

Lead Safety Awareness Forum and Day



Agenda

Tuesday, November 13, 2018

Legislative Office Building

9:00 am – 10:00 am

- Informational Tables (LOB Atrium)

10:00 am to 12:00 pm

- Information Session (LOB Room 2D)

Opening Remarks

Steven Hernandez, Director, Commission on Women, Children and Seniors

Dr. Raul Pino, Commissioner, Department of Public Health

Lead Poisoning in Connecticut

Kimberly Ploszaj, Epidemiologist, Department of Public Health

The Effects of Lead

Dr. Jennifer Haile, CT Connecticut Children's Medical Center/Hartford RLTC

Dr. Erin Nozetz, Yale School of Medicine/Yale RLTC

Funding Opportunities

Nick Lundgren, Deputy Commissioner, Department of Housing

Francis Ford, Director, Waterbury Healthy Homes Program

Best Practice Models

Audrey Gaines, Supervisor, Bridgeport Health Department Lead Program

Judith Dicine, Supervisor, Chief State's Attorney for Housing Matters

Wrap-up and Next Steps

12:00 pm – 1:00 pm

- Informational Tables (LOB Atrium)

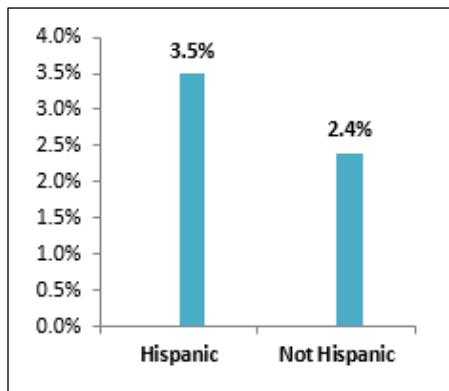
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Children lead poisoned with blood lead level ≥ 5 micrograms per deciliter

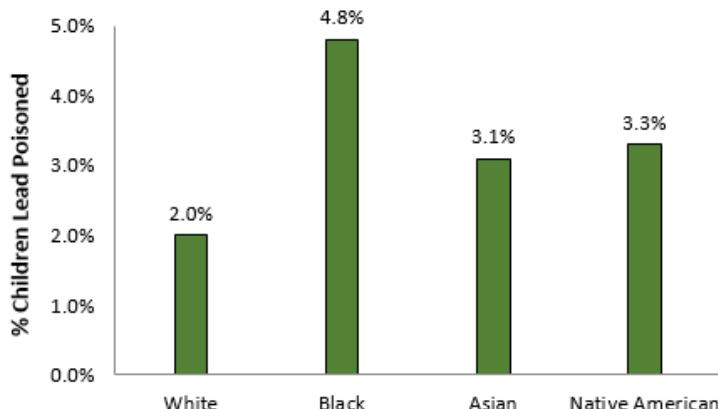
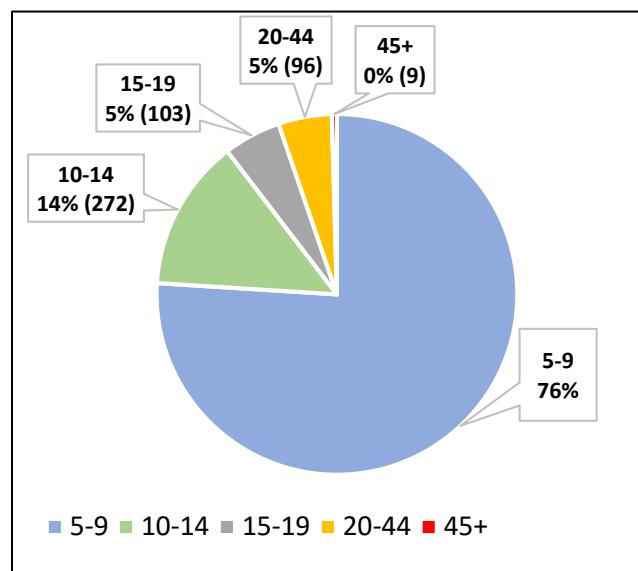
Preventing lead poisoning and promoting wellness through education and a wide range of program activities that relate to childhood lead poisoning prevention

- Blood lead screening** is state law in CT!
Children are required to receive two blood tests before the age of 3.
- 74,055 children tested
- Of the children in the 2013 birth cohort, 57% were tested at ages 1 and 2

Hispanic
children were 1.5 times as likely to be lead poisoned at levels of ≥ 5 micrograms per deciliter than non-Hispanics



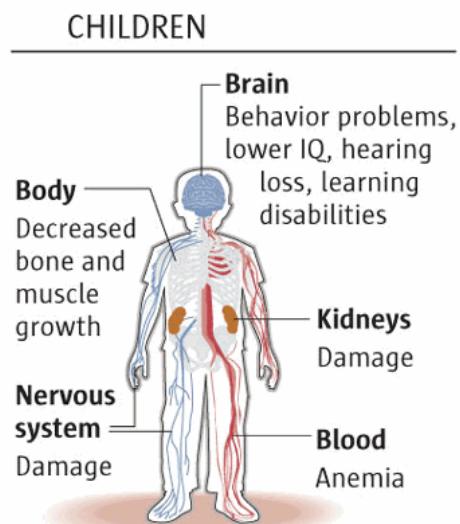
Percentage and number of children under 6 years of age with blood lead levels ≥ 5 micrograms per deciliter



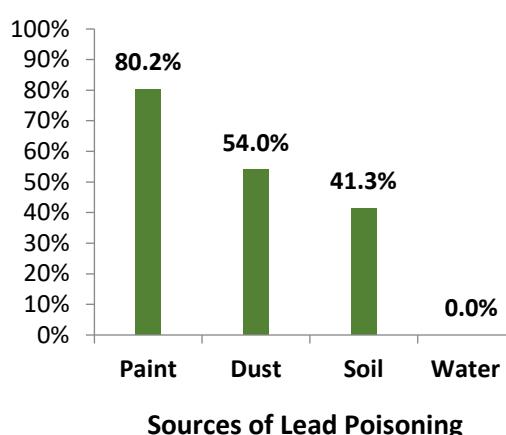
Black children were 2.4 times as likely to be lead poisoned at levels of ≥ 5 micrograms per deciliter when compared to White children

- Children's natural curiosity and **hand to mouth behavior** results in their consumption of leaded objects
- Due to the rapidly developing body, a child can absorb 4-5 times more lead than an adult
- Lead mimics iron, zinc and calcium, which may cause anemia and slowed growth
- There is no safe level of lead
- A blood lead level of 5 micrograms per deciliter, averages in a 6 point IQ deduction

