2018 EXECUTIVE SUMMARY: CHILDHOOD LEAD POISONING SURVEILLANCE

Lead Poisoning Prevention Program

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Background

Childhood lead poisoning is the most common pediatric public health problem, yet it is entirely preventable. Lead paint in homes built before 1978 continues to be the most common source of lead exposure. Lead harms children's nervous systems and is associated with reduced IQ, behavioral problems, and learning disabilities, among other health outcomes. Once a child has been poisoned, the impairment it may cause is irreversible. A mission of the Lead Poisoning Prevention Program is to protect children from lead exposure. The program strives to prevent lead poisoning and promote wellness through education and a wide range of program activities that relate to lead poisoning prevention and intervention. This executive report summarizes the annual findings from blood lead surveillance for Connecticut children under the age of 6 years in 2019 and reviews the progress of the program efforts in addressing this important public health issue. Below are the key findings.

In May 2012, the CDC recommended a new "reference value" of 5 μg/dL, for lead poisoning among young children. The State of Connecticut adopted the new reference value in May 2013. As such, Connecticut local health departments (LHDs) are required to initiate public health case management actions for children with a confirmed blood level of ≥5 μg/dL. This report defines 5 μg/dL and greater as an elevated blood lead level. For a more detailed report and corresponding datasets, go to CT Open Data.
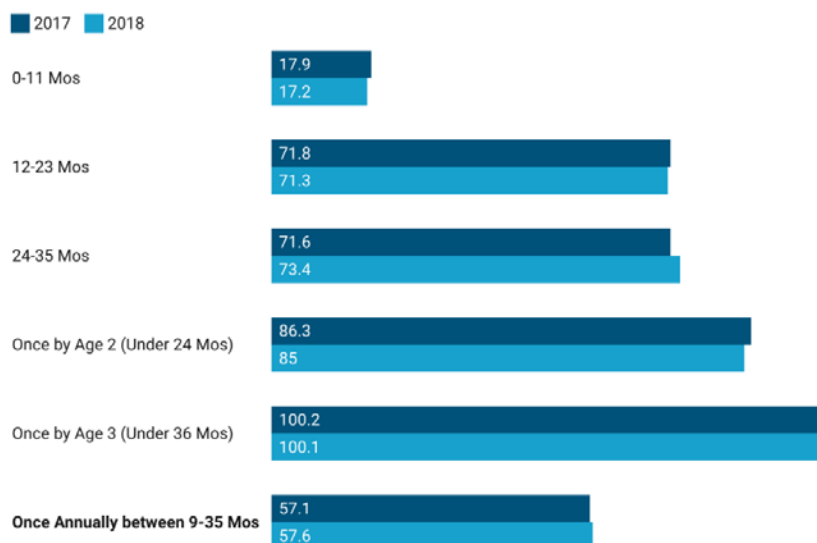
Highlights of Findings

Compliance with Mandatory Universal Screening

- 73,013 children under the age of 6 were tested for lead.
- Birth cohort analyses of children who turned 3 years old in 2018 shows that 100% of children were tested *at least* one time by the age of 3 years old. However, only 57.6% were tested twice before turning 3 years of age as required by state law. Despite that, the screening rate for the required two annual tests increased from 57.1% in 2016 to 57.6% in 2018.

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2018 - Percentage of Children Screened for Lead Poisoning by Relative 3 Year Old Birth Cohort by Year

As of January 1, 2009, Connecticut law mandates that medical providers must conduct annual lead screening for each child 9 to 35 months of age.

■ 2017 ■ 2018

| Age Group	2017	2018
0-11 Mos	17.9	17.2
12-23 Mos	71.8	71.3
24-35 Mos	71.6	73.4
Once by Age 2 (Under 24 Mos)	86.3	85
Once by Age 3 (Under 36 Mos)	100.2	100.1
Once Annually between 9-35 Mos	57.1	57.6

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Continued Decline in Childhood Lead Poisoning Rates

- 1,333 (18 per 1,000) children were tested with elevated blood lead levels ≥5 µg/dL, the CDC reference value.
- There was a 20% reduction in the number of cases from 2017.
- The prevalence rate (existing cases) significantly decreased from 2017.

