2014

Childhood Lead Surveillance

Annual Report

pennsylvania
DEPARTMENT OF HEALTH

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EXECUTIVE SUMMARY

This is the eighth Lead Surveillance Annual Report. Prior reports are available on the Department of Health (DOH) website at www.health.state.pa.us/lead. The data for the 2014 Annual Report were extracted from the Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS)[1] on April 6, 2015. However, data related to age of housing and population were extracted from the U.S. Census Bureau's 2010 Census summary file tables, located at http://www.census.gov.

The 2014 Annual Report is the first to include geospatial maps based on lead testing data. The maps represent a scale and focus that is different from the housing maps that have traditionally been included in the report, signaling a move towards more geospatial analysis. Data related to blood lead levels of 5 micrograms per decileter (µg/dL) and above (the Centers for Disease Control and Prevention [CDC] reference value) have also been integrated into the report in a more meaningful way.

In 2014, there were 140,524 Pennsylvania children under 7 years of age[2] reported to have been tested for lead. That represents a decrease of nearly 4,000 children tested from 2013, or 2.79 percent. Unlike the previous year, however, the decreases were not statewide. Of the 67 counties in Pennsylvania, roughly half experienced a decrease in testing from 2013 to 2014. Of the counties that experienced an increase in testing over the past year, roughly half of them were in the top half of county rankings for the number of children tested. The same is true for counties that experienced a decrease in testing in 2014.

There were 13,171 children under 7 tested with blood lead levels (BLLs) of 5 µg/dL and above in 2014, a decrease of approximately 1,000 (or 6.83 percent) from 2013. Children with BLLs of 5 µg/dL and above represent 9.37 percent of all Pennsylvania children under 7 tested in 2014, a decrease from 9.78 percent in 2013.

Of the children tested, 1,486 (1.06 percent) were reported to have confirmed elevated blood lead levels* (EBLLs).[3] Because the standard for care is to test children for lead at ages 1 and 2, the testing rate is highest for children under 3 years of age.[4] Over 26 percent of Pennsylvania's population under 3 years of age was tested for lead in 2014, compared to a testing rate of slightly less than 14 percent for children under 7 years of age.

Reporting on race continues to be problematic. Patient race was reported as "unknown" or left blank for more than two-thirds of the children reported to have been tested for lead in 2014. Despite this, the lack of race information is not a uniform, statewide phenomenon. For children under 7 tested, in roughly one-quarter of Pennsylvania's counties, nearly 60 percent or more of the race data is known. However, given that roughly one-third of the patient race data is known, it is difficult to perform analysis that is either meaningful or statistically reliable. With that much information unknown, the data are susceptible to high variance and may not be representative of the overall population.

When reviewing the number of children with reported confirmed elevated results, more than half (53.97 percent) of the confirmed elevated results were reported as a race of "other" or "unknown." This means that there is more race data for confirmed elevated reports (approximately 46 percent reported) than for reports as a whole (approximately 32 percent). Despite there being more race data for confirmed elevated reports, the level of unknown race data still prevents any further meaningful analysis.

Pennsylvania's overall blood lead levels have clearly been dropping. In 2004, for children under 7 years of age, the geometric mean[5] blood lead level on reported maximum blood lead levels was approximately 3.5 micrograms per decileter (µg/dL). In 2014, that number was approximately 2.3 µg/dL, which is a 34.29 percent decrease over the last 10 years. Because Pennsylvania is not a

universal testing state (where lead testing is mandatory), it is important to avoid comparing the geometric mean blood lead level with data representative of universal testing states.

It is generally recognized and accepted that the primary source for childhood lead poisoning in Pennsylvania continues to be exposure to aging, deteriorating lead-based paint (chips and dust). While lead was banned from paint in 1978, many older dwellings still contain layers of pre-1978 paint. According to the 2010 Census data, Pennsylvania ranks third in the nation for having the most housing units identified as having been built before 1950 (when lead was more prevalent) and fourth in the nation for having the most housing units identified as having been built before 1978.

UPDATES AND HIGHLIGHTS

Lead Data Usage

The need for lead data is constant and varied, and its users are ever more wide-ranging. With each passing year, there are additional groups that request lead data and more ways in which the data is needed. Data is released according to both the Health Insurance Portability and Accountability Act (HIPAA) and the Pa. Disease Prevention and Control Law requirements. Some examples of groups that use lead data and the ways they use it are:

- Federal agencies: CDC (national lead data, programming), Housing and Urban Development [HUD] (programming, lead abatement), Environmental Protection Agency [EPA] (programming, EBLL requests, and property monitoring);
- State agencies: DOH (programming, grant writing, Environmental Public Health Tracking Network [EPHTN], environmental health studies); Department of Human Services [DHS] (Data matching, Health Effectiveness and Data Information Set [HEDIS] measures, monitoring);
- The media (reports on lead poisoning);
- Hospitals (studies, community programming, patient information/test results);
- Universities (research studies);
- Head Start (testing and follow-up); and
- The general public/lead-tested children (children's blood lead levels, follow-up).

Data Analysis

As the need for lead surveillance data continues to evolve, so must its analysis. By continuing to look at data in different ways, more insight is gained, the data's utility is increased, and more new comparisons are revealed. As mentioned earlier, this year's report includes a number of new reports utilizing geospatial analysis.

With the movement of PA-NEDSS lead data to a new server in 2015, the current software used for extracting data (COGNOS) will be replaced with Microsoft's data analysis suite (Reporting Services). In preparation for this move, staff have worked with the Bureau of Informatics and Information Technology to map current functionality and ensure that necessary functionality continues with the new software. By examining data flows and where data is stored, there are opportunities to construct different datasets and analyze data in different ways.

The Environmental Public Health Tracking Network (EPHTN) is piloting a project that integrates PA-NEDSS data with geospatial software to present interactive maps on their Web page. It is expected that the same can be done with lead data. To prepare for this possibility, staff have undergone ArcGIS geospatial software training, including both the desktop and streamlined online

versions. The establishment of an ArcGIS users group has also provided more resources for understanding and use of the software. Where possible, every opportunity has been taken to prepare maps for a variety of projects and reports. All of these elements have led to increased capability in using the software and have resulted in the additional maps included.

Data Quality

In an effort to clean the database in preparation for the 2014 Annual Report, staff employed various strategies to identify and fix patient, report, and location records within PA-NEDSS. Records missing critical fields of information were identified, researched, and corrected whenever possible. Records indicating implausible data (such as extremely high quantitative test results, for example) were identified, researched, and corrected. Error queues were monitored daily, and every effort to maintain clean, accurate, and consistent information on incoming reports was taken. Records with missing dates of birth were identified and completed after contacting health care providers to obtain the correct information. In addition, several programs within the Pa. Department of Health participate in cross-program de-duplication. Programs are assigned one-week periods on a rotating basis, during which they de-duplicate, or merge, duplicate records found in PA-NEDSS each day. This activity aids in data cleaning and allows PA-NEDSS to function more efficiently.

One area that will be improved is records in which addresses of patients were not verified by system software, so that the data reflected a county of residence as "unknown." Gone uncorrected, this can have an effect on the reporting of testing numbers and percentages for counties and the state as a whole. The first part of the solution is an enhanced cleaning schedule to prevent the buildup of defective records in the system. In addition, PA-NEDSS has moved to a more robust address verification system used by the Office of Administration. As changes are phased in with the new system, staff will be performing research to pinpoint where the new software is working and identifying what changes or workarounds will need to be pursued. It is expected that this effort will lead to more verified addresses, leading to fewer instances of records where the child's residence is unknown.

EPHTN

The EPHTN is an effort to collect, analyze, document, and provide information on suspected links between environmental hazards (including air pollution, contaminated water, and toxic substances such as pesticides) and their impact on the health of citizens. The Pennsylvania Department of Health Bureau of Epidemiology, Division of Environmental Health Epidemiology, Health Tracking Section, received a grant from CDC to begin building Pennsylvania's Statewide EPHTN in 2006. The Pennsylvania Childhood Lead Surveillance Program continues to participate in planning, development efforts, and annual delivery of a childhood lead dataset in accordance with the project's requirements. More information on the EPHTN project can be found at: www.health.state.pa.us/epht.

Point-of-service lead analyzing devices

In accordance with the PA Code, laboratories are required to report all lead test results. A relatively new way to test children for lead involves the use of portable, point-of-service lead analyzing devices (such as the Lead Care II). These devices produce immediate results at the service location and have the potential to go unreported. To account for the use of these devices and establish reporting of results to PA-NEDSS, language was included in the final draft of the PA Code Chapter 27 regulations. These regulations revised laboratory reporting requirements, established

the requirement of electronic reporting, and delineated the difference between adult lead and childhood lead reporting.

In the interim, staff developed a process to enable the reporting of results obtained from these devices by working with the company that distributes them, the DOH's Bureau of Laboratories (BOL) and Bureau of Informatics and Information Technology (BIIT). Purchasers of the devices are given an information package that informs them of the requirement to report results. Users undergo compliance testing through BOL and are then registered for PA-NEDSS use through BIIT. Results can be entered manually or through the electronic reporting process, if the volume warrants. Staff have also continued to work with users to ensure complete and proper reporting into PA-NEDSS.

***Note:** For the purposes of this report, a confirmed elevated (or confirmed EBLL) result is defined as one venous specimen with a result of ≥10 micrograms per decileter of blood (µg/dL) or two capillary specimens with a result of ≥10 µg/dL, drawn within 12 weeks of each other. The CDC has changed its definition to such results of ≥5 µg/dL. For more information, please see page 18 of this report.

Pa. Lead Snapshot, 2014

140,524	This is the number of children under 7 tested for lead in Pennsylvania in 2014. This represents a 2.76 percent decrease from 2013. Overall, 146,181 tests were performed on children under 16. For more information, see pp. 9, 13, and 30-32.
13,171	This is the number of children under 7 with BLLs of 5 µg/dL, a 6.83 percent decrease from 2013. Children with BLLs of 5 µg/dL and above represent 9.37 percent of children under 7 tested for lead in Pa. in 2014. For more information, please see pp. 18-21, 34, and 47.
1,486	This is the number of children under 7 with confirmed EBLL tests in 2014. This represents a decrease of 4.99 percent from 2013. For more information, see pp. 9, 13, and 35-38.
1.06%	This is the percentage of confirmed EBLL tests in 2014, based on the number of children under 7 tested. This represents a 2.06 percent decrease from 2013. For more information, see pp. 9, 13, 15-16, and 39.
2.3 µg/dL	This is the geometric mean (in micrograms per decileter) of blood lead levels of tests performed in Pennsylvania in 2014. For more information, see p. 12.

70%	**5th**	This is the estimated percentage of homes built in Pa. before 1978 and our national rank, based on the 2010 Census. For more information, see pp. 24-25.
36%	**5th**	This is the estimated percentage of homes built in Pa. before 1950 and our national rank, based on the 2010 Census. Although lead paint wasn't banned until 1978, it was used less frequently as other products became more widely available and affordable. Lead paint was still most prevalent before 1950. For more information, see pp. 24-25.

- Since 2007, the number of children under 7 tested for lead has increased from **131,150** to **140,524**, an increase of **7.15 percent**. For children under age 16, the number of tests has increased from 139,183 to 146,181.
- Since 2007, the geometric mean BLL has decreased from **3.1µg/dL** to **2.3µg/dL**, a **25.81 percent decrease.**
- Since 2007, the percentage of children under 7 tested with a confirmed EBLL has gone from **2.20 percent** to **1.06 percent**, a **decrease of 51.85 percent**. During that time, the number of confirmed EBLLs has gone from **2,887** to **1,486**, a **48.53 percent decrease.**
- Since 2007, the percentage of children under 7 tested has risen from **12.57 percent to 13.67 percent**, an **increase of 8.75 percent.**

STATEWIDE SUMMARIES

Statewide Summaries

CHILDREN TESTED FOR LEAD

Pa. Children Tested for Lead by Age and Maximum Blood Lead Level[6]

BLL	1 and 2 Years (12-35 Months)	<3 Years (0-35 Months)	<6 Years (0-71 months)	< 7 Years (0-83 Months)	<16 Years (<191 Months)
0-9 µg/dL	71,519	108,485	131,692	134,231	139,701
≥10 µg/dL	1,632	1,959	2,552	2,600	2,657
Nulls	1,804	3,036	3,627	3,693	3,823
Total	74,955	113,480	137,871	140,524	146,181
2010 Census pop.	291,031	432,581	877,769	1,028,282	2,442,080
% of pop. tested[7]	25.75%	26.23%	15.71 %	13.67%	5.99%

Maximum blood lead level = The child's highest blood lead level (quantitative test result) for the year.

µg/dL = micrograms per deciliter of blood

NOTE: "Less than" Sign: <

Pa. Children Tested and Confirmed Elevated by Age/Categorized by First Confirmed Elevated Blood Lead Level[8]

BLL	1 and 2 Years (12-35 Months)	<3 Years (0-35 Months)	<6 Years (0-71 Months)	< 7 Years (0-83 Months)	<16 Years (<191 Months)
10 to <15 µg/dL	558	610	839	853	871
15 to <20 µg/dL	175	190	277	291	304
≥20 µg /dL	171	179	320	342	366
Total	904	979	1,436	1,486	1,541
Total tested	74,955	113,480	137,871	140,524	146,181
% confirmed[9] elevated	1.21%	0.86%	1.04%	1.06%	1.05%

Maximum blood lead level = The child's highest blood lead level (quantitative test result) for the year.

µg/dL = micrograms per deciliter of blood

NOTE: "Less than" Sign: <

Statewide Summaries - continued

Pa. Children Tested for Lead by Age and Race[10]

Race	1 and 2 Years (12-35 Months)	<3 Years (0-35 Months)	<6 Years (0-71 Months)	< 7 Years (0-83 Months)	<16 Years (<191 Months)
A	1,020	1,331	1,762	1,791	1,848
B	5,861	7,294	10,951	11,430	12,288
W	16,739	26,428	31,544	32,140	33,739
O	2,577	3,533	4,766	4,910	5,207
U	48,758	74,894	88,848	90,253	93,099
Total	74,955	113,480	137,871	140,524	146,181

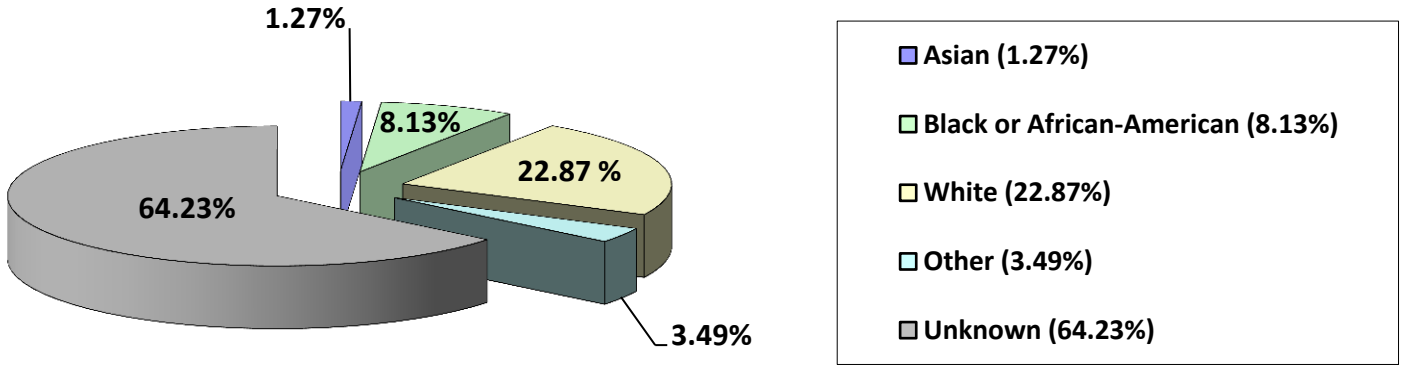
Race Abbreviations:

A = Asian
B = Black or African-American
W = White
O = Reported Other + American Indian + Alaskan Native + Native Hawaiian + Pacific Islander
U = Unknown
Total = Total children

NOTE: "Less than" sign: <

****Full race data available upon request.****

Pennsylvania Children < 7 Years, Reported to Have Been Tested for Lead in 2014, by Race



Statewide Summaries - continued

Pennsylvania Children Tested and Confirmed Elevated by Age and Race[11]

Race	1 and 2 Years (12-35 Months)	<3 Years (0-35 Months)	<6 Years (0-71 Months)	< 7 Years (0-83 Months)	<16 Years (<191 Months)
A	13	17	27	28	29
B	131	138	245	259	274
W	238	266	380	397	410
O	52	56	80	83	86
U	470	502	704	719	742
Total	904	979	1,436	1,486	1,541

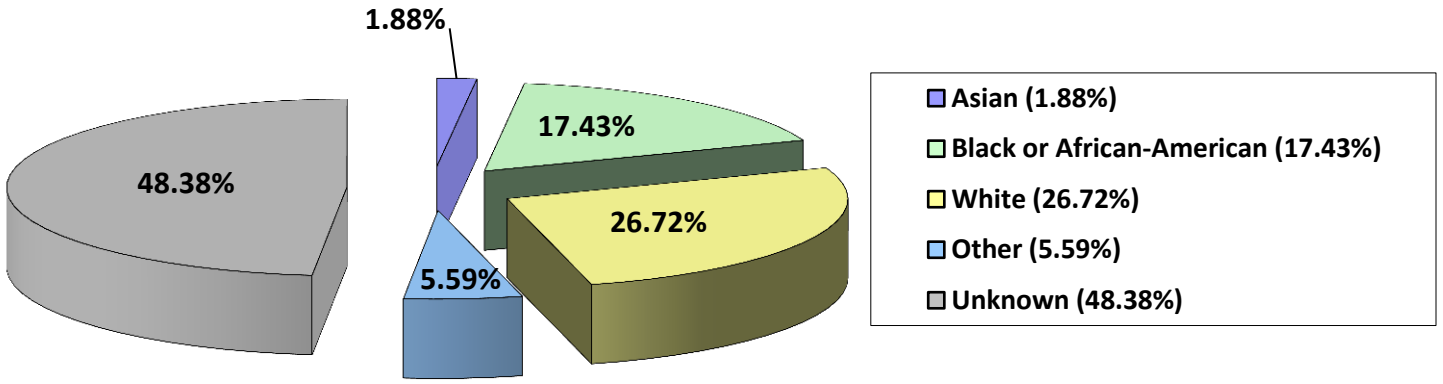
Race Abbreviations:

A = Asian
B = Black or African-American
W = White
O = Reported Other + American Indian + Alaskan Native + Native Hawaiian + Pacific Islander
U = Unknown
Total = Total children