Lead poisoning is **100% preventable**

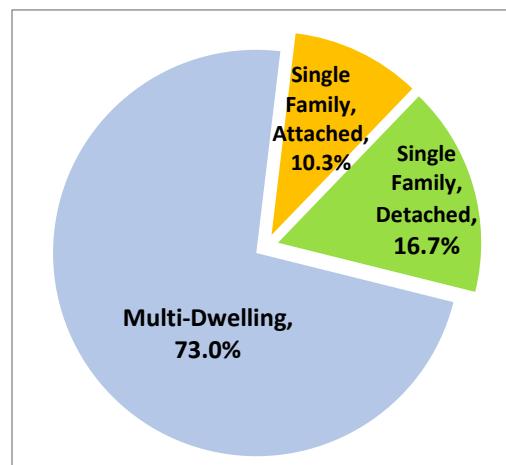


Lead-based paint is the **primary source** of lead poisoning



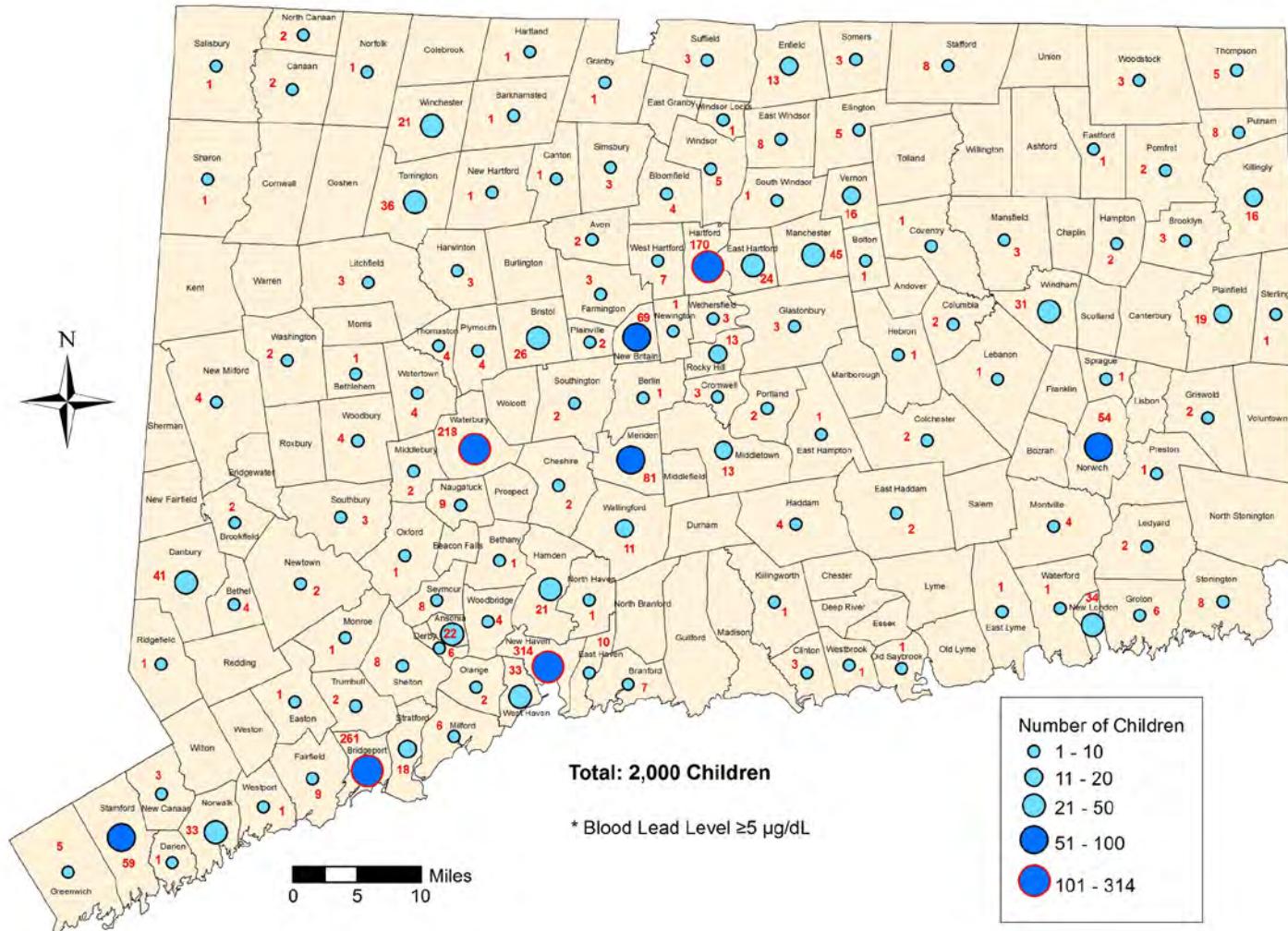
When a child has a blood lead level ≥ 20 micrograms per deciliter an **epidemiological investigation** must be completed. This investigation includes the completion:

- of a **questionnaire** to determine where the child spends time, what the child's hand to mouth habits are, hobbies, occupational exposure and cultural products (i.e. sindoor, kohl)
- a **lead hazard investigation** of the child's home



Of the 126 dwelling units inspected, 73% (93) were **multiple-units**, 10.3% (13) were single family attached and 16.7% (21) were single family detached

Number of Lead Poisoned Children* Under 6 Years Old by Town, Connecticut 2016

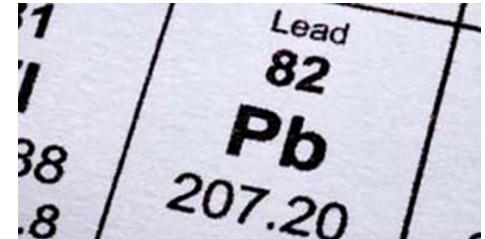


Prevalence of childhood lead poisoning is defined as the proportion of children under six years of age with confirmed blood lead levels were ≥ 5 micrograms per deciliter.

In 2016, 2,000 children were poisoned with confirmed blood lead levels ≥ 5 micrograms per deciliter. The urban communities continue to be the areas with the highest levels of prevalence: New Haven, Bridgeport, Waterbury and Hartford round out the top 4 areas with the highest prevalence rates.



- Over **half a million** children living in the United States have blood lead levels above 5 micrograms per deciliter
- Childhood Lead Poisoning is the most common pediatric public health problem, **yet it is entirely preventable**
- Once a child has been poisoned, the damage it may cause is irreversible
- Lead harms children's nervous systems, and is associated with reduced IQ, behavioral problems and learning disabilities
- **No amount** of lead is safe for the body



Childhood lead poisoning **costs** billions of dollars each year. However, a study found that there could be large social and economic savings if funds were allocated to reduce lead hazards in older housing. The study found that for every dollar **invested** in lead paint hazard control there is a **savings** of between \$17 and \$221.

Estimated Savings:

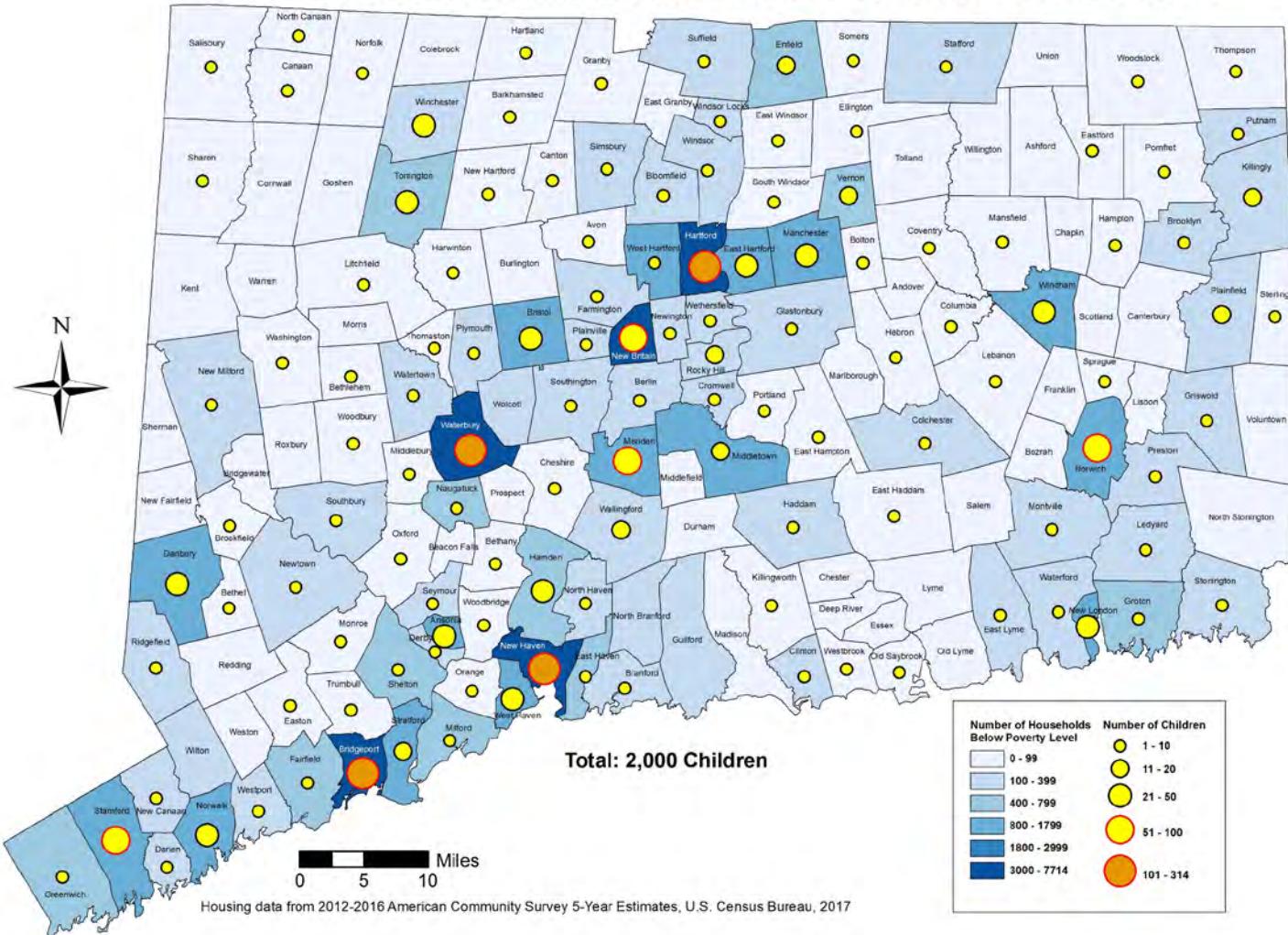
- Health Care **\$11-\$53 billion**
- Lifetime earnings **\$165-\$233 billion**
- Tax revenue **\$25-\$35 billion**
- Special education **\$30-\$146 billion**
- Attention deficit-hyperactivity disorder **\$267 million**
- Reduction in crime **\$1.7 billion**



Source: Gould, E. *Childhood Lead Poisoning: Conservative Estimates of the Social Economic Benefits of Lead Hazard Control*. Environ Health Perspect. 2009 July; 117(7): 1162-1167.