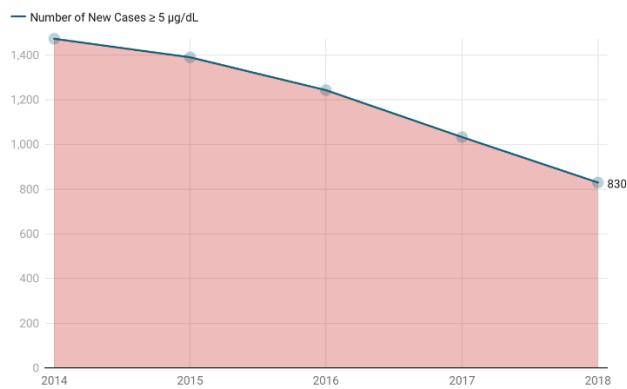**2018 Prevalence - Number of Children under 6 Years Old with Elevated Blood Lead Levels by Year**

— Number of Existing Cases ≥ 5 µg/dL
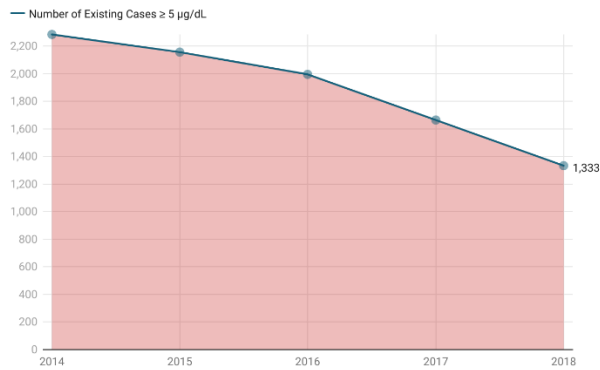
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2018 Prevalence - Percent of Children under 6 Years Old with Elevated Blood Lead Levels by Year

— Percent of Existing Cases ≥ 5 µg/dL
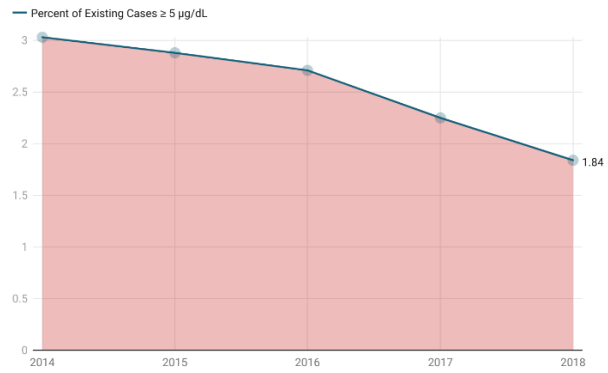
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- Of the 1,333 children tested with elevated blood lead levels, 830 (62.3%) were new cases.
- There was a 20% reduction in the number of *new* cases from 2017.
- The incidence rate of blood lead results ≥5 µg/dL significantly decreased from 2017 which translates into a 18% reduction in risk. The overall risk reduction across 5 years was 41%.

2018 Incidence- Number of Children under 6 Years Old with Elevated Blood Lead Levels by Year

— Number of New Cases ≥ 5 µg/dL

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2018 Incidence- Percent of Children under 6 Years Old with Elevated Blood Lead Levels by Year

— Percent of New Cases ≥ 5 µg/dL
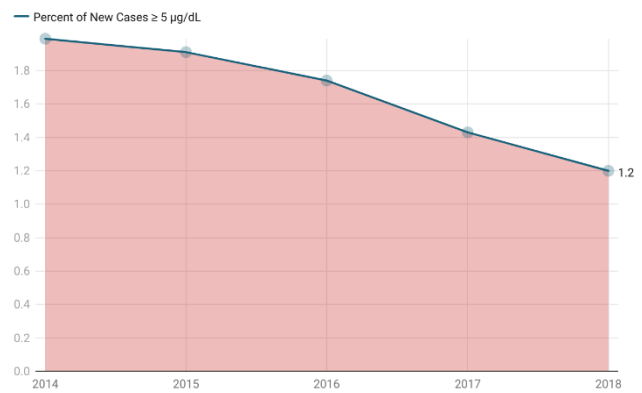
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Changes in Health Disparity

- The incidence rate of Non-Hispanic Blacks, Non-Hispanic Asians and Hispanics was 2.2%, 1.9%, and 1.3% as compared to 0.7% among Non-Hispanic Whites.
- This translates into significant elevated risks of 3.3, 2.8 and 2 for Non-Hispanic Blacks, Non-Hispanic Asians and Hispanics when compared to Non-Hispanic Whites. Data from prior years analyses are not comparable as the distinction between Hispanic and Non-Hispanic ethnicity was not made across each race.

