



**OKLAHOMA CHILDHOOD LEAD  
POISONING PREVENTION PROGRAM**

**2010 SURVEILLANCE DATA REPORT**

**Prepared by:**

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# Surveillance Highlights 2010

- The number of children less than or equal to ( $\leq$ ) six years of age receiving a blood lead test in Oklahoma has increased from 9,519 in 2000 to 40,962 in 2010 (**Figure 1**).
- The blood lead testing rate in Oklahoma has increased from 3.4% in 2000 to 14.5% in 2010 (**Figure 1**).
- The case rate or prevalence of children  $\leq$  six years of age with elevated blood lead levels (EBLLs) in Oklahoma has decreased from 1.5% in 2000 to 0.4% in 2010 (**Figure 1**), a 73.3% decrease.
- According to the most recent data from National Health and Nutrition Examination Survey (NHANES), the prevalence of EBLLs in the United States has decreased from 8.6% in 1988-1991 to 1.4% in 1999-2004, an 83.7% decrease.
- There were 149 (0.4%) children  $\leq$  six years of age with an elevated blood lead level (EBLL) in Oklahoma. Of the total EBLL cases, 144 cases were incident (new) cases (**Figure 2, Table 1**).
- The geometric mean blood lead level for children  $\leq$  six years of age in Oklahoma was 2.1  $\mu\text{g}/\text{dL}$ .
- **Map 1** shows the distribution of EBLL cases in different counties throughout the state.
- Twenty-one zip codes within nine Oklahoma counties have been identified as high-risk target area (HRTA) zip codes in which there is a likelihood of a high number of young children at risk for lead exposure (**Map 2**).
- High proportion of older housing, particularly those built prior to 1950, high proportion of children living in poverty, high EBLL prevalence rate, and high proportion of minority

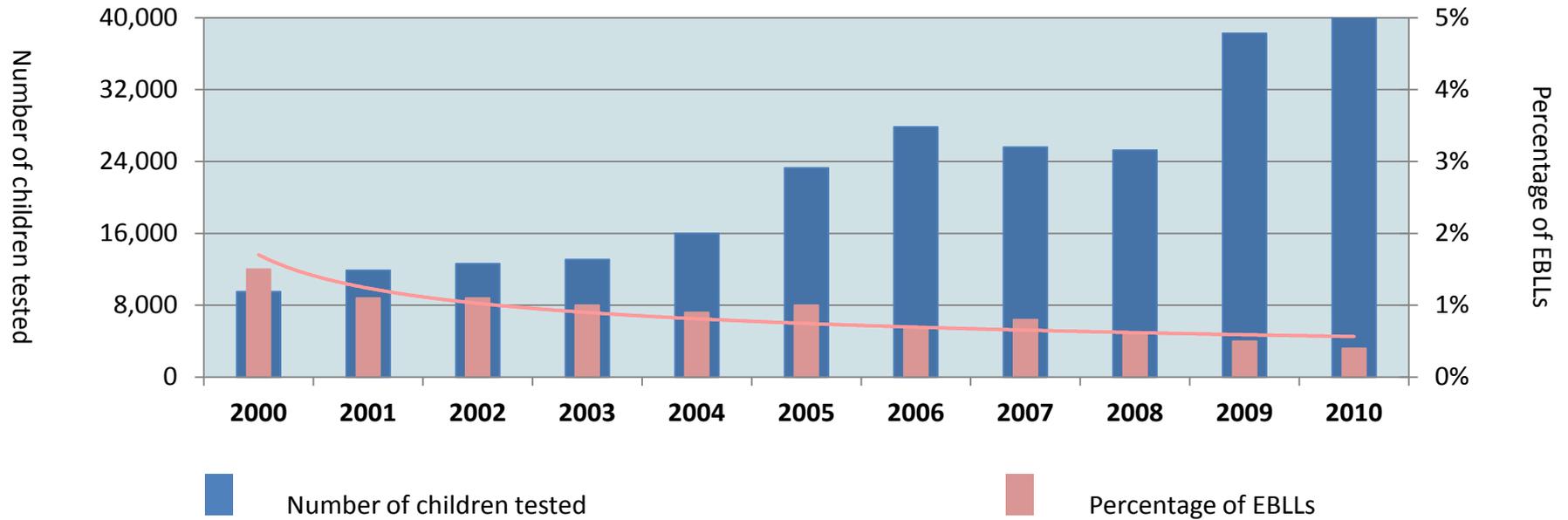
populations are the factors used to identify HRTA zip codes. **Table 2** provides data related to these risk factors for all the HRTA zip codes.

- The blood lead testing rate for children  $\leq$  six years of age living in HRTA zip codes was 20.1% (**Table 2**).
- There were 42 (0.6%) children  $\leq$  six years of age living in HRTA zip codes with an EBLL (**Table 2**).
- There were 13 (0.2%) children  $\leq$  six years of age living in HRTA zip codes with blood lead levels  $\geq 20$   $\mu\text{g}/\text{dL}$ .
- There were 29 (0.4%) children  $\leq$  six years of age living in HRTA zip codes with blood lead levels between 10-19  $\mu\text{g}/\text{dL}$ .
- There were 451 (6.2%) children  $\leq$  six years of age living in HRTA zip codes with blood lead levels between 5-9  $\mu\text{g}/\text{dL}$ .
- The geometric mean blood lead level for children  $\leq$  six years of age living in HRTA zip codes was 2.4  $\mu\text{g}/\text{dL}$ .
- The case rate or prevalence of SoonerCare (Oklahoma Medicaid program) members  $\leq$  six years of age living in HRTA zip codes with an EBLL (0.6%) was comparable with non-SoonerCare members with an EBLL (0.5%) living in HRTA zip codes.
- During 2000-2010, the case rate or prevalence of children  $\leq$  six years of age with EBLLs has declined in both the SoonerCare (1.7% to 0.4%) and the non-SoonerCare populations (1.3% to 0.3%). This current trend suggests not a huge disparity in EBLL prevalence among the SoonerCare and Non-SoonerCare populations statewide (**Figure 3**). Disparities may continue to exist within some high-risk target areas (HRTAs), however.

