Louisiana Healthy Homes and Lead Poisoning Surveillance System Report, 2014

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DEPARTMENT OF HEALTH
AND HOSPITALS

Introduction

The surveillance component of the Louisiana Healthy Homes and Lead Poisoning Prevention Program (HHLPPP), the Healthy Homes and Blood Lead Surveillance System (HHLPSS), collects information about blood lead tests conducted on child residents of Louisiana between the ages of 6 months and 72 months. Data is collected from several private laboratories that conduct lead analysis for Louisiana children. The HHLPSS's primary goal is the collection of all blood lead test results for children in the target age range in Louisiana. The data is compiled and analyzed to support outreach and prevention efforts, screening recommendations and resource allocation.

This report presents blood-level screening rates and the prevalence of elevated blood-lead levels for the state and all parishes using data collected during 2014 from several private laboratories. A record was included in this analysis if the child was between the ages of six months and 72 months and if the record contained residential information indicating the child lived in Louisiana at the time of the test. All addresses were geocoded, and county FIPS codes were assigned using Melissa data, a software licensed by the Centers for Disease Control and Prevention (CDC) for this purpose. Each child contributed only one lead result to the analysis. For children with multiple lead tests during 2014, only the highest lead result was included in the final dataset. Both venous and capillary results are included. In this report, 5.2 percent of the samples were venous specimens, 81 percent were capillary specimens and 13.8 percent were of unknown type due to incomplete submission data.

Screening estimates were calculated by dividing the number of children screened in an area by the population estimate of children aged 6 months to 72 months for the same area as obtained from the 2012 and 2013 American Community Survey (ACS) data sets. To determine the population of children aged six to twelve months, the ACS population estimates of children under one year of age were divided in half. The combined dataset for 2014 consists of lead results for 62,844 children, representing an overall screening rate in Louisiana of 18.3 percent. In the dataset, 1,141 children were found to have a blood lead level $\geq 10\mu g/dl$, and 3,173 children had blood lead level $\geq 5\ \mu g/dl$ and $< 10\ \mu g/dl$.

Screening rates between parishes varied in both estimation and reliability. Parishes with higher screening rates and larger numbers of children screened had stabler estimates for the prevalence of elevated lead levels than those with lower screening rates or with very few children screened. Similarly, parishes with higher screening rates and larger numbers of children screened also had more reliable estimates. Consumers of the data presented in this report should keep these limitations of the data in mind when reviewing or interpreting the information presented here.

Louisiana Statewide Data

Summary of Activity – 2013 and 2014

	2013 Data	2014 Data
Population of children[i] 6 and under	347776	342993
Total children[ii] screened	64247	62844
Proportion of children screened	18.5%	18.3%
Total children elevated (≥ 10 µg/dl[iii])	748	1141

Characteristic of Children[ii] Screened – 2013 and 2014

Characteristic		2013 data (n=64247)		2014 data (n=62844)	
Gender	Male	31674	49.3%	33038	52.6%
	Female	31160	48.5%	29178	47.3%
	Missing	1413	2.2%	628	0.1%
Race	Black	12657	19.7%	12967	20.6%
	White	7645	11.9%	7213	11.5%
	Other	2313	3.6%	2288	3.6%
	Missing	41632	64.8%	40376	64.3%
Age (Months)	6 to 11	2891	4.5%	2639	4.2%
	12 to 35	44395	69.1%	41809	66.5%
	36 to 72	1696	26.4%	18396	29.3%

Characteristic of Children[ii] with Elevated Blood Lead levels – 2013 and 2014

Characteristic		2013 data (n=748)				2014 data (n=1141)			
		≥ 10 and < 15 µg/dl	≥ 15 and < 20 µg/dl	≥ 20 µg/dl	Total	≥ 10 and < 15 µg/dl	≥ 15 and < 20 µg/dl	≥ 20 µg/dl	Total
Gender	Male	239	153	56	448	286	193	114	593
	Female	161	85	37	283	243	168	78	489
	Missing	9	6	2	17	34	18	7	59
Race	Black	93	67	8	168	185	91	44	320
	White	44	19	6	69	112	69	31	212
	Other	15	11	7	33	45	23	12	80
	Missing	259	163	56	478	309	152	68	529
Age (Months)	6 to 11	6	5	0	11	18	9	4	31
	12 to 35	247	156	70	473	391	216	125	732
	36 to 72	165	81	18	264	189	112	77	378
Total		418	242	88	748	598	337	206	1141

