

# **CHILDHOOD LEAD POISONING IN NEW JERSEY ANNUAL REPORT**

**FISCAL YEAR 2006  
(July 1, 2005 – June 30, 2006)**

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## **WHY IS LEAD POISONING IN CHILDREN A PRIORITY FOR NEW JERSEY?**

Lead is a heavy metal that has been widely used in industrial processes and consumer products. When absorbed into the human body, lead affects the blood, kidneys and nervous system. Lead's effects on the nervous system are particularly serious and can cause learning disabilities, hyperactivity, decreased hearing, mental retardation and possible death. Lead is particularly hazardous to children between six months and six years of age because their neurological system and organs are still developing. Children who have suffered from the adverse effects of lead exposure for an extended period of time are frequently in need of special health and educational services in order to assist them to develop to their potential as productive members of society.

The primary method for lead to enter the body is the ingestion of lead containing substances. Lead was removed from gasoline in the United States in the early 1980's. This action is credited with reducing the level of lead in the air, and thereby the amount of lead inhaled by children. However, significant amounts of lead remain in the environment where it poses a threat to children. Some common lead containing substances that are ingested or inhaled by children include:

- ? lead-based paint;
- ? dust and soil;
- ? tap water;
- ? food stored in lead soldered cans or improperly glazed pottery; and
- ? traditional folk remedies and cosmetics containing lead.

All children in New Jersey are at risk because lead-based paint and other lead-containing substances are present throughout the environment. Some children, however, are at particularly high risk due to exposure to high dose sources of lead in their immediate environment. These potential high dose sources include:

- ? leaded paint that is peeling, chipping or otherwise in a deteriorated condition;
- ? lead-contaminated dust created during removal or disturbance of leaded paint in the process of home renovation; and
- ? lead-contaminated dust brought into the home by adults who work in an occupation that involves lead or materials containing lead, or who engage in a hobby where lead is used.

Recently, there has been much attention focused by the media on the increasing number of foreign imports coming into the United States being tainted with dangerous levels of lead. This has been alarming especially when these imports consist of toys and other products used primarily by children. However, in New Jersey, today, the primary lead hazard to children comes from lead-based paint. In recognition of the danger that lead-based paint presents to children, such paint was regulated for residential use in New Jersey in 1971, and banned nationwide in 1978. This ban has effectively reduced the risk of lead exposure for children who live in houses built after 1978, but any house built before 1978 may still contain leaded paint. The highest risk for children is found in houses built before 1950, when paints contained a very high percentage of lead. There are nearly one million housing units in New Jersey, 30% of the housing in the state, which were built before 1950. Every county in the State has more than 9,000 housing units built before 1950.

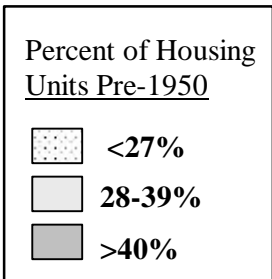
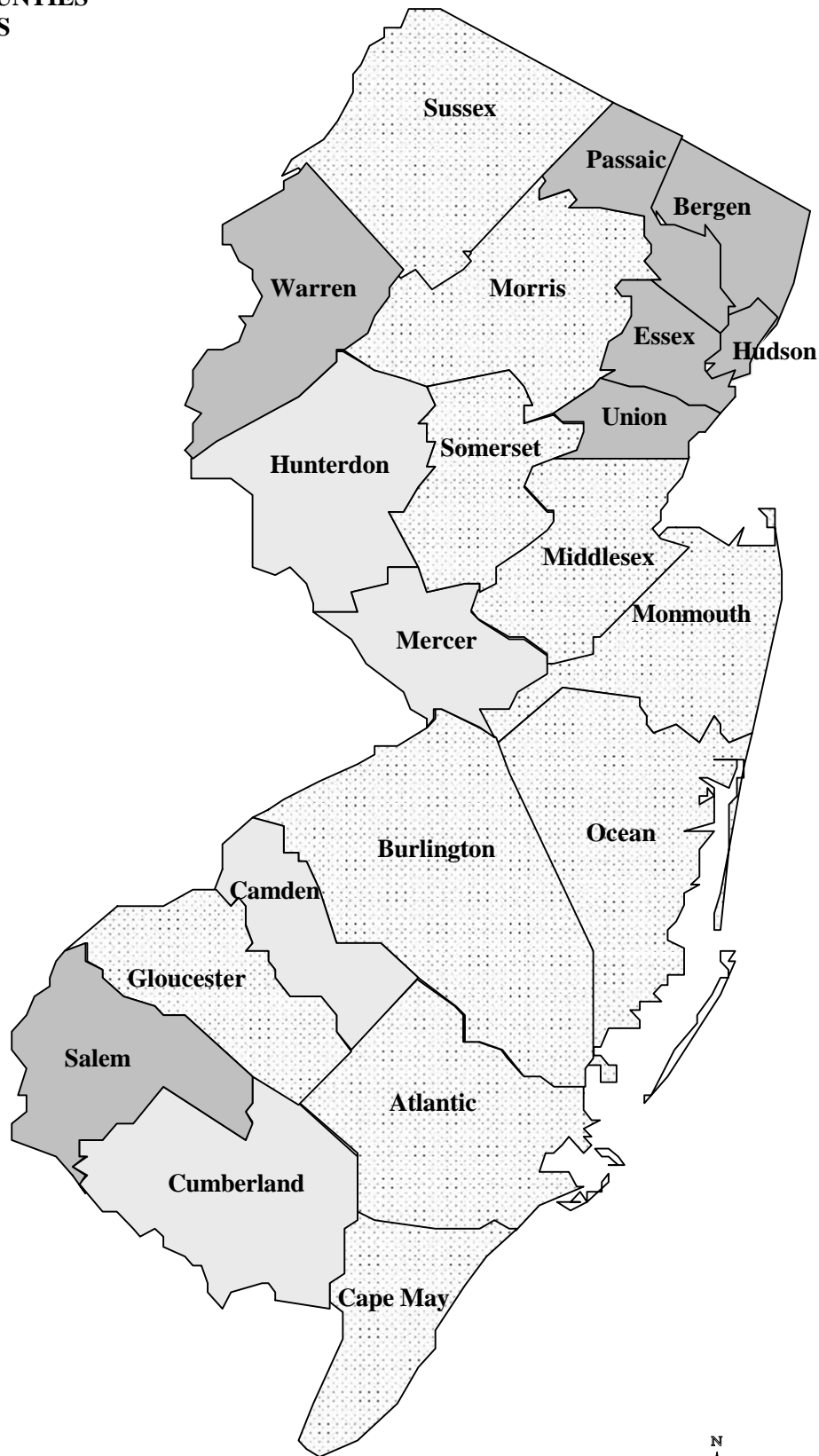
(Table 1 and Map 1)

**Table 1**  
**HOUSING BUILT BEFORE 1950 IN NEW JERSEY**

<b>County</b>	<b>Total Housing Units</b>	<b># of Units Built Pre-1950</b>	<b>% of Units Built Pre-1950</b>
Atlantic	114,090	24,868	21.8%
Bergen	339,820	126,125	37.1%
Burlington	161,311	26,363	16.3%
Camden	199,679	57,949	29.0%
Cape May	91,047	20,248	22.2%
Cumberland	52,863	16,316	30.9%
Essex	301,011	142,297	47.3%
Gloucester	95,054	19,029	20.0%
Hudson	240,618	125,180	52.0%
Hunterdon	45,032	11,720	26.0%
Mercer	133,280	44,117	33.1%
Middlesex	273,637	52,430	19.2%
Monmouth	240,884	56,969	23.6%
Morris	174,379	40,039	23.0%
Ocean	248,711	24,076	9.7%
Passaic	170,048	70,979	41.7%
Salem	26,158	9,623	36.8%
Somerset	112,023	21,286	19.0%
Sussex	56,528	12,221	21.6%
Union	192,945	82,231	42.6%
Warren	41,157	14,786	35.9%
<b>Statewide</b>	<b>3,310,275</b>	<b>998,852</b>	<b>30.2%</b>
<i>Source: 2000 U.S. Census of Housing and Population</i>			

# Map 1

## PERCENT PRE-1950 HOUSING UNITS NEW JERSEY COUNTIES 2000 U.S. CENSUS





## EXECUTIVE SUMMARY

N.J.A.C. 8:51A requires the protection of children under six years of age from the toxic effects of lead exposure by requiring lead screening pursuant to N.J.S.A. 26:2-137.2 et seq. (P.L. 1995, c 328). This Annual Report on Childhood Lead Poisoning in New Jersey for Fiscal Year (FY) 2006 is submitted in compliance with N.J.S.A. 26:2-135, which requires the Commissioner of Health and Senior Services 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 fiscal year.

The Department of Health and Senior Services (DHSS) maintains a Childhood Lead Poisoning Prevention Surveillance System (CLPPSS). This system collects reports from laboratories of the results of blood lead tests performed on children, identifies children with elevated test results, and notifies local health departments about the children with elevated blood lead who reside in their jurisdiction. The CLPPSS also includes a database that tracks the actions taken by the local health departments in response to children reported with elevated blood lead levels, as required by Chapter XIII of the New Jersey State Sanitary Code.

DHSS entered into a contract with Welligent, Inc., the vendor, for hosting and support of their web based data/surveillance tracking system, called LeadTrax. LeadTrax system was customized to meet the statutory and stakeholders' requirements/needs, prior to transitioning to the first phase of its implementation planned during FY 2007.

Significant enhancements were made to the transmission mode of reporting by two laboratories. Out of these two laboratories, one major laboratory was motivated to report on a daily basis instead of its original schedule of weekly reporting.

Pioneer enhancement was made in the software program used for detecting new cases of lead poisoning and generating referrals, rendering it capable of including new persistent borderline cases as well.

There was an increase in the screening rates for the children between the age of 6 and 29 months. This age range captures the statutory age range for screening.

The City of Newark is center stage in New Jersey's childhood lead poisoning elimination efforts. Newark surpasses by far any other large municipality in terms of the number of children (<6 years old) with elevated blood lead levels (EBL) ( $\geq 10$  ug/dL). Newark alone comprises 17% of the total number of children (<6 years old) with EBL in the entire State.

The number of children (<17 years old) tested for lead poisoning in FY 2006 was 200,581, an increase of 2.2% over the 196,335 children tested during FY 2005. This number includes 101,498 children between six months and 29 months of age, the ages at which all children should be tested under State law. This number represents 46% of children 6 to 29 months in FY 2006.

While 196,928 (98.2%) children tested in New Jersey in FY 2006 had blood lead levels below the Centers for Disease Control and Prevention (CDC) threshold of 10  $\mu\text{g}/\text{dL}$ , there were 3,653 (1.8%) children with a blood lead test result above this level. This included 615 children who had at least one test result of 20  $\mu\text{g}/\text{dL}$  or greater (Figure 8). The distribution of results by blood lead level is shown in Figure 7.

## Chapter One

### SCREENING CHILDREN FOR LEAD POISONING

In New Jersey, screening of children for blood lead is mandated at the age of one and two years. While the ideal is for all children to be tested at both one and two years of age, at a minimum all children should have at least one blood lead test done before their third birthday. Approximately 75% of the estimated number of two-year-old children in New Jersey have had at least one blood lead test in their lifetime.

This chapter describes and depicts the screening statistics and trends based on the reports of blood lead tests received from the clinical laboratories.

Analysis to create the tables, graphs or charts is based on unduplicated children, counting only one test per child.

The tables and charts highlighting children between the age of 6 and 29 months closely represent the screening rates. However, the number on these tables and charts also include children that were screened during FY2006 as their second screening test at two years of age, while they were already screened at the age of one year during FY2005. The subsequent histograms have better resolution of the screening rates defined by age.

DHSS uses the age span of 6 to 29 months to capture data on tests that are performed either earlier than the age of 12 months or later than the age of 24 months, as not all children are tested exactly at the age of one and two years.

The pie charts represent the percentages of children that had a lead test done prior to turning three years (Figure 1A) and prior to turning six years old (Figure 1B).

Figure 1A

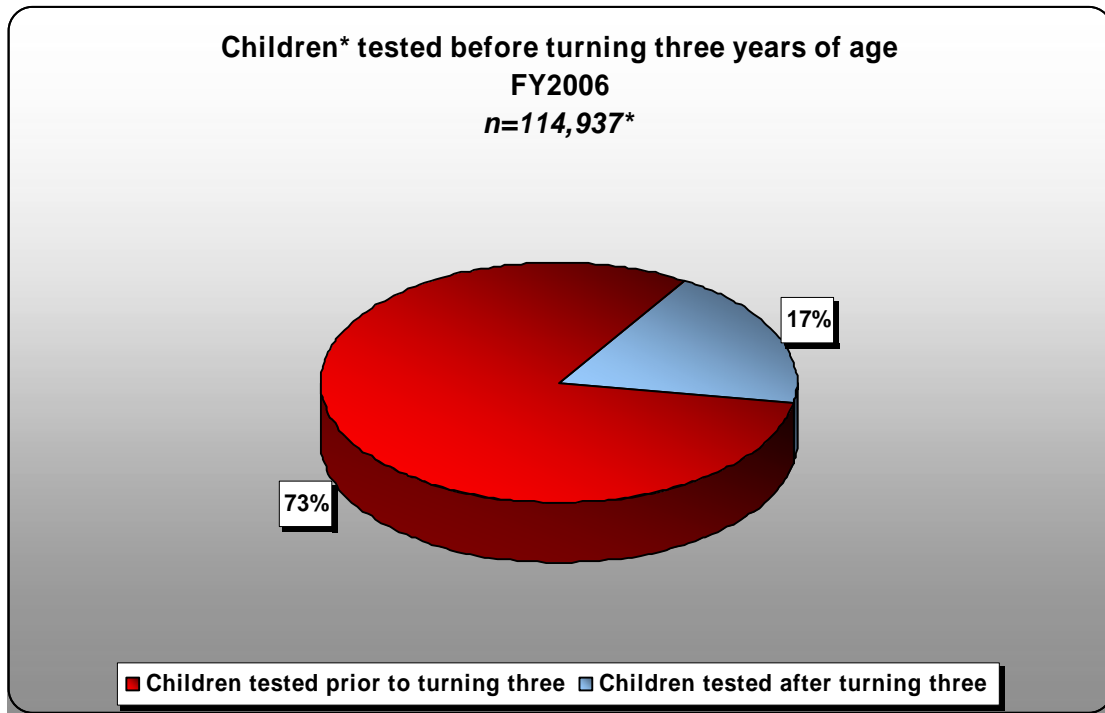
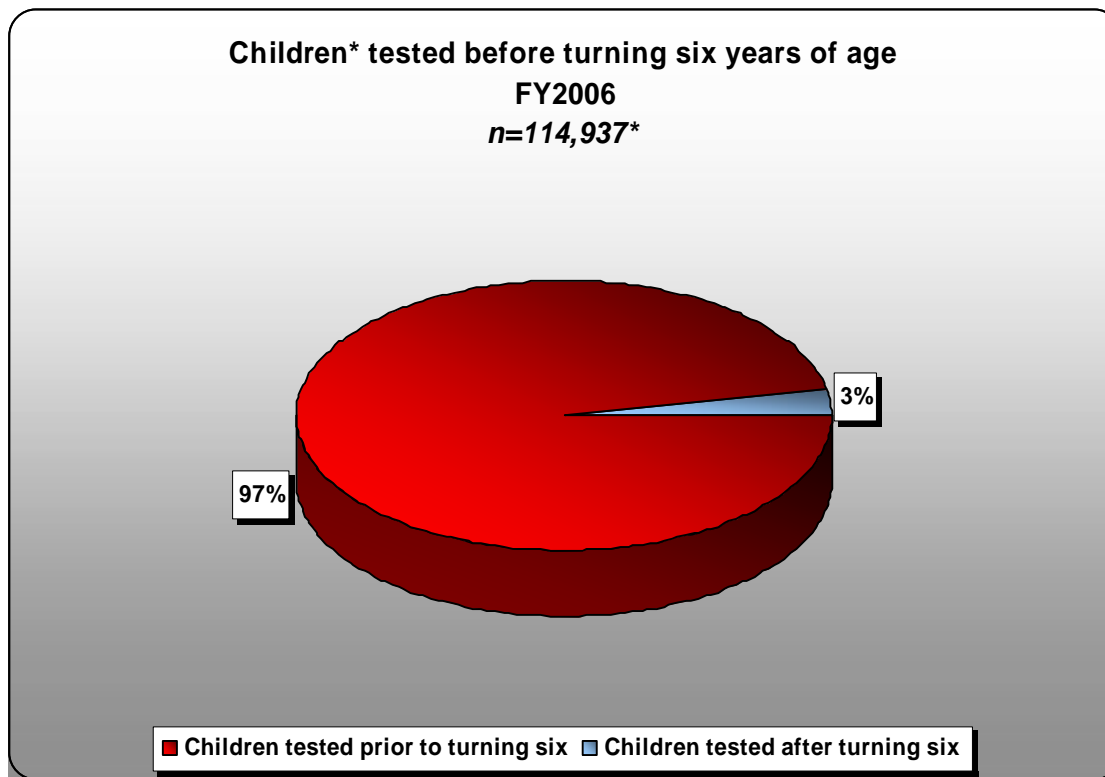
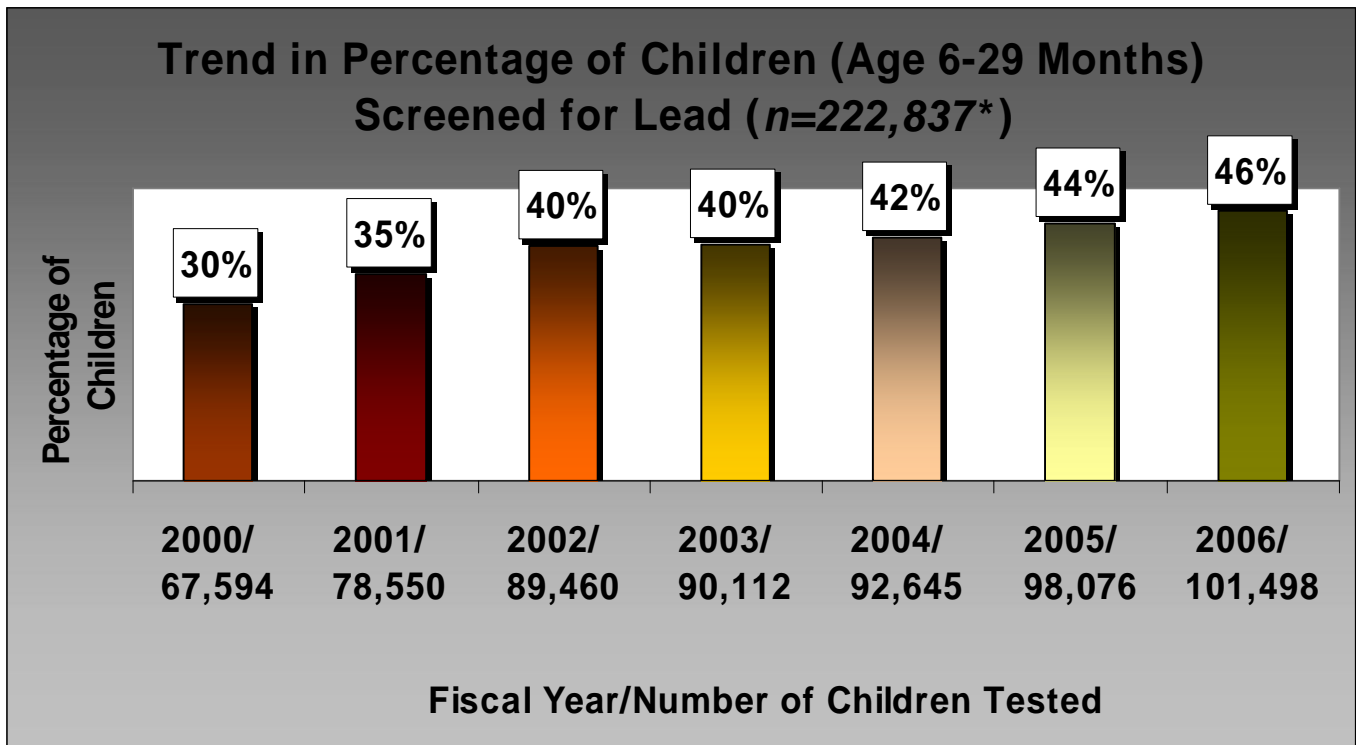


