

BLOOD LEAD SURVEILLANCE
2017 ANNUAL REPORT, TEXAS



TEXAS
Health and Human
Services

Texas Department of State
Health Services

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Report Overview

About the Annual Report

The annual report provides information on lead poisoning and an analysis of statewide, regional, and county level data in Texas. The intent of this report is to provide information for stakeholders to identify areas across Texas to target interventions and help direct prevention and outreach activities. The current report includes data for calendar year 2017.

About the Blood Lead Surveillance Branch

The Texas Department of State Health Services Blood Lead Surveillance Branch (BLSB) maintains a surveillance system of blood lead test results for children and adults. BLSB includes the Texas Childhood Lead Poisoning Prevention Program (TX CLPPP). BLSB's goal is to eliminate lead as a public health problem in Texas by working with health, housing, and environmental organizations. With the support of communities throughout Texas, regional public health offices, and Texas healthcare workers, BLSB is working diligently toward a safer, healthier Texas.

For more information, visit: [*dshs.texas.gov/lead*](https://dshs.texas.gov/lead)

Potential Sources and Health Effects of Lead Exposure for Children

Sources of Lead Exposure

Sources of lead include:

- paint in homes built before 1978.
- water pumped through leaded pipes.
- imported items including clay pots.
- certain consumer products such as candies, make-up and jewelry.
- certain imported home remedies.
- certain jobs and hobbies that involve working with lead-based products and may cause parents to bring lead into the home.

Although there are several exposure sources, lead-based paint is the most widespread and dangerous high-dose source of lead exposure for young children. Swallowing or breathing in lead dust can poison children.

Health Effects of Lead Exposure

There is no safe blood lead level in children. Exposure to lead can seriously harm a child's health and cause adverse effects such as:

- Damage to the brain and nervous system
- Slowed growth and development
- Learning and behavior problems
- Hearing and speech problems

Even low levels of lead in blood can affect IQ, ability to pay attention, and academic achievement. In 2012, CDC updated its recommendations on children's blood lead levels and experts use a reference level of 5 micrograms per deciliter ($\mu\text{g}/\text{dL}$) or greater to identify children with elevated blood lead levels.

LEAD POISONING IS PREVENTABLE

The most important step parents, doctors, and others can take is to prevent lead exposure before it occurs. Visit dshs.texas.gov/lead for more information.

Blood Lead Screening and Surveillance in Texas

Screening

In 2017, Texas screening guidelines recommended blood lead testing for children:

- at age 12 and 24 months, if enrolled in Medicaid/ Texas Health Steps, or
- at age 6, 12, and 24 months, and age 3 and 4 years, if child resided in a targeted zip code area, or
- identified based on lead risk questionnaire, or
- if parent requested child tested.

In 2019, childhood blood lead screening guidelines were slightly revised. The current screening guidelines are available at dshs.texas.gov/lead

Surveillance

Texas law requires reporting of **ALL** blood lead test results (both elevated and non-elevated) regardless of age. Not reporting complete information causes a delay in follow-up services for a person with an elevated blood lead level.

DSHS BLSB uses these surveillance reports to monitor the progress of lead screening initiatives and to determine trends in exposure and rates of testing in specific geographical areas. The conclusions formed from these data help direct TX CLPPP prevention and outreach activities. Prevention activities for children with elevated blood lead levels (EBLLs) include lead education, medical monitoring, case management, and source-of-exposure identification.

To learn how to report blood lead levels in Texas, visit dshs.texas.gov/lead

Surveillance Data

While reviewing and interpreting any single blood lead result can be simple, there are complexities associated with reviewing and interpreting data for the population. Please see page 30 for Data Considerations

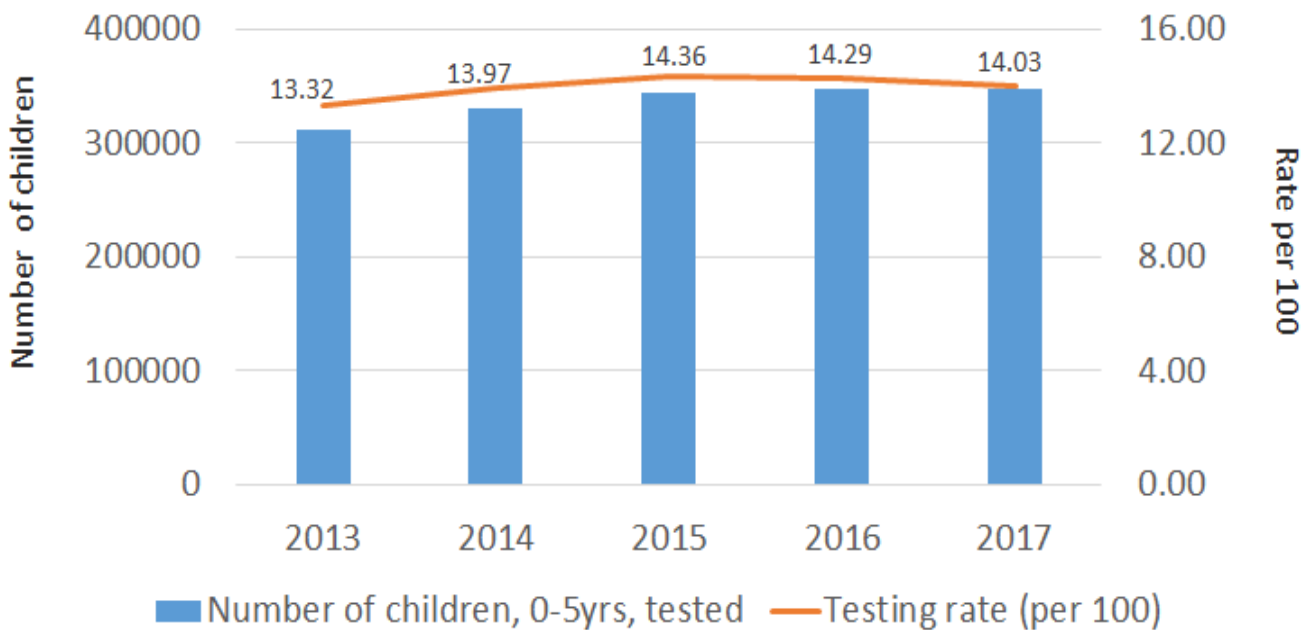
Children Tested for Lead in Texas: Trends

Lead Testing

Although Texas law requires reporting of ALL blood lead test results (both elevated and non-elevated) regardless of age, the data provided in figure 1 are for children younger than 6 years (0-5 years) of age; the risk for lead exposure is typically higher for this age group.

Figure 1 shows a 5-year trend of lead testing in Texas. The number and percentage of children tested appear to increase from 2013 to 2015 and slightly decline from 2016 to 2017. During 2017, BLSB received blood lead results for 346,877 children in this age group.

FIGURE 1: Number and rate of children, 0-5 years of age, tested for lead in Texas, 2013-2017



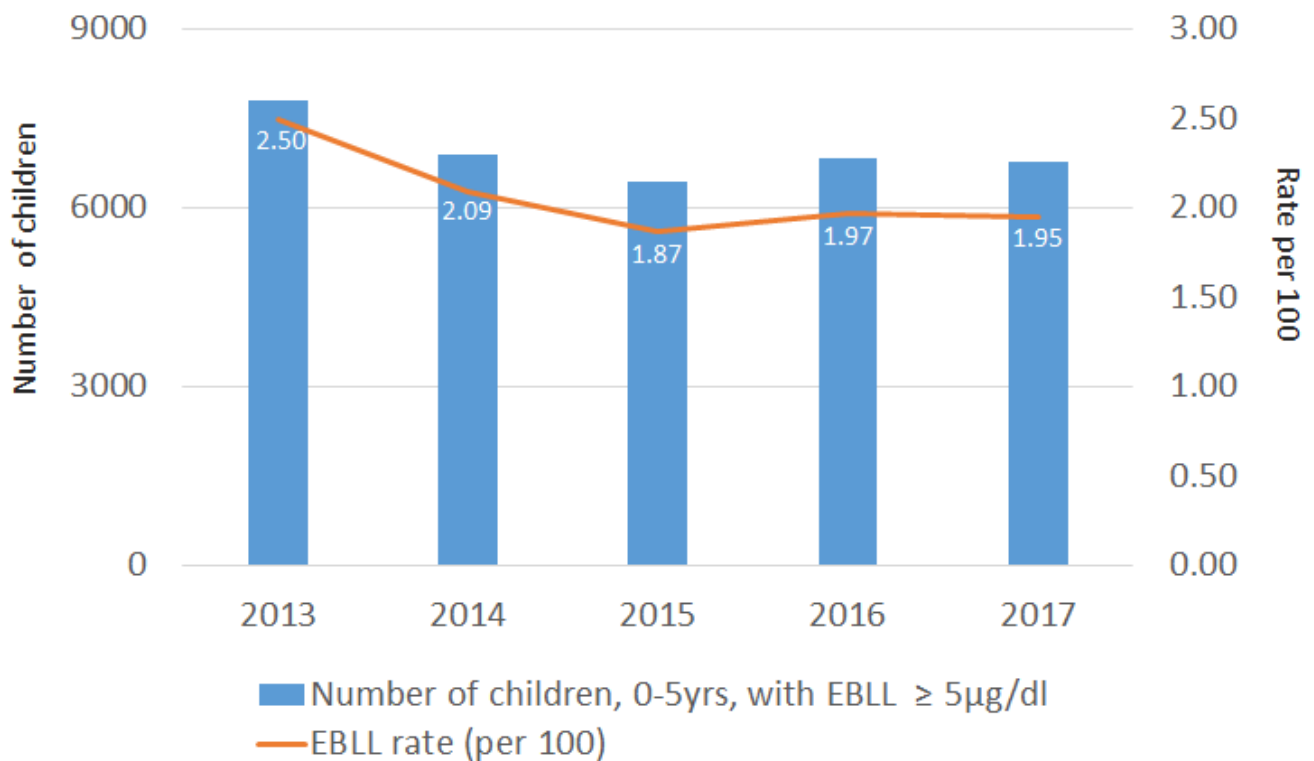
Children with Elevated Blood Lead Levels (EBLL) in Texas: Trends