[i] Population estimates of children aged 6 months to 72 months residing in the parish indicated are taken from 2013 American Census Data
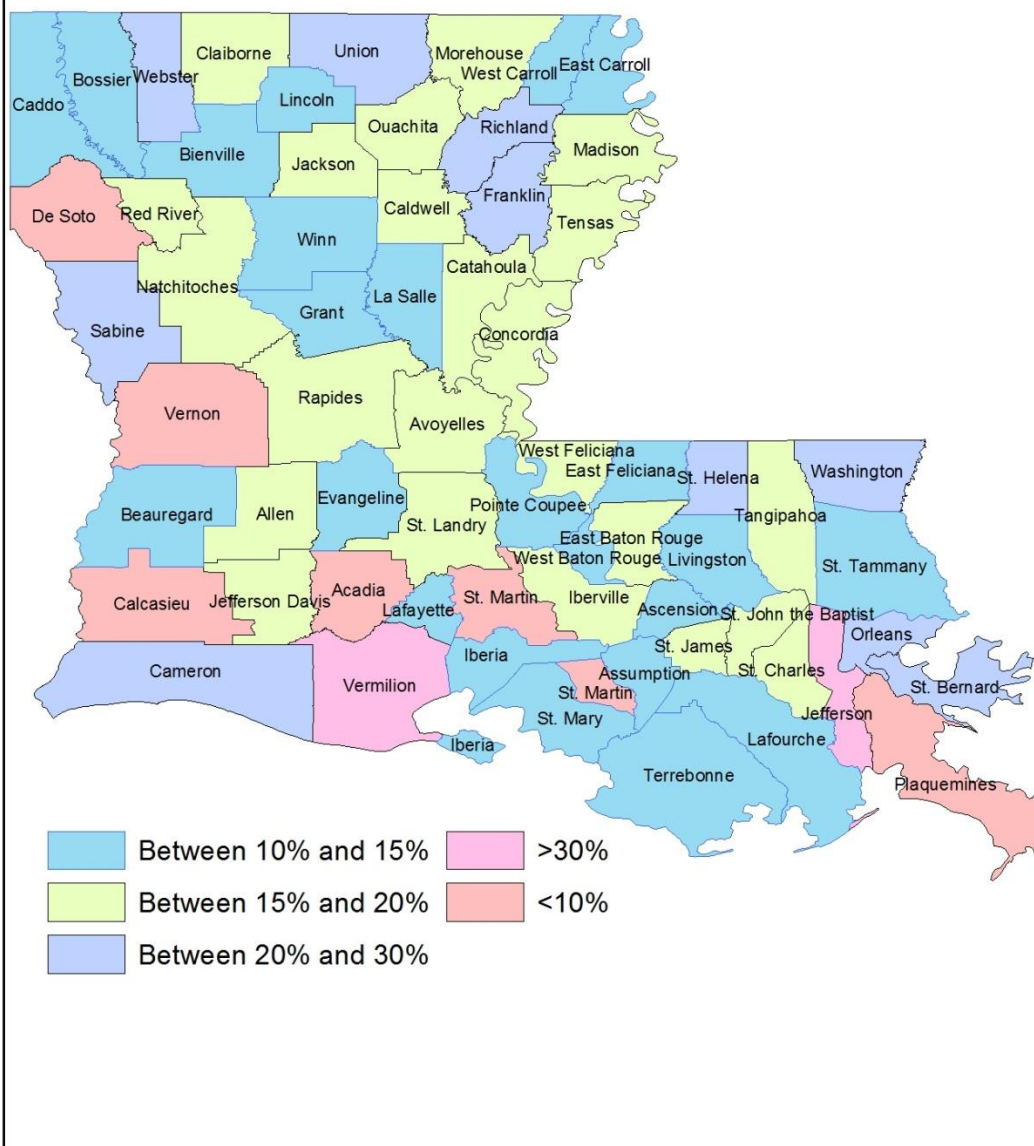[ii] Children aged 6 months to 72 months screened at the Private Labs in 2013 and 2014.
[iii] µg/dl indicating Microgram per deciliter

Summary: Numbers of Children with Elevated Blood Lead levels by Parish – 2014 Data