NOTE: "Less than" sign: <

****Full race data available upon request****

Pennsylvania Children < 7 Years Reported Confirmed Elevated in 2014 by Race
[Universe: All Confirmed Elevated Children Reported to PA-NEDSS]

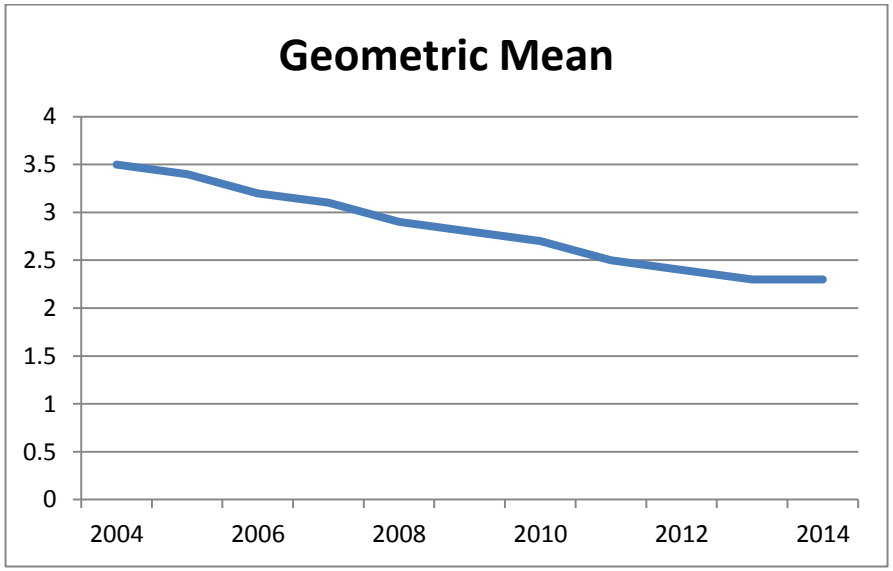


Statewide Summaries - continued

GEOMETRIC MEAN

Calendar Year	Geometric Mean of Maximum Blood Lead Level	
2004	3.5	Dataset: The maximum blood lead levels for children less than 7 years of age who were tested for lead Note: Maximum blood lead levels of zero were converted to 0.1, and null quantitative test results (blank) were eliminated prior to calculation. **Source: Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS), Lead Annual Report Cube**
2005	3.4	
2006	3.2	
2007	3.1	
2008	2.9	
2009	2.8	
2010	2.7	
2011	2.5	For a description of the geometric mean, please see **endnote 6 on page 55** of the report.
2012	2.4	
2013	2.3	
2014	2.3	

Time Period	% Decrease in Geometric Mean	Overall % Decrease Since 2004
2004-2005	2.86	2.86
2005-2006	5.88	8.57
2006-2007	3.13	11.43
2007-2008	6.45	17.14
2008-2009	3.45	20.00
2009-2010	3.57	22.86
2010-2011	7.41	28.57
2011-2012	4.00	31.43
2012-2013	4.17	34.29
2013-2014	0	34.29



Statewide Summaries - continued

HISTORICAL DATA - CHILDREN TESTED AND CONFIRMED ELEVATED

	1 and 2 Years (12-35 Months)			<3 Years (0-35 Months)			<6 Years (0-71 Months)			< 7 Years (0-83 Months)			<16 Years (<191 Months)		
	Tested	CE	**% CE**	Tested	CE	**% CE**	Tested	CE	**% CE**	Tested	CE	**% CE**	Tested	CE	**% CE**
2007	59,991	1,411	**2.35%**	94,907	1,560	**1.64%**	127,440	2,770	**2.17%**	131,150	2,887	**2.20%**	139,183	3,024	**2.17%**
2008	65,334	1,632	**2.50%**	100,535	1,770	**1.76%**	134,118	2,898	**2.16%**	137,878	2,996	**2.17%**	146,320	3,131	**2.14%**
2009	70,865	1,563	**2.21%**	107,298	1,675	**1.56%**	142,387	2,657	**1.87%**	145,996	2,750	**1.88%**	154,096	2,856	**1.85%**
2010	72,106	1,463	**2.03%**	108,916	1,575	**1.45%**	144,896	2,498	**1.72%**	148,617	2,595	**1.75%**	156,394	2,725	**1.74%**
2011	73,827	1,075	**1.46%**	111,066	1,171	**1.05%**	147,356	1,877	**1.27%**	150,979	1,950	**1.29%**	158,596	2,050	**1.29%**
2012	74,491	1,030	**1.38%**	112,662	1,106	**0.98%**	146,474	1,749	**1.19%**	149,689	1,817	**1.21%**	156,527	1,902	**1.22%**
2013	75,128	904	**1.20%**	113,170	992	**0.88%**	141,684	1,518	**1.07%**	144,512	1,564	**1.08%**	150,546	1,642	**1.09%**
2014	74,955	904	**1.21%**	113,480	979	**0.86%**	137,871	1,436	**1.04%**	140,524	1,486	**1.06%**	146,181	1,541	**1.05%**

How to read this table: The data is organized by year and then by age group, reading across the table. Within each age group, there are three numbers:

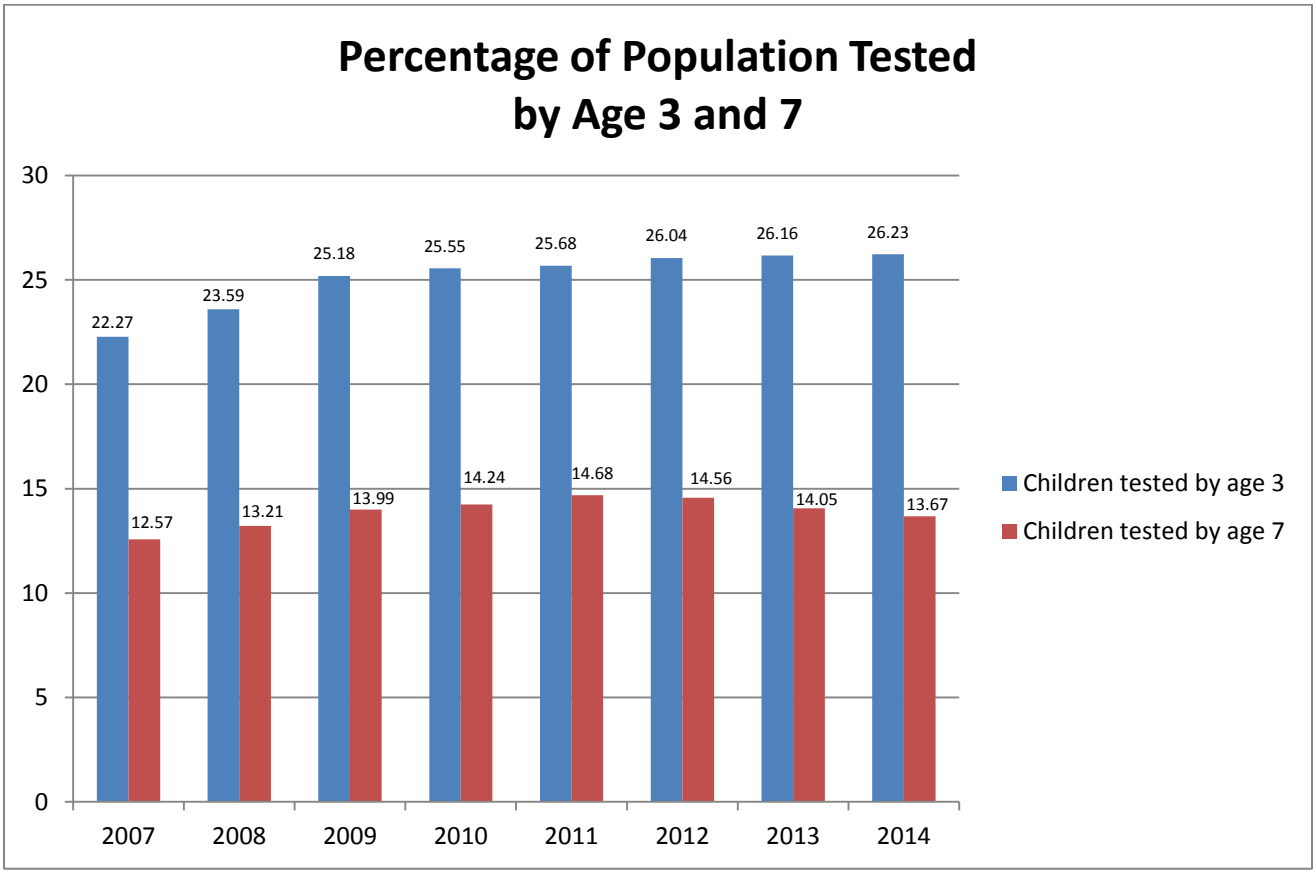
- The number of children reported to have been tested for lead ("Tested");
- The number of children with confirmed elevated results ("CE"); and
- The percentage of children tested with confirmed elevated results ("% CE").

As seen in the table above, confirmed elevated percentages have decreased considerably across age groups. Since 2007, the confirmed elevated percentages have decreased by at least 45 percent for all age groups. This is due to a moderate increase in testing numbers over time (the number of tests increased by at least 5 percent since 2007 for each age group) and a more substantial decrease in the number of confirmed elevated results (the two youngest age groups each decreased by at least 35 percent since 2007 and the others by at least 45 percent each).

CHILDREN TESTED BY AGE 3 AND 7

Pennsylvania does not have a universal testing law, so there is no mandate for children to be tested by a certain age. However, the Early Periodic Screening, Diagnosis and Treatment (EPSDT) program (administered by the Pa. Department of Human Services [DHS]) requires providers to test children on Medical Assistance at age 1 and 2. Furthermore, most clinical practice guidelines recommend testing children under 7 and focusing on children at age 1 and 2. As seen below, both groups have experienced an increase in testing since 2007, with an increase of nearly 20 percent for children under 3 and nearly 9 percent for children under age 7.

Although these increases in the percentage of children being tested are significant, it must be noted here that only slightly more than one-fourth of the population of children under 3 and between one-seventh and one-eighth of the population of children under 7 are being tested.

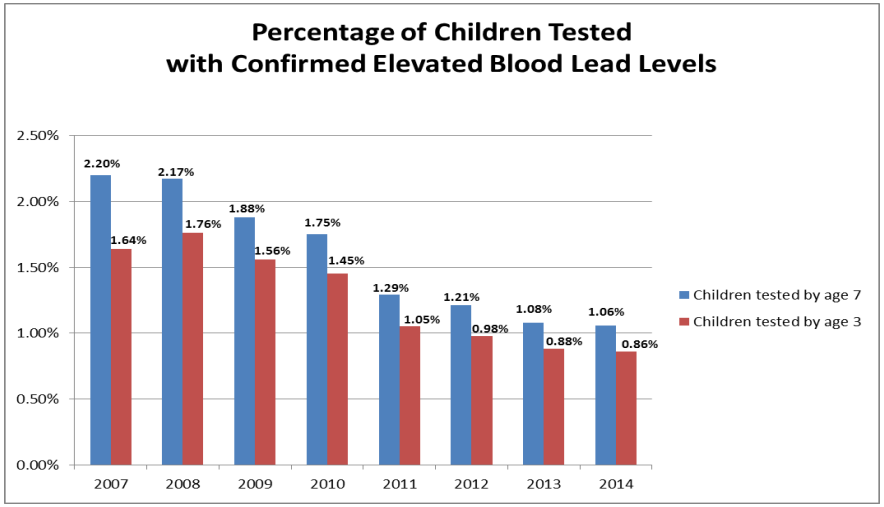


Statewide Summaries – continued

CONFIRMED ELEVATED RESULTS FOR CHILDREN TESTED BY AGE 3 AND 7

CONFIRMED EBLL PERCENTAGES

Until 2012, blood lead levels greater than or equal to 10 µg/dL were considered the threshold for public health action.* As seen in the graph at right, confirmed elevated percentages have decreased steadily since 2007, with a 52 percent decrease for children under 3 and a 47 percent decrease for children under 7. Of the children tested for lead in Pennsylvania in 2013, there were 979 children under 3 and 1,486 children under 7 with confirmed EBLLs. This is the second year in a row that any age group has decreased below 1,000 confirmed elevated results for the calendar year.



EBLLS WITH MEDICAL INTERVENTION

The CDC guidelines recommend chelation for children with confirmed elevated blood lead levels of 45 µg/dL and above. As seen in the chart at right, the number of children with BLLs requiring chelation is a relatively small portion of the number of children with confirmed elevated blood lead levels. And although the number of children tested has increased since 2007, the number of children with confirmed EBLLs of 45 µg/dL and above has decreased steadily since 2007. For more information on the number of children tested, please see the chart on p. 13.

	Confirmed EBLLs Requiring Medical Intervention					
	Children under 3 (0 – 35 Months)			Children under 7 (0-83 Months)		
	10 < 20	20 < 45	45 and above	10< 20	20 < 45	45 and above
2007	1,276	188	5	2,262	521	39
2008	1,241	204	3	2,309	553	37
2009	1,178	239	4	2,097	558	38
2010	1,151	212	6	1,977	543	42
2011	839	164	6	1,443	454	32
2012	813	172	7	1,354	426	31
2013	813	163	6	1,206	332	28
2014	800	173	6	1,144	318	24

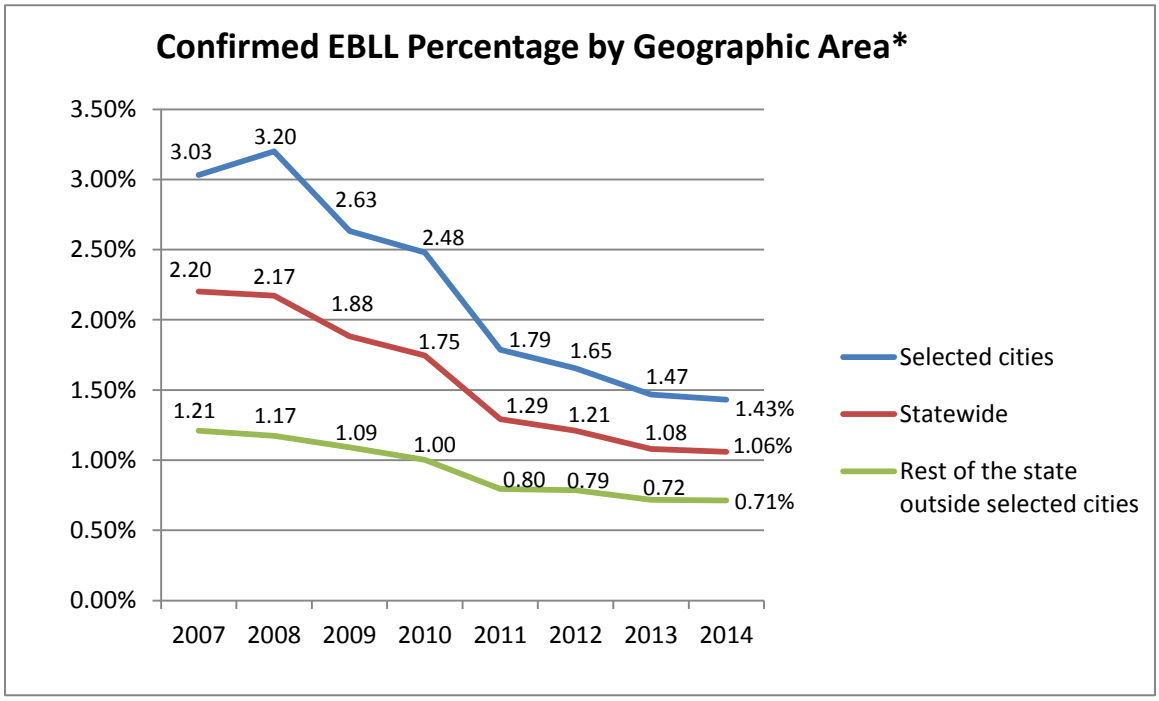
*On 5/16/12, the CDC accepted the recommendation from the Advisory Committee on Lead Poisoning Prevention to eliminate the use of the term "level of concern" (associated with the level of 10 µg/dL) and to begin using a "reference value" of 5 µg/dL, based on population BLLs as an indicator of lead exposure that warrants further monitoring. For more information, please see p. 18 of this report and pp. 15-17 of the 2012 report.

Statewide Summaries – continued

CONFIRMED ELEVATED BLOOD LEAD LEVEL (EBLL) PERCENTAGE BY GEOGRAPHIC AREA

DOH analyzes testing in a number of cities separately because of their high proportion of risk factors for lead poisoning: population of children under 7, low income families, and older housing. A confirmed result is the most reliable sign of a child's BLL, so confirmed elevated percentages are a common baseline measure. Even though the percentage of confirmed EBLLs has decreased significantly since 2007, these cities still experience confirmed EBLLs at a rate of more than twice that of the rest of the state and 35 percent more than the state as a whole. For reference, the cities are listed below:

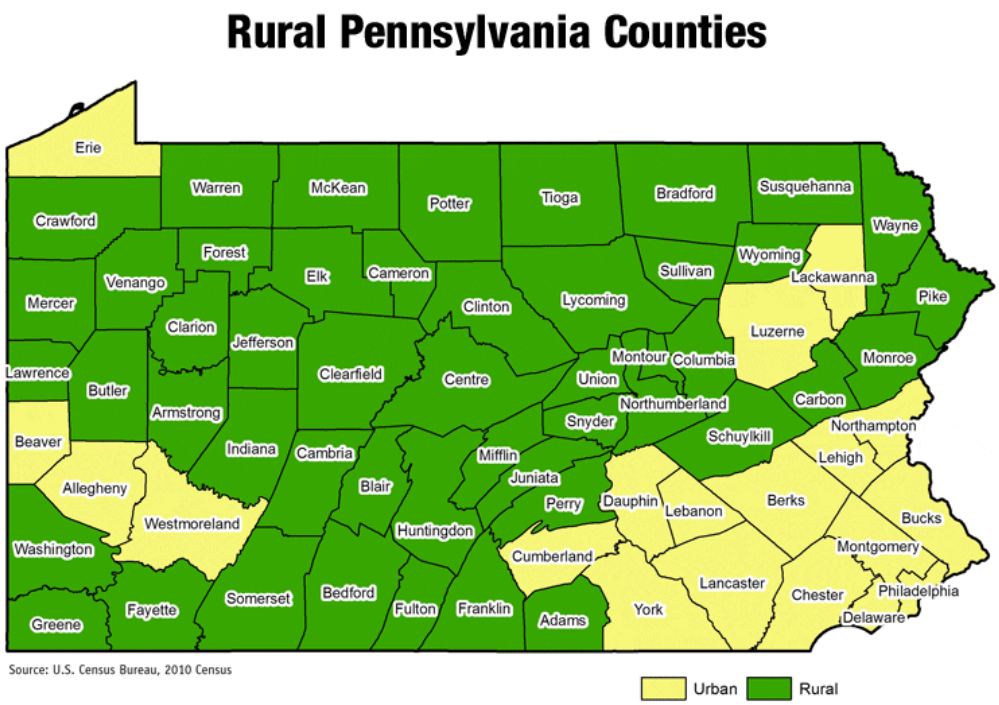
Allentown	Johnstown	Reading
Altoona	Lancaster	Scranton
Bethlehem	Lebanon	State College
Chester	Levittown	Wilkes-Barre
Easton	Norristown	Williamsport
Erie	Philadelphia	York
Harrisburg	Pittsburgh	



*Based on the percentage of confirmed elevated blood lead results. The percentages were calculated as follows: **number of confirmed EBLLs for children under 7 ÷ total number of children under 7 reported to have been tested.** For the numbers of confirmed elevated cases and number of children tested for 2014, please refer to p. 9 of this report. For previous years, please see p. 13 of this report or previous reports at www.health.state.pa.us/lead.