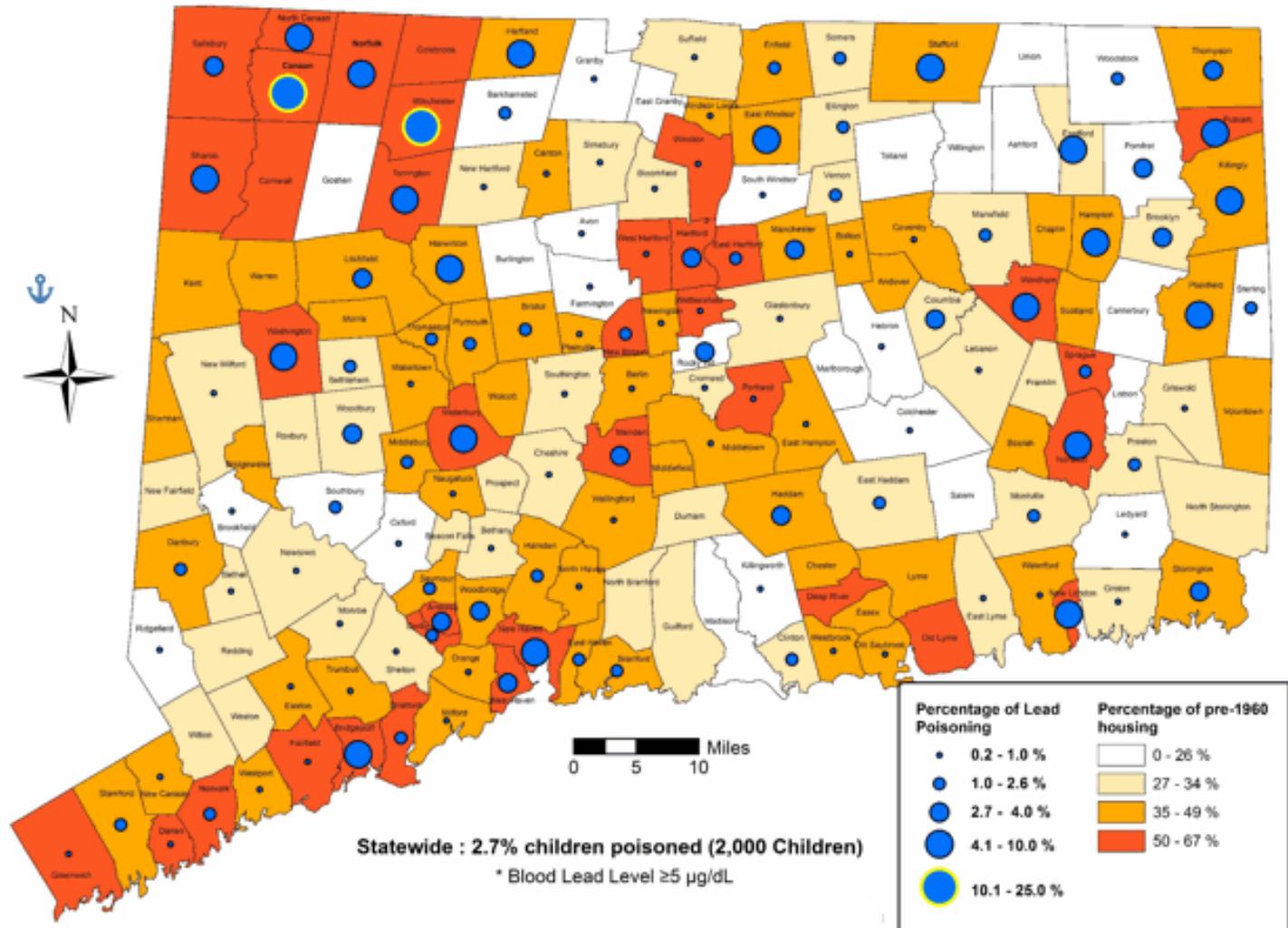


**Number of Lead Poisoned Children with Blood Lead Levels $\geq 5 \mu\text{g}/\text{dL}$ &
Number of Households with Income Below Poverty Level, Connecticut 2016**



There is a strong correlation between household incomes below poverty level and childhood lead poisoning. The above map shows the number of confirmed blood lead levels ≥ 5 micrograms per deciliter and households with incomes below poverty level. Bridgeport, Hartford, New Haven and Waterbury are the communities that have the highest number of households with incomes below poverty level, as well as the highest rates of childhood lead poisoning.

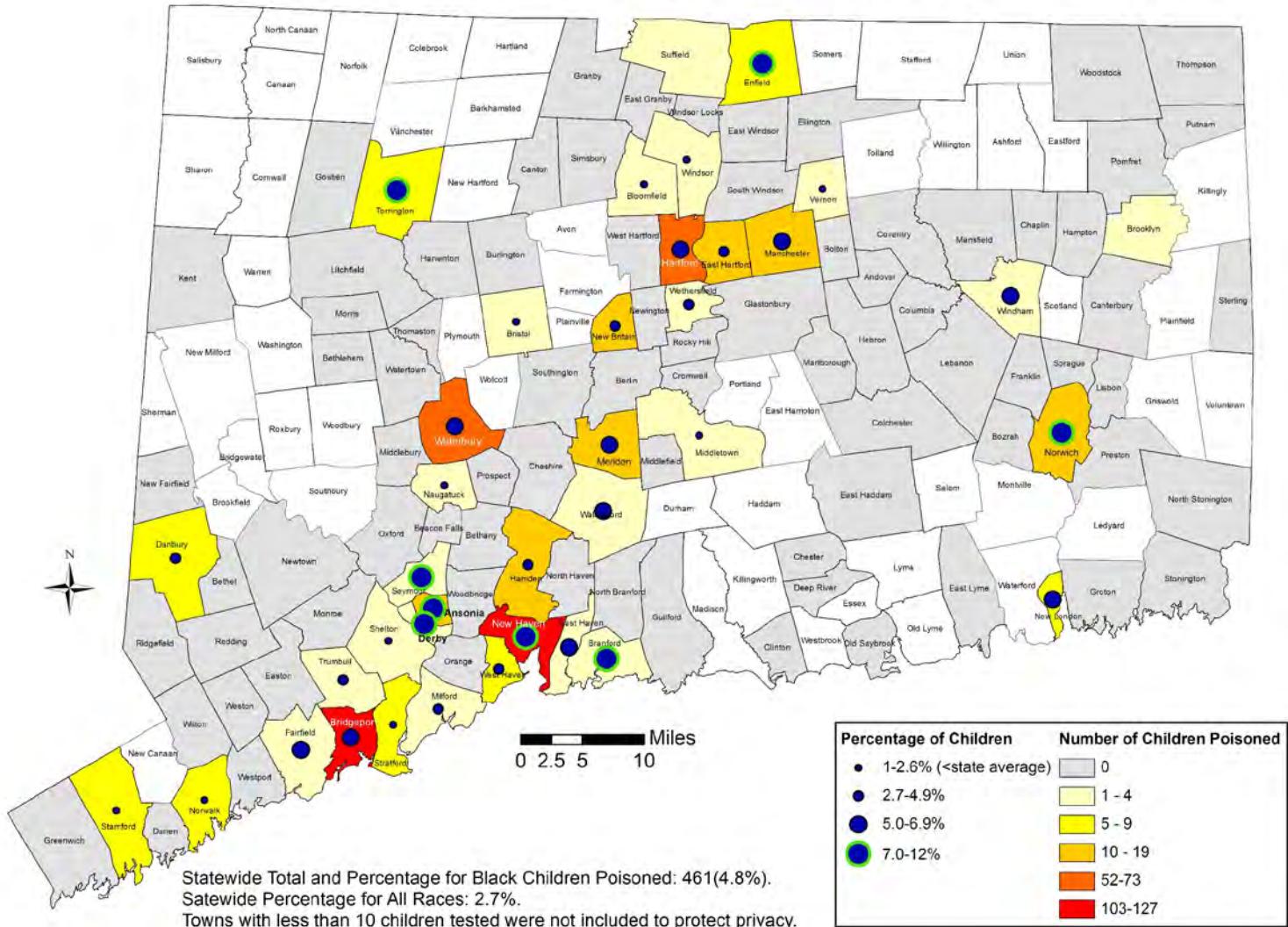
**Percentages of pre-1960 housing and
Lead Poisoned Children* Under 6 Years Old by Town, Connecticut 2016**



Lead-based paint was banned for residential use in 1978. The United States Environmental Protection Agency reports that 83% of homes built prior to 1980 contain some lead-based paint. Older houses have an even higher probability of containing lead-based paint.

In Connecticut, 71% of the housing stock was built before 1980 and 45% was built before 1960. This map depicts the number and percentage of childhood lead poisoning cases and pre-1960 housing by town.