Elevated Blood Lead Levels (EBLL)

This report classifies an EBLL as the highest elevated test result, 5 micrograms per deciliter ($\mu\text{g}/\text{dL}$) or greater, of any sample type (capillary, venous, or undesignated-type samples) for a child in a given year. The report expresses rates for EBLLs as the percentage of children with elevated test results among those tested.

Figure 2 shows a 5-year trend of EBLLs in Texas. Overall, the number and rate of EBLLs appear to decline from 2013 to 2015 and slightly increase in 2016 and 2017.

FIGURE 2: Number and rate of children, 0-5 years of age, with an elevated blood lead level (EBLL $\geq 5\mu\text{g}/\text{dL}$) in Texas, 2013-2017

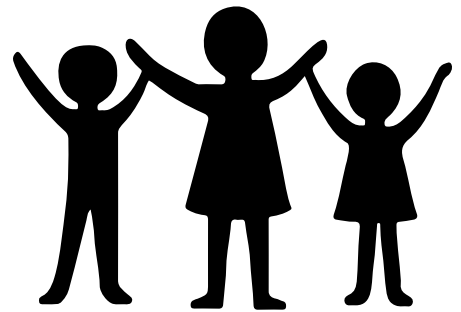


Data at a Glance: Texas, 2017

Children, 0-5 years of age

Lead testing occurred in 346,877 children (14.03%), under the age of 6, in Texas in 2017

6,767 children (1.95%), 0-5 years of age, tested for lead had an elevated blood lead level (EBLL), greater than or equal to $5\mu\text{g}/\text{dL}$, in 2017



Children, 1-2 years of age

Lead testing occurred in 266,904 children (32.01%), 1-2 years of age, in Texas in 2017

5,076 children (1.90%), 1-2 years of age, tested for lead had an elevated blood lead level (EBLL), greater than or equal to $5\mu\text{g}/\text{dL}$, in Texas in 2017

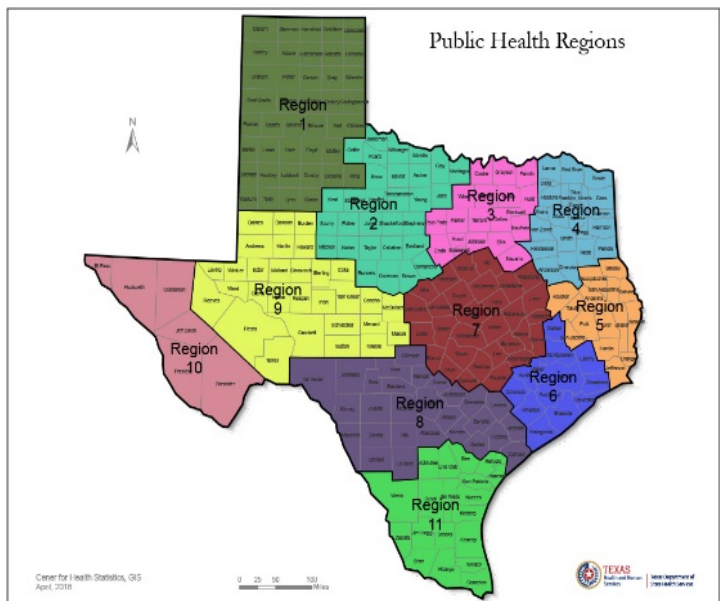
Public Health Region (PHR) and County Level Data

Children, 0-5 years of age

Texas comprises 254 counties with each county assigned to one of eleven state-designated Public Health Regions (PHR) as shown in Figure 3.

Pages 9-19 include data by Public Health Region and by County for the number and percentage of children, under the age of 6 years, who received a blood lead test in 2017 and for children with an elevated blood lead level (EBLL), greater than or equal to $5\mu\text{g}/\text{dL}$, in 2017.

FIGURE 3: Public Health Region Map



Top Fifteen County Rankings

Below are rankings for the top 15 counties with the highest percentage of children testing for lead and the highest percentage of children with EBLs in 2017.

TABLE 1: Top 15 Counties with Highest Percentage of Children Testing for Lead in 2017

County	PHR	% Tested
REEVES	9	32.66
DIMMIT	8	30.89
FRIO	8	25.83
BAYLOR	2	25.11
CALDWELL	7	24.79
TITUS	4	24.10
MATAGORDA	6	22.97
FALLS	7	22.54
MADISON	7	22.54
GRAYSON	3	22.25
DUVAL	11	22.19
CAMERON	11	21.75
KNOX	2	21.68
MAVERICK	8	20.90
WILLACY	11	20.86

TABLE 2: Top 15 Counties with Highest Percentage of Children with EBLs in 2017

County	PHR	% EBL
DONLEY	1	28.57
SHACKELFORD	2	20.59
CONCHO	9	18.52
WHEELER	1	15.09
RED RIVER	4	13.21
WILBARGER	2	12.26
MCCULLOCH	9	11.11
SWISHER	1	10.81
DEWITT	8	10.20
HARDEMAN	2	9.84
ARCHER	2	9.38
HAMILTON	7	8.86
LAVACA	8	8.61
PANOLA	4	8.25
LAMAR	4	7.33

Public Health Region 1

Children, 0-5 years of age

- Lead testing occurred in 6,950 children, under the age of 6, in PHR 1 in 2017
- Of those children tested, 229 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent tested (8.7%) in PHR 1 is lower than the percent tested (14.03) Statewide in 2017
- The percent EBLL (3.29%) in PHR 1 is higher than the percent EBLL (1.95%) Statewide in 2017
- Table 3 shows the number and percentage of children tested for lead and those with EBLLs for the 41 counties in PHR 1

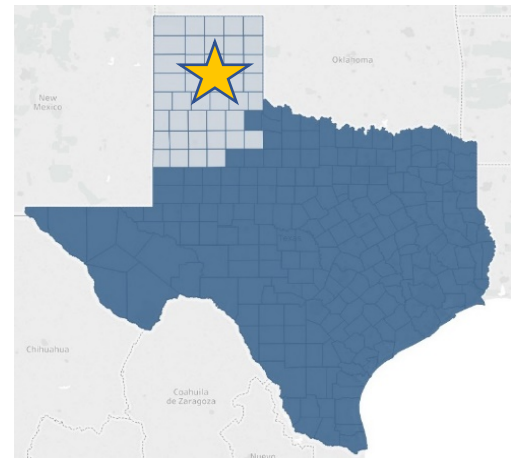


TABLE 3: Number and Percentage of Children Tested for Lead and those with EBLLs in PHR 1 by County in 2017

COUNTY	Tested	% Tested	EBLL	% EBLL	COUNTY	Tested	% Tested	EBLL	% EBLL
ARMSTRONG	6	6.12	0	0	HOCKLEY	343	15.5	6	1.75
BAILEY	89	11.57	< 5	~	HUTCHINSON	182	10.16	< 5	~
BRISCOE	6	5.17	0	0	KING	0	0	~	~
CARSON	20	4.91	0	0	LAMB	148	11.01	< 5	~
CASTRO	62	8.12	0	0	LIPSCOMB	5	1.83	0	0
CHILDRESS	9	1.77	0	0	LUBBOCK	2,242	8.12	45	2.01
COCHRAN	42	13.25	0	0	LYNN	36	6.86	< 5	~
COLLINGSWORTH	7	2.75	< 5	~	MOORE	127	5.03	< 5	~
CROSBY	52	9.59	< 5	~	MOTLEY	< 5	~	0	0
DALLAM	52	6.77	< 5	~	OCHILTREE	50	4.3	< 5	~
DEAF SMITH	120	5.2	< 5	~	OLDHAM	8	5.06	0	0
DICKENS	10	8	< 5	~	PARMER	47	4.39	0	0
DONLEY	21	7.78	6	28.57	POTTER	1,595	12.95	86	5.39
FLOYD	63	11.39	< 5	~	RANDALL	718	7.36	23	3.2
GARZA	53	11.28	< 5	~	ROBERTS	< 5	~	0	0
GRAY	169	7.92	< 5	~	SHERMAN	25	9.73	0	0
HALE	222	5.81	8	3.6	SWISHER	74	12.07	8	10.81
HALL	9	3.85	0	0	TERRY	158	13.32	9	5.7
HANSFORD	31	5.76	0	0	WHEELER	53	12.02	8	15.09
HARTLEY	14	4.02	0	0	YOAKUM	55	6.47	< 5	~
HEMPHILL	21	6.46	0	0					

