2,579
OCEAN	15,532	41.4%	6,371	58	6	1	1		6,437
PASSAIC	13,727	49.6%	6,548	239	17	1	7		6,812
SALEM	1,549	30.1%	432	30	2	1	1		466
SOMERSET	7,581	26.2%	1,960	21	5		1		1,987
SUSSEX	3,099	23.8%	731	7					738
UNION	14,148	44.6%	6,104	174	21	7	7		6,313
WARREN	2,382	30.2%	696	21	2				719
Not Specified	N/A		12,586	189					12,775
Total	214,727	42.2%	88,060	2,245	235	68	71	4	90,683

*US Census 2010 data

Table 2**SFY 2014: Number of Children (six (6) to 26 months of age) by BLL and Municipality* of Residence**

Municipality	Total Children**	% Tested	BLL (µg/dL)					Total
			<5	5 - 9	10 - 14	15-19	20-44	
ATLANTIC CITY	1,249	69.7%	794	64	7	2	3	870
BAYONNE	1,528	33.2%	495	9	3		1	508
BELLEVILLE	869	48.3%	414	5		1		420
BERKELEY	509	5.1%	26					26
BLOOMFIELD	1,224	40.8%	488	11				499
BRICK	1,531	25.7%	391	2				393
BRIDGEWATER	978	38.4%	369	7				376
CAMDEN	2,838	44.7%	1,225	33	5	2	3	1268
CHERRY HILL	1,449	23.6%	333	6	2	1		342
CLIFTON	2,123	44.4%	925	16	1			942
EAST BRUNSWICK	860	32.9%	280	3				283
EAST ORANGE	1,916	38.9%	686	51	5	1	2	745
EDISON	2,560	37.8%	945	17	3	1	1	967
EGG HARBOR	1,038	44.8%	459	5	1			465
ELIZABETH	3,943	51.9%	1,962	78	2	1	2	2045
EVESHAM	1,016	2.2%	22					22
EWING	600	31.8%	186	5				191
FORT LEE	725	36.4%	263	1				264
FRANKLIN	1,759	8.2%	138	3	3			144
FREEHOLD	652	55.2%	356	3	1			360
GALLOWAY	724	30.7%	218	3	1			222
GLOUCESTER	1,520	7.3%	110	1				111
HACKENSACK	1,118	51.9%	568	11		1		580
HAMILTON	1,814	22.2%	392	9	1			402
HILLSBOROUGH	866	46.1%	398	1				399
HOBOKEN	1,467	30.3%	442	3				445
HOWELL	1,125	21.6%	242	1				243
IRVINGTON	1,692	59.4%	918	71	9	2	5	1005
JACKSON	1,100	23.9%	263					263
JERSEY CITY	7,192	53.8%	3,712	130	16	7	4	3869
KEARNY	895	43.8%	384	8				392
LAKEWOOD	6,556	68.2%	4,417	51	5	1		4474
LINDEN	911	48.1%	431	7				438
MANALAPAN	778	22.5%	175					175
MANCHESTER	448	10.0%	45					45

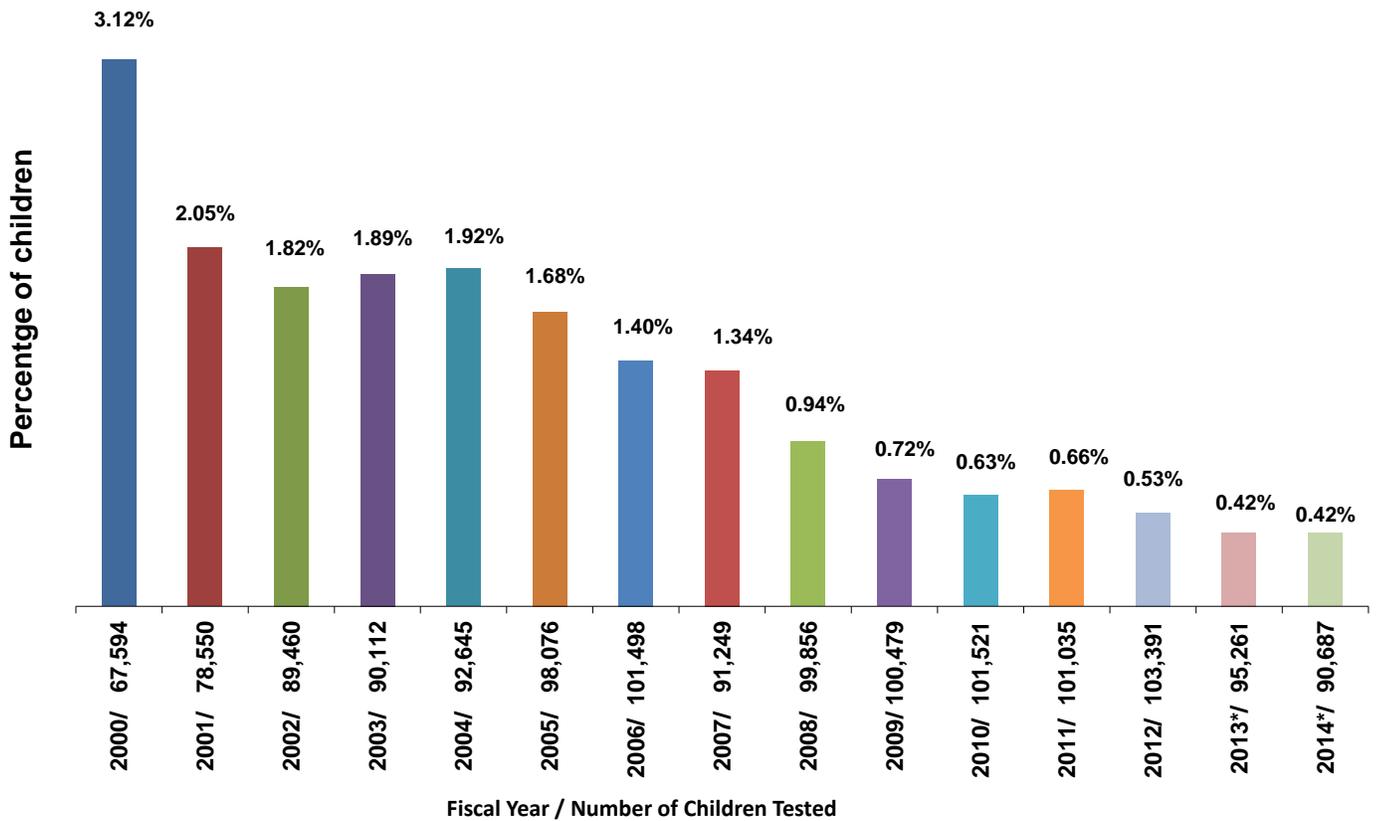
Municipality	Total Children**	% Tested	BLL (µg/dL)						Total
			<5	5 - 9	10 - 14	15-19	20-44	≥ 45	
MARLBORO	767	14.3%	110						110
MIDDLETOWN	1,444	17.5%	250	2	1				253
MONROE (Gloucester County)	898	3.5%	31						31
MONROE (Middlesex County)	655	14.2%	93						93
MONTCLAIR	869	31.8%	266	8	1	1			276
MOUNT LAUREL	886	18.2%	157	4					161
NEW BRUNSWICK	1,573	59.4%	900	26	3	1	3	2	935
NEWARK	8,382	62.4%	4,909	269	24	11	15		5228
NORTH BERGEN	1,498	41.2%	610	6	1				617
NORTH BRUNSWICK	1,220	33.1%	398	3	3				404
OLD BRIDGE	1,478	23.9%	351	2					353
PARSIPPANY-TROY HILLS	1,207	5.9%	64	2	5				71
PASSAIC	2,767	63.6%	1,677	70	8	1	5		1761
PATERSON	4,632	58.4%	2,569	127	8		2		2706
PENNSAUKEN	845	27.9%	233	3					236
PERTH AMBOY	1,584	52.9%	820	15	2		1		838
PISCATAWAY	1,361	35.5%	476	7					483
PLAINFIELD	1,628	69.9%	1,077	44	9	6	2		1138
SAYREVILLE	1,137	21.5%	242		1	1			244
SOUTH BRUNSWICK	935	6.7%	59	3	1				63
TEANECK	1,075	29.6%	308	9	1				318
TOMS RIVER	1,816	35.9%	650	1			1		652
TRENTON	2,786	56.6%	1,452	102	19	3			1576
UNION CITY	1,880	42.4%	768	22	3	3	2		798
UNION	1,250	40.6%	497	9			1		507
VINELAND	1,729	38.3%	651	11	1				663
WASHINGTON (Gloucester County)	900	3.0%	27						27
WAYNE	995	41.3%	407	4					411
WEST NEW YORK	1,523	46.7%	701	10					711
WEST ORANGE	1,263	35.3%	432	11	2		1		446
WINSLOW	1,122	3.6%	39			1			40
WOODBIDGE	2,495	15.0%	357	16	1	1			375

*Large Municipalities only

**US Census 2010 data

Figure 3

Trend in Percentage of Children (ages six (6) to 29 months*) with BLL \geq 10 μ g/dL by SFY



*For FY 2013 and 2014 the data are for age group six (6) to 26 months, because the screening regulations (N.J.A.C. §8:51A) require that each child be screened for lead at the age of one (1) year and again at the age of two (2) years. The regulations specify the qualifying screening age ranges of six (6) to 17 months for the age of one (1) year and 18 to 26 months for the age of two (2) years.

