

Children with Asthma

DEFINITION

Children with asthma is the rate of asthma hospitalizations among children under age 18. Data are reported by place of child's residence at the time of hospitalization.

SIGNIFICANCE

Asthma is a chronic lung disease that causes recurrent episodes of wheezing, breathlessness, chest tightness, and cough and can be life threatening.^{1,2} Attacks can be triggered by exposure to cigarette smoke, mold and dust in the home, stress, strenuous exercise, allergies, roach infestation, animal dander, indoor and outdoor pollutants, and weather conditions.^{3,4} Childhood asthma in the U.S. has steadily increased over the past two decades from 40 per 1,000 children in 1982 to 108 per 1,000 children in 1999.^{5,6,7} In 1999 in the United States, for every 10,000 children under age 15 there were 600 asthma outpatient visits, 110 asthma emergency room visits, and 30 asthma hospitalizations.⁸

Asthma is the number one chronic condition in children and the first-ranked cause of hospitalization in children under age 15. Asthma is the leading cause of school absences resulting from chronic illness.⁹ Black children are more likely to suffer from asthma than White, non-Hispanic or Hispanic children. Racial differences in

the prevalence of asthma are correlated with poverty, substandard housing, urban air quality, indoor allergens and lack of access to preventive medical care.^{10,11}

Managing asthma requires a long-term, multifaceted approach, including patient education, behavior modification, avoidance of asthma triggers, medication to minimize and prevent symptoms, prompt treatment and frequent medical follow-up.^{12,13} Insured children are twice as likely as uninsured children to receive ongoing asthma care from a physician. Low-income and uninsured children are more likely to receive treatment in the emergency department or be hospitalized for conditions that could have been managed with appropriate outpatient care.¹⁴

Childhood Asthma Hospitalization Rates, Core Cities and Rhode Island, 1999-2001

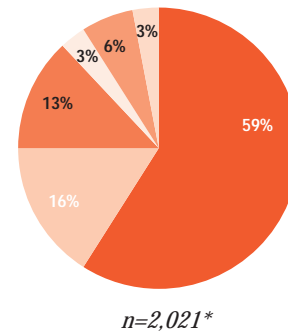
City/Town	Number of Children Hospitalized	Rate per 1,000 Children
Central Falls	61	3.7
Newport	48	3.1
Pawtucket	165	3.0
Providence	656	4.8
West Warwick	65	3.3
Woonsocket	128	3.8
Rhode Island	2,014	2.7

Source: Rhode Island Department of Health, Hospital Discharge Database, 1999-2001.

Asthma Hospitalizations, Children Under Age 18, Rhode Island, 1999-2001

By Race/Ethnicity

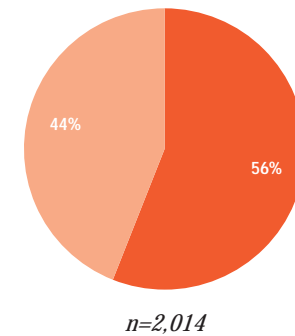
59% White
16% Hispanic
13% Black
3% Asian
6% Other
3% Unknown



Source: Rhode Island Department of Health, Hospital Discharge Database, 1999-2001.
*Includes 7 non-Rhode Island residents.

By Residence

56% Core Cities
44% Remainder of State



Asthma and Access to Health Care

◆ Most cases of childhood asthma can be managed by the child's primary care physician and timely medical care can prevent severe asthma attacks. Hospitalization for asthma may indicate that the child has not had adequate outpatient management of the disease.^{15,16} Asthma symptoms not severe enough to require hospitalization may still prevent a child with asthma from leading a fully-active life.¹⁷

◆ In Rhode Island between 1999-2001, over half (56%) of all hospitalizations for childhood asthma were children residing in the core cities, where only a third of Rhode Island's children live.¹⁸ Rhode Island's core cities have the highest child poverty rates and the highest rates of children without health insurance in the state.¹⁹

Table 18.

