



# **TEXAS DEPARTMENT OF STATE HEALTH SERVICES**

## **2011 Annual Report**

### **Adult Blood Lead Levels in Texas**

## **2011 Data Summary**

In 2011, 31,891 blood lead reports were received for 29,111 individuals 15 years of age and older in Texas (Table 1). Of those, 31,252 (98.00%) were below 25 µg/dL, and 639 (2.00%) were above this level (Figure 1). The majority of individuals with blood lead levels greater or equal to 25 µg/dL were male (Table 2); 35 years of age or older (Table 3); and were exposed to lead at work (Table 4).

Race and ethnicity information is largely unknown. Among the 31,891 reports received in 2011, 85.84% had no race information (Table 5), and 75.07% had no ethnicity information (Table 6).

Occupational settings remain the predominant source of exposure for reported elevated (25 µg/dL or higher) blood levels in Texas. Industries with the highest number of reported elevated blood lead test results are primary metal manufacturing; amusement, gambling, and recreation industries; computer and electronic product manufacturing; specialty trade contractors; heavy and civil engineering construction; and chemical manufacturing (Figure 2).

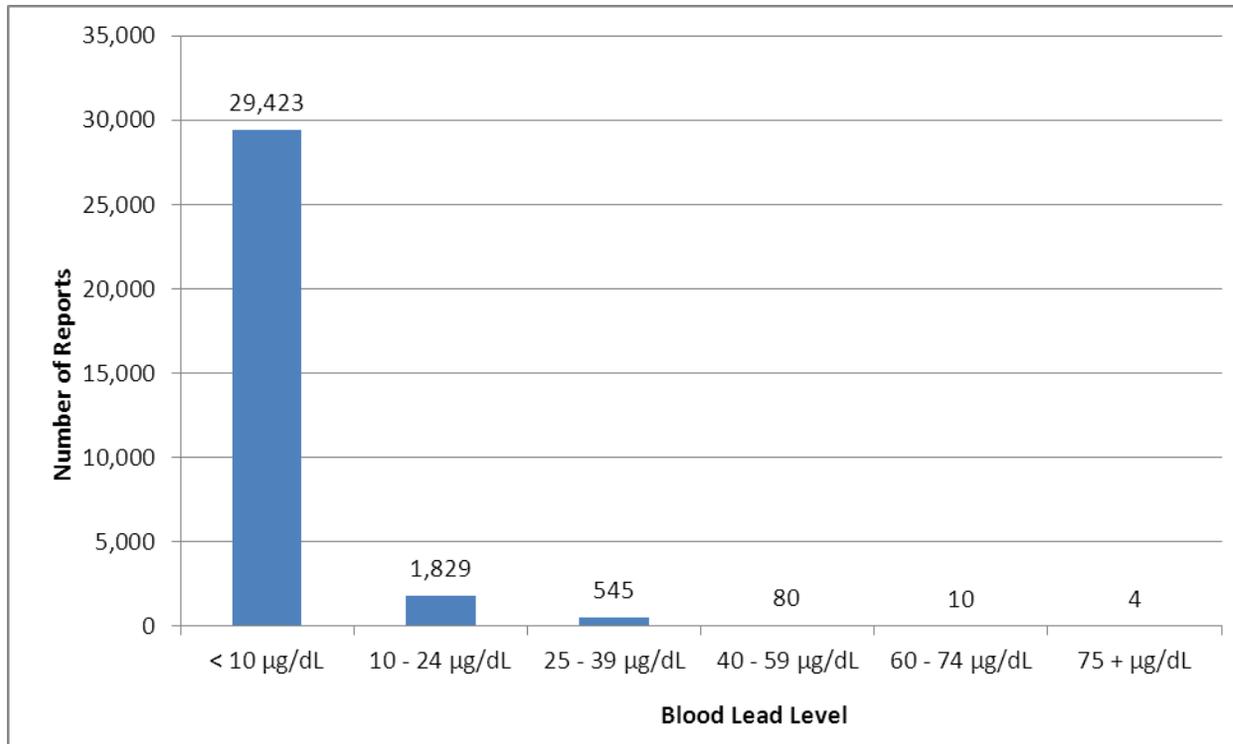
Non-occupational exposures also occur. The most frequently reported sources of exposure in a non-occupational setting are shooting and/or reloading bullets, non-traditional herbal remedies, and home renovation/restoration (Table 7). Individuals may report more than one type of exposure at a time.

During 2011, follow-up activity was conducted for individuals with blood lead levels of 10 µg/dL or higher. Individuals were contacted via mail and/or telephone and provided educational information related to lead exposure and prevention methods. Additionally, healthcare providers and employers were often contacted in instances where individuals had blood lead levels equal or greater to 25 µg/dL.