Public Health Region 2

Children, 0-5 years of age

- Lead testing occurred in 5,652 children, under the age of 6, in PHR 2 in 2017
- Of those children tested, 239 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent tested (12.77%) in PHR 2 is lower than the percent tested (14.03) Statewide in 2017
- The percent EBLL (4.23%) in PHR 2 is higher than the percent EBLL (1.95%) Statewide in 2017
- Table 4 shows the number and percentage of children tested for lead and those with EBLLs for the 30 counties in PHR 2

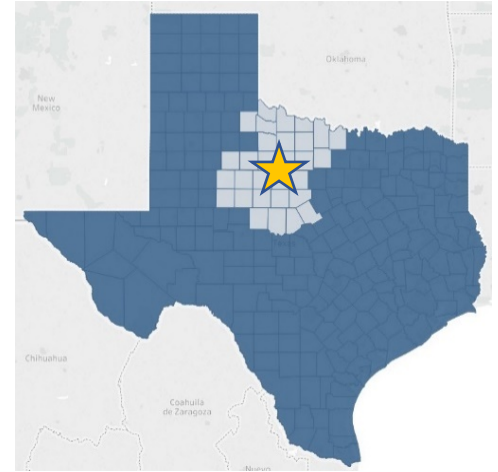


TABLE 4: Number and Percentage of Children Tested for Lead and those with EBLLs in PHR 2 by County in 2017

COUNTY	Tested	% Tested	EBLL	% EBLL	COUNTY	Tested	% Tested	EBLL	% EBLL
ARCHER	64	12.28	6	9.38	KENT	< 5	~	0	0.00
BAYLOR	56	25.11	< 5	~	KNOX	67	21.68	< 5	~
BROWN	225	8.13	8	3.56	MITCHELL	52	8.67	< 5	~
CALLAHAN	135	14.24	8	5.93	MONTAGUE	98	6.65	< 5	~
CLAY	79	11.11	5	6.33	NOLAN	128	10.22	< 5	~
COLEMAN	66	10.44	< 5	~	RUNNELS	109	13.57	6	5.50
COMANCHE	189	17.23	6	3.17	SCURRY	180	11.84	0	0.00
COTTLE	16	14.41	0	0.00	SHACKELFORD	34	13.18	7	20.59
EASTLAND	148	10.20	6	4.05	STEPHENS	86	11.81	< 5	~
FISHER	18	6.62	< 5	~	STONEWALL	10	12.35	0	0.00
FOARD	19	20.00	< 5	~	TAYLOR	1,714	13.99	60	3.50
HARDEMAN	61	19.18	6	9.84	THROCKMORTON	9	9.57	0	0.00
HASKELL	58	15.51	0	0.00	WICHITA	1,564	14.49	72	4.60
JACK	27	4.35	< 5	~	WILBARGER	106	8.43	13	12.26
JONES	167	14.52	9	5.39	YOUNG	165	11.21	10	6.06

Public Health Region 3

Children, 0-5 years of age

- Lead testing occurred in 70,390 children, under the age of 6, in PHR 3 in 2017
- Of those children tested, 1,456 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent tested (10.92%) in PHR 3 is lower than the percent tested (14.03) Statewide in 2017
- The percent EBLL (2.07%) in PHR 3 is higher than the percent EBLL (1.95%) Statewide in 2017
- Table 5 shows the number and percentage of children tested for lead and those with EBLLs for the 19 counties in PHR 3

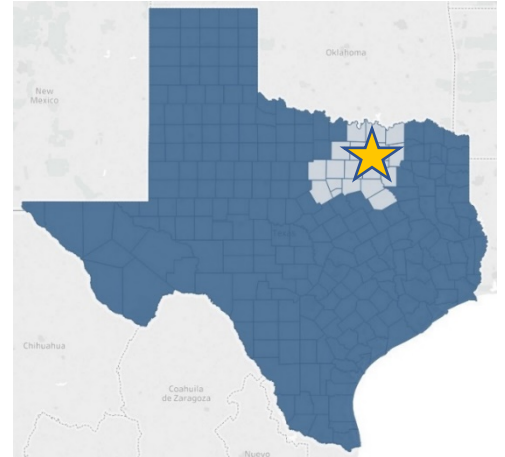


TABLE 5: Number and Percentage of Children Tested for Lead and those with EBLLs in PHR 3 by County in 2017

COUNTY	Tested	% Tested	EBLL	% EBLL
COLLIN	5,188	7.42	94	1.81
COOKE	276	8.87	12	4.35
DALLAS	33,811	13.64	701	2.07
DENTON	4,378	7.00	56	1.28
ELLIS	1,810	13.16	31	1.71
ERATH	357	10.03	< 5	~
FANNIN	437	18.85	19	4.35
GRAYSON	2,057	22.25	76	3.69
HOOD	144	4.10	0	0.00
HUNT	814	11.50	39	4.79
JOHNSON	932	6.91	9	0.97
KAUFMAN	1,337	13.60	37	2.77
NAVARRO	861	19.75	32	3.72
PALO PINTO	106	4.61	< 5	~
PARKER	962	10.88	5	0.52
ROCKWALL	578	9.60	< 5	~
SOMERVELL	28	4.20	< 5	~
TARRANT	16,158	9.44	330	2.04
WISE	156	3.11	< 5	~

Public Health Region 4

Children, 0-5 years of age

- Lead testing occurred in 12,551 children, under the age of 6, in PHR 4 in 2017
- Of those children tested, 445 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent tested (13.81%) in PHR 4 is lower than the percent tested (14.03) Statewide in 2017
- The percent EBLL (3.55%) in PHR 4 is higher than the percent EBLL (1.95%) Statewide in 2017
- Table 6 shows the number and percentage of children tested for lead and those with EBLLs for the 23 counties in PHR 4

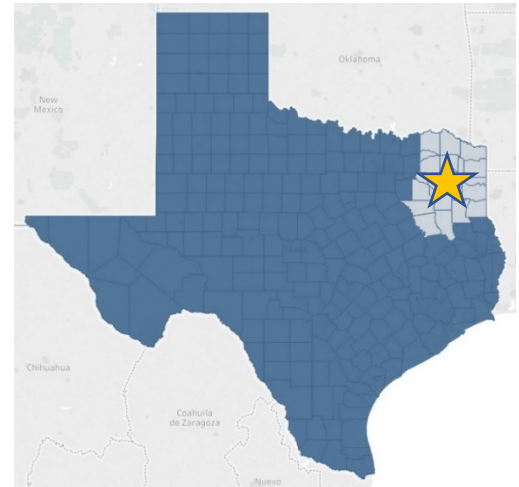


TABLE 6: Number and Percentage of Children Tested for Lead and those with EBLLs in PHR 4 by County in 2017

COUNTY	Tested	% Tested	EBLL	% EBLL	COUNTY	Tested	% Tested	EBLL	% EBLL
ANDERSON	451	12.53	9	2.00	MARION	97	15.09	7	7.22
BOWIE	1,164	16.60	37	3.18	MORRIS	219	20.64	8	3.65
CAMP	218	20.59	10	4.59	PANOLA	97	5.54	8	8.25
CASS	420	19.59	20	4.76	RAINS	58	7.90	< 5	~
CHEROKEE	771	16.99	27	3.50	RED RIVER	159	16.99	21	13.21
DELTA	61	16.80	< 5	~	RUSK	288	6.86	10	3.47
FRANKLIN	120	16.06	< 5	~	SMITH	2,471	12.81	64	2.59
GREGG	1,181	10.35	27	2.29	TITUS	814	24.10	17	2.09
HARRISON	910	16.72	47	5.16	UPSHUR	358	12.44	11	3.07
HENDERSON	672	10.83	16	2.38	VAN ZANDT	508	13.67	16	3.15
HOPKINS	487	15.95	21	4.31	WOOD	331	12.21	12	3.63
LAMAR	696	17.38	51	7.33					