2018 Executive Summary: Childhood Lead Poisoning Surveillance

Sources of Lead Exposure

- Deteriorated paint at dwelling units continues to be the most common source of lead exposure among young children. In 2018, 82 properties required a comprehensive or limited lead inspection (when one or more components of a comprehensive lead inspection is not tested). Of the 73 dwelling units inspected for children with environmental actionable blood lead levels, 80% were identified with lead paint hazards, 48% were identified with dust hazards, 43% were identified with soil hazards, and 0% were identified with drinking water hazards. The graph below shows the findings as the proportion of lead hazards related to paint and non-paint hazards.
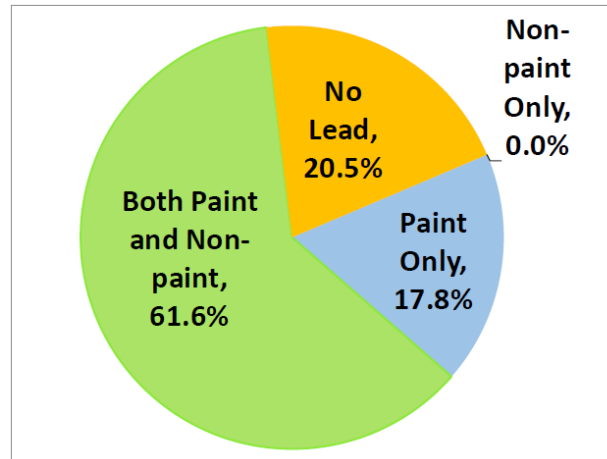
- Of the 1,333 children with elevated blood lead levels (5 mcg/dL and greater), 5 cities remain the locations of housing that harm the largest proportion of children: **New Haven, Waterbury, Bridgeport, Hartford, and Meriden**. These 5 cities make up 51% of all lead poisoned children throughout Connecticut.

Recommendations

- Increase communications to pediatric providers regarding the annual screening requirements between 9 and 35 months per CT General Statute 19a-111g.
- Continue to improve prevention and risk reduction strategies by collaborating with stakeholders and community members.
- Heighten focus on high-risk populations and geographic areas with the highest rates to reduce disparities.

Additional information on Connecticut's annual Childhood Lead Poisoning Surveillance, including publicly accessible town level data, can be found on the Connecticut Open Data portal.