Table 3

SFY 2014: Number of Children <6 years of Age by BLL and County of Residence

County	Total Children*	% Tested	Blood Lead Level (µg/dL)						Total
			<5	5-9	10-14	15-19	20-44	≥45	
ATLANTIC	19,909	25.3%	4,869	144	23	4	6		5,046
BERGEN	61,192	20.4%	12,314	121	11	11	5	1	12,463
BURLINGTON	31,546	9.5%	2,946	38	3	2	2		2,991
CAMDEN	40,195	13.3%	5,226	71	21	10	10	1	5,339
CAPE MAY	5,423	11.7%	622	8	2		3		635
CUMBERLAND	12,963	23.3%	2,892	101	20	3	5		3,021
ESSEX	64,591	39.3%	24,480	719	112	49	45	2	25,407
GLOUCESTER	21,059	6.4%	1,328	16	2	2	3		1,351
HUDSON	49,759	35.9%	17,458	305	49	18	12	1	17,843
HUNTERDON	7,484	12.4%	909	16	4	1			930
MERCER	26,052	22.3%	5,649	125	33	7	3		5,817
MIDDLESEX	60,249	20.2%	11,956	159	26	12	7	3	12,163
MONMOUTH	42,404	15.3%	6,368	77	18	5	4		6,472
MORRIS	33,493	11.7%	3,852	34	15	2	1		3,904
OCEAN	46,657	23.7%	10,951	75	10	3	3		11,042
PASSAIC	41,179	35.7%	14,321	317	46	7	13	1	14,705
SALEM	4,625	14.8%	624	48	6	4	3		685
SOMERSET	23,622	12.1%	2,834	22	9		2		2,867
SUSSEX	9,701	11.0%	1,061	9			1		1,071
UNION	43,085	30.7%	12,901	248	37	14	16	2	13,218
WARREN	7,434	12.7%	923	16	5	1			945
Not Specified	N/A	N/A	21,376	1,980					23,356
Total	652,622	26.2%	165,860	4,649	452	155	144	11	171,271

**US Census 2010 data*

Table 4**SFY 2014: Number of Children <6 years of Age) by BLL and Municipality* of Residence**

Municipality	Total Children**	% Tested	Blood Lead Level (µg/dL)						Total
			<5	5-9	10-14	15-19	20-44	≥45	
ATLANTIC CITY	3,677	47.3%	1,561	155	15	3	4		1,738
BAYONNE	4,576	26.3%	1,179	17	7		1		1,204
BELLEVILLE	2,601	36.1%	923	14	1	1			939
BERKELEY	1,565	2.9%	46						46
BLOOMFIELD	3,575	30.0%	1,047	24					1,071
BRICK	4,558	15.0%	678	4					682
BRIDGEWATER	3,052	17.2%	518	7					525
CAMDEN	8,525	23.8%	1,950	57	10	4	7	1	2,029
CHERRY HILL	4,588	11.0%	490	8	3	1	1		503
CLIFTON	6,187	30.5%	1,853	32	3				1,888
EAST BRUNSWICK	2,725	17.3%	468	3					471
EAST ORANGE	5,534	34.3%	1,749	120	16	4	7		1,896
EDISON	7,774	23.0%	1,746	32	4	2	2		1,786
EGG HARBOR	3,341	23.0%	757	11	1				769
ELIZABETH	11,792	41.7%	4,726	174	10	3	7	1	4,921
EVESHAM	3,117	1.1%	35						35
EWING	1,797	17.8%	310	10					320
FORT LEE	2,171	20.7%	448	2					450
FRANKLIN	5,182	4.8%	241	5	4				250
FREEHOLD	2,156	26.1%	558	4	1				563
GALLOWAY	2,240	17.0%	374	5	2				381
GLOUCESTER	4,647	3.1%	143	2					145
HACKENSACK	3,223	37.4%	1,183	20		2	1		1,206
HAMILTON	5,480	14.9%	794	18	1		1		814
HILLSBOROUGH	2,736	19.0%	518	2					520
HOBOKEN	3,779	19.9%	749	3					752
HOWELL	3,591	10.3%	368	1					369
IRVINGTON	4,993	54.2%	2,476	188	22	5	13	1	2,705
JACKSON	3,649	12.5%	456	1					457
JERSEY CITY	20,393	42.2%	8,258	295	30	13	8	1	8,605
KEARNY	2,681	35.9%	942	19	1	1			963
LAKEWOOD	18,872	40.6%	7,566	81	8	3	1		7,659
LINDEN	2,726	33.3%	895	13					908
MANALAPAN	2,541	11.7%	296			1			297

Municipality	Total Children**	% Tested	Blood Lead Level (µg/dL)						Total
			<5	5-9	10-14	15-19	20-44	≥45	
MANCHESTER	1,372	6.7%	92						92
MARLBORO	2,606	7.2%	187						187
MIDDLETOWN	4,615	7.5%	340	3	1				344
MONROE (Gloucester County)	2,794	2.0%	42						42
MONROE (Middlesex County)	2,082	4.4%	123						123
MONTCLAIR	2,701	19.1%	501	11	2	1			515
MOUNT LAUREL	2,705	7.7%	203	5					208
NEW BRUNSWICK	4,753	36.8%	1,683	51	7	1	3	2	1,747
NEWARK	24,831	56.5%	13,230	689	55	31	24	1	14,030
NORTH BERGEN	4,473	30.0%	1,320	20	2				1,342
NORTH BRUNSWICK	3,502	20.4%	698	12	3	1			714
OLD BRIDGE	4,548	13.3%	600	5					605
PARSIPPANY- TROY HILLS	3,671	3.2%	109	2	8				119
PASSAIC	8,226	53.9%	4,270	139	15	2	7		4,433
PATERSON	13,987	45.8%	6,097	272	27	5	5	1	6,407
PENNSAUKEN	2,696	14.5%	378	10		1	1		390
PERTH AMBOY	4,756	42.8%	1,979	49	3	2	2		2,035
PISCATAWAY	3,903	22.1%	850	13					863
PLAINFIELD	4,961	56.5%	2,675	99	13	11	3	1	2,802
SAYREVILLE	3,338	13.8%	453	4	2	1			460
SOUTH BRUNSWICK	3,130	4.1%	123	4	1				128
TEANECK	3,142	16.5%	504	12	2	1			519
TOMS RIVER	5,617	21.2%	1,181	8			1		1,190
TRENTON	7,998	42.8%	3,207	180	26	6	2		3,421
UNION CITY	5,742	32.6%	1,816	45	5	4	3		1,873
UNION	3,701	27.9%	1,014	17			1		1,032
VINELAND	5,058	23.2%	1,154	19	2				1,175
WASHINGTON	2,968	1.3%	40						40
WAYNE	3,105	18.2%	561	5					566
WEST NEW YORK	4,258	40.3%	1,688	28	1				1,717
WEST ORANGE	3,635	23.4%	824	20	3	1	1		849
WINSLOW	3,336	2.4%	80			1			81
WOODBIDGE	7,326	10.1%	715	26	1	1			743

*Large Municipalities only

**US Census 2010 data

Table 5**SFY 2014: Number of Children (<17 years of age) by BLL and County of Residence**