**Table 1. Reported blood lead tests for individuals 15 years of age and older in Texas, 2011**

Number of reports	Number of individuals	Range of reported results	Mean blood lead level	Median blood lead level
31,891	29,111	0 - 87 µg/dL	3.32 µg/dL	2 µg/dL

**Figure 1. Distribution of blood lead levels among individuals 15 years of age and older in Texas, 2011**



**Table 2. Distribution of gender by blood lead test result for individuals 15 years of age and older in Texas, 2011**

<u>Gender</u>	<u>All Blood Lead Levels</u>		<u>Blood Lead Levels <math>\geq</math> 25 <math>\mu</math>g/dL</u>		<u>Blood Lead Levels <math>\geq</math> 40 <math>\mu</math>g/dL</u>	
	<u>Number of reports</u>	<u>Percent</u>	<u>Number of reports</u>	<u>Percent</u>	<u>Number of reports</u>	<u>Percent</u>
Male	21,329	66.88	625	97.81	90	95.74
Female	10,495	32.91	14	2.19	4	4.26
Unknown	67	0.21	0	0	0	0
<b>Total</b>	<b>31,891</b>	<b>100</b>	<b>639</b>	<b>100</b>	<b>94</b>	<b>100</b>

**Table 3. Distribution of age by blood lead test result for individuals 15 years of age and older in Texas, 2011**

<u>Age</u>	<u>All Blood Lead Levels</u>		<u>Blood Lead Levels <math>\geq</math> 25 <math>\mu</math>g/dL</u>		<u>Blood Lead Levels <math>\geq</math> 40 <math>\mu</math>g/dL</u>	
	<u>Number of reports</u>	<u>Percent</u>	<u>Number of reports</u>	<u>Percent</u>	<u>Number of reports</u>	<u>Percent</u>
15 - 17 years	7,249	22.73	6	0.94	1	1.06
18 - 24 years	3,836	12.02	50	7.82	5	5.32
25 - 34 years	5,248	16.45	143	22.38	23	24.47
35 - 44 years	5,090	15.96	133	20.81	8	8.51
45 - 54 years	4,774	14.96	171	26.76	25	26.60
55 - 64 years	3,072	9.63	101	15.81	20	21.27
65 + years	2,617	8.20	35	5.48	12	12.77
Unknown	5	0.15	0	0.00	0	0.00
<b>Total</b>	<b>31,891</b>	<b>100</b>	<b>639</b>	<b>100</b>	<b>94</b>	<b>100</b>

**Table 4. Work-relatedness among reported blood lead tests for individuals 15 years of age and older in Texas, 2011**

<u>Work-relatedness</u>	<u>All Blood Lead Levels</u>		<u>Blood Lead Levels <math>\geq</math> 25 <math>\mu</math>g/dL</u>		<u>Blood Lead Levels <math>\geq</math> 40 <math>\mu</math>g/dL</u>	
	<u>Number of reports</u>	<u>Percent</u>	<u>Number of reports</u>	<u>Percent</u>	<u>Number of reports</u>	<u>Percent</u>
Occupational	4,081	12.80	587	91.86	74	78.72
Non-occupational	68	0.21	42	6.57	14	14.89
Both occupational and non-occupational	0	0.00	0	0.00	0	0.00
Unknown	27,742	86.99	10	1.57	6	6.38
<b>Total</b>	<b>31,891</b>	<b>100</b>	<b>639</b>	<b>100</b>	<b>94</b>	<b>100</b>