Statewide Summaries – Continued

TESTING IN RURAL AND URBAN COUNTIES



The Center for Rural Pa. defines rural and urban counties in terms of population density. Those counties with a population density above the state average are considered urban, and those below the state average are considered rural. Although one in four children in Pa. lives in a rural county, rural counties account for one in five children tested. One out of five children with a confirmed elevated result lives in a rural county. One reason for the difference in testing could be the lower proportion of doctors in rural counties. In 2012, there was one primary care physician for every 1,538 residents in rural counties, compared to one for every 1,071 residents in urban counties.[12]

2014	Percentage of Children under 7 in Pa. [13]	Percentage of Children under 7 tested*	Percentage of Tests in Pa. for Children under 7*	Percentage of Confirmed Elevated Results in Pa. for Children under 7	Confirmed Elevated Percentage
Urban	74.66%	14.39%	78.61%	80.08%	1.08%
Rural	25.34%	11.54%	21.39%	19.92%	0.98%

For more information and definitions concerning rural and urban counties, please see the Center for Rural Pa.'s website at: http://www.rural.palegislature.us/demographics_rural_urban.html.

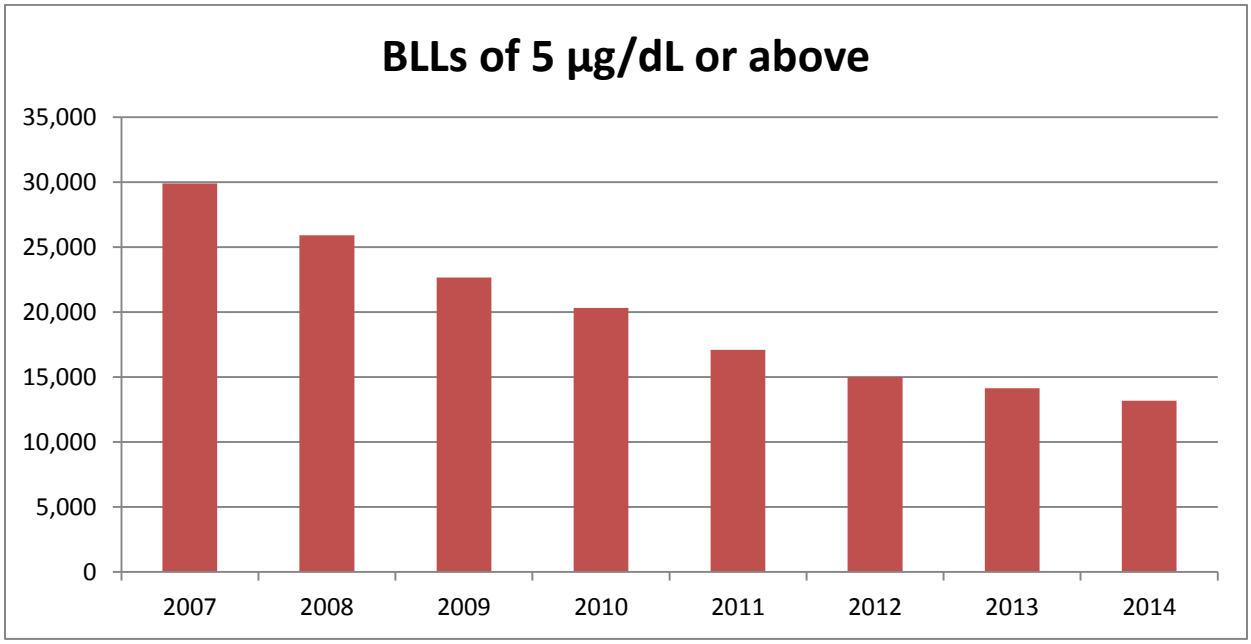
*Source: PA-NEDSS.

BLLs OF 5 µg/dL AND ABOVE – CDC'S "REFERENCE VALUE"

In 2012, the CDC established a "reference value" of 5 µg/dL and eliminated the use of the term "level of concern." This decision was based on an extensive review of emerging science that there is no level below which deleterious effects are not noted. That level of 5 µg/dL has also been established as an elevated blood lead level (EBLL).[14]

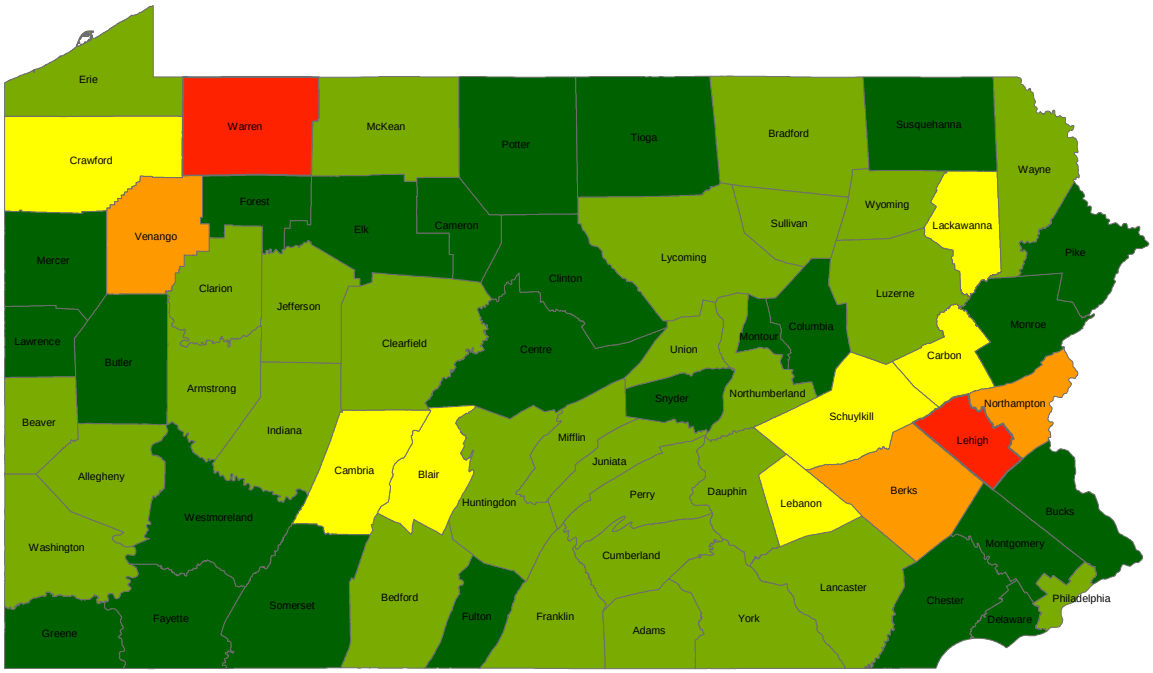
It's useful to look at BLLs of 5 µg/dL and above because they are an indicator of how many children (and what proportion of children) are exposed to a source of lead that most children their age are not. BLLs above the reference value warrant additional monitoring, education, and investigation. The chart below includes results for children under 7.

While testing of children under 7 has increased by more than 7 percent since 2007, the number of children with BLLs of 5 µg/dL and above has decreased by more than half. The percentage of children tested with these BLLs has followed suit, decreasing from almost 23 percent of children tested in 2007 to less than 10 percent in 2014. These numbers have followed the general downward trend in the number and percentage of children with confirmed elevated BLLs, as well as the mean BLL (see pp. 12, 13, and 15 for further details).



*Please note that the results included in this chart are not confirmed BLLs, as confirmed BLLs are not tracked for levels of 5 to less than 10.

PERCENTAGE OF BLLS 5 µg/dL AND ABOVE, CHILDREN UNDER 7



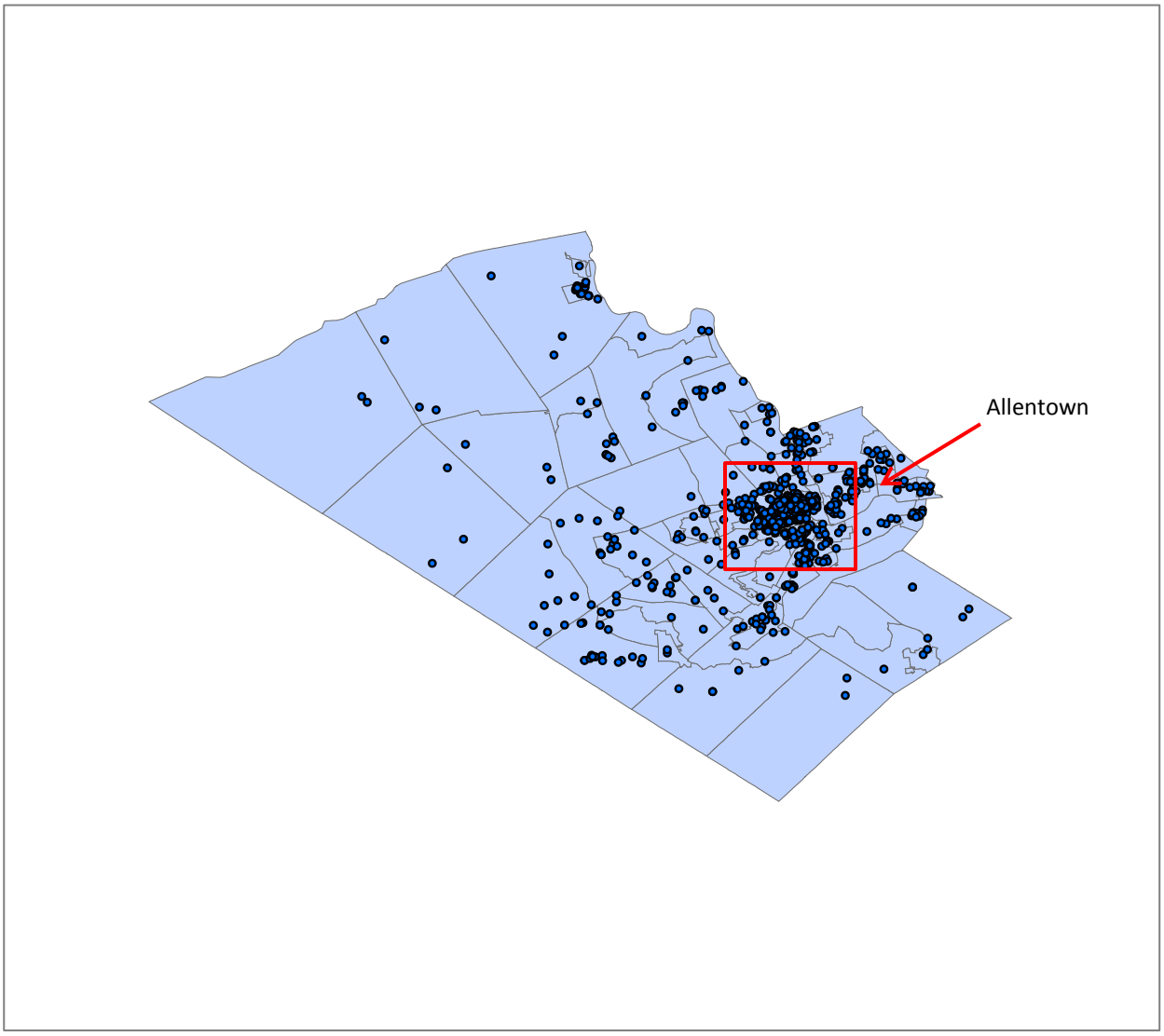
Percentage of Children w/ BLLs 5 µg/dL and above

- 2.42% - 6.89%
- 6.9% - 11.37%
- 11.38% - 15.84%
- 15.85% - 20.32%
- 20.33% - 24.79%

This map is a visual representation of the percentages of children tested with BLLs of 5 µg/dL and above (see chart on p. 34) and is known as a choropleth map. Choropleth maps are created by separating numbers into statistical groups, then assigning a color value (or some other signifier) to each group. Choropleth maps are helpful in recognizing patterns, or as in this map, highlighting an area or areas of concern. As seen on this map, Lehigh and Warren counties had the highest percentage of children tested with BLLs of 5 µg/dL and above. The next highest percentages were found in Venango, Berks, and Northampton.

Sources: PA-NEDSS, U.S. Census Bureau and PA Spatial Data Clearinghouse

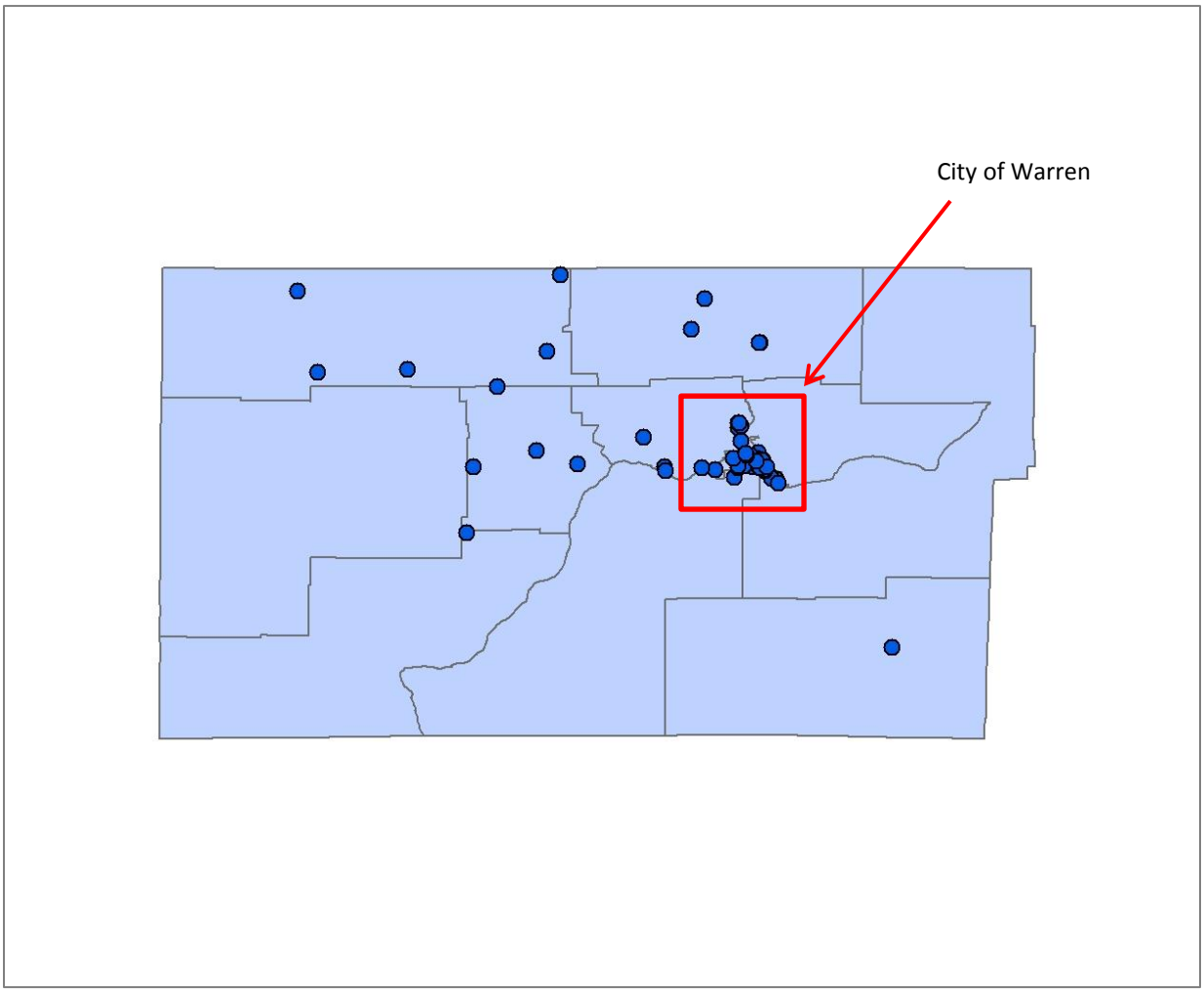
BLL RESULTS OF 5 µg/dL AND ABOVE
LEHIGH COUNTY CENSUS TRACTS, CHILDREN UNDER 7



Source: PA-NEDSS, U.S. Census Bureau

The statewide map on the previous page highlighted two counties (Lehigh and Warren) with the highest proportion of children with BLLs of 5 µg/dL and above (5 and above). But since that map shows only proportions and not numbers, it will be helpful to look in more detail. The above map shows the individual BLL results plotted in Lehigh County. Note that the results are concentrated around the city of Allentown (highlighted with the red box), which also happens to be the selected city with the highest percentage of children with BLLs of 5 and above (see p. 47). The number of children with BLL results of 5 and above is being driven in large part by a high concentration of results in one area, as Allentown city accounts for nearly 68 percent of Lehigh County's BLLs of 5 and above. For the sake of comparison, 73 percent of tests in Lehigh County were in Allentown. So, regardless of what the proportion looks like, the majority of tests and BLLs of 5 and above are concentrated in one city. Showing strictly a choropleth map with just counties may not tell the whole story.

