CONNECTICUT DEPARTMENT OF PUBLIC HEALTH

2024 Annual Childhood Lead Poisoning Surveillance Report

PROGRAM HIGHLIGHTS

- Effective January 1, 2023, the Lead Hazard Reduction and Control Section lowered the blood lead reference value for children from 5 µg/dL to 3.5 µg/dL, per Public Act 22-49.
- Statistics regarding children under the age of 6 in 2024:
  - 72,190 children were tested for lead.
  - The new CDC reference value of ≥ 3.5 µg/dL has led to an increased prevalence of children with elevated lead levels, with 1,669 in 2023 to 1,887 in 2024.
  - Incidence has increased in 2024 with a total of 1,223 new cases of children younger than 6 years old who were lead poisoned (≥ 3.5 µg/dL).
- Both Non-Hispanic Black children and Hispanic children have a higher risk of lead poisoning compared to their Non-Hispanic counterparts, with rates of 2.9%, 4.0%, and 1.3% respectively.
- Deteriorated paint at dwelling units continues to be the most common source of lead exposure among young children; 76% of units inspected were identified with lead-based paint.
- Birth cohort analyses of children in 2024 showed that 100% were tested at least once by the age of 3. Sixty-six percent of children were tested twice before turning age 3.

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CONNECTICUT
Public Health

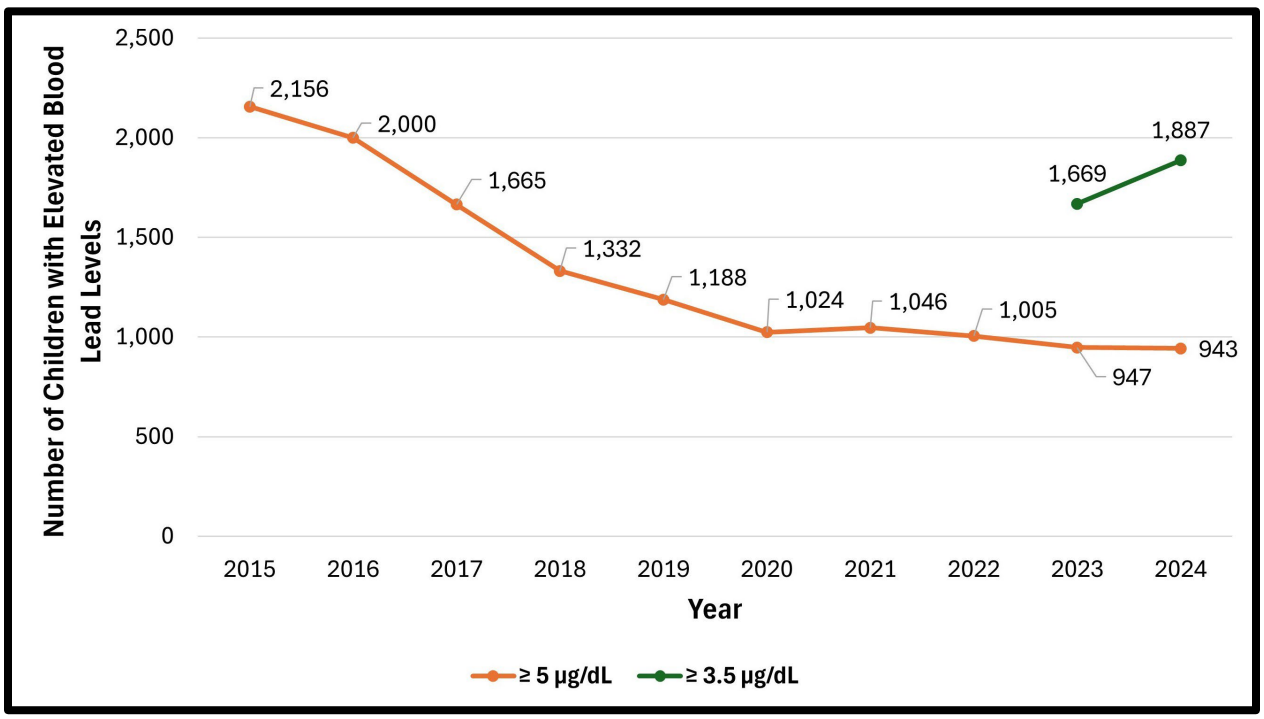
I. BACKGROUND

Childhood lead poisoning is a 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. The LHRC Section is dedicated to reducing childhood lead poisoning by promoting mandatory blood lead testing, reporting, surveillance, and linking families to services and targeted interventions.