Public Health Region 5

Children, 0-5 years of age

- Lead testing occurred in 8,742 children, under the age of 6, in PHR 5 in 2017
- Of those children tested, 203 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent tested (13.89%) in PHR 5 is lower than the percent tested (14.03%) Statewide in 2017
- The percent EBLL (2.32%) in PHR 5 is higher than the percent EBLL (1.95%) Statewide in 2017
- Table 7 shows the number and percentage of children tested for lead and those with EBLLs for the 15 counties in PHR 5

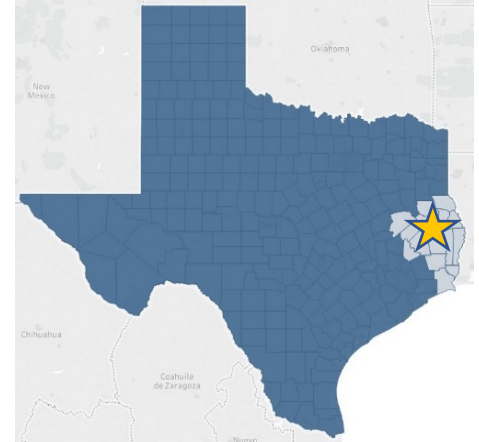


TABLE 7: Number and Percentage of Children Tested for Lead and those with EBLLs in PHR 5 by County in 2017

COUNTY	Tested	%		
		Tested	EBLL	% EBLL
ANGELINA	1,490	19.28	27	1.81
HARDIN	460	11.04	10	2.17
HOUSTON	208	13.22	5	2.40
JASPER	448	16.26	11	2.46
JEFFERSON	3,009	13.95	77	2.56
NACOGDOCHES	513	7.47	12	2.34
NEWTON	126	12.71	7	5.56
ORANGE	1,093	17.24	21	1.92
POLK	395	12.23	10	2.53
SABINE	60	8.72	< 5	~
SAN AUGUSTINE	101	16.21	0	0.00
SAN JACINTO	230	12.31	< 5	~
SHELBY	234	10.26	8	3.42
TRINITY	140	14.71	< 5	~
TYLER	235	17.94	9	3.83

Public Health Region 6

Children, 0-5 years of age

- Lead testing occurred in 92,218 children, under the age of 6, in PHR 5 in 2017
- Of those children tested, 1,335 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent tested (15.27%) in PHR 6 is higher than the percent tested (14.03) Statewide in 2017
- The percent EBLL (1.45%) in PHR 6 is lower than the percent EBLL (1.95%) Statewide in 2017
- Table 8 shows the number and percentage of children tested for lead and those with EBLLs for the 13 counties in PHR 6

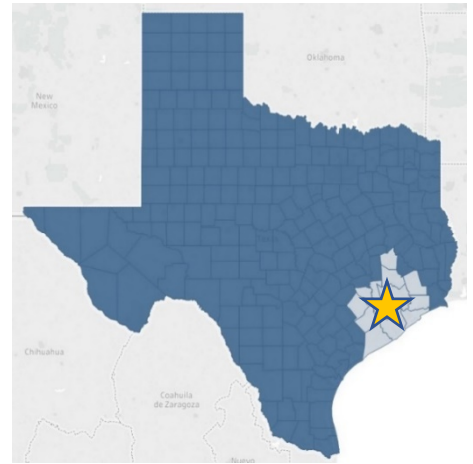


TABLE 8: Number and Percentage of Children Tested for Lead and those with EBLLs in PHR 6 by County in 2017

COUNTY	Tested	%		
		Tested	EBLL	% EBLL
AUSTIN	262	10.63	7	2.67
BRAZORIA	2,460	8.09	28	1.14
CHAMBERS	421	14.35	12	2.85
COLORADO	96	6.01	< 5	~
FORT BEND	6,036	11.77	60	0.99
GALVESTON	2,995	11.76	102	3.41
HARRIS	72,831	17.13	1,017	1.40
LIBERTY	821	12.16	11	1.34
MATAGORDA	758	22.97	14	1.85
MONTGOMERY	4,132	9.73	59	1.43
WALKER	422	9.12	6	1.42
WALLER	314	7.54	7	2.23
WHARTON	670	18.88	9	1.34

Public Health Region 7

Children, 0-5 years of age

- Lead testing occurred in 36,074 children, under the age of 6, in PHR 7 in 2017
- Of those children tested, 797 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent tested (12.01%) in PHR 7 is lower than the percent tested (14.03) Statewide in 2017
- The percent EBLL (2.21%) in PHR 7 is higher than the percent EBLL (1.95%) Statewide in 2017
- Table 9 shows the number and percentage of children tested for lead and those with EBLLs for the 30 counties in PHR 7

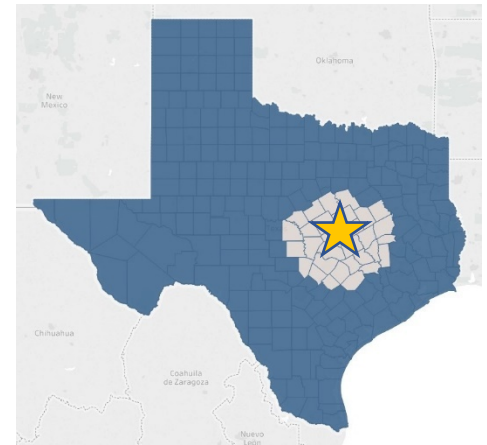


TABLE 9: Number and Percentage of Children Tested for Lead and those with EBLLs in PHR 7 by County in 2017

COUNTY	Tested	% Tested	EBLL	% EBLL	COUNTY	Tested	% Tested	EBLL	% EBLL
BASTROP	1,197	18.89	12	1.00	HILL	164	5.79	7	4.27
BELL	4,427	11.44	87	1.97	LAMPASAS	116	7.03	< 5	~
BLANCO	51	7.76	0	0.00	LEE	144	11.67	5	3.47
BOSQUE	138	10.78	< 5	~	LEON	193	14.78	< 5	~
BRAZOS	2,169	9.56	42	1.94	LIMESTONE	304	15.49	16	5.26
BURLESON	227	19.22	8	3.52	LLANO	129	12.67	< 5	~
BURNET	444	13.57	6	1.35	MADISON	229	22.54	8	3.49
CALDWELL	798	24.79	11	1.38	MCCLENNAN	4,261	19.77	153	3.59
CORYELL	595	9.03	12	2.02	MILAM	412	19.34	13	3.16
FALLS	282	22.54	19	6.74	MILLS	18	5.28	0	0.00
FAYETTE	131	8.22	5	3.82	ROBERTSON	212	16.04	14	6.60
FREESTONE	197	13.50	< 5	~	SAN SABA	20	5.06	0	0.00
GRIMES	283	13.89	9	3.18	TRAVIS	11,991	10.89	260	2.17
HAMILTON	79	13.72	7	8.86	WASHINGTON	299	11.15	7	2.34
HAYS	2,270	12.03	20	0.88	WILLIAMSON	4,294	10.45	64	1.49

Public Health Region 8

Children, 0-5 years of age

- Lead testing occurred in 34,431 children, under the age of 6, in PHR 8 in 2017
- Of those children tested, 825 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent tested (13.80%) in PHR 8 is lower than the percent tested (14.03) Statewide in 2017
- The percent EBLL (2.40%) in PHR 8 is higher than the percent EBLL (1.95%) Statewide in 2017
- Table 10 shows the number and percentage of children tested for lead and those with EBLLs for the 28 counties in PHR 8

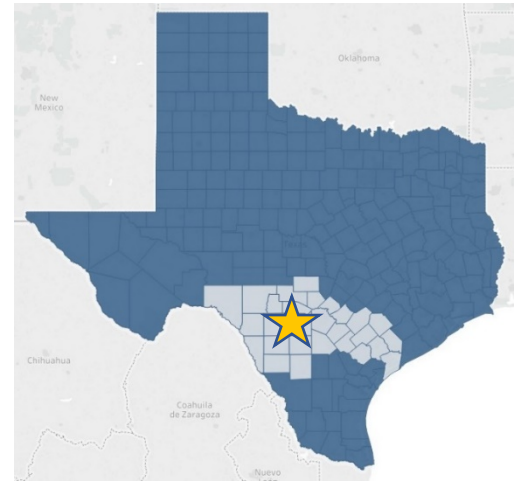


TABLE 10: Number and Percentage of Children Tested for Lead and those with EBLLs in PHR 8 by County in 2017

county	Tested	% Tested	EBLL	% EBLL	county	Tested	% Tested	EBLL	% EBLL
ATASCOSA	847	20.15	15	1.77	KARNES	172	18.76	< 5	~
BANDERA	132	11.75	< 5	~	KENDALL	173	7.61	< 5	~
BEXAR	23,627	13.65	580	2.45	KERR	545	15.43	12	2.20
CALHOUN	187	9.86	< 5	~	KINNEY	27	10.23	0	0.00
COMAL	974	11.54	11	1.13	LA SALLE	74	11.80	< 5	~
DEWITT	196	13.20	20	10.20	LAVACA	151	12.41	13	8.61
DIMMIT	308	30.89	11	3.57	MAVERICK	1,424	20.90	21	1.47
EDWARDS	28	16.87	0	0.00	MEDINA	436	11.85	5	1.15
FRIO	396	25.83	13	3.28	REAL	34	14.98	0	0.00
GILLESPIE	177	10.38	5	2.82	UVALDE	424	16.06	< 5	~
GOLIAD	60	13.33	< 5	~	VAL VERDE	862	15.55	21	2.44
GONZALES	210	10.95	9	4.29	VICTORIA	813	10.20	23	2.83
GUADALUPE	1,320	11.93	25	1.89	WILSON	449	15.00	12	2.67
JACKSON	95	7.92	< 5	~	ZAVALA	290	20.31	10	3.45