BLL RESULTS OF 5 µg/dL AND ABOVE
WARREN COUNTY CENSUS TRACTS, CHILDREN UNDER 7



Source: PA-NEDSS, U.S. Census Bureau

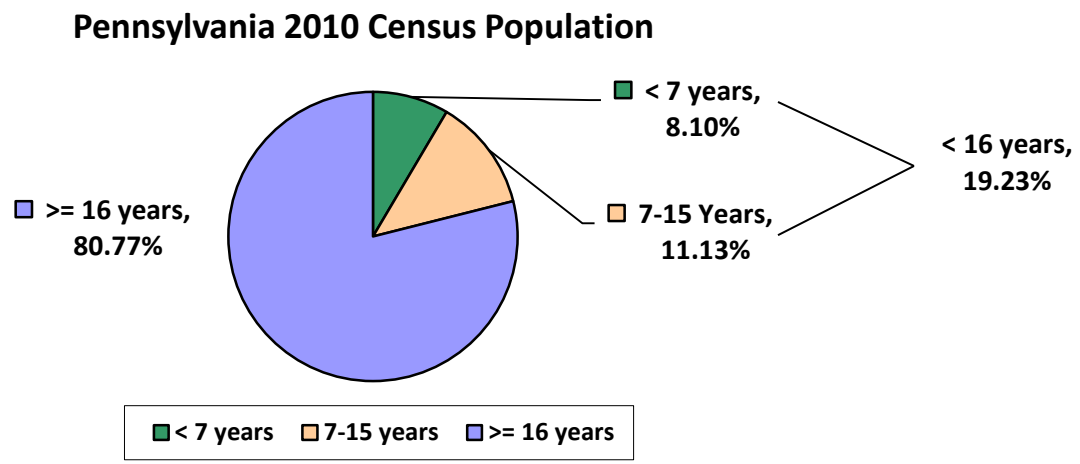
Warren County had one of the two highest proportions of children tested with BLLs of 5 and above. However, as seen on the above map, there are fewer children with BLLs of 5 and above than in Lehigh County. Compared to Lehigh County, Warren County has a much smaller population of children under 7 (about one-tenth the number), testing numbers (roughly one-eighth), and children with BLLs of 5 and above (roughly one-fifth). So, although the proportion is the same, the numbers are markedly different; this highlights where a choropleth map becomes more of a starting point and encourages further examination. Although the numbers are different, the concentration of the results is similar to Lehigh County. The tests are clustered around one area, which is the city of Warren (highlighted with the red box). The city of Warren accounts for roughly 44 percent of Warren County's tests but more than 64 percent of the results of 5 and above. Further examination of other counties may reveal a similar pattern, but the statewide map led us to these two first. This is where a choropleth map can be helpful, as it can draw attention to specific areas.

Statewide Summaries - continued

POPULATION [15]

Geo. Level	Population Data Source	Population as of	1 and 2 Years	< 3 Years	< 6 Years	< 7 Years	< 16 Years	Total Population
Pennsylvania	U.S. Census Bureau	2010 Census →	291,031	432,581	877,769	1,028,282	2,442,080	**12,702,379**
	Pa. Dept. of Health Division of Health Informatics	July 1, 2013 →	287,669	430,618	862,426	1,011,273	2,392,071	**12,773,801**
United States (including Pa. and excluding Puerto Rico)	U.S. Census Bureau	2010 Census →	8,074,999	12,019,152	24,258,220	28,324,601	65,470,033	**308,745,538**

Geo. Level	Population Data Source: U.S. Census Bureau, 2010 Census Percent of Total Population Represented by Age Cohort Population		
	1 and 2 Years (12-35 Months)	< 7 Years (0-83 Months)	< 16 Years (0-191 Months)
Pennsylvania	2.29%	8.10%	19.23%
United States	2.62%	9.17%	21.21%



Statewide Summaries – continued

POPULATION

Source: The U.S. Census Bureau's 2010 Census, Summary File 1 Table QT-P2
Note: Excluding Puerto Rico but including the District of Columbia (DC)

States Ranking by Total Population			
	Rank	**State**	**Total Population (All Ages)**
First (most)	1	California	37,253,956
Sixth	**6**	**Pennsylvania**	**12,702,379**
Last (fewest)	51	Wyoming	563,626

States Ranking by Population < 16 Years			
	Rank	**State**	**Population < 16 Years**
First (most)	1	California	8,174,098
Sixth	**6**	**Pennsylvania**	**2,442,080**
Last (fewest)	51	District of Columbia	89,148

States Ranking by Population < 7 Years			
	Rank	**State**	**Population < 7 Years**
First (most)	1	California	3,536,926
Sixth	**6**	**Pennsylvania**	**1,028,282**
Last (fewest)	51	District of Columbia	43,471

States Ranking by Population < 6 Years			
	Rank	**State**	**Population < 6 Years**
First (most)	1	California	3,036,508
Sixth	**6**	**Pennsylvania**	**877,769**
Last (fewest)	51	District of Columbia	38,156

States Ranking by Population < 3 Years			
	Rank	**State**	**Population < 3 Years**
First (most)	1	California	1,507,814
Sixth	**6**	**Pennsylvania**	**432,581**
Last (fewest)	51	Vermont	18,676

States Ranking by Population 1 and 2 Years			
	Rank	**State**	**Population 1 and 2 Years**
First (most)	1	California	955,430
Sixth	**6**	**Pennsylvania**	**291,031**
Last (fewest)	51	Vermont	12,708

Statewide Summaries - continued

HOME OWNERSHIP AND OCCUPANCY [16]

Source: The US Census Bureau's 2010 American Community Survey, Tables B25002 and S2502
Statistics below reflect U.S. Census Bureau estimates on 50 U.S. states and the District of Columbia (DC). Puerto Rico is not included.

Geo Level	Occupied Housing Units			Vacant Housing Units	Total Housing Units [17]
	Owner Occupied	Renter Occupied	Total Occupied	Total Vacant	
United States	74,873,372	39,694,047	114,567,419	17,223,646	131,791,065
Pennsylvania	3,461,678	1,474,352	4,936,030	632,790	5,568,820

Ranking by Total Housing Units

Rank		State	Housing Units
First (most)	1	California	13,682,976
Fifth	5	Pennsylvania	5,568,820
Last (fewest)	51	Wyoming	262,286

Ranking by Total Owner Occupied Housing Units

Rank		State	Housing Units
First (most)	1	California	6,903,175
Fifth	5	Pennsylvania	3,461,678
Last (fewest)	51	District of Columbia (DC)	101,793

Ranking by Total Occupied Housing Units

Rank		State	Housing Units
First (most)	1	California	12,406,475
Fifth	5	Pennsylvania	4,936,030
Last (fewest)	51	Wyoming	222,803

Ranking by Total Renter Occupied Housing Units

Rank		State	Housing Units
First (most)	1	California	5,503,300
Sixth	6	Pennsylvania	1,474,352
Last (fewest)	51	Wyoming	67,525

Ranking by Total Vacant Housing Units

Rank		State	Housing Units
First (most)	1	Florida	1,959,023
Seventh	7	Pennsylvania	632,790
Last (fewest)	51	North Dakota	37,687

Statewide Summaries - continued

AGE OF HOUSING[18]

Source: The US Census Bureau's 2010 American Community Survey, Table B25034

Statistics below reflect US Census Bureau estimates on 50 U.S. states and the District of Columbia (DC). Puerto Rico is not included.

Geo Level	Total Housing Units, as of the 2010 Census	Estimated Total Units Built Pre-1978 [19]	All percentages are rounded two decimal places. Estimated Percentage of Total Housing Units Built Pre-1978 [20]	Total Units Built Pre-1950	All percentages are rounded two decimal places. Percentage of Total Housing Units Built Pre-1950 [21]
United States	131,791,065	71,302,191	54.10%	25,296,711	19.19%
Pennsylvania	5,568,820	3,899,824	70.03%	2,006,135	36.02%

Ranking by Estimated Total Housing Units Built Pre-1978

Rank		State	Housing Units
First (most)	1	California	8,007,401
Fourth	4	Pennsylvania	3,899,824
Last (fewest)	51	Alaska	117,920

Ranking by Estimated Percent of Total Housing Units Built Pre-1978

Rank		State	All Percentages are rounded two decimal places. Estimated Percentage of Housing Units Built pre-1978
First (highest %)	1	District of Columbia (DC)	83.55%
Fifth	5	Pennsylvania	70.03%
Last (lowest %)	51	Nevada	22.86%

Ranking by Total Housing Units Built Pre-1950

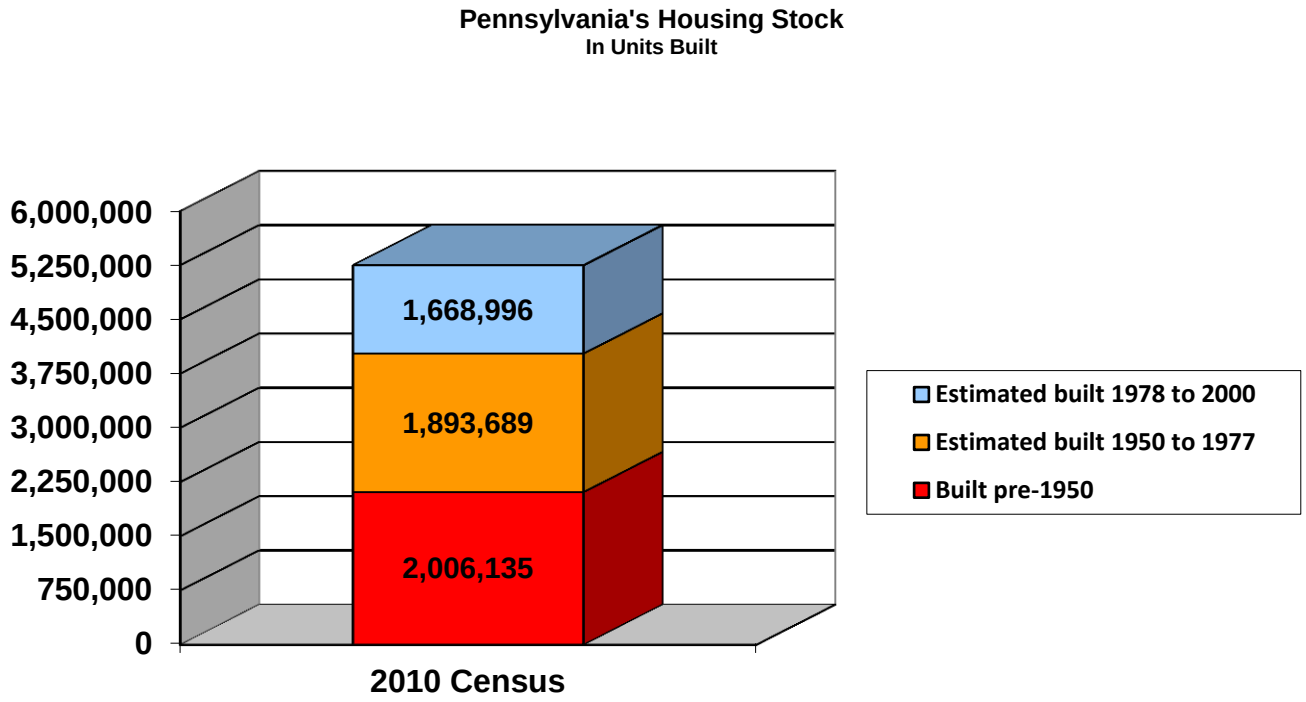
Rank		State	Housing Units
First (most)	1	New York	3,403,457
Third	3	Pennsylvania	2,006,135
Last (fewest)	51	Alaska	10,893

Ranking by Percent of Total Housing Units Built Pre-1950

Rank		State	All Percentages are rounded two decimal places. Percentage of Housing Units Built pre-1950
First (highest %)	1	District of Columbia (DC)	50.97%
Fifth	5	Pennsylvania	36.02%
Last (lowest %)	51	Nevada	2.18%

Statewide Summaries - continued

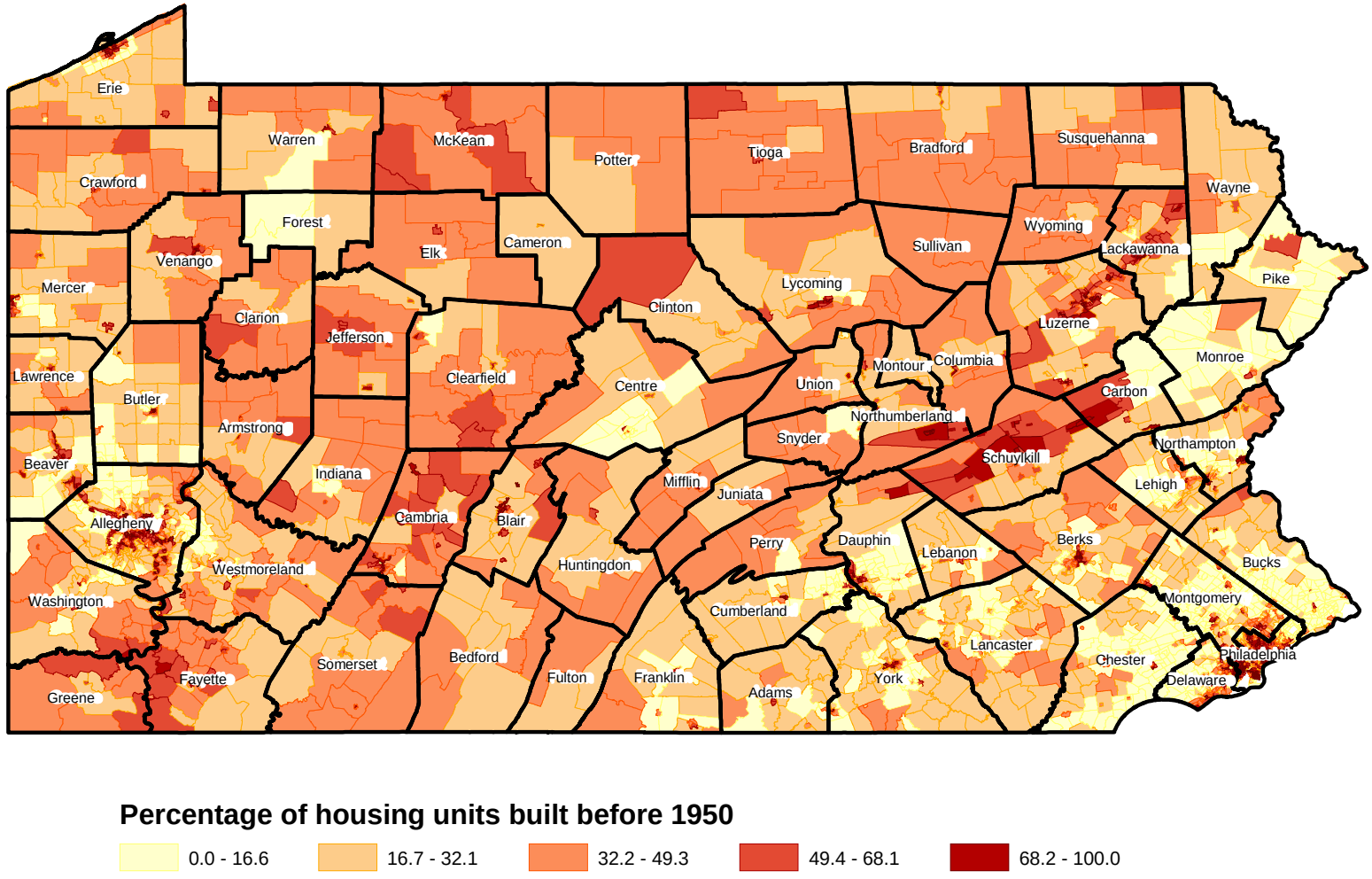
AGE OF HOUSING



Source: U.S. Census Bureau, 2010 ACS, Table B25034	Housing Units:				
	Built Pre-1950	Estimated Built 1950 through 1977	Total Estimated Built Pre-1978	Estimated Built 1978 through 2010	Total Housing Units
Pennsylvania	2,006,135	1,893,689	3,899,824	1,668,996	5,568,820

AGE OF HOUSING - MAP

Percentage of Pennsylvania's Housing Stock Built before 1950, by 2010 Census Tract

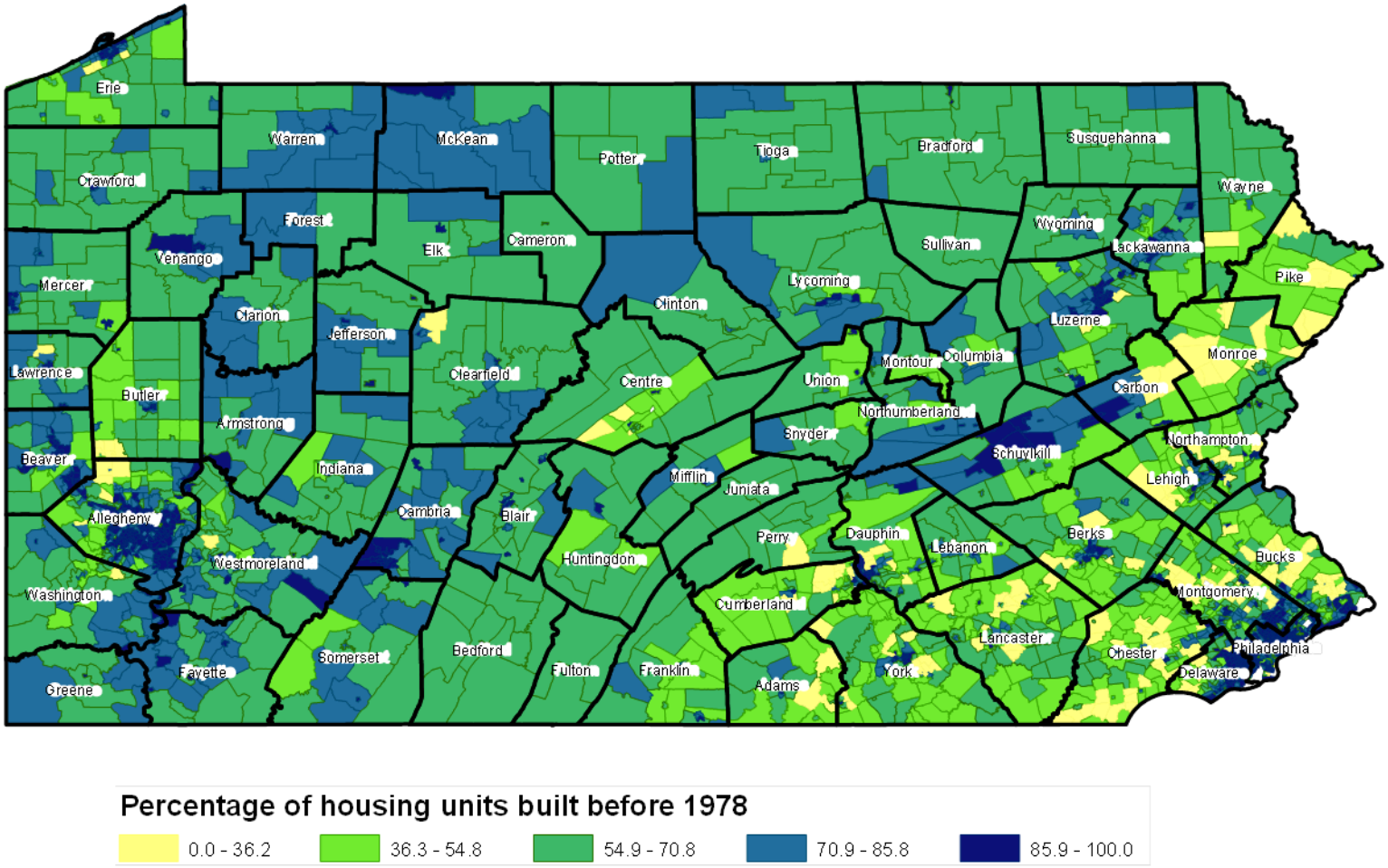


Percentage of housing units built before 1950

0.0 - 16.6	16.7 - 32.1	32.2 - 49.3	49.4 - 68.1	68.2 - 100.0

AGE OF HOUSING - MAP

Percentage of Pennsylvania's Housing Stock Built before 1978, by 2010 Census Tract