County	BLL (µg/dL)						Total
	<5	5-9	10-14	15-19	20-44	≥45	
ATLANTIC	5,462	253	26	4	6		5,751
BERGEN	14,404	229	11	13	5	1	14,663
BURLINGTON	3,254	81	3	2	2		3,342
CAMDEN	5,802	126	23	12	10	1	5,974
CAPE MAY	681	20	2		3		706
CUMBERLAND	3,389	163	22	4	5		3,583
ESSEX	30,379	1,373	122	51	54	2	31,981
GLOUCESTER	1,436	29	3	2	3		1,473
HUDSON	22,423	499	55	20	15	1	23,013
HUNTERDON	955	30	4	1			990
MERCER	7,003	239	36	7	6		7,291
MIDDLESEX	15,258	277	30	15	7	3	15,590
MONMOUTH	7,627	128	19	5	4		7,783
MORRIS	4,287	55	15	2	2		4,361
OCEAN	12,270	115	12	3	4		12,404
PASSAIC	17,430	536	50	8	15	1	18,040
SALEM	651	71	6	5	3		736
SOMERSET	3,285	35	10	1	2		3,333
SUSSEX	1,189	11			1		1,201
UNION	16,167	417	41	14	17	2	16,658
WARREN	1,008	30	5	1			1,044
Not Specified	25,223	467					25,690
Total	199,583	5,184	495	170	164	11	205,607

Figure 4a

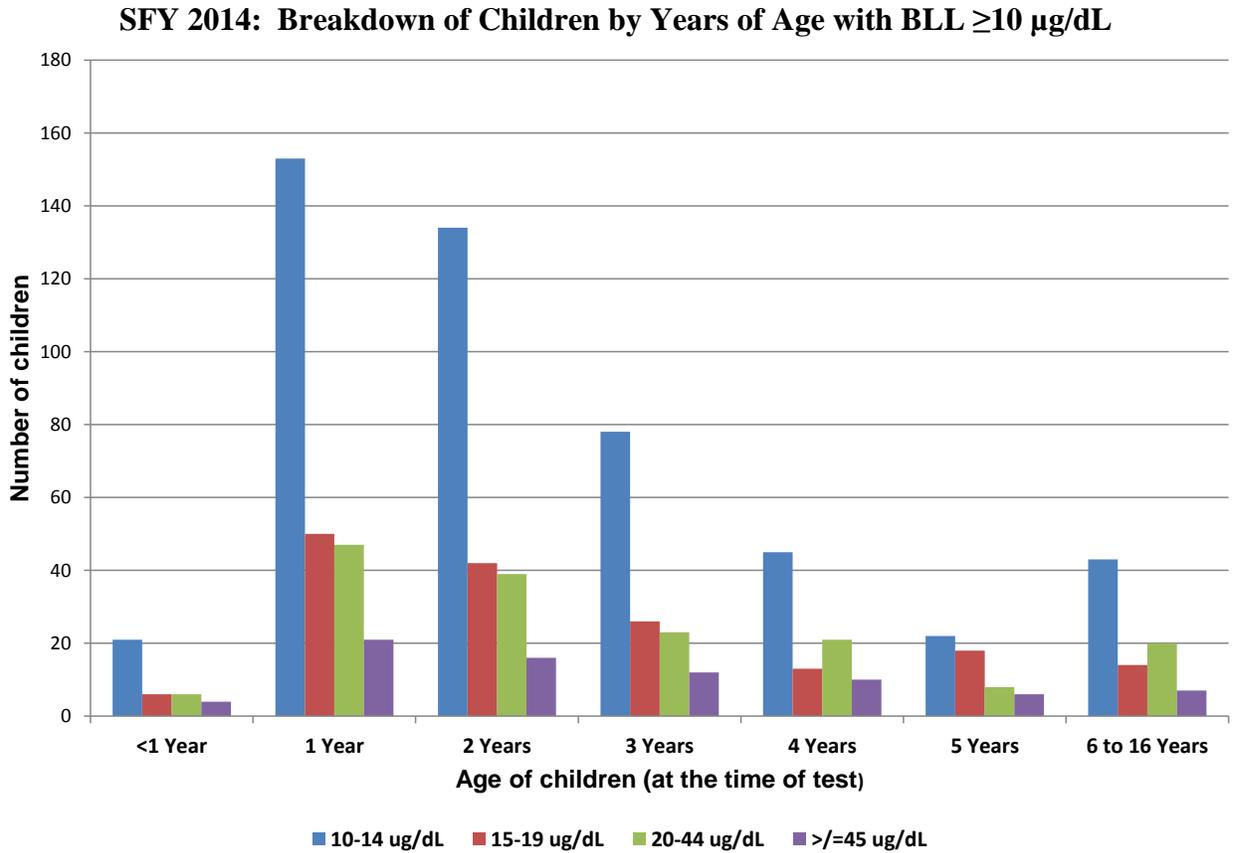


Figure 4b

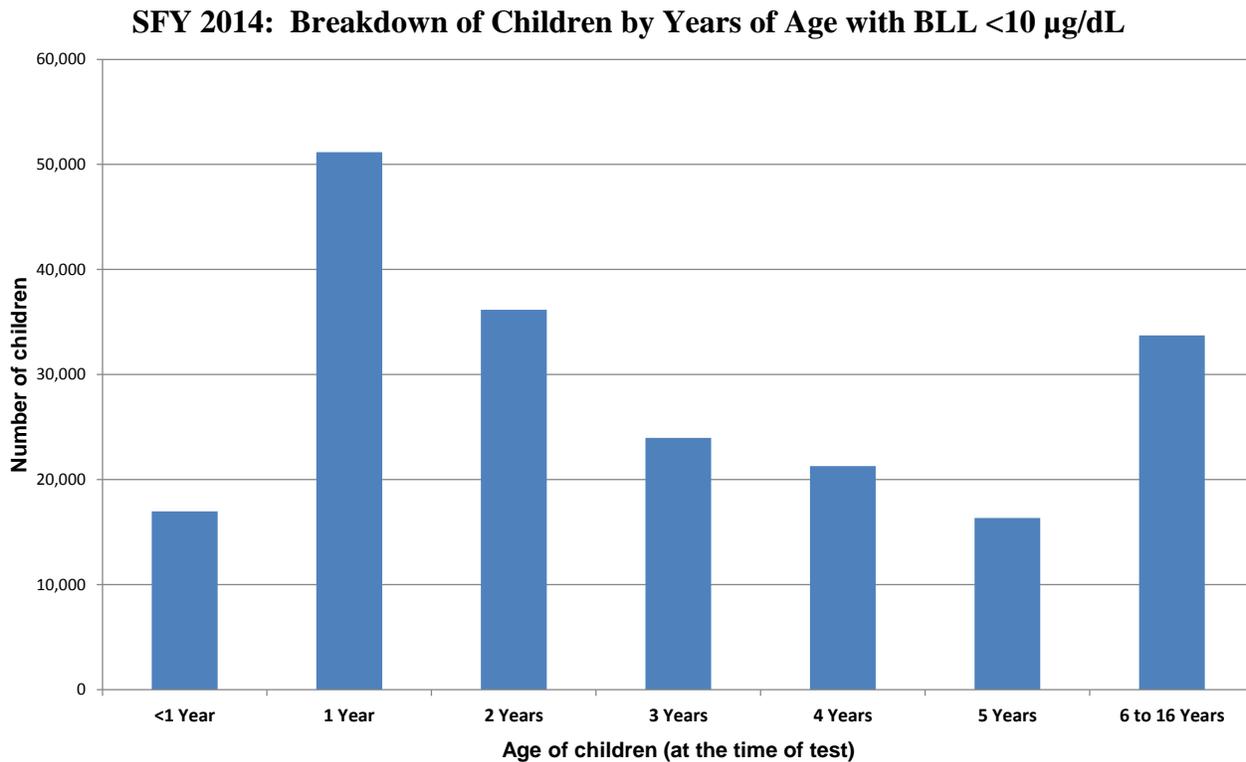


Figure 5

SFY 2014: Percentage of Children (<17 years of age) by BLL
(*n*=205,607)

