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]

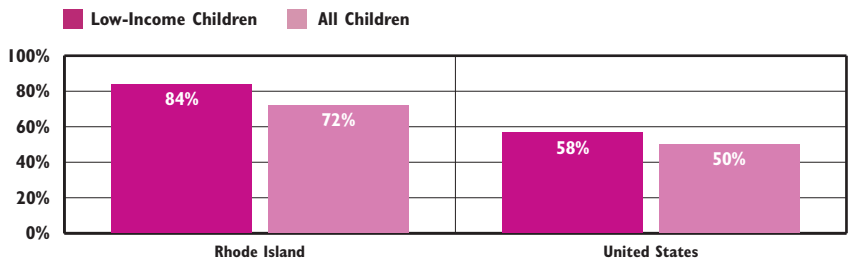
Unhealthy housing can cause or intensify many health conditions. Studies have connected poor quality construction, utility deficiencies, water intrusion, lead paint, radon, and pests to respiratory illnesses, asthma, unintentional injuries, lead poisoning, and cancer. Children under age five, low-income 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 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]

Children Living in Older Housing*, 2014-2018, Rhode Island and the United States



Source: Population Reference Bureau analysis of 2014-2018 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. Factbooks prior to 2016 are not comparable due to the discontinuation of 3-year ACS data.

◆ **Between 2014 and 2018, Rhode Island had the highest percentage of low-income children (84%) and the second highest percentage of children of all incomes (72%) living in older housing in the U.S., after New York.[10]**

◆ **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.[11] In 2019, 579 (2%) of Rhode Island children under age six who were screened had a confirmed blood lead level of ≥5 µg/dL.[12]**

◆ **Asthma: Asthma is one of the most common chronic conditions in children and a leading cause of school absences and hospitalization for children under age 18 in the U.S.[13] Between 2014 and 2018, there were 3,941 emergency department visits of Rhode Island children ages six and under (9.7 per 1,000) for which asthma was the primary diagnosis.[14]**

◆ **Unintentional Injuries: Falls are the leading cause of non-fatal unintentional injuries among children in the U.S.[15] In 2018, housing-related falls resulted in 1,274 emergency room visits by Rhode Island children age six and under.[16]**

◆ **Weatherization Assistance Program: This program helps income-eligible households reduce heating bills by providing whole-house energy efficiency and safety services. In 2018, 1,743 Rhode Island children under age 18 benefited from 1,694 completed weatherization projects administered by seven Community Action Program agencies.[17,18]**

Table 25.

Housing and Health, Rhode Island

CITY/TOWN	TOTAL # OF CHILDREN AGES 6 AND UNDER 2010	CHILDREN WITH LEAD POISONING 2019 #	TESTED	%	PRIMARY ASTHMA ED VISITS 2014-2018 #	RATE PER 1,000	HOUSING RELATED FALLS 2018	% HOUSING STOCK PRE-1980
Barrington	1,213	3	459	*	54	8.9	17	82%
Bristol	1,316	4	318	*	34	5.2	9	68%
Burrillville	1,186	4	269	*	21	3.5^	12	63%
Central Falls	2,374	31	806	3.8%	193	16.3	48	88%
Charlestown	493	1	88	*	9	*	3	50%
Coventry	2,508	7	553	*	101	8.1	36	65%
Cranston	5,814	30	1,733	1.7%	180	6.2	86	77%
Cumberland	2,603	9	734	*	40	3.1	27	63%
East Greenwich	930	3	285	*	20	4.3^	8	63%
East Providence	3,545	14	1,213	1.2%^	122	6.9	51	84%
Exeter	390	0	100	0.0%	7	*	4	47%
Foster	315	0	77	0.0%	5	*	1	63%
Glocester	633	2	116	*	7	*	9	64%
Hopkinton	618	0	87	0.0%	13	4.2^	9	62%
Jamestown	287	0	40	0.0%	10	*	5	55%
Johnston	1,930	5	520	*	54	5.6	31	65%
Lincoln	1,490	2	385	*	41	5.5	17	69%
Little Compton	188	0	45	0.0%	5	*	1	67%
Middletown	1,331	6	329	*	55	8.3	26	66%
Narragansett	739	0	80	0.0%	13	3.5^	5	56%
New Shoreham	57	0	11	0.0%	1	*	0	57%
Newport	1,792	10	412	*	110	12.3	43	81%
North Kingstown	1,965	1	456	*	46	4.7	22	63%
North Providence	2,040	4	670	*	115	11.3	37	71%
North Smithfield	752	3	187	*	8	*	7	68%
Pawtucket	6,835	71	2,039	3.5%	414	12.1	115	88%
Portsmouth	1,206	2	284	*	30	5.0	17	59%
Providence	16,934	295	6,772	4.4%	1,484	17.5	308	86%
Richmond	635	1	83	*	12	3.8^	8	50%
Scituate	608	1	182	*	7	*	8	65%
Smithfield	1,076	3	323	*	21	3.9^	11	62%
South Kingstown	1,707	2	334	*	36	4.2	15	57%
Tiverton	1,006	2	320	*	9	*	9	60%
Warren	727	2	250	*	25	6.9^	12	79%
Warwick	5,561	11	1,349	*	191	6.9	100	80%
West Greenwich	446	0	98	0.0%	8	*	5	34%
West Warwick	2,351	9	593	*	105	8.9	43	72%
Westerly	1,735	3	248	*	44	5.1	27	62%
Woonsocket	4,212	38	1,099	3.5%	291	13.8	81	89%
Unknown	*0*	*0*	*0*	*NA*	*0*	*NA*	*1*	*NA*
Four Core Cities	*30,355*	*435*	*10,716*	*4.1%*	*2,382*	*15.7*	*552*	*87%*
Remainder of State	*51,193*	*144*	*13,231*	*1.1%*	*1,559*	*6.1*	*721*	*69%*
Rhode Island	*81,548*	*579*	*23,947*	*2.4%*	*3,941*	*9.7*	*1,274*	*74%*

Source of Data for Table/Methodology

Children Age Six and Under: U.S. Census Bureau, Census 2010. Table PCT12.

Children with Lead Poisoning: Rhode Island Department of Health, Healthy Homes and Childhood Lead Poisoning Prevention Program, 2019. The numerator is the number of Rhode Island children with a confirmed blood lead level ≥5 µg/dL in calendar year 2019. The denominator is the number of children who were tested in calendar year 2019. Data are for children under age six.

Children with Asthma: Rhode Island Department of Health, Hospital Discharge Database, 2014-2018. 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. For details, see Children with Asthma indicator. Data are for children age six and under.

Housing Related Falls: Rhode Island Department of Health, Center for Health Data and Analysis, 2018. Data are for children age six and under who are residents of Rhode Island.

Housing Stock Pre-1980: Population Reference Bureau analysis of 2014-2018 American Community Survey (ACS) Public Use Microsample (PUMS) data. Table B25034. 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.

* 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.

Effective October 1, 2015, the International Classification of Disease (ICD) codes changed from the 9th classification to the 10th classification, which may impact comparability across the years for Housing Related Falls.

Core cities are Central Fall, Pawtucket, Providence, and Woonsocket.

(References continued on page 181)