Figure 1B



\*Denominator = Number of children that turned six during FY2006 (114,937) among all children in New Jersey that were ever tested for blood lead level.

Figure 2



This bar chart displays the trend in the percentage/number of children screened between the ages of 6 and 29 months, by fiscal year.

*\*Denominator = Number of one and two year old children in New Jersey - Estimated based on US Census 2000 Data*

The following table compares the number of children (6 to 29 months old) tested during FY2005 versus during FY2006:

**Table 2**  
**CHANGES IN CHILDREN 6 TO 29 MONTHS OLD SCREENED**  
**FY2005-2006**

	FY2005	FY2006	Change 2005-06	Percent Change 2005-06
<b>Number Children in New Jersey* = 222,837</b>				
<b>Number of Children Tested</b>	98,076	101,498	3,422	3.4%
<b>Percent Children Tested</b>	44%	46%	1.5%	3.4%

\*Estimated, based on the number of one- and two-year-old children in the US Census 2000

This table denotes the change in number and percentage of children tested  
between the previous State Fiscal Year (SFY2005) and SFY2006

The following series of histograms depict screening profiles by the cohorts of children born in FY2000 through FY2005.

Each histogram shows the number of children born\* during the fiscal year, and the number of children by the age at which they had their first blood lead test done.

\*Source: Birth registry data

**Legend:**

BLL = Blood Lead Level test

█ = BLL between 6 and 18 months of age

█ = BLL either before 6 months or after 18 months of age

Figure 3a

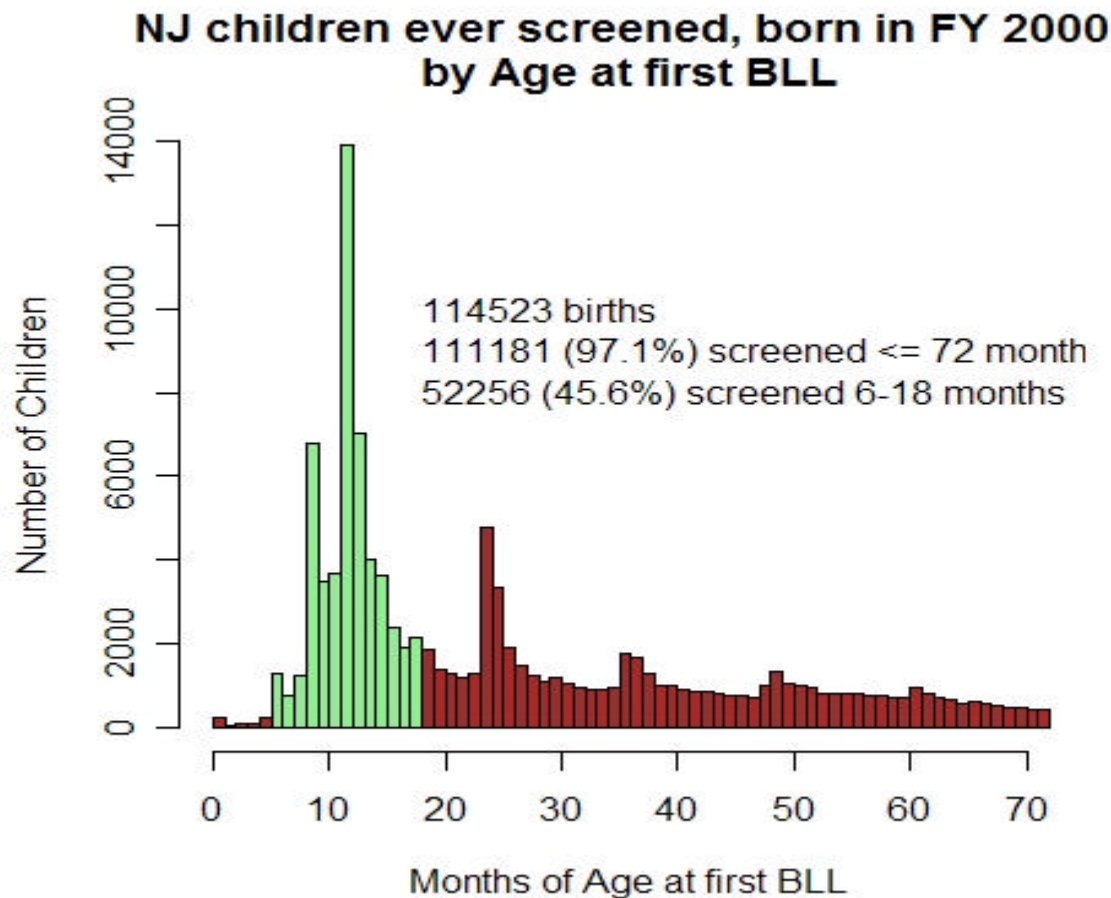


Figure 3b

**NJ children ever screened, born in FY 2001  
by Age at first BLL**

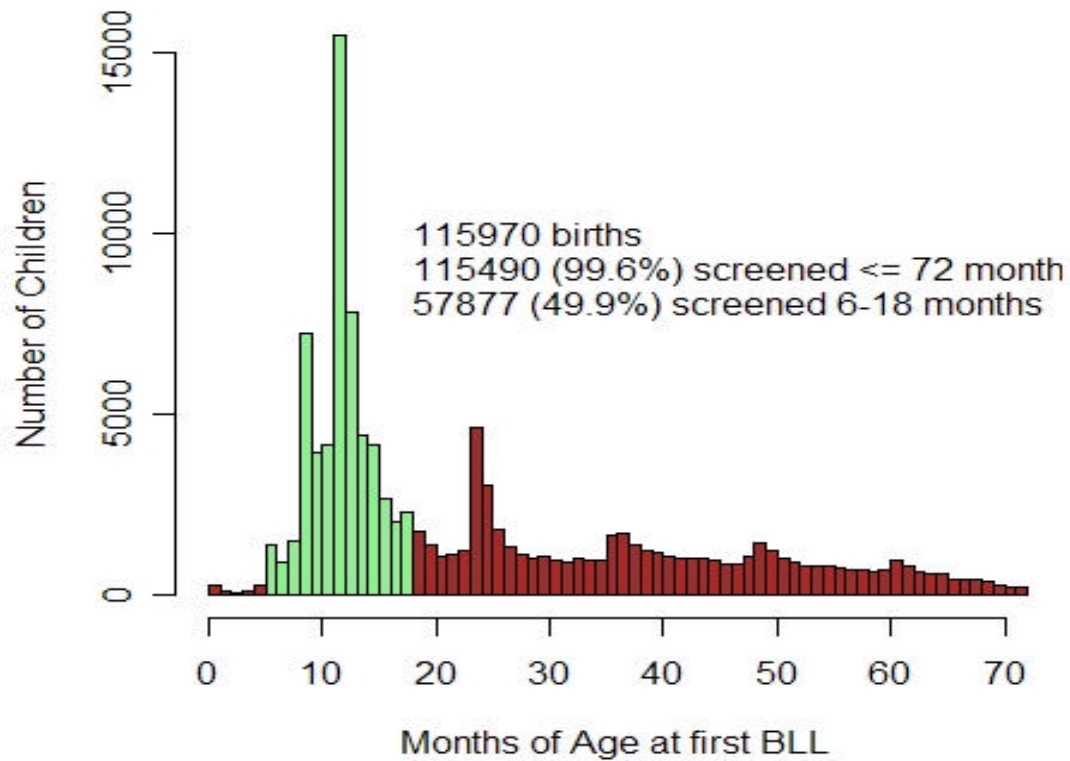


Figure 3c

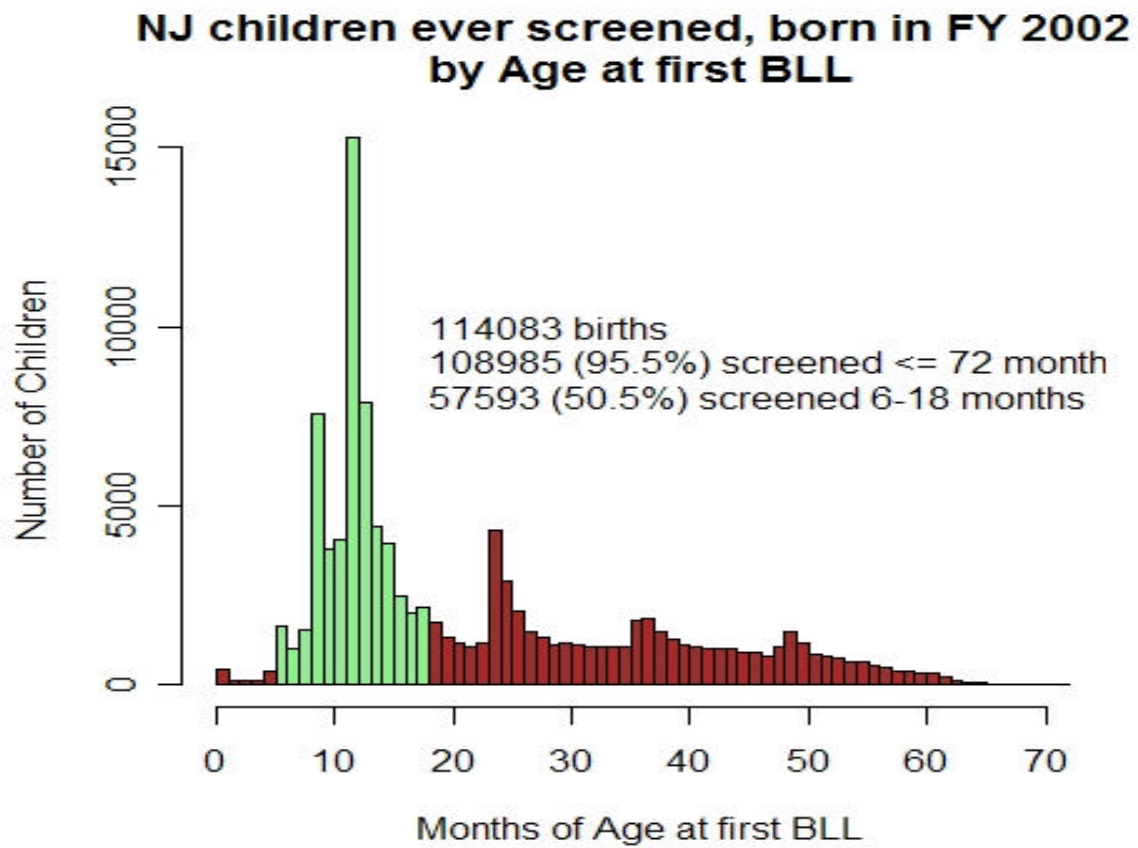


Figure 3d

**NJ children ever screened, born in FY 2003  
by Age at first BLL**

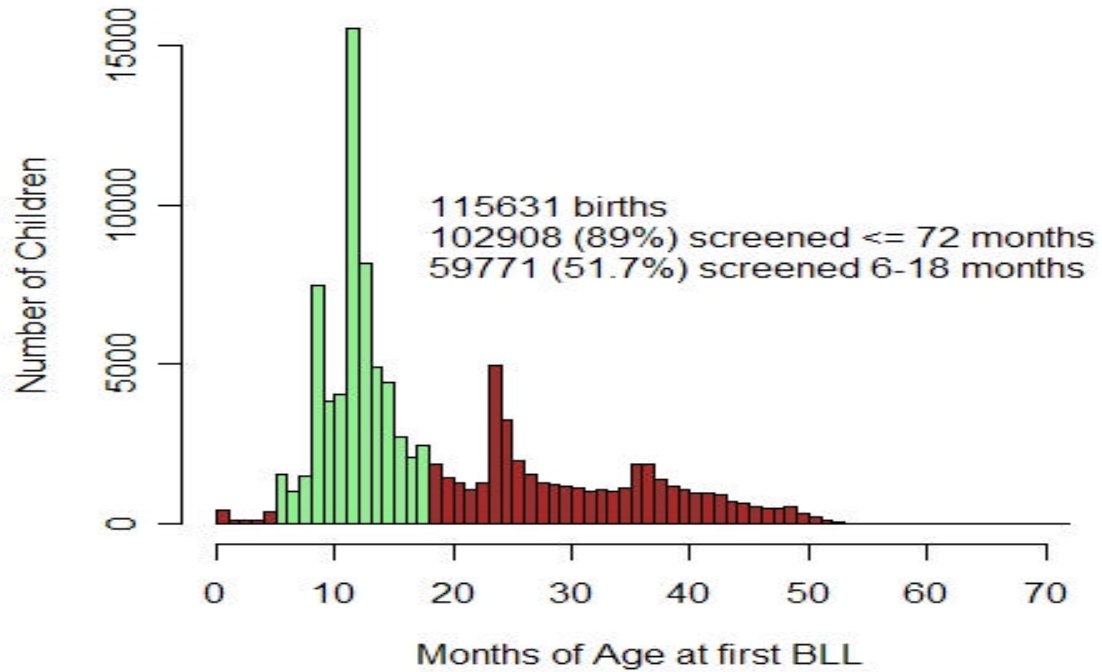


Figure 3e

**NJ children ever screened, born in FY 2004  
by Age at first BLL**

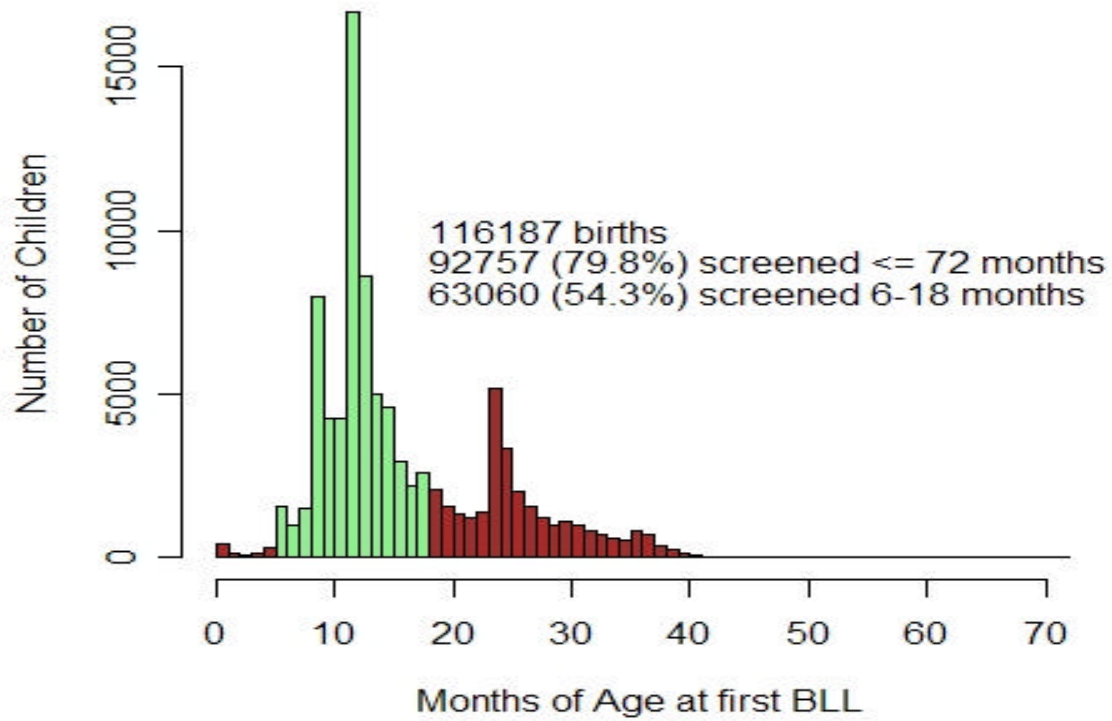
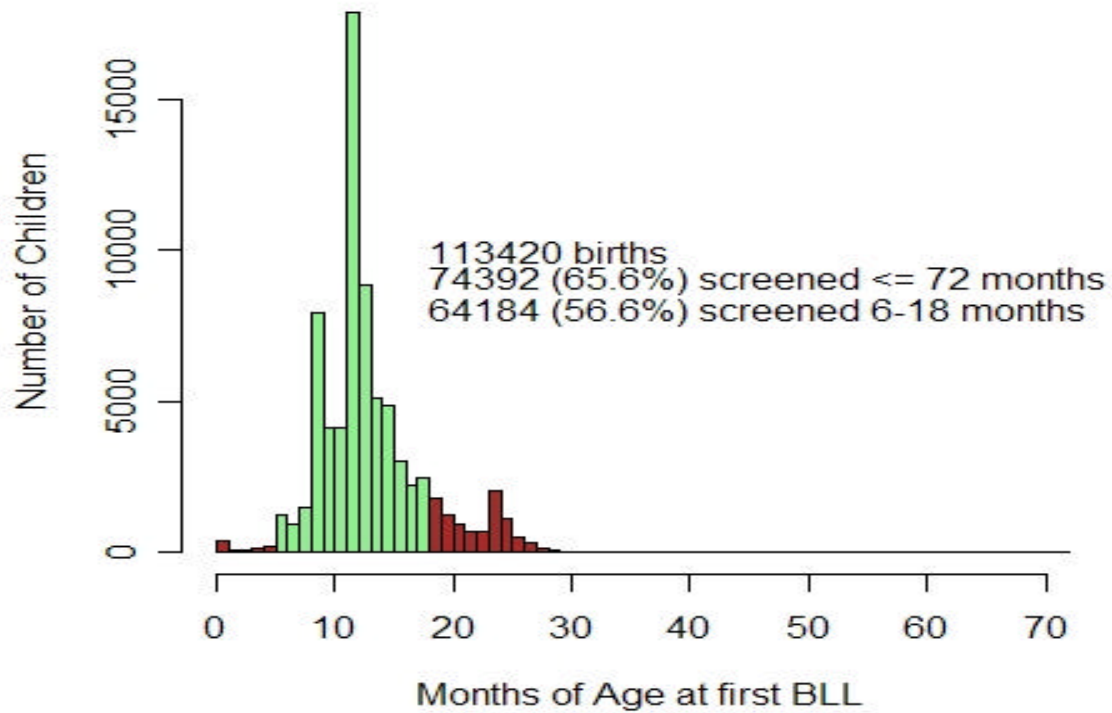


Figure 3f

**NJ children ever screened, born in FY 2005  
by Age at first BLL**



In the series of histograms on the following pages, the age range of 18-26 months is used as an appropriate age for the second BLL test. This includes any child who has had a first test, whether or not the first test is in the age range of 6-17 months.

Although the appropriately timed second test rate is low compared to the rate for the first test, there is some evidence of improvement:

<b><u>Fiscal Year</u></b>	<b><u>Percentage of children getting second test at age range of 18-26 months</u></b>
FY 2000	6.1 %
FY 2001	7.0 %
FY 2002	7.6 %
FY 2003	8.1 %
FY 2004	8.9 %
FY 2005	9.9 %