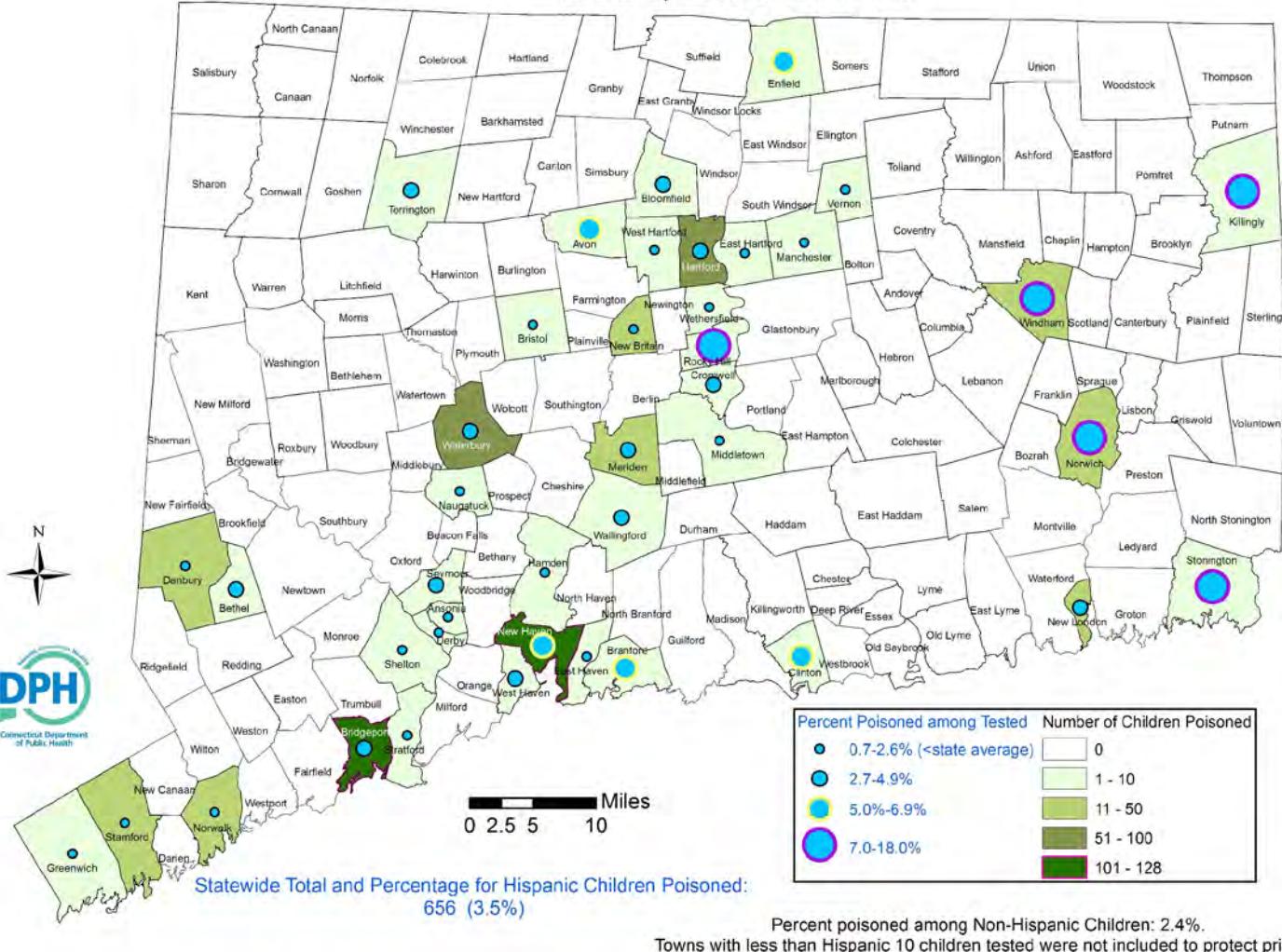
Number and Percentage of Black Children Lead Poisoned Under Age 6, Connecticut 2016



Among children under 6 years of age who had a confirmed blood lead test in 2016, Black children (4.8%) were 2.4 times as likely to be lead poisoned at levels of ≥ 5 micrograms per deciliter when compared to White children (2.0%).

The map depicts the number and percentage of lead poisoned Black children in Connecticut towns.

Number and Percentage of Hispanic Children Lead Poisoned Under 6, Connecticut 2016



Among children under 6 years of age who had a confirmed blood lead test in 2016, Hispanic children (3.5%, 656 children) were 1.5 times as likely to be lead poisoned at levels of ≥ 5 micrograms per deciliter than non-Hispanic children (2.4%, 1072 children).

The map depicts the number and percentage of lead poisoned Hispanic children in Connecticut towns.

	2016 Prevelance (by town): Numbers and Percents of Confirmed Blood Lead Levels among Children Aged Less Than Six Years with a Confirmed Lead Test										
	Number of Children with Confirmed Test	0–4 µg/dL		Cumulative Statistics							
				≥ 5 µg/dL		≥ 10 µg/dL		≥ 15 µg/dL		≥ 20 µg/dL	
		Number	%	Number	%	Number	%	Number	%	Number	%
CT CY2016	73,512	71,512	97.3	2,000	2.7	480	0.7	208	0.3	105	0.1
By-Town											
Andover	34	34	100	0	0	0	0	0	0	0	0
Ansonia	496	474	95.6	22	4.4	8	1.6	4	0.8	1	0.2
Ashford	58	58	100	0	0	0	0	0	0	0	0
Avon	272	270	99.3	2	0.7	1	0.4	0	0	0	0
Barkhamsted	42	41	97.6	1	2.4	0	0	0	0	0	0
Beacon Falls	74	74	100	0	0	0	0	0	0	0	0
Berlin	242	241	99.6	1	0.4	0	0	0	0	0	0
Bethany	75	74	98.7	1	1.3	0	0	0	0	0	0
Bethel	329	325	98.8	4	1.2	2	0.6	1	0.3	0	0
Bethlehem	51	50	98	1	2	0	0	0	0	0	0
Bloomfield	336	332	98.8	4	1.2	2	0.6	2	0.6	1	0.3
Bolton	72	71	98.6	1	1.4	0	0	0	0	0	0
Bozrah	22	22	100	0	0	0	0	0	0	0	0
Branford	358	351	98	7	2	0	0	0	0	0	0
Bridgeport	5509	5248	95.3	261	4.7	61	1.1	30	0.5	14	0.3
Bridgewater	13	13	100	0	0	0	0	0	0	0	0
Bristol	1163	1137	97.8	26	2.2	5	0.4	4	0.3	3	0.3
Brookfield	243	241	99.2	2	0.8	0	0	0	0	0	0
Brooklyn	112	109	97.3	3	2.7	1	0.9	0	0	0	0
Burlington	110	110	100	0	0	0	0	0	0	0	0
Canaan	8	6	75	2	25	0	0	0	0	0	0
Canterbury	62	62	100	0	0	0	0	0	0	0	0
Canterbury	62	62	100	0	0	0	0	0	0	0	0
Canterbury	62	62	100	0	0	0	0	0	0	0	0
Canterbury	62	62	100	0	0	0	0	0	0	0	0
Chaplin	23	23	100	0	0	0	0	0	0	0	0
Cheshire	373	371	99.5	2	0.5	0	0	0	0	0	0
Chester	52	52	100	0	0	0	0	0	0	0	0

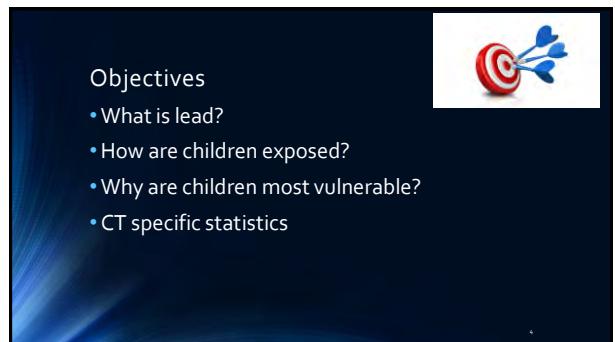
	Number of Children with Confirmed Test	0–4 µg/dL		Cumulative Statistics							
				≥ 5 µg/dL		≥ 10 µg/dL		≥ 15 µg/dL		≥ 20 µg/dL	
			Number	%	Number	%	Number	%	Number	%	Number
Clinton	163	160	98.2		3	1.8	2	1.2	0	0	0
Colchester	196	194	99		2	1	1	0.5	1	0.5	0
Colebrook	5	5	100		0	0	0	0	0	0	0
Columbia	62	60	96.8		2	3.2	0	0	0	0	0
Cornwall	13	13	100		0	0	0	0	0	0	0
Coventry	194	193	99.5		1	0.5	0	0	0	0	0
Cromwell	278	275	98.9		3	1.1	1	0.4	0	0	0
Danbury	2068	2027	98		41	2	9	0.4	3	0.1	0
Darien	476	475	99.8		1	0.2	0	0	0	0	0
Deep River	60	60	100		0	0	0	0	0	0	0
Derby	243	237	97.5		6	2.5	3	1.2	0	0	0
Durham	96	96	100		0	0	0	0	0	0	0
East Granby	82	82	100		0	0	0	0	0	0	0
East Haddam	107	105	98.1		2	1.9	1	0.9	1	0.9	0
East Hampton	189	188	99.5		1	0.5	0	0	0	0	0
East Hartford	1120	1096	97.9		24	2.1	10	0.9	3	0.3	1
East Haven	512	502	98		10	2	0	0	0	0	0
East Lyme	237	236	99.6		1	0.4	0	0	0	0	0
East Windsor	176	168	95.5		8	4.5	3	1.7	0	0	0
Eastford	16	15	93.8		1	6.3	0	0	0	0	0
Easton	87	86	98.9		1	1.1	0	0	0	0	0
Ellington	268	263	98.1		5	1.9	1	0.4	0	0	0
Enfield	731	718	98.2		13	1.8	3	0.4	1	0.1	0
Essex	55	55	100		0	0	0	0	0	0	0
Fairfield	1117	1108	99.2		9	0.8	2	0.2	1	0.1	1
Farmington	382	379	99.2		3	0.8	2	0.5	1	0.3	0
Franklin	21	21	100		0	0	0	0	0	0	0
Glastonbury	440	437	99.3		3	0.7	1	0.2	0	0	0
Goshen	29	29	100		0	0	0	0	0	0	0
Granby	109	108	99.1		1	0.9	0	0	0	0	0