Asthma Hospitalizations for Children, Rhode Island, 1999-2001

CITY/TOWN	ESTIMATED NUMBER OF CHILDREN UNDER 18	NUMBER OF ASTHMA HOSPITALIZATIONS	RATE/1000 CHILDREN
Barrington	14,235	21	1.5
Bristol	13,197	25	1.9
Burrillville	12,129	23	1.9
Central Falls	16,593	61	3.7
Charlestown	5,136	17	3.3
Coventry	25,167	47	1.9
Cranston	51,294	121	2.4
Cumberland	23,070	29	1.3
East Greenwich	10,692	15	1.4
East Providence	31,638	70	2.2
Exeter	4,767	4	0.8
Foster	3,315	6	1.8
Glocester	7,992	8	1.0
Hopkinton	6,033	9	1.5
Jamestown	3,714	2	0.5
Johnston	17,718	37	2.1
Lincoln	15,471	25	1.6
Little Compton	2,340	2	0.9
Middletown	12,984	42	3.2
Narragansett	8,499	12	1.4
New Shoreham	555	0	0.0
Newport	15,597	48	3.1
North Kingstown	20,544	37	1.8
North Providence	17,808	45	2.5
North Smithfield	7,137	5	0.7
Pawtucket	54,453	165	3.0
Portsmouth	12,987	22	1.7
Providence	135,831	656	4.8
Richmond	6,042	10	1.7
Scituate	7,905	11	1.4
Smithfield	12,057	8	0.7
South Kingstown	18,852	32	1.7
Tiverton	10,101	12	1.2
Warren	7,362	18	2.4
Warwick	56,340	107	1.9
West Greenwich	4,332	7	1.6
West Warwick	19,896	65	3.3
Westerly	16,218	34	2.1
Woonsocket	33,465	128	3.8
Unknown Residence	NA	28	NA
Core Cities	275,835	1,123	4.1
Remainder of State	467,631	891	1.9
Rhode Island	743,466	2,014	2.7

Source of Data for Table/Methodology

Rhode Island Department of Health, Hospital Discharge Database, 1999-2001.

The data are for fiscal year 1999 and calendar year 2000 and 2001.

Core cities are Central Falls, Newport, Pawtucket, Providence, West Warwick and Woonsocket.

The denominator is the total number of children under age 18 according to the 2000 Census of Population.

References for Indicator

^{1,9} *Asthma in Children Fact Sheet* (2002). New York, NY: American Lung Association.

^{2,15,17} *Asthma and the Environment: A Strategy to Protect Children* (2000). Washington, DC: President's Task Force on Environmental Health Risks and Safety Risks to Children.

^{3,6,11} *Minority Lung Disease Data 2000* (2000). New York, NY: American Lung Association.

⁴ Vanderslice, R. and Bibeault, L. (July 1999). "Asthma and the Environment: A Physician's Guide to Resources, Research, and Data" in *Medicine and Health/Rhode Island*, Vol. 82, No. 7. Providence, RI: Rhode Island Medical Society.

⁵ *Trends in Asthma Morbidity and Mortality* (2002). New York, NY: American Lung Association.

⁷ *Asthma in Children Fact Sheet* (1999). New York, NY: American Lung Association.

⁸ Mannino, D. et al (March 2002). "Surveillance for Asthma-United States, 1980-1999" in *MMWR*, Vol. 51, No. SS1.

¹⁰ *National Asthma Control Program: Reducing Costs and Improving the Quality of Life, 2002* (2002). Atlanta, GA: Centers for Disease Control and Prevention.

^{13,16} *Pediatric Asthma: Promoting Best Practice - Guide for Managing Asthma in Children* (1999). Washington, DC: American Academy of Allergy, Asthma, and Immunology.

¹² Sherman, C. and Arthurs, D. (July 1999). "Office Management of Asthma" in *Medicine & Health Rhode Island*, Vol. 82, No. 7.

¹⁴ *No Health Insurance? It's Enough to Make You Sick* (1999). Washington, DC: American College of Physicians-American Society of Internal Medicine.

¹⁸ Rhode Island Department of Health, Hospital Discharge Database, 1999-2001.

¹⁹ Rhode Island Department of Human Services, Medicaid Data Archive and Rhode Island Department of Health, Behavioral Risk Factor Surveillance System, 2002.