- A similar trend has been observed nationwide as indicated by the NHANES data suggesting that the EBLL disparity which once existed between Medicaid eligible children and non-Medicaid eligible children is diminishing (21.0% for Medicaid eligible children vs. 5.0% for non-Medicaid eligible children during 1988-1991; 8.5% for Medicaid eligible children vs. 2.5% for non-Medicaid eligible children during 1991-1994; and 1.9% for Medicaid eligible children vs. 1.1% for non-Medicaid eligible children during 1999-2004).
- Among the children identified as EBLL cases during 2010, the percentage of males was slightly higher as compared to females (55.0% vs. 45.0% - **Figure 4**). However, the case rate or prevalence of EBLs among males and females were comparable during 2010 (0.4% for males vs. 0.3% for females).
- Among the children identified as EBLL cases during 2010, the percentage of children < 36 months of age was higher as compared to children > 36 and < 72 months of age during 2010 (68.5% vs. 31.5% - **Figure 4**). However, the case rate or prevalence of EBLs among children < 36 months of age and children  $\geq 36$  and  $\leq 72$  months of age were similar during 2010 (0.4% for children < 36 months of age vs. 0.4% for children  $\geq 36$  and  $\leq 72$  months of age).
- Among the children identified as EBLL cases during 2010, the percentage of SoonerCare (Oklahoma's Medicaid) children was higher as compared to children not on SoonerCare (67.8% vs. 32.2% - **Figure 4**). However, the case rate or prevalence of EBLs among children enrolled in SoonerCare and children not on SoonerCare were comparable during 2010 (0.4% for children enrolled in SoonerCare vs. 0.3% for children not on SoonerCare).
- OCLPPP provided limited follow-up for 1,730 children  $\leq$  six years of age whose blood lead levels were between 5 and 9  $\mu\text{g}/\text{dL}$  (**Figure 5**).

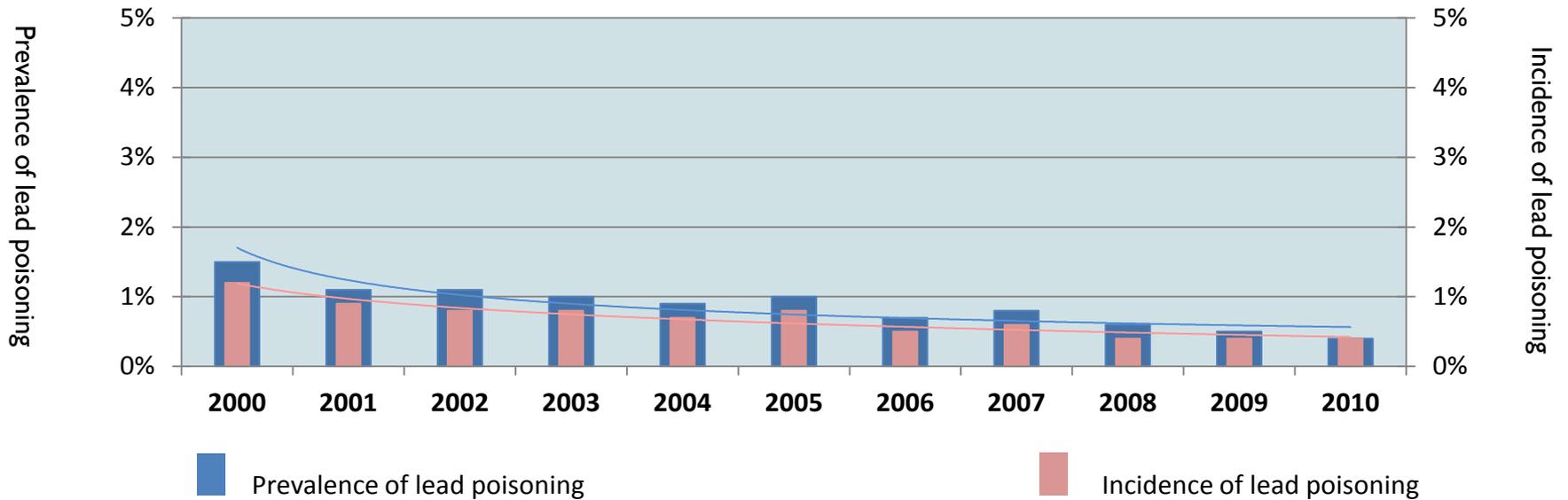
- Case management was provided to parents of 119 children  $\leq$  six years of age with an EBLL between 10-19  $\mu\text{g}/\text{dL}$  (**Figure 5**).
- Case management was provided to parents of 30 children  $\leq$  six years of age with an EBLL between  $\geq 20$   $\mu\text{g}/\text{dL}$ . This also included environmental investigations for 21 children (**Figure 5**).

# Figure 1: Oklahoma Blood Lead Surveillance, 2000-2010



Years	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Population of children < 6 years of age	283,208	283,208	283,208	283,208	283,208	283,208	283,208	283,208	283,208	283,208	283,208
Number of children tested	9,519 (3.4%)	11,881 (4.2%)	12,623 (4.5%)	13,076 (4.6%)	15,972 (5.6%)	23,279 (8.2%)	27,859 (9.8%)	25,615 (9.0%)	25,253 (8.9%)	38,264 (13.5%)	40,962 (14.5%)
Percentage of EBLLs	1.5%	1.1%	1.1%	1.0%	0.9%	1.0%	0.7%	0.8%	0.6%	0.5%	0.4%

## Figure 2: Prevalence and Incidence of Lead Poisoning in Oklahoma, 2000-2010



Years	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Prevalent cases	143 (1.5%)	134 (1.1%)	137 (1.1%)	137 (1.0%)	139 (0.9%)	230 (1.0%)	198 (0.7%)	195 (0.8%)	143 (0.6%)	176 (0.5%)	149 (0.4%)
Incident cases	116 (1.2%)	108 (0.9%)	105 (0.8%)	101 (0.8%)	104 (0.7%)	182 (0.8%)	137 (0.5%)	146 (0.6%)	96 (0.4%)	137 (0.4%)	144 (0.4%)