	Number of Children with Confirmed Test	0–4 µg/dL		Cumulative Statistics								
				≥ 5 µg/dL		≥ 10 µg/dL		≥ 15 µg/dL		≥ 20 µg/dL		
			Number	%	Number	%	Number	%	Number	%	Number	
Greenwich	1112	1107	99.6		5	0.4	1	0.1	1	0.1	1	0.1
Griswold	195	193	99		2	1	0	0	0	0	0	0
Groton	1026	1020	99.4		6	0.6	0	0	0	0	0	0
Guilford	218	218	100		0	0	0	0	0	0	0	0
Haddam	124	120	96.8		4	3.2	2	1.6	1	0.8	1	0.8
Hamden	954	933	97.8		21	2.2	8	0.8	3	0.3	2	0.2
Hampton	29	27	93.1		2	6.9	0	0	0	0	0	0
Hartford	4307	4137	96.1		170	3.9	41	1	16	0.4	9	0.2
Hartland	14	13	92.9		1	7.1	0	0	0	0	0	0
Harwinton	64	61	95.3		3	4.7	0	0	0	0	0	0
Hebron	89	88	98.9		1	1.1	0	0	0	0	0	0
Kent	28	28	100		0	0	0	0	0	0	0	0
Killingly	342	326	95.3		16	4.7	3	0.9	2	0.6	1	0.3
Killingworth	75	74	98.7		1	1.3	0	0	0	0	0	0
Lebanon	76	75	98.7		1	1.3	0	0	0	0	0	0
Ledyard	326	324	99.4		2	0.6	0	0	0	0	0	0
Lisbon	39	39	100		0	0	0	0	0	0	0	0
Litchfield	107	104	97.2		3	2.8	0	0	0	0	0	0
Lyme	11	11	100		0	0	0	0	0	0	0	0
Madison	189	189	100		0	0	0	0	0	0	0	0
Manchester	1517	1472	97		45	3	12	0.8	7	0.5	3	0.2
Mansfield	132	129	97.7		3	2.3	2	1.5	2	1.5	1	0.8
Marlborough	87	87	100		0	0	0	0	0	0	0	0
Meriden	1941	1860	95.8		81	4.2	31	1.6	13	0.7	10	0.5
Middlebury	105	103	98.1		2	1.9	1	1	0	0	0	0
Middlefield	61	61	100		0	0	0	0	0	0	0	0
Middletown	912	899	98.6		13	1.4	2	0.2	1	0.1	1	0.1
Milford	749	743	99.2		6	0.8	0	0	0	0	0	0
Monroe	290	289	99.7		1	0.3	0	0	0	0	0	0
Montville	262	258	98.5		4	1.5	1	0.4	0	0	0	0

	Number of Children with Confirmed Test	0–4 µg/dL		Cumulative Statistics							
				≥ 5 µg/dL		≥ 10 µg/dL		≥ 15 µg/dL		≥ 20 µg/dL	
		Number	%	Number	%	Number	%	Number	%	Number	%
Morris	23	23	100	0	0	0	0	0	0	0	0
Naugatuck	689	680	98.7	9	1.3	1	0.1	0	0	0	0
New Britain	2675	2606	97.4	69	2.6	22	0.8	16	0.6	6	0.2
New Canaan	336	333	99.1	3	0.9	1	0.3	1	0.3	0	0
New Fairfield	188	188	100	0	0	0	0	0	0	0	0
New Hartford	81	80	98.8	1	1.2	1	1.2	0	0	0	0
New Haven	4108	3794	92.4	314	7.6	67	1.6	21	0.5	12	0.3
New London	688	654	95.1	34	4.9	9	1.3	2	0.3	1	0.1
New Milford	426	422	99.1	4	0.9	0	0	0	0	0	0
Newington	386	385	99.7	1	0.3	0	0	0	0	0	0
Newtown	264	262	99.2	2	0.8	1	0.4	0	0	0	0
Norfolk	15	14	93.3	1	6.7	0	0	0	0	0	0
North Branford	199	199	100	0	0	0	0	0	0	0	0
North Canaan	36	34	94.4	2	5.6	0	0	0	0	0	0
North Haven	320	319	99.7	1	0.3	1	0.3	0	0	0	0
North Stonington	80	80	100	0	0	0	0	0	0	0	0
Norwalk	2046	2013	98.4	33	1.6	7	0.3	3	0.1	1	0
Norwich	841	787	93.6	54	6.4	15	1.8	10	1.2	8	1
Old Lyme	84	84	100	0	0	0	0	0	0	0	0
Old Saybrook	91	90	98.9	1	1.1	0	0	0	0	0	0
Orange	204	202	99	2	1	0	0	0	0	0	0
Oxford	176	175	99.4	1	0.6	0	0	0	0	0	0
Plainfield	283	264	93.3	19	6.7	2	0.7	0	0	0	0
Plainville	264	262	99.2	2	0.8	0	0	0	0	0	0
Plymouth	178	174	97.8	4	2.2	1	0.6	1	0.6	0	0
Pomfret	69	67	97.1	2	2.9	0	0	0	0	0	0
Portland	149	147	98.7	2	1.3	0	0	0	0	0	0
Preston	51	50	98	1	2	0	0	0	0	0	0
Prospect	124	124	100	0	0	0	0	0	0	0	0
Putnam	168	160	95.2	8	4.8	2	1.2	1	0.6	0	0

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				≥ 5 µg/dL		≥ 10 µg/dL		≥ 15 µg/dL		≥ 20 µg/dL	
			Number	%	Number	%	Number	%	Number	%	Number
Redding	116	116	100		0	0	0	0	0	0	0
Ridgefield	383	382	99.7		1	0.3	0	0	0	0	0
Rocky Hill	429	416	97		13	3	4	0.9	1	0.2	0
Roxbury	18	18	100		0	0	0	0	0	0	0
Salem	63	63	100		0	0	0	0	0	0	0
Salisbury	31	30	96.8		1	3.2	0	0	0	0	0
Scotland	8	8	100		0	0	0	0	0	0	0
Seymour	336	328	97.6		8	2.4	2	0.6	1	0.3	1
Sharon	22	21	95.5		1	4.5	0	0	0	0	0
Shelton	682	674	98.8		8	1.2	4	0.6	2	0.3	0
Sherman	32	32	100		0	0	0	0	0	0	0
Simsbury	278	275	98.9		3	1.1	0	0	0	0	0
Somers	126	123	97.6		3	2.4	1	0.8	1	0.8	0
South Windsor	358	357	99.7		1	0.3	0	0	0	0	0
Southbury	186	183	98.4		3	1.6	0	0	0	0	0
Southington	611	609	99.7		2	0.3	0	0	0	0	0
Sprague	59	58	98.3		1	1.7	1	1.7	0	0	0
Stafford	163	155	95.1		8	4.9	2	1.2	1	0.6	1
Stamford	3755	3696	98.4		59	1.6	11	0.3	7	0.2	3
Sterling	45	44	97.8		1	2.2	0	0	0	0	0
Stonington	252	244	96.8		8	3.2	1	0.4	0	0	0
Stratford	1030	1012	98.3		18	1.7	7	0.7	2	0.2	1
Suffield	226	223	98.7		3	1.3	0	0	0	0	0
Thomaston	156	152	97.4		4	2.6	0	0	0	0	0
Thompson	174	169	97.1		5	2.9	1	0.6	0	0	0
Tolland	223	223	100		0	0	0	0	0	0	0
Torrington	725	689	95		36	5	2	0.3	1	0.1	1
Trumbull	641	639	99.7		2	0.3	1	0.2	1	0.2	0
Union	2	2	100		0	0	0	0	0	0	0
Vernon	671	655	97.6		16	2.4	5	0.7	5	0.7	3

