

Children's Health Insurance

DEFINITION

Children's health insurance is the percentage of children under age 18 who are covered by any kind of private or public health insurance, including Medicaid.

SIGNIFICANCE

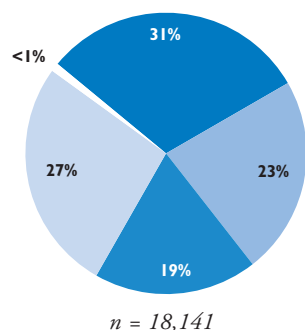
Children's health insurance status is a major determinant in whether children have access to care.¹ Children who lack insurance coverage are more likely to have no usual place of care, delayed care, unmet medical and dental needs, and fewer visits to the doctor and dentist.² Insured children are more likely than uninsured children to be monitored for the achievement of developmental milestones, miss fewer days of school, and have fewer avoidable hospitalizations.³ Covering parents increases the likelihood that children receive preventive care, reduces unmet health needs and improves health care access for both children and parents.^{4,5}

Medicaid and the Children's Health Insurance Program (CHIP) provide low-income children with access to health care that is comparable to the access for children with private health insurance.⁶ RIte Care/RIte Share, Rhode Island's Medicaid/CHIP managed care health insurance program, is available to children and families who qualify based on family income. RIte Care also serves as the health care delivery system for

children who qualify for Medical Assistance based on a disability or because they are in foster care or receiving an adoption subsidy. As of December 31, 2009, 71% (78,953) of RIte Care members who qualified based on family income were children under age 19.⁷ There were 41,223 low-income parents enrolled in RIte Care as of December 31, 2009.^{8,9} RIte Care enrollment rose from 104,636 in December 2008 to 111,646 in December 2009, but remains below the peak of 120,049 in December 2004.¹⁰

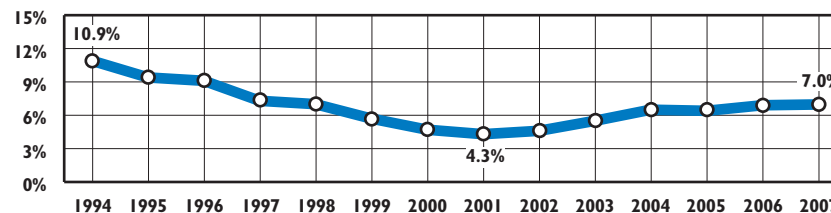
Children Under Age 19 Without Health Insurance, by Poverty Level, Rhode Island, 2006-2008*

31% ■ Income Less Than 100% of Poverty (5,618)
 23% ■ Income 100% to 174% of Poverty (4,089)
 19% ■ Income 175% to 249% of Poverty (3,371)
 27% ■ Income at or above 250% of Poverty (4,983)
 <1% □ Poverty Status Unknown (80)



Source: Population Reference Bureau analysis of U.S. Census Bureau, Current Population Survey data, 2006-2008. These data reflect only those who were uninsured throughout the entire year and do not include those who were insured for only part of the year.

Children Without Health Insurance, Rhode Island, 1993-2008



Source: U.S. Census Bureau, Current Population Survey, 1993-2008, three-year averages (labeled by the mid-point year), compiled by Rhode Island KIDS COUNT. Data are for children under 18 years of age.

◆ Between 2006 and 2008, 7.0% of Rhode Island's children under age 18 were uninsured, compared to 10.8% of children in the U.S.¹¹ Rhode Island ranks 14th best in the nation with 93.0% of children with health insurance, down from 2nd in 2002 and 2003. The majority of children in Rhode Island are covered by private health insurance, most of which is obtained through their parents' employers.¹²

◆ An estimated 4,983 uninsured children under age 19 live in Rhode Island families with incomes at or above 250% of the federal poverty level (\$44,000 for a family of three in 2008), the limit for RIte Care eligibility. Between 2006 and 2008, approximately 72% (13,078) of the estimated 18,141 uninsured children in Rhode Island were eligible for RIte Care based on their family incomes but were not enrolled.^{13,14}

◆ Recent increases in the rate of uninsured children in Rhode Island can be partly attributed to the decline in employer-sponsored insurance. Between 2006 and 2008, 67.2% of children were covered by employer-sponsored health insurance (ESI), down from 73.3% between 1999 and 2001 (an 8% decline).¹⁵

◆ The cost of health care coverage for families has increased faster than wages in every state over the past decade. Between 1999 and 2009, health care premiums in Rhode Island increased by 122%, compared with 38% wage growth.¹⁶ In 2008, the average annual cost for a family policy in Rhode Island was \$13,363, compared with \$12,298 in the U.S.¹⁷

◆ Rhode Island's RIte Share premium assistance program helps low-income families to afford the cost of employer-sponsored coverage. As of December 31, 2009, 7,234 children and 3,143 parents (10,377 total) were enrolled in RIte Share.¹⁸

Table 16. Children Under Age 19 Receiving Medical Assistance, Rhode Island, December 31, 2009

CITY/TOWN	Rite Care RI Works	Rite Care Not RI Works	SSI	Katie Beckett Provision	Adoption Subsidy	Foster Care	Total
Barrington	21	224	6	42	9	14	316
Bristol	103	625	19	14	36	33	830
Burrillville	118	720	45	28	63	67	1,041
Central Falls	998	2,898	284	3	26	16	4,225
Charlestown	31	310	10	10	18	5	384
Coventry	193	1,419	70	72	102	47	1,903
Cranston	863	4,048	243	141	145	104	5,544
Cumberland	167	932	71	78	54	32	1,334
East Greenwich	37	245	12	47	14	9	364
East Providence	505	2,345	152	56	78	48	3,184
Exeter	31	143	10	4	15	41	244
Foster	25	123	6	7	14	5	180
Glocester	33	234	18	14	50	41	390
Hopkinton	49	404	19	12	15	12	511
Jamestown	14	68	6	10	5	1	104
Johnston	267	1,267	77	35	34	36	1,716
Lincoln	166	794	50	44	50	30	1,134
Little Compton	9	81	1	3	0	3	97
Middletown	106	609	40	27	17	35	834
Narragansett	62	314	24	25	21	59	505
New Shoreham	3	29	2	0	0	1	35
Newport	460	1,272	95	5	20	56	1,908
North Kingstown	213	951	49	55	25	37	1,330
North Providence	302	1,304	107	27	49	66	1,855
North Smithfield	52	282	27	24	23	31	439
Pawtucket	1,892	6,589	542	33	98	168	9,322
Portsmouth	47	436	22	43	7	52	607
Providence*	8,077	19,116	1,913	56	884	648	30,694
Richmond	41	222	8	12	15	28	326
Scituate	27	292	11	31	27	11	399
Smithfield	52	384	18	34	17	30	535
South Kingstown	121	713	56	51	40	19	1,000
Tiverton	92	450	25	19	20	17	623
Warren	91	490	18	16	22	19	656
Warwick	478	3,514	196	163	187	121	4,659
West Greenwich	18	138	11	10	13	8	198
West Warwick	398	1,782	124	25	58	33	2,420
Westerly	204	1,133	63	35	27	11	1,473
Woonsocket	1,799	3,869	489	33	105	87	6,382
<i>Out of State/Unknown</i>	<i>10</i>	<i>9</i>	<i>26</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>45</i>
<i>Core Cities</i>	<i>13,624</i>	<i>35,526</i>	<i>3,447</i>	<i>155</i>	<i>1,191</i>	<i>1,008</i>	<i>54,951</i>
<i>Remainder of State</i>	<i>4,541</i>	<i>25,243</i>	<i>1,492</i>	<i>1,189</i>	<i>1,212</i>	<i>1,073</i>	<i>34,750</i>
<i>Rhode Island</i>	<i>18,175</i>	<i>60,778</i>	<i>4,965</i>	<i>1,344</i>	<i>2,403</i>	<i>2,081</i>	<i>89,746</i>

Source of Data for Table/Methodology

Rhode Island Department of Human Services, MMIS Database, December 31, 2009.