**Legend:**

BLL = Blood Lead Level test

■ = BLL between 18 and 26 months of age

■ = BLL either before 18 months or after 26 months of age

**Figure 4a**

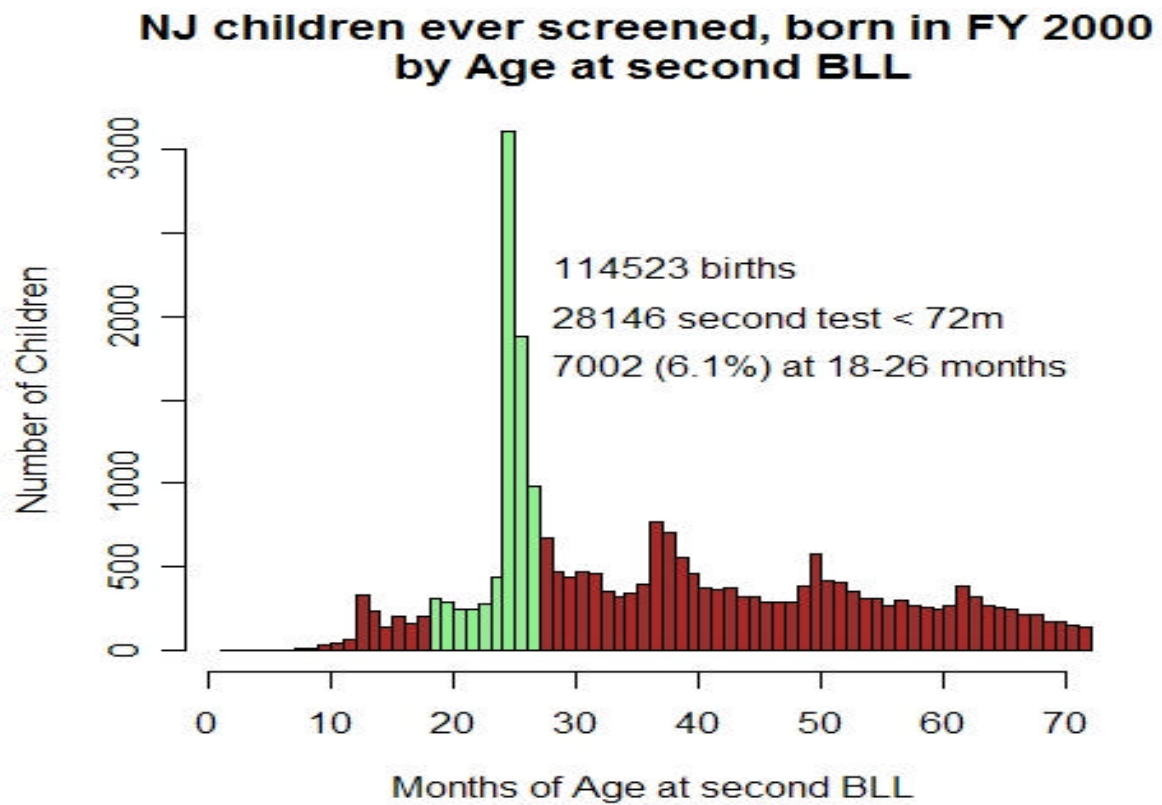


Figure 4b

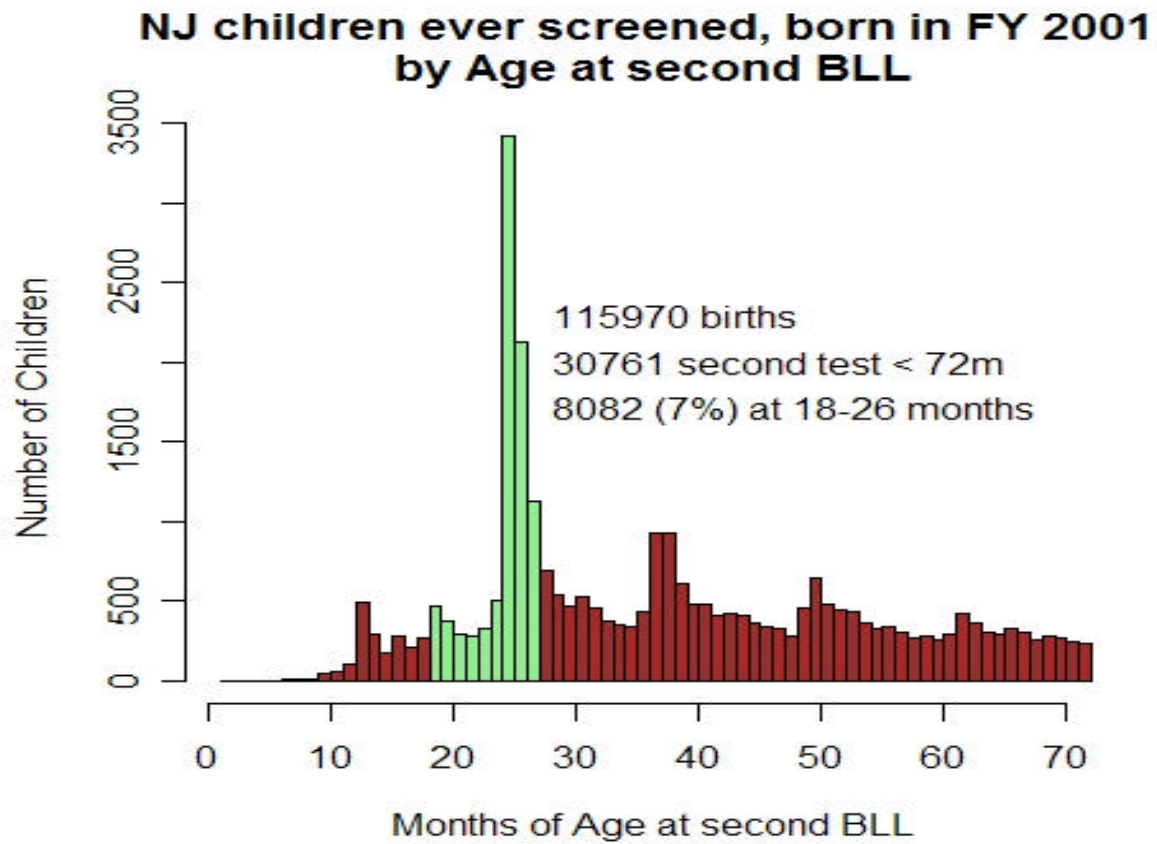


Figure 4c

**NJ children ever screened, born in FY 2002  
by Age at second BLL**

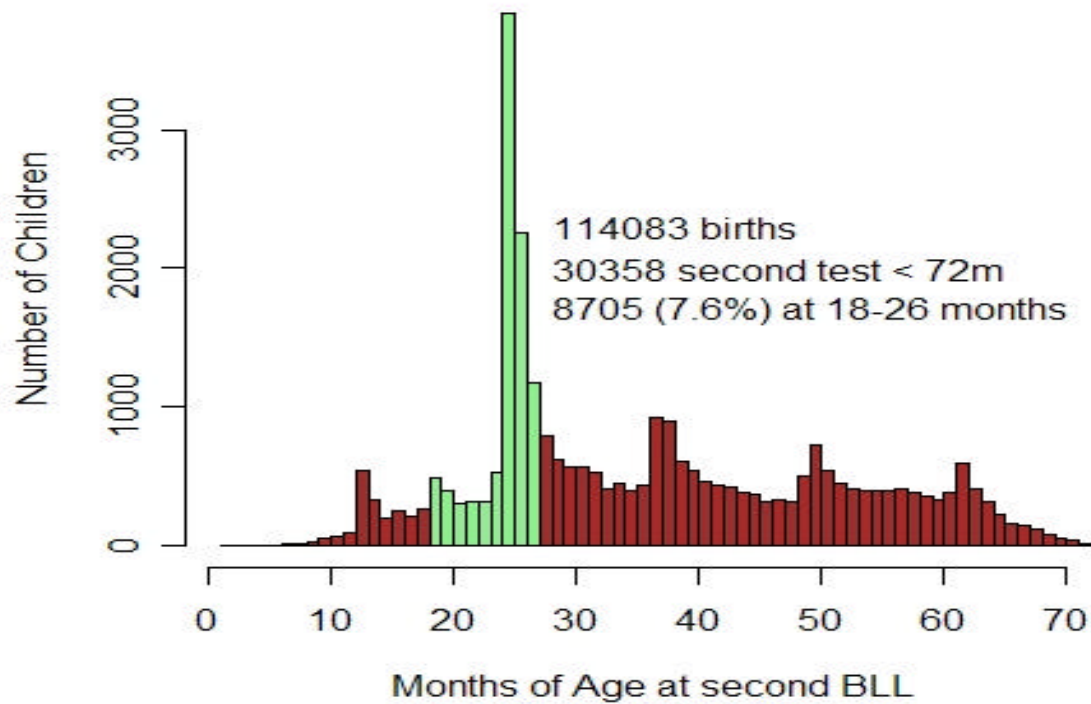


Figure 4d

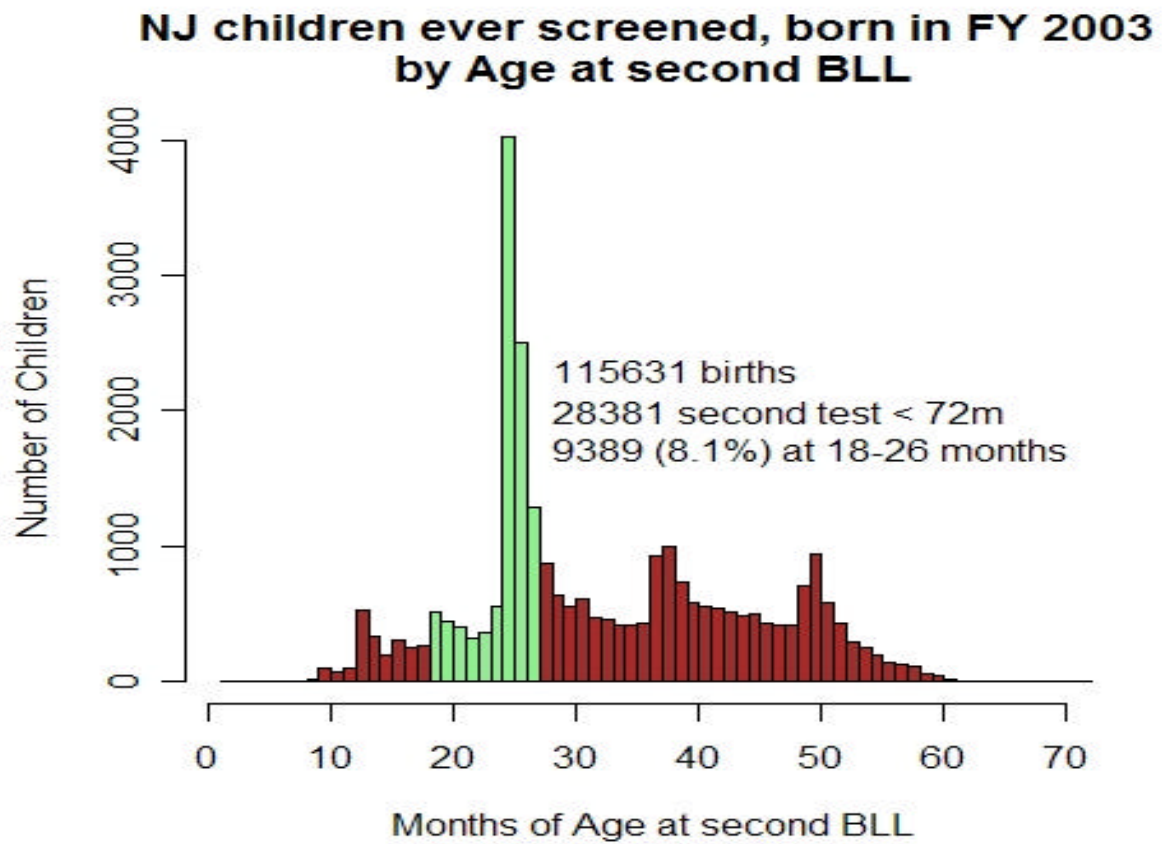


Figure 4e

**NJ children ever screened, born in FY 2004  
by Age at second BLL**

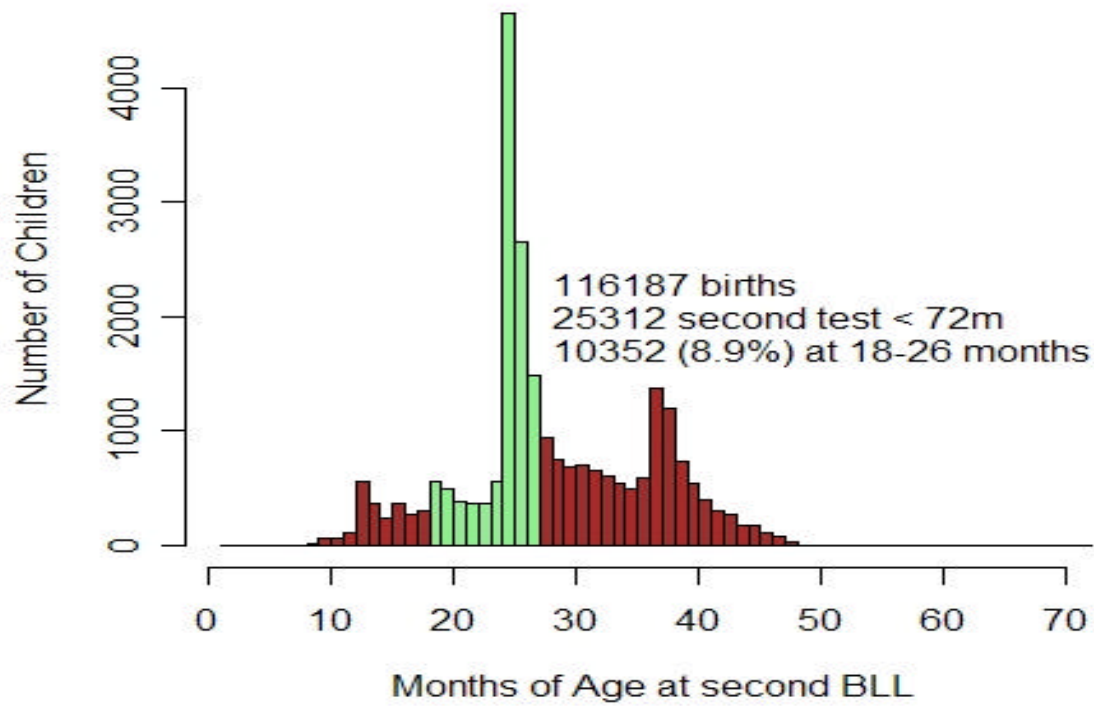
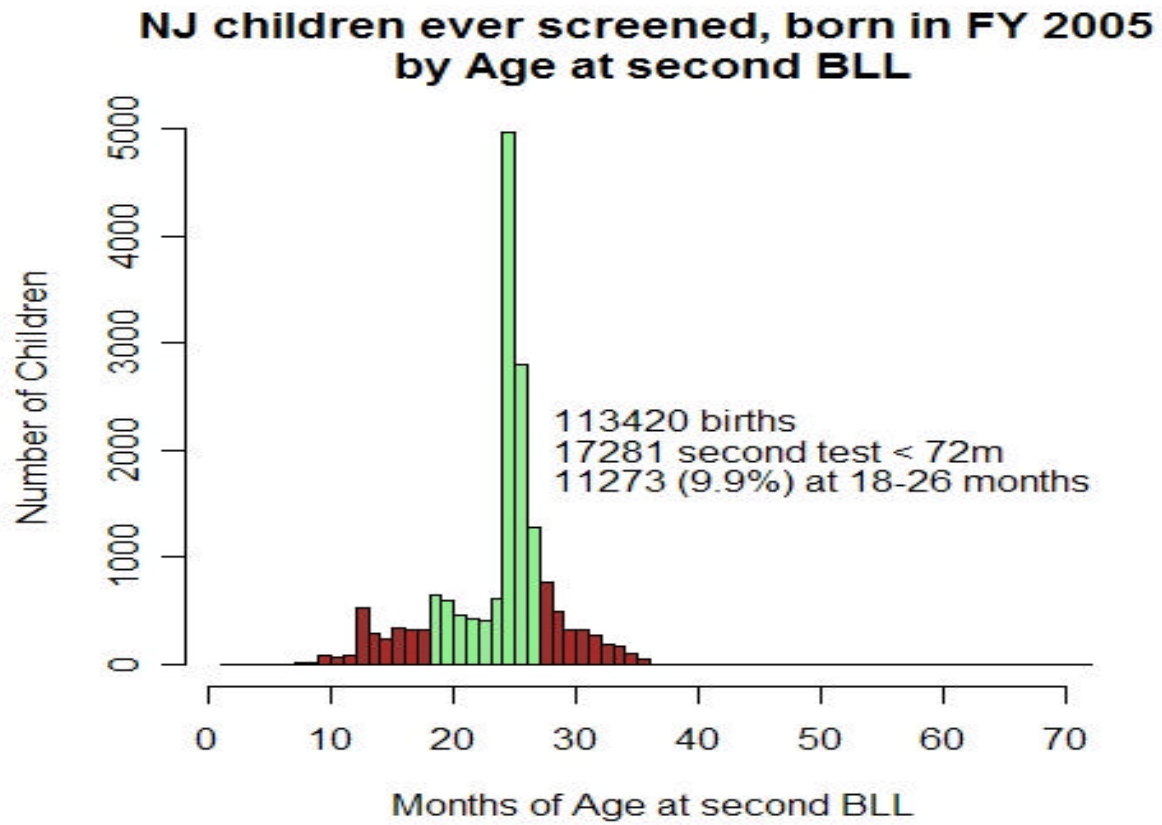


Figure 4f





## Chapter Two

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

In this chapter the tables and charts exhibit the statistics of testing performed for various ages and the prevalence of lead poisoning during FY2006 among all children less than 17 years of age.

Tables 3 and 4, and Figure 5 show the testing statistics and the prevalence of childhood lead poisoning among the children between the ages of 6 and 29 months in New Jersey by county of residence. The analyses behind the formulation of the tables are based on the number of unduplicated children, among the children reported during FY2006, counting only one test (highest\* blood lead level reported during FY2006) per child. However, these tables and charts may also include some children that were screened during FY2006 as their *second* screening test at around two years of age, as these children were already screened at the age of one year during FY2005.

Tables 5, 6 and 7 display the testing statistics and the prevalence of lead poisoning among the children that were tested at the age of <6 years old during FY2006.

DHSS maintains a database containing all blood lead tests reported on the children <17 years of age. In order to exhibit the full picture of distribution of lead tests and the prevalence of lead poisoning among all children, Table 8 and Figures 6, 7 and 8 focus on the entire population of the children that were tested for blood lead levels at the age of <17 years old and reported during FY2006.

The children in the age groups of <6 years and <17 years old may have had one or more blood lead tests taken during their life time, either as a lead screening test or as a followup to an elevated blood lead test. However, the analyses of data for the tables for these age groups were based on the number of unduplicated children, among the children reported during FY2006, counting only one test per child (highest\* blood lead level reported during FY2006).

*\*Current limitation: Laboratories do not always report complete sample information to specify the sample type (Venous or Capillary). Due to this limitation, some of the highest lead level results used may have been without a sample type.*

**CHILDREN 6 TO 29 MONTHS OF AGE WITH LEAD TEST RESULT    S  
REPORTED FY2006 BY COUNTY OF RESIDENCE**

County	Total Children*	Percent Tested	Blood Lead Level ( µg/dL )					Total
			<10	10-14	15-19	20-44	45+	
Atlantic	6,403	38%	2,422	27	10	5	1	2,465
Bergen	21,968	41%	9,013	41	9	13	0	9,076
Burlington	10,728	23%	2,415	5	5	4	0	2,429
Camden	13,663	33%	4,407	33	17	15	0	4,472
Cape May	2,103	28%	575	2	0	2	1	580
Cumberland	3,639	47%	1,643	45	18	10	1	1,717
Essex	22,734	46%	10,101	275	87	86	2	10,551
Gloucester	6,666	27%	1,799	4	2	5	0	1,810
Hudson	15,205	40%	5,980	65	20	18	1	6,084
Hunterdon	3,121	44%	1,356	11	2	4	0	1,373
Mercer	8,810	36%	3,151	39	9	10	1	3,210
Middlesex	19,683	42%	8,220	29	10	12	0	8,271
Monmouth	16,744	34%	5,589	43	22	9	1	5,664
Morris	12,987	40%	5,104	22	2	3	0	5,131
Ocean	12,765	32%	4,010	22	6	11	0	4,049
Passaic	14,232	51%	7,043	90	36	40	0	7,209
Salem	1,540	27%	399	6	5	0	1	411
Somerset	8,843	29%	2,552	14	7	5	1	2,579
Sussex	3,876	23%	899	2	2	0	0	903
Union	14,402	44%	6,221	99	23	24	4	6,371
Warren	2,725	41%	1,109	9	1	5	0	1,124
Zip unknown			15,844	134	41	0	0	16,019