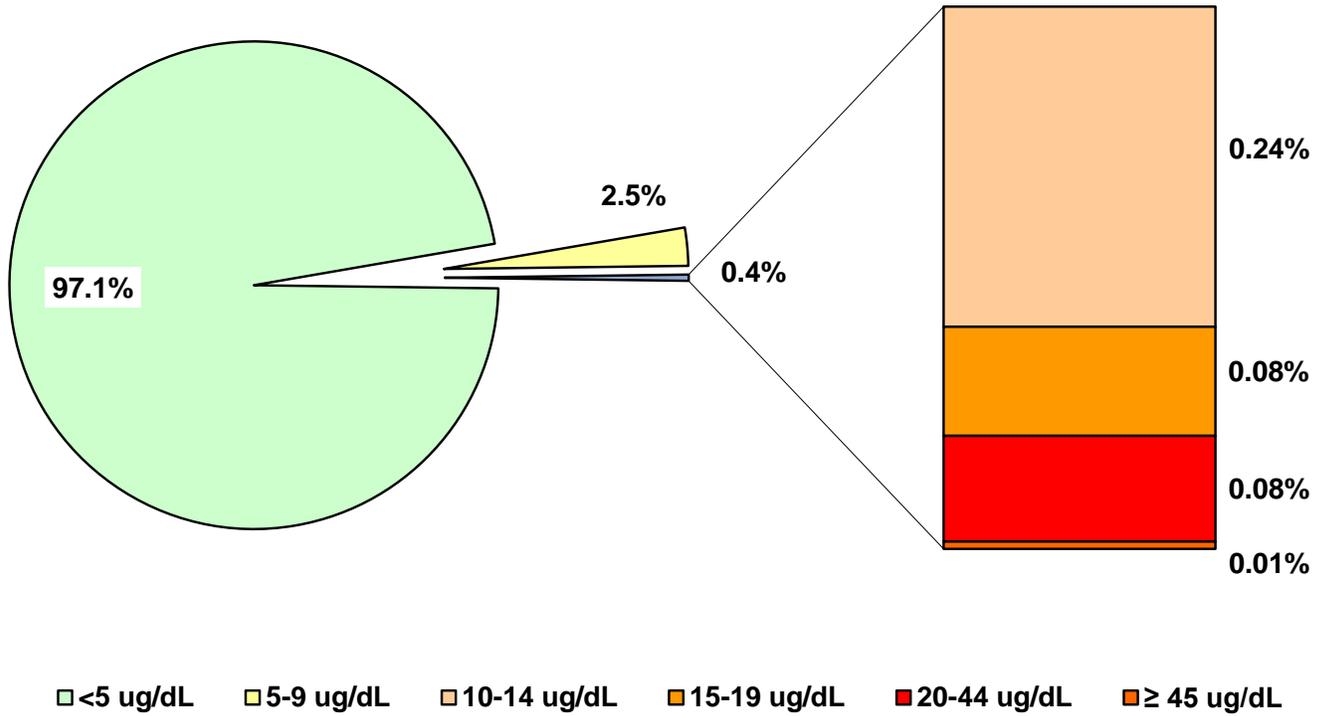


Figure 6a

Number of Children (<17 years of age) with BLL \geq 10 μ g/dL by SFY

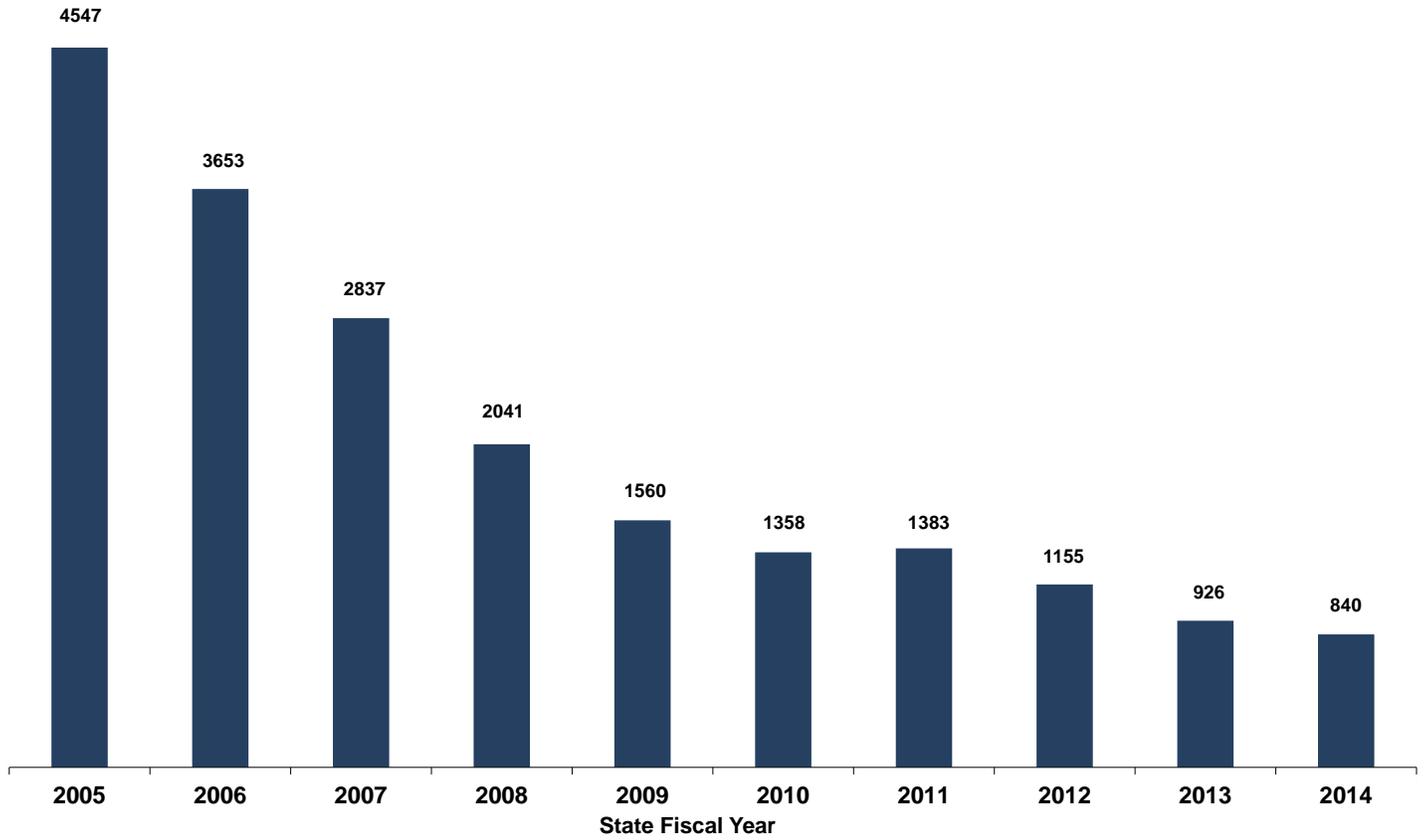
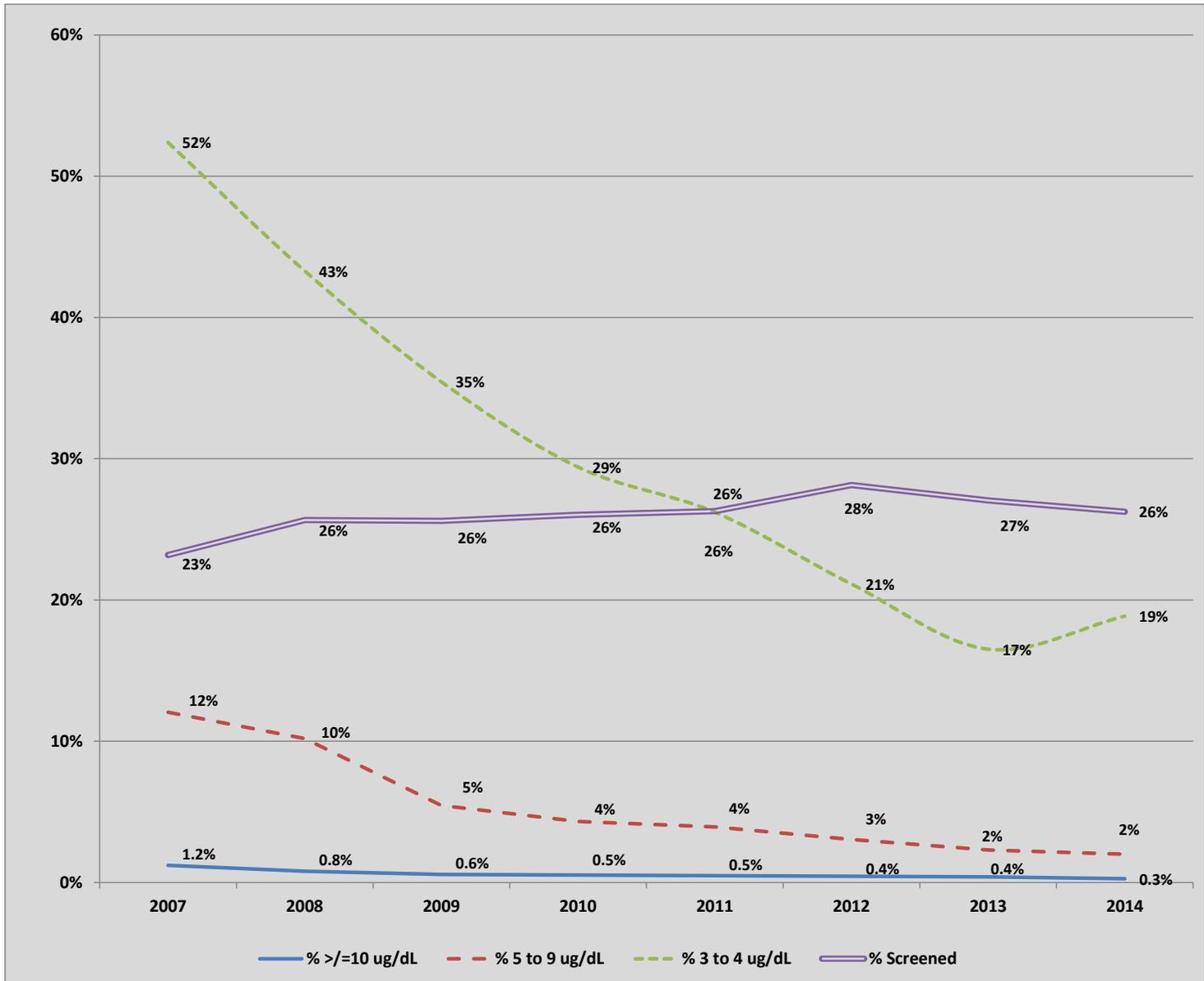