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				≥ 5 µg/dL		≥ 10 µg/dL		≥ 15 µg/dL		≥ 20 µg/dL		
			Number	%	Number	%	Number	%	Number	%	Number	
Voluntown	39	39	100		0	0	0	0	0	0	0	
Wallingford	773	762	98.6		11	1.4	4	0.5	3	0.4	1	0.1
Warren	4	4	100		0	0	0	0	0	0	0	0
Washington	36	34	94.4		2	5.6	1	2.8	0	0	0	0
Waterbury	4472	4254	95.1		218	4.9	59	1.3	24	0.5	14	0.3
Waterford	226	225	99.6		1	0.4	0	0	0	0	0	0
Watertown	396	392	99		4	1	0	0	0	0	0	0
West Hartford	1083	1076	99.4		7	0.6	1	0.1	0	0	0	0
West Haven	1146	1113	97.1		33	2.9	7	0.6	2	0.2	0	0
Westbrook	69	68	98.6		1	1.4	0	0	0	0	0	0
Weston	113	113	100		0	0	0	0	0	0	0	0
Westport	339	338	99.7		1	0.3	0	0	0	0	0	0
Wethersfield	447	444	99.3		3	0.7	0	0	0	0	0	0
Willington	68	68	100		0	0	0	0	0	0	0	0
Wilton	265	265	100		0	0	0	0	0	0	0	0
Winchester	195	174	89.2		21	10.8	3	1.5	0	0	0	0
Windham	483	452	93.6		31	6.4	6	1.2	3	0.6	2	0.4
Windsor	414	409	98.8		5	1.2	2	0.5	0	0	0	0
Windsor Locks	171	170	99.4		1	0.6	1	0.6	0	0	0	0
Wolcott	240	240	100		0	0	0	0	0	0	0	0
Woodbridge	113	109	96.5		4	3.5	1	0.9	1	0.9	0	0
Woodbury	120	116	96.7		4	3.3	0	0	0	0	0	0
Woodstock	117	114	97.4		3	2.6	0	0	0	0	0	0

A slide with a dark blue background. On the left, there is a photo of a baby in a high chair. To the right of the photo, the text "Lead: an invisible enemy that can affect the health of your child." is written in white. Below the photo, the text "Did you know???" is in blue, and "Lead poisoning is the most preventable childhood illness" is in orange.A slide with a dark blue background. On the right, there is a target icon with three blue arrows hitting the bullseye. To the left of the target, the text "Objectives" is in white. Below it, a list of objectives is shown in white: "• What is lead?", "• How are children exposed?", "• Why are children most vulnerable?", and "• CT specific statistics".

What is Lead?

- naturally occurring
- heavy metal
- bluish-gray
- soft
- ductile
- **many historical uses!!**



Facts About Lead Poisoning

- Lead is toxic, with no health benefits
- Damage caused is irreversible
- Even low levels of lead can impact a person's health throughout their life
- Lead poisoning is a reportable disease
- **100% preventable**

Common Sources of Lead

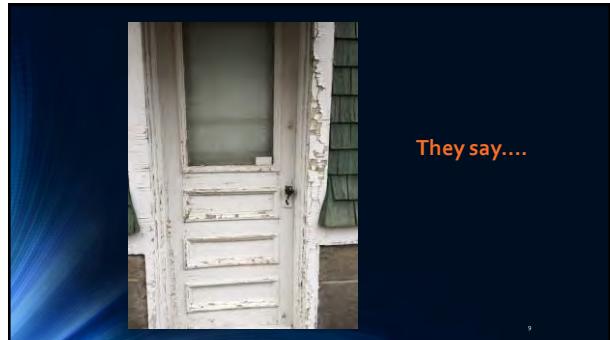
• Environmental	• Non-Environmental
• Paint	• Ethnic/folk remedies
• Dust	• Imported foods
• Water	• Occupations
• Soil	• Hobbies
	• Children's jewelry, toys, clothing
	• Spices

Most Commonly Found

- Paint
- Dust

In Pre-1978 homes





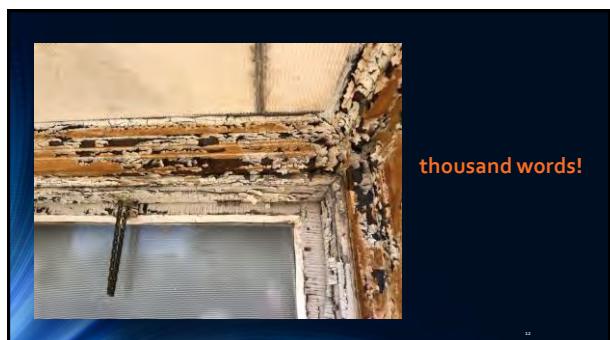
They say....



a picture....



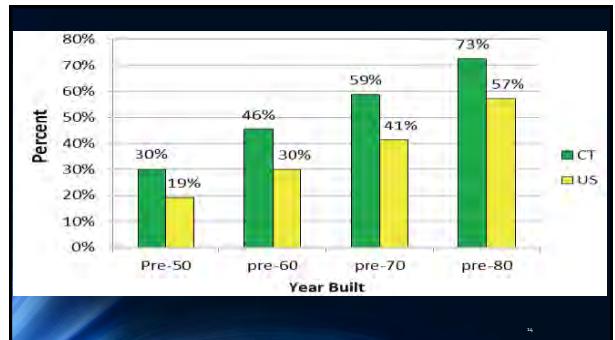
is worth a....



thousand words!

Lead In Paint

- Pre-1978 housing may contain lead-based paint
- 73% of homes in CT built prior to 1980
- Pre-1950 housing stock has an even higher probability of containing lead paint
 - In CT, 30% of housing stock is pre-1950

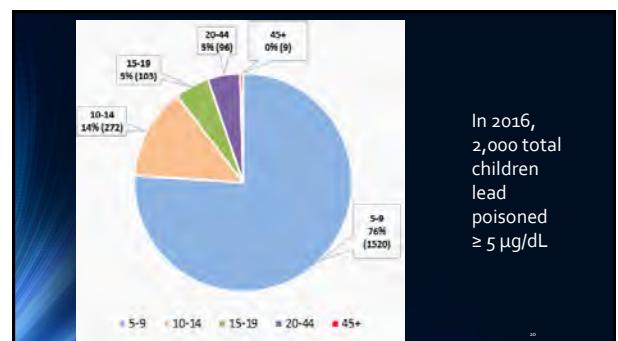
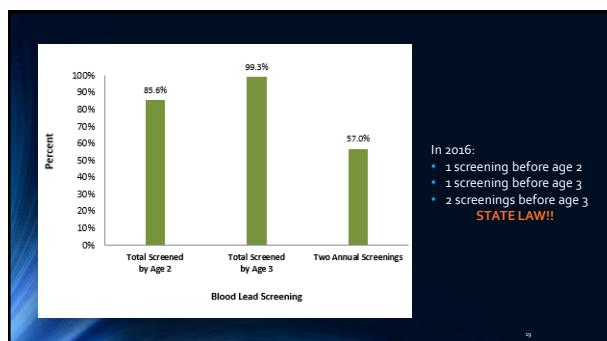
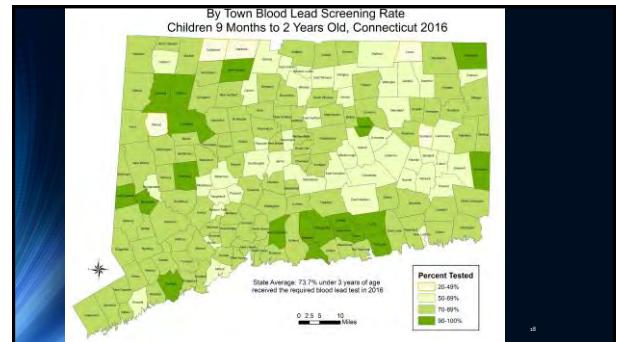
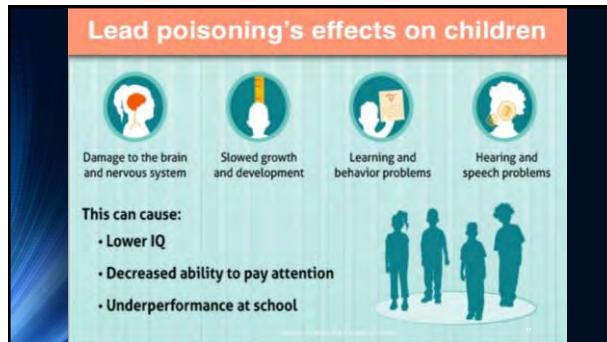