<b>Total</b>	<b>222,837</b>	<b>46%</b>	<b>99,852</b>	<b>1,017</b>	<b>334</b>	<b>281</b>	<b>14</b>	<b>101,498</b>

\*Estimated number of one and two year old children in New Jersey - based on US Census 2000 data

**CHILDREN 6 TO 29 MONTHS OF AGE  
WITH BLOOD LEAD TEST RESULTS REPORTED IN FY 2006  
BY MUNICIPALITY OF RESIDENCE  
(FOR MUNICIPALITIES WITH POPULATIONS > 35,000)**

Municipality	Number of Children*	% Tested	Blood Lead Level ( µg/dL )					Total
			<10	10-14	15-19	20-44	45+	
Atlantic City	1,186	51.18%	579	16	8	3	1	607
Bayonne City	1,376	33.72%	460	4	0	0	0	464
Belleville Twp	836	55.50%	455	6	2	1	0	464
Berkeley Twp	433	38.11%	164	1	0	0	0	165
Bloomfield Twp	1,102	47.64%	516	7	1	1	0	525
Brick Twp	1,847	20.14%	369	1	0	2	0	372
Bridgewater Twp	1,300	18.00%	233	1	0	0	0	234
Camden City	2,845	51.14%	1,410	27	9	9	0	1,455
Cherry Hill	1,591	24.20%	381	1	2	1	0	385
Clifton City	1,766	55.55%	967	8	3	3	0	981
Dover Twp	1,915	19.37%	369	1	0	1	0	371
East Brunswick Twp	1,065	30.99%	330	0	0	0	0	330
East Orange City	2,132	37.29%	742	31	11	11	0	795
Edison Twp	2,481	39.90%	988	1	1	0	0	990
Elizabeth City	3,700	49.00%	1,775	25	5	8	0	1,813
Evesham Twp	1,227	21.11%	259	0	0	0	0	259
Ewing Twp	666	29.73%	197	1	0	0	0	198
Fort Lee Boro	766	48.30%	369	1	0	0	0	370
Franklin Twp	1,488	47.72%	707	1	1	0	1	710
Gloucester Twp	1,763	20.65%	362	1	0	1	0	364
Hackensack City	1,010	60.59%	602	9	0	1	0	612

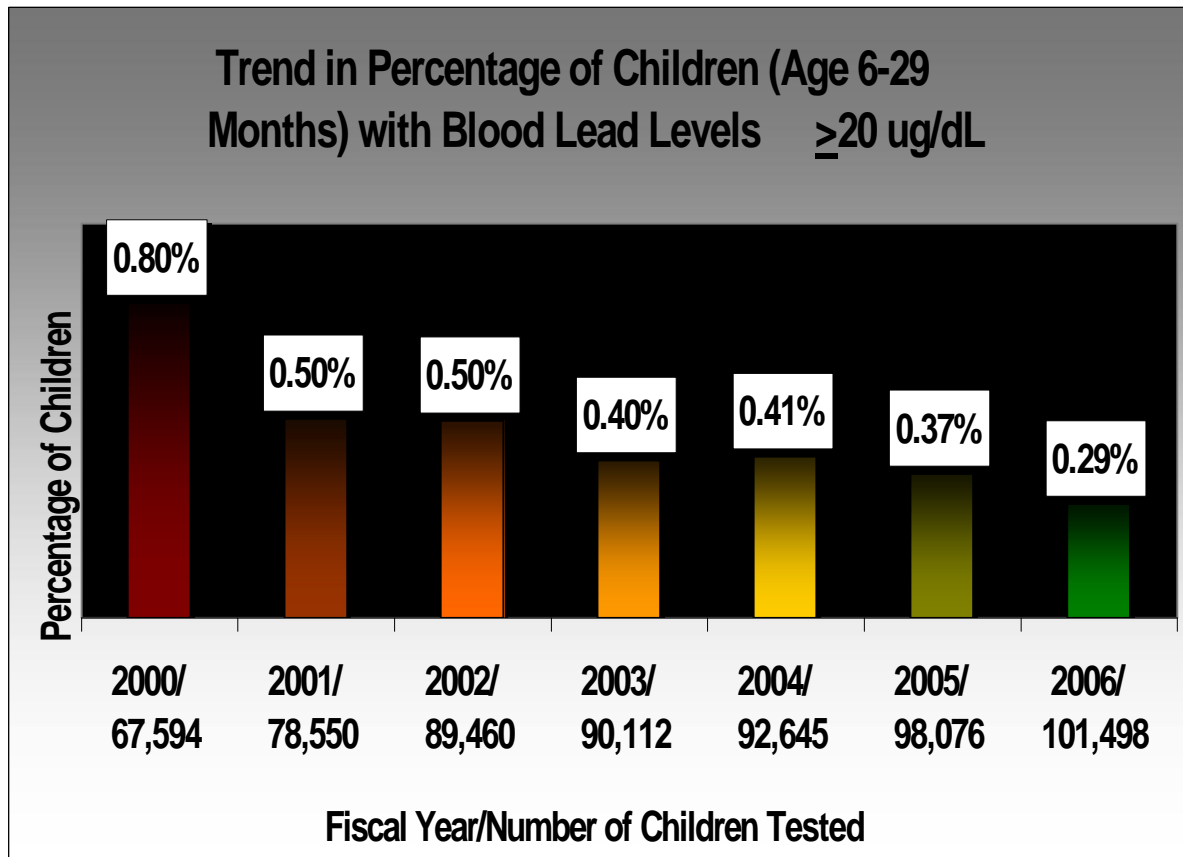
Municipality	Number of Children*	% Tested	Blood Lead Level ( $\mu\text{g/dL}$ )					Total
			<10	10-14	15-19	20-44	45+	
Hamilton Twp	1,981	32.16%	633	2	1	1	0	637
Hillsborough Twp	1,140	10.00%	113	0	1	0	0	114
Hoboken City	491	78.41%	383	1	1	0	0	385
Howell Twp	1,547	21.72%	335	1	0	0	0	336
Irvington Twp	1,963	52.27%	967	38	11	9	1	1,026
Jackson Twp	1,420	20.92%	294	3	0	0	0	297
Jersey City	6,558	37.85%	2,412	48	11	10	1	2,482
Kearny Town	918	38.89%	352	3	1	1	0	357
Lakewood Twp	2,961	56.06%	1,639	11	5	5	0	1,660
Linden Twp	877	41.51%	362	1	0	0	1	364
Manchester Twp	371	35.58%	132	0	0	0	0	132
Marlboro Twp	1,033	37.27%	384	1	0	0	0	385
Middletown Twp	1,777	27.86%	495	0	0	0	0	495
Montclair Twp	1,048	39.50%	406	5	2	1	0	414
Mount Laurel Twp	993	20.64%	205	0	0	0	0	205
New Brunswick	1,308	79.05%	1,008	13	4	9	0	1,034
Newark City	8,217	50.52%	3,905	148	50	47	1	4,151
North Bergen Twp	1,435	38.68%	552	1	1	1	0	555
North Brunswick Twp	1,009	35.78%	357	3	1	0	0	361
Old Bridge Twp	1,700	34.59%	585	3	0	0	0	588
Parsippany -Troy Hills Twp	1,202	40.85%	487	3	0	1	0	491
Passaic City	2,607	67.78%	1,716	24	12	15	0	1,767
Paterson City	4,973	47.21%	2,263	49	16	20	0	2,348
Pennsauken Twp	873	34.71%	297	1	4	1	0	303
Perth Amboy City	1,474	50.00%	730	5	1	1	0	737

Municipality	Number of Children*	% Tested	Blood Lead Level ( $\mu\text{g/dL}$ )					Total
			<10	10-14	15-19	20-44	45+	
Plainfield Twp	1,492	58.78%	810	43	12	10	2	877
Sayreville Boro	1,079	38.09%	410	0	0	1	0	411
South Brunswick Twp	1,223	34.01%	416	0	0	0	0	416
Teaneck Twp	1,048	36.55%	379	3	1	0	0	383
Trenton City	2,602	44.89%	1,121	33	7	6	1	1,168
Union City	1,955	35.91%	696	1	3	2	0	702
Union Twp	1,176	39.46%	459	3	1	1	0	464
Vineland Twp	1,375	47.49%	639	10	4	0	0	653
Washington Twp	1,086	31.31%	340	0	0	0	0	340
Wayne Twp	1,284	39.25%	500	2	2	0	0	504
West NY Town	1,174	38.67%	449	3	0	2	0	454
West Orange Twp	1,191	42.49%	493	9	3	1	0	506
Woodbridge Twp	2,495	34.31%	855	1	0	0	0	856
<b>Total</b>	<b>102,930</b>	<b>41.09%</b>	<b>41,285</b>	<b>616</b>	<b>199</b>	<b>187</b>	<b>9</b>	<b>42,296</b>

\*Estimated, based on number of 1 and 2 year old children in US Census 2000

**This table exhibits the number of children tested between the age of 6 and 29 and their blood lead levels, by municipality.**

Figure 5



This bar chart displays the trend in percentage of children (tested between 6 to 29 months of age) reported with blood lead levels of 20  $\mu\text{g}/\text{dL}$  or above. Denominator=number of children tested between the ages of 6 and 29 months, during the fiscal year.