2018 Number and Percent of Blood Lead Levels among Children under 6 Years Old by Town

Town	Total Confirmed Tests	# <3.5 mcg/dL*	% <3.5 mcg/dL*	# ≥3.5 mcg/dL	% 3.5 mcg/dL	# ≥5 mcg/dL	% ≥5 mcg/dL	# ≥15 mcg/dL	% ≥15 mcg/dL	# ≥20 mcg/dL	% ≥20 mcg/dL
2018 Total	72,631	68,679	94.6	3,952	5.4	1,333	1.8	165	0.2	71	0.1
Andover	48	S	S	S	S	S	S	0	0.0	0	0.0
Ansonia	492	457	92.9	35	7.1	15	3.1	1	0.2	0	0.0
Ashford	69	68	98.6	1	1.4	0	0.0	0	0.0	0	0.0
Avon	303	290	95.7	13	4.3	1	0.3	0	0.0	0	0.0
Barkhamsted	53	46	86.8	7	13.2	2	3.8	0	0.0	0	0.0
Beacon Falls	92	89	96.7	3	3.3	0	0.0	0	0.0	0	0.0
Berlin	274	267	97.4	7	2.6	1	0.4	1	0.4	0	0.0
Bethany	59	58	98.3	1	1.7	0	0.0	0	0.0	0	0.0
Bethel	301	291	96.7	10	3.3	2	0.7	0	0.0	0	0.0
Bethlehem	48	S	S	S	S	0	0.0	0	0.0	0	0.0
Bloomfield	345	329	95.4	16	4.6	0	0.0	0	0.0	0	0.0
Bolton	64	63	98.4	1	1.6	0	0.0	0	0.0	0	0.0
Bozrah	28	S	S	S	S	0	0.0	0	0.0	0	0.0
Branford	361	351	97.2	10	2.8	3	0.8	0	0.0	0	0.0
Bridgeport	4863	4,567	93.9	296	6.1	137	2.8	20	0.4	11	0.2
Bridgewater	22	S	S	S	S	0	0.0	0	0.0	0	0.0
Bristol	1098	1,046	95.3	52	4.7	12	1.1	3	0.3	2	0.2
Brookfield	259	255	98.5	4	1.5	1	0.4	0	0.0	0	0.0
Brooklyn	143	128	89.5	15	10.5	4	2.8	0	0.0	0	0.0
Burlington	147	145	98.6	2	1.4	0	0.0	0	0.0	0	0.0
Canaan	9	S	S	S	S	S	S	S	S	S	S
Canterbury	67	65	97.0	2	3.0	1	1.5	0	0.0	0	0.0
Canton	126	124	98.4	2	1.6	0	0.0	0	0.0	0	0.0
Chaplin	31	S	S	S	S	0	0.0	0	0.0	0	0.0
Cheshire	432	417	96.5	15	3.5	3	0.7	0	0.0	0	0.0
Chester	57	54	94.7	3	5.3	0	0.0	0	0.0	0	0.0
Clinton	163	156	95.7	7	4.3	1	0.6	0	0.0	0	0.0
Colchester	214	208	97.2	6	2.8	3	1.4	0	0.0	0	0.0
Colebrook	8	8	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Columbia	61	58	95.1	3	4.9	0	0.0	0	0.0	0	0.0

2018 Number and Percent of Blood Lead Levels among Children under 6 Years Old by Town

Town	Total Confirmed Tests	# <3.5 mcg/dL*	% <3.5 mcg/dL*	# ≥3.5 mcg/dL	% 3.5 mcg/dL	# ≥5 mcg/dL	% ≥5 mcg/dL	# ≥15 mcg/dL	% ≥15 mcg/dL	# ≥20 mcg/dL	% ≥20 mcg/dL
Cornwall	12	S	S	S	S	S	S	0	0.0	0	0.0
Coventry	210	201	95.7	9	4.3	0	0.0	0	0.0	0	0.0
Cromwell	223	217	97.3	6	2.7	1	0.5	0	0.0	0	0.0
Danbury	2316	2,229	96.2	87	3.8	27	1.2	5	0.2	2	0.1
Darien	417	411	98.6	6	1.4	0	0.0	0	0.0	0	0.0
Deep River	59	56	94.9	3	5.1	0	0.0	0	0.0	0	0.0
Derby	302	284	94.0	18	6.0	8	2.7	0	0.0	0	0.0
Durham	89	89	100.0	0	0.0	0	0.0	0	0.0	0	0.0
East Granby	81	80	98.8	1	1.2	0	0.0	0	0.0	0	0.0
East Haddam	111	106	95.5	5	4.5	0	0.0	0	0.0	0	0.0
East Hampton	181	170	93.9	11	6.1	2	1.1	1	0.6	1	0.6
East Hartford	1121	1,074	95.8	47	4.2	17	1.5	2	0.2	0	0.0
East Haven	511	494	96.7	17	3.3	4	0.8	0	0.0	0	0.0
East Lyme	195	192	98.5	3	1.5	0	0.0	0	0.0	0	0.0
East Windsor	207	197	95.2	10	4.8	1	0.5	0	0.0	0	0.0
Eastford	21	S	S	S	S	S	S	0	0.0	0	0.0
Easton	92	88	95.7	4	4.3	0	0.0	0	0.0	0	0.0
Ellington	336	325	96.7	11	3.3	3	0.9	0	0.0	0	0.0
Enfield	750	721	96.1	29	3.9	5	0.7	0	0.0	0	0.0
Essex	62	60	96.8	2	3.2	0	0.0	0	0.0	0	0.0
Fairfield	1064	1,050	98.7	14	1.3	4	0.4	0	0.0	0	0.0
Farmington	415	401	96.6	14	3.4	3	0.7	2	0.5	1	0.2
Franklin	26	S	S	S	S	0	0.0	0	0.0	0	0.0
Glastonbury	442	437	98.9	5	1.1	2	0.5	0	0.0	0	0.0
Goshen	31	S	S	S	S	0	0.0	0	0.0	0	0.0
Granby	134	130	97.0	4	3.0	0	0.0	0	0.0	0	0.0
Greenwich	1156	1,098	95.0	58	5.0	4	0.4	1	0.1	0	0.0
Griswold	189	181	95.8	8	4.2	1	0.5	0	0.0	0	0.0
Groton	998	953	95.5	45	4.5	7	0.7	1	0.1	0	0.0
Guilford	213	212	99.5	1	0.5	1	0.5	1	0.5	0	0.0
Haddam	118	110	93.2	8	6.8	1	0.9	0	0.0	0	0.0