Public Health Region 9

Children, 0-5 years of age

- Lead testing occurred in 5,593 children, under the age of 6, in PHR 9 in 2017
- Of those children tested, 91 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent tested (10.10%) in PHR 9 is lower than the percent tested (14.03) Statewide in 2017
- The percent EBLL (1.63%) in PHR 9 is lower than the percent EBLL (1.95%) Statewide in 2017
- Table 11 shows the number and percentage of children tested for lead and those with EBLLs for the 30 counties in PHR 9

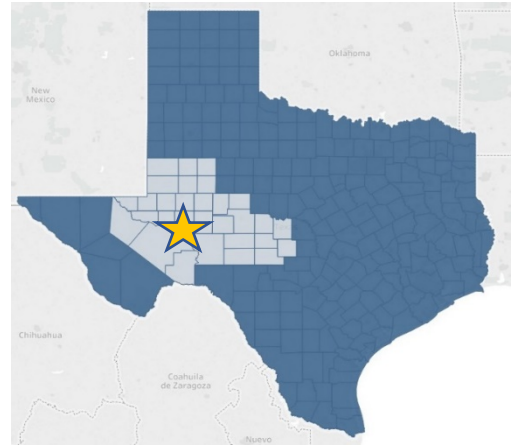


TABLE 11: Number and Percentage of Children Tested for Lead and those with EBLLs in PHR 9 by County in 2017

county	Tested	% Tested	EBLL	% EBLL	county	Tested	% Tested	EBLL	% EBLL
ANDREWS	123	7.73	< 5	~	MASON	34	14.85	< 5	~
BORDEN	< 5	~	0	0.00	MCCULLOCH	72	11.75	8	11.11
COKE	34	19.54	0	0.00	MENARD	19	13.97	< 5	~
CONCHO	27	13.71	5	18.52	MIDLAND	843	6.06	14	1.66
CRANE	48	10.79	0	0.00	PECOS	164	11.40	< 5	~
CROCKETT	37	10.69	0	0.00	REAGAN	50	15.15	0	0.00
DAWSON	59	5.32	< 5	~	REEVES	342	32.66	< 5	~
ECTOR	1,727	11.06	20	1.16	SCHLEICHER	18	6.27	0	0.00
GAINES	215	10.13	7	3.26	STERLING	10	11.63	0	0.00
GLASSCOCK	< 5	~	0	0.00	SUTTON	36	9.97	< 5	~
HOWARD	23	0.90	0	0.00	TERRELL	6	8.82	< 5	~
IRION	11	8.59	0	0.00	TOM GREEN	1,408	14.57	10	0.71
KIMBLE	24	8.42	0	0.00	UPTON	52	17.39	< 5	~
LOVING	< 5		0	0.00	WARD	120	11.85	< 5	~
MARTIN	25	4.91	< 5	~	WINKLER	55	7.91	< 5	~

Public Health Region 10

Children, 0-5 years of age

- Lead testing occurred in 10,949 children, under the age of 6, in PHR 10 in 2017
- Of those children tested, 198 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent tested (12.04%) in PHR 10 is lower than the percent tested (14.03) Statewide and the percent EBLL (1.81%) in PHR 10 is lower than the percent EBLL (1.95%) Statewide in 2017
- Table 12 shows the number and percentage of children tested for lead and those with EBLL for the 6 counties in PHR 10

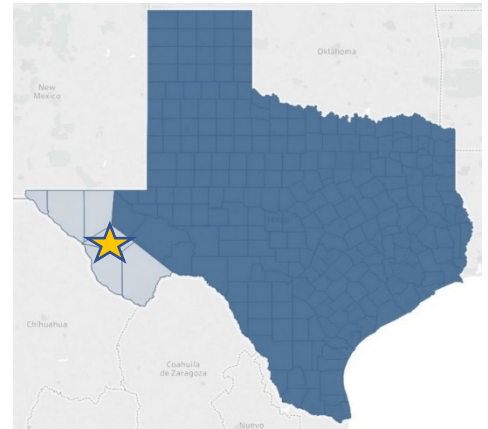


TABLE 12: Number and Percentage of Children Tested for Lead and those with EBLLs in PHR 10 by County in 2017

COUNTY	Tested	%		
		Tested	EBLL	% EBLL
BREWSTER	8	0.98	0	0.00
CULBERSON	17	6.44	0	0.00
EL PASO	10,853	12.25	196	1.81
HUDSPETH	60	18.52	< 5	~
JEFF DAVIS	< 5	~	0	0.00
PRESIDIO	10	1.26	< 5	~

Public Health Region 11

Children, 0-5 years of age

- Lead testing occurred in 36,551 children, under the age of 6, in PHR 11 in 2017
- Of those children tested, 630 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent tested (8.7%) in PHR 10 is lower than the percent tested (14.03) Statewide and the percent EBLL (3.29%) in PHR 11 is higher than the percent EBLL (1.95%) Statewide in 2017
- Table 13 shows the number and percentage of children tested and those with EBLL for the 19 counties in PHR 11

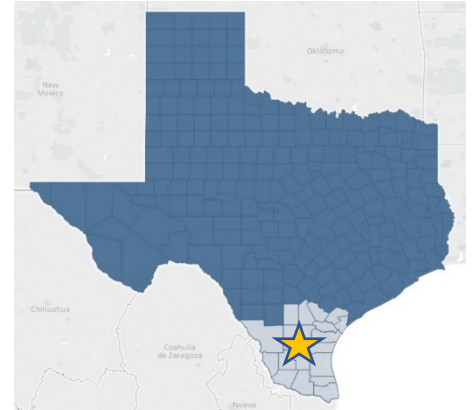


TABLE 13: Number and Percentage of Children Tested for Lead and those with EBLLs in PHR 11 by County in 2017

county	Tested	% Tested	EBLL	% EBLL
ARANSAS	93	5.97	< 5	~
BEE	375	17.47	8	2.13
BROOKS	142	19.92	10	7.04
CAMERON	11,177	21.75	194	1.74
DUVAL	235	22.19	< 5	~
HIDALGO	12,380	12.45	211	1.70
JIM HOGG	94	17.74	< 5	~
JIM WELLS	878	18.57	15	1.71
KENEDY	< 5	~	0	0.00
KLEBERG	240	7.40	8	3.33
LIVE OAK	134	17.80	6	4.48
MCMULLEN	6	10.00	< 5	~
NUECES	2,909	9.53	35	1.20
REFUGIO	96	16.19	< 5	~
SAN PATRICIO	924	14.21	12	1.30
STARR	1,459	17.63	34	2.33
WEBB	4,696	13.93	82	1.75
WILLACY	523	20.86	5	0.96
ZAPATA	189	9.03	< 5	~

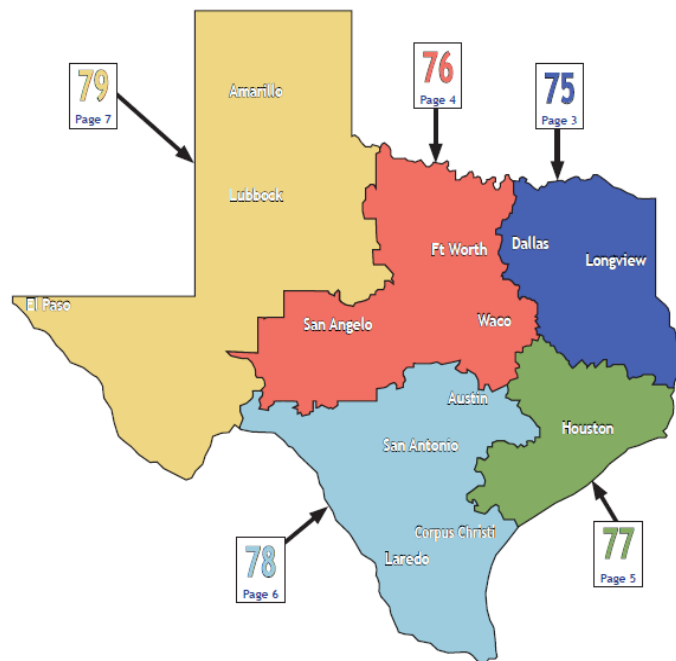
Targeted Areas by Zip Code

Children, 1-2 years of age

BLSB currently recommends that blood lead testing occur in children who reside in a Targeted Zip Code Area at age 12 and 24 months