**NUMBER OF CHILDREN <6 YEARS OLD, WITH BLOOD LEAD TEST  
REPORTED IN FY2006, BY BLOOD LEAD LEVEL AND COUNTY OF  
RESIDENCE**

County	Number of Children*	% Tested	Blood Lead Level (ug/dL)					Total
			<10	10-14	15-19	20-44	45+	
Atlantic	20,219	21.5%	4,263	50	17	9	1	4,340
Bergen	66,984	20.4%	13,563	58	15	17	2	13,655
Burlington	32,944	10.7%	3,501	13	9	11	0	3,534
Camden	41,771	17.5%	7,210	61	27	22	0	7,320
Cape May	6,477	15.2%	977	6	0	2	2	987
Cumberland	11,200	28.3%	3,041	72	40	19	2	3,174
Essex	69,596	31.9%	21,230	602	212	179	8	22,231
Gloucester	20,323	12.4%	2,496	8	2	5	0	2,511
Hudson	46,455	26.4%	12,057	133	38	45	2	12,275
Hunterdon	9,904	15.9%	1,550	12	5	4	1	1,572
Mercer	26,865	21.4%	5,591	92	27	25	1	5,736
Middlesex	56,447	21.5%	12,057	52	19	16	2	12,146
Monmouth	51,242	17.0%	8,567	74	35	13	1	8,690
Morris	39,748	17.9%	7,088	34	6	6	0	7,134
Ocean	38,870	17.1%	6,562	44	9	15	0	6,630
Passaic	43,600	31.9%	13,538	210	75	75	1	13,899
Salem	4,760	14.2%	656	9	6	5	1	677
Somerset	26,764	13.9%	3,675	22	10	7	1	3,715
Sussex	11,982	10.9%	1,297	2	3	1	0	1,303
Union	43,943	27.1%	11,620	171	54	44	5	11,894
Warren	8,515	18.0%	1,511	15	1	5	0	1,532
Zip unknown	N/A	N/A	27,466	292	84	0	0	27,842
<b>Total</b>	<b>678,609</b>	<b>25.5%</b>	<b>169,516</b>	<b>2,032</b>	<b>694</b>	<b>525</b>	<b>30</b>	<b>172,797</b>

*\*Estimated, based on the US Census 2000 data*

**The above table displays distribution of testing and prevalence of lead poisoning among children <6 years old, by their county of residence.**

**CHILDREN LESS THAN 6 YEARS OF AGE  
WITH BLOOD LEAD TEST RESULTS REPORTED IN FY 2006  
BY MUNICIPALITY OF RESIDENCE  
(FOR MUNICIPALITIES WITH POPULATIONS > 35,000)**

Municipality	Number of Children*	Blood Lead Level ( µg/dL )					Total
		<10	10-14	15-19	20-44	45+	
Atlantic City	3,694	1,171	26	12	5	1	1,215
Bayonne City	4,293	941	4	1	2	0	948
Belleville Twp	2,543	832	8	6	1	0	847
Berkeley Twp	1,289	237	1	0	0	0	238
Bloomfield Twp	3,359	917	9	3	1	0	930
Brick Twp	5,731	582	2	0	2	0	586
Bridgewater Twp	3,632	321	1	0	0	0	322
Camden City	8,894	2,868	50	18	14	0	2,950
Cherry Hill Twp	4,757	591	1	2	1	0	595
Clifton City	5,727	1,601	14	7	3	0	1,625
Dover Twp	1,524	585	1	0	1	0	587
East Brunswick Twp	3,375	502	1	0	0	0	503
East Orange City	6,628	1,826	64	28	29	1	1,948
Edison Twp	7,526	1,633	3	1	0	0	1,637
Elizabeth City	11,110	4,049	52	15	16	1	4,133
Evesham Twp	3,718	326	1	0	0	0	327
Ewing Twp	1,950	339	1	0	1	0	341
Fort Lee Boro	2,265	583	1	0	0	0	584
Franklin Twp	4,087	1,053	2	1	0	1	1,057
Gloucester Twp	4,845	513	1	0	1	0	515
Hackensack City	2,916	1,104	13	0	1	0	1,118
Hamilton Twp	6,048	1,143	10	1	5	0	1,159
Hillsborough Twp	3,589	151	0	2	0	0	153
Hoboken City	1,444	532	1	1	0	0	534
Howell Twp	4,294	553	1	0	0	0	554
Irvington twp	5,957	2,383	102	28	24	2	2,539
Jackson Twp	4,271	455	3	1	0	0	459
Jersey City	20,081	5,381	101	23	29	2	5,536
Kearny Town	2,779	662	4	2	2	0	670
Lakewood Twp	6,810	3,032	27	7	8	0	3,074
Linden City	2,872	719	5	1	0	1	726
Manchester Twp	1,123	215	0	0	0	0	215
Marlboro Twp	3,320	552	1	0	0	0	553
Middletown Twp	5,525	702	3	0	0	0	705
Montclair Twp	3,278	719	5	4	2	0	730
Mount Laurel Twp	2,977	275	0	0	0	0	275
New Brunswick City	3,985	1,645	16	7	10	0	1,678
Newark City	25,608	9,818	347	120	94	3	10,382
North Bergen Twp	4,477	1,033	4	2	1	0	1,040
North Brunswick	2,921	569	4	1	0	0	574
Old Bridge Twp	2,012	964	3	0	0	0	967
Parsippany-Troy Hills Twp	3,662	705	4	0	1	0	710
Passaic City	7,857	3,867	55	25	30	0	3,977

Municipality	Number of Children*	Blood Lead Level ( $\mu\text{g/dL}$ )					Total
		<10	10-14	15-19	20-44	45+	
Paterson City	15,148	5,254	131	38	39	1	5,463
Pennsauken Twp	2,747	514	2	4	1	0	521
Perth Amboy City	4,546	1,536	12	2	2	0	1,552
Piscataway Twp	3,725	769	2	2	0	0	773
Plainfield City	4,566	1,765	61	29	16	2	1,873
Sayreville	3,264	665	2	0	1	0	668
South Brunswick Twp	3,691	644	0	0	0	1	645
Teaneck Twp	3,086	583	7	2	1	0	593
Trenton City	7,850	2,566	78	25	16	1	2,686
Union City	5,913	1,447	3	5	5	0	1,460
Union Twp	3,671	876	5	2	2	0	885
Vineland City	4,275	1,208	14	6	0	0	1,228
Washington Twp	3,618	440	0	0	0	0	440
Wayne Twp	3,973	678	2	2	0	0	682
West New York Town	3,619	963	7	1	2	0	973
West Orange Twp	3,560	896	11	5	4	0	916
Woodbridge Twp	7,378	1,524	5	1	0	0	1,530
<b>Total</b>	<b>303,383</b>	<b>80,977</b>	<b>1,294</b>	<b>443</b>	<b>373</b>	<b>17</b>	<b>83,104</b>

*\*Estimated, based on the US Census 2000 data*

**The above table displays distribution of testing and prevalence of lead poisoning among children <6 years old, by their municipality of residence.**

**Cross tabulation of age of the children tested and their blood lead levels – A comparison of FY2005 and FY2006**

**Table 7**

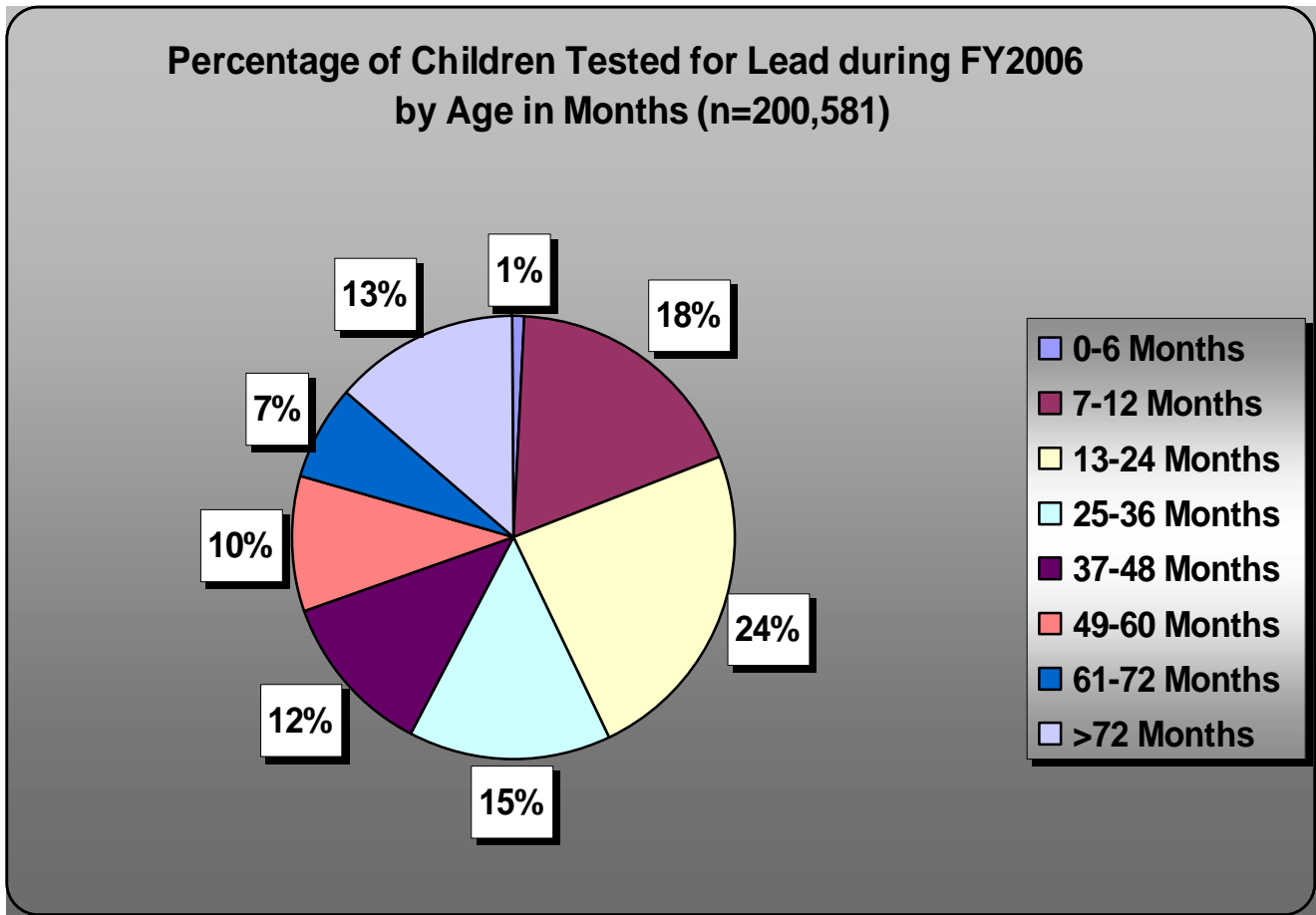
Breakdown of Age and Elevated Blood Lead Levels - FY2005 vs FY2006								
	Blood Lead Level/Fiscal Year							
	10-14 ug/dL		15-19 ug/dL		≥20 ug/dL		Total	
Age	FY2005	FY2006	FY2005	FY2006	FY2005	FY2006	FY2005	FY2006
<1 Year	96	96	31	28	30	20	157	144
1 Year	615	590	208	175	183	159	1,006	924
2 Years	646	528	233	161	161	136	1,040	825
3 Years	477	413	152	131	139	87	768	631
4 Years	341	252	103	74	56	55	500	381
5 years	188	147	70	51	40	42	298	240
<b>Total</b>	<b>2,363</b>	<b>2,026</b>	<b>797</b>	<b>620</b>	<b>609</b>	<b>499</b>	<b>3,769</b>	<b>3,145</b>

**This table provides cross tabulation of children’s age versus their highest blood lead level category, as reported during FY2006. Each child is counted only once, with using their highest blood lead level reported during FY2006.**

<b>CHILDREN &lt;17 YEARS OLD WITH BLOOD LEAD TEST REPORTED IN FY2006 BY BLOOD LEAD LEVEL AND COUNTY OF RESIDENCE</b>						
<b>County</b>	<b>Blood Lead Levels (ug/dL)</b>					<b>Total</b>
	<b>&lt;10</b>	<b>10-14</b>	<b>15-19</b>	<b>20-44</b>	<b>45+</b>	
Atlantic	4,927	54	19	10	1	5,011
Bergen	14,612	63	15	17	2	14,709
Burlington	3,836	13	9	11	0	3,869
Camden	8,037	63	31	23	0	8,154
Cape May	1,082	7	2	2	2	1,095
Cumberland	3,514	74	44	24	2	3,658
Essex	25,553	686	253	202	8	26,702
Gloucester	2,711	8	2	5	0	2,726
Hudson	14,944	148	47	57	2	15,198
Hunterdon	1,611	12	5	4	1	1,633
Mercer	6,493	94	32	25	1	6,645
Middlesex	15,714	56	20	16	2	15,808
Monmouth	9,587	79	37	18	1	9,722
Morris	7,646	34	6	6	0	7,692
Ocean	7,387	49	10	15	0	7,461
Passaic	15,445	228	79	80	3	15,835
Salem	740	10	7	5	1	763
Somerset	4,051	28	11	7	1	4,098
Sussex	1,413	3	3	2	0	1,421
Union	14,062	182	61	49	5	14,359
Warren	1,635	18	2	5	0	1,660
Zip unknown	31,928	340	94	0	0	32,362
<b>Total</b>	<b>196,928</b>	<b>2249</b>	<b>789</b>	<b>583</b>	<b>32</b>	<b>200,581</b>

**This table displays distribution of tests by county, for all children <17 years old that were tested during FY2006 and their highest blood lead level reported during FY2006.**

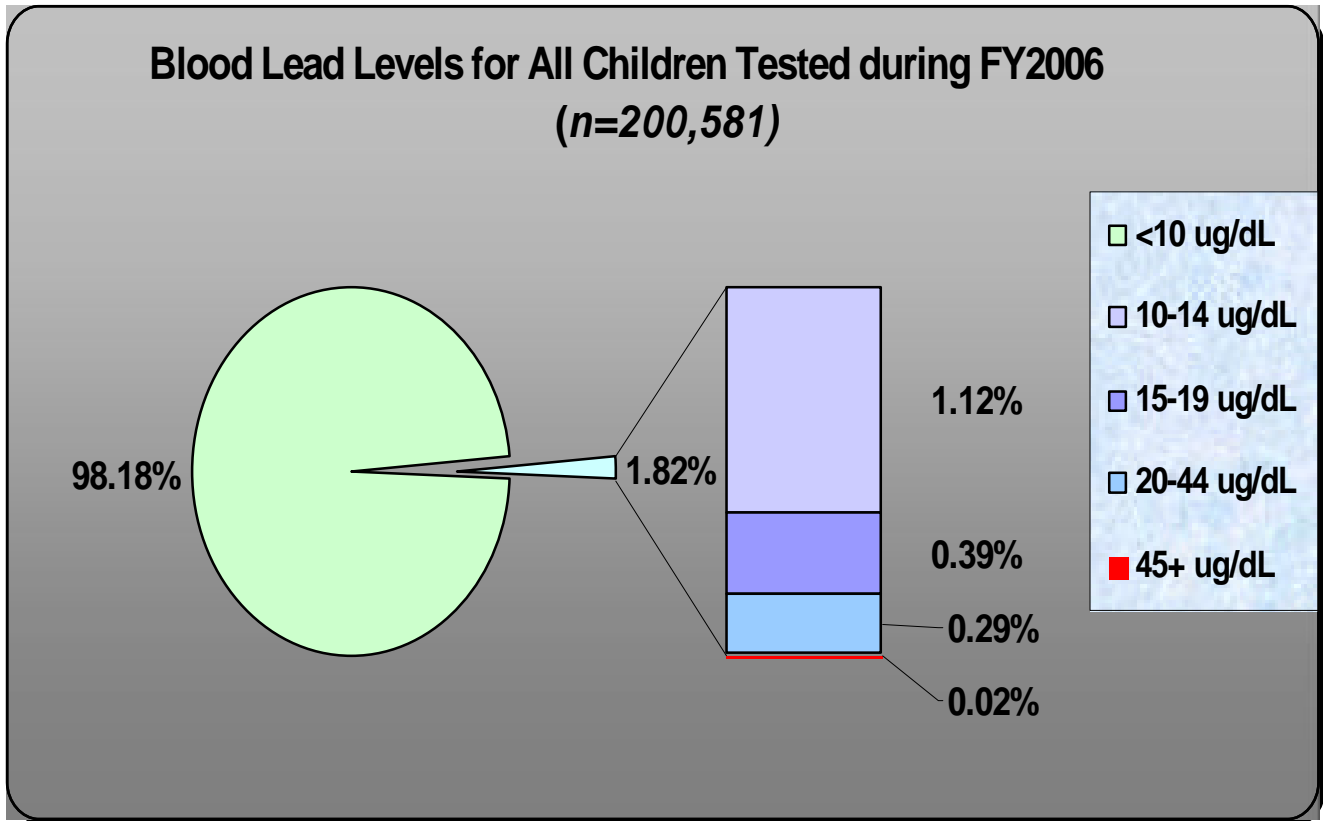
Figure 6



Breakdown of age at the time of test, for the children tested for blood lead levels during FY2006.

This chart is based on all children (<17 years old, unduplicated) that were reported with their blood lead test results during FY2006, counting only one test per child. Total number of children tested = 200,581.