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

From September 2003 through March 2004, children with special health care needs were voluntarily transitioned from fee-for-service Medical Assistance to managed care Rite Care. Between October 2008 and December 2008, all children with special health care needs who had remained in fee-for-service Medical Assistance were required to transition to managed care Rite Care. Since October 2008, all new children with special health care needs are required to enroll in managed care Rite Care. Children with special health care needs who have been and will be transitioned into Rite Care included those who qualify for Medical Assistance because they receive SSI, adoption subsidies, or qualify for the Katie Beckett provision. Certain groups of children, including those with commercial health insurance, have been exempted from both transitions to Rite Care and thus will remain in fee-for-service. The columns "SSI, Katie Beckett, and Adoption Subsidy" include children in fee-for-service Medicaid and (managed care) Rite Care as of December 31, 2009.

*The Providence numbers include some foster children who live in other towns because the DHS database lists some foster children as Providence residents for administrative purposes.

References

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- ³ *America's uninsured crisis: Consequences for health and health care.* (2009). Washington, DC: National Academies Press, Institute of Medicine.
- ⁴ DeVoe, J. E., Tillotson, C. J. & Wallace, L. S. (2009). Children's receipt of health care services and family health insurance patterns. *Annals of Family Medicine*, 7(5), 406-413.

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Childhood Immunizations

DEFINITION

Childhood immunizations is the percentage of children ages 19 months to 35 months who have received the entire 4:3:1:3:3:1 Series of vaccinations as recommended by the Advisory Committee on Immunization Practices (ACIP). The Series includes 4 doses of diphtheria, tetanus and pertussis (DTaP); 3 doses of polio; 1 dose of measles, mumps, rubella (MMR); 3 doses of Haemophilus influenzae type b (Hib); 3 doses of hepatitis B vaccines; and 1 dose of varicella (chickenpox).

SIGNIFICANCE

Adequate immunization protects children against a number of infectious diseases that were once common and resulted in death or disability.¹ Vaccines interact with the immune system to produce antibodies that protect the body if it is later exposed to disease.² Individuals benefit from immunization because it can improve quality of life and productivity and prevent illness and death. Society benefits from the creation and maintenance of community immunity, prevention of disease outbreaks and reduction of health-related costs.^{3,4} Although many of the diseases against which children are vaccinated are rare, it is important to continue to immunize them until the diseases are completely eradicated.⁵

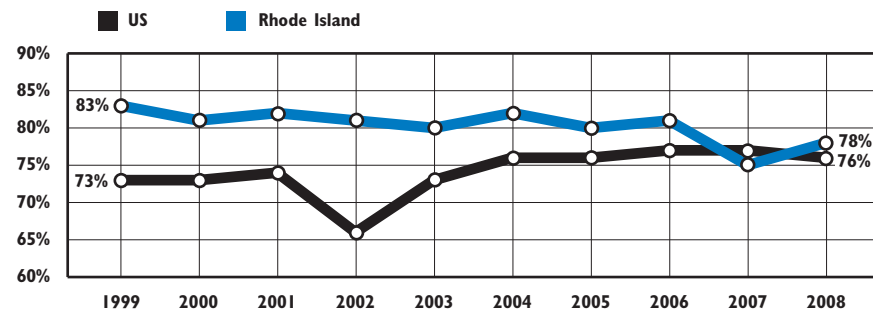
Vaccines are an extremely cost-

effective tool in preventing disease.

Every dollar spent on routine childhood immunization saves \$5 in direct costs and \$11 in additional societal costs.⁶ In order to eliminate cost as a barrier to vaccination, the federal Vaccines for Children program allows states to purchase vaccines at a discounted price. Providers then administer the vaccines at no cost to eligible children, including those who are uninsured, underinsured or Medicaid-eligible.⁷ Because of the rapidly rising cost of vaccines and the increasing complexity of vaccine administration, adequate financing for vaccine programs in the public and private sector has become an area of national policy concern.⁸

Rhode Island purchases vaccines for all children and distributes them to health care providers. In order to ensure that vaccines reach all children, the Rhode Island Department of Health works in partnership with Rhode Island health care providers to maintain and share KIDSNET immunization data for children from birth to age 18.^{9,10} In accordance with national recommendations, Rhode Island requires vaccination against the following diseases prior to entry into child care, preschool, Head Start or kindergarten: diphtheria, tetanus, and pertussis (DTaP); hepatitis B; Haemophilus influenzae type b (Hib); measles, mumps, rubella (MMR); polio (IPV); varicella (chickenpox) and pneumococcal disease.¹¹

Fully Immunized Children*, Ages 19 Months to 35 Months, United States and Rhode Island, 1999-2008

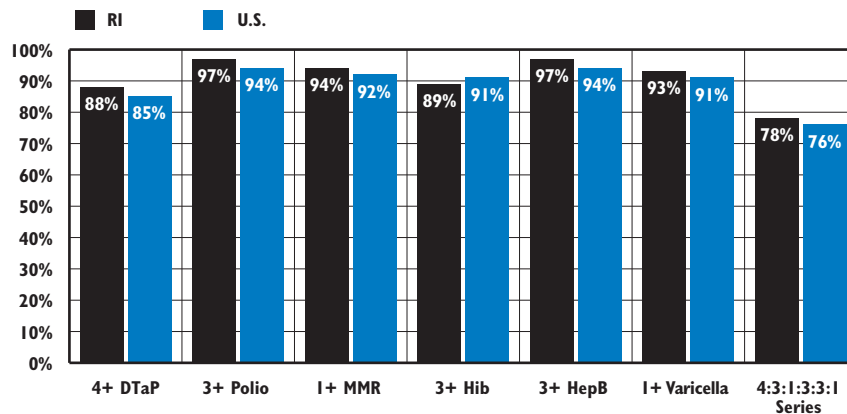


*Fully immunized children received the 4:3:1:3:3 series from 1999 to 2001 and the 4:3:1:3:3:1 series from 2002 to 2008.

Source: Centers for Disease Control and Prevention, National Immunization Survey, 1999-2008.

- ◆ Rhode Island's rate of fully immunized children ages 19 months to 35 months (77.5%) was higher than the national average (76.1%) in 2008.¹²
- ◆ In the U.S. in 2008, the 4:3:1:3:3:1 vaccination rate among children ages 19 months to 35 months was 82% for Asian children, 78% for Hispanic children, 77% for Native American children, 75% for White children and 73% for Black children.¹³
- ◆ Poverty remains a risk factor for under-immunization. In the U.S. in 2008, children living at or above the federal poverty level had a 78% immunization rate while children living below the poverty level had a 72% immunization rate.¹⁴
- ◆ Concerns about vaccine safety have resulted in some parents refusing to have their children vaccinated, contributing to the number of children who are under-immunized in the U.S.^{15,16} As required by the National Childhood Vaccine Injury Act, families must be provided with informational materials about each vaccine and given the opportunity to clarify issues or concerns with their healthcare provider.^{17,18}
- ◆ In 2008, there were 179 Rhode Island children who were exempt from receiving one or more vaccines for medical, religious, or personal reasons.¹⁹

Vaccination Coverage Among Children, Ages 19 Months to 35 Months, United States and Rhode Island, 2008



Source: Centers for Disease Control and Prevention, National Immunization Survey, 2008.