This executive report summarizes the annual findings from blood lead surveillance for Connecticut children under the age of 6 years in 2024 and reviews the program's accomplishments in addressing this public health issue.

Under Connecticut Public Act 22-49, the Lead Hazard Reduction and Control (LHRC) Section lowered the blood lead reference value from 5 µg/dL to 3.5 µg/dL on January 1, 2023. Connecticut local health departments are required to initiate case management actions for children with a blood level of ≥ 3.5 µg/dL. This report defines a venous level of 3.5 µg/dL and greater as an elevated blood lead level.

Due to the adoption of the new CDC reference value of ≥ 3.5 µg/dL, there is an increase from 1,669 to 1,887 cases from 2023 to 2024, as shown below.



The LHRC Section will continue tracking trends for the reduced blood lead level of ≥ 3.5 µg/dL. Connecticut local health departments are required to initiate case management for children with a confirmed blood level of ≥ 3.5 µg/dL. Prevalence includes child lead poisoning cases that may have occurred prior to 2024 and remained lead poisoned in 2024.

Confirmatory Screening of Elevated Blood Lead Levels

The LHRC Section requires venous confirmation of capillary blood lead levels ≥ 3.5 µg/dL. Parents of children with venous levels at or above 3.5 µg/dL receive education on lead exposure, proper nutrition, and medical monitoring from their local health department.

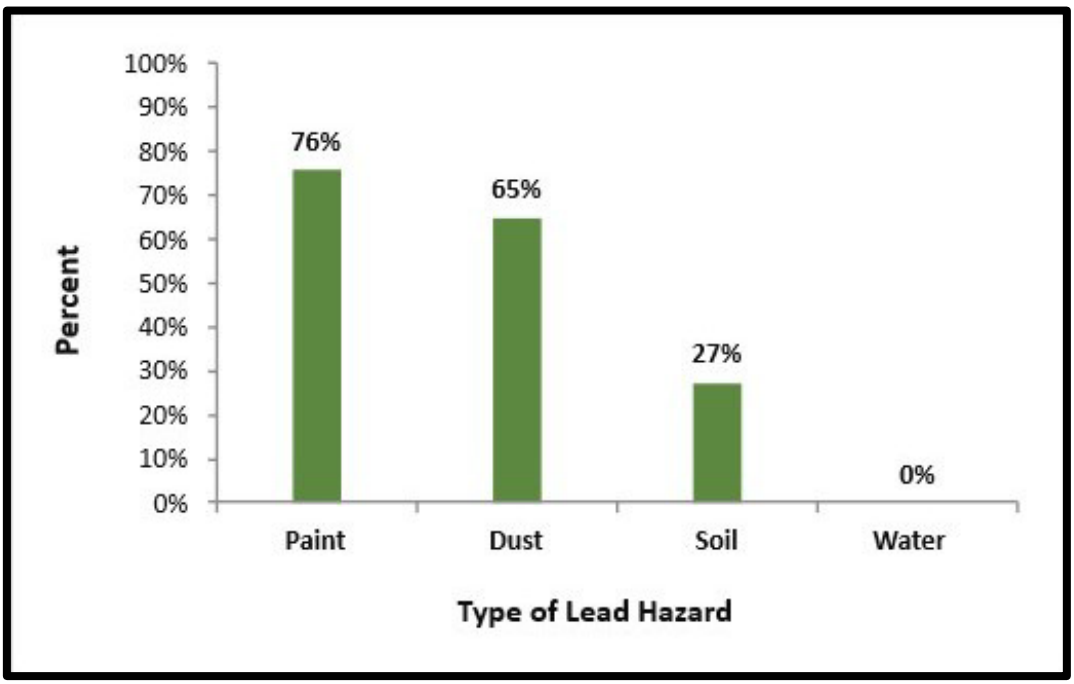
Capillary blood lead testing is a useful tool for preliminary lead screening. For capillary test results ≥ 3.5 µg/dL, local health department staff contact parents to ensure the child receives a confirmation venous test within the appropriate follow-up window.

Blood Lead Screening

In 2024, 72,190 children under the age of 6 were tested. With the adoption of the new blood reference value of ≥ 3.5 µg/dL, the number of children recognized as being lead poisoned increased from 1,669 to 1,887. According to the CDC, low levels of lead are harmful in children and can cause permanent damage to the brain and nervous system.