2018 Number and Percent of Blood Lead Levels among Children under 6 Years Old by Town

Town	Total Confirmed Tests	# <3.5 mcg/dL*	% <3.5 mcg/dL*	# ≥3.5 mcg/dL	% 3.5 mcg/dL	# ≥5 mcg/dL	% ≥5 mcg/dL	# ≥15 mcg/dL	% ≥15 mcg/dL	# ≥20 mcg/dL	% ≥20 mcg/dL
Hamden	963	919	95.4	44	4.6	14	1.5	1	0.1	1	0.1
Hampton	30	S	S	S	S	S	S	0	0.0	0	0.0
Hartford	3707	3,442	92.9	265	7.1	109	2.9	14	0.4	5	0.1
Hartland	14	14	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Harwinton	69	67	97.1	2	2.9	1	1.5	0	0.0	0	0.0
Hebron	110	107	97.3	3	2.7	0	0.0	0	0.0	0	0.0
Kent	39	S	S	S	S	S	S	0	0.0	0	0.0
Killingly	336	314	93.5	22	6.5	10	3.0	2	0.6	0	0.0
Killingworth	106	104	98.1	2	1.9	0	0.0	0	0.0	0	0.0
Lebanon	74	72	97.3	2	2.7	0	0.0	0	0.0	0	0.0
Ledyard	353	338	95.8	15	4.2	1	0.3	0	0.0	0	0.0
Lisbon	30	30	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Litchfield	109	98	89.9	11	10.1	3	2.8	0	0.0	0	0.0
Lyme	9	9	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Madison	211	205	97.2	6	2.8	0	0.0	0	0.0	0	0.0
Manchester	1492	1,390	93.2	102	6.8	42	2.8	5	0.3	2	0.1
Mansfield	170	161	94.7	9	5.3	2	1.2	0	0.0	0	0.0
Marlborough	89	86	96.6	3	3.4	0	0.0	0	0.0	0	0.0
Meriden	1789	1,645	92.0	144	8.0	62	3.5	10	0.6	5	0.3
Middlebury	101	95	94.1	6	5.9	0	0.0	0	0.0	0	0.0
Middlefield	50	49	98.0	1	2.0	0	0.0	0	0.0	0	0.0
Middletown	703	670	95.3	33	4.7	8	1.1	2	0.3	2	0.3
Milford	914	872	95.4	42	4.6	9	1.0	1	0.1	1	0.1
Monroe	294	293	99.7	1	0.3	1	0.3	0	0.0	0	0.0
Montville	273	264	96.7	9	3.3	1	0.4	0	0.0	0	0.0
Morris	32	S	S	S	S	0	0.0	0	0.0	0	0.0
Naugatuck	699	663	94.8	36	5.2	5	0.7	1	0.1	0	0.0
New Britain	2419	2,312	95.6	107	4.4	49	2.0	10	0.4	6	0.3
New Canaan	307	300	97.7	7	2.3	0	0.0	0	0.0	0	0.0
New Fairfield	176	169	96.0	7	4.0	2	1.1	0	0.0	0	0.0
New Hartford	89	83	93.3	6	6.7	1	1.1	0	0.0	0	0.0