COUNTY LEVEL

Children Tested for Lead in 2014 by:

i) Age
ii) Maximum blood lead level (BLL)
iii) County of residence

COUNTY LEVEL: CHILDREN TESTED FOR LEAD IN 2014 – BY AGE, MAXIMUM BLOOD LEAD LEVEL AND COUNTY OF RESIDENCE

County	The Number of Pennsylvania Children Tested for Lead in 2014 by Age, Maximum Blood Lead Level and County of Residence																			
	1 and 2 Years (12-35 Months)				< 3 Years (0-35 Months)				< 6 Years (0-71 Months)				< 7 Years (0-83 Months)				< 16 Years (0-191 Months)			
	0-9 µg/dL	≥ 10 µg/dL	Nulls[22]	Total children[23]	0-9 µg/dL	≥ 10 µg/dL	Nulls	Total children	0-9 µg/dL	≥ 10 µg/dL	Nulls	Total children	0-9 µg/dL	≥ 10 µg/dL	Nulls	Total children	0-9 µg/dL	≥ 10 µg/dL	Nulls	Total children
Adams	474	9	2	**485**	880	13	2	**895**	939	14	3	**956**	943	14	3	**960**	971	14	3	**988**
Allegheny	7,091	126	66	**7,283**	11,397	156	107	**11,660**	13,351	205	115	**13,671**	13,452	207	115	**13,774**	13,739	210	118	**14,067**
Armstrong	686	12	5	**703**	754	12	7	**773**	802	14	8	**824**	806	14	8	**828**	820	15	8	**843**
Beaver	684	20	4	**708**	1,312	27	14	**1,353**	1,538	30	16	**1,584**	1,557	30	17	**1,604**	1,587	31	18	**1,636**
Bedford	230	7	5	**242**	417	10	14	**441**	483	13	18	**514**	484	13	18	**515**	497	13	18	**528**
Berks	2,394	84	5	**2,483**	2,882	93	5	**2,980**	4,048	130	6	**4,184**	4,301	135	6	**4,442**	4,964	136	7	**5,107**
Blair	543	35	20	**598**	1,095	49	62	**1,206**	1,286	57	66	**1,409**	1,298	57	67	**1,422**	1,323	57	68	**1,448**
Bradford	161	2	40	**203**	248	3	56	**307**	297	5	64	**366**	298	5	64	**367**	307	5	66	**378**
Bucks	1,693	8	18	**1,719**	2,961	11	23	**2,995**	3,470	15	27	**3,512**	3,555	15	28	**3,598**	3,691	15	33	**3,739**
Butler	618	12	10	**640**	1,081	14	18	**1,113**	1,189	16	18	**1,223**	1,209	17	18	**1,244**	1,316	17	18	**1,351**
Cambria	491	22	8	**521**	953	24	13	**990**	1,160	38	15	**1,213**	1,175	39	15	**1,229**	1,186	39	15	**1,240**
Cameron	44	1	0	**45**	55	1	0	**56**	60	1	0	**61**	63	1	0	**64**	63	1	0	**64**
Carbon	174	2	0	**176**	387	4	0	**391**	449	6	0	**455**	464	6	0	**470**	496	6	0	**502**
Centre	284	2	0	**286**	759	4	1	**764**	810	5	1	**816**	813	5	1	**819**	831	5	1	**837**
Chester	2,122	29	19	**2,170**	3,631	37	25	**3,693**	4,232	45	28	**4,305**	4,280	45	29	**4,354**	4,349	46	33	**4,428**
Clarion	159	3	7	**169**	249	4	29	**282**	286	4	36	**326**	286	4	36	**326**	294	4	36	**334**
Clearfield	418	8	0	**426**	757	10	4	**771**	836	12	5	**853**	838	12	5	**855**	850	13	5	**868**
Clinton	113	2	0	**115**	285	3	0	**288**	358	5	0	**363**	362	5	0	**367**	369	5	0	**374**
Columbia	164	5	0	**169**	340	5	0	**345**	406	7	0	**413**	411	7	0	**418**	425	7	0	**432**
Crawford	288	14	1	**303**	570	18	8	**596**	670	21	9	**700**	681	21	9	**711**	737	22	9	**768**
Cumberland	645	16	15	**676**	848	17	15	**880**	999	19	19	**1,037**	1,017	19	19	**1,055**	1,057	20	19	**1,096**
Dauphin	1,674	41	9	**1,724**	2,499	45	12	**2,556**	3,279	67	15	**3,361**	3,351	68	15	**3,434**	3,500	71	16	**3,587**
Delaware	4,137	49	150	**4,336**	6,060	56	242	**6,358**	7,275	78	305	**7,658**	7,388	80	310	**7,778**	7,552	83	315	**7,950**
Elk	152	3	0	**155**	276	4	1	**281**	338	5	1	**344**	346	5	1	**352**	356	5	1	**362**
Erie	2,137	72	20	**2,229**	2,973	80	33	**3,086**	3,650	108	33	**3,791**	3,729	112	33	**3,874**	4,025	113	33	**4,171**
Fayette	634	9	1	**644**	1,130	9	4	**1,143**	1,398	12	4	**1,414**	1,433	12	6	**1,451**	1,479	12	6	**1,497**
Forest	14	0	0	**14**	25	0	0	**25**	29	0	0	**29**	31	0	0	**31**	32	0	0	**32**
Franklin	834	19	2	**855**	1,104	23	2	**1,129**	1,238	30	4	**1,272**	1,253	30	4	**1,287**	1,337	30	5	**1,372**
Fulton	74	2	2	**78**	112	2	2	**116**	153	2	3	**158**	156	2	3	**161**	160	2	3	**165**
Greene	135	0	2	**137**	193	1	3	**197**	239	1	4	**244**	244	1	4	**249**	248	1	4	**253**

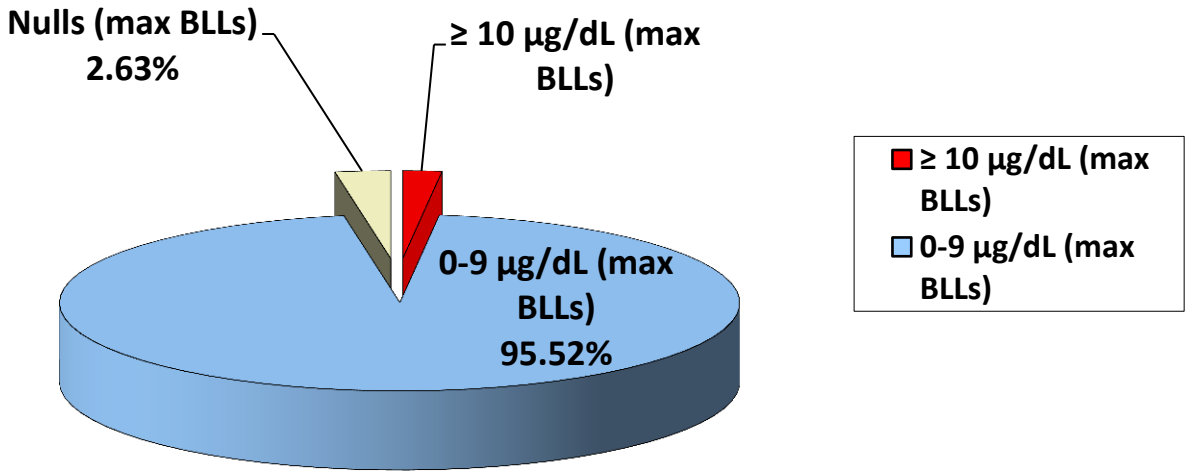
COUNTY LEVEL: CHILDREN TESTED FOR LEAD IN 2014 – BY AGE, MAXIMUM BLOOD LEAD LEVEL AND COUNTY OF RESIDENCE

County	The Number of Pennsylvania Children Tested for Lead in 2014 by Age, Maximum Blood Lead Level and County of Residence																			
	1 and 2 Years (12-35 Months)				< 3 Years (0-35 Months)				< 6 Years (0-71 Months)				< 7 Years (0-83 Months)				< 16 Years (0-191 Months)			
	0-9 µg/dL	≥ 10 µg/dL	Nulls	Total children	0-9 µg/dL	≥ 10 µg/dL	Nulls	Total children	0-9 µg/dL	≥ 10 µg/dL	Nulls	Total children	0-9 µg/dL	≥ 10 µg/dL	Nulls	Total children	0-9 µg/dL	≥ 10 µg/dL	Nulls	Total children
Huntingdon	164	4	4	**172**	359	7	7	**373**	460	10	7	**477**	467	10	7	**484**	486	10	7	**503**
Indiana	315	7	7	**329**	631	8	18	**657**	710	10	18	**738**	713	10	18	**741**	716	11	18	**745**
Jefferson	199	4	2	**205**	355	6	3	**364**	427	8	7	**442**	433	9	8	**450**	445	9	8	**462**
Juniata	91	2	0	**93**	181	2	0	**183**	203	4	0	**207**	207	4	0	**211**	211	4	0	**215**
Lackawanna	849	33	7	**889**	1,253	49	17	**1,319**	1,701	57	17	**1,775**	1,740	58	17	**1,815**	1,878	60	18	**1,956**
Lancaster	2,017	47	19	**2,083**	2,816	51	24	**2,891**	3,559	80	30	**3,669**	3,620	80	30	**3,730**	3,796	85	34	**3,915**
Lawrence	287	9	1	**297**	431	10	2	**443**	516	13	2	**531**	521	13	2	**536**	540	13	2	**555**
Lebanon	571	23	3	**597**	834	29	8	**871**	1,052	36	8	**1,096**	1,061	37	8	**1,106**	1,095	37	8	**1,140**
Lehigh	1,957	36	0	**1,993**	2,997	51	4	**3,052**	3,306	56	4	**3,366**	3,348	57	4	**3,409**	3,445	58	4	**3,507**
Luzerne	1,395	40	16	**1,451**	2,253	58	19	**2,330**	2,689	68	21	**2,778**	2,739	68	22	**2,829**	2,829	68	22	**2,919**
Lycoming	440	21	0	**461**	893	26	1	**920**	1,074	33	2	**1,109**	1,082	34	2	**1,118**	1,103	34	2	**1,139**
McKean	420	10	4	**434**	639	13	4	**656**	694	15	4	**713**	699	15	4	**718**	715	15	4	**734**
Mercer	621	12	1	**634**	978	14	1	**993**	1,095	14	1	**1,110**	1,116	14	1	**1,131**	1,220	14	1	**1,235**
Mifflin	136	3	0	**139**	391	4	0	**395**	450	5	0	**455**	459	5	0	**464**	470	5	0	**475**
Monroe	816	18	1	**835**	1,033	19	1	**1,053**	1,169	20	2	**1,191**	1,195	20	2	**1,217**	1,246	20	2	**1,268**
Montgomery	4,140	61	90	**4,291**	6,400	68	120	**6,588**	7,361	82	138	**7,581**	7,463	83	142	**7,688**	7,650	87	156	**7,893**
Montour	85	2	0	**87**	123	3	0	**126**	185	3	0	**188**	187	3	0	**190**	191	3	0	**194**
Northampton	1,537	31	9	**1,577**	1,846	33	9	**1,888**	2,040	39	10	**2,089**	2,063	39	11	**2,113**	2,141	40	11	**2,192**
Northumberla	409	14	1	**424**	758	20	1	**779**	949	29	3	**981**	960	29	3	**992**	982	29	3	**1,014**
Perry	168	2	1	**171**	335	3	3	**341**	364	3	3	**370**	366	3	3	**372**	368	3	3	**374**
Philadelphia	19,026	458	1,171	**20,655**	25,439	513	2,002	**27,954**	33,461	718	2,415	**36,594**	34,463	739	2,458	**37,660**	36,124	759	2,531	**39,414**
Pike	291	3	4	**298**	443	3	4	**450**	550	4	4	**558**	558	4	5	**567**	574	4	5	**583**
Potter	276	1	2	**279**	290	1	2	**293**	310	1	3	**314**	310	1	3	**314**	312	1	3	**316**
Schuylkill	611	30	2	**643**	1,376	44	4	**1,424**	1,434	50	4	**1,488**	1,445	52	4	**1,501**	1,484	53	4	**1,541**
Snyder	142	1	0	**143**	271	2	0	**273**	330	3	0	**333**	332	3	0	**335**	334	3	0	**337**
Somerset	222	3	4	**229**	442	5	5	**452**	507	5	6	**518**	510	5	6	**521**	521	6	7	**534**
Sullivan	12	1	1	**14**	26	1	2	**29**	32	1	2	**35**	32	1	3	**36**	32	1	6	**39**
Susquehanna	161	0	1	**162**	201	0	2	**203**	291	1	2	**294**	295	1	2	**298**	302	1	2	**305**

COUNTY LEVEL: CHILDREN TESTED FOR LEAD IN 2014 – BY AGE, MAXIMUM BLOOD LEAD LEVEL AND COUNTY OF RESIDENCE

County	The Number of Pennsylvania Children Tested for Lead in 2014 by Age, Maximum Blood Lead Level and County of Residence																			
	1 and 2 Years (12-35 Months)				< 3 Years (0-35 Months)				< 6 Years (0-71 Months)				< 7 Years (0-83 Months)				< 16 Years (0-191 Months)			
	0-9 µg/dL	≥ 10 µg/dL	Nulls	Total children	0-9 µg/dL	≥ 10 µg/dL	Nulls	Total children	0-9 µg/dL	≥ 10 µg/dL	Nulls	Total children	0-9 µg/dL	≥ 10 µg/dL	Nulls	Total children	0-9 µg/dL	≥ 10 µg/dL	Nulls	Total children
Tioga	245	1	13	**259**	305	2	15	**322**	356	3	23	**382**	366	3	25	**394**	385	3	32	**420**
Union	107	2	2	**111**	254	5	2	**261**	296	6	2	**304**	300	6	2	**308**	303	6	2	**311**
Venango	191	16	2	**209**	354	19	4	**377**	404	21	4	**429**	411	22	4	**437**	426	22	5	**453**
Warren	166	13	1	**180**	325	17	1	**343**	386	21	1	**408**	394	21	1	**416**	424	21	1	**446**
Washington	806	12	6	**824**	1,402	17	12	**1,431**	1,637	21	17	**1,675**	1,657	21	17	**1,695**	1,712	22	19	**1,753**
Wayne	160	6	1	**167**	306	10	1	**317**	371	12	2	**385**	377	12	2	**391**	394	12	2	**408**
Westmoreland	1,308	25	11	**1,344**	2,377	33	26	**2,436**	2,617	43	31	**2,691**	2,628	44	32	**2,704**	2,711	46	32	**2,789**
Wyoming	47	4	0	**51**	76	4	0	**80**	89	4	0	**93**	90	4	0	**94**	94	4	0	**98**
York	1,864	63	6	**1,933**	2,859	74	10	**2,943**	3,349	88	11	**3,448**	3,400	89	11	**3,500**	3,481	90	11	**3,582**
All 67 counties	71,519	1,632	1,804	**74,955**	108,485	1,959	3,036	**113,480**	131,692	2,552	3,627	**137,871**	134,231	2,600	3,693	**140,524**	139,701	2,657	3,823	**146,181**

Pennsylvania Children Under 7 Years of Age Tested for Lead in 2014



COUNTY LEVEL: PERCENTAGES OF CHILDREN (< 7 YEARS) TESTED FOR LEAD - BY COUNTY OF RESIDENCE

The Percentage of Pennsylvania Children, Under 7 Years of age, Tested for Lead in 2014 by County of Residence													
	Pa. County	Total Children Tested [24]	2010 Census Population under 7	Percent Tested [25]		Pa. County	Total Children Tested	2010 Census Population	Percent Tested		Pa. County	Total Children Tested	2010 Census Population	Percent Tested
1	Adams	960	8,001	12.00%	30	Greene	249	2,794	8.91%	59	Tioga	394	3,100	12.71%
2	Allegheny	13,774	89,121	15.46%	31	Huntingdon	484	3,403	14.22%	60	Union	308	3,058	10.07%
3	Armstrong	828	5,038	16.44%	32	Indiana	741	6,354	11.66%	61	Venango	437	4,265	10.25%
4	Beaver	1,604	12,625	12.70%	33	Jefferson	450	3,626	12.41%	62	Warren	416	2,942	14.14%
5	Bedford	515	3,721	13.84%	34	Juniata	211	2,213	9.53%	63	Washington	1,695	15,174	11.17%
6	Berks	4,442	36,035	12.33%	35	Lackawanna	1,815	16,230	11.18%	64	Wayne	391	3,139	12.46%
7	Blair	1,422	10,244	13.88%	36	Lancaster	3,730	49,568	7.53%	65	Westmoreland	2,704	25,172	10.74%
8	Bradford	367	5,258	6.98%	37	Lawrence	536	6,878	7.79%	66	Wyoming	94	2,145	4.38%
9	Bucks	3,598	49,300	7.30%	38	Lebanon	1,106	11,782	9.39%	67	York	3,500	37,816	9.26%
10	Butler	1,244	14,395	8.64%	39	Lehigh	3,409	30,329	11.24%		**All 67 counties**	**140,524**	**1,028,282**	**13.67%**
11	Cambria	1,229	10,308	11.92%	40	Luzerne	2,829	23,386	12.10%					
12	Cameron	64	305	20.98%	41	Lycoming	1,118	9,165	12.20%					
13	Carbon	470	4,905	9.58%	42	McKean	718	3,318	21.64%					
14	Centre	819	9,435	8.68%	43	Mercer	1,131	8,632	13.10%					
15	Chester	4,354	44,938	9.69%	44	Mifflin	464	4,084	11.36%					
16	Clarion	326	2,852	11.43%	45	Monroe	1,217	12,675	9.60%					
17	Clearfield	855	5,772	14.81%	46	Montgomery	7,688	67,338	11.42%					
18	Clinton	367	3,100	11.84%	47	Montour	190	1,491	12.74%					
19	Columbia	418	4,545	9.20%	48	Northampton	2,113	23,225	9.10%					
20	Crawford	711	7,108	10.00%	49	Northumberland	992	7,370	13.46%					
21	Cumberland	1,055	18,099	5.83%	50	Perry	372	3,880	9.59%					
22	Dauphin	3,434	23,315	14.73%	51	Philadelphia	37,660	138,163	27.26%					
23	Delaware	7,778	47,874	16.25%	52	Pike	567	4,113	13.79%					
24	Elk	352	2,196	16.03%	53	Potter	314	1,369	22.94%					
25	Erie	3,874	23,447	16.52%	54	Schuylkill	1,501	10,924	13.74%					
26	Fayette	1,451	9,715	14.94%	55	Snyder	335	3,413	9.82%					
27	Forest	31	255	12.16%	56	Somerset	521	5,282	9.86%					
28	Franklin	1,287	13,820	9.31%	57	Sullivan	36	342	10.53%					
29	Fulton	161	1,253	12.85%	58	Susquehanna	298	3,144	9.48%					