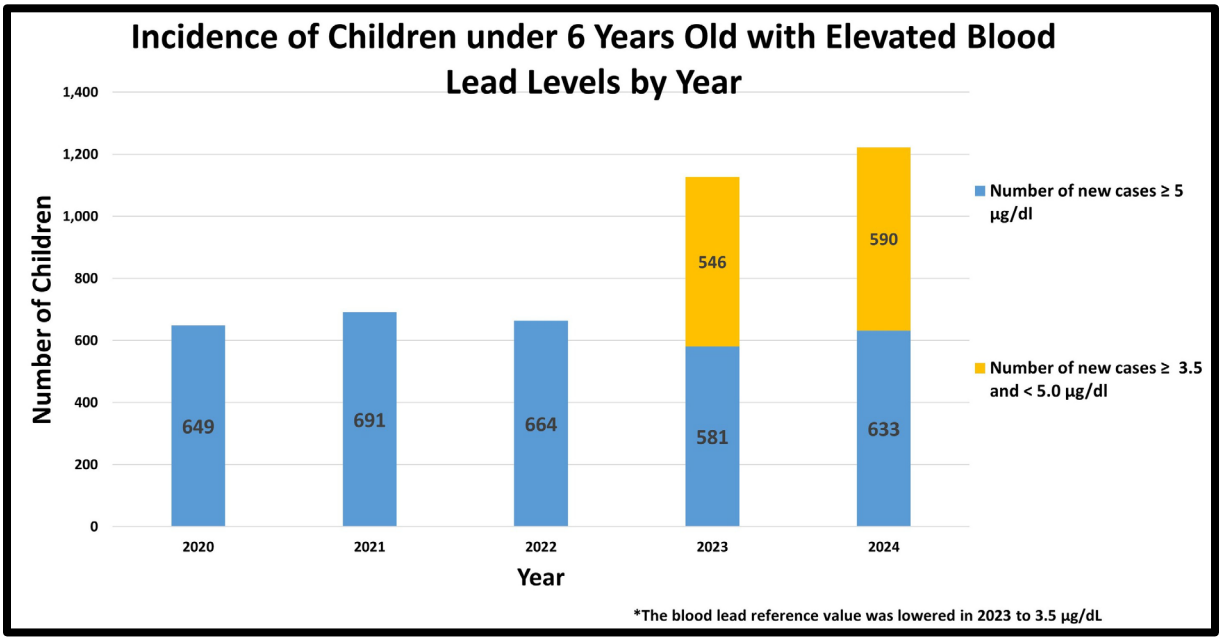
Lead Hazards By Type

In 2024, deteriorated paint in dwelling units continued to be the most common source of lead exposure among young children. Of the 216 residences investigated, a total of 164 (76%) were identified with a lead-based paint hazard, 140 (65%) were identified with a lead dust hazard, 59 (27%) were identified with a lead soil hazard, and 0 (0%) were identified with a lead in drinking water hazard.