Figure 6b

**Trends for Children <6 years of Age:
Testing Rates and Percentages of Newly Reported BLL by SFY**



While the testing rate is generally increasing, the percentage of EBLL is consistently declining. The percentage of newly reported children with BLLs from 5 to 9 $\mu\text{g}/\text{dL}$ is also declining.

Table 6**Change in the Number of Children Screened and Number of Children with EBLs in Superstorm Sandy Most Affected Counties**, By Fiscal Year[@]**

County	FY 2012		FY 2013		FY 2014	
	% Screened	≥10 µg/dL	% Screened	≥10 µg/dL	% Screened	≥10 µg/dL
ATLANTIC	41.4%	19	40.5%	16	41.5%	20
BERGEN	39.4%	23	38.6%	23	37.5%	15
CAPE MAY	26.9%	2	24.9%	4	22.0%	3
ESSEX	49.5%	111	50.2%	90	49.5%	87
HUDSON	53.4%	52	52.3%	38	46.5%	43
MIDDLESEX	34.2%	32	33.5%	22	32.9%	31
MONMOUTH	33.4%	20	31.7%	12	30.2%	15
OCEAN	46.1%	10	45.4%	14	41.4%	8
UNION	46.5%	35	45.5%	30	44.6%	35
Sandy Counties	43.0%	304	42.3%	249	40.4%	257
% Difference with Statewide	-5.3%		-3.1%		-4.7%	
% Share of Statewide		65.2%		64.5%		67.6%
Statewide	45.4%	466	43.7%	386	42.4%	380

During SFY 2014, the nine Counties that were most affected by Superstorm Sandy claimed the majority of the Statewide number of children with EBLs (3.1% more than SFY 2013, while the screening percentage declined by 1.9% as compared to SFY 2013. During SFY 2013 (the year during which Superstorm Sandy occurred) there was a decline both in the number of children screened as well as the number of children with EBLs as compared to SFY 2012.

[@] *Counting records with geocoded addresses only*

****As per the Federal Emergency Management Administration (FEMA)**

CHAPTER THREE

SPOTLIGHT ON THE CITY OF NEWARK

The City of Newark has the greatest known burden of lead-poisoned children compared to any other local board of health in the State. This large municipality comprised 15% of the State's children younger than six (6) years of age with an EBLL during SFY 2014, while only 3.8% of the entire State's population of children in that age group resides in Newark. Additionally, in SFY 2014 it comprised 17% of the total number of children younger than six (6) years of age with an EBLL in all large municipalities.

Of all children* <6 years of age residing in the city of Newark, 0.46% were reported with an EBLL during SFY 2014. By contrast, in two comparable large municipalities (by population*) this percentage was 0.25% (Jersey City) and 0.27% (Paterson).

The City of Newark addresses the issue of childhood lead poisoning through several means and has been aggressive in obtaining grants from governmental and non-governmental sources. In the past decade, the City of Newark established and locally administers the State's only Lead-Safe Houses, which are lead-free, municipal-owned properties. The Lead-Safe Houses are used to relocate residents who have a lead-poisoned child when the family has no other housing alternatives. This is a great accomplishment that other municipalities have expressed an interest in also achieving. Further, the City of Newark provides a primary prevention-focused, community-based presence through the Newark Partnership for Lead-Safe Children. This partnership provides lead poisoning prevention education and outreach opportunities to residents and property owners.

*Source: US Census 2010 data

Figure 7

SFY 2014: Percentage of EBLL Cases in the City of Newark Compared to the Rest of New Jersey (*n*=763)

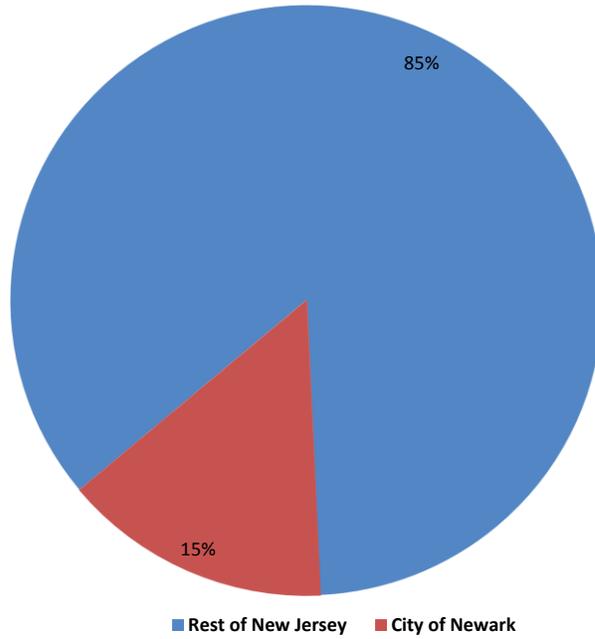
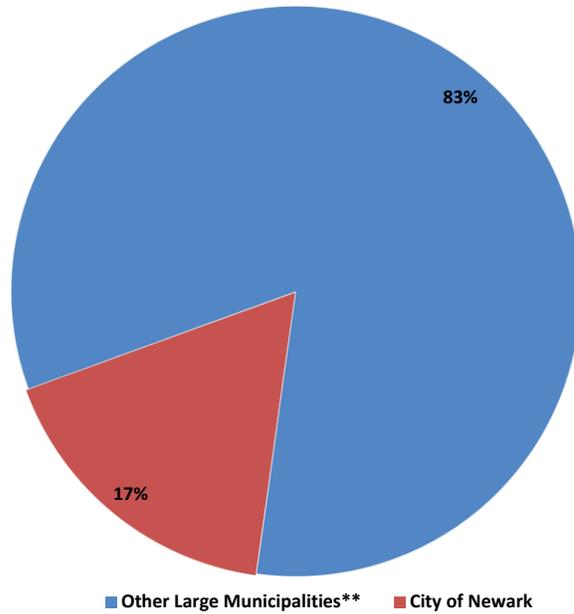