- ◆ Rhode Island ranks 15th in the nation for the completion of the full Series in 2008, an improvement from 38th in 2007.^{20,21}

Immunizations for Elementary and Middle School Students

- ◆ The 2008-2009 *Rhode Island School Immunization Assessment* (comprised of data collected directly from student health records) included an analysis of 2,751 randomly selected records from students at kindergarten entry (5-7 years of age) and at middle school entry (11-13 years of age) across 132 randomly selected public and private schools. Over 94% of entering kindergarteners were up-to-date on the five immunizations needed for school entry. More than 94% of entering middle school students had three of the four recommended immunizations.²²

References

^{1,4} Centers for Disease Control and Prevention. (n.d.). *How vaccines prevent disease*. Retrieved January 14, 2010 from www.cdc.gov

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^{3,18} Centers for Disease Control and Prevention. (2006). General recommendations on immunization: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR*, 55(RR-15), 1-48.

⁵ Centers for Disease Control and Prevention. (n.d.). *Why immunize? For parents*. Retrieved January 14, 2010 from www.cdc.gov

- ◆ State-level data for immunizations among adolescents ages 13 to 17 are available for the first time through the *National Immunization Survey–Teen*. In 2008, Rhode Island adolescents ranked best in the U.S. for four immunizations (3+HepB, 1+Varicella (chickenpox), 1+MCV4, and 1+HPV4), 2nd best for two immunizations (2+MMR and 1+Td/Tdap), and 27th for 1+Tdap. In 2008, more than 95% of Rhode Island adolescents had received the 2+MMR, the 3+HepB and the 1+Varicella vaccines, compared with rates below 90% in the U.S. as a whole.²³

- ◆ To ensure that all high school seniors are fully vaccinated before beginning college or work, the Rhode Island Immunization Program runs Vaccinate Before You Graduate (VBYG) in high schools throughout the state. The program informs parents and students of the importance of immunization and holds vaccination clinics throughout the year at each participating school. The immunizations are funded by the state's Vaccines for Children program and are offered at no cost to students.²⁴

- ◆ During the 2008-2009 school year, 72 schools participated in VBYG. Of the 1,676 students enrolled in the program, 98% received one or more immunizations and 86% completed all immunizations for which they were enrolled. The vaccines administered included Hepatitis B, MMR, Tdap, meningococcal (MCV4), varicella (chicken pox), polio, influenza, and the human papillomavirus vaccine (HPV).²⁵

⁸ Birkhead, G. S., Orenstein, W. A. & Almqvist, J. R. (2009). Reducing financial barriers to vaccination in the United States: Call to action. *Pediatrics*, 124(5), s451-S454.

⁹ Rhode Island Department of Health. (n.d.). *Childhood immunization program*. Retrieved January 14, 2010 from www.health.ri.gov

⁷ Centers for Disease Control and Prevention. (n.d.). *Vaccines for Children Program (VFC)*. Retrieved January 14, 2010 from www.cdc.gov

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Access to Dental Care

DEFINITION

Access to dental care is the percentage of children under age 21 who were enrolled in RIte Care, RIte Share or Medicaid fee-for-service on September 30 who had received dental services at any point during the previous federal fiscal year.

SIGNIFICANCE

Dental caries (tooth decay) is the most common disease among children five to 17 years old.¹ Children with untreated dental problems are more likely to have problems chewing and swallowing, speech problems and poor school performance due to difficulty concentrating and absenteeism.²

Insurance is a strong predictor of access to health and dental care. Nearly one in four (24%) uninsured children in the U.S. has unmet dental needs, compared with 6% of those with Medicaid and 4% of those with private health insurance.³ National estimates indicate that the number of children without dental insurance is 2.6 times greater than the number without medical insurance.⁴ The percentage of Rhode Island children with dental insurance increased in the 1990s through the early 2000s (from 62% in 1990 to 76% in 2004, the most recent year for which data are available).^{5,6}

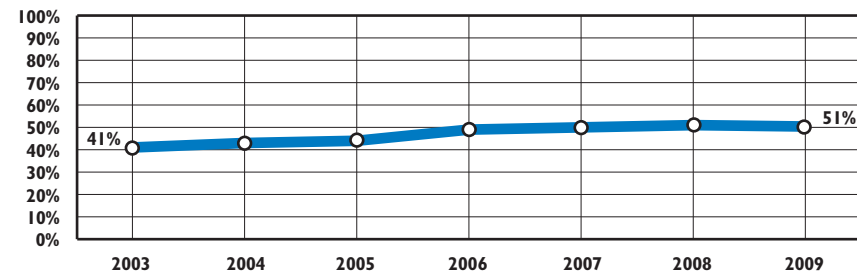
Children living in poverty are more likely to have severe and untreated tooth

decay than higher-income children. Medicaid-eligible children are twice as likely to have dental disease as higher-income children, although children with Medicaid coverage have better access to dental care than those without insurance. For children in low-income families, the efficacy and continuity of public dental insurance is a critical factor in access to dental care. In the U.S., children who have continuous enrollment in public health insurance programs have greater access to dental and medical care than children who have no insurance or are covered for only part of the year.^{7,8,9} Children who are uninsured for only part of the year are nearly six times as likely to have an unmet dental need as children who are insured for a year or more.¹⁰

Minority children have the highest rates of tooth decay and untreated dental problems. One in five (19%) Hispanic children in the U.S. has gone for more than two years without a dental visit, compared with 15% of non-Hispanic Black and 14% of non-Hispanic White children.^{11,12}

Children with special health care needs may have problems finding and accessing providers who are trained and equipped to address their special dental, medical and mobility needs.¹³ A dental home can provide comprehensive, continuously accessible, coordinated and family-centered oral health care.^{14,15}

Children Enrolled in Medical Assistance* Programs Who Received Any Dental Service, Rhode Island, Federal Fiscal Years 2003-2009



Source: Rhode Island Department of Human Services, Federal Fiscal Years 2003-2009. *Medical Assistance includes RIte Care, RIte Share or Medicaid fee-for-service.

◆ Half (51%) of the children who were enrolled in RIte Care, RIte Share or Medicaid fee-for-service on September 30, 2009 received a dental service during Federal Fiscal Year 2009.¹⁶ The Centers for Medicare and Medicaid Services (CMS) reports that Rhode Island ranked 6th best in the U.S. for the percentage of children under age 21 enrolled in Medicaid who received dental services in Federal Fiscal Year 2008.¹⁷

◆ The increase in access to dental care for low-income children has been attributed to the RIte Smiles program, Rhode Island's dental benefits management program for young children (who were born on or after May 1, 2000).^{18,19} As of December 31, 2009, there were 45,684 Rhode Island children receiving dental benefits through the RIte Smiles program. At the end of 2009, there were 276 dental providers participating in the RIte Smiles program, up from 90 when it began in September 2006. All children receiving Medical Assistance who were born before May 1, 2000 continue to receive dental benefits under the fee-for-service system.²⁰

◆ The federal Medicaid program mandates that states provide comprehensive dental services, including diagnostic and preventive services, treatment services, emergency services, and medically necessary orthodontic services to eligible children up to age 21.²¹

◆ Dental insurance is not available to many working families in Rhode Island. In 2007, half (50%) of Rhode Island employers reported offering dental insurance to their full-time employees, and 9% offered it to their part-time employees (compared to 79% and 10% who offer health insurance, respectively).²²

