

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 inflammatory lung disease that causes recurrent, reversible episodes of coughing, wheezing, shortness of breath, and chest tightness, which can be life threatening.^{1,2} Attacks can be triggered by respiratory infections, cigarette smoke, exercise, weather conditions, stress and allergies to pollen, mold, dust, cockroaches and animal dander.^{3,4} Childhood asthma in the U.S. has increased over the past 2 decades. The current prevalence has remained stable since 2001, but is at historically high levels. Ambulatory care use for asthma continues to grow. Emergency department visits and hospitalization rates for asthma have stabilized at high levels, while deaths due to asthma have decreased recently.⁵

Nationally, asthma is the number one chronic condition in children and the third-ranked cause of hospitalization for children under age 15.⁶ Nearly 9.3 million children under age 18 (13%) have ever been diagnosed with asthma and more than 6.5 million children (9%) currently report having asthma.⁷

Asthma is the leading cause of school absences resulting from chronic illness.⁸ Black and Puerto Rican children have higher prevalence rates of asthma than White children.⁹ While research is inconclusive, racial differences in asthma prevalence are believed to be correlated with poverty, indoor and outdoor air pollution, stress, lack of access to preventive medical care and genetic factors.¹⁰

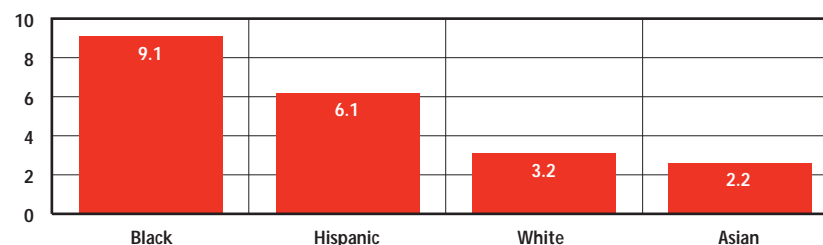
Proper asthma management requires patient education, ongoing partnerships with primary care providers, avoidance of asthma triggers, medication to prevent and minimize symptoms, management of asthmatic episodes and regular follow-up care.¹¹ A primary care provider acting as a child's medical home can provide the connections to support services to help manage asthma.¹²

Childhood Asthma Hospitalization Rates, Core Cities and Rhode Island, 2002-2006

City/Town	Number of Children Hospitalized	Rate per 1,000 Children
Central Falls	189	6.8
Newport	95	3.7
Pawtucket	450	5.0
Providence	1,478	6.5
West Warwick	170	5.1
Woonsocket	263	4.7
Rhode Island	4,942	4.0

Source: Rhode Island Department of Health, Hospital Discharge Database, 2002-2006.

Asthma Hospitalizations by Race/Ethnicity, per 1,000 Children Under Age 18, Rhode Island, 2002-2006



◆ In Rhode Island between 2002 and 2006, the rate of asthma hospitalizations for Black children was almost three times the rate of hospitalizations for White children. Hispanic children were hospitalized at nearly twice the rate of White children.

Source: Rhode Island Department of Health, Hospital Discharge Database, 2002-2006; U.S. Bureau of the Census, Census 2000.

Preventing Childhood Asthma

◆ In Rhode Island, 1 in 10 (11%) children ages birth to 17 years reported having asthma between 2001-2005. Only 4 states report higher current asthma prevalence rates.¹³

◆ In the U.S. and in Rhode Island, health care use for asthma (including emergency room use and hospitalizations) is highest among the youngest children.¹⁴ In Rhode Island between 2002-2006, children ages birth to 4 years accounted for 54% of hospitalizations for asthma, children ages 5-12 comprised 28% and adolescents ages 13-17 made up 19%.¹⁵

◆ A demonstration project in California aimed at improving asthma-related health outcomes among children ages 5 to 18 years reduced hospitalizations by four-fifths and decreased the number of acute care visits for asthma exacerbations, emergency department visits, missed school days, and frequent use of rescue medications by approximately two-thirds. The project implemented a multi-disciplinary clinic-based team approach, including community health workers, and continuous quality improvement.¹⁶

Table 21. Asthma Hospitalizations for Children Under Age 18, Rhode Island, 2002-2006

CITY/TOWN	ESTIMATED NUMBER OF CHILDREN UNDER AGE 18*	NUMBER OF ASTHMA HOSPITALIZATIONS	RATE 1,000 CHILDREN
Barrington	23,725	41	1.7
Bristol	21,995	60	2.7
Burrillville	20,215	56	2.8
Central Falls	27,655	189	6.8
Charlestown	8,560	27	3.2
Coventry	41,945	121	2.9
Cranston	85,490	273	3.2
Cumberland	38,450	82	2.1
East Greenwich	17,820	43	2.4
East Providence	52,730	221	4.2
Exeter	7,945	16	2.0
Foster	5,525	9	1.6
Glocester	13,320	27	2.0
Hopkinton	10,055	25	2.5
Jamestown	6,190	12	1.9
Johnston	29,530	79	2.7
Lincoln	25,785	70	2.7
Little Compton	3,900	7	1.8
Middletown	21,640	63	2.9
Narragansett	14,165	19	1.3
New Shoreham	925	1	1.1
Newport	25,995	95	3.7
North Kingstown	34,240	88	2.6
North Providence	29,680	110	3.7
North Smithfield	11,895	30	2.5
Pawtucket	90,755	450	5.0
Portsmouth	21,645	70	3.2
Providence	226,385	1,478	6.5
Richmond	10,070	19	1.9
Scituate	13,175	31	2.4
Smithfield	20,095	57	2.8
South Kingstown	31,420	48	1.5
Tiverton	16,835	19	1.1
Warren	12,270	42	3.4
Warwick	93,900	331	3.5
West Greenwich	7,220	17	2.4
West Warwick	33,160	170	5.1
Westerly	27,030	87	3.2
Woonsocket	55,775	263	4.7
Unknown	NA	96	NA
Core Cities	459,725	2,645	5.8
Remainder of State	779,385	2,201	2.8
Rhode Island	1,239,110	4,942	4.0

Source of Data for Table/Methodology

Rhode Island Department of Health, Division of Family Health, 2002-2006. Data for 2005-2006 are provisional.

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

*The estimated number of children under age 18 is the number of children under age 18 according to the 2000 U.S. Census, multiplied by five.

References

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- ⁷ National Health Interview Survey, 2005. (2007). (Tables 1-1, 2-1, 3-1, and 4-1). Hyattsville, MD: Centers for Disease Control and Prevention, National Center for Health Statistics. Retrieved December 11, 2007, from <http://www.cdc.gov/asthma/nhis/05/data.htm>
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- ¹¹ Global Initiative for Asthma. (2004). *Pocket guide for asthma management and prevention.* Retrieved January 10, 2007, from www.ginasthma.org
- ¹² *Medical Home.* (n.d.). American Academy of Pediatrics. Retrieved December 11, 2007 from www.aap.org
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