Figure 8

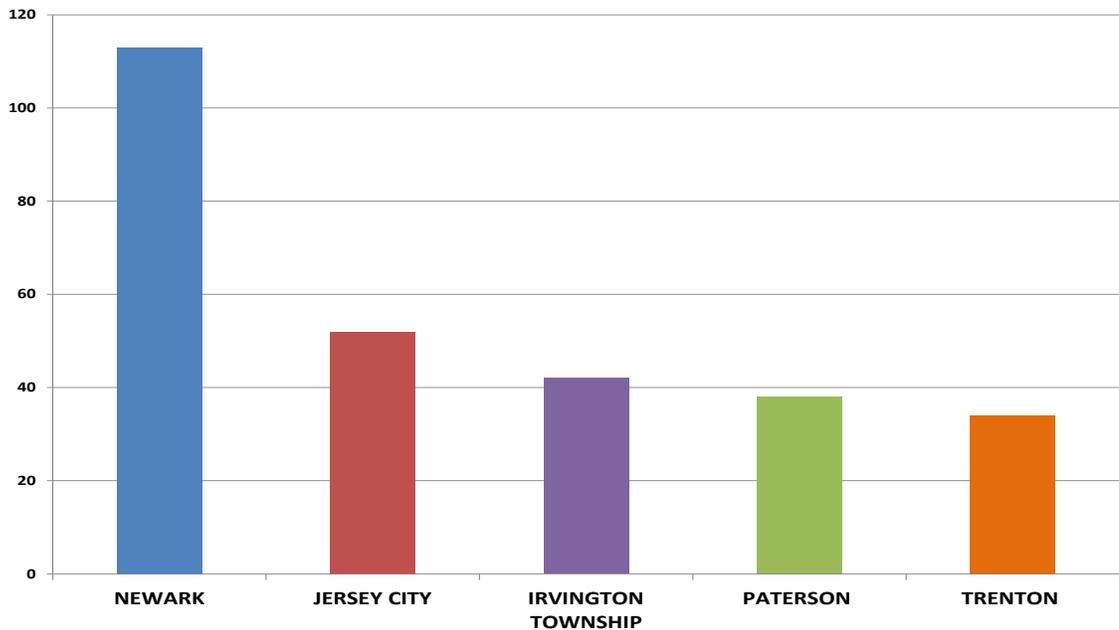
SFY 2013: Percentage of EBLL Cases in the City of Newark Compared to Other Large Municipalities in New Jersey (*n*=547)



There is a disproportionate distribution of lead-poisoned children in the City of Newark compared to the rest of the State and other large municipalities. The data are based on the total number of individual children younger than six (6) years of age who have a confirmed EBLL. Of the 113 children identified in the City of Newark during SFY 2014, only the highest blood lead test per child is counted.

Figure 9

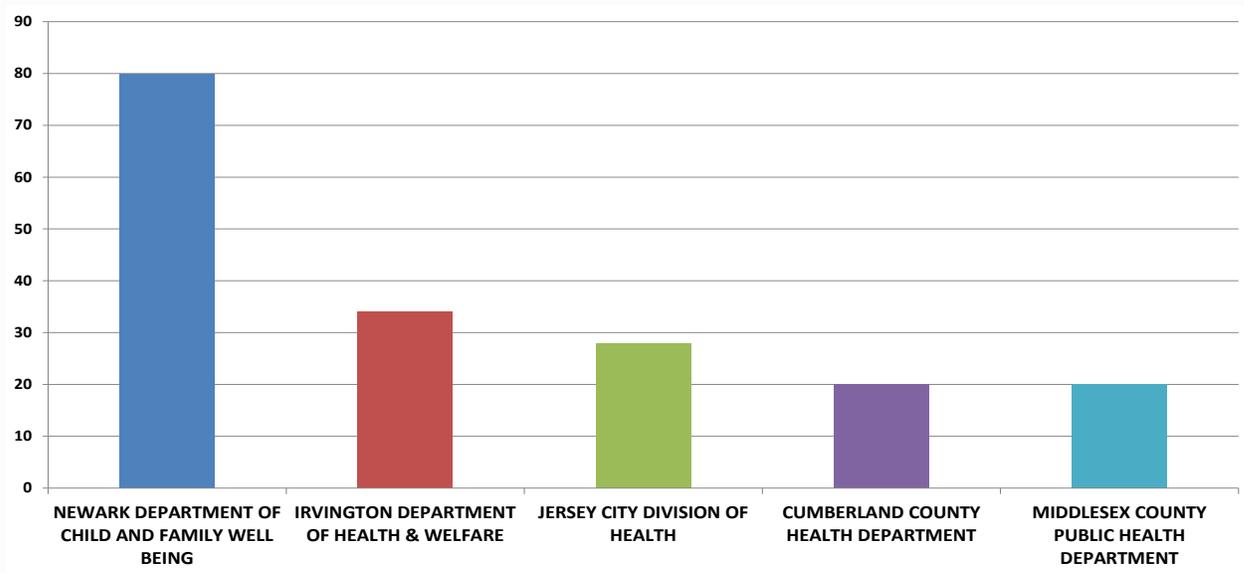
SFY 2014: Top Five Large Municipalities (population of >35,000) with Highest Number of Children <6 years Old Reported with Elevated Blood Lead Levels



There is a disproportionate number of lead-poisoned children in the City of Newark compared to other large municipalities in New Jersey. The data are based on the total number of children who have a confirmed EBLL. Of the children reported with an EBLL during SFY 2014, only the highest blood lead test per child is counted.

Figure 10

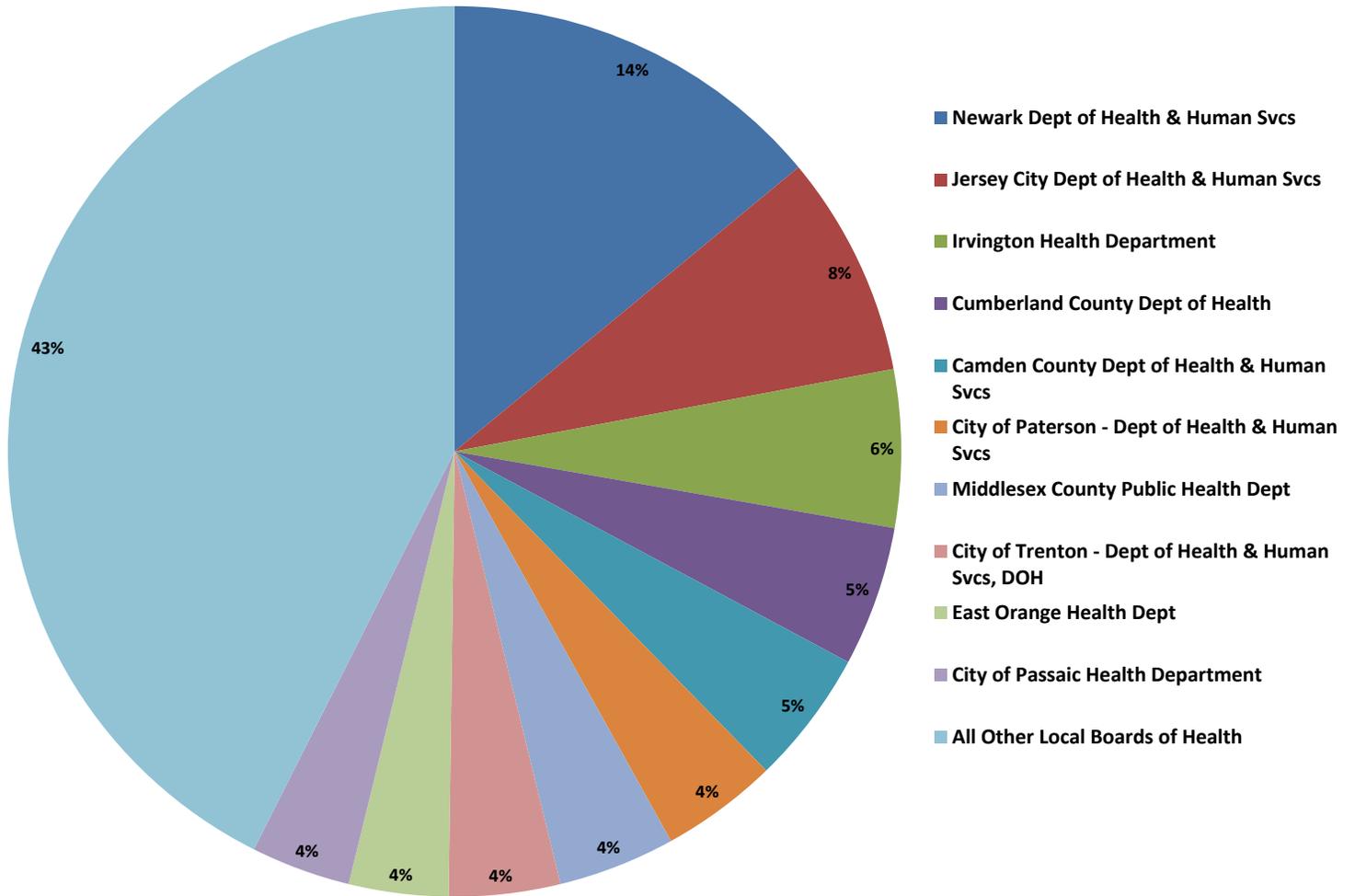
SFY 2014: Top Five Local Boards of Health with ≥ 20 New Environmental Cases



There is a disproportionate number of lead-poisoned children in the Newark Department of Child and Family Well-Being catchment area compared to other Local Boards of Health in New Jersey. The data are based on the total number of new environmental cases opened during SFY 2014. A new environmental case is opened based on a child's EBLL. Once a case is opened, the Local Board of Health is required to conduct an environmental investigation per N.J.A.C. §8:51-4.3.