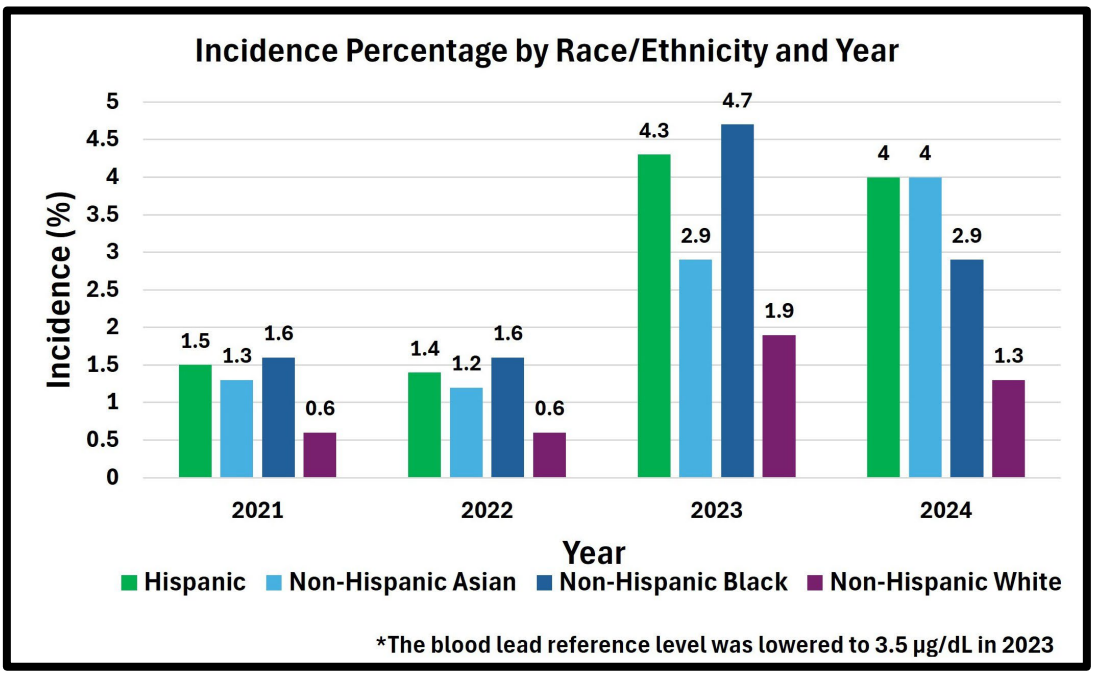


2. INCIDENCE AND RISK

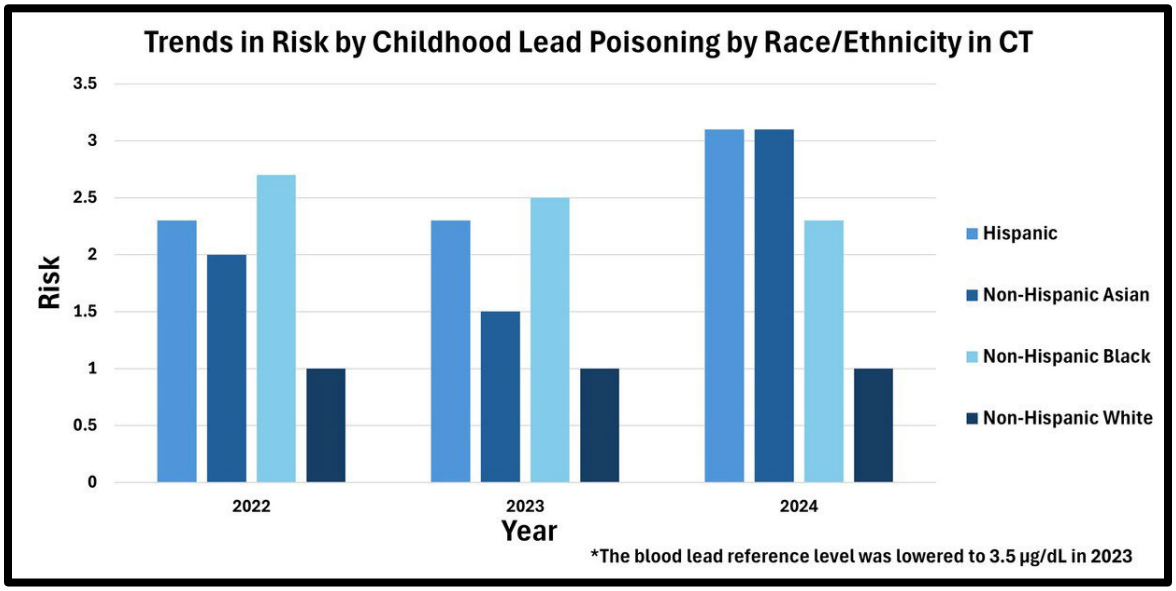
Effective January 1, 2023, per Public Act 22-49, the LHRC Section lowered the blood lead reference value for children from 5 µg/dL to 3.5 µg/dL. In 2024, 1,223 children under the age of 6 with new cases of elevated blood lead levels. Due to the reduced threshold of ≥ 3.5 µg/dL, there was an increase in the incidence of children, with 664 cases in 2022 compared to 1,223 cases in 2024. There were 590 new cases in 2024.



The incidence rate of Non-Hispanic Black children (2.9%), Non-Hispanic Asian children (4.0%), and Hispanic children (4.0%) showed a disparity compared to Non-Hispanic White children (1.3%). These percentages demonstrate an elevated risk for all groups, with Non-Hispanic Black children at the highest risk as compared to Non-Hispanic White children. The increased incidence percentages seen in the below graph are in-part due to the lowering of the blood lead risk threshold, from 5 µg/dL to 3.5 µg/dL.



While all race and ethnicity groups in Connecticut were shown to have an increased risk of lead poisoning, Non-Hispanic Black children were 2.3 times as likely to be lead poisoned than Non-Hispanic White children. Hispanic children and Non-Hispanic Asian children were 3.1 times as likely to be lead poisoned than Non-Hispanic White children.



Although lead continues to affect children in all communities across Connecticut, data collected by the LHRC Section shows that lead exposure disproportionately impacts lower-income communities and communities of color, making lead exposure a critical health equity issue.