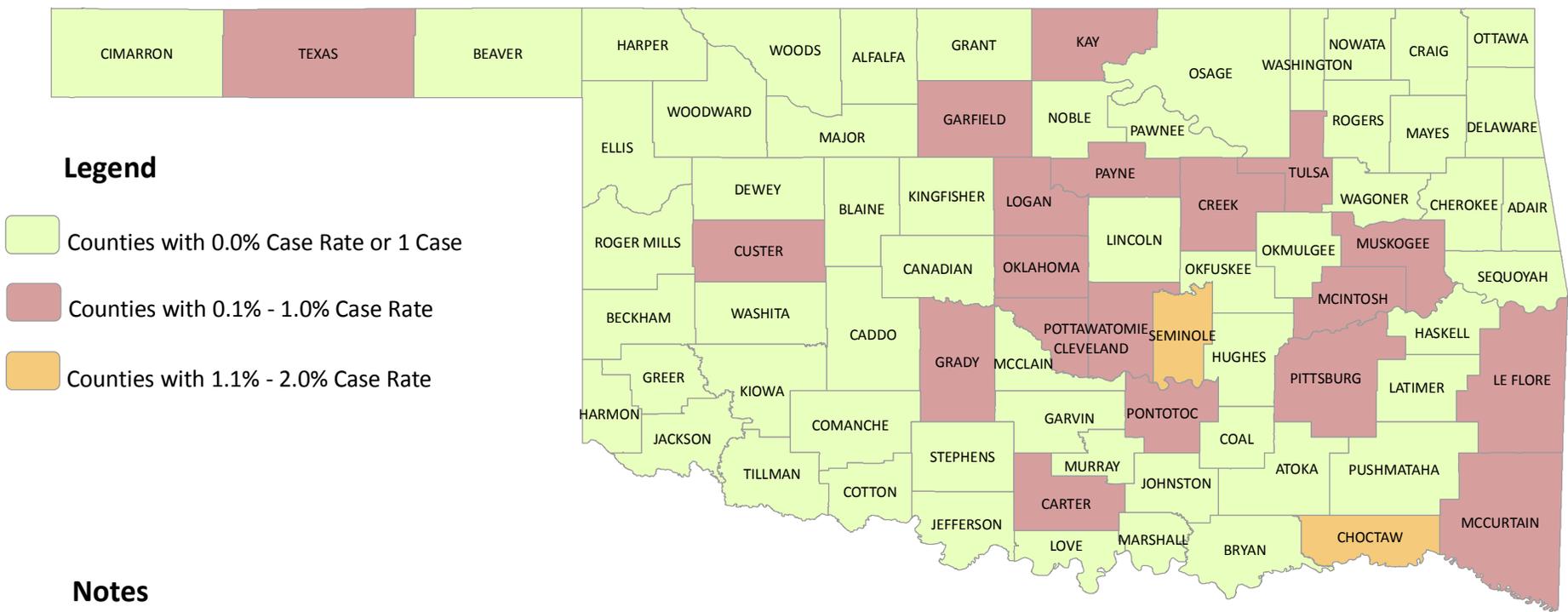
**Table 1: Oklahoma Blood Lead Testing Data, by County - 2010**

COUNTY	POPULATION OF CHILDREN < 6 YEARS OF AGE	NUMBER OF CHILDREN TESTED	TOTAL EBLL AND CASE RATE (%)
ADAIR	2,223	425	0 (0.0%)
ALFALFA	283	26	0 (0.0%)
ATOKA	1,013	162	1 (0.6%)
BEAVER	425	82	0 (0.0%)
BECKHAM	1,983	425	1 (0.2%)
BLAINE	906	66	0 (0.0%)
BRYAN	3,369	658	1 (0.2%)
CADDO	2,416	565	1 (0.2%)
CANADIAN	9,044	690	0 (0.0%)
CARTER	4,133	664	4 (0.6%)
CHEROKEE	3,760	654	1 (0.2%)
CHOCTAW	1,293	348	4 (1.1%)
CIMARRON	159	47	0 (0.0%)
CLEVELAND	17,598	1,704	5 (0.3%)
COAL	423	101	0 (0.0%)
COMANCHE	10,950	1,374	1 (0.1%)
COTTON	443	76	0 (0.0%)
CRAIG	1,094	196	1 (0.5%)
CREEK	5,376	670	2 (0.3%)
CUSTER	2,391	418	2 (0.5%)
DELAWARE	2,802	385	1 (0.3%)
DEWEY	356	20	0 (0.0%)
ELLIS	324	31	0 (0.0%)
GARFIELD	5,548	391	4 (1.0%)
GARVIN	2,205	238	1 (0.4%)
GRADY	4,120	850	2 (0.2%)
GRANT	245	19	1 (5.3%)
GREER	394	128	0 (0.0%)
HARMON	223	73	0 (0.0%)
HARPER	280	61	0 (0.0%)
HASKELL	1,007	110	1 (0.9%)
HUGHES	1,034	163	1 (0.6%)
JACKSON	2,468	571	1 (0.2%)
JEFFERSON	484	107	0 (0.0%)
JOHNSTON	877	202	0 (0.0%)
KAY	4,040	1,098	10 (0.9%)
KINGFISHER	1,197	186	0 (0.0%)
KIOWA	650	192	1 (0.5%)
LATIMER	701	139	0 (0.0%)
LE FLORE	4,389	766	7 (0.9%)