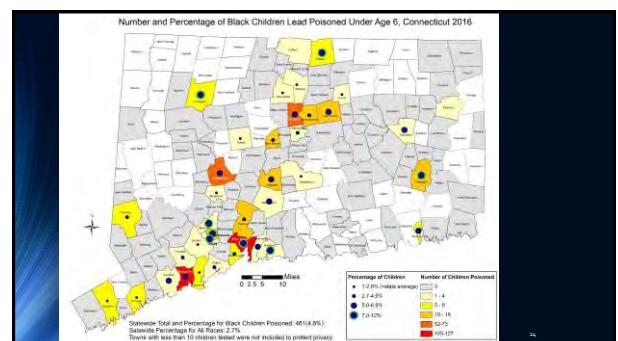
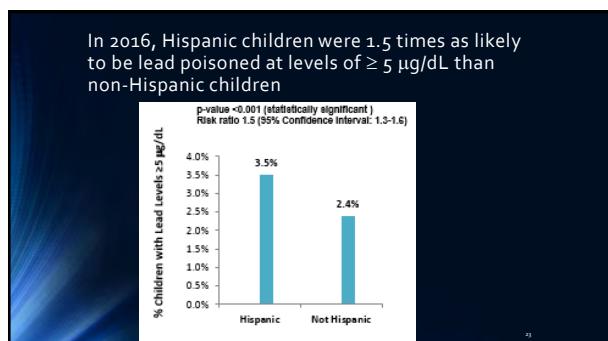
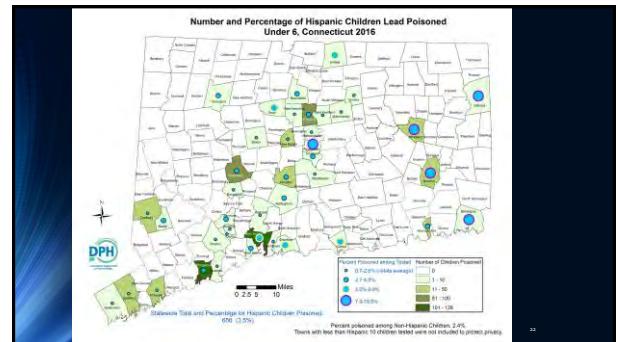
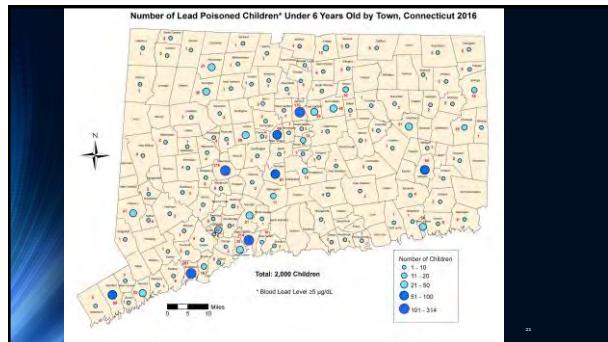
Exposure Routes for Lead

- Ingestion
- Inhalation
- Absorption

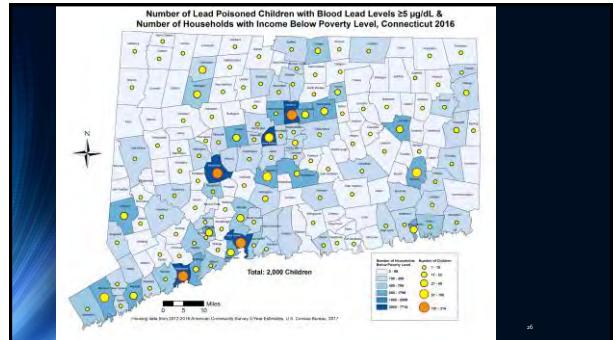
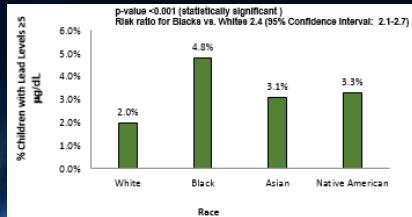
Lead Effects on Children

- Young children absorb lead more readily than adults
- Developing nervous systems of children (birth to six) are more susceptible to the toxic effects of lead
- Pregnant women with elevated blood lead levels can transfer lead to the fetus

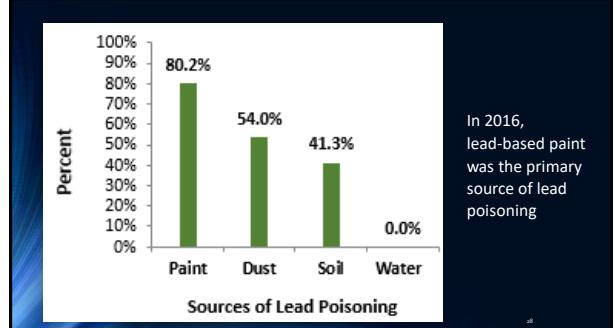
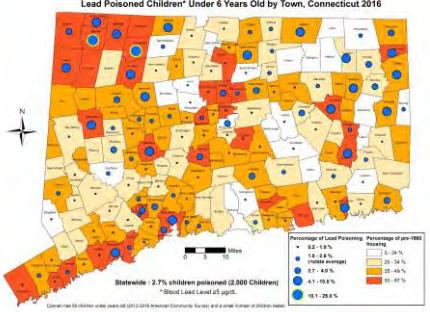




In 2016, Black children were 2.4 times as likely to be lead poisoned at levels of $\geq 5 \mu\text{g}/\text{dL}$ as White children



Percentages of pre-1960 housing and Lead Poisoned Children* Under 6 Years Old by Town, Connecticut 2016



Diagnosing Lead Poisoning

- Blood testing
- Capillary
- Venous
- The CDC lowered the Reference Value in 2012, for blood lead: **5 µg/dL or more**
- CT adopted the Reference Value April 2013

DPH's Focus

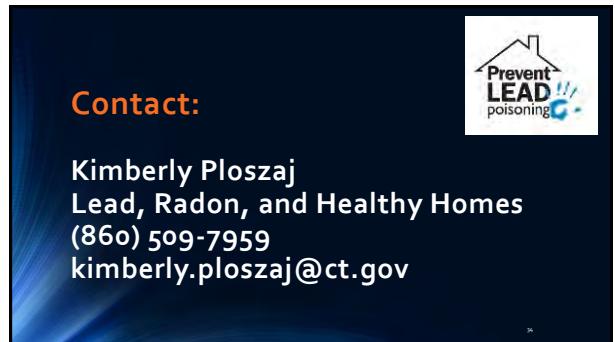
- Mandated blood lead screening
- Mailing of educational information
- Working with local health departments to ensure:
 - Inspection of home of poisoned child
 - Ordering abatement
 - Ensuring abatement is completed properly
 - Ensuring the workforce is trained and licensed/certified

Primary Prevention

- Regulations – testing other units
- Universal screening
 - Educational material mailed to parent's of children with blood lead level 5 µg/dL or higher
 - Reduced severe cases of lead poisoning
- EPA Renovation, Repair, and Painting Rule
- Housing code and training code enforcement officials
- Policies with other State Agencies

Resources

General lead educational materials :
www.ct.gov/dph/lead



Lead Safety Awareness Forum

11/13/2018

Jennifer Haile, MD

Erin Nozetz, MD

Agenda

- Regional lead treatment centers
- Screening and Associated Challenges (^{Refugees})
- Health effects of lead poisoning

CT Lead Treatment Centers

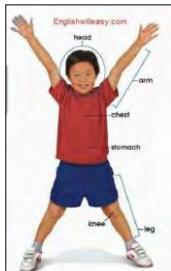
- 1994 Two Regional Lead Treatment Centers were established
 - Hartford and New Haven
- Hartford:
 - Based out of CHC@CCMC
 - Our team
 - Darlene Abbate, APRN
 - Jennifer Haile, MD
 - Alexandra Vega, coordinator
- New Haven:
 - Based out of YNHCH
 - Our team
 - Carl Baum, MD
 - Erin Nozetz, MD
 - Marta Wilczynski, LCSW

CT Lead Treatment Centers

• What we do:

- Provide inter professional and culturally sensitive care including:
 - Home visits
 - Medical evaluation and treatment
 - Developmental evaluations
 - Social service support
 - Assistance with relocation and funding
 - Lead Clinic the second Friday of every month YNHCH
 - Community outreach

Pathophysiology



Lead is a Master Mimic

It gets into the body and wreaks havoc :

- The gut
- The brain
- The blood
- The bones
- The soft tissue

The Blood



Anemia

2 ways:

- Blocks the production of Iron (Heme)
- Blocks Iron from being absorbed in the gut

The Brain



<http://neurosciencenewstuff.tumblr.com/post/78327980217/immune-system-has-dramatic-impact-on-childrens>

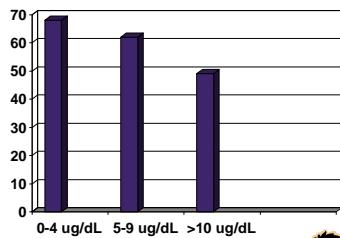
Cognitive Impairment

- Language delay
- Decreased attention span
- Learning deficits especially reading
- Behavior problems including aggressive behavior
- Lowered IQ scoring



Lead and Reading Readiness at Kindergarten

- Proportion of children scoring above the PALS-K benchmark



Pediatrics Vol 131, No. 6, June 2013

The Gut



<https://www.redapple.com/work-life-family/cute-belly-button>

Abdominal X-Ray

- Belly pain
- Constipation
- Vomiting
- Anorexia



Screening Guidelines

Childhood Lead Poisoning Prevention CGS 19a-111g, January 2009

- Connecticut State Mandate
- Pediatric providers shall conduct lead screening at least annually for each child 9 to 35 months of age
- Routinely done at 12 and 24 months