2018 Number and Percent of Blood Lead Levels among Children under 6 Years Old by Town

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New Haven	4060	3,565	87.8	495	12.2	209	5.2	25	0.6	12	0.3
New London	604	555	91.9	49	8.1	22	3.6	3	0.5	1	0.2
New Milford	446	434	97.3	12	2.7	3	0.7	1	0.2	0	0.0
Newington	381	379	99.5	2	0.5	0	0.0	0	0.0	0	0.0
Newtown	331	327	98.8	4	1.2	0	0.0	0	0.0	0	0.0
Norfolk	14	S	S	S	S	0	0.0	0	0.0	0	0.0
North Branford	179	176	98.3	3	1.7	1	0.6	0	0.0	0	0.0
North Canaan	53	45	84.9	8	15.1	3	5.7	0	0.0	0	0.0
North Haven	340	328	96.5	12	3.5	2	0.6	2	0.6	2	0.6
North Stonington	82	77	93.9	5	6.1	0	0.0	0	0.0	0	0.0
Norwalk	1944	1,875	96.5	69	3.5	15	0.8	0	0.0	0	0.0
Norwich	780	708	90.8	72	9.2	37	4.7	7	0.9	3	0.4
Old Lyme	112	110	98.2	2	1.8	1	0.9	0	0.0	0	0.0
Old Saybrook	89	88	98.9	1	1.1	0	0.0	0	0.0	0	0.0
Orange	230	229	99.6	1	0.4	1	0.4	0	0.0	0	0.0
Oxford	169	161	95.3	8	4.7	1	0.6	0	0.0	0	0.0
Plainfield	252	238	94.4	14	5.6	9	3.6	0	0.0	0	0.0
Plainville	257	254	98.8	3	1.2	0	0.0	0	0.0	0	0.0
Plymouth	141	132	93.6	9	6.4	3	2.1	0	0.0	0	0.0
Pomfret	63	60	95.2	3	4.8	0	0.0	0	0.0	0	0.0
Portland	139	135	97.1	4	2.9	1	0.7	1	0.7	0	0.0
Preston	52	50	96.2	2	3.8	0	0.0	0	0.0	0	0.0
Prospect	155	153	98.7	2	1.3	0	0.0	0	0.0	0	0.0
Putnam	199	183	92.0	16	8.0	8	4.0	1	0.5	0	0.0
Redding	98	96	98.0	2	2.0	0	0.0	0	0.0	0	0.0
Ridgefield	370	359	97.0	11	3.0	0	0.0	0	0.0	0	0.0
Rocky Hill	419	397	94.7	22	5.3	7	1.7	1	0.2	1	0.2
Roxbury	19	19	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Salem	74	71	95.9	3	4.1	0	0.0	0	0.0	0	0.0
Salisbury	28	S	S	S	S	0	0.0	0	0.0	0	0.0
Scotland	11	11	100.0	0	0.0	0	0.0	0	0.0	0	0.0