RANKING: **Top 15 testing percentages by county, for children under 7 years of age**

1. **Philadelphia (27.26%)**
2. **Potter (22.94%)**
3. **McKean (21.64%)**
4. **Cameron (20.98%)**
5. **Erie (16.52%)**
6. **Armstrong (16.44%)**
7. **Delaware (16.25%)**
8. **Elk (16.03%)**
9. **Allegheny (15.46%)**
10. **Fayette (14.94%)**
11. **Clearfield (14.81%)**
12. **Dauphin (14.73%)**
13. **Huntingdon (14.22%)**
14. **Warren (14.14%)**
15. **Blair (13.88%)**

COUNTY LEVEL: BLLS OF 5 µg/dL AND ABOVE

	Pa. County	BLLs ≥ 5 µg/dL	Percentage of Children Tested w/BLLs ≥ 5 µg/dL
1	Adams	75	7.81%
2	Allegheny	1010	7.33%
3	Armstrong	71	8.57%
4	Beaver	143	8.92%
5	Bedford	57	11.07%
6	Berks	714	16.07%
7	Blair	212	14.91%
8	Bradford	26	7.08%
9	Bucks	87	2.42%
10	Butler	64	5.14%
11	Cambria	166	13.51%
12	Cameron	4	6.25%
13	Carbon	68	14.47%
14	Centre	23	2.81%
15	Chester	271	6.22%
16	Clarion	27	8.28%
17	Clearfield	60	7.02%
18	Clinton	25	6.81%
19	Columbia	27	6.46%
20	Crawford	88	12.38%
21	Cumberland	83	7.87%
22	Dauphin	388	11.30%
23	Delaware	517	6.65%
24	Elk	19	5.40%
25	Erie	437	11.28%
26	Fayette	58	4.00%
27	Forest	2	6.45%
28	Franklin	109	8.47%
29	Fulton	9	5.59%
30	Greene	11	4.42%
31	Huntingdon	38	7.85%
32	Indiana	74	9.99%
33	Jefferson	36	8.00%
34	Juniata	19	9.00%
35	Lackawanna	265	14.60%
36	Lancaster	318	8.53%
37	Lawrence	34	6.34%
38	Lebanon	129	11.66%
39	Lehigh	845	24.79%
40	Luzerne	285	10.07%
41	Lycoming	110	9.84%
42	McKean	76	10.58%
43	Mercer	68	6.01%
44	Mifflin	32	6.90%
45	Monroe	76	6.24%
46	Montgomery	394	5.12%
47	Montour	7	3.68%
48	Northampton	337	15.95%
49	Northumberland	102	10.28%
50	Perry	28	7.53%
51	Philadelphia	3827	10.16%
52	Pike	30	5.29%
53	Potter	12	3.82%
54	Schuylkill	219	14.59%
55	Snyder	21	6.27%
56	Somerset	20	3.84%
57	Sullivan	4	11.11%
58	Susquehanna	9	3.02%
59	Tioga	22	5.58%
60	Union	23	7.47%
61	Venango	71	16.25%
62	Warren	90	21.63%
63	Washington	117	6.90%
64	Wayne	34	8.70%
65	Westmoreland	184	6.80%
66	Wyoming	10	10.64%
67	York	354	10.11%
	All 67 counties	**13,171**	9.37%

Notes:

This chart shows the number and percentage of children under 7 tested with results of 5 µg/dL and above. In general, counties with higher numbers of tests had higher numbers of children with results ≥5 µg/dL.

Because of difficulty with the extraction software, this report is only being provided for children under 7.

Source: PA-NEDSS

COUNTY LEVEL

Children Tested and Confirmed Elevated in 2014 by:

i) **Age**
ii) **First confirmed elevated blood lead level (EBLL)**
iii) **County of residence**

COUNTY LEVEL: CHILDREN TESTED AND CONFIRMED ELEVATED[26] – BY AGE, FIRST CONFIRMED EBLL[27] AND COUNTY OF RESIDENCE

County	The Number of Pennsylvania Children Tested and Confirmed Elevated in 2014 by Age, First Confirmed EBLL and County of Residence																			
	1 and 2 Years (12-35 Months)				< 3 Years (0-35 Months)				< 6 Years (0-71 Months)				< 7 Years (0-83 Months)				< 16 Years (0-191 Months)			
	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total
Adams	3	0	1	**4**	5	0	1	**6**	5	0	2	**7**	5	0	2	**7**	5	0	2	**7**
Allegheny	41	9	10	**60**	46	9	11	**66**	63	13	21	**97**	63	14	22	**99**	64	14	24	**102**
Armstrong	5	2	0	**7**	5	2	0	**7**	5	3	1	**9**	5	3	1	**9**	6	3	1	**10**
Beaver	3	3	2	**8**	3	3	2	**8**	3	3	2	**8**	3	3	2	**8**	3	4	2	**9**
Bedford	2	1	1	**4**	2	2	1	**5**	2	2	1	**5**	2	2	1	**5**	2	2	1	**5**
Berks	36	14	25	**75**	41	16	25	**82**	62	21	38	**121**	62	26	40	**128**	62	26	41	**129**
Blair	12	3	4	**19**	14	4	4	**22**	19	4	5	**28**	19	4	5	**28**	19	4	5	**28**
Bradford	0	1	0	**1**	0	1	0	**1**	0	2	0	**2**	0	2	0	**2**	0	2	0	**2**
Bucks	2	1	2	**5**	3	1	2	**6**	5	1	3	**9**	5	1	3	**9**	5	1	3	**9**
Butler	5	3	1	**9**	6	3	1	**10**	8	3	2	**13**	8	3	3	**14**	8	3	3	**14**
Cambria	8	1	1	**10**	8	1	1	**10**	13	5	8	**26**	13	5	9	**27**	13	5	9	**27**
Cameron	0	1	0	**1**	0	1	0	**1**	0	1	0	**1**	0	1	0	**1**	0	1	0	**1**
Carbon	1	1	0	**2**	1	1	0	**2**	2	1	0	**3**	2	1	0	**3**	2	1	0	**3**
Centre	2	0	0	**2**	3	0	0	**3**	3	0	0	**3**	3	0	0	**3**	3	0	0	**3**
Chester	8	2	1	**11**	8	2	1	**11**	10	2	5	**17**	10	2	5	**17**	10	2	6	**18**
Clarion	1	0	0	**1**	2	0	0	**2**	2	0	0	**2**	2	0	0	**2**	2	0	0	**2**
Clearfield	1	0	1	**2**	1	0	1	**2**	1	0	2	**3**	1	0	2	**3**	1	0	2	**3**
Clinton	1	0	2	**3**	1	0	2	**3**	1	0	2	**3**	1	0	2	**3**	1	0	2	**3**
Columbia	1	0	1	**2**	1	0	1	**2**	1	1	1	**3**	1	1	1	**3**	1	1	1	**3**
Crawford	3	0	1	**4**	3	0	1	**4**	3	1	3	**7**	3	1	3	**7**	3	2	3	**8**
Cumberland	5	1	2	**8**	5	1	2	**8**	5	1	4	**10**	5	1	4	**10**	5	1	5	**11**
Dauphin	16	6	2	**24**	16	6	2	**24**	23	9	6	**38**	23	9	7	**39**	23	10	7	**40**
Delaware	13	5	2	**20**	13	7	2	**22**	20	11	10	**41**	20	11	11	**42**	20	11	13	**44**
Elk	1	0	0	**1**	2	0	0	**2**	3	0	0	**3**	3	0	0	**3**	3	0	0	**3**
Erie	24	7	5	**36**	25	7	5	**37**	36	11	11	**58**	36	12	14	**62**	36	12	15	**63**
Fayette	4	1	0	**5**	4	1	0	**5**	6	3	0	**9**	6	3	0	**9**	6	3	0	**9**
Forest	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Franklin	5	0	0	**5**	7	0	0	**7**	9	1	2	**12**	9	1	3	**13**	9	1	3	**13**
Fulton	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**

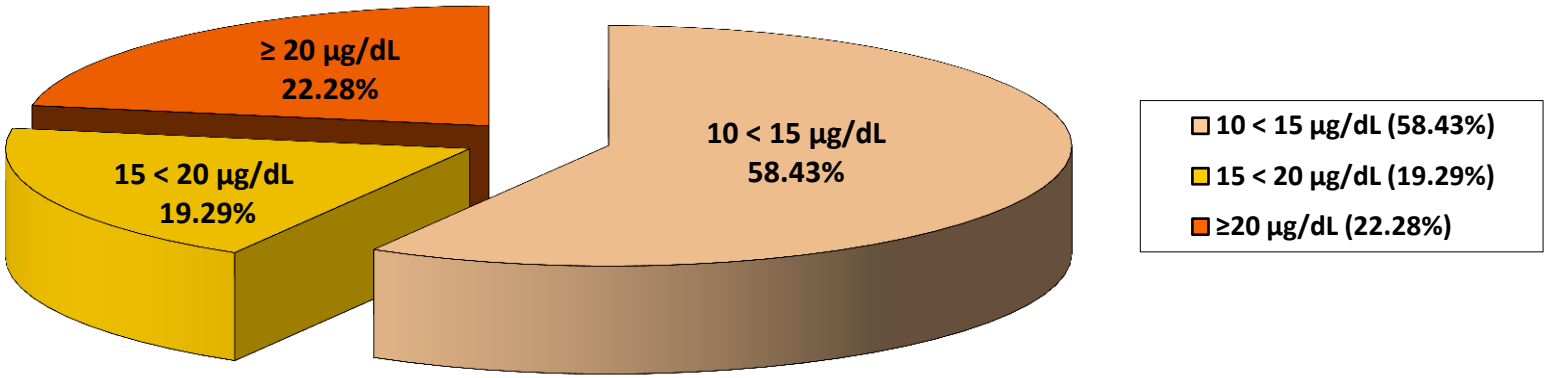
COUNTY LEVEL: CHILDREN TESTED AND CONFIRMED ELEVATED – BY AGE, FIRST CONFIRMED EBLL AND COUNTY OF RESIDENCE

County	The Number of Pennsylvania Children Tested and Confirmed Elevated in 2014 by Age, First Confirmed EBLL and County of Residence																			
	1 and 2 Years (12-35 Months)				< 3 Years (0-35 Months)				< 6 Years (0-71 Months)				< 7 Years (0-83 Months)				< 16 Years (0-191 Months)			
	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total
Greene	0	0	0	**0**	1	0	0	**1**	1	0	0	**1**	1	0	0	**1**	1	0	0	**1**
Huntingdon	0	0	1	**1**	0	0	1	**1**	2	0	1	**3**	2	0	1	**3**	2	0	1	**3**
Indiana	0	0	0	**0**	0	0	0	**0**	2	0	0	**2**	2	0	0	**2**	2	0	1	**3**
Jefferson	1	0	2	**3**	1	0	2	**3**	3	0	2	**5**	4	0	2	**6**	4	0	2	**6**
Juniata	2	0	0	**2**	2	0	0	**2**	4	0	0	**4**	4	0	0	**4**	4	0	0	**4**
Lackawanna	5	3	3	**11**	5	4	4	**13**	8	5	5	**18**	8	6	5	**19**	8	7	6	**21**
Lancaster	19	8	6	**33**	21	8	6	**35**	30	18	11	**59**	30	19	11	**60**	32	20	13	**65**
Lawrence	8	0	0	**8**	9	0	0	**9**	10	1	1	**12**	10	1	1	**12**	10	1	1	**12**
Lebanon	5	2	4	**11**	5	2	4	**11**	5	3	8	**16**	7	3	8	**18**	7	3	8	**18**
Lehigh	10	6	5	**21**	10	6	6	**22**	12	7	7	**26**	12	7	8	**27**	12	7	9	**28**
Luzerne	9	3	1	**13**	11	4	1	**16**	16	5	1	**22**	16	5	1	**22**	16	5	1	**22**
Lycoming	9	3	1	**13**	9	3	1	**13**	11	3	3	**17**	11	3	4	**18**	11	3	4	**18**
McKean	2	0	3	**5**	2	0	3	**5**	3	0	4	**7**	3	0	4	**7**	3	0	4	**7**
Mercer	5	3	1	**9**	5	3	1	**9**	5	3	1	**9**	5	3	1	**9**	5	3	1	**9**
Mifflin	2	0	0	**2**	3	0	0	**3**	3	0	0	**3**	3	1	0	**4**	3	1	0	**4**
Monroe	3	4	3	**10**	3	4	4	**11**	3	5	4	**12**	3	5	4	**12**	3	5	4	**12**
Montgomery	18	10	12	**40**	20	10	12	**42**	24	13	18	**55**	25	13	18	**56**	27	13	19	**59**
Montour	1	0	0	**1**	1	1	0	**2**	1	1	0	**2**	1	1	0	**2**	1	1	0	**2**
Northampton	7	1	3	**11**	8	1	3	**12**	9	4	6	**19**	9	4	6	**19**	9	4	7	**20**
Northumberland	6	2	2	**10**	8	3	2	**13**	10	5	3	**18**	10	5	3	**18**	10	5	3	**18**
Perry	2	0	0	**2**	2	0	0	**2**	2	0	0	**2**	2	0	0	**2**	2	0	0	**2**
Philadelphia	182	59	45	**286**	195	63	48	**306**	285	90	91	**466**	293	94	96	**483**	30	100	10	**505**
Pike	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Potter	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Schuylkill	9	0	3	**12**	10	0	3	**13**	14	1	4	**19**	14	1	5	**20**	14	2	6	**22**
Snyder	0	0	0	**0**	0	0	1	**1**	0	0	2	**2**	0	0	2	**2**	0	0	2	**2**
Somerset	1	1	0	**2**	1	1	0	**2**	1	1	0	**2**	1	1	0	**2**	2	1	0	**3**
Sullivan	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Susquehanna	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**

COUNTY LEVEL: CHILDREN TESTED AND CONFIRMED ELEVATED – BY AGE, FIRST CONFIRMED EBLL AND COUNTY OF RESIDENCE

County	The Number of Pennsylvania Children Tested and Confirmed Elevated in 2014 by Age, First Confirmed EBLL and County of Residence																			
	1 and 2 Years (12-35 Months)				< 3 Years (0-35 Months)				< 6 Years (0-71 Months)				< 7 Years (0-83 Months)				< 16 Years (0-191 Months)			
	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total
Tioga	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
Union	0	0	0	**0**	0	0	0	**0**	0	1	0	**1**	0	1	0	**1**	0	1	0	**1**
Venango	11	1	1	**13**	12	1	1	**14**	14	1	1	**16**	14	1	2	**17**	14	1	2	**17**
Warren	0	1	0	**1**	0	1	0	**1**	0	1	2	**3**	0	1	2	**3**	0	1	2	**3**
Washington	3	1	0	**4**	3	1	0	**4**	3	1	0	**4**	3	1	0	**4**	3	2	0	**5**
Wayne	1	0	1	**2**	2	1	1	**4**	2	1	1	**4**	2	1	1	**4**	2	1	1	**4**
Westmoreland	9	0	4	**13**	11	0	4	**15**	15	1	5	**21**	15	1	6	**22**	16	1	7	**24**
Wyoming	1	0	0	**1**	1	0	0	**1**	1	0	0	**1**	1	0	0	**1**	1	0	0	**1**
York	24	5	6	**35**	24	5	6	**35**	30	7	10	**47**	32	7	11	**50**	33	7	11	**51**
All 67 counties	**558**	**175**	**171**	**904**	**610**	**190**	**179**	**979**	**839**	**277**	**320**	**1,436**	**853**	**291**	**342**	**1,486**	**871**	**304**	**366**	**1,541**

Pennsylvania Children < 7 years of age, Confirmed Elevated in 2014, by First Confirmed Elevated Blood Lead Level



COUNTY LEVEL: PERCENTAGES OF CHILDREN (< 7 YEARS) TESTED AND CONFIRMED ELEVATED - BY COUNTY OF RESIDENCE

The Percentage of Pennsylvania's Tested Children, Under 7 Years of Age, Confirmed Elevated in 2014 by County of Residence													
	Pa. County	Total Children Tested	Total Confirmed Elevated	Percent Confirmed Elevated [28]		Pa. County	Total Children Tested	Total Confirmed Elevated	Percent Confirmed Elevated		Pa. County	Total Children Tested	Total Confirmed Elevated	Percent Confirmed Elevated
1	Adams	960	7	0.73%	30	Greene	249	1	0.40%	59	Tioga	394	0	0.00%
2	Allegheny	13,774	99	0.72%	31	Huntingdon	484	3	0.62%	60	Union	308	1	0.32%
3	Armstrong	828	9	1.09%	32	Indiana	741	2	0.27%	61	Venango	437	17	3.89%
4	Beaver	1,604	8	0.50%	33	Jefferson	450	6	1.33%	62	Warren	416	3	0.72%
5	Bedford	515	5	0.97%	34	Juniata	211	4	1.90%	63	Washington	1,695	4	0.24%
6	Berks	4,442	128	2.88%	35	Lackawanna	1,815	19	1.05%	64	Wayne	391	4	1.02%
7	Blair	1,422	28	1.97%	36	Lancaster	3,730	60	1.61%	65	Westmoreland	2,704	22	0.81%
8	Bradford	367	2	0.54%	37	Lawrence	536	12	2.24%	66	Wyoming	94	1	1.06%
9	Bucks	3,598	9	0.25%	38	Lebanon	1,106	18	1.63%	67	York	3,500	50	1.43%
10	Butler	1,244	14	1.13%	39	Lehigh	3,409	27	0.79%		All 67 counties	**140,524**	**1,486**	**1.06%**
11	Cambria	1,229	27	2.20%	40	Luzerne	2,829	22	0.78%					
12	Cameron	64	1	1.56%	41	Lycoming	1,118	18	1.61%					
13	Carbon	470	3	0.64%	42	McKean	718	7	0.97%					
14	Centre	819	3	0.37%	43	Mercer	1,131	9	0.80%					
15	Chester	4,354	17	0.39%	44	Mifflin	464	4	0.86%					
16	Clarion	326	2	0.61%	45	Monroe	1,217	12	0.99%					
17	Clearfield	855	3	0.35%	46	Montgomery	7,688	56	0.73%					
18	Clinton	367	3	0.82%	47	Montour	190	2	1.05%					
19	Columbia	418	3	0.72%	48	Northampton	2,113	19	0.90%					
20	Crawford	711	7	0.98%	49	Northumberland	992	18	1.81%					
21	Cumberland	1,055	10	0.95%	50	Perry	372	2	0.54%					
22	Dauphin	3,434	39	1.14%	51	Philadelphia	37,660	483	1.28%					
23	Delaware	7,778	42	0.54%	52	Pike	567	0	0.00%					
24	Elk	352	3	0.85%	53	Potter	314	0	0.00%					
25	Erie	3,874	62	1.60%	54	Schuylkill	1,501	20	1.33%					
26	Fayette	1,451	9	0.62%	55	Snyder	335	2	0.60%					
27	Forest	31	0	0.00%	56	Somerset	521	2	0.38%					
28	Franklin	1,287	13	1.01%	57	Sullivan	36	0	0.00%					
29	Fulton	161	0	0.00%	58	Susquehanna	298	0	0.00%					

Note: Percentages based on low numbers of children confirmed elevated have the potential for a high standard of error (SE) and are less reliable in representing the general population.