Rationale

- CDC performed a cost benefit analysis for universal lead screening (1998)
- Conclusions
 - Children living in high risk areas should be screened twice
 - Children in low risk areas can be screened using a questionnaire and blood work obtained if positive
- High risk is defined
 - as prevalence > 12%
 - ≥ 27% of housing stock built before 1950

Connecticut

- $\geq 27\%$ of housing stock built before 1950 (2015 census data)
- 2015 census data
 - 1.49 million housing units
 - 30.8% were built before 1950
 - 71.6% were built before 1978

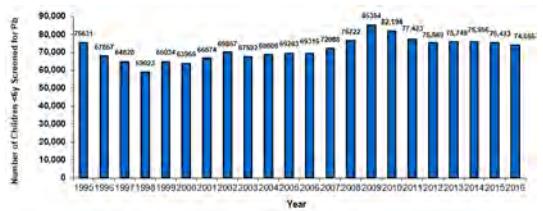
Childhood Lead Poisoning Prevention CGS 19a-111g, January 2009

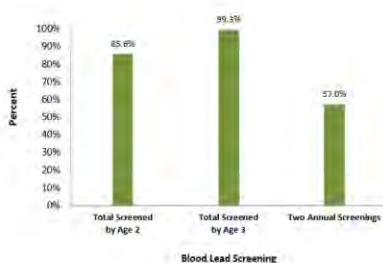
- Any child age 36-72 months of age should be screened if not screened before or if assessment shows risk

Special Consideration: Immigrant and Refugee Children

- Screening upon arrival
 - Medicines and tonics
 - Make-up (kohl)
 - Lead paint, pigments, ceramic glazes (pottery/cookware)
 - Leaded gas: North Korea, Iraq, Yemen, Afghanistan, Myanmar, Algeria
 - Industrial emissions, lead acid car batteries, electronic waste
 - Ammunition manufacturing and use
 - Jewelry
- 3-6 months after arrival rescreen for exposure to lead in the United States

Screening Rates





Testing Options

- **Venous Sample**
 - Inconvenient: outside lab
 - Compliance
 - Lab will report results to State
- **Capillary Sample**
 - Personnel training
 - Some MCOs don't reimburse
 - Must report results yourself
 - False positives
 - Require venous confirmation!

Challenges in Screening

- Pediatricians believe it is an extinct problem
- Families do not want venous levels
- Transient patient populations

Challenges to Follow Up

- Transient patient populations
 - Addresses
 - Phone numbers
- Parents don't want their children to get frequent blood work

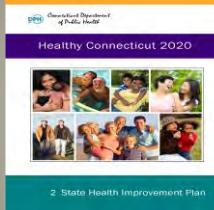
Please call us!
We are here to help!

BEST PRACTICE MODELS Adoption of a Statewide Property Maintenance Code

Lead Safety Awareness Forum and Day
CT Legislative Office Building
November 13, 2018



CONNECTICUT'S STATE HEALTH IMPROVEMENT PLAN (The SHIP)



The SHIP Vision

A coalition of over 600 diverse partners from local, regional, and statewide organizations and agencies that address public health from a variety of traditional and non-traditional perspectives integrating and focusing their efforts to achieve measurable improvements in health outcomes.



LACK OF HOUSING STANDARDS THE EFFECT



[Driving Public Health 3.0
in the Motor City](#)

07/12/2016 10:53 AM EDT

If you start at City Hall and drive 15 minutes east to Gross Pointe, a wealthy suburb of Detroit, you'll cross a difference of nearly 12 years in life expectancy and 10 percent higher pregnancy rates. And its children continue to suffer infant mortality, asthma, and lead exposure at higher rates than their counterparts elsewhere.

Source: Office of the United States Assistant Secretary of Health with support from Healthy People 2020

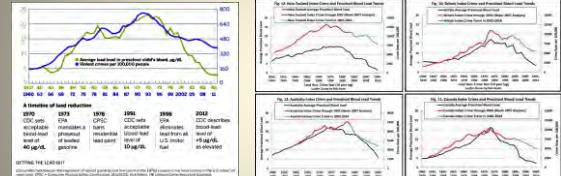
Remediating Abandoned, Inner City Buildings Reduces Crime and Violence in Surrounding Areas

http://www.safeguardproperties.com/News/Industry_Updates/2015/07/Remediating_Abandoned_Inner_City_Building_Reduces_Crime_and_Violence_in_Surrounding_Areas.aspx



Before **After**

Lead Poisoning and Violent Crime



<https://www.motherjones.com/kevin-drum/2018/02/an-updated-lead-crime-roundup-for-2018/>

Environmental Health

HEALTHY HOUSING STRATEGIES

SHIP Approved Action Agenda

1. ADOPT A STATEWIDE PROPERTY MAINTENANCE CODE
2. ESTABLISH CLEAR INCENTIVES FOR PROPERTY OWNERS TO COMPLY WITH CT'S HEALTH AND SAFETY CODES THROUGH A "COOPERATIVE COMPLIANCE" MODEL
3. INCREASE AWARENESS ON THE IMPORTANCE OF HEALTHY HOUSING IN PREVENTING INJURY AND ILLNESS, ADDRESSING INEQUALITIES IN HEALTH, ECONOMIC AND SOCIAL FACTORS, AS WELL AS IN REDUCING CRIME

CT Can Improve Health and Safety with the Adoption of a Statewide Property Maintenance Code

- ▶ Such a code can reverse the overall negative effect property deterioration and damage has on individuals from lead, asthma and other known nuisances in substandard housing
- ▶ Adoption benefits:
 - ▶ Health equity
 - ▶ A reduction in costs related to preventable illness and injuries
 - ▶ A reduction in crime
 - ▶ Improving property values and community prosperity
 - ▶ Uniformity of housing codes for landlords, tenants and officials
 - ▶ An increase in overall community well being



ICC Property Maintenance Code
Whole or Partial U.S. State Adoption Map (2018)



Implemented Statewide:

District of Columbia, Illinois, Maryland, New York, Rhode Island,
South Dakota, Tennessee, Virginia, and West Virginia

Reversing the Cost of Environmental Hazards in Housing **CT's Green & Healthy Homes Project**

Comprehensive housing interventions that integrate weatherization, energy efficiency, and **healthy homes** produce cost-effective benefits that mitigate environment-related health problems and enhances the well-being of low-income households.

- The CT Green & Healthy Homes Project – co-sponsored by DPH and CT Green Bank with 6 other agency and 2 utility partners



See new report: *Achieving Health and Social Equity through Housing: Understanding the Impact of Non Energy Benefits in the United States*
► **Green and Healthy Homes Initiative™** http://www.greenandhealthyhomes.org/sites/default/files/AchievingHealth%26SocialEquity_final_lo.pdf

Green & Healthy Homes Initiative

Needs

- CT's aging housing stock presents challenges to health, safety and efficiency. 45% of housing was built before 1950, and over 70% of housing is more than 50 years old.
- Over 2,100 CT children under age 6 had elevated blood lead levels in 2015.
- Falls, largely in elderly, had 98,938 emergency department visits in 2014.
- CT's Energy Affordability Gap ranges from \$1,250 to \$2,500 per year.
- CT residents spend \$5.2 billion/year to heat, cool, light and provide hot water – more than state's budget for health care or education.

Health & Health Purpose

Healthcare challenges to health, housing is built on the assumption that more is than more than 50% before the age of 6 had elevated blood pressure.

98.938 families receive services from 1,250 providers. 90% of these families are from low-income families. 90% of these families are from low-income families. 90% of these families are from low-income families.

- To research and evaluate the efficacy of statewide, comprehensive energy, health, housing and transportation services, asthma, injury and lead exposure risks, and result in long term public sector cost savings.
- To research and evaluate the feasibility of supporting energy, health and housing services through sustainable public and private funding.
- Connected Green Banks
- Green & Healthy Homes
- Energy Efficiency
- Department of Social Services
- Department of Energy
- Department of Health
- Department on Aging
- Department of Children and Families
- Office of Early Childhood
- Office of Chief State Attorney
- Utilities
- Nonprofit organizations
- Eversource

Partners

- Connecticut Green Bank
- Green & Healthy Homes Initiative
- Department of Public Health
- Department of Social Services
- Department of Energy & Environmental Protection
- Department of Aging
- Department of Children and Families
- Office of Early Childhood
- Office of Chief State's Attorney
- United Illuminating
- Eversource

Goals

- To provide a comprehensive analysis of the economic, technical and operational feasibility of a statewide integrated service delivery model for housing, health and energy services in Connecticut.
- To identify various payment mechanisms utilizing public and private sector funds for housing, health and energy work.
- To convene key partners to discuss opportunities for advancing this work in Connecticut.



JOIN US ON THE SHIP COALITION
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