Figure 7



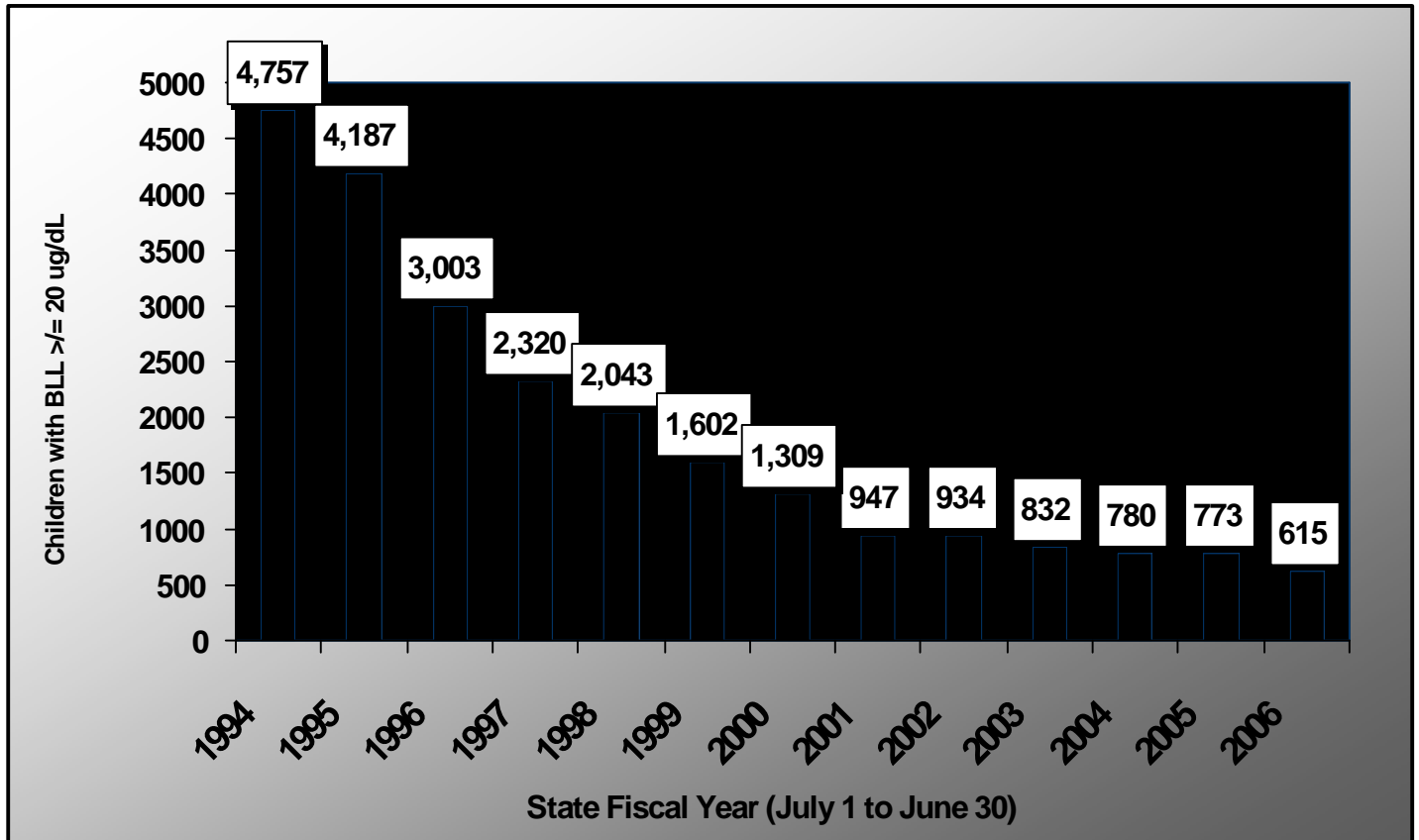
Percentage of children by blood lead levels for FY2006

**This pie chart describes the breakdown of blood lead levels of all children (unduplicated) reported during FY2006 (number of children reported = 200,581), counting one test (highest lead level reported) per child.**

**Trend in number of children (<17 years old) with Elevated Blood Lead Levels:**

**Figure 8**

**CHILDREN WITH BLOOD LEAD  $\geq 20$   $\mu\text{g/dL}$   
BY STATE FISCAL YEAR (SFY)**



**This chart demonstrates the change in number of children (<17 years old) reported with elevated blood lead levels ( $\geq 20$   $\mu\text{g/dL}$ ) by State Fiscal Year**

## Chapter Three

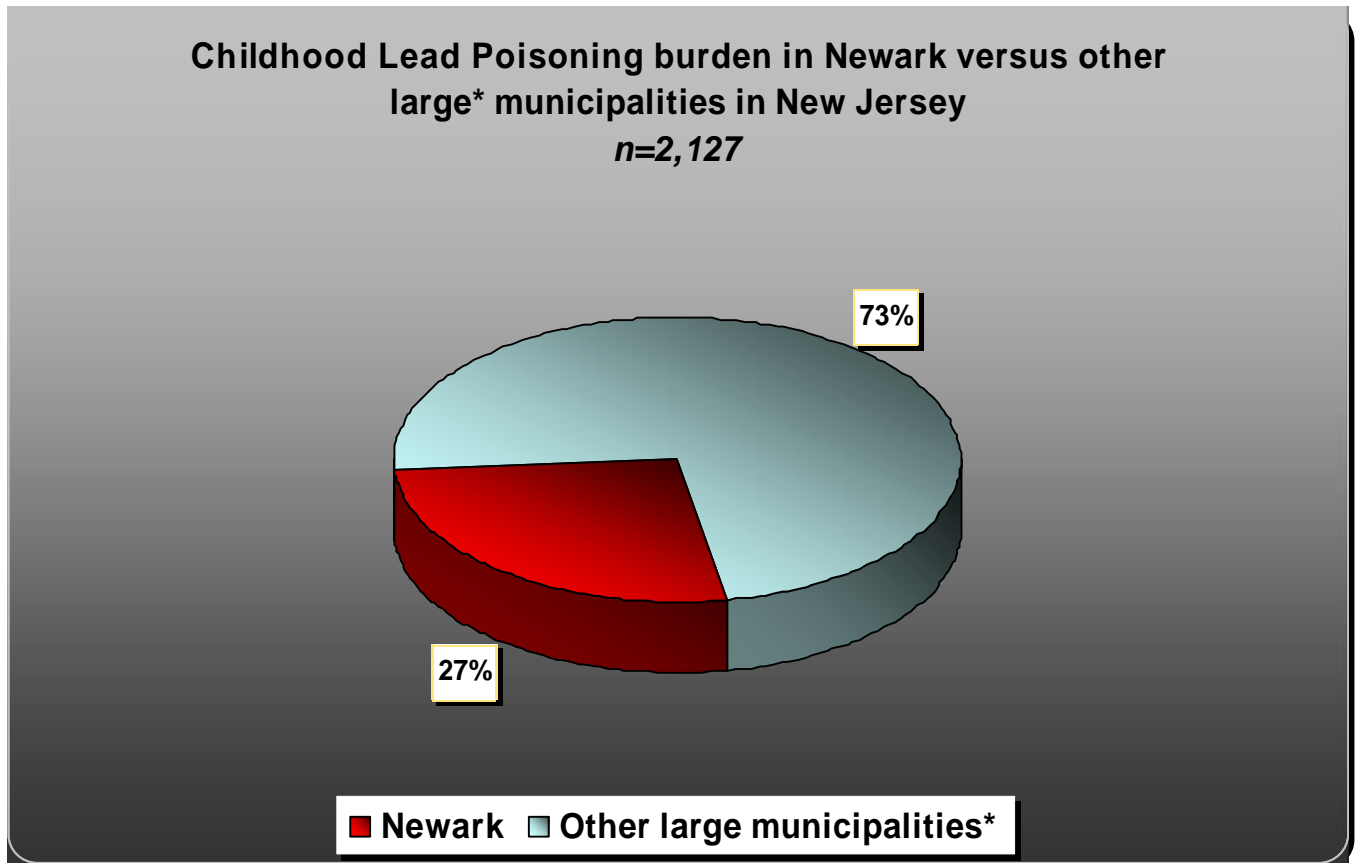
### **SPOTLIGHT ON THE CITY OF NEWARK**

Newark has the heaviest burden of childhood lead poisoning in the entire state, as depicted in the charts and graphs exhibited in this chapter.

Newark comprised 17% of all children (< 6 years old) in the entire State with elevated blood lead levels ( $\geq 10 \mu\text{g/dL}$ ) during FY2006. Among all large municipalities, Newark has the highest number of children (< 6 years old) with elevated blood lead levels. Newark comprised 27% of the number of children (< 6 years old) with elevated blood lead levels in all large municipalities.

Whether or not New Jersey as a state meets its goal of eliminating childhood lead poisoning as a public health problem depends heavily on Newark's success addressing this issue.

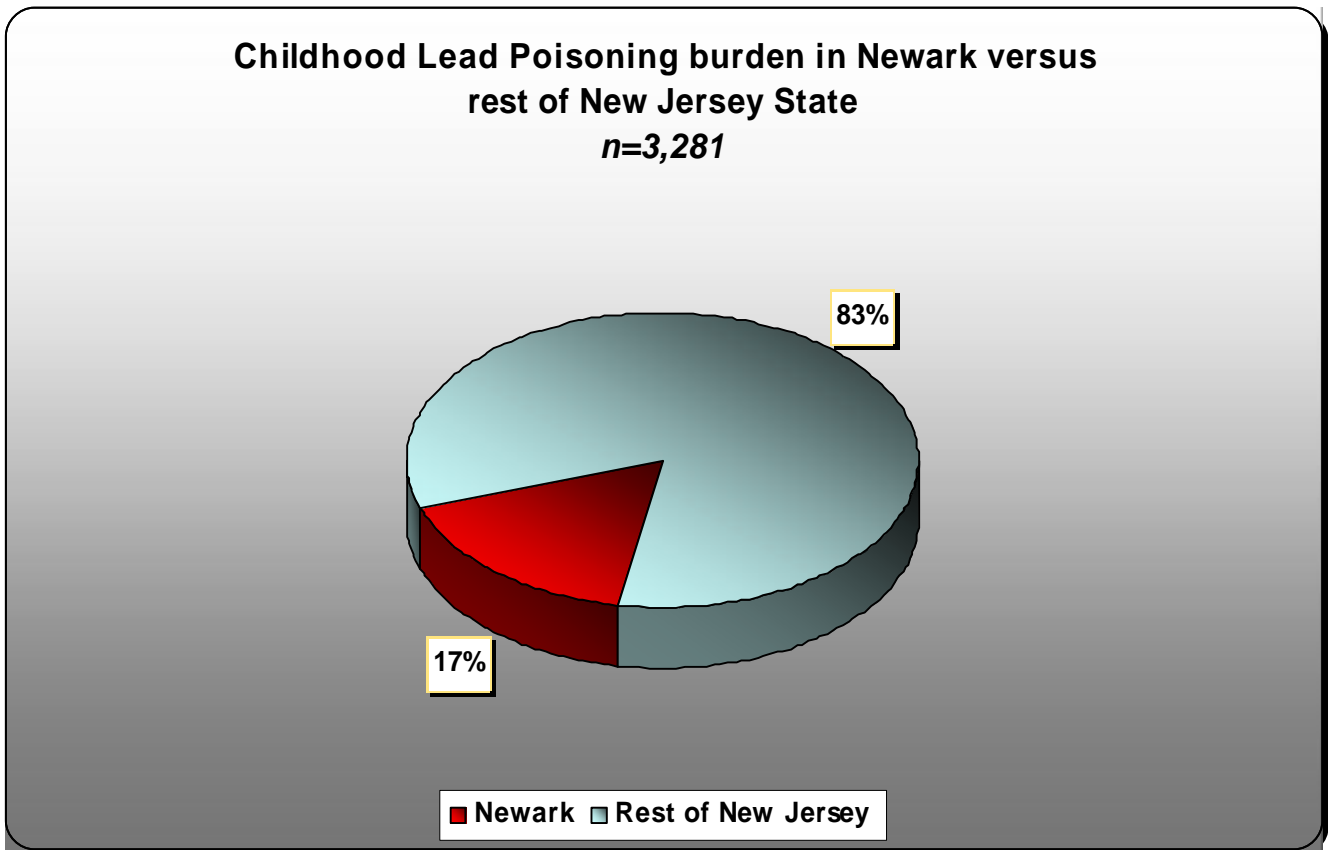
Figure 9



*\*Municipalities with population of >35,000 (Source: US Census 2000 data)*

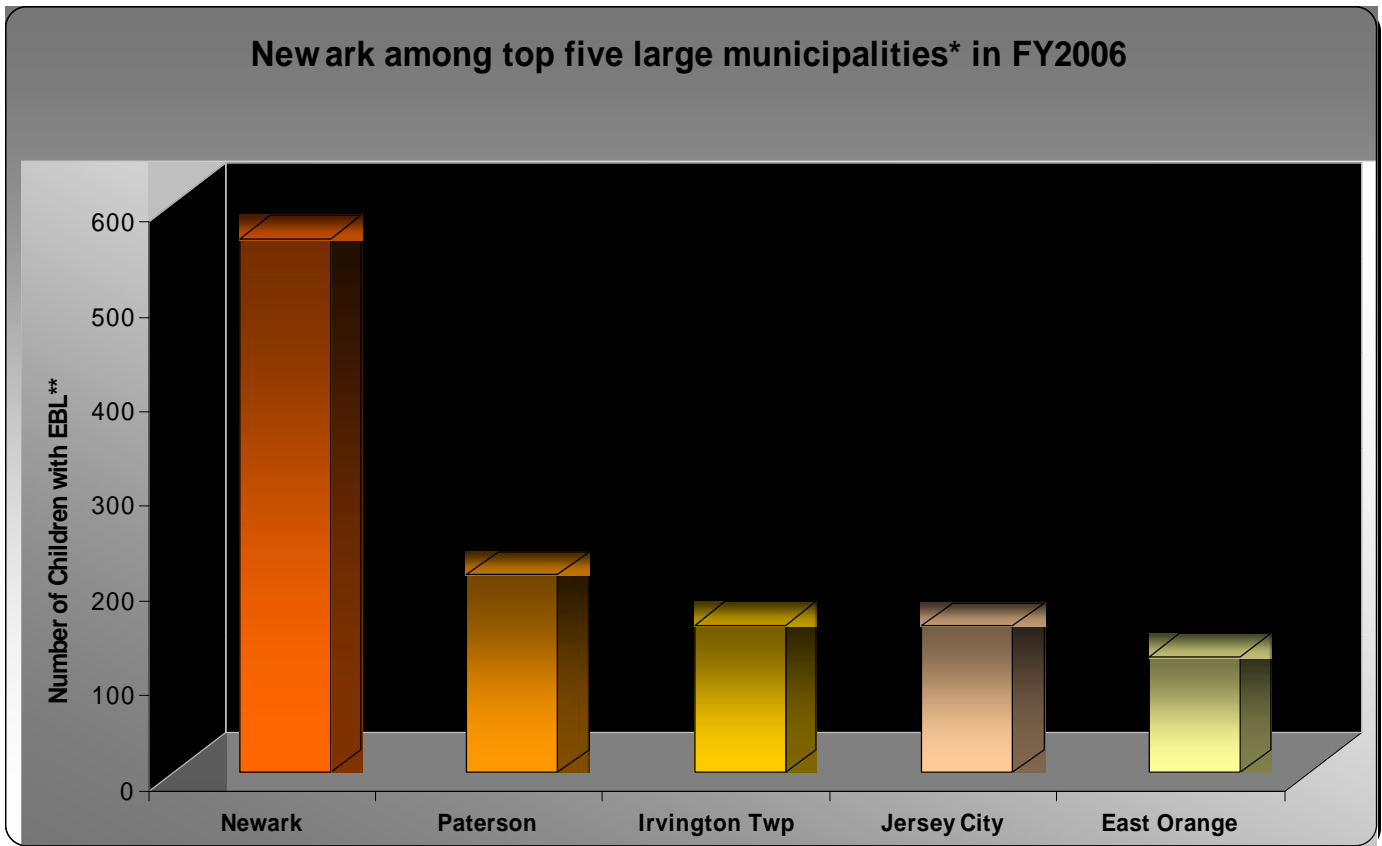
The above pie chart is based on the number of unduplicated children (<6 years old) in the large\* municipalities, reported with blood lead levels of  $\geq 10 \mu\text{g/dL}$  (2,127 children), counting only one test (highest blood lead level reported) per child, during FY2006.

Figure 10



The above pie chart is based on the number of unduplicated children (<6 years old) in the entire State, reported with blood lead levels of  $\geq 10 \mu\text{g/dL}$  (3,281 children), counting only one test (highest blood lead level reported) per child, during FY2006.