Targeted zip codes have one or more associated census tract in which:

- (a) The percentage of children age 1-2 years old with a blood lead level ≥ 5 $\mu\text{g}/\text{dL}$ is $\geq 3\%$ among those tested in 2016 (Prevalence), or
- (b) The percentage of residential structures built before 1950 is $\geq 27\%$ (Housing)



Pages 21-25 include data for the five targeted zip code regions for children, 1-2 years of age

Targeted Zip Codes in Texas Data

Age 1 year (12-23 months)

- 1,371 children tested at 1 year of age in all Targeted Zip Codes in Texas had an EBLL, greater than or equal to $5\mu\text{g}/\text{dL}$, in 2017

Age 2 years (24-35 months)

- 1,385 children tested at 2 years of age in all Targeted Zip Codes in Texas had an EBLL, greater than or equal to $5\mu\text{g}/\text{dL}$, in 2017

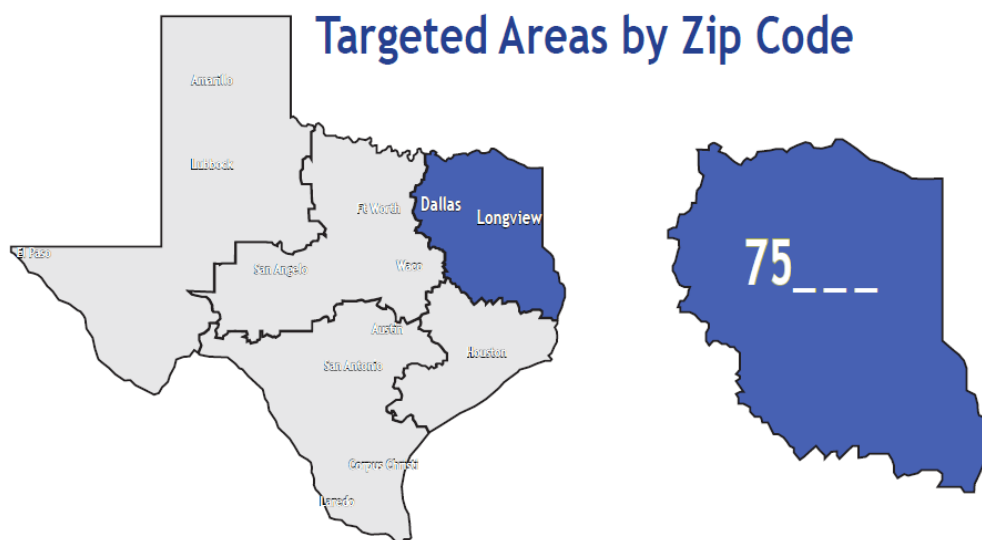
Age 1-2 years (12-35 months)

- 2,756 children tested at 1-2 years of age in all Targeted Zip Codes in Texas had an EBLL, greater than or equal to $5\mu\text{g}/\text{dL}$, in 2017

EBLL rates* for 1-2-year old's in Targeted Zip Codes (2.47) are higher compared to EBLL rates* for all of Texas (1.90)

*rates per 100

Targeted Zip Code Area: 75---



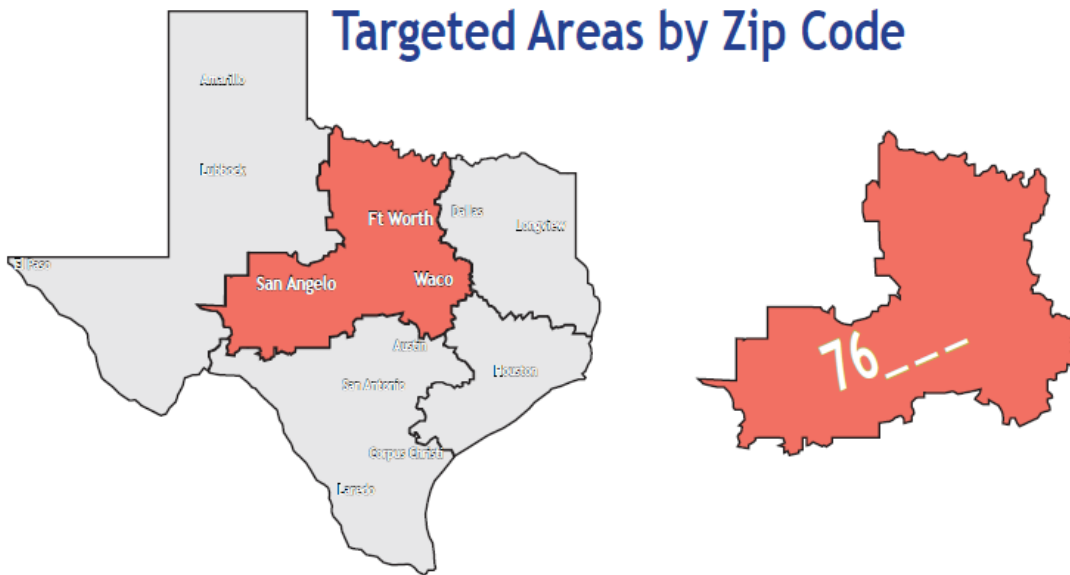
Lead testing occurred in 25,624 children between the ages 1-2 years in Target Zip Code Areas beginning with 75--- in 2017

- Of those children tested, 655 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent EBLL, 2.56%, for 1-2 year old's in Targeted Zip Code Areas beginning with 75--- is higher than the state percentage, 1.90%.

TABLE 14: Number of Children Tested for Lead and children with EBLLs in Targeted Zip Code Areas beginning with 75--- , by age group in 2017

	No. of children tested	No. of children with EBLL >5ug/dL	% EBLL
Age 1 year (12-23 months)	14,304	319	2.23
Age 2 years (24-35 months)	11,320	336	2.97
Age 1-2 years (12-35 months)	25,624	655	2.56

Targeted Zip Code Area: 76---



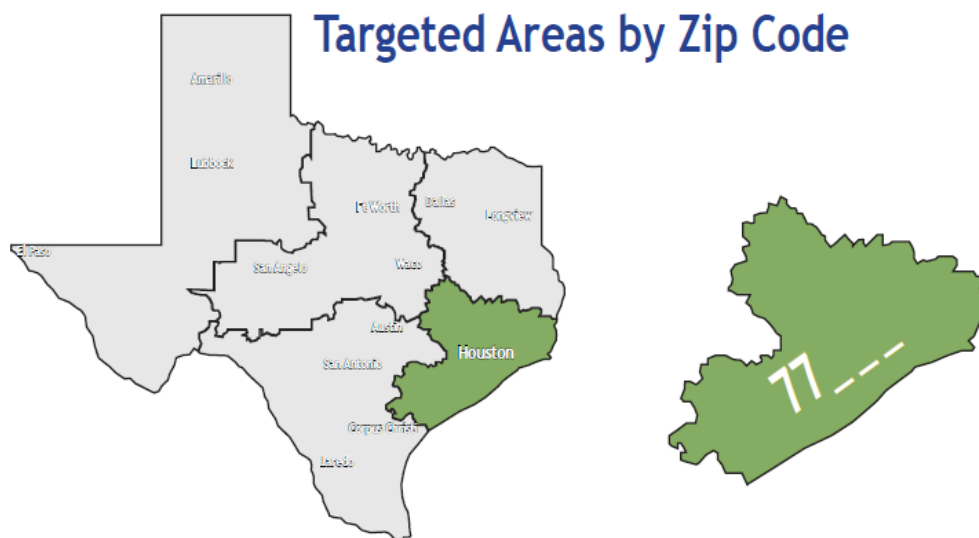
Lead testing occurred in 17,422 children between the ages 1-2 in Target Zip Code Areas beginning with 76--- in 2017

- Of those children tested, 534 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent EBLL, 3.07%, for 1-2 year old's in Targeted Zip Code Areas beginning with 76--- is higher than the state percentage, 1.90%.