Parish	Population of Children 6 and under	2014 Data							
		Total Tested (n)	Total tested (%)	≥ 5 and < 10	≥ 10 and < 15	≥ 15 and < 20	≥ 20	≥10	Total elevated (%)
						µg/dl			
Acadia	9063	698	7.7%	78	2	1	2	5	0.7%
Allen	1526	299	19.6%	22	1	1	0	2	0.7%
Ascension	7561	877	11.6%	69	9	1	1	11	1.3%
Assumption	1510	185	12.3%	21	1	1	0	2	1.1%
Avoyelles	3150	521	16.5%	52	7	3	0	10	1.9%
Beauregard	2648	332	12.5%	38	5	2	1	8	2.4%
Bienville	1216	157	12.9%	22	1	1	0	2	1.3%
Bossier	18486	2208	11.9%	65	11	4	2	17	0.8%
Caddo	24727	2393	9.7%	144	26	12	4	42	1.8%
Calcasieu	31046	2248	7.2%	121	19	9	3	31	1.4%
Caldwell	751	127	16.9%	12	1	2	0	3	2.4%
Cameron	583	131	22.5%	9	2	0	0	2	1.5%
Catahoula	822	152	18.5%	17	3	1	1	5	3.3%
Claiborne	1207	183	15.2%	35	3	0	1	4	2.2%
Concordia	1786	271	15.2%	45	5	1	1	7	2.6%
De Soto	1934	149	7.7%	21	1	1	1	3	2.0%
East Baton Rouge	31150	6024	19.3%	378	40	21	10	71	1.2%
East Carroll	884	132	14.9%	9	3	0	1	4	3.0%
East Feliciana	1236	169	13.7%	15	3	1	0	4	2.4%
Evangeline	3563	357	10.0%	32	3	1	1	5	1.4%
Franklin	1684	403	23.9%	29	4	2	1	7	1.7%
Grant	1456	165	11.3%	12	1	1	1	3	1.8%
Iberia	5966	726	12.2%	36	7	1	1	9	1.2%
Iberville	2305	418	18.1%	39	5	2	1	8	1.9%
Jackson	1167	186	15.9%	11	1	0	0	1	0.5%
Jefferson Davis	2072	397	19.2%	29	4	2	1	8	2.0%
Jefferson	19156	6028	31.5%	253	29	15	6	50	0.8%
La Salle	1017	132	13.0%	8	1	0	0	1	0.8%
Lafayette	17845	1806	10.1%	45	9	1	1	11	0.6%
Lafourche	7420	1008	13.6%	39	5	2	2	9	0.9%
Lincoln	2464	328	13.3%	17	3	1	0	4	1.2%
Livingston	9101	1201	13.2%	32	8	1	1	10	0.8%
Madison	1185	211	17.8%	19	1	1	1	3	1.4%

Parish	Population of Children 6 and under	Total Tested (n)	Total tested (%)	≥ 5 and < 10	≥ 10 and < 15	≥ 15 and < 20	≥ 20	≥10	Total elevated (%)
						2014 Data			
						µg/dl			
Morehouse	1285	207	16.1%	11	4	1	0	5	2.4%
Natchitoches	3183	613	19.3%	27	4	1	1	6	1.0%
Orleans	24852	6121	24.6%	363	132	32	9	173	2.8%
Ouachita	12551	2352	18.7%	149	33	4	2	39	1.7%
Plaquemines	1713	169	9.9%	11	2	1	1	4	2.4%
Pointe Coupee	1635	171	10.5%	15	2	1	0	3	1.8%
Rapides	10231	1816	17.7%	118	14	8	3	25	1.4%
Red River	888	135	15.2%	12	1	1	0	2	1.5%
Richland	1539	431	28.0%	34	5	0	1	6	1.4%
Sabine	1515	403	26.6%	21	4	0	1	5	1.2%
St. Bernard	1533	432	28.2%	14	5	1	1	7	1.6%
St. Charles	3542	644	18.2%	37	6	1	1	8	1.2%
St. Helena	854	219	25.6%	13	2	0	0	2	0.9%
St. James	1600	247	15.4%	9	3	1	0	4	1.6%
St. John the Baptist	3453	639	18.5%	29	8	2	1	11	1.7%
St. Landry	7773	1304	16.8%	76	8	1	2	11	0.8%
St. Martin	4034	369	9.1%	9	4	1	1	6	1.6%
St. Mary	4127	486	11.8%	31	7	3	1	11	2.3%
St. Tammany	14676	1971	13.4%	141	15	4	1	20	1.0%
Tangipahoa	9190	1453	15.8%	73	12	6	1	19	1.3%
Tensas	527	103	19.5%	9	2	1	0	3	2.9%
Terrebonne	8449	1096	13.0%	37	13	2	1	16	1.5%
Union	1447	295	20.4%	7	4	1	0	5	1.7%
Vermilion	3386	1109	32.8%	25	9	1	1	11	1.0%
Vernon	4113	269	6.5%	17	1	1	1	3	1.1%
Washington	3064	819	26.7%	43	8	1	0	9	1.1%
Webster	2685	661	24.6%	34	4	3	0	7	1.1%
West Baton Rouge	1675	189	11.3%	7	1	1	0	2	1.1%
West Carroll	897	115	12.8%	9	2	1	0	3	2.6%
West Feliciana	743	139	18.7%	4	1	0	0	1	0.7%
Winn	1322	187	14.1%	14	2	1	1	4	2.1%

2014 Blood Lead Screening Rate by Parishes

Legend:
- Between 10% and 15%
- Between 15% and 20%
- Between 20% and 30%
- >30%
- <10%

Percentage of Tested Children with Blood Lead Levels >=10ug/dl by Parishes 2014 data

Legend:
- <1%
- Between 1.5% and 2%
- Between 1% and 1.5%
- >2.5%
- Between 2% and 2.5%