**Figure 11**

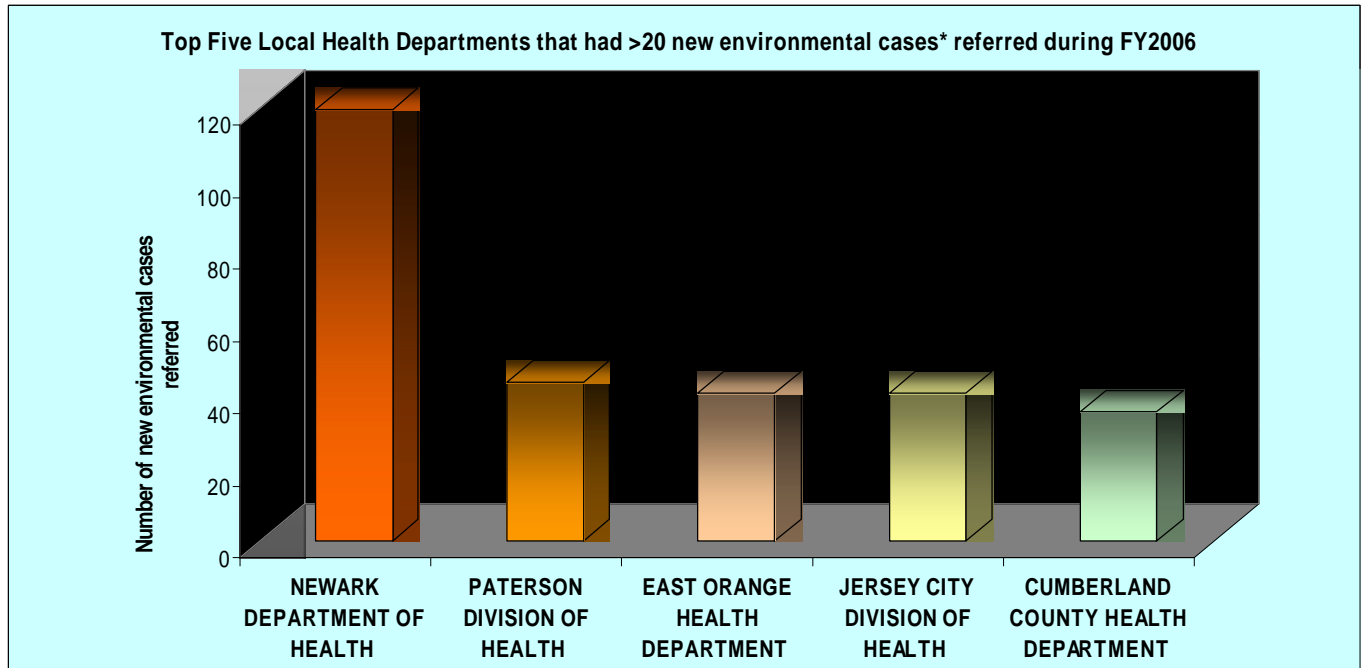


**\*Municipalities with population of >35,000**

**The above pie chart is based on the number of unduplicated children (<6 years old) in the large\* municipalities, reported with blood lead levels of  $\geq 10 \mu\text{g/dL}$ , counting only one test (highest blood lead level reported) per child, during FY2006.**

The following chart highlights Newark, with the highest number of new environmental cases referred during FY2006 and the magnitude of the same among the top five local health departments that had more than 20 new environmental cases referred during the same fiscal year.

Figure 12



\*New environmental case is referred to the local health department when a child with lead level of  $\geq 15$   $\mu\text{g}/\text{dL}$  is reported to NJ DHSS, with an address for which there has been no environmental case referred to ever before, or if it has been more than one year since the environmental case for the address has been closed.



## Chapter Four

### ENVIRONMENTAL INVESTIGATIONS BY LOCAL HEALTH DEPARTMENTS

New Jersey law (N.J.S.A. 24:14A-6) requires local boards of health to investigate all reported cases of lead poisoning within their jurisdiction and to order the abatement of all lead hazards identified in the course of the investigation. The procedures for conducting these investigations are specified in Chapter XIII of the New Jersey State Sanitary Code (N.J.A.C. 8:51). The local health department must conduct an inspection of the child's primary residence, and any other places, such as a child care center or the home of a relative or babysitter, where the child spends a significant amount of time. Even if the child moves, the property where the child resided when the blood lead test was done must be inspected. The inspection includes a determination of the presence of lead-based paint, the identification of locations where that paint is in a hazardous condition (such as peeling, chipping or flaking), and the presence of lead in dust or soil. The inspector completes a questionnaire through speaking to the child's parent or guardian to help determine any other potential sources of lead hazard exposure.

In addition, the local health department arranges for a home visit by a public health nurse to educate the parents about lead poisoning and the steps that they can take to protect their child. The nurse also provides on-going case management services to assist the family in getting follow-up testing, medical treatment, and other social services that they may require to address the effects of their child's exposure to lead.

The DHSS maintains a system for notifying each local health department of all children with elevated blood lead reported in its jurisdiction. This system is described in Appendix 1. When an elevated blood lead test result is received, it is compared with the records in the database to determine if this child has had a previously reported blood lead level  $\geq 15$  ug/dL, for whom a notice had been issued, at the same address, within the previous 12 months. For each child not previously reported, a notice is sent to the local health department which has jurisdiction over the address given on the laboratory report. This chapter presents the data on children with elevated blood lead levels reported to local health departments, and local health department actions in response.

The data in Tables 9, 10 and 11 reflect the results of environmental investigations as reported to the DHSS by local health departments. They are accurate to the extent that local health departments make complete and timely reports to the DHSS. It is possible that additional inspections and/or abatements may have been completed, but not reported.

**Table 9**

ENVIRONMENTAL ACTIVITY STATUS BY COUNTY - FY2006							
County	EBL Reports Sent	Invest. Required	Invest. Completed	Percent Invest. Completed	% Lead Hazards Found	No. Abatements Completed	% Abatements Completed
ATLANTIC	10	4	3	75%	100%	1	33%
BERGEN	21	14	7	50%	71%	3	60%
BURLINGTON	13	9	6	67%	33%	0	0%
CAMDEN	22	15	12	80%	58%	3	43%
CAPE May	3	3	3	100%	67%	2	100%
CUMBERLAND	37	36	34	94%	62%	2	10%
ESSEX	239	190	133	70%	74%	29	29%
GLOUCESTER	4	3	3	100%	100%	1	33%
HUDSON	63	44	39	89%	46%	11	61%
HUNTERDON	5	4	1	25%	100%	0	0%
MERCER	29	18	9	50%	78%	0	0%
MIDDLESEX	16	10	9	90%	56%	2	40%
MONMOUTH	19	12	11	92%	82%	4	44%
MORRIS	6	4	3	75%	33%	0	0%
OCEAN	22	16	13	81%	62%	5	63%
PASSAIC	85	70	67	96%	76%	29	57%
SALEM	6	4	4	100%	75%	0	0%
SOMERSET	10	9	5	56%	80%	2	50%
SUSSEX	2	1	1	100%	100%	1	100%
UNION	67	56	52	93%	75%	14	36%
WARREN	5	4	4	100%	100%	0	0%
<b>New Jersey</b>	<b>684</b>	<b>526</b>	<b>419</b>	<b>80%</b>	<b>73%</b>	<b>109</b>	<b>36%</b>

**The above table displays the profile of environmental activity for each county, based on the number of Elevated Blood Lead Level (EBL) reports (referrals) for new environmental cases\* sent to the appropriate local health department in the county and the status of the environmental activity performed for the cases.**

*\*A new environmental case is generated and referred to the pertinent local health department when there is an elevated blood lead level reported on a child, residing at the address that either never had an environmental case opened or it has been more than 365 days since the last time when an environmental case was closed for the same address.*

**Table 10**

ENVIRONMENTAL INVESTIGATION STATUS REPORT - FY 2006 LOCAL HEALTH DEPARTMENTS WITH 20 OR MORE REPORTED ELEVATED BLOOD LEAD CASES								
Local Health Department	EBL Reports Sent	Invest. Required	Invest. Completed	Percent Completed	Lead Hazards Found	% Lead Hazards Found	Abatements Completed	% Abatement Completed
NEWARK DEPARTMENT OF HEALTH	120	85	79	93%	60	76%	24	40%
PATERSON DIVISION OF HEALTH	44	31	18	58%	11	61%	10	91%
EAST ORANGE HEALTH DEPARTMENT	41	28	21	75%	16	76%	11	69%
JERSEY CITY DIVISION OF HEALTH	41	36	28	78%	18	64%	16	89%
CUMBERLAND COUNTY HEALTH DEPARTMENT	36	17	15	88%	3	20%	1	33%
PASSAIC CITY HEALTH DEPARTMENT	34	26	13	50%	6	46%	4	67%
IRVINGTON DEPARTMENT OF HEALTH & WELFARE	33	22	12	55%	9	75%	5	56%
PLAINFIELD HEALTH DEPARTMENT	26	16	12	75%	6	50%	4	67%
WEST ORANGE HEALTH DEPARTMENT	25	22	16	73%	10	63%	5	50%
ELIZABETH DEPARTMENT OF HEALTH & HUMAN SERVICES	24	16	10	63%	6	60%	5	83%
CAMDEN COUNTY DEPARTMENT OF HEALTH	22	18	15	83%	10	67%	7	70%
OCEAN COUNTY HEALTH DEPARTMENT	21	18	14	78%	9	64%	6	67%
TRENTON DEPT OF HEALTH & HUMAN SERVICES	20	14	14	100%	14	100%	10	71%

**The above table depicts local health departments that had more than 20 new environmental cases\* referred (EBL reports sent) to them during FY2006, and the status of the environmental activity performed for the cases. See Appendix 2 for complete data on the status of all elevated blood lead reports issued by local health department.**

*\*A new environmental case is generated and referred to the pertinent local health department when there is an elevated blood lead level reported on a child, residing at the address that either never had an environmental case opened or it has been more than 365 days since the last time when an environmental case was closed for the same address.*

**Table 11**

CURRENT ENVIRONMENTAL INVESTIGATION STATUS BY FISCAL YEAR FY 1998 THROUGH FY 2006								
Fiscal Year	EBL Reports* Sent	Invest. Required	Investigation Completed	% Invest. Completed	# Lead Hazard Found	% Lead Hazard Found	# of Abatement Completed	% Abatement Completed
FY1998	2014	1457	1440	99%	778	54%	725	93%
FY1999	1518	1045	1015	97%	654	64%	554	85%
FY2000	1144	816	784	96%	598	76%	480	80%
FY2001	932	651	636	98%	461	72%	370	80%
FY2002	866	600	593	99%	419	71%	356	85%
FY2003	797	528	504	95%	320	63%	282	88%
FY2004	745	526	501	95%	339	68%	271	80%
FY2005	781	543	514	95%	370	72%	238	64%
FY2006	684	526	419	80%	293	70%	109	37%
<b>TOTAL</b>	<b>8797</b>	<b>6166</b>	<b>5987</b>	<b>97%</b>	<b>3939</b>	<b>66%</b>	<b>3276</b>	<b>83%</b>

\*Elevated Blood Lead Level referrals sent to the local health departments

The above table displays the trend of environmental investigation status by State Fiscal Years, from SFY1998 through SFY2006

*Note: This table is cumulative, and reflects the status of all cases as of June 30, 2006*

Table 11 illustrates that it can take several years to complete abatement of a property where lead hazards have been identified. The length of time between the reporting of an elevated blood lead test result and the completion of the abatement of lead hazards responsible for the elevation is affected by a number of factors, which vary from case to case. These factors include:

- ? difficulty in identifying and communicating with absentee landlords;
- ? lengthy enforcement actions required against recalcitrant property owners, including court action, when necessary;
- ? delays in contracting and scheduling work by State-certified lead abatement contractors; and
- ? inability of some property owners to cover the cost of the required abatement, and/or to obtain financial assistance for these costs.

## Chapter Five

### ADDRESSING CHILDHOOD LEAD POISONING IN NEW JERSEY

The goal of the New Jersey Department of Health and Senior Services is to reduce, and ultimately eliminate childhood lead poisoning as a public health problem in New Jersey. In *Healthy New Jersey 2010*, published in August 2001, the DHSS has set health objectives for the State for the next ten years, including the following two objectives related to childhood lead poisoning:

- ? To increase the percentage of children tested for lead poisoning by two years of age to 85%.
- ? To reduce the percentage of children whose blood lead level is  $\geq 10$  ug/dL by 50%.

#### **Accomplishments in FY 2006**

##### A. Increasing Screening Rates

Educating Physicians in their Communities (EPIC) – Lead poisoning prevention was one of four modules developed by the New Jersey Chapter of the American Academy of Pediatrics/Pediatric Council on Research and Education (PCORE) with funds provided by DHSS and in cooperation with the NJ Department of Human Services/Division of Medical Assistance and Health Services. The lead module, with an emphasis on performing in-office blood draws, was conducted in 12 Trenton primary care practices that serve children.

##### B. Surveillance

Customization and transition process to new web based data/surveillance/tracking system for childhood lead poisoning and case management activities - New Jersey underwent an extensive process of customizing the new, outsourced, web based data system (LeadTrax, by Welligent, Inc.) for tracking childhood lead report data, and case management activity data. Part of the entire project involved the migration of the legacy data to the LeadTrax system from the existing Childhood Lead Poisoning Prevention Surveillance System (CLPPSS), hosted and supported by the New Jersey State Office of Information Technology (OIT). Four hands-on computer training sessions on LeadTrax were conducted for DHSS-funded agency staff, program staff and on-site trainers in preparation for the system roll-out in July 2006. The implementation of the system was limited to the grantee local health departments, as the initial phase, prior to expanding it to other local health departments at a future date.

Clinical Laboratories' reporting enhancements - One major clinical laboratory was assisted to enhance frequency of reporting to daily from its original weekly schedule. The same laboratory and a new laboratory were also assisted to change the method of transmission of reports to automatic secure file transfer mode directly to the computer at DHSS, from its original method of mailing a floppy diskette by regular postal delivery. This enhancement has significantly compressed the delay, by about 75%, between the date of analysis and the date of reporting by these laboratories.

### C. Follow-up of Children with Elevated Blood Lead

Letters were sent to all the local health departments informing staff of new protocols being implemented by the Child and Adolescent Health Program to expedite the follow-up and case management services for lead-burdened children:

Children with blood lead levels of 45 ug/dL or higher - When a child with a blood lead level of 45 ug/dL or higher is reported to the Program, Program staff will be contacting the local health officer, the public health nurse and/or the lead inspector/risk assessor via telephone. The purpose of these calls is to notify the local health department of this specific case so that appropriate follow-up measures can be implemented in a more timely manner. The Centers for Disease Control and Prevention recommends that follow-up for these cases is initiated within 48 hours. A copy of the Lead Poisoning Environmental Intervention Report (LP-1 form) for this type of case is faxed to the local health department on the same day and the original LP-1 will continue to be mailed. Many of these children with blood lead levels of 45 ug/dL or higher may be hospitalized. The release of these children from the hospital will be contingent upon an assurance that the child will be returning to a lead-safe environment. The local health departments were encouraged to make every effort to work with and assist the medical community in achieving this goal.

Opening environmental and medical cases for persistent borderline results - To comply with the Chapter XIII of the New Jersey State Sanitary Code, all new cases of children with persistent borderline lead level results (reports of two consecutive blood lead tests with the results between 15 and 19  $\mu\text{g/dL}$ , at least three months apart but less than 12 months apart) need to be case managed in the same manner as those with blood lead test results of 20  $\mu\text{g/dL}$  or above. Despite the requirement, the current data system had not been able to detect such cases and generate referrals for them to open cases. However, a pioneer enhancement was made by means of modification in the software program, rendering it capable of detecting new persistent borderline cases and generating referral forms. As a result, as of October 2005, for the first time since the birth of the lead program, referrals for the children with persistent borderline results have begun to be generated and sent to the corresponding local health departments.

Lead Case Management Model – The Child and Adolescent Health Program developed a comprehensive statewide lead case management model to reduce blood lead levels in children. Several division-level meetings were held between the Division of Family Health Services/DHSS and the Division of Medical Assistance and Health Services/Department of Human Services to discuss ways to strengthen collaboration of local health departments with the Medicaid HMOs in follow-up of Medicaid lead-burdened children. Implementation of the protocols for children with blood lead levels 15 ug/dL or above began in July 2006, limited to the local health departments receiving grants for case management. Local health departments not receiving grants for case management can only be mandated to provide case management services as spelled out under N.J.A.C. 8:51-2.4. The Program offered training to all the local health departments in July 2006, through the Summer 2006 Child Health Regional Network Meetings, promoting the Lead Case Management Model to be adopted as best practices until they can be incorporated into Chapter XIII regulations (N.J.A.C. 8:51). The Lead Case Management Model document can be found on the Department’s website at [www.state.nj.us/health/fhs](http://www.state.nj.us/health/fhs).

#### D. Public and Professional Education

Childhood Lead Poisoning Prevention (CLPP) Week (October 2006) – The four regional lead poisoning prevention coalitions, in partnership with the New Jersey Interagency Task Force on the Prevention of Lead Poisoning, planned and implemented activities statewide. The week-long observance started with a kick-off event at the State House where students of the Creative and Performing Arts High School in Camden rallied the attendees through African dance to STOMP OUT LEAD. New and gently used shoes were collected by lead poisoning prevention advocates and distributed to homeless and emergency shelters statewide with lead poisoning prevention educational materials.

Si No Sabes, Pregunta Que Es El Plomo (If You Don’t Know, Ask About Lead) - DVD premiered in March 2006 at a primarily Spanish-speaking Parent Teacher Organization meeting at Lincoln Annex, New Brunswick. The event was conducted in Spanish with English translation provided. Students involved in the production of the Spanish-language DVD were in attendance and received recognition of their efforts from DHSS’ Chief of Staff.