COUNTY LEVEL

U.S. Census Bureau, 2010 Census Population by County:

i) **Pennsylvania county**

ii) **Age [total population and children less than 7 years]**

COUNTY LEVEL: POPULATION

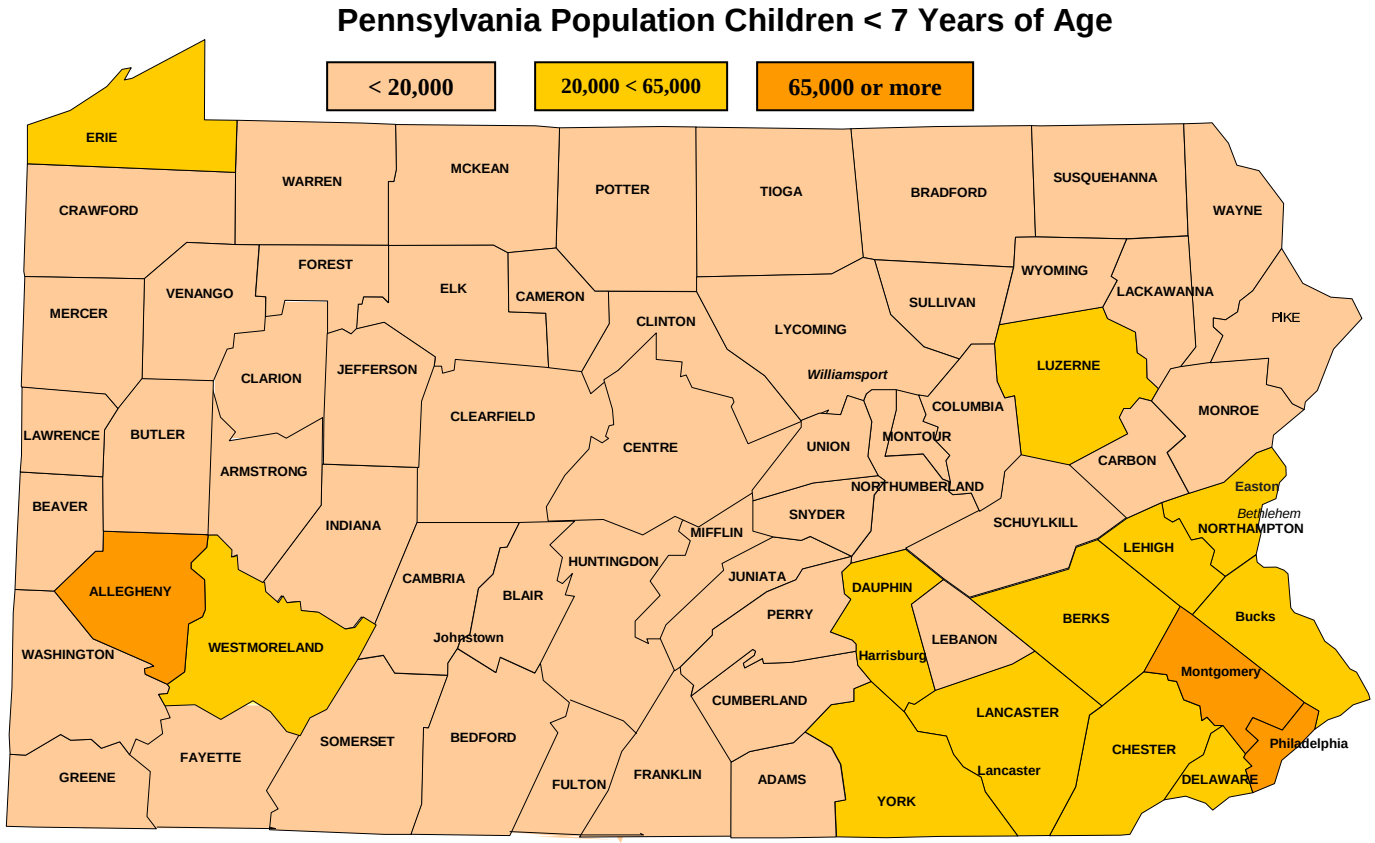
	Pennsylvania County	2010 Census Total Population	Statewide Ranking Based on Highest Total Population	2010 Census Population Children < 7	Statewide Ranking Based on Highest Population < 7	Children < 7 as a Percentage of Total Population:	Statewide Ranking Based on Highest Percentage < 7
1	**Adams**	101,407	31	8,001	31	7.89%	24-tie
2	**Allegheny**	1,223,348	2	89,121	2	7.29%	47-tie
3	**Armstrong**	68,941	38	5,038	39	7.31%	45
4	**Beaver**	170,539	20	12,625	22	7.40%	41-tie
5	**Bedford**	49,762	45	3,721	46	7.48%	38
6	**Berks**	411,442	9	36,035	9	8.76%	7
7	**Blair**	127,089	28	10,244	26	8.06%	20
8	**Bradford**	62,622	41	5,258	38	8.40%	17
9	**Bucks**	625,249	4	49,300	5	7.88%	26
10	**Butler**	183,862	19	14,395	19	7.83%	28
11	**Cambria**	143,679	25	10,308	25	7.17%	51-tie
12	**Cameron**	5,085	67	305	66	6.00%	64
13	**Carbon**	65,249	40	4,905	40	7.52%	37
14	**Centre**	153,990	22	9,435	28	6.13%	63
15	**Chester**	498,886	7	44,938	7	9.01%	4
16	**Clarion**	39,988	55	2,852	57	7.13%	54
17	**Clearfield**	81,642	36	5,772	36	7.07%	56
18	**Clinton**	39,238	57	3,100	53	7.90%	23
19	**Columbia**	67,295	39	4,545	41	6.75%	62
20	**Crawford**	88,765	35	7,108	33	8.01%	22
21	**Cumberland**	235,406	16	18,099	16	7.69%	32
22	**Dauphin**	268,100	15	23,315	14	8.70%	9
23	**Delaware**	558,979	5	47,874	6	8.56%	13
24	**Elk**	31,946	59	2,196	60	6.87%	59
25	**Erie**	280,566	14	23,447	12	8.36%	18
26	**Fayette**	136,606	26	9,715	27	7.11%	55
27	**Forest**	7,716	65	255	67	3.30%	67
28	**Franklin**	149,618	23	13,820	20	9.24%	2
29	**Fulton**	14,845	64	1,253	64	8.44%	14-tie
30	**Greene**	38,686	58	2,794	58	7.22%	50

COUNTY LEVEL: POPULATION

	Pennsylvania County	2010 Census Total Population	Statewide Ranking Based on Highest Total Population	2010 Census Population Children < 7	Statewide Ranking Based on Highest Population < 7	Children < 7 as a Percentage of Total Population:	Statewide Ranking Based on Highest Percentage < 7
31	**Huntingdon**	45,913	48	3,403	49	7.41%	40
32	**Indiana**	88,880	34	6,354	35	7.15%	53
33	**Jefferson**	45,200	49	3,626	47	8.02%	21
34	**Juniata**	24,636	61	2,213	59	8.98%	5
35	**Lackawanna**	214,437	17	16,230	17	7.57%	35
36	**Lancaster**	519,445	6	49,568	4	9.54%	1
37	**Lawrence**	91,108	33	6,878	34	7.55%	36
38	**Lebanon**	133,568	27	11,782	23	8.82%	6
39	**Lehigh**	349,497	11	30,329	10	8.68%	11
40	**Luzerne**	320,918	12	23,386	13	7.29%	47-tie
41	**Lycoming**	116,111	30	9,165	29	7.89%	24-tie
42	**McKean**	43,450	51	3,318	50	7.64%	33
43	**Mercer**	116,638	29	8,632	30	7.40%	41-tie
44	**Mifflin**	46,682	46	4,084	44	8.75%	8
45	**Monroe**	169,842	21	12,675	21	7.46%	39
46	**Montgomery**	799,874	3	67,338	3	8.42%	16
47	**Montour**	18,267	62	1,491	62	8.16%	19
48	**Northampton**	297,735	13	23,225	15	7.80%	29-tie
49	**Northumberland**	94,528	32	7,370	32	7.80%	29-tie
50	**Perry**	45,969	47	3,880	45	8.44%	14-tie
51	**Philadelphia**	1,526,006	1	138,163	1	9.05%	3
52	**Pike**	57,369	42	4,113	43	7.17%	51-tie
53	**Potter**	17,457	63	1,369	63	7.84%	27
54	**Schuylkill**	148,289	24	10,924	24	7.37%	44
55	**Snyder**	39,702	56	3,413	48	8.60%	12
56	**Somerset**	77,742	37	5,282	37	6.79%	61
57	**Sullivan**	6,428	66	342	65	5.32%	66
58	**Susquehanna**	43,356	52	3,144	51	7.25%	49
59	**Tioga**	41,981	53	3,100	53	7.38%	43
60	**Union**	44,947	50	3,058	55	6.80%	60
61	**Venango**	54,984	43	4,265	42	7.76%	31

COUNTY LEVEL: POPULATION

	Pennsylvania County	2010 Census Total Population	Statewide Ranking Based on Highest Total Population	2010 Census Population Children < 7	Statewide Ranking Based on Highest Population < 7	Children < 7 as a Percentage of Total Population:	Statewide Ranking Based on Highest Percentage < 7
62	**Warren**	41,815	54	2,942	56	7.04%	57
63	**Washington**	207,820	18	15,174	18	7.30%	46
64	**Wayne**	52,822	44	3,139	52	5.94%	65
65	**Westmoreland**	365,169	10	25,172	11	6.89%	58
66	**Wyoming**	28,276	60	2,145	61	7.59%	34
67	**York**	434,972	8	37,816	8	8.69%	10
All 67 counties		12,702,379		1,028,282		8.10%	



Note: Ten of Pennsylvania's 67 counties account for more than half (57.42 percent) of the state's total population of children under 7 years of age. Nine of those counties (Berks, Bucks, Chester, Delaware, Lancaster, Lehigh, Montgomery, Philadelphia, and York) are clustered in the southeastern part of the state and represent almost 49 percent of the state's children under 7. The other county (Allegheny) is located in the southwest.

Note 2: There are 15 counties with more than 20,000 children under 7. These 15 counties (all highlighted on the map at left) represent nearly 69 percent of the state's total population of children under 7.

CITY LEVEL

Children Tested for Lead in 2014 by:

i) **Age**
ii) **Maximum blood lead level**
iii) **City of residence** – **20 selected cities**

CITY LEVEL: CHILDREN TESTED FOR LEAD IN 2014 BY AGE, MAXIMUM BLOOD LEAD LEVEL AND CITY OF RESIDENCE

Selected Cities	The Number of Pennsylvania Children Tested for Lead in 2014 by Age, Maximum Blood Lead Level and City of Residence:																			
	1 and 2 Years (12-35 Months)				< 3 Years (0-35 Months)				< 6 Years (0-71 Months)				< 7 Years (0-83 Months)				< 16 Years (0-191 Months)			
	0-9	≥ 10	Nulls	Total Children	0-9	≥ 10	Nulls	Total Children	0-9	≥ 10	Nulls	Total Children	0-9	≥ 10	Nulls	Total Children	0-9	≥ 10	Nulls	Total Children
Allentown	1,432	27	0	1,459	2,184	40	2	2,226	2,408	43	2	2,453	2,439	43	2	2,484	2,501	44	2	2,547
Altoona	311	30	4	345	612	41	11	664	724	48	11	783	733	48	11	792	742	48	11	801
Bethlehem	672	7	2	681	815	7	2	824	888	8	2	898	898	8	2	908	922	8	2	932
Chester	425	9	7	441	548	10	10	568	811	13	12	836	827	13	12	852	838	14	12	864
Easton	583	14	6	603	672	15	6	693	744	20	7	771	751	20	7	778	775	20	7	802
Erie	1,645	61	19	1,725	2,191	65	27	2,283	2,751	89	27	2,867	2,817	93	27	2,937	3,046	94	27	3,167
Harrisburg	1,206	32	5	1,243	1,771	35	6	1,812	2,363	49	9	2,421	2,408	50	9	2,467	2,484	50	10	2,544
Johnstown	271	16	4	291	522	18	5	545	644	29	5	678	655	30	5	690	663	30	5	698
Lancaster	1,010	32	11	1,053	1,372	35	15	1,422	1,793	61	20	1,874	1,823	61	20	1,904	1,944	66	21	2,031
Lebanon	346	15	3	364	463	18	6	487	572	23	6	601	579	23	6	608	588	23	6	617
Levittown	192	0	1	193	376	1	2	379	447	1	2	450	460	1	2	463	472	1	2	475
Norristown	720	34	6	760	1,097	36	6	1,139	1,422	45	6	1,473	1,458	45	6	1,509	1,492	45	9	1,546
Philadelphia	18,114	442	1,152	19,708	24,217	495	1,936	26,648	31,824	688	2,340	34,852	32,775	707	2,381	35,863	34,317	727	2,449	37,493
Pittsburgh	4,181	78	35	4,294	6,472	97	54	6,623	7,694	126	58	7,878	7,749	128	58	7,935	7,905	130	60	8,095
Reading	1,670	77	2	1,749	1,957	82	2	2,041	2,902	114	3	3,019	3,112	119	3	3,234	3,665	120	4	3,789
Scranton	456	26	6	488	679	36	13	728	943	40	13	996	964	41	13	1,018	1,031	43	13	1,087
State Coll.	94	1	0	95	246	1	0	247	258	1	0	259	259	1	0	260	266	1	0	267
Wilkes-Barre	265	10	8	283	449	15	8	472	600	18	8	626	612	18	8	638	626	18	8	652
Williamsport	227	14	0	241	416	18	0	434	541	20	0	561	546	20	0	566	555	20	0	575
York	852	41	3	896	1,273	45	6	1,324	1,516	55	6	1,577	1,550	56	6	1,612	1,585	57	6	1,648
Total all 20 cities	**34,672**	**966**	**1,274**	**36,912**	**48,332**	**1,110**	**2,117**	**51,559**	**61,845**	**1,491**	**2,537**	**65,873**	**63,415**	**1,525**	**2,578**	**67,518**	**66,417**	**1,559**	**2,654**	**70,630**

CITY LEVEL: PERCENTAGES OF CHILDREN (< 7 YEARS) TESTED FOR LEAD - BY CITY OF RESIDENCE (FOR 20 SELECTED CITIES ONLY)

The Percentage of Pennsylvania Children, Under 7 Years of Age, Tested for Lead in 2014 by City of Residence (for 20 selected cities)			
Selected Cities	**Total Children Tested**	**2010 Census Population for Children under 7**	**Percent Tested**
Allentown	2,484	12,747	19.49%
Altoona	792	4,190	18.90%
Bethlehem	908	5,757	15.77%
Chester	852	3,852	22.12%
Easton	778	2,463	31.59%
Erie	2,937	10,269	28.60%
Harrisburg	2,467	5,829	42.32%
Johnstown	690	1,975	34.94%
Lancaster	1,904	6,356	29.96%
Lebanon	608	2,767	21.97%
Levittown	463	Levittown CDP 4,408	10.50%
Norristown	1,509	Norristown Borough 4,113	36.69%
Philadelphia	35,863	138,163	25.96%
Pittsburgh	7,935	20,390	38.92%
Reading	3,234	11,537	28.03%
Scranton	1,018	6,225	16.35%
State College	260	State College Borough 999	26.03%
Wilkes-Barre	638	3,304	19.31%
Williamsport	566	2,676	21.15%
York	1,612	5,460	29.52%
Total all 20 cities	**67,518**	**253,480**	**26.64%**

CITY LEVEL: BLLS OF 5 µg/dL AND ABOVE (BY SELECTED CITY)

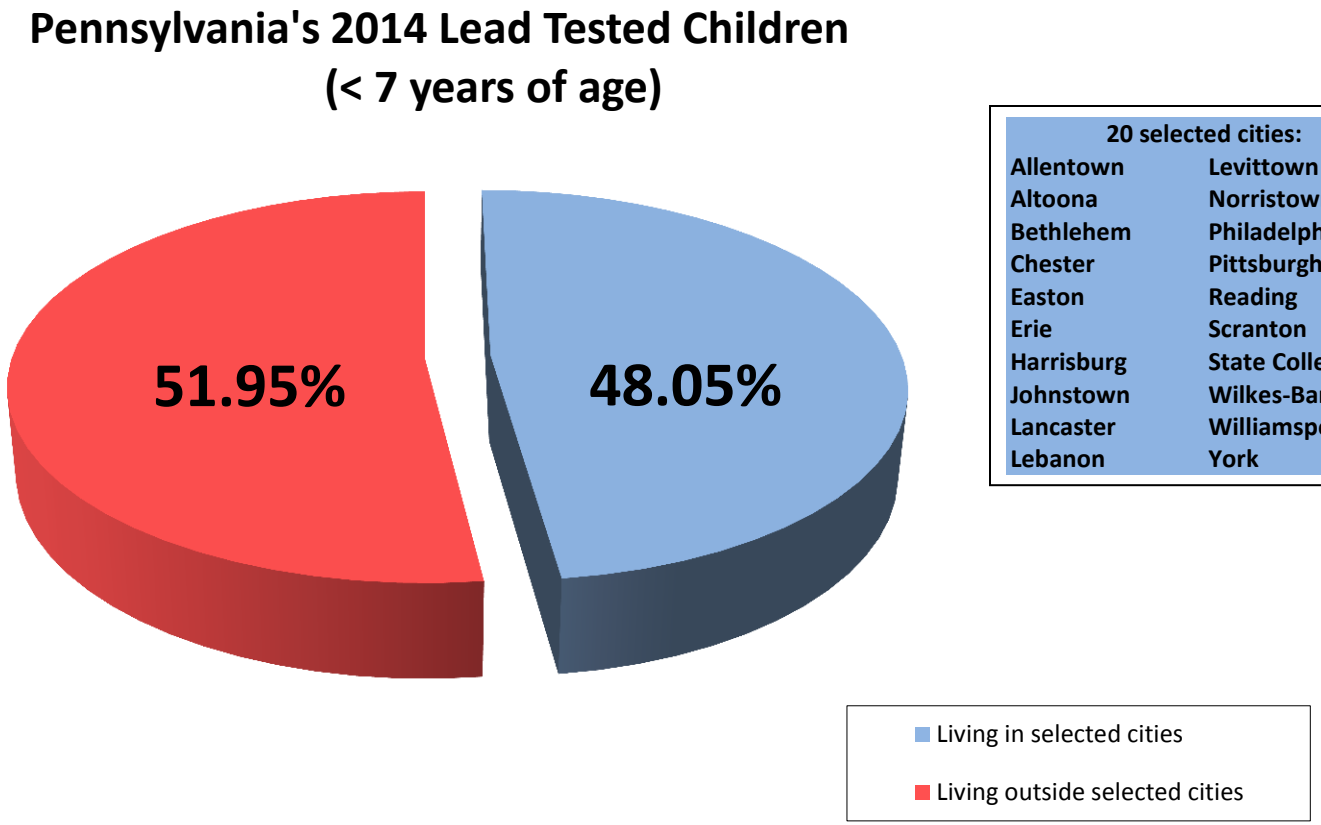
A number of cities are selected for analysis because of their risk factors for lead poisoning: high proportions of children under 7, families with low income, and older housing. The chart below shows the levels of elevated BLLs in those cities for children under 7 tested in 2014. Most of the selected cities (17 out of 20) had a higher percentage of children with BLLs ≥ 5 µg/dL than the rate for the state as a whole, and as a group, had a rate 22 percent higher than the state as a whole.