3. HEALTH EQUITY

Figure 1: Number of Cases ≥ 3.5 µg/dL and Number of Houses Built Before 1960

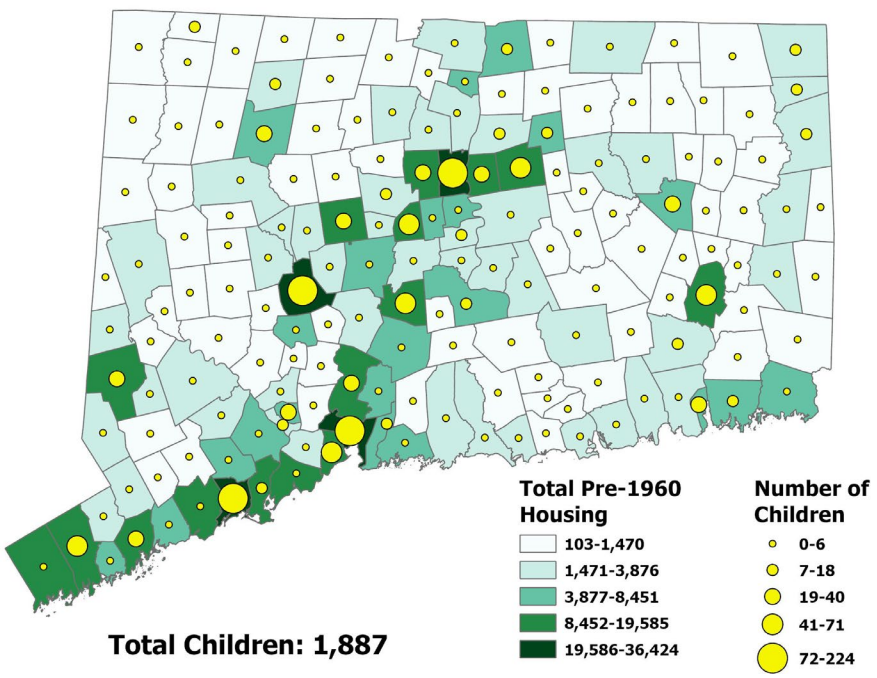
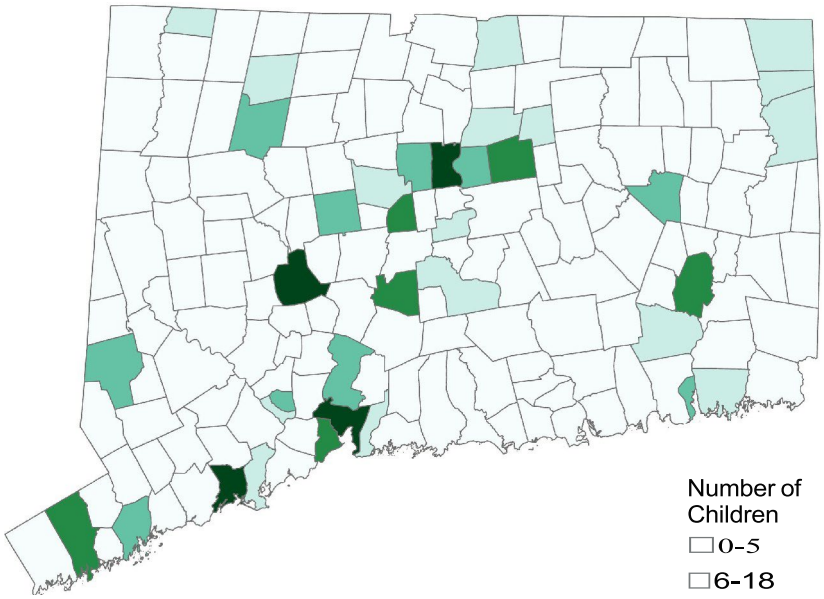
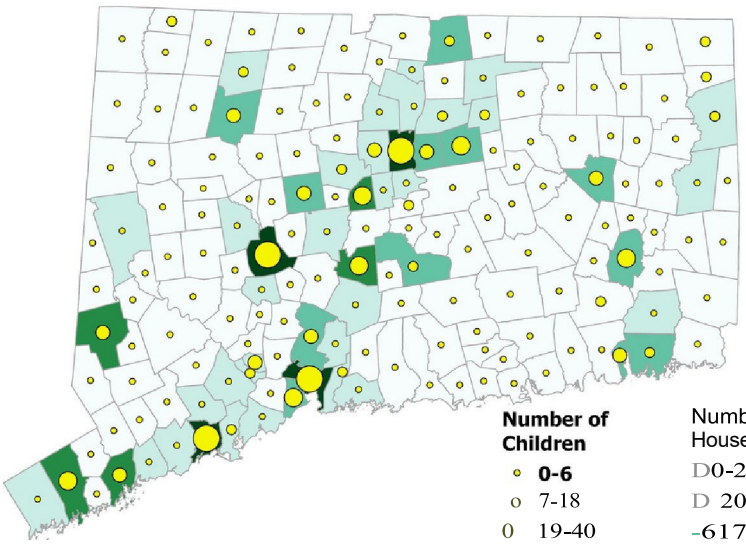