Oral Health Services for Young Children

- ◆ Nearly one-half of children in the U.S. do not receive dental care in accordance with the American Academy of Pediatric Dentistry's recommendations of two visits per year beginning at age one. The youngest children are the least likely to receive dental care.²³
- ◆ There are too few dentists in the U.S. trained to treat very young children, and too few who treat children with special health care needs or those who have public insurance.²⁴
- ◆ Despite significant improvements in oral health in the U.S., the number of very young children with dental caries (cavities) in their primary teeth has increased. Between 1988 and 1994, 24% of children ages two to five had caries, compared with 28% between 1999 and 2004, an increase of 17%. Between 1999 and 2004, more than half (51%) of children ages six to 11 had dental caries, essentially the same as between 1988 and 1994 (50%).²⁵

Medicaid Reimbursement Rates

- ◆ In 2006, reimbursement rates were raised for Rhode Island dental providers participating in the RIte Smiles program. As a result of RIte Smiles, the number of dentists accepting qualifying children with Medical Assistance has increased from 27 in 2006 (before RIte Smiles) to 90 (at the launch of RIte Smiles) in September 2006 to 276 in 2009.²⁶
- ◆ General dentists and specialists providing oral health services to Medicaid-enrolled children who do not qualify for RIte Smiles continue to be reimbursed at Medicaid fee-for-service reimbursement rates.²⁷ Fewer than 1% of dentists in Rhode Island report that the Medicaid reimbursement rate is equal to or greater than their standard rate. Rhode Island's fee-for-service Medicaid reimbursement rates for key dental services for children have not been increased since 1992 and continue to be the lowest in New England and to lag behind much of the nation.^{28,29}
- ◆ Dentists cite low reimbursement rates that fail to cover the cost of services and administrative difficulties as the two main reasons for limiting or not serving Medicaid patients. State efforts to attract more dentists to Medicaid by paying higher fees and streamlining administrative requirements have resulted in increased access.³⁰

Consequences of Untreated Dental Disease

- ◆ Between 2006 and 2008, an average of 881 children under age 21 were treated for a primary dental-related condition in Rhode Island emergency departments each year. Half (49%) of these children had public insurance (Medicaid/RIte Care) and 26% had private/commercial health or dental insurance. Nearly one-quarter (23%) were self-pay patients, which could mean that their health or dental insurance did not cover the cost of the emergency department visit or that they were uninsured. The number of children treated for a dental condition at emergency departments increased from 813 in 2006 to 875 in 2007 and 956 in 2008.³¹
- ◆ Between 2006 and 2008 in Rhode Island, an average of 56 children under age 19 were hospitalized each year with a diagnosis that included an oral health condition, and an average of 13 children were hospitalized each year with an oral health condition as the primary reason for the hospitalization.³²

State Policy Solutions for Children's Oral Health

- ◆ Ensuring that children have good oral health and access to care can be achieved through a combination of policy solutions that cost relatively little and have large returns on investment. States can improve children's oral health when they implement school-based sealant programs in schools with many high-risk children, fluoridate their community water supplies, and ensure access to care for Medicaid-eligible children. Innovative workforce models can be used to expand the number of dental and medical providers that are able to offer oral health services when dentists are unavailable.³³

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- ³¹ Bloom, B. & Cohen, R. A. (2009). *Summary health statistics for U.S. children: National Health Interview Survey, 2007*. (Vital and Health Statistics Series 10, Number 239). Washington, DC: U.S. Government Printing Office.

- ⁴ Lewis, C., Mouradian, W., Slayton, R. & Williams, A. (2007). Dental insurance and its impact on preventive dental care visits for U.S. children. *Journal of the American Dental Association*, 138(3), 369-380.

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Children's Mental Health

DEFINITION

Children's mental health is the number of acute care hospitalizations of children under age 18 with a primary diagnosis of a mental disorder. Hospitalization is the most intensive type of treatment for mental disorders and represents only one type of treatment category on a broad continuum available to children with mental health problems in Rhode Island.

SIGNIFICANCE

Mental health in childhood and adolescence is defined as the achievement of expected developmental, cognitive, social and emotional milestones and by secure attachments, satisfying social relationships and effective coping skills.¹ One in five children ages six to 17 in Rhode Island has a diagnosable mental or addictive disorder; one in ten has significant functional impairment.² Nationally, an estimated four out of five children who need mental health treatment do not get it.^{3,4}

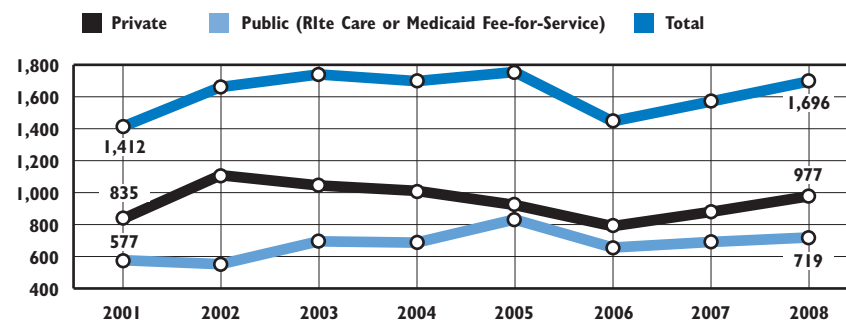
Behavioral health problems affect children of all backgrounds. Children most at risk for mental disorders are those with prenatal exposure to alcohol, tobacco and other drugs; children born with low birth weight, difficult temperament or an inherited predisposition to a mental disorder; children living in poverty; those suffering

abuse and neglect; children exposed to traumatic events; and children of parents with a mental health disorder.⁵ Young people in the juvenile justice and child welfare systems experience mental health problems at higher rates than children and youth in general.⁶

Mental health problems, whether arising from biological or psycho-social causes or both, affect the physical functioning of the brain and can be prevented or treated in many cases. The mental health status of children influences their behavior at home, child care or school, as well as their academic performance and their ability to participate in community life.⁷ Schools serve as the *de facto* mental health system for many children and adolescents; 70-80% of children who receive mental health services receive them in a school setting.⁸

In both the U.S. and Rhode Island, mental health systems tend to be fragmented and crisis-driven with disproportionate spending on high-end hospital and residential care and inadequate investment in prevention and community-based services that would allow children to receive treatment at appropriate levels of care in their own communities.^{9,10,11,12} Over the past several years, Rhode Island has been focusing on building more preventive and home- and community-based treatment capacity for children and youth.^{13,14,15}

Hospitalizations With Primary Diagnosis of Mental Disorder, Children Under Age 18, By Insurance Type, Rhode Island, 2001-2008*



Source: Rhode Island Hospital Discharge Data, RI Department of Health and Medicaid Data Archive, RI Department of Human Services. *These data represent hospitalizations, not number of children; children or adolescents with more than one hospitalization may be counted more than once. Mental disorders include ICD-9-CM codes 290-319, including psychoses, anxiety, depressive, mood, and personality disorders, and alcohol and drug dependence.