COUNTY	POPULATION OF CHILDREN < 6 YEARS OF AGE	NUMBER OF CHILDREN TESTED	TOTAL EBLL AND CASE RATE (%)
LINCOLN	2,396	481	0 (0.0%)
LOGAN	2,909	373	2 (0.5%)
LOVE	727	148	0 (0.0%)
MCCLAIN	2,711	358	0 (0.0%)
MCCURTAIN	2,837	489	4 (0.8%)
MCINTOSH	1,364	215	2 (0.9%)
MAJOR	509	50	0 (0.0%)
MARSHALL	1,280	349	1 (0.3%)
MAYES	3,274	495	1 (0.2%)
MURRAY	977	191	1 (0.5%)
MUSKOGEE	5,988	1,002	6 (0.6%)
NOBLE	859	122	0 (0.0%)
NOWATA	766	73	1 (1.4%)
OKFUSKEE	810	196	0 (0.0%)
OKLAHOMA	70,835	8,292	41 (0.5%)
OKMULGEE	3,192	662	1 (0.2%)
OSAGE	2,863	302	1 (0.3%)
OTTAWA	2,515	815	0 (0.0%)
PAWNEE	1,224	227	1 (0.4%)
PAYNE	5,352	600	3 (0.5%)
PITTSBURG	3,329	802	2 (0.2%)
PONTOTOC	3,149	438	2 (0.5%)
POTTAWATOMIE	5,547	1,020	7 (0.7%)
PUSHMATAHA	865	217	0 (0.0%)
ROGERS	6,280	348	0 (0.0%)
ROGER MILLS	309	33	0 (0.0%)
SEMINOLE	2,133	567	8 (1.4%)
SEQUOYAH	3,328	473	0 (0.0%)
STEPHENS	3,456	547	0 (0.0%)
TEXAS	2,299	338	2 (0.6%)
TILLMAN	621	216	0 (0.0%)
TULSA	57,000	4,369	6 (0.1%)
WAGONER	5,512	287	1 (0.3%)
WASHINGTON	3,774	387	1 (0.3%)
WASHITA	1,029	123	0 (0.0%)
WOODS	532	37	1 (2.7%)
WOODWARD	1,749	239	0 (0.0%)
<b>OKLAHOMA</b>	<b>283,208</b>	<b>40,962</b>	<b>149 (0.4%)</b>

- Population of children < 6 years of age was calculated from US Census Bureau 2000.
- EBLL (Elevated Blood Lead Level): An EBLL is defined as a confirmed concentration of greater than or equal to ( $\geq$ ) 10 micrograms ( $\mu\text{g}$ ) of lead per deciliter (dL) of blood measured on a venous sample.
- Case rate is defined as the number of children less than or equal to ( $\leq$ ) 6 years of age with an EBLL divided by the total number of children  $\leq$  6 years of age who received a blood lead test.

# Map 1: EBLL Case Rates in Oklahoma, By County - 2010

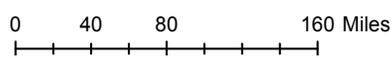


### Legend

- Counties with 0.0% Case Rate or 1 Case
- Counties with 0.1% - 1.0% Case Rate
- Counties with 1.1% - 2.0% Case Rate

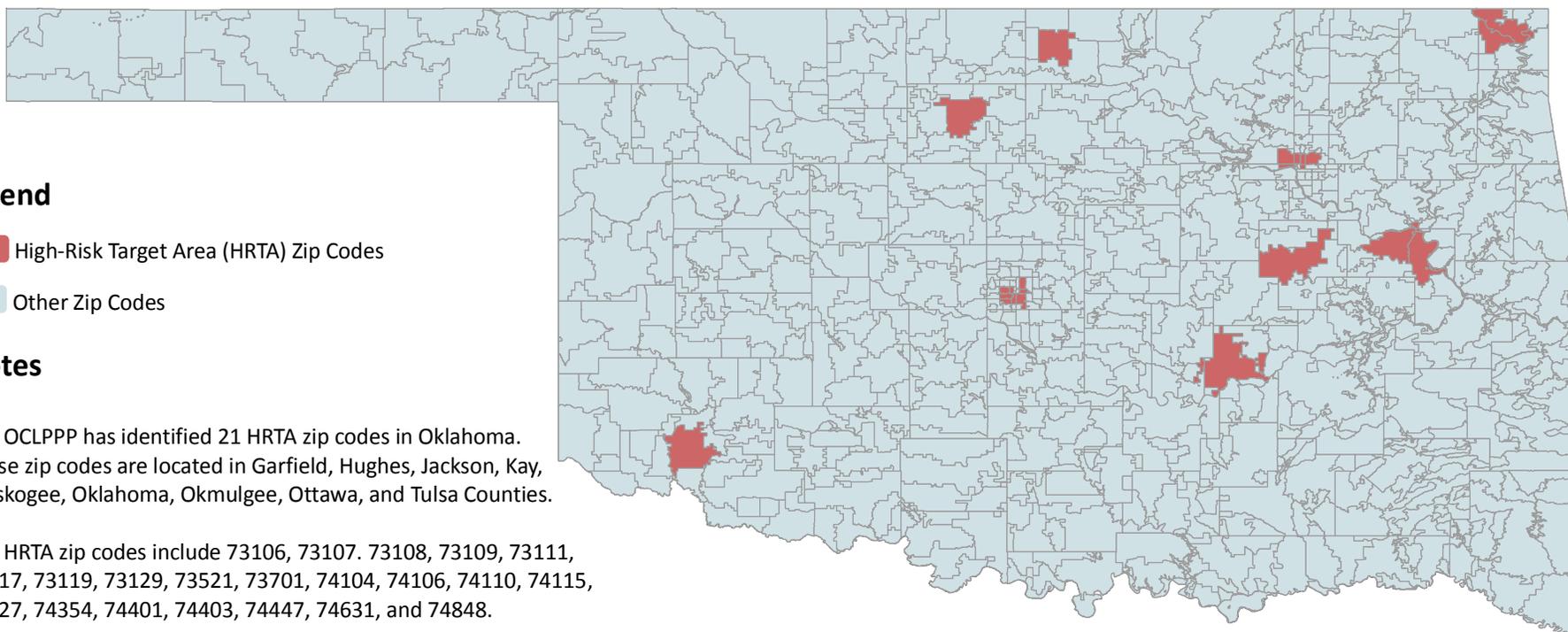
### Notes

During 2010, there were 149 EBLL cases in Oklahoma.  
 The overall case rate in Oklahoma during 2010 was 0.4%.