Figure 2: Number of Cases 3.5 1,.1g/dl by Town Among Children Under 6 Years Old



Total Children: 1,887

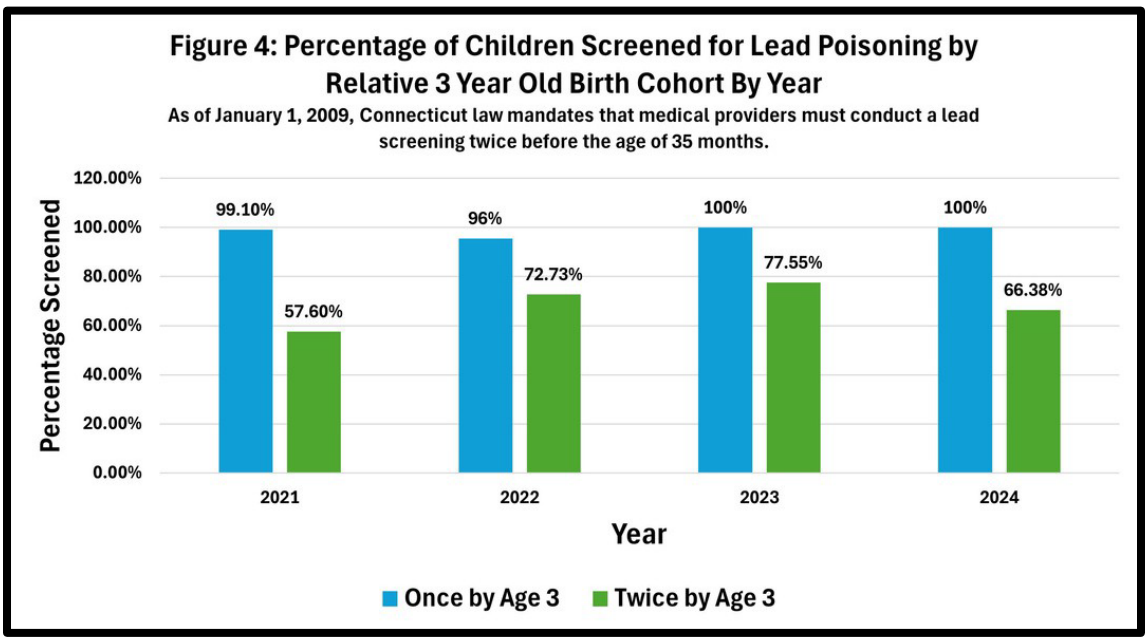
Figure 3: Number of Cases 3.5 µg/dl andNumber of Households with Income Below Poverty



Total: 1,887

4. COMPLIANCE WITH MANDATORY UNIVERSAL SCREENING

In 2024, 72,190 children under the age of 6 were tested for lead in Connecticut. Birth cohort analyses of children who turned 3 years old in 2024 showed that 100% of children were tested at least once by the age of 3 years old. However, only 66.4% were tested twice before turning 3 years old.



The effectiveness of the universal screening law for children under the age of three was evaluated by assessing the screening rate among the 2024 birth cohort (children turning three years old in 2024). The analysis used the total number of children who received a lead test while residing in Connecticut as the numerator, regardless of where the child was born, divided by the total number of births in 2020 from the Connecticut Vital Registry. This method accounts for population relocation. This method is adopted by the CDC's National Environmental Public Health Tracking (EPHT) Program to assess lead screening in young children among the grantee states. This approach may lead to screening rates above 100%.

5. HIGH-RISK COMMUNITIES

Each year, the LHRC Section identifies communities with a higher risk of childhood lead poisoning to better target resources and reduce health inequities associated with lead exposure in those communities. Risk is determined by examining rates of newly poisoned children, the age of housing, and income levels for each of Connecticut's 169 towns.

In 2024, 995 of the 1,887 (53%) elevated blood lead levels occurred in the following 10 towns: New Haven, Bridgeport, Waterbury, Hartford, Meriden, New Britain, Norwich, West Haven, Stamford, and Manchester.

