

Housing and Health

DEFINITION

Housing and health is the percentage of children under age 18 who live in low-income families that reside in older housing, defined as housing built before 1980. Low-income families are those with incomes less than 200% of the federal poverty level.

SIGNIFICANCE

Homes that are dry, clean, pest-free, safe, contaminant-free, well-ventilated, well-maintained, and thermally-controlled can provide a healthy environment for children and residents.¹ Safe, affordable, and stable housing maintains the health and well-being of families and children, supporting mental and emotional health as well as physical safety. Healthy housing also protects families from weather, environmental hazards, and injury and provides a safe place for children to eat, sleep, play, and grow.^{2,3}

Unhealthy housing can cause or intensify many health conditions. Studies have connected poor quality construction, utility deficiencies, water intrusion, lead paint, radon, and pests to respiratory illnesses, asthma, unintentional injuries, lead poisoning, and cancer. Children under age five, low-income children, and Children of Color are at increased risk for fall injuries due to unsafe sleep and home environments, including aging and

deteriorating housing.^{4,5}

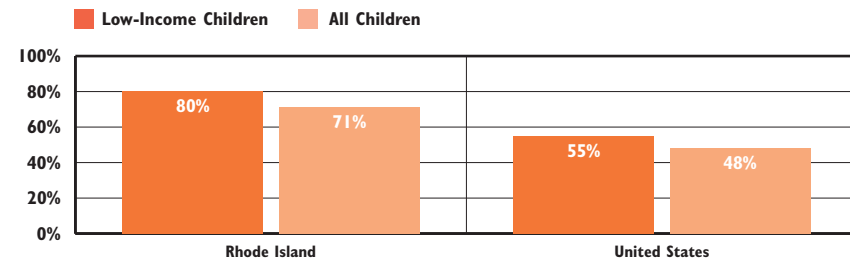
Poor quality housing is also a strong predictor of emotional and behavioral problems in low-income children and youth as well as academic achievement. Adolescents living in poorer quality homes have lower reading and math proficiency than their peers.⁶

The quality and stability of children's homes can have long-term effects on children. Lack of adequate and affordable housing puts safe, healthy, well-maintained homes out of reach for many families. Families may be forced to move frequently in search of better, more affordable housing, or to raise their children in overcrowded and unsafe environments that can interfere with their growth, development, health, and academic performance. Overcrowded housing is associated with mental health concerns, stress, sleep problems, injury, and exposure to disease, while multiple moves are associated with behavioral and mental health concerns, academic difficulties, and substance use.⁷

Adopting a comprehensive "healthy homes" approach that addresses multiple housing deficiencies simultaneously can help prevent housing-related injuries and illnesses, reduce health care costs, and improve children's quality of life. Because the causes of many health conditions related to the home environment are interconnected, it can be cost-effective to address multiple hazards simultaneously.^{8,9,10}



Children Living in Older Housing*, 2017-2021, Rhode Island and the United States



Source: Population Reference Bureau analysis of 2017-2021 American Community Survey (ACS) Public Use Microsample (PUMS) data. *Older housing is defined as built before 1980. The ACS reports housing year built by decade, so this is the best available approximation for housing built before 1978 when interior lead paint was banned. Facebooks prior to 2016 are not comparable due to the discontinuation of 3-year ACS data.

- ◆ **Between 2017 and 2021, Rhode Island had the highest percentage of low-income children (80%) and the second highest percentage of children of all incomes (71%) living in older housing in the U.S., after New York.**¹¹
- ◆ **Lead Poisoning:** Children living in homes built before 1978 are at risk for lead poisoning. Even at low levels, lead exposure can negatively affect a child's health, development, and brain.¹² In 2022, 2.5% (550) of Rhode Island children under age six who were screened had a confirmed blood lead level of ≥ 5 $\mu\text{g}/\text{dL}$.¹³
- ◆ **Asthma:** Asthma is the most common chronic condition in children and a leading cause of school absences and hospitalization for children under age 18 in the U.S.¹⁴ Between 2017 and 2021, there were 2,866 emergency department visits of Rhode Island children ages six and under (7.0 per 1,000) for which asthma was the primary diagnosis.¹⁵
- ◆ **Unintentional Injuries:** Falls are the leading cause of non-fatal unintentional injuries among children in the U.S.¹⁶ In 2021, housing-related falls resulted in 1,082 emergency room visits by Rhode Island children ages six and under.¹⁷
- ◆ **Weatherization Assistance Program:** This program helps income-eligible households reduce heating bills by providing whole-house energy efficiency and safety services. In 2022, 628 Rhode Island children under age 18 benefited from 562 completed weatherization projects, a decline from previous pre-pandemic years due to disruptions during the pandemic.^{18,19}

Table 24.