- ◆ In 2008, there were 1,696 hospitalizations of children with a primary diagnosis of mental disorder at the following hospitals: Bradley, Butler, Kent, Landmark, Newport, Memorial, Miriam, Rhode Island (including Hasbro Children's Hospital), Roger Williams, Saint Joseph, South County, and Westerly Hospitals.¹⁶
- ◆ Children and adolescents receive a range of behavioral health treatment services at hospitals in Rhode Island, ranging from inpatient treatment at a psychiatric hospital or a general acute care hospital to outpatient treatment services. In 2009, 2,190 children received outpatient treatment at Bradley Hospital and another 102 received outpatient treatment at Butler Hospital.^{17,18}
- ◆ When an inpatient psychiatric bed or other needed service is not available, children and youth are "boarded" in the emergency department or on medical floors at acute care hospitals. These children and youth must wait for appropriate treatment and may require constant monitoring by staff so that they do not injure themselves or others.^{19,20} In 2009, 122 children between the ages of four and 17 years with a psychiatric diagnosis were "boarded" for an average of two days at Hasbro Children's Hospital, down from 166 children boarded in 2008.^{21,22}

Psychiatric Hospitals

Children Under Age 19 Treated at Rhode Island Psychiatric Hospitals, October 1, 2008 – September 30, 2009

	Bradley Hospital General Psychiatric Services		Bradley Hospital Developmental Disabilities Program		Butler Hospital General Psychiatric Services		Butler Hospital Child Intensive Services Unit	
	# Treated	Average Length of Stay	# Treated	Average Length of Stay	# Treated	Average Length of Stay	# Treated	Average Length of Stay
Inpatient	1,135	11 days	129	46 days	485	11 days	97	25 days
Residential	62	136 days	77	289 days	--	--	--	--
Partial Hospitalization	515	11 days	37	12 days	83	5 days	--	--
Outpatient	2,103	4 visits	87	4 visits	102	NA	--	--

Source: Lifespan, 2010 and Butler Hospital, 2009. Programs can have overlapping enrollment. Number treated is based on the hospital census (i.e., the number of patients seen in any program during FY 2009). The average length of stay is based on discharges.

-- = Service not offered. NA=Data not available for this service.

- ◆ The two hospitals in Rhode Island that specialize in providing psychiatric care to children and youth are Bradley Hospital and Butler Hospital.
- ◆ Inpatient treatment at a psychiatric hospital is the most intensive type of behavioral health care. In 2009, 1,846 children and youth received inpatient psychiatric treatment at either Bradley Hospital or Butler Hospital. At Bradley Hospital, the most common diagnoses for young people treated in an inpatient setting were bipolar disorders (39%), depressive disorders (24%), anxiety disorders (18%), and adjustment disorders (14%). At Butler Hospital the most common disorders were bipolar disorders (45%), depressive disorders (35%), anxiety disorders (7%), and child/adolescent disorders (6%).^{23,24}
- ◆ Bradley Hospital has a Developmental Disabilities Program that offers highly specialized clinical services to children and adolescents who show signs of serious emotional and behavioral problems in addition to developmental disabilities. Bradley also operates four schools for children with behavioral health problems and developmental disabilities, which together had an average daily enrollment of 237 students in 2009.²⁵

References

^{1,5,7} *Mental health: A report of the Surgeon General*. (1999). Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General.

² Kim, H. K., Viner-Brown, S. I. & Garcia, J. (2007). Children's mental health and family functioning in Rhode Island. *Pediatrics*, 119, S22-S28.

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Rhode Island's Community Mental Health Centers

- ◆ The seven Community Mental Health Centers (CMHCs) in Rhode Island are the primary source of public mental health treatment services available in the state for children and adults. During 2009, 7,929 children under age 18 were treated at community mental health centers, and 4,109 children were receiving services as of December 31, 2009.²⁶
- ◆ Among the children who received services through Rhode Island CMHCs in 2009, 20% presented with a primary diagnosis of attention deficit disorders, 17% with depressive disorders, 12% with conduct disorders and 12% with anxiety disorders.²⁷

Child and Adolescent Intensive Treatment Services (CAITS)

- ◆ The CAITS program, which is administered by the Rhode Island Department of Human Services as an in-plan benefit under RItE Care, aims to reduce inpatient psychiatric hospitalizations and residential treatment among Medicaid-eligible children and youth with moderate to severe emotional and/or behavioral disorders. CAITS provides up to 16 weeks of intensive, home- and community-based treatment via individual and/or family therapy, family training and support worker services per year.²⁸
- ◆ CAITS replaced the Children's Intensive Services (CIS) program, which had been administered by the Rhode Island Department of Children, Youth and Families, and which allowed children and youth to receive services for two to three years, with an average length of treatment of six months.²⁹
- ◆ In State Fiscal Year 2009, 2,283 children and youth received services from twelve CAITS provider agencies, down 28% from the 3,189 children served by CIS in 2007.^{30,31}

Kid's Link Emergency Services Hotline

- ◆ In 2007, the Rhode Island Department of Children, Youth and Families (DCYF) launched the Kid's Link Emergency Services hotline to help parents and caregivers determine the best place to go for behavioral health treatment for children and youth experiencing mental health problems or crises.³² In 2009, there were 818 phone calls to Kid's Link, resulting in 275 evaluations by mental health professionals.³³

Children with Special Needs

DEFINITION

Children with special needs are those who have a chronic disease or disability that requires educational services, health care and/or related services of a type or amount beyond that required generally by children. Special needs can be physical, developmental, behavioral or emotional. This indicator measures the number of children enrolled in Early Intervention, special education, Supplemental Security Income (SSI) and Medical Assistance for children with special health care needs.

SIGNIFICANCE

It is estimated that 14% of children in the U.S. and 17% of children in Rhode Island have at least one special health care need.¹ Children with special health care needs include those with chronic and disabling conditions such as cystic fibrosis, mental retardation, cerebral palsy, autism spectrum disorders, hearing impairments, communication disorders, seizure disorders and congenital diseases. Children with special health needs can have multiple impairments of varying degrees in physical, social, emotional or behavioral functioning.^{2,3}

Children with mild or severe chronic or disabling conditions have special needs related to physical health, mental health, education, family support,

housing, child care and recreation.⁴ Health-related needs of children with special needs are best met through a medical home, which can provide care that is comprehensive, coordinated, continuous, accessible and family-centered.⁵ In Rhode Island, youth with special needs are much less likely than their non-disabled peers to finish high school, go on to post-secondary education, find employment or live independently.⁶

Rhode Island high school students with disabilities report high levels of risky behaviors, including smoking, drinking, and marijuana use. They also are more likely to report having mental health problems and being in physical danger.⁷

Children with disabilities may require therapeutic or medical services, equipment, assistive technology or home modifications which may result in serious financial burdens on families.^{8,9} Having children with special needs significantly impacts parents' finances, employment and family lives.^{10,11} Adequate and affordable health insurance coverage for primary and specialty care, mental health and oral health care is important for children with special health care needs. Many families may experience financial hardships due to lack of insurance or underinsurance.^{12,13}



Children Enrolled in Early Intervention

- ◆ States are required by the federal *Individuals with Disabilities Education Act (IDEA) Part C* to identify and provide appropriate Early Intervention services to all infants and toddlers under age three who have developmental delays or a diagnosed physical or mental condition that is associated with a developmental delay.¹⁴
- ◆ In Rhode Island in 2009, ten certified Early Intervention provider agencies served 3,795 children. Nearly two-thirds (63%) of children receiving Early Intervention services were male and just over one-third (37%) were female. Enrollment is nearly evenly distributed among children by age, with 31% ages birth to one year, 35% between ages one and two, 33% between ages two and three, and less than 1% over age three.¹⁵



Children Enrolled in Special Education

- ◆ Under IDEA Part B, local school systems are responsible for identifying, evaluating and serving students ages three to 21 whom they have reason to believe have disabilities that might require special education and related services.¹⁶
- ◆ In Rhode Island during the 2008-2009 school year, 17% (24,302) of children enrolled in K-12 public schools received special education services. Forty-one percent (41%) of students receiving special education services in Rhode Island had a learning disability.¹⁷
- ◆ Early Intervention (EI) programs are required to provide transition services for children who are enrolled in EI and who may be eligible for special education at age three. In 2009, 630 (68%) of the 931 children who reached age three while in EI were referred to special education, 13% did not have eligibility determined when exiting EI, 14% were found not eligible for special education, and the remainder either completed their service plan prior to reaching the maximum age for EI or withdrew from the program prior to completion.¹⁸
- ◆ During the 2008-2009 school year, there were 2,635 pre-school age children (not yet enrolled in kindergarten) who were receiving special education services through Rhode Island public school districts.¹⁹