Town	Total Confirmed Tests	< 3.5 µg/dL	≥ 3.5 µg/dL	≥ 5 µg/dL	≥ 10 µg/dL	≥ 15 µg/dL	≥ 20 µg/dL
Andover	58	57	1	1	0	0	0
Ansonia	484	455	29	13	1	1	1
Ashford	90	89	1	1	0	0	0
Avon	287	287	0	0	0	0	0
Barkhamsted	45	44	0	0	0	0	0
Beacon Falls	97	96	1	1	0	0	0
Berlin	349	349	0	0	0	0	0
Bethany	69	69	0	0	0	0	0
Bethel	372	367	5	2	0	0	0
Bethlehem	38	37	0	0	0	0	0
Bloomfield	351	348	3	2	1	1	1
Bolton	91	87	4	2	0	0	0
Bozrah	31	31	0	0	0	0	0
Branford	351	350	1	0	0	0	0
Bridgeport	4188	3973	215	113	29	14	5
Bridgewater	14	14	0	0	0	0	0
Bristol	1281	1249	32	17	1	1	1
Brookfield	247	246	1	1	0	0	0
Brooklyn	125	125	0	0	0	0	0
Burlington	161	158	3	0	0	0	0
Canaan	7	6	0	0	0	0	0
Canterbury	74	72	2	2	1	0	0
Canton	127	127	0	0	0	0	0
Chaplin	46	44	2	0	0	0	0
Cheshire	464	461	3	0	0	0	0
Chester	49	49	0	0	0	0	0
Clinton	194	193	1	1	1	0	0
Colchester	267	264	3	0	0	0	0
Colebrook	13	13	0	0	0	0	0
Columbia	82	81	1	0	0	0	0
Cornwall	18	18	0	0	0	0	0
Coventry	235	230	5	4	1	0	0
Cromwell	243	240	3	0	0	0	0
Danbury	2236	2196	40	18	2	1	1
Darien	543	542	1	1	1	1	0
Deep River	55	52	3	1	1	0	0
Derby	263	254	9	3	1	1	1
Durham	121	121	0	0	0	0	0
East Granby	98	96	2	1	0	0	0
East Haddam	150	144	6	4	1	1	1
East Hampton	220	218	2	1	1	1	1
East Hartford	1316	1285	31	20	6	2	0
East Haven	434	420	14	7	1	0	0
East Lyme	272	271	1	1	0	0	0
East Windsor	206	201	5	5	1	0	0
Eastford	28	27	1	1	1	0	0
Easton	131	129	2	0	0	0	0
Ellington	277	276	1	1	0	0	0
Enfield	862	844	18	6	2	2	1
Essex	57	56	1	0	0	0	0
Fairfield	1026	1020	6	3	1	1	1
Farmington	419	411	8	3	1	0	0
Franklin	21	21	0	0	0	0	0
Glastonbury	605	601	4	1	0	0	0
Goshen	28	26	2	1	0	0	0
Granby	179	179	0	0	0	0	0
Greenwich	1118	1116	2	2	0	0	0
Griswold	205	203	2	1	0	0	0
Groton	930	918	12	6	3	0	0
Guilford	206	205	1	1	0	0	0
Haddam	138	135	3	1	0	0	0
Hamden	908	873	35	21	7	3	2
Hampton	47	46	0	0	0	0	0
Hartford	3539	3389	150	92	29	12	7
Hartland	24	22	0	0	0	0	0