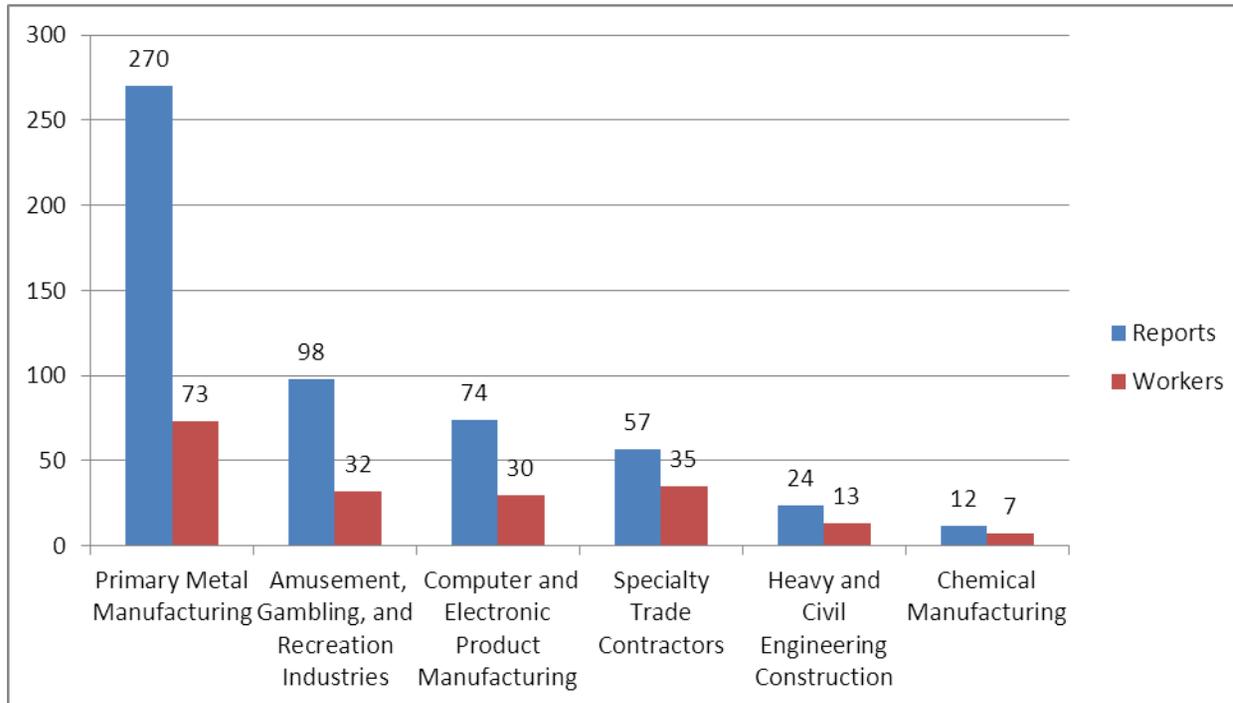
**Table 5. Distribution of race by blood lead test result for individuals 15 years of age and older in Texas, 2011**

<b>Race</b>	<b>All Blood Lead Levels</b>		<b>Blood Lead Levels <math>\geq</math> 25 <math>\mu</math>g/dL</b>		<b>Blood Lead Levels <math>\geq</math> 40 <math>\mu</math>g/dL</b>	
	<b>Number of reports</b>	<b>Percent</b>	<b>Number of reports</b>	<b>Percent</b>	<b>Number of reports</b>	<b>Percent</b>
American Indian/Alaskan Native	54	0.17	1	0.16	1	1.06
Asian	290	0.91	9	1.41	2	2.13
Black	1,486	4.66	80	12.52	13	13.83
White	2,002	6.28	239	37.40	10	10.64
Hawaiian/Pacific Islander	0	0.00	0	0.00	0	0.00
Other	681	2.14	39	6.10	1	1.06
Unknown	27,378	85.84	271	42.41	67	71.28
<b>Total</b>	<b>31,891</b>	<b>100</b>	<b>639</b>	<b>100</b>	<b>94</b>	<b>100</b>

**Table 6. Distribution of ethnicity by blood lead test result for individuals 15 years of age and older in Texas, 2011**

<b>Ethnicity</b>	<b>All Blood Lead Levels</b>		<b>Blood Lead Levels <math>\geq</math> 25 <math>\mu</math>g/dL</b>		<b>Blood Lead Levels <math>\geq</math> 40 <math>\mu</math>g/dL</b>	
	<b>Number of reports</b>	<b>Percent</b>	<b>Number of reports</b>	<b>Percent</b>	<b>Number of reports</b>	<b>Percent</b>
Hispanic	5,849	18.34	256	40.06	21	22.34
Not Hispanic	2,100	6.59	273	42.73	46	48.94
Unknown	23,942	75.07	110	17.21	27	28.72
<b>Total</b>	<b>31,891</b>	<b>100</b>	<b>639</b>	<b>100</b>	<b>94</b>	<b>100</b>

**Figure 2. Texas industries with the highest number of blood lead test results  $\geq 25 \mu\text{g/dL}$  in individuals 15 years of age and older in Texas, 2011**



**Table 7. Types of non-occupational exposures among individuals 15 years of age and older with elevated blood lead levels in Texas, 2011**

<u>Source of Exposure</u>	<u>Number of reports</u>	<u>Number of Individuals</u>
Shooting and/or reloading	25	15
Herbal remedies	10	5
Removing paint/restoration	4	3
Pica	1	1
Travel outside of country	1	1
Erroneous collection method	1	1
Shooting and/or reloading	25	15

**Table 8. Counties with the highest number of resident individuals with blood lead levels  $\geq 25 \mu\text{g/dL}$  in individuals 15 years of age and older, 2011**

<u>County</u>	<u>Number of reports</u>	<u>Number of Individuals</u>
Harris	157	82
Collin	98	22
Denton	70	16
Galveston	37	9
Kaufman	32	16
Grayson	32	4