Medical Assistance for Children With Special Health Care Needs

- ◆ As of December 31, 2009, there were 5,805 Rhode Island children and youth under age 21 receiving Medical Assistance benefits through their enrollment in the federal Supplemental Security Income (SSI) program.^{20,21}
- ◆ The Katie Beckett eligibility provision provides Medical Assistance coverage to children under age 19 who have serious disabling conditions, in order to enable them to be cared for at home instead of in an institution.²² As of December 31, 2009, there were 1,346 Rhode Island children enrolled through the Katie Beckett provision.²³
- ◆ Children with special needs enrolled in Medical Assistance in Rhode Island have shown significant gains in access to needed health services and reductions in emergency care and hospitalization use since 1997. Increases have been reported by parents in access to specialists, behavioral health and nutrition counseling, oral health services, therapeutic child care, and parent support services.^{24,25}

Children With Special Needs in the Child Welfare System

- ◆ Children and youth who are in the child welfare system are more likely to have special needs, including behavioral and emotional health concerns, developmental delays, and serious health problems than other children. Children often enter the child welfare system in poor health and face difficulties accessing services while in care.^{26,27}
- ◆ As of December 31, 2009, there were 2,489 children in Rhode Island enrolled in Medical Assistance through the child welfare system.²⁸ Rhode Island youth in care on their 18th birthday are provided with RIte Care health insurance coverage until their 21st birthday through the Post Foster Care Medical Assistance provision.²⁹
- ◆ Children who are adopted through the Rhode Island Department of Children, Youth and Families and have special needs may qualify for Medical Assistance coverage. As of December 31, 2009, 2,476 children in Rhode Island were enrolled in Medical Assistance because of special needs adoptions.³⁰

References

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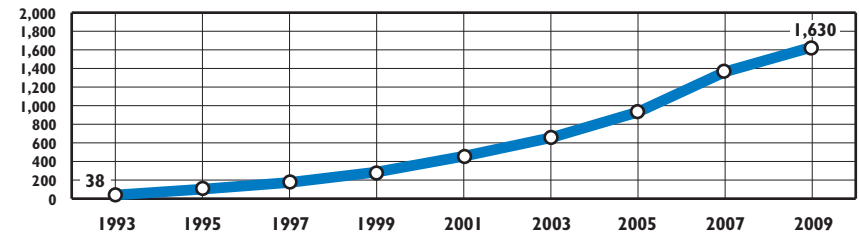
² *Who are children with special health care needs?* (n.d.). Retrieved January 28, 2010 from www.familyvoices.org/info/cshcn.php

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Children With Autism Spectrum Disorders (ASDs)

- ◆ Autism Spectrum Disorders (ASDs) includes a range of brain development disorders that affect a person's ability to communicate, process and respond to sensory information, and form social relationships throughout their lives. Children diagnosed with ASDs have a variety of symptoms and experience challenges and abilities that vary that range widely in severity. Many children with ASDs face challenges in social interaction, speech/language and communication, and demonstrate repetitive behaviors and routines.³¹

Children Ages Three to 21 With Autism Spectrum Disorders (ASDs), Rhode Island, December 1993 through December 2009



Source: Rhode Island Department of Elementary and Secondary Education, Office of Diverse Learners, December 1993 through December 2009.

- ◆ The national ASD prevalence (including mild to severe disorders) is estimated to be one out of every 110 children (one out of 70 boys and one out of 315 girls).^{32,33} In December 2009, there were 1,630 Rhode Island children ages three to 21 with an ASD who received special education services.³⁴ The significant increase in the number of children with ASDs nationally and in Rhode Island is largely attributable to improved awareness and diagnosis, a broadening of the educational definition of autism to include other ASDs, as well as an increase in the risk of developing ASDs.^{35,36}
- ◆ Research indicates that early, sustained and appropriate identification and intervention can result in significant improvements in the quality of life, level of independent functioning in school and work, and reduction of public costs associated with ASDs. Interventions for children and youth with ASDs are costly and require skilled professionals to deliver them, often resulting in gaps in access.^{37,38}

Breastfeeding

DEFINITION

Breastfeeding is the percentage of newborn infants who are exclusively breastfed at the time of hospital discharge.

SIGNIFICANCE

The American Academy of Pediatrics (AAP) identifies breastfeeding as the ideal method of feeding and nurturing infants and recognizes breastfeeding as a critical component in achieving optimal infant and child health, growth and development. The AAP recommends exclusive breastfeeding for six months after birth, continuous breastfeeding for at least 12 months after birth, and thereafter as long as mutually desired.¹

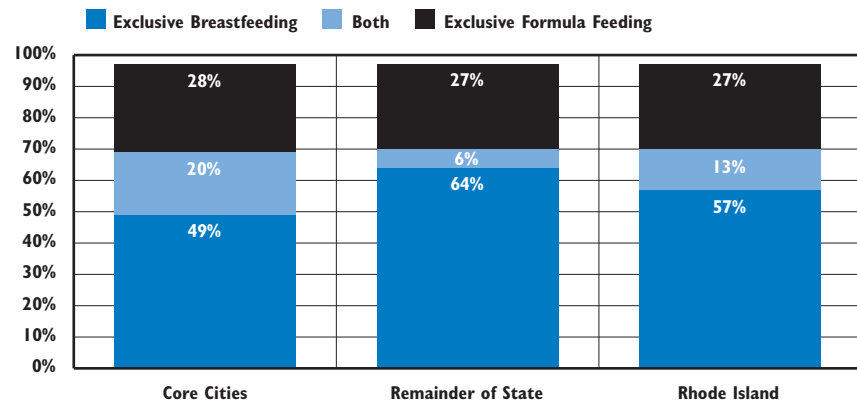
Breastfeeding decreases infant mortality and morbidity.² Benefits for infants include optimal nutrition, reduced risk for sudden infant death syndrome (SIDS) as well as reduced risk for chronic conditions such as obesity, type 1 and 2 diabetes and childhood leukemia. Additionally, breastfeeding benefits mothers by creating a strong bond with infants and decreasing risk for postpartum depression, type 2 diabetes, breast and ovarian cancer.³ Breastfeeding provides significant social and economic benefits including reduced cost to the family, reduced health care costs and reduced employee absenteeism.⁴

Breastfeeding can be effectively

promoted by practices that take place before, during, and after labor and delivery.⁵ Educating new mothers and women of childbearing age about breastfeeding is instrumental to increasing practice initiation. Hospital and other birth facility policies and practices influence the success of breastfeeding.⁶ Access to professional lactation consultants, involvement in mother-to-mother lactation support networks, and birth facility support for breastfeeding all factor into protecting, supporting and promoting breastfeeding.⁷ Without adequate support, women are more likely to stop breastfeeding earlier.⁸ Certain social determinants also influence exclusivity and duration of breastfeeding. Breastfeeding rates generally increase with maternal age, higher educational achievement and higher income levels.⁹

Healthy People 2010, the nation's health agenda, established target breastfeeding rates of 75% at birth, 50% at 6 months and 25% at one year.¹⁰ Rhode Island exceeded the *Healthy People 2010* goal with 75% of infants born in 2006 having ever been breastfed.¹¹ Nationally, the percentage of infants who were ever breastfed has significantly increased from 60% among infants born in 1993-1994 to 77% among infants born between 2005-2006, which exceeds the *Healthy People 2010* target.¹²

Breastfeeding and Formula Feeding Rates in Rhode Island, 2004-2008



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Newborn Developmental Risk Screening Program, 2004-2008. *Breastfeeding* and *formula feeding* are defined as intended feeding method at hospital discharge. Core cities are Central Falls, Newport, Pawtucket, Providence, West Warwick, and Woonsocket. Totals may not sum to 100% because data on feeding methods were not available on 3% of births.