Town	Total Confirmed Tests	< 3.5 µg/dL	≥ 3.5 µg/dL	≥ 5 µg/dL	≥ 10 µg/dL	≥ 15 µg/dL	≥ 20 µg/dL
Harwinton	96	96	0	0	0	0	0
Hebron	154	151	3	1	0	0	0
Kent	18	17	0	0	0	0	0
Killingly	334	326	8	5	1	1	0
Killingworth	99	99	0	0	0	0	0
Lebanon	134	130	4	3	0	0	0
Ledyard	347	346	1	1	1	0	0
Lisbon	37	36	0	0	0	0	0
Litchfield	107	104	3	1	0	0	0
Lyme	20	20	0	0	0	0	0
Madison	248	246	2	1	0	0	0
Manchester	1269	1221	48	19	9	6	2
Mansfield	173	169	4	4	1	0	0
Marlborough	120	120	0	0	0	0	0
Meriden	1923	1852	71	29	6	2	2
Middlebury	104	103	1	0	0	0	0
Middlefield	55	55	0	0	0	0	0
Middletown	832	819	13	7	1	0	0
Milford	743	737	6	1	1	1	0
Monroe	375	371	4	2	0	0	0
Montville	335	328	7	3	0	0	0
Morris	42	42	0	0	0	0	0
Naugatuck	525	520	5	1	0	0	0
New Britain	2287	2216	71	39	16	9	6
New Canaan	368	367	1	0	0	0	0
New Fairfield	224	224	0	0	0	0	0
New Hartford	78	77	1	0	0	0	0
New Haven	3185	2961	224	103	21	5	2
New London	677	648	29	15	4	1	0
New Milford	425	422	3	1	0	0	0
Newington	607	601	6	1	0	0	0
Newtown	460	456	4	1	1	1	1
Norfolk	7	6	0	0	0	0	0
North Branford	222	220	2	0	0	0	0
North Canaan	33	25	8	4	0	0	0
North Haven	417	415	2	0	0	0	0
North Stonington	99	99	0	0	0	0	0
Norwalk	1903	1877	26	12	3	1	0
Norwich	863	805	58	34	6	2	0
Old Lyme	89	88	1	1	0	0	0
Old Saybrook	105	105	0	0	0	0	0
Orange	217	215	2	1	0	0	0
Oxford	207	206	1	1	0	0	0
Plainfield	239	234	5	3	2	1	1
Plainville	266	264	2	1	0	0	0
Plymouth	215	214	1	0	0	0	0
Pomfret	72	71	1	0	0	0	0
Portland	157	155	2	2	1	1	0
Preston	63	61	2	1	0	0	0
Prospect	123	121	2	2	0	0	0
Putnam	193	183	10	6	1	1	0
Redding	128	127	1	1	0	0	0
Ridgefield	332	331	1	0	0	0	0
Rocky Hill	397	380	17	4	0	0	0
Roxbury	21	21	0	0	0	0	0
Salem	89	89	0	0	0	0	0
Salisbury	14	12	0	0	0	0	0
Scotland	13	12	0	0	0	0	0
Seymour	283	278	5	3	2	0	0
Sharon	9	9	0	0	0	0	0
Shelton	610	605	5	4	1	0	0
Sherman	43	43	0	0	0	0	0
Simsbury	432	428	4	3	0	0	0
Somers	187	185	2	1	1	0	0
South Windsor	426	413	13	8	3	1	0

Town	Total Confirmed Tests	< 3.5 µg/dL	≥ 3.5 µg/dL	≥ 5 µg/dL	≥ 10 µg/dL	≥ 15 µg/dL	≥ 20 µg/dL
Southbury	225	222	3	2	1	0	0
Southington	766	762	4	3	0	0	0
Sprague	39	39	0	0	0	0	0
Stafford	209	205	4	2	1	0	0
Stamford	3284	3235	49	26	5	2	1
Sterling	57	56	1	1	1	0	0
Stonington	239	237	2	0	0	0	0
Stratford	938	923	15	11	2	1	1
Suffield	226	222	4	3	0	0	0
Thomaston	120	117	3	1	0	0	0
Thompson	179	170	9	5	1	0	0
Tolland	314	312	2	0	0	0	0
Torrington	587	564	23	13	2	2	1
Trumbull	631	628	3	1	0	0	0
Union	15	15	0	0	0	0	0
Vernon	742	727	15	7	2	1	0
Voluntown	32	28	0	0	0	0	0
Wallingford	743	737	6	3	0	0	0
Warren	7	7	0	0	0	0	0
Washington	34	33	1	0	0	0	0
Waterbury	3662	3466	196	92	23	15	9
Waterford	297	295	2	0	0	0	0
Watertown	329	326	3	1	0	0	0
West Hartford	1379	1357	22	8	2	2	0
West Haven	1069	1013	56	25	9	4	3
Westbrook	82	81	1	1	0	0	0
Weston	175	175	0	0	0	0	0
Westport	437	434	3	0	0	0	0
Wethersfield	592	586	6	2	0	0	0
Willington	134	128	6	2	0	0	0
Wilton	326	325	1	1	0	0	0
Winchester	127	116	11	5	2	0	0
Windham	727	691	36	27	6	5	2
Windsor	510	504	6	1	0	0	0
Windsor Locks	223	220	3	0	0	0	0
Wolcott	271	269	2	0	0	0	0
Woodbridge	137	137	0	0	0	0	0
Woodbury	115	115	0	0	0	0	0
Woodstock	126	123	3	1	0	0	0
Total	**72190**	**70303**	**1871**	**936**	**233**	**107**	**54**