Childhood Lead Poisoning Prevention Program  
 Screening and Special Services  
 Prevention and Preparedness Service  
 Oklahoma State Department of Health

# Map 2: High-Risk Target Areas (HRTA) Zip Codes for Childhood Lead Poisoning



## Legend

-  High-Risk Target Area (HRTA) Zip Codes
-  Other Zip Codes

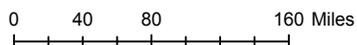
## Notes

The OCLPPP has identified 21 HRTA zip codes in Oklahoma. These zip codes are located in Garfield, Hughes, Jackson, Kay, Muskogee, Oklahoma, Okmulgee, Ottawa, and Tulsa Counties.

The HRTA zip codes include 73106, 73107, 73108, 73109, 73111, 73117, 73119, 73129, 73521, 73701, 74104, 74106, 74110, 74115, 74127, 74354, 74401, 74403, 74447, 74631, and 74848.

The HRTA zip codes are identified using the following criteria:

- 1- Zip codes having the highest proportion of pre-1950 housing;
- 2- Zip codes having the highest proportion of children under six years of age living in poverty;
- 3- Zip codes having high elevated blood lead level (EBLL) prevalence rate; and
- 4- Zip codes having the highest proportion of minority populations.



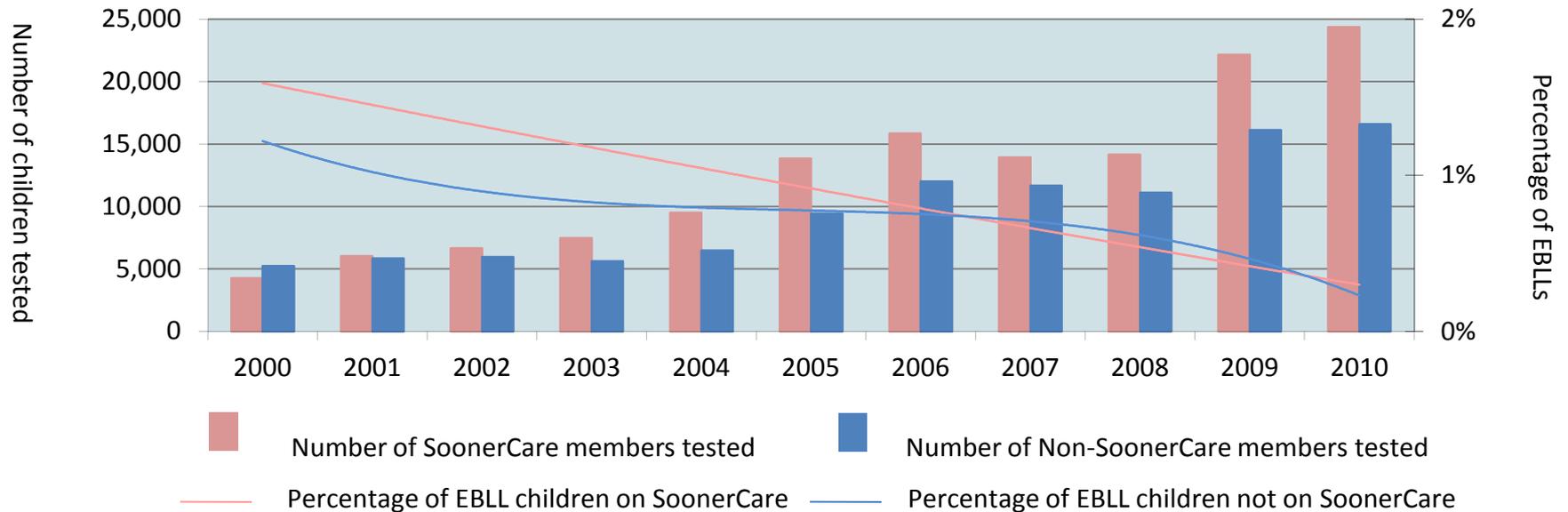
Childhood Lead Poisoning Prevention Program  
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**Table 2: Oklahoma Blood Lead Testing Data, by High-Risk Target Areas (HRTA) - 2010**