- ◆ **Nationally in 2007, Hispanic children were the most likely to have ever been breastfed, followed by Asian and Native American children.¹³ Nationally, non-Hispanic black children are the least likely to have been breastfed, although significant increases in breastfeeding rates have occurred in this group since the mid-1990s.¹⁴**
- ◆ **Between 2004 and 2008, more than half (57%) of all women who gave birth in Rhode Island chose to exclusively breastfeed their children, nearly one-third (27%) chose to exclusively formula feed, 13% chose to use a combination of breast and formula feeding and data on feeding method was not available for 3% of births.¹⁵**
- ◆ **Of new mothers in Rhode Island between 2004 and 2008 who were surveyed approximately 3 months after giving birth, 73% reported having ever breastfed. Fifty-two percent of these mothers reported continued breastfeeding at the time of the survey.¹⁶**
- ◆ **In 2008, the Rhode Island General Assembly enacted a law that provides mothers with the explicit right to breastfeed in public places. Despite protective laws, mothers and babies who breastfeed in public can still face obstacles and negative reactions from others. Rhode Island does not have legislation that mandates support for breastfeeding mothers who return to work, as do fifteen other states.¹⁷**

Table 17.

Breastfeeding Rates, Rhode Island, 2004-2008

CITY/TOWN	NUMBER OF BIRTHS SCREENED	NUMBER BREAST AND FORMULA FEEDING	NUMBER EXCLUSIVELY BREASTFEEDING	PERCENT WITH ANY BREASTFEEDING	PERCENT EXCLUSIVELY BREASTFEEDING
Barrington	644	23	531	86%	82%
Bristol	878	46	575	71%	65%
Burrillville	686	37	402	64%	59%
Central Falls	1,997	588	861	73%	43%
Charlestown	367	9	272	77%	74%
Coventry	1,663	65	987	63%	59%
Cranston	4,230	457	2,453	69%	58%
Cumberland	1,578	106	1,038	72%	66%
East Greenwich	564	25	420	79%	74%
East Providence	2,541	223	1,463	66%	58%
Exeter	254	7	182	74%	72%
Foster	229	18	164	79%	72%
Glocester	361	20	234	70%	65%
Hopkinton	464	18	333	76%	72%
Jamestown	180	6	146	84%	81%
Johnston	1,372	116	714	60%	52%
Lincoln	876	51	573	71%	65%
Little Compton	111	5	92	87%	83%
Middletown	962	43	724	80%	75%
Narragansett	472	28	347	79%	74%
New Shoreham	48	1	43	92%	90%
Newport	1,492	89	1,044	76%	70%
North Kingstown	1,281	62	883	74%	69%
North Providence	1,713	169	956	66%	56%
North Smithfield	399	23	261	71%	65%
Pawtucket	5,400	1,026	2,737	70%	51%
Portsmouth	733	23	576	82%	79%
Providence	14,559	3,507	7,087	73%	49%
Richmond	416	21	298	77%	72%
Scituate	436	26	290	72%	67%
Smithfield	689	33	458	71%	66%
South Kingstown	1,167	45	874	79%	75%
Tiverton	357	17	250	75%	70%
Warren	498	19	296	63%	59%
Warwick	4,104	216	2,446	65%	60%
West Greenwich	243	15	162	73%	67%
West Warwick	1,987	112	1,045	58%	53%
Westerly	1,232	66	870	76%	71%
Woonsocket	3,067	460	1,225	55%	40%
Unknown	3	1	0	NA	NA
Core Cities	28,502	5,782	13,999	69%	49%
Remainder of State	31,748	2,039	20,313	70%	64%
Rhode Island	60,253	7,822	34,312	70%	57%

Notes

The number of births screened may differ from the total number of births reported elsewhere in the Factbook as not all documented births received a screening.

“Percent with Any Breastfeeding” includes infants fed breast milk in combination with formula and those exclusively breastfed.

Sources of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Newborn Developmental Risk Assessment Screening Program Database and Maternal and Child Health Database, 2004-2008. *Breastfeeding* is defined as breastfeeding as intended feeding method at hospital discharge. Births to Rhode Island women that occurred outside Rhode Island are not included.

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- ^{12,14} McDowell, M., Wang C-Y. & Kennedy-Stephenson, J. (2008). *Breastfeeding in the United States: Findings from the National Health and Nutrition Examination Surveys, 1999-2006*. Hyattsville, MD: U.S. Department of Health and Human Services, Centers for Disease Control, National Center for Health Statistics.

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Women with Delayed Prenatal Care

DEFINITION

Women with delayed prenatal care is the percentage of women beginning prenatal care in the second or third trimester of pregnancy or receiving no prenatal care at all. Data are reported by place of mother's residence, not place of infant's birth.

SIGNIFICANCE

Early prenatal care is important to identify and treat health problems and influence health behaviors that can compromise fetal development, infant health and maternal health. Women receiving late or no prenatal care are at increased risk of poor birth outcomes such as having babies who are stillborn, of low birthweight or who die within the first year of life.¹

Prenatal care offers the opportunity to screen for and treat conditions that increase the risk for poor birth outcomes and to educate parents on caring for newborns. Effective prenatal care also screens for and intervenes with a range of maternal needs including nutritional needs, social support, mental health, smoking cessation, substance use, domestic violence, and unmet needs for food and shelter.^{2,3} Prenatal visits are also the first step in establishing the infants' medical home, and can provide valuable links to other health services.^{4,5}

Timely initiation of prenatal care is especially important for women who face multiple risks for poor birth outcomes. Addressing barriers to prenatal care, implementing and enhancing Medicaid policies and other programs that provide health care to women of childbearing age, and renewing focus on timing and content of prenatal care are strategies to increase timely prenatal care for all women.⁶

In Rhode Island between 2004 and 2008, 14% of women who gave birth either received no prenatal care or did not begin care until the second or third trimester, up from 9.4% between 2001 and 2005.⁵ Pregnant adolescents in Rhode Island are the most likely to delay prenatal care. Between 2004 and 2008, over one-quarter (26.8%) of teens ages 19 and under received delayed prenatal care, compared with 12.6% of women ages 20 and over.⁷

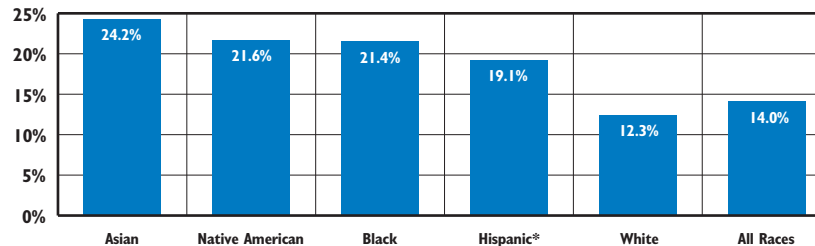
Late or No Prenatal Care		
	1995	2006
RI	1.3%	1.9%
US	4.2%	3.6%
National Rank*		3rd
New England Rank**		3rd

*1st is best; 32nd is worst

**1st is best; 4th is worst

Source: U.S. Centers for Disease Control and Prevention. (2009). Births: Final data for 2006. *National Vital Statistics Reports*, 57(7). This ranking is based on the 32 states with comparable prenatal care data. Late or no prenatal care indicates care beginning in the 3rd trimester or not at all prior to birth.

Women With Delayed Prenatal Care by Race/Ethnicity, Rhode Island, 2004-2008



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Database, 2004-2008. Data for 2008 are provisional. *Hispanic may be included in any racial category.