City	BLLs ≥5 µg/dL	Number of Children Tested	Percentage of Children Tested w/ BLLs ≥5 µg/dL
Allentown	574	2,484	23.11%
Altoona	162	792	20.45%
Bethlehem	130	908	14.32%
Chester	117	852	13.73%
Easton	123	778	15.81%
Erie	355	2,937	12.09%
Harrisburg	300	2,467	12.16%
Johnstown	126	690	18.26%
Lancaster	210	1,904	11.03%
Lebanon	79	608	12.99%
Levittown	10	463	2.16%
Norristown	178	1,509	11.80%
Philadelphia	3,655	35,863	10.19%
Pittsburgh	660	7,935	8.32%
Reading	522	3,234	16.14%
Scranton	198	1,018	19.45%
State College	4	260	1.54%
Wilkes-Barre	84	638	13.17%
Williamsport	68	566	12.01%
York	200	1,612	12.41%
Total	**7,755**	67,518	11.49%
Statewide	**13,171**	140,524	9.37%

Source: PA-NEDSS

CITY LEVEL: PERCENTAGE OF CHILDREN TESTED LIVING IN 20 SELECTED CITIES

	Children Living:			Percentage of total children tested living in 20 selected cities
	In Pennsylvania, but outside 20 selected cities	In 20 selected Pennsylvania cities	In Pennsylvania	
Number of children under 7 tested for lead in 2014 →	73,006	67,518	140,524	48.05%



CITY LEVEL

Children Tested and Confirmed Elevated in 2014 by:

i) **Age**
ii) **First confirmed EBLL**
iii) **City of residence** – **20 selected cities**

CITY LEVEL: CHILDREN TESTED AND CONFIRMED ELEVATED – BY AGE, FIRST CONFIRMED EBLL AND CITY OF RESIDENCE (FOR 20 SELECTED CITIES)

City	The Number of Pennsylvania Children Tested and Confirmed Elevated in 2014 by age, First Confirmed EBLL and City of Residence (20 selected cities)																			
	1 and 2 Years (12-35 Months)				< 3 Years (0-35 Months)				< 6 Years (0-71 Months)				< 7 Years (0-83 Months)				< 16 Years (0-191 Months)			
	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total	10 < 15 µg/dL	15 < 20 µg/dL	≥ 20 µg/dL	Total
Allentown	7	6	3	16	7	6	4	17	8	7	5	20	8	7	5	20	8	7	6	21
Altoona	12	1	4	17	14	2	4	20	18	2	5	25	18	2	5	25	18	2	5	25
Bethlehem	0	0	2	2	0	0	2	2	0	1	2	3	0	1	2	3	0	1	2	3
Chester	2	1	0	3	2	1	0	3	3	1	2	6	3	1	2	6	3	1	2	6
Easton	3	1	1	5	3	1	1	5	4	2	5	11	4	2	5	11	4	2	5	11
Erie	18	9	5	32	19	9	5	33	26	13	15	54	26	13	19	58	26	13	20	59
Harrisburg	11	5	2	18	11	5	2	18	16	7	6	29	16	7	7	30	16	7	7	30
Johnstown	8	0	1	9	8	0	1	9	10	3	7	20	10	3	8	21	10	3	8	21
Lancaster	11	8	5	24	12	8	5	25	21	15	11	47	21	15	11	47	23	16	13	52
Lebanon	3	1	3	7	3	1	3	7	3	1	7	11	3	1	8	12	3	1	8	12
Levittown	0	0	0	0	1	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1
Norristown	10	4	10	24	11	4	10	25	13	6	15	34	13	6	15	34	13	6	15	34
Philadelphia	157	62	59	278	170	66	62	298	247	88	113	448	251	91	121	463	258	95	132	485
Pittsburgh	24	5	7	36	27	5	7	39	34	9	14	57	34	10	15	59	34	10	17	61
Reading	30	14	23	67	34	14	23	71	45	21	39	105	45	25	42	112	45	25	43	113
Scranton	2	2	3	7	2	3	3	8	4	3	4	11	4	4	4	12	4	5	5	14
State College	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
Wilkes-Barre	2	0	0	2	2	0	0	2	4	1	0	5	4	1	0	5	4	1	0	5
Williamsport	4	3	1	8	4	3	1	8	4	3	2	9	4	3	3	10	4	3	3	10
York	15	5	4	24	15	5	4	24	18	7	9	34	19	7	10	36	20	7	10	37
Total all 20 cities	**319**	**128**	**133**	**580**	**345**	**134**	**137**	**616**	**479**	**191**	**261**	**931**	**484**	**200**	**282**	**966**	**494**	**206**	**301**	**1,001**

CITY LEVEL

U.S. Census Bureau, 2010 Census Population:

i) **Age** - **total population and children less than 7 years**
ii) **City of residence** - **20 selected cities**

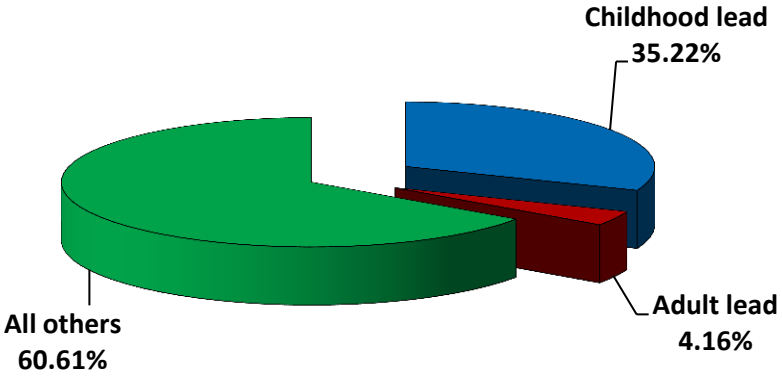
	20 Selected Cities	2010 Census Total Population	20 City Ranking Total Population	2010 Census Population Children Less Than 7 Years	20 City Ranking Children Less Than 7 Years	Children Less Than 7 Years as a Percentage of Total Population	20 City Ranking Percentage of Population Less Than 7 Years
1	Allentown	118,032	3	12,747	3	10.80%	7
2	Altoona	46,320	11	4,190	12	9.05%	Tie - 13
3	Bethlehem	74,982	7	5,757	9	7.68%	18
4	Chester	33,972	16	3,852	14	11.34%	5
5	Easton	26,800	18	2,463	18	9.19%	11
6	Erie	101,786	4	10,269	5	10.09%	9
7	Harrisburg	49,528	10	5,829	8	11.77%	4
8	Johnstown	20,978	20	1,975	19	9.41%	10
9	Lancaster	59,322	8	6,356	6	10.71%	8
10	Lebanon	25,477	19	2,767	16	10.86%	6
11	Levittown (CDP)	52,983	9	4,408	11	8.32%	15
12	Norristown Borough	34,324	15	4,113	13	11.98%	3
13	Philadelphia	1,526,006	1	138,163	1	9.05%	Tie - 13
14	Pittsburgh	305,704	2	20,390	2	6.67%	19
15	Reading	88,082	5	11,537	4	13.10%	1
16	Scranton	76,089	6	6,225	7	8.18%	16
17	State College Borough	42,034	13	999	20	2.38%	20
18	Wilkes-Barre	41,498	14	3,304	15	7.96%	17
19	Williamsport	29,381	17	2,676	17	9.11%	12
20	York	43,718	12	5,460	10	12.49%	2
	Total all 20 cities	2,682,419		253,480		9.45%	

Disease Reports to PA-NEDSS in 2014

Disease Reports to PA-NEDSS During 2014

Number of Reports Submitted to PA-NEDSS during Calendar Year 2014	Condition:				Total Reports for 2014
	Childhood Lead	Adult Lead	Total Lead Reports	All Others (89 different initial conditions*)	
(Reported Date = 1/1/2014 through 12/31/2014, inclusive) →	169,638	20,079	189,717	357,215	546,932
Percentage of total →	31.02%	3.67%	34.69%	65.31%	100%

Reports to PA-NEDSS in 2014



Childhood lead 31.02% | Adult lead 3.67% | All others 65.31%

In 2014, lead reports comprised nearly 35 percent of all reports in PA-NEDSS. The vast majority of lead reports (more than 89 percent) were childhood lead reports.

*All Others (89 different initial conditions) – Examples:
Hepatitis C;
Chlamydia Trachomatis infection;
Lyme disease;
Hepatitis B;
Influenza A;
Low CD4 count (<200 or <14%);
Syphilis;
Gonorrhea; etc.

NOTE: For confidentiality reasons, this figure excludes HIV/AIDS reports.

Endnotes

[1] **The Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS)** – The Pennsylvania Department of Health's online disease surveillance system. It serves as the department's reporting system for all reportable conditions. It has been utilized by the Childhood Lead Poisoning Prevention Program since the spring of 2003.

[2] **Children less than 7 years of age (< 7 years**) – Children between 0 and 83 months of age at time of specimen collection.

[3] **Confirmed elevated blood lead levels** - Those children identified to be confirmed elevated as defined by the Council for State and Territorial Epidemiologists (CSTE). CSTE defines Confirmed Elevated as follows: A child with one venous blood specimen ≥ 10 µg/dL, or any combination of two capillary and/or unknown blood specimens ≥ 10 µg/dL drawn within 12 weeks of each other.

[4] **Children less than 3 years of age (< 3 years)** – Children between 0 and 35 months of age, inclusive, at time of specimen collection.

[5] **Geometric mean** - The geometric mean, in mathematics, is a type of mean or average which indicates the central tendency or typical value of a set of numbers. It is similar to the arithmetic mean (which most think of as "the average"), except that, instead of adding the set of numbers and then dividing the sum by the count of numbers in the set (n), the numbers are multiplied and then the nth root of the resulting product is taken. This measure is preferred when identifying a representative value for blood lead levels. The childhood lead datasets do contain outlying results that would skew the arithmetic mean or "average" and, possibly, lead to inaccurate conclusions. The geometric mean, therefore, serves as a better representative value of the dataset. For example, assume you have a dataset with two values in it, 2 and 8. The "average" (arithmetic mean) of those would be (2+8)/2 = 5. The geometric mean, however, is the square root of [(2)X(8)], which is 4. As you see, the "average" is 5, but the geometric mean is 4. Both are a type of "mean." Both are a measure of central tendency. Calculating and utilizing the geometric mean is typically how blood lead levels are handled. Most articles indicating that childhood blood lead levels have dropped over time are referencing the geometric mean of those blood lead levels. And, as is typically done, we provided the geometric mean of maximum blood lead levels (highest values) within this report.

[6] **Pennsylvania children tested for lead in 2014 by age and maximum blood lead level** – Those children reported to be residing in Pennsylvania and having had a lead test done with a specimen collection date between 01/01/2014 and 12/31/2014, inclusive, by age and maximum blood lead level (BLL). As children are often tested more than once during a given time period, this table reflects those children tested by their single maximum (highest) blood lead level result during the calendar year. Source: The Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS), as of April 6, 2015.

[7] **Percentage of Pennsylvania's 2010 census population tested for lead in 2014, by age cohort =** [(Total Children Tested for Lead) ÷ (Total 2010 Census Age Cohort Population) x 100], rounded two decimal places.

[8] **Pennsylvania children tested and confirmed elevated in 2014 by age and categorized by first confirmed elevated blood lead level** – Those children reported to be residing in Pennsylvania and having been tested and confirmed elevated during 2014, by age and first reported confirmed blood lead level. Here, "confirmed elevated" reflects those children identified to have a reported confirmed elevated blood lead level during 2014. The Council for State and Territorial Epidemiologists (CSTE) defines confirmed elevated as follows: A child with one venous blood specimen ≥ 10 µg/dl or any combination of two capillary and/or unknown blood specimens ≥ 10 µg/dL drawn within 12 weeks of each other. Source: The Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS), as of April 6, 2015.

[9] **Percentage of Pennsylvania's 2014 tested children confirmed elevated, by age cohort** = [(Total children confirmed elevated in 2014) ÷ (Total children tested in 2014) X 100], rounded two decimal places.

[10] **Pennsylvania children tested in 2014 by age and race** – Those children reported to be residing in Pennsylvania and having been tested and confirmed elevated during 2014, by age and race. Source: The Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS), as of April 6, 2015.

[11] **Pennsylvania children tested and confirmed elevated in 2014 by age and race** – Those children reported to be residing in Pennsylvania and having been tested and confirmed elevated during 2014, by age and race. Here, "confirmed elevated" reflects those children identified to have a reported confirmed elevated blood lead level during 2014. The Council for State and Territorial Epidemiologists (CSTE) defines Confirmed Elevated as follows: A child with one venous blood specimen ≥ 10 µg/dL, or any combination of two capillary and/or unknown blood specimens ≥ 10 µg/dL drawn within 12 weeks of each other. Source: The Pennsylvania National Electronic Disease Surveillance System (PA-NEDSS), as of April 6, 2015.

[13] **Rural and Urban Primary Care Providers** – Center for Rural PA and Department of Health, Bureau of Health Planning. Data for 2012 was the most recent available.

[13] **Percentage of Children in Rural and Urban Counties** – Population numbers based on 2010 Census, Summary File 1, Table QT-P2, U.S. Census Bureau.

[15] **CDC Reference Value –** For more information on the CDC Reference Value, please see "Recommendations of the Advisory Committee for Childhood Lead Poisoning Prevention – Low Level Lead Exposure Harms Children: A Renewed Call of Primary Prevention" at: http://www.cdc.gov/nceh/lead/ACCLPP/blood_lead_levels.htm.

[15] **Population** – Numbers based on 2010 Census, Summary File 1, Table QT-P2, U.S. Census Bureau.

[16] **Home ownership and occupancy** – Numbers based on 2010 American Community Survey, Tables B25002 and S2502, U.S. Census Bureau.

[17] **Total housing units** = Total occupied units + Total vacant units.

[18] **Age of housing** – Numbers based on 2010 ACS Survey, Table B25034, U.S. Census Bureau. The ACS Survey was used because the 2010 Census did not break down housing by year structure built.

[19] **Estimated total units built before 1978** - The estimated number of housing units built 1970 – 1977 was calculated as follows: (80%) x (total housing units built 1970 through 1979). This number was then added to the number built before 1970 to arrive at the total.

[20] **Estimated percentage of total housing units built pre-1978** = [(Estimated total units built pre-1978) ÷ (Total housing units)] X 100, rounded two decimal places.

[21] **Percentage of total housing units built pre-1950** = [(Total units built before 1950) ÷ (Total housing units)] X 100, rounded two decimal places.

[22] **Nulls** – Those children reported to have been tested for lead during 2014 (specimen collection dates between 01/01/2014 and 12/31/2014, inclusive) with maximum blood lead levels (highest) reported null, or blank. Blank quantitative test results are reported for various reasons. In some situations, the null represents an analyzed blood sample (by the laboratory) that contained a very, very low amount of lead and for which a value, or number, could not be assigned, given the low amount. These get reported with blank quantitative fields and "none detected" in the corresponding qualitative field. In other situations, these nulls represent those children whose blood samples were never analyzed at the laboratory for various reasons. For example, the tube holding the blood sample may have broken before an analysis could be performed. Also, perhaps the quantity of blood within the tube was "insufficient" for analysis. These children do need to be re-tested, since nothing is known about their true blood lead levels.

[23] **Total children tested** = (Total children with max BLLs that were low) + (Total children with max BLLs that were high) + (Total children with max BLLs that were null).

[24] **Total children tested** – Total children tested for lead in 2014 and residing in the reported County (at time of specimen collection).

[25] **Percent tested** = [(Total children tested) ÷ (2010 census population)] X 100, rounded to two decimal places.

[26] **Confirmed elevated** - Those children identified to be confirmed elevated as defined by the Council for State and Territorial Epidemiologists (CSTE). CSTE defines Confirmed Elevated as follows: A child with one venous blood specimen ≥ 10 µg/dL, or any combination of two capillary and/or unknown blood specimens ≥ 10 µg/dL drawn within 12 weeks of each other.

[27] **First confirmed elevated blood lead level** – Children in this table were categorized by their first reported confirmed elevated blood lead level in 2014.

[28] **Percent confirmed elevated** = [(Total children confirmed elevated) ÷ (Total children tested)] X 100, rounded two decimal places.

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