	TOTAL POPULATION	POPULATION OF CHILDREN < 6 YEARS OF AGE	CHILDREN < 6 YEARS OF AGE LIVING BELOW POVERTY (%)	TOTAL HOUSING UNITS	PRE-1950 HOUSING UNITS (%)	MINORITY POPULATION			NUMBER OF CHILDREN TESTED	EBLL AND CASE RATE (%)
						HISPANICS (%)	AFRICAN AMERICAN (%)	AMERICAN INDIAN AND ALASKAN NATIVE (%)		
73106	13,485	1,182	381 (32.2%)	6,359	3,853 (60.6%)	3,497 (25.9%)	1,696 (12.6%)	726 (5.4%)	220	1 (0.5%)
73107	24,832	2,372	463 (19.5%)	12,519	6,548 (52.3%)	3,757 (15.1%)	2,016 (8.1%)	1,112 (4.5%)	511	1 (0.2%)
73108	15,229	1,994	1,081 (54.2%)	5,967	2,324 (39.0%)	6,628 (43.5%)	1,090 (7.2%)	982 (6.4%)	569	3 (0.5%)
73109	19,453	1,999	787 (39.4%)	8,535	3,367 (39.5%)	6,234 (32.0%)	1,000 (5.1%)	1,081 (5.6%)	609	6 (1.0%)
73111	12,658	935	459 (49.1%)	6,038	2,146 (35.5%)	233 (1.8%)	11,319 (89.4%)	130 (1.0%)	195	0 (0.0%)
73117	5,128	662	248 (37.5%)	2,838	1,042 (36.7%)	112 (2.2%)	4,377 (85.4%)	61 (1.2%)	110	1 (0.9%)
73119	28,584	3,184	1,199 (37.7%)	10,940	2,477 (22.6%)	7,337 (25.7%)	1,835 (6.4%)	1,790 (6.3%)	750	4 (0.5%)
73129	19,849	2,318	970 (41.8%)	9,038	2,780 (30.85)	5,036 (25.4%)	2,400 (12.1%)	1,194 (6.0%)	632	6 (0.9%)
74104	14,050	1,012	255 (25.2%)	6,522	4,463 (68.4%)	1,908 (13.6%)	944 (6.7%)	808 (5.8%)	106	1 (0.9%)
74106	18,106	1,888	992 (52.6%)	8,115	2,788 (34.4%)	837 (4.6%)	14,560 (80.4%)	395 (2.2%)	263	1 (0.4%)
74110	15,267	1,619	916 (56.6%)	6,366	2,786 (43.8%)	2,457 (16.1%)	4,064 (26.6%)	1,231 (8.1%)	244	0 (0.0%)
74115	23,687	2,617	727 (27.8%)	9,882	2,560 (25.9%)	2,046 (8.6%)	3,645 (15.4%)	2,012 (8.5%)	303	3 (1.0%)
74127	18,108	1,516	390 (25.7%)	7,974	3,227 (40.5%)	940 (5.2%)	4,568 (25.2%)	1,308 (7.2%)	183	1 (0.5%)
74401	18,018	1,682	665 (39.5%)	8,125	2,566 (31.6%)	431 (2.4%)	6,245 (34.7%)	1,787 (9.9%)	295	2 (0.7%)
74403	30,035	2,506	573 (22.9%)	13,258	3,089 (23.3%)	980 (3.3%)	1,181 (3.9%)	4,598 (15.3%)	390	2 (0.5%)
73521	23,130	2,363	480 (20.3%)	8,554	1,987 (23.2%)	3,836 (16.6%)	2,256 (9.8%)	351 (1.5%)	484	1 (0.2%)
74447	17,997	1,507	504 (33.4%)	8,163	2,763 (33.8%)	333 (1.9%)	3,219 (17.9%)	2,466 (13.7%)	352	1 (0.3%)
74354	17,861	1,371	391 (28.5%)	7,890	2,330 (29.5%)	390 (2.2%)	168 (0.9%)	2,826 (15.8%)	472	0 (0.0%)
74631	8,378	698	189 (27.1%)	3,833	1,879 (49.0%)	455 (5.4%)	10 (0.1%)	348 (4.2%)	195	4 (2.1%)
73701	23,646	2,098	752 (35.8%)	10,809	4,194 (38.8%)	1,630 (6.9%)	1,194 (5.0%)	621 (2.6%)	257	3 (1.2%)
74848	8,228	587	136 (23.2%)	3,379	1,312 (38.8%)	242 (2.9%)	525 (6.4%)	1,186 (14.4%)	109	1 (0.9%)
ALL HRTA ZIP CODES	375,729	36,110	12,558	165,104	60,481 (36.6%)	49,319 (13.1%)	68,312 (18.2%)	27,013 (7.2%)	7,249 (20.1%)	42 (0.6%)
OKLAHOMA	3,450,654	283,208	63,051 (22.3%)	1,514,400	272,451 (18.0%)	179,304 (5.2%)	260,968 (7.6%)	273,230 (7.9%)	40,962 (14.5%)	149 (0.4%)
U.S.	281,421,906	23,140,901	4,101,689 (17.7%)	115,904,641	25,815,821 (22.3%)	35,305,818 (12.5%)	34,658,190 (12.3%)	2,475,956 (0.9%)	-	-

- Total population, population of children < 6 years of age, children < 6 years of age living below poverty, total housing units, pre-1950 housing units, and minority population calculated from US Census Bureau 2000.
- EBLL (Elevated Blood Lead Level): An EBLL is defined as a confirmed concentration of greater than or equal to (≥) 10 micrograms (µg) of lead per deciliter (dL) of blood measured on a venous sample.
- Case rate is defined as the number of children less than or equal to (≤) 6 years of age with an EBLL divided by the total number of children ≤ 6 years of age who received a blood lead test.

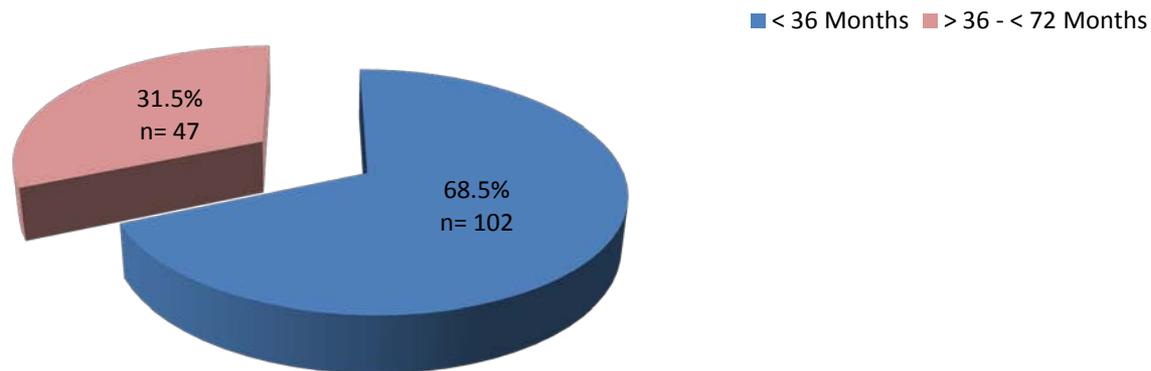
### Figure 3: Comparison of Testing and EBLL Rates in SoonerCare and Non-SoonerCare Populations, 2000-2010



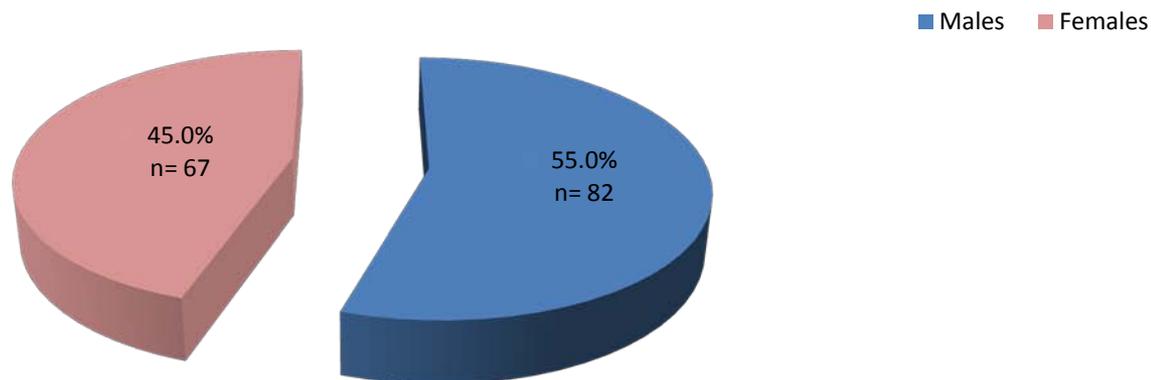
Years	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number of SoonerCare members tested	4,274	6,026	6,656	7,465	9,497	13,848	15,852	13,932	14,149	22,147	24,370
Percentage of EBLL children on SoonerCare	1.7%	1.3%	1.3%	1.3%	0.9%	1.0%	0.7%	0.7%	0.6%	0.5%	0.4%
Number of Non-SoonerCare members tested	5,245	5,855	5,967	5,611	6,475	9,431	12,007	11,683	11,104	16,117	16,592
Percentage of EBLL children not on SoonerCare	1.3%	0.9%	0.9%	0.8%	0.8%	0.9%	0.7%	0.8%	0.5%	0.4%	0.3%