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Town	Total Confirmed Tests	# <3.5 mcg/dL*	% <3.5 mcg/dL*	# ≥3.5 mcg/dL	% 3.5 mcg/dL	# ≥5 mcg/dL	% ≥5 mcg/dL	# ≥15 mcg/dL	% ≥15 mcg/dL	# ≥20 mcg/dL	% ≥20 mcg/dL
Seymour	359	349	97.2	10	2.8	4	1.1	0	0.0	0	0.0
Sharon	18	S	S	S	S	0	0.0	0	0.0	0	0.0
Shelton	640	622	97.2	18	2.8	7	1.1	0	0.0	0	0.0
Sherman	32	S	S	S	S	0	0.0	0	0.0	0	0.0
Simsbury	301	285	94.7	16	5.3	2	0.7	0	0.0	0	0.0
Somers	150	145	96.7	5	3.3	0	0.0	0	0.0	0	0.0
South Windsor	467	458	98.1	9	1.9	2	0.4	0	0.0	0	0.0
Southbury	218	212	97.2	6	2.8	1	0.5	0	0.0	0	0.0
Southington	534	520	97.4	14	2.6	2	0.4	0	0.0	0	0.0
Sprague	49	S	S	S	S	S	S	0	0.0	0	0.0
Stafford	178	159	89.3	19	10.7	7	3.9	1	0.6	0	0.0
Stamford	3427	3,321	96.9	106	3.1	37	1.1	5	0.2	2	0.1
Sterling	54	50	92.6	4	7.4	2	3.7	0	0.0	0	0.0
Stonington	257	235	91.4	22	8.6	5	2.0	1	0.4	0	0.0
Stratford	1003	962	95.9	41	4.1	14	1.4	0	0.0	0	0.0
Suffield	204	195	95.6	9	4.4	1	0.5	0	0.0	0	0.0
Thomaston	141	133	94.3	8	5.7	2	1.4	0	0.0	0	0.0
Thompson	137	127	92.7	10	7.3	2	1.5	0	0.0	0	0.0
Tolland	268	265	98.9	3	1.1	1	0.4	0	0.0	0	0.0
Torrington	707	619	87.6	88	12.4	17	2.4	2	0.3	0	0.0
Trumbull	602	586	97.3	16	2.7	0	0.0	0	0.0	0	0.0
Union	6	6	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Vernon	695	649	93.4	46	6.6	20	2.9	3	0.4	2	0.3
Voluntown	29	S	S	S	S	S	S	0	0.0	0	0.0
Wallingford	716	700	97.8	16	2.2	3	0.4	1	0.1	1	0.1
Warren	11	11	100.0	0	0.0	0	0.0	0	0.0	0	0.0
Washington	39	S	S	S	S	0	0.0	0	0.0	0	0.0
Waterbury	4720	4,334	91.8	386	8.2	164	3.5	16	0.3	6	0.1
Waterford	257	249	96.9	8	3.1	1	0.4	0	0.0	0	0.0
Watertown	393	381	96.9	12	3.1	0	0.0	0	0.0	0	0.0
West Hartford	1183	1,105	93.4	78	6.6	14	1.2	0	0.0	0	0.0

2018 Number and Percent of Blood Lead Levels among Children under 6 Years Old by Town

Town	Total Confirmed Tests	# <3.5 mcg/dL*	% <3.5 mcg/dL*	# ≥3.5 mcg/dL	% 3.5 mcg/dL	# ≥5 mcg/dL	% ≥5 mcg/dL	# ≥15 mcg/dL	% ≥15 mcg/dL	# ≥20 mcg/dL	% ≥20 mcg/dL
West Haven	1231	1,117	90.7	114	9.3	30	2.4	5	0.4	0	0.0
Westbrook	73	70	95.9	3	4.1	1	1.4	0	0.0	0	0.0
Weston	109	106	97.2	3	2.8	0	0.0	0	0.0	0	0.0
Westport	371	366	98.7	5	1.3	0	0.0	0	0.0	0	0.0
Wethersfield	442	432	97.7	10	2.3	4	0.9	0	0.0	0	0.0
Willington	76	70	92.1	6	7.9	5	6.6	0	0.0	0	0.0
Wilton	279	271	97.1	8	2.9	1	0.4	0	0.0	0	0.0
Winchester	189	154	81.5	35	18.5	11	5.8	2	1.1	0	0.0
Windham	529	473	89.4	56	10.6	23	4.4	3	0.6	1	0.2
Windsor	562	532	94.7	30	5.3	5	0.9	0	0.0	0	0.0
Windsor Locks	225	208	92.4	17	7.6	11	4.9	0	0.0	0	0.0
Wolcott	234	223	95.3	11	4.7	1	0.4	0	0.0	0	0.0
Woodbridge	117	116	99.1	1	0.9	1	0.9	0	0.0	0	0.0
Woodbury	105	103	98.1	2	1.9	0	0.0	0	0.0	0	0.0
Woodstock	127	122	96.1	5	3.9	1	0.8	0	0.0	0	0.0

* Data included are from confirmed results only. Confirmed results are currently defined as either a result derived from a venous blood draw or a result of <5 mcg/dL derived from a capillary draw. Children with a capillary of ≥ 5 mcg/dL are required to have a venous. Estimates of ≥ 3.5 include non-confirmed 3.5 -4.9 capillary results.