TABLE 15: Number of Children Tested for Lead and children with EBLLs in Targeted Zip Code Areas beginning with 76--- , by age group in 2017

	No. of children tested	No. of children with EBLL >5ug/dL	% EBLL
Age 1 year (12-23 months)	10,018	270	2.70
Age 2 years (24-35 months)	7,404	264	3.57
Age 1-2 years (12-35 months)	17,422	534	3.07

Targeted Zip Code Area: 77---



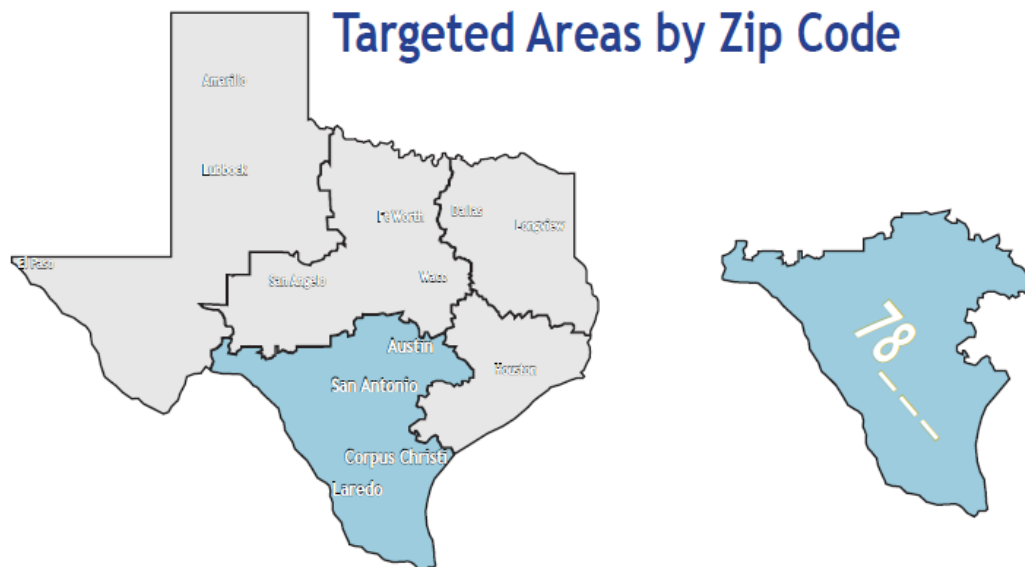
Lead testing occurred in 23,973 children between the ages 1-2 years in Target Zip Code Areas beginning with 77---in 2017

- Of those children tested, 476 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent EBLL, 1.99%, for 1-2 year old's in Targeted Zip Code Areas beginning with 77--- is higher than the state percentage, 1.90%.

TABLE 16: Number of Children Tested for Lead and children with EBLLs in Targeted Zip Code Areas beginning with 77--- , by age group in 2017

	No. of children tested	No. of children with EBLL >5ug/dL	% EBLL
Age 1 year (12-23 months)	13,255	248	1.87
Age 2 years (24-35 months)	10,718	228	2.13
Age 1-2 years (12-35 months)	23,973	476	1.99

Targeted Zip Code Area: 78---



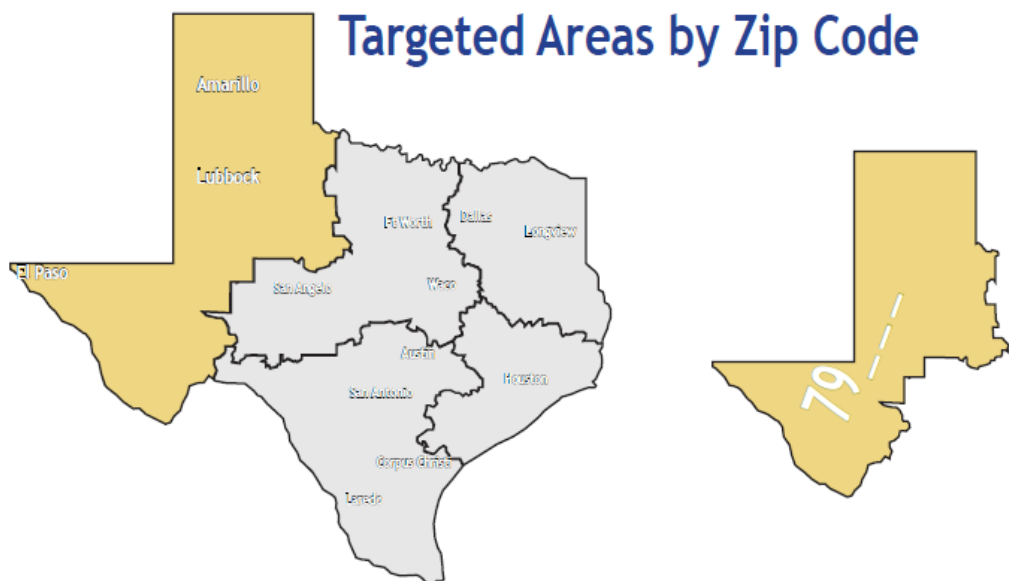
Lead testing occurred in 33,668 children between the ages 1-2 years in Target Zip Code Areas beginning with 78--- in 2017

- Of those children tested, 753 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent EBLL, 2.24%, for 1-2 year old's in Targeted Zip Code Areas beginning with 78--- is higher than the state percentage, 1.90%.

TABLE 17: Number of Children Tested for Lead and children with EBLLs in Targeted Zip Code Areas beginning with 78--- , by age group in 2017

	No. of children tested	No. of children with EBLL >5ug/dL	% EBLL
Age 1 year (12-23 months)	18,711	370	1.98
Age 2 years (24-35 months)	14,957	383	2.56
Age 1-2 years (12-35 months)	33,668	753	2.24

Targeted Zip Code Area: 79---



Lead testing occurred in 11,102 children between the ages 1-2 years in Target Zip Code Areas beginning with 79--- in 2017

- Of those children tested, 338 had an elevated blood lead level (EBLL), greater than or equal to 5µg/dL, in 2017
- The percent EBLL, 3.04%, for 1-2 year old's in Targeted Zip Code Areas beginning with 79--- is higher than the state percentage, 1.90%.

TABLE 18: Number of Children Tested for Lead and children with EBLLs in Targeted Zip Code Areas beginning with 79--- , by age group in 2017

	No. of children tested	No. of children with EBLL >5ug/dL	% EBLL
Age 1 year (12-23 months)	6,527	164	2.51
Age 2 years (24-35 months)	4,575	174	3.80
Age 1-2 years (12-35 months)	11,102	338	3.04

Environmental Lead Investigations

Licensed Risk Assessors conduct Environmental Lead Investigations (ELIs) in a child's home to determine if there are lead hazards.

Healthcare providers can request an ELI for a child with a venous blood lead level test result of 20 µg/dL and higher, or two separate venous blood lead level tests collected at least 12 weeks apart in the 10-19 µg/dL range.

For more information on how to request an ELI, visit dshs.texas.gov/lead

Environmental Lead Investigations (ELIs) completed in 2017

BLSB risk assessors conducted 121 ELIs in 2017. The year built of properties investigated ranged from 1900-2017 with a median year built of 1974.

The number of properties built...

- ❖ **before 1950** is 31 (26%)
- ❖ **between 1950-1977** is 27 (21%)
- ❖ **between 1978-present** is 46 (38%)

(17 unknown or not recorded)



Environmental Lead Investigations

Where in Texas were ELIs conducted?

Environmental Lead Investigations (ELIs) occurred across the state in the following Public Health Regions (PHR): PHR 1 (4 ELIs), PHR 2 (5 ELIs), PHR 3 (31 ELIs), PHR 4 (8 ELIs), PHR 5 (3 ELIs), PHR 6 (13 ELIs), PHR 7 (27 ELIs), PHR 8 (17 ELIs), PHR 10 (5 ELIs), and PHR 11 (8 ELIs). Figure 4 shows the geographical distribution of ELIs conducted in Texas by county.