# Figure 4: Distribution of EBLL Cases in Oklahoma, by Selected Characteristics - 2010

## AGE

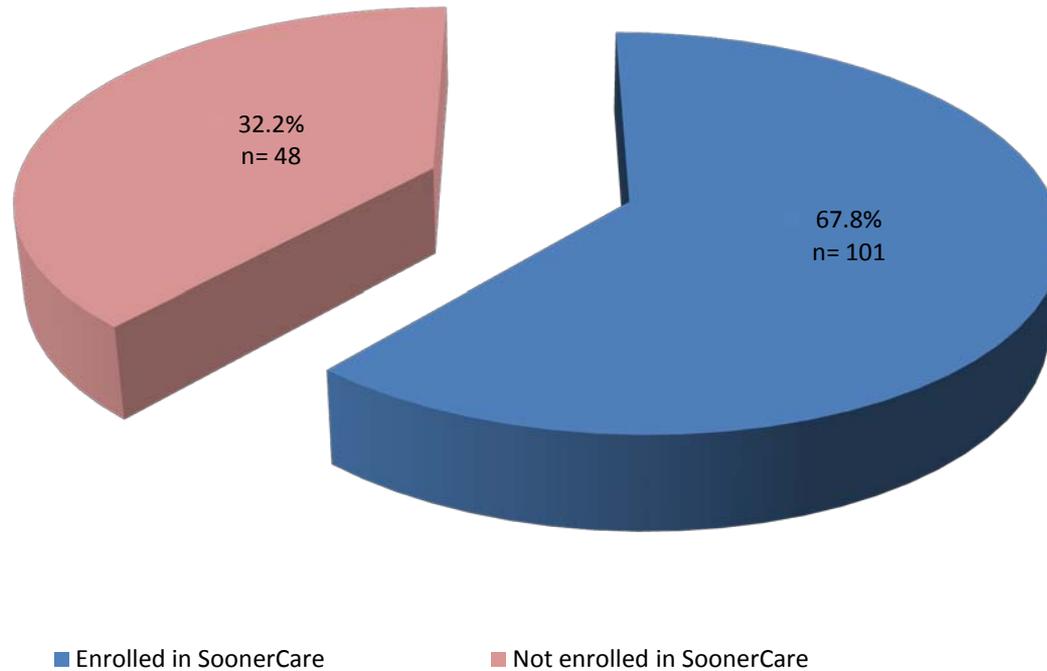


## GENDER



**Figure 4: Distribution of EBLL Cases in Oklahoma, by Selected Characteristics – 2010 (Continued)**

**SOONERCARE MEMBERSHIP (OKLAHOMA MEDICAID) STATUS**

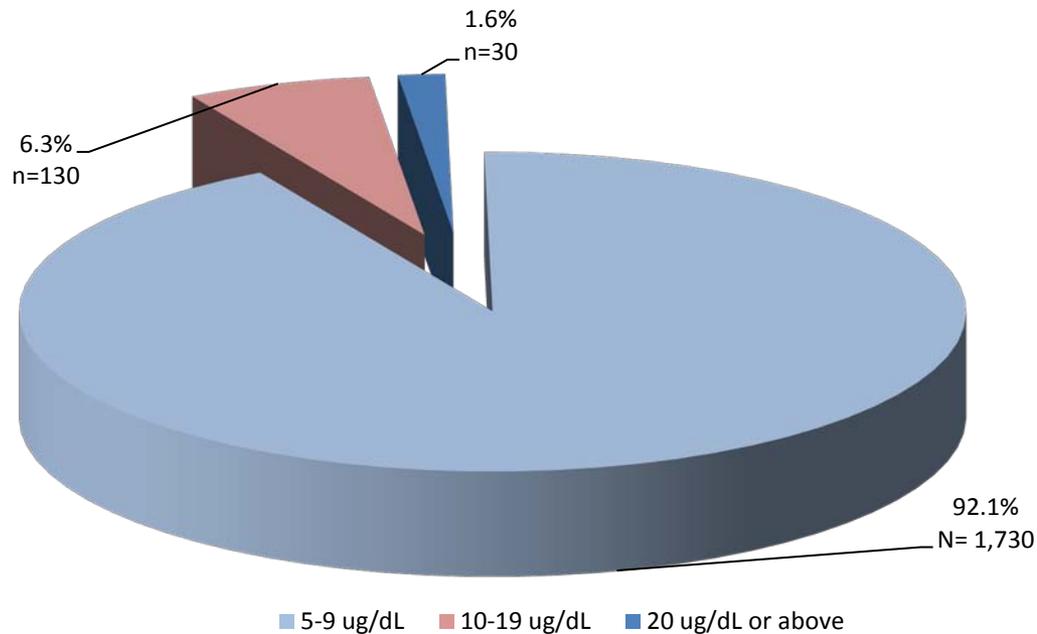


**Figure 4: Distribution of EBLL Cases in Oklahoma, by Selected Characteristics – 2010 (Continued)**

TOTAL EBLL CASES DURING 2010	AGE		GENDER		SOONERCARE STATUS	
	< 36 months	≥ 36 and ≤ 72 months	Male	Female	Yes	No
149	102 (68.5%)	47 (31.5%)	82 (55.0%)	67 (45.0%)	101 (67.8%)	48 (32.2%)