Figure 11

**SFY 2014: Top Ten Local Boards of Health
Comprising the Highest Percentages* of New EBLL Cases
Compared to All Other Local Boards of Health**



There is a disproportionate distribution of lead-poisoned children within the jurisdiction of Newark Department of Child and Family Well-Being compared to other Local Boards of Health in New Jersey. The data are based on the percentage of new cases of EBLs reported during SFY 2014.

**Percent share of all new cases of lead poisoning during SFY 2014 in the entire State.*

CHAPTER FOUR

ENVIRONMENTAL INVESTIGATIONS BY LOCAL BOARDS OF HEALTH

New Jersey law (N.J.S.A. § 24:14A-6) requires Local Boards of Health to investigate all reported cases of childhood lead poisoning (N.J.A.C. § 8:51) within their jurisdiction and to order the abatement of all lead hazards identified in the course of the investigation. The procedures for conducting environmental investigations in response to a lead-poisoned child are specified in N.J.A.C. § 8:51. The Local Board of Health must conduct an inspection of the child's primary residence and any secondary address, such as a child care center, the home of a relative or babysitter, or wherever the child spends at least 10 hours per week. If the child moves, the property where the child resided when the blood lead test was performed must be inspected. The environmental inspection includes a determination of the presence of lead-based paint and leaded dust; the identification of locations where that paint is in a hazardous condition such as peeling, chipping, or flaking; and, as appropriate, the presence of lead on the dwelling's exterior or soil. The inspector, with the public health nurse, speaks to the child's parent/guardian and completes a questionnaire to help determine any other potential sources of exposure to lead.

In addition, the Local Board of Health arranges for a home visit by a public health nurse to educate the parent/guardian about lead poisoning and the steps that he or she can take to protect the child from further exposure. The public health nurse also provides ongoing case management services to assist the family, including but not limited to, receiving follow-up testing, medical treatment, and social services that may be necessary to address the effects of the child's exposure to lead.

The data listed in Tables 7, 8, and 9 in this chapter reflect the results of environmental investigations as reported to the Department by Local Boards of Health. The data are accurate to the extent that the Local Boards of Health make complete and timely reports to the Department through the electronic childhood lead poisoning information database. It is possible that additional inspections and/or abatements may have been completed, but not reported by Local Boards of Health.

Table 10 shows the environmental case activity within SFY 2014 by each Local Board of Health.

Table 7**SFY 2014: Environmental Case Activity Status by County**

County Name	Cases Referred	Investigation Required	Investigation Completed	% Investigation Completed	Abatement Required	Abatement Completed	% Abatement Completed
ATLANTIC	9	7	7	100%	4	4	100%
BERGEN	15	9	6	67%	5	3	60%
BURLINGTON	5	4	4	100%	4	3	75%
CAMDEN	19	6	6	100%	2	1	50%
CAPE MAY	5	2	2	100%	2		0%
CUMBERLAND	26	21	20	95%	15	7	47%
ESSEX	134	85	51	60%	22	12	55%
GLOUCESTER	3	2	2	100%	2		0%
HUDSON	43	28	28	100%	8	1	13%
HUNTERDON	3	2	1	50%			N/A
MERCER	11	7	6	86%	6	1	17%
MIDDLESEX	30	10	7	70%	3		0%
MONMOUTH	18	14	14	100%	8	5	63%
MORRIS	6	4	3	75%			N/A
OCEAN	12	9	9	100%	5	3	60%
PASSAIC	32	24	23	96%	17	10	59%
SALEM	6	4	4	100%	4	1	25%
SOMERSET	5	1		0%			N/A
SUSSEX	3	2	2	100%			N/A
UNION	37	26	25	96%	19	9	47%
WARREN	2	2	2	100%	2	1	50%
Total	424	269	222	83%	128	61	48%

Table 7 above displays the environmental case activity in SFY 2014 for each county, based on the number of EBLL reports (referrals) for new environmental cases sent to the appropriate Local Board of Health.

A new environmental case is generated and referred to the appropriate Local Board of Health when a child with an EBLL is reported who resides at an address that does not have an existing environmental case open.

Table 8**SFY 2014: Local Boards of Health with ≥ 20 New Environmental Cases**

Local Board of Health	Cases Referred	Investigation Required	Investigation Completed	% Investigation Completed	Abatement Required	Abatement Completed	% Abatement Completed
NEWARK DEPT OF HEALTH & HUMAN SVCS	80	49	16	33%	10	1	10%
IRVINGTON HEALTH DEPT	34	21	21	100%	10	6	60%
JERSEY CITY DEPT OF HEALTH & HUMAN SVCS	28	16	16	100%	7		0%
CUMBERLAND COUNTY DEPT OF HEALTH	20	17	17	100%	13	6	46%
MIDDLESEX COUNTY PUBLIC HEALTH DEPT	20	10	7	70%	4	1	25%

See Table 10 for complete data on the status of all EBLL cases referred to Local Boards of Health during SFY 2014.

A new environmental case is generated and referred to the appropriate Local Board of Health when a child with an EBLL is reported who resides at an address that does not have an existing environmental case open.

Table 9**Current Environmental Case Investigation Status by SFY 1997-2014**

SFY	Environmental Cases Opened	Investigation Required	Investigation Completed	Investigation Completed	Investigation Pending	Abatements Completed	Abatements Pending	Abatements Completed
1997	2168	1499	1468	98%	31	767	12	98%
1998	2014	1455	1405	97%	50	725	13	98%
1999	1517	1044	952	91%	92	558	29	95%
2000	1144	815	705	87%	110	484	29	94%
2001	932	648	562	87%	86	374	12	97%
2002	867	601	546	91%	55	363	7	98%
2003	796	527	495	94%	32	288	21	93%
2004	748	526	471	90%	55	289	20	94%
2005	718	542	481	89%	61	277	24	92%
2006	688	494	494	100%		229	40	85%
2007	1008	728	615	84%	113	350	62	85%
2008	750	581	487	84%	94	256	20	93%
2009	583	500	500	100%		330	23	93%
2010	450	411	411	100%		220	66	76%
2011	573	573	546	100%		260	70	79%
2012	874	421	390	92%	31	163	72	69%
2013	502	354	318	90%	36	129	59	69%
2014	424	269	223	83%	46	61	67	48%

**Based on the information entered into the Childhood Lead Poisoning Information Database as of July 22, 2014 by Local Boards of Health.*

Table 9 illustrates how it can take several years to complete the abatement process for a property where lead hazards are identified. The length of time between the initial report of an EBLL and the completion of the abatement process can be affected by a number of factors. These factors include, but are not limited to:

- difficulty in identifying and communicating with absentee property owners;
- lengthy enforcement actions and court proceedings against recalcitrant property owners;
- delays in contracting with and scheduling work to be performed by State-certified lead abatement contractors; and,
- inability of property owners to obtain financial assistance to pay for the cost of the required abatement.

