Children with Asthma

DEFINITION

Children with asthma is the rate of hospitalizations for asthma per 1,000 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] Childhood asthma in the U.S. has steadily increased over the past two decades.[4] In 2001, 12.6% of children under age 18 had previously been diagnosed with asthma.[5] In 2000 in the United States, for every 10,000 children under age 18 there were 649 asthma outpatient visits, 104 asthma emergency room visits, and 30 asthma hospitalizations.[6]

Asthma is the number one chronic condition in children and the third-ranked cause of hospitalization in children under age 15. Asthma is the leading cause of school absences resulting from chronic illness.[7] Black children are more likely to suffer from asthma than White and 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.[8,9]

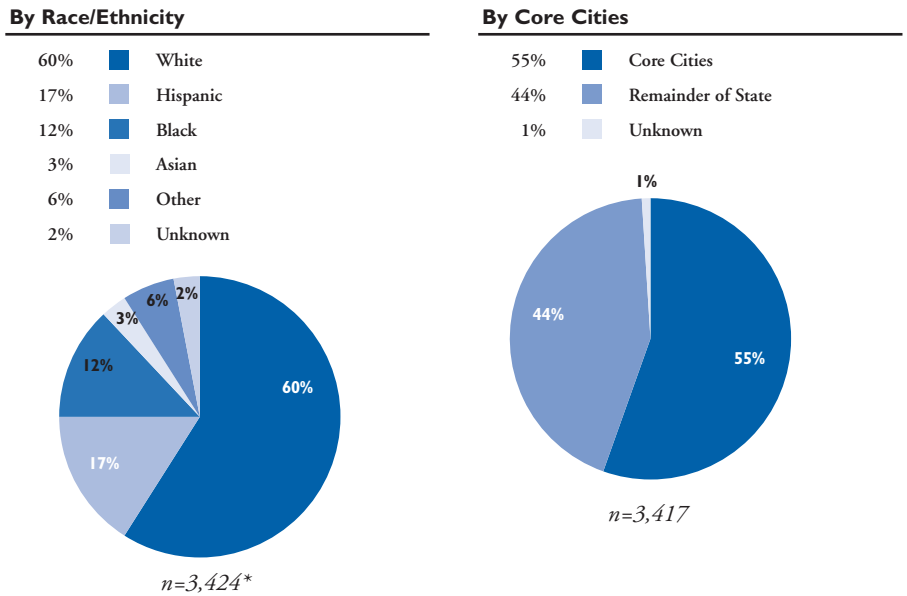
Proper asthma management requires a long-term, multifaceted approach, including patient education, behavior modification, avoidance of asthma triggers, medication to minimize and prevent symptoms, and frequent medical follow-up.[10] Insured children are twice as likely as uninsured children to receive ongoing asthma care from a physician.[11] 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.[12]

Childhood Asthma Hospitalization Rates, Core Cities and Rhode Island, 1998-2002

City/Town	Number of Children Hospitalized	Rate per 1,000 Children
Central Falls	111	4.0
Newport	76	2.9
Pawtucket	272	3.0
Providence	1,098	4.9
West Warwick	109	3.3
Woonsocket	213	3.8
Rhode Island	3,417	2.8

Source: Rhode Island Department of Health, Hospital Discharge Database, 1998-2002.

Asthma Hospitalizations, Children Under Age 18, Rhode Island, 1998-2002



Source: Rhode Island Department of Health, Hospital Discharge Database, 1998-2002.
*Includes 7 non-Rhode Island residents.

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.[13] Asthma symptoms not severe enough to require hospitalization may still prevent a child with asthma from leading a fully-active life.[14]

◆ In Rhode Island between 1998-2002, over half (55%) of all hospitalizations for childhood asthma were children residing in the core cities, where only a third of Rhode Island's children live.[15] Rhode Island's core cities have the highest child poverty rates and the highest rates of children without health insurance in the state.[16]

Table 19. **Asthma Hospitalizations for Children Under Age 18, Rhode Island, 1998-2002**

CITY/TOWN	ESTIMATED NUMBER OF CHILDREN UNDER 18	NUMBER OF ASTHMA HOSPITALIZATIONS	RATE/1000 CHILDREN
Barrington	23,725	29	1.2
Bristol	21,995	48	2.2
Burrillville	20,215	47	2.3
Central Falls	27,655	111	4.0
Charlestown	8,560	34	4.0
Coventry	41,945	80	1.9
Cranston	85,490	193	2.3
Cumberland	38,450	51	1.3
East Greenwich	17,820	24	1.3
East Providence	52,730	130	2.5
Exeter	7,945	5	0.6
Foster	5,525	10	1.8
Glocester	13,320	16	1.2
Hopkinton	10,055	13	1.3
Jamestown	6,190	4	0.6
Johnston	29,530	52	1.8
Lincoln	25,785	43	1.7
Little Compton	3,900	5	1.3
Middletown	21,640	61	2.8
Narragansett	14,165	19	1.3
New Shoreham	925	0	0.0
Newport	25,995	76	2.9
North Kingstown	34,240	58	1.7
North Providence	29,680	76	2.6
North Smithfield	11,895	13	1.1
Pawtucket	90,755	272	3.0
Portsmouth	21,645	38	1.8
Providence	226,385	1,098	4.9
Richmond	10,070	16	1.6
Scituate	13,175	16	1.2
Smithfield	20,095	29	1.4
South Kingstown	31,420	52	1.7
Tiverton	16,835	18	1.1
Warren	12,270	30	2.4
Warwick	93,900	211	2.2
West Greenwich	7,220	13	1.8
West Warwick	33,160	109	3.3
Westerly	27,030	60	2.2
Woonsocket	55,775	213	3.8
Unknown Residence	*NA*	*44*	*NA*
Core Cities	*459,725*	*1,879*	*4.1*
Remainder of State	*779,385*	*1,494*	*1.9*
Rhode Island	*1,239,110*	*3,417*	*2.8*

Source of Data for Table/Methodology

Rhode Island Department of Health, Hospital Discharge Database, 1998-2002.

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, multiplied by five to calculate a rate over five years.

References for Indicator

[1,3,7] *Asthma in Children Fact Sheet.* (2003). New York, NY: American Lung Association.

[2] *Childhood Asthma: An Overview.* (2003). New York, NY: American Lung Association.

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

[5,6] *Asthma Prevalence, Health Care Use and Mortality, 2000-2001.* (2003). Hyattsville, MD: Centers for Disease Control and Prevention, National Center for Health Statistics.

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

[9] *Minority Lung Disease Data 2000.* (2000). New York, NY: American Lung Association.

[10,12] Brodsky, Karen L. (2002) *Overcoming Financial Barriers to Improving Asthma Care for Children.* Lawrenceville, NJ: Center for Health Care Strategies.

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

[14] *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.

[15] Rhode Island Department of Health, Hospital Discharge Database, 1998-2002.

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