- Among the children identified as EBLL cases during 2010, the percentage of children < 36 months of age was higher as compared to children ≥ 36 and ≤ 72 months of age during 2010 (68.5% vs. 31.5%). This was primarily because a higher percentage of children < 36 months of age were tested as compared to children ≥ 36 and ≤ 72 months of age during 2010 (68.2% for children < 36 months of age vs. 31.8% for children ≥ 36 and ≤ 72 months of age). The prevalence or the case rates among children < 36 months of age and children ≥ 36 and ≤ 72 months of age were similar during 2010 (0.4% for children < 36 months of age vs. 0.4% for children ≥ 36 and ≤ 72 months of age).
- Among the children identified as EBLL cases during 2010, the percentage of males was slightly higher as compared to females (55.0% vs. 45.0%). This was primarily because a slightly higher percentage of males were tested as compared to females during 2010 (51.2% for males vs. 48.8% for females). The prevalence or the case rates among males and females were comparable during 2010 (0.4% for males vs. 0.3% for females).
- Among the children identified as EBLL cases during 2010, the percentage of SoonerCare (Oklahoma’s Medicaid) children was higher as compared to children not on SoonerCare(67.8% vs. 32.2%). This was primarily because a higher percentage of children enrolled in SoonerCare were tested as compared to children not on SoonerCare during 2010 (59.5% for children enrolled in SoonerCare vs. 40.5% for children not on SoonerCare ). The prevalence or the case rates among children enrolled in SoonerCare and children not on SoonerCare were comparable during 2010 (0.4% for children enrolled in SoonerCare vs. 0.3% for children not on SoonerCare ).

## Figure 5: Case Management



- The OCLPPP has developed case management guidelines to facilitate the follow-up testing of children  $\leq 6$  years of age (Appendix A: Case Management Guidelines)
- OCLPPP provide limited follow-up for children with blood lead levels between 5 and 9  $\mu\text{g}/\text{dL}$ . A letter is generated to the parents alerting them to the child's risk of lead poisoning, recommending follow-up testing and offering educational information to reduce further exposure. During 2010, OCLPPP sent 5-9 $\mu\text{g}/\text{dL}$  letter and the educational packet to the families of 1,730 children.
- The OCLPPP provides individualized guidance to parents of children with EBLs between 10 and 19  $\mu\text{g}/\text{dL}$ , and consultation to health care providers on appropriate follow-up of EBL in children. Families are provided with fact sheets, brochures, and pamphlets in order to increase their awareness about lead poisoning, sources of exposure, and how to reduce them. Children are retested (venous) every two months until two consecutive blood lead measurements below 10  $\mu\text{g}/\text{dL}$  are achieved. During 2010, OCLPPP provided case management services to the families of 130 EBL children.
- The case management protocol for children with first time EBL between 15-19  $\mu\text{g}/\text{dL}$  is same as for 10-14  $\mu\text{g}/\text{dL}$  range. However if the level persists (two venous EBLs in this range at least 2 months apart), then the child receives an environmental Investigation (EI). An EI is performed in child's home and other sites where significant amount of time is spent.
- Of the 30 children with an EBL of  $\geq 20$   $\mu\text{g}/\text{dL}$  during 2010, 25 children new cases were eligible for an environmental investigation while five existing cases already received an investigation in previous years. OCLPPP conducted environmental investigations inside the homes of 21 children. Families of remaining four children either refused the service or moved to a different location and could not be located.

# Glossary

**Elevated Blood Lead Level (EBLL):** An EBLL means a confirmed concentration of  $\geq 10$  micrograms ( $\mu\text{g}$ ) of lead per deciliter (dL) of blood measured on a venous sample. The Centers for Disease Control and Prevention (CDC) has set a level of concern for children at  $10 \mu\text{g}/\text{dL}$  at which recommended specific Interventions should be implemented to reduce the blood lead levels

**Capillary blood specimen:** Blood drawn from the capillary (finger stick) to measure lead. Capillary blood specimens are acceptable for lead screening if appropriate collection procedures are followed to minimize the risk of environmental lead contamination.

**Venous blood specimen:** Blood drawn from the vein to measure lead. Venous blood specimens are preferred for blood lead analysis and should be used for lead measurement whenever practical.

**Screening Rate:** Number of children less than or equal to ( $\leq$ ) 6 years of age who received a blood lead test divided by total number of children less than or equal to ( $\leq$ ) 6 years of age.

**Incidence of EBLL:** New EBLL cases less than or equal to ( $\leq$ ) 6 years of age in a year that have never been lead poisoned before. It is calculated by dividing the total number of new EBLL cases for a year by the total number of children that either were not previously tested or previously had a blood lead level  $< 10 \mu\text{g}/\text{dl}$ .

**Prevalence of EBLL:** Existing (old and new) EBLL less than or equal to ( $\leq$ ) 6 years of age. It is calculated by dividing the total number of EBLL cases by the total number of children that received a blood lead test. The term prevalence is used interchangeably with case rate in this report.

**Case Rate:** Case rate is defined as the number of children less than or equal to ( $\leq$ ) 6 years of age with an EBLL divided by the total number of children  $\leq 6$  years of age who received a blood lead test.

**Geometric Mean:** For the analysis of blood lead levels, geometric mean is often used instead of straight average (arithmetic mean) since there may be a wide variation in the blood lead levels. A geometric mean suppresses the effect of very high or low values and therefore does not bias the mean.

**High-Risk Target Area (HRTA) zip codes:** Twenty-one zip codes within nine Oklahoma counties have been identified as HRTA zip codes in which there is a likelihood of a high number of young children at risk for lead exposure and poisoning.

**SoonerCare:** Oklahoma Medicaid program.

**Environmental Investigation:** Investigating the child's environment, which includes the home and other sites where the child spends significant amount of time to identify lead sources.

**Case management:** Management of children with EBLLs involves coordinating, providing, and overseeing the services required to reduce their blood lead levels below the level of concern.