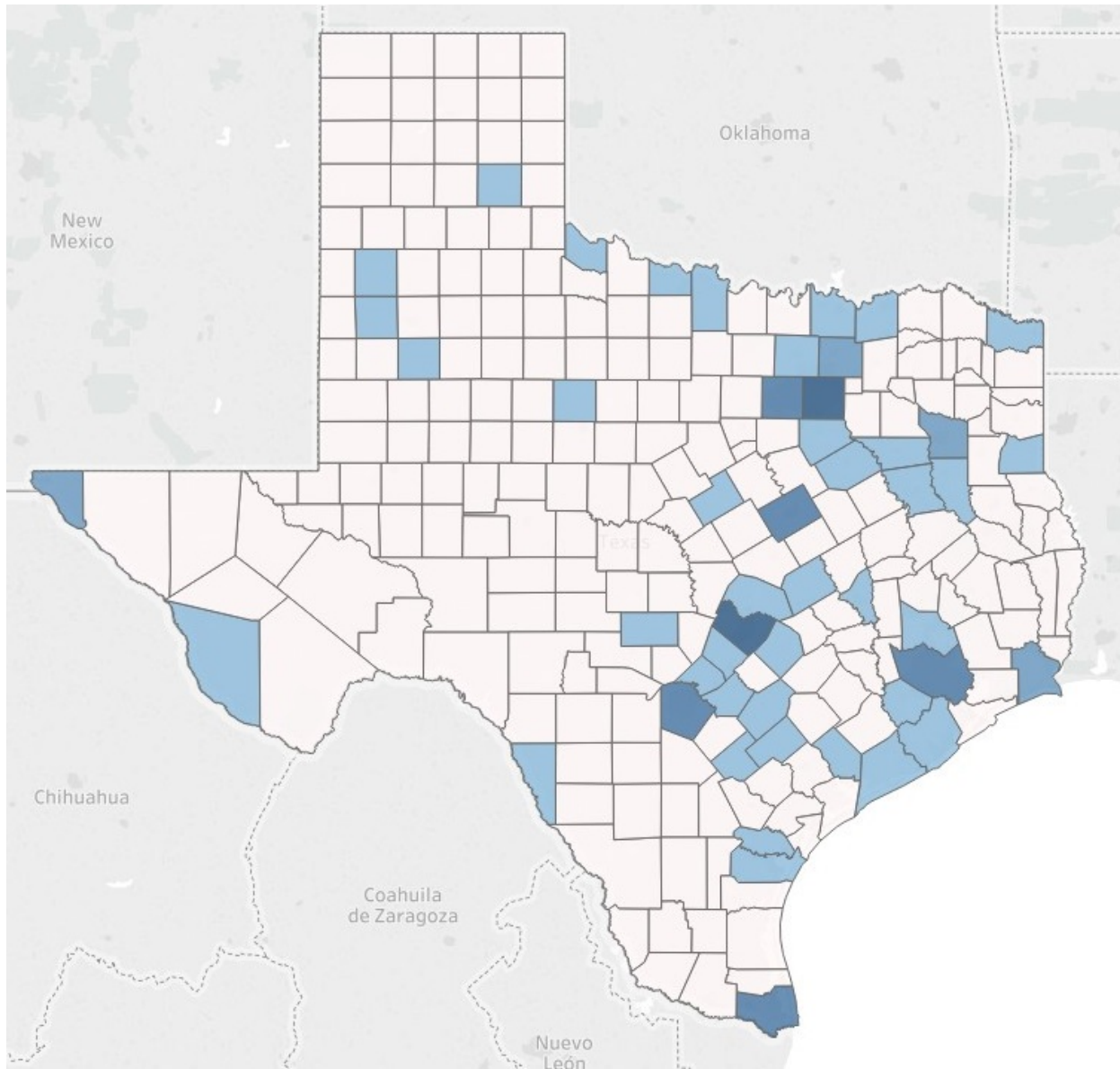


Figure 4: Number of ELIs conducted in Texas by County, 2017

Environmental Lead Investigations

ELI Environmental Samples

As part of an ELI, risk assessors test areas where children sleep, play, and eat to see if there are items that may be contributing to the lead exposure. Dust, paint, soil, or other samples may be collected to send to a lab for testing. The information below is a summary of environmental samples tested during ELIs in 2017.



Table 19: Percentage of Investigations with at least one sample with detectable lead by category in Texas, 2017

Environmental Sample Category	Percentage of ELIs with at least one sample with detectable lead
Paint	79%
Soil	13%
Dust	13%
Spice or other food	13%
Pottery or Clay Pot	14%
Cosmetic	7%
Religious or ceremonial powder	7%

Where to Find More Data?

Lead-Safe Texas Newsletter

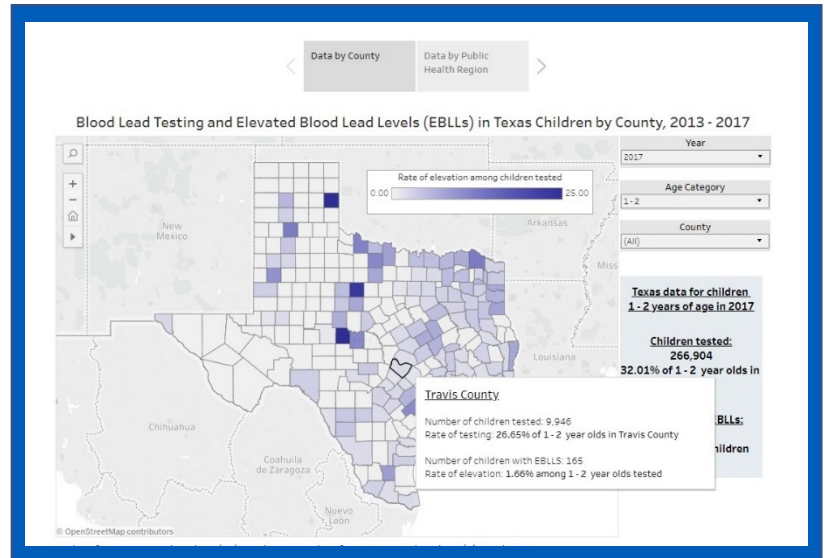
Sign-up to receive the semi-annual Lead-Safe Texas Newsletter and stay informed about lead related activities in Texas

To sign up, visit: dshs.texas.gov/lead



Interactive Map

Visit dshs.texas.gov/lead to utilize the interactive map tool which includes blood lead testing and elevated blood lead levels (EBLLs) in Texas children from 2013-2017. Users can select data by county or public health region (PHR), by age groups, and by year.



Visit dshs.texas.gov/lead or Email texasbloodlead@dshs.texas.gov

Blood Lead Surveillance Branch: Data Considerations

Data Considerations

- The report represents data analyzed by September 2019.
- The Centers for Disease Control and Prevention (CDC) currently defines a reference level of 5 µg/dL to identify individuals with elevated blood lead levels.
- Each person is represented once at the date of the highest test for the given calendar year.
- Each person's residential geography is represented by the address at the time of the highest test per calendar year.
- Because BLSB only actively gathers addresses for individuals with blood lead levels 5 µg/dL or greater, persons with blood lead levels less than 5 µg/dL may be under-represented geographically due to the lack of availability of address information.
- Caution should be used when interpreting data with a small count (i.e., less than 20).
- Cell sizes of 1-4 are expressed as "< 5" to protect the identity of individuals.
- Population data (if applicable) are obtained from the DSHS Center for Health Statistics Population Data for Texas, located at <https://www.dshs.texas.gov/chs/popdat/>.

Identification of Persons/Entities with Blood Lead Data:

- No person will attempt to use these data to identify any person or entity.
- If the identity of a person or entity should be discovered inadvertently:
- No use will be made of this knowledge
- The Blood Lead Surveillance Branch will be notified immediately of the incident via phone at (800) 588 – 1248 or email at TexasBloodLead@dshs.texas.gov .
- The information that would identify the individual or entity will be destroyed, as requested by the Blood Lead Surveillance Branch.
- No one else will be informed of the discovery.

Environmental Samples

- The following Lead Hazard Limits were used to determine detectable lead limits.
- Dust wipes: 40 µg/ft² for floors and 250 µg/ft² for window sills.
- Soil: 400 ppm for bare soil in play area and 1200 ppm for bare soil in non-play area (drip line).
- Paint: 1.04 mg/cm² for any paint sample type.
- Spices, other food items, cosmetics, religious or ceremonial powders, pottery or clay pots: detectable limits determined on individual basis.
- References:
 - <https://www.epa.gov/lead/hazard-standards-lead-paint-dust-and-soil-tsca-section-403>
 - <https://www.atsdr.cdc.gov/csem/csem.asp?csem=34&po=8>

Glossary of Terms, Abbreviations, and Acronyms

BLSB- Blood Lead Surveillance Branch

Elevated Blood Lead Level (EBLL)- A blood lead level greater than or equal to 5µg/dl.

EBLL rate- The number of children with an elevated blood lead level (EBLL) divided by the number of children screened with a blood lead test, multiplied by 100.

Environmental Lead Investigation (ELI)- An inspection, by a certified Lead Risk Assessor, of the child's residence or other sites where a child spends a significant amount of time, to find the source or sources of potential lead exposures to a child with a persistent or a significantly EBLL. For more information on how to request an ELI, visit dshs.texas.gov/lead

Public Health Region (PHR)- Texas is comprised of 254 counties and each Texas county is assigned to one of eleven states designated Public Health Regions (PHRs).

Targeted Zip Code- A zip code that has one or more associated census tract in which:

The percentage of children age 1-2 years old with a blood lead level ≥ 5 mcg/dL is $\geq 3\%$ among those tested in 2016 (Prevalence), or

(The percentage of residential structures built before 1950 is $\geq 27\%$ (Housing).

A complete list of Targeted Zip Codes can be found in the blood lead screening guidelines, available at dshs.texas.gov/lead

Targeted Zip Code Area- One of five targeted zip code regions in Texas that are grouped based on the first 2 numbers in zip code; 75---, 76---, 77---, 78---, and 79---.

Testing Rate- The number of children screened with a blood lead test divided by the population of children in the group of interest (e.g., by age and/or geographical location), multiplied by 100.

TX CLPPP- Texas Childhood Lead Poisoning Prevention Program

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Blood Lead Surveillance Branch
[***dshs.texas.gov/lead***](https://dshs.texas.gov/lead)