Housing and Health, Rhode Island

CITY/TOWN	TOTAL # OF CHILDREN UNDER AGE 6 2010	CHILDREN WITH LEAD POISONING 2022			PRIMARY ASTHMA ED VISITS 2017-2021**		HOUSING RELATED FALLS 2021	WEATHERIZATION PROJECTS 2022	% HOUSING STOCK PRE-1980
		#	TESTED	%	#	RATE PER 1,000			
Barrington	1,213	<5	507	*	36	5.9	11	2	83%
Bristol	1,316	<5	368	*	18	2.7^	10	2	67%
Burrillville	1,186	9	266	3.8%	14	2.4^	10	23	68%
Central Falls	2,374	41	725	6.2%	138	11.6	40	4	79%
Charlestown	493	<5	90	*	7	*	6	4	50%
Coventry	2,508	<5	646	*	60	4.8	27	29	68%
Cranston	5,814	28	1,887	1.6%	168	5.8	66	51	77%
Cumberland	2,603	6	786	0.8%	43	3.3	35	10	64%
East Greenwich	930	<5	354	*	9	*	13	1	59%
East Providence	3,545	10	1,173	0.9%	119	6.7	41	27	81%
Exeter	390	<5	89	*	7	*	*	6	46%
Foster	315	<5	93	*	7	*	*	2	59%
Glocester	633	<5	133	*	5	*	6	14	64%
Hopkinton	618	<5	121	*	10	*	7	2	60%
Jamestown	287	0	65	0.0%	8	*	*	1	54%
Johnston	1,930	11	625	1.9%	39	*	32	36	67%
Lincoln	1,490	8	450	2.2%	28	4.0	18	6	68%
Little Compton	188	<5	48	*	5	*	*	0	64%
Middletown	1,331	<5	292	*	54	8.1	24	3	65%
Narragansett	739	0	79	0.0%	2	*	11	1	62%
New Shoreham	57	0	14	0.0%	1	*	22	0	50%
Newport	1,792	20	355	6.2%	79	8.8	*	4	84%
North Kingstown	1,965	<5	474	*	30	3.1	25	11	63%
North Providence	2,040	11	715	1.6%	75	7.4	31	25	66%
North Smithfield	752	<5	225	*	10	*	13	6	62%
Pawtucket	6,835	51	1,897	2.9%	305	8.9	87	42	85%
Portsmouth	1,206	<5	281	*	23	3.8^	20	8	61%
Providence	16,934	281	6,629	4.6%	1,060	12.5	276	106	84%
Richmond	635	0	101	0.0%	8	2.5	*	0	47%
Scituate	608	<5	237	*	4	1.3	10	5	68%
Smithfield	1,076	0	331	0.0%	21	3.9^	9	10	59%
South Kingstown	1,707	<5	364	*	18	2.1^	20	8	56%
Tiverton	1,006	<5	291	*	12	2.4^	5	12	61%
Warren	727	5	239	2.3%	17	4.7^	10	3	79%
Warwick	5,561	<5	1,479	*	119	4.3	71	57	78%
West Greenwich	446	<5	128	*	3	1.3	6	0	32%
West Warwick	2,351	10	652	1.7%	64	5.4	26	25	70%
Westerly	1,735	<5	205	*	22	2.5^	20	5	62%
Woonsocket	4,212	26	1,036	2.7%	218	10.4	64	11	86%
Four Core Cities	30,355	399	10,287	4.2%	1,721	11.3	467	163	84%
Remainder of State	51,193	151	14,163	1.1%	1,145	4.5	605	399	68%
Rhode Island	81,548	550	24,450	2.5%	2,866	7.0	1,072	562	73%

Source of Data for Table/Methodology

U.S. Census Bureau, Census 2010.

Children with Lead Poisoning: Rhode Island Department of Health, Healthy Homes and Childhood Lead Poisoning Prevention Program, 2022. The numerator is the number of Rhode Island children with a confirmed blood lead level ≥ 5 $\mu\text{g}/\text{dL}$ in calendar year 2022. The denominator is the number of children who were tested in calendar year 2022. Data are for children under age six.

Children with Asthma: Rhode Island Department of Health, Hospital Discharge Database, 2017-2021. The Rhode Island Department of Health defines emergency department (ED) visits for children with a primary asthma diagnosis as those resulting in a home discharge or another facility, but not admitted to the hospital as an inpatient. Children with multiple ED visits are counted as a new event for each admission, so some children are counted more than once. For details, see Children with Asthma indicator. Data are for children ages six and under.

**Asthma data for 2020 are not comparable to prior years. Asthma-related emergency department visits and hospitalizations decreased substantially in spring 2020, due to the COVID-19 pandemic.

Housing Related Falls: Rhode Island Department of Health, Center for Health Data and Analysis, 2021. Data are for children ages six and under who are residents of Rhode Island.

Weatherization Projects: Rhode Island Department of Human Services, Weatherization Assistance Program data, 2022. Weatherization projects are defined as those receiving a final inspection by the end of calendar year 2022.

Housing Stock Pre-1980: Population Reference Bureau analysis of 2017-2021 American Community Survey (ACS) data. Table B25034. Older housing is defined as being built before 1980. The ACS reports housing year built by decade, so this is the best available approximation for housing built before 1978 when interior lead paint was banned.

* The data are statistically unreliable and rates are not reported and should not be calculated.

^ The data are statistically unstable and rates or percentages should be interpreted with caution.

(Continued with references on page 183)