Renovating? Look Out for Lead – A DVD was produced to inform property owners that large and even small weekend renovation and remodeling work that disturbs lead-based paint can create hazards resulting in lead poisoning in children and their families. The DVD instructs property owners on where to receive lead-safe work practices training, how to choose a contractor, and financial resources available.

E. Strengthening Collaborations

Statewide Planning – DHSS continued to be an active participant on the Interagency Task Force. Through the Task Force, DHSS staff from Family Health Services, Consumer and Environmental Health Services, and Occupational Health Services worked with their colleagues in other state agencies and community-based organizations to implement policies and projects to reduce and eliminate childhood lead poisoning in New Jersey. Strategies from the statewide Elimination Plan focused on five key areas: surveillance; screening and case management; education; lead-safe maintenance/renovation and abatement; and environment.

Department of Community Affairs (DCA) – Important information regarding DCA's new funding sources for lead abatement and for emergency relocation of occupants have been provided to local health departments. In order that local health departments can utilize these programs more effectively, DCA has collaborated with the Program to conduct presentations on these programs at grantee meetings and at Child Health Regional Network meetings.

## Appendix 1

# CHILDHOOD LEAD POISONING PREVENTION

## SURVEILLANCE SYSTEM

FY 2006



## Appendix 1

### CHILDHOOD LEAD POISONING PREVENTION SURVEILLANCE SYSTEM

All clinical laboratories licensed by the DHSS are required to report all blood lead tests. This universal reporting was authorized by Public Law 1995, chapter 328 (N.J.S.A. 26:2-137.5b). N.J.A.C. 8:44-2.11 established the requirement for reporting of all blood lead tests. Prior to July 1, 1999, reporting was required only of elevated test results.

During FY 2006, more laboratories were enabled to report blood lead test results electronically (96% of all reports during FY 2006 were transmitted to the DHSS electronically, compared to 92% of all reports during FY 2005). Efforts are underway to enable more laboratories to transmit files of blood lead tests results electronically rather than on hard copies.

All reported blood lead tests are entered into LeadTrax, the web-based data surveillance system. This database records the child's name, address, birth date, and blood lead level, as well as the medical provider and laboratory performing the testing. These data are used to track childhood lead poisoning in New Jersey, both geographically and over time, and to produce reports of this information (such as this Annual Report). The database contains files of over 2 million blood lead test results on about 2 million children, dating back to the mid-1970's. Most of the records from before July 1999 are of elevated test results.

Blood lead tests results are reviewed to identify children with elevated blood lead (>15 ug/dL). The DHSS then notifies local health departments of children with elevated blood lead reported in their jurisdictions. This is currently done through issuing a Lead Poisoning Environmental Intervention Report (LP-1). This report is issued whenever the DHSS receives a report of an elevated blood lead test on a child, unless a report form has already been issued on the same child, at the same address, within the previous twelve months. More than one form may be issued on the same child if the address shown on the laboratory report is different from that on a previous report. This is done to ensure that the local health department is aware of any changes of address made by the child and their family, and to ensure that all places where the child resides are investigated for lead hazards.

The local health department is required to report the closure or completion of an investigation and/or abatement to the DHSS, using copies of these forms. The DHSS Child and Adolescent Health Program maintains a database for tracking the status and results of lead poisoning investigations. The database contains more than 31,000 records on environmental actions taken by local health departments since the mid-1980's. When the local health department reports that an inspection has been completed and the lead hazards abated, or the case otherwise closed, the DHSS will record the case as closed. Any case of lead poisoning in a child for which the DHSS has not received a completed

report from the local health department is considered to be “open”. Reports are sent to local health departments to remind them of cases still open.

### **Creation of Report Tables**

An analysis database is created, based upon all blood lead test results that were reported to the DHSS prior to August 1, 2006, with an analysis date during FY2006 (July 1 – June 30, 2006). Blood lead test results are reported in either electronic or hardcopy format. All hardcopy reports are initially entered into a temporary database. All the reports are then batch loaded into the Childhood Lead Poisoning Prevention Surveillance System (CLPPSS) for processing. During processing, the new records are matched to existing child and address records.

All new address records are processed by CLPPSS and, if possible, standardized into US Postal Services format and geocoded to county, municipal, and census tract levels. If addresses could not be standardized, then the reported address is retained and geocoded as unknown.

For those records missing date of birth, age is assigned as unknown. An attempt is made to count each child only once by creating a unique identifier based upon the child’s full name and date of birth. If more than one result is reported for a child, then the highest result for each child that has a standardized address is selected. If all results for a child are associated with addresses that could not be standardized, then the highest result is selected. It is not possible to specifically identify the number of screening tests because the reason for testing is not reported. In assigning test results to a blood lead level group, if the result is reported as “<” some value, then the result is assigned to a group as if the “<” sign is not reported. For example, a result reported as “<3” is processed as if the value is 3 and therefore assigned to the “< 10 ug/dL” group.

U.S. Census 2000 data is used when reporting the total number of children by age group within a specific geographic area. When performing analyses for children ages six months through 29 months of age, the denominator used is children at one year old through two years old because the U.S. Census 2000 tables do not report age in months. This provides a reasonable estimate of children within the 6 through 29 month age group because of the relative stability of New Jersey’s population within this age group.

### **Environmental Activities**

All records are selected from the environmental portion of the database. Environmental records are assigned to a fiscal year based upon the date of analysis of the blood lead test result that generated the environmental record. All environmental activities (investigation, abatement, and closure) counted within this report as occurring during FY2006, actually occurred during FY2006. That is, the date for any activity completed after June 30, 2006, was set to missing and, therefore, not counted within this report. Activities counted within this section of the report were based upon records updated through September 10, 2006. It should be noted that because of the dynamic nature of the database, comparison with previous years’ reports may result in small discrepancies because of updated records.

## Appendix 2

### ENVIRONMENTAL ACTIVITY STATUS

### BY LOCAL HEALTH DEPARTMENT JURISDICTION

FY 2006

ENVIRONMENTAL INVESTIGATION STATUS BY LOCAL HEALTH DEPARTMENT - FY 2006										
LOCAL HEALTH DEPARTMENT	EBL REPORTS SENT	INVEST. NOT REQUIRED	INVEST. REQUIRED	INVEST. PENDING	INVEST. COMPLETED	% INVEST. COMPLETED	LEAD HAZARDS FOUND	% LEAD HAZARDS FOUND	ABATEMENT PENDING	ABATEMENT COMPLETED
<b>ATLANTIC COUNTY</b>										
ATLANTIC COUNTY HEALTH DEPARTMENT	3	0	3	1	2	67%	2	100%	0	2
ATLANTIC CITY HEALTH DEPARTMENT	7	2	5	0	5	100%	5	100%	1	4
<b>BERGEN COUNTY</b>										
BERGEN COUNTY DEPARTMENT OF HEALTH SERVICES	7	1	6	0	6	100%	6	100%	4	2
CLOSTER HEALTH DEPARTMENT	1	0	1	0	1	100%	1	100%	1	0
ELMWOOD PARK DEPARTMENT OF HEALTH	1	0	1	0	1	100%	1	100%	1	0
ENGLEWOOD HEALTH DEPARTMENT	4	0	4	3	1	25%	1	100%	0	1
FAIR LAWN HEALTH DEPARTMENT	1	0	1	0	1	100%	0	0%	0	0
HACKENSACK HEALTH DEPARTMENT	1	0	1	0	1	100%	1	100%	0	1
PARAMUS BOARD OF HEALTH	1	0	1	0	1	100%	0	0%	0	0
MID-BERGEN REGIONAL HEALTH COMMISSION	1	1	0	0	0	N/A	0	N/A	0	0
TEANECK DEPARTMENT OF HEALTH & HUMAN SERVICES	1	0	1	0	1	100%	1	100%	1	0
N.W. BERGEN REGIONAL HEALTH COMMISSION	1	0	1	0	1	100%	1	100%	0	1
WASHINGTON TOWNSHIP LOCAL HEALTH AGENCY	2	0	2	0	2	100%	2	100%	0	2
<b>BURLINGTON COUNTY</b>										
BURLINGTON COUNTY HEALTH DEPARTMENT	13	2	11	0	11	100%	7	64%	3	4
<b>CAMDEN COUNTY</b>										
CAMDEN COUNTY DEPARTMENT OF HEALTH	22	4	18	3	15	83%	10	67%	3	7
<b>CAPE MAY COUNTY</b>										
CAPE MAY COUNTY HEALTH DEPARTMENT	3	0	3	2	1	33%	0	0%	0	0
<b>CUMBERLAND COUNTY</b>										
CUMBERLAND COUNTY HEALTH DEPARTMENT	36	19	17	2	15	88%	3	20%	2	1
VINELAND DEPARTMENT OF HEALTH	1	0	1	0	1	100%	0	0%	0	0
<b>ESSEX COUNTY</b>										
BLOOMFIELD DEPARTMENT OF HEALTH	2	1	1	0	1	100%	1	100%	1	0
EAST ORANGE HEALTH DEPARTMENT	41	13	28	7	21	75%	16	76%	5	11
IRVINGTON DEPARTMENT OF HEALTH & WELFARE	33	11	22	10	12	55%	9	75%	4	5
MAPLEWOOD HEALTH DEPARTMENT	6	5	1	0	1	100%	1	100%	1	0
MONTCLAIR HEALTH DEPT.	9	2	7	0	7	100%	6	86%	4	2
NEWARK DEPARTMENT OF HEALTH	120	35	85	6	79	93%	60	76%	36	24
SOUTH ORANGE HEALTH DEPARTMENT	2	0	2	0	2	100%	2	100%	0	2
WEST CALDWELL HEALTH DEPARTMENT	1	0	1	0	1	100%	1	100%	1	0
WEST ORANGE HEALTH DEPARTMENT	25	3	22	6	16	73%	10	63%	5	5
<b>GLOUCESTER COUNTY</b>										
GLOUCESTER COUNTY DEPARTMENT OF HEALTH	4	2	2	1	1	50%	1	100%	0	1
<b>HUDSON COUNTY</b>										
BAYONNE DEPARTMENT OF HEALTH	3	0	3	0	3	100%	3	100%	3	0
HARRISON BOARD OF HEALTH	3	1	2	2	0	0%	0	N/A	0	0
JERSEY CITY DIVISION OF HEALTH	41	5	36	8	28	78%	18	64%	2	16

KEARNY DEPARTMENT OF HEALTH	1	0	1	0	1	100%	0	0%	0	0
NORTH BERGEN HEALTH DEPARTMENT	10	0	10	0	10	100%	2	20%	0	2
<b>LOCAL HEALTH DEPARTMENT</b>	<b>EBL REPORTS SENT</b>	<b>INVEST. NOT REQUIRED</b>	<b>INVEST. REQUIRED</b>	<b>INVEST. PENDING</b>	<b>INVEST. COMPLETED</b>	<b>% INVEST. COMPLETED</b>	<b>LEAD HAZARDS FOUND</b>	<b>% LEAD HAZARDS FOUND</b>	<b>ABATEMENT PENDING</b>	<b>ABATEMENT COMPLETED</b>
<b>HUDSON COUNTY (Contd.)</b>										
WEST NEW YORK HEALTH DEPARTMENT	5	1	4	1	3	75%	1	33%	0	1
<b>HUNTERDON COUNTY</b>										
HUNTERDON COUNTY DEPARTMENT OF HEALTH	5	1	4	0	4	100%	4	100%	3	1
<b>MERCER COUNTY</b>										
EWING TOWNSHIP HEALTH DEPARTMENT	1	0	1	0	1	100%	1	100%	1	0
HAMILTON TOWNSHIP DIVISION OF HEALTH	5	0	5	0	5	100%	4	80%	4	0
HOPEWELL TOWNSHIP HEALTH DEPARTMENT	1	0	1	0	1	100%	1	100%	0	1
PRINCETON REGIONAL HEALTH COMMISSION	1	0	1	0	1	100%	0	0%	0	0
TRENTON DEPT OF HEALTH & HUMAN SERVICES	20	6	14	0	14	100%	14	100%	4	10
WEST WINDSOR TOWNSHIP HEALTH DEPARTMENT	1	1	0	0	0	N/A	0	N/A	0	0
<b>MIDDLESEX COUNTY</b>										
MIDDLESEX COUNTY PUBLIC HEALTH DEPARTMENT	16	3	13	2	11	85%	7	64%	1	6
MIDDLE-BROOK REGIONAL HEALTH COMMISSION	3	2	1	1	0	0%	0	N/A	0	0
<b>MONMOUTH COUNTY</b>										
MONMOUTH COUNTY HEALTH DEPARTMENT	7	4	3	1	2	67%	2	100%	0	2
FREEHOLD AREA HEALTH DEPARTMENT	6	0	6	2	4	67%	3	75%	0	3
LONG BRANCH DEPARTMENT OF HEALTH	1	0	1	1	0	0%	0	N/A	0	0
MONMOUTH COUNTY REGIONAL HEALTH COMMISSION	5	1	4	0	4	100%	3	75%	1	2
<b>MORRIS COUNTY</b>										
MORRISTOWN DIVISION OF HEALTH	3	1	2	0	2	100%	1	50%	1	0
MT. OLIVE TOWNSHIP HEALTH DEPARTMENT	1	0	1	0	1	100%	1	100%	0	1
PARSIPPANY HEALTH DEPARTMENT	1	0	1	0	1	100%	1	100%	0	1
ROCKAWAY TOWNSHIP HEALTH DEPARTMENT	1	0	1	0	1	100%	0	0%	0	0
<b>OCEAN COUNTY</b>										
OCEAN COUNTY HEALTH DEPARTMENT	21	3	18	4	14	78%	9	64%	3	6
LONG BEACH ISLAND HEALTH DEPARTMENT	1	0	1	1	0	0%	0	N/A	0	0
CLIFTON BOARD OF HEALTH	6	0	6	3	3	50%	1	33%	0	1
<b>PASSAIC COUNTY</b>										
PASSAIC CITY HEALTH DEPARTMENT	34	8	26	13	13	50%	6	46%	2	4
PATERSON DIVISION OF HEALTH	44	13	31	13	18	58%	11	61%	1	10
WEST MILFORD TOWNSHIP HEALTH DEPARTMENT	1	1	0	0	0	N/A	0	N/A	0	0
<b>SALEM COUNTY</b>										
SALEM COUNTY DEPARTMENT OF HEALTH	6	3	3	0	3	100%	2	67%	0	2
<b>SOMERSET COUNTY</b>										
SOMERSET COUNTY HEALTH DEPARTMENT	4	0	4	0	4	100%	4	100%	4	0
FRANKLIN TOWNSHIP HEALTH DEPARTMENT	1	0	1	1	0	0%	0	N/A	0	0
HILLSBOROUGH TOWNSHIP HEALTH DEPARTMENT	1	0	1	0	1	100%	1	100%	0	1
SOMERVILLE HEALTH DEPARTMENT	1	0	1	0	1	100%	0	0%	0	0
<b>SUSSEX COUNTY</b>										
SUSSEX COUNTY DEPT HEALTH	2	0	2	1	1	50%	1	100%	0	1

<b>UNION COUNTY</b>										
ELIZABETH DEPARTMENT OF HEALTH & HUMAN SERVICES	24	8	16	6	10	63%	6	60%	1	5
LINDEN BOARD OF HEALTH	2	0	2	0	2	100%	1	50%	0	1
PLAINFIELD HEALTH DEPARTMENT	26	10	16	4	12	75%	6	50%	2	4
LOCAL HEALTH DEPARTMENT	EBL REPORTS SENT	INVEST. NOT REQUIRED	INVEST. REQUIRED	INVEST. PENDING	INVEST. COMPLETED	% INVEST. COMPLETED	LEAD HAZARDS FOUND	% LEAD HARZARDS FOUND	ABATEMENT PENDING	ABATEMENT COMPLETED
<b>UNION COUNTY (Contd.)</b>										
RAHWAY HEALTH DEPARTMENT	6	3	3	2	1	33%	1	100%	0	1
ROSELLE HEALTH DEPARTMENT	2	1	1	0	1	100%	0	0%	0	0
TOWNSHIP OF UNION DEPARTMENT OF HEALTH	4	2	2	0	2	100%	1	50%	1	0
WESTFIELD REGIONAL HEALTH DEPARTMENT	3	1	2	2	0	0%	0	N/A	0	0
<b>WARREN COUNTY</b>										
WARREN COUNTY HEALTH DEPARTMENT	5	4	1	0	1	100%	1	100%	0	1
<b>STATEWIDE TOTALS</b>	<b>684</b>	<b>184</b>	<b>500</b>	<b>109</b>	<b>391</b>	<b>78%</b>	<b>265</b>	<b>68%</b>	<b>107</b>	<b>158</b>

<b>% ABATEMENT COMPLETED</b>
100%
80%
33%
0%
0%
100%
.
100%
N/A
N/A
0%
100%
100%
57%
70%
N/A
33%
N/A
0%
69%
56%
0%
33%
40%
100%
0%
50%
100%
0%
N/A
89%

N/A
100%
<b>% ABATEMENT COMPLETED</b>
100%
25%
0%
0%
100%
N/A
71%
N/A
86%
N/A
100%
100%
N/A
67%
0%
100%
100%
N/A
67%
N/A
100%
67%
91%
N/A
100%
0%
N/A
100%
N/A
100%

83%
100%
67%
<b>% ABATEMENT COMPLETED</b>
100%
N/A
0%
N/A
100%
60%