Table 10

SFY 2014: Environmental Case Activity by Local Board of Health*

Local Board of Health	Cases Referred	Investigation Required	Investigation Completed	Abatement Required	Abatement Completed
ATLANTIC CITY HEALTH DEPARTMENT	5	3	2	2	2
ATLANTIC COUNTY HEALTH DEPARTMENT	4	4	2	2	2
BAYONNE DEPARTMENT OF HEALTH	2	1			
BERGENFIELD HEALTH DEPARTMENT	1				
BERNARDS TOWNSHIP HEALTH DEPARTMENT	1	1			
BURLINGTON COUNTY HEALTH DEPARTMENT	5	4	4	3	3
CAMDEN COUNTY DEPARTMENT OF HEALTH	19	6	2	1	1
CAPE MAY COUNTY HEALTH DEPARTMENT	5	2	2		2
CUMBERLAND COUNTY HEALTH DEPARTMENT	21	17	14	6	6
DOVER HEALTH DEPARTMENT	2	2	0		
EAST ORANGE HEALTH DEPARTMENT	13	9	1	1	1
EDISON DEPARTMENT OF HEALTH & HUMAN RESOURCES	7				0
ELIZABETH DEPARTMENT OF HEALTH & HUMAN SVCS	14	12	8	4	4
ELMWOOD PARK DEPARTMENT OF HEALTH	4	4	2	1	1
FAIR LAWN HEALTH DEPARTMENT	1				
FRANKLIN TOWNSHIP HEALTH DEPARTMENT	2				
GLOUCESTER COUNTY DEPARTMENT OF HEALTH	3	2	2		2
HACKENSACK HEALTH DEPARTMENT	3				
HAMILTON TOWNSHIP DIVISION OF HEALTH	3				
HUNTERDON COUNTY DEPARTMENT OF HEALTH	3	2			
IRVINGTON DEPARTMENT OF HEALTH & WELFARE	33	21	10	6	6
JERSEY CITY DEPT OF HEALTH & HUMAN SVCS	28	16	5		
KEARNY DEPARTMENT OF HEALTH	2	2			
LINCOLN PARK HEALTH DEPARTMENT	1				
LONG BRANCH DEPARTMENT OF HEALTH	4	4	2	2	2
MANALAPAN TOWNSHIP DEPARTMENT OF HEALTH	1	1			
MAPLEWOOD HEALTH DEPARTMENT	1	1	1		
MID-BERGEN REGIONAL HEALTH COMMISSION	3	3	1	2	1
MIDDLE-BROOK REGIONAL HEALTH COMMISSION	1				
MIDDLESEX COUNTY PUBLIC HEALTH DEPARTMENT	20	10	3	1	1
MONMOUTH COUNTY HEALTH DEPARTMENT	12	9	2	2	2
MONMOUTH COUNTY REGIONAL HEALTH COMMISSION	1				
MONTCLAIR HEALTH DEPARTMENT	2	1	1	1	1
MORRISTOWN DIVISION OF HEALTH	1	1			

**Local Boards of Health that had at least one environmental case opened during SFY 2014*

Local Board of Health	Cases Referred	Investigation Required	Investigation Completed	Abatement Required	Abatement Completed
NEWARK DEPARTMENT OF HEALTH & HUMAN SVCS	78	47			
NORTH BERGEN HEALTH DEPARTMENT	9	8	3	1	1
OCEAN COUNTY HEALTH DEPARTMENT	12	9	1	1	1
PARAMUS BOARD OF HEALTH	2	2	1		
PARSIPPANY HEALTH DEPARTMENT	2	1			
PASSAIC CITY HEALTH DEPARTMENT	11	9	6	5	5
PATERSON DIVISION OF HEALTH	19	15	5	5	5
PEQUANNOCK TOWNSHIP BOARD OF HEALTH	1				
PLAINFIELD HEALTH DEPARTMENT	16	13	5	5	5
RAHWAY HEALTH DEPARTMENT	3				
RINGWOOD HEALTH DEPARTMENT	1				
ROSELLE HEALTH DEPARTMENT	1				
SALEM COUNTY DEPARTMENT OF HEALTH	6	4	2	1	1
SOMERSET COUNTY HEALTH DEPARTMENT	2				
SOUTH BRUNSWICK HEALTH DEPARTMENT	1				
SUSSEX COUNTY DEPT HEALTH, PUB SAFE & SR SVCS	3	2			
TEANECK DEPARTMENT OF HEALTH & HUMAN SERVICES	1				
TOWNSHIP OF UNION DEPARTMENT OF HEALTH	3	1			
TRENTON DEPT OF HEALTH & HUMAN SERVICES	7	6			
VINELAND DEPARTMENT OF HEALTH	5	4	1	1	1
WARREN COUNTY HEALTH DEPARTMENT	2	2	2	1	1
WEST NEW YORK HEALTH DEPARTMENT	2	1			
WEST ORANGE HEALTH DEPARTMENT	7	6	5	4	4
WEST WINDSOR TOWNSHIP HEALTH DEPARTMENT	1	1			
WOODBIDGE TOWNSHIP DEPT OF HEALTH & HUMAN SVCS	1				

**Local Boards of Health that had at least one environmental case opened during SFY 2014*

CHAPTER FIVE

ADDRESSING CHILDHOOD LEAD POISONING IN NEW JERSEY

Healthy People 2020:

In October 2011, the U.S. Department of Health and Human Services released *Healthy People 2020* that established health objectives for the Nation for the next 10 years.

Objective: Eliminate EBLs in children.

Baseline: 0.9 percent of children in the United States had EBLs in 2005-2008

Target: Not Applicable (Target-Setting Method: This measure is being tracked for informational purposes. If warranted, a target will be set during the decade.)

Data Source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS

Objective: Reduce the mean BLLs in children.

Baseline: 1.5 µg/dL Children one (1) to five (5) years of age in the United States had an average BLL of 1.5 µg/dL in 2005–2008

Target: 1.4 µg/dL Average BLL in children one (1) to five (5) years of age (10 percent improvement)

Data Source: National Health and Nutrition Examination Survey (NHANES), CDC, NCHS

The New Jersey Department of Health's goal is to reduce, and ultimately eliminate, childhood lead poisoning as a public health priority in New Jersey, which supports these national objectives.

Healthy New Jersey 2020 Objectives:

Objective: Reduce the proportion of children aged one (1) to five (5) years who have an initial BLL $\geq 10\mu\text{g/dL}$

Baseline: 1.3%; Target: 0.9%

Data Source: New Jersey Childhood Lead Poisoning Information Database (LeadTrax)

Objective: Reduce mean blood lead levels in children aged one (1) to five (5) years to an average blood lead level of $\leq 2.9\ \mu\text{g/dL}$.

Baseline: 3.2 µg/dL

Data Source: New Jersey Childhood Lead Poisoning Information Database (LeadTrax)

SFY 2014 Accomplishments

A. Increasing Testing Rates

LeadCare II Pilot Project: The pilot project used the LeadCare II analyzer, a point-of-care device that delivers a BLL result, by capillary blood draw, in three (3) minutes. This point-of-care device allows users to educate families about specific BLL and immediately care for and track children that present with an EBL. As of December 30, 2013, the date when the study ended, there were

1,270 children (<17 years of age) tested through this project. Among those tested, 943 children were never tested before in their lifetime. The participating Local Boards of Health are the counties of Camden, Cumberland, Monmouth, Middlesex, Salem, and the cities of Hackensack, Jersey City, Morristown, and Passaic.

B. Surveillance

Electronic Laboratory Reporting (ELR): The Department witnessed an increase of traditional laboratories and point-of-care test users who electronically reported blood lead test results. Currently, 99.5% of BLL are reported electronically while the remainders are reported via facsimile or regular mail. This is an increase from 92% ELR rate in SFY 2004.

Healthy New Jersey 2020 Target: The proportion of children aged one (1) to five (5) years who have an initial blood lead level ≥ 10 $\mu\text{g}/\text{dL}$ is 0.44%. Mean blood lead level in children aged one (1) to five (5) years is 2.1 $\mu\text{g}/\text{dL}$.

C. Superstorm Sandy Recovery Project

The Department received Social Services Block Grant-Supplemental funding from the U.S. Department of Health and Human Services, Administration for Children and Families, to conduct targeted blood lead screenings in vulnerable populations (children, pregnant women, and adults exposed to recovery activities) residing in the counties most affected by Superstorm Sandy. Those counties are: Bergen, Hudson, Essex, Union, Middlesex, Monmouth, Ocean, Atlantic, and Cape May. In addition, funding was dedicated to educating the general public not only of the possible dangers of exposure to lead in recovery activities, but methods to maintain a healthy home once remediation activities were completed. Professional development trainings target health and social services home visitors, housing inspectors, and primary care providers to assist residents in making the connection between housing hazards and health status. The project will continue until June 30, 2015 (SFY 2015).