◆ Between 2004 and 2008 in Rhode Island, Asian women (24.2%), Native American women (21.6%), Black women (21.4%), and Hispanic* women (19.1%) were significantly more likely to receive delayed prenatal care than White women (12.3%).⁸

◆ Between 2004 and 2008, the rate of delayed prenatal care in the core cities (18.2%) was nearly twice the rate in the remainder of the state (10.2%). Newport was the only core city with a rate of delayed prenatal care (11.5%) better than that of the state as a whole (14.0%).⁹

Reducing Barriers to Prenatal Care

◆ Strategies that increase access to timely prenatal care include insurance coverage and access to preconceptional care for teens and women of childbearing age, education on preventive health practices, and access to health providers with the training and skills to be culturally and linguistically competent.¹⁰

◆ RIte Care, Rhode Island's Medicaid managed care program, has improved access to prenatal care for women. Targeted interventions expanded the number of obstetric care providers serving Medicaid patients and improved the adequacy of prenatal care to women in the program.¹¹

◆ Between 2004 and 2008, uninsured women in Rhode Island were more than twice as likely to receive delayed prenatal care (44.2%) than women enrolled in RIte Care (20.4%).¹²

Women with Delayed Prenatal Care

Table 18.

Delayed Prenatal Care, Rhode Island, 2004-2008

City/Town	# Births	# Delayed Care	% Delayed Care
Barrington	667	53	7.9%
Bristol	921	92	10.0%
Burrillville	754	61	8.1%
Central Falls	2,021	383	19.0%
Charlestown	370	25	NA
Coventry	1,683	177	10.5%
Cranston	4,325	559	12.9%
Cumberland	1,784	149	8.4%
East Greenwich	517	39	7.5%
East Providence	2,606	283	10.9%
Exeter	261	22	NA
Foster	233	27	NA
Glocester	398	29	NA
Hopkinton	458	50	NA
Jamestown	187	14	NA
Johnston	1,390	158	11.4%
Lincoln	909	87	9.6%
Little Compton	141	11	NA
Middletown	984	89	9.0%
Narragansett	492	32	NA
New Shoreham	49	2	NA
Newport	1,516	174	11.5%
North Kingstown	1,272	127	10.0%
North Providence	1,615	189	11.7%
North Smithfield	439	22	NA
Pawtucket	5,668	927	16.4%
Portsmouth	810	82	10.1%
Providence	14,774	3,031	20.5%
Richmond	460	34	NA
Scituate	417	43	NA
Smithfield	730	59	8.1%
South Kingstown	1,161	93	8.0%
Tiverton	625	76	12.2%
Warren	527	70	13.3%
Warwick	4,193	450	10.7%
West Greenwich	245	25	NA
West Warwick	1,989	288	14.5%
Westerly	1,340	129	9.6%
Woonsocket	3,304	525	15.9%
Unknown	5	1	NA
<i>Core Cities</i>	<i>29,272</i>	<i>5,328</i>	<i>18.2%</i>
<i>Remainder of State</i>	<i>32,963</i>	<i>3,358</i>	<i>10.2%</i>
<i>Rhode Island</i>	<i>62,240</i>	<i>8,687</i>	<i>14.0%</i>

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2004-2008. Data for 2008 are provisional.

During 2004, data on delayed prenatal care began to be collected via a review of medical records, rather than via self report by the mother. Due to this change in methodology, data in this indicator are not comparable to data included in previous Factbooks.

NA: Percentages were not calculated for cities and towns with less than 500 births, as percentages for small denominators are statistically unreliable.

The denominator is the total number of live births to Rhode Island residents from 2004-2008.

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

Note: The Rhode Island Birth Worksheet was changed in 2008 to allow for multiple race and Hispanic options for the first time, resulting in a decline in the number of women reported as White and an increase in women coded as "other."

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³ Hagan, J. F., Shaw, J. S. & Duncan, P. M. (Eds.) (2008). *Bright futures: Guidelines for health supervision of infants, children, and adolescents (3rd ed.)*. Elk Grove Village, IL: American Academy of Pediatrics.

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^{7, 8, 9, 12} Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 1995-2008.

(continued on page 166)

Preterm Births

DEFINITION

Preterm births is the percentage of births occurring before the 37th week of pregnancy. The data are reported by place of mother's residence, not place of infant's birth.

SIGNIFICANCE

Preterm birth is a major determinant of infant mortality and morbidity and is the leading cause of death among newborns during the first month of life in the U.S.^{1,2} Infants born before 37 weeks gestation are at higher risk than infants born full-term for neurodevelopmental, respiratory, gastrointestinal, immune system, central nervous system, hearing and vision problems.^{3,4} Infants born preterm have longer hospital stays than full-term infants. Nationally, newborns with no complications stay an average of 1.5 days in the hospital, compared with an average of 13 days for preterm infants.⁵ Preschool and school-age children who are born preterm can also experience learning difficulties, and more behavioral problems later in life.⁶ Infants born very preterm (<32 weeks gestation) are at highest risk for death and life-long disability.⁷

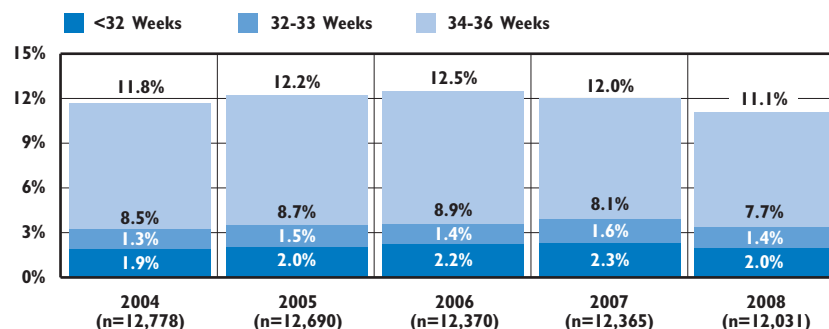
While the specific causes of spontaneous preterm births are largely unknown, research indicates that there are a number of inter-related risk factors involved. The three leading risk factors

are a history of preterm birth, current multifetal pregnancy, and uterine and/or cervical abnormalities. Other risk factors include infections, diabetes, hypertension, late or no prenatal care, and maternal use of tobacco, alcohol and other drugs.⁸ The rate of preterm births for Rhode Island women who smoke is higher than for those who do not. Between 2004 and 2008, 14.7% of births to smokers were preterm, compared with 11.4% of preterm births to women who did not smoke during pregnancy.⁹

Nationally in 2007, the preterm birth rate was 12.7%. The preterm birth rate has generally been on the rise for more than two decades. While preterm birth occurs in all racial and ethnic groups, nationally the rate is highest for non-Hispanic blacks.¹⁰ Low-income women also are at greater risk for pre-term births than higher-income women.¹¹

Multiple birth infants are more likely to be born preterm than singletons. In Rhode Island between 2004 and 2008, 57.1% of multiple births were preterm, compared with 10.1% of singleton births.¹² Multifetal pregnancy is a known risk factor for preterm birth.¹³ Nationally, widespread use of fertility drugs, which cause a high percentage of multiple births, likely play a role in premature births.¹⁴

Preterm Births by Gestational Age, Rhode Island, 2004-2008



Source: Rhode Island Department of Health, Center for Health Data and Analysis, 2004-2008. Percentages by gestational age may not sum to total percentage of preterm births due to rounding.

- ◆ Between 2004 and 2008, the preterm birth rate in Rhode Island was 11.9%.¹⁵ The majority of preterm births in Rhode Island during this period were late preterm births (34-36 weeks gestation). Approximately 2% of births in Rhode Island in 2008 were very preterm (<32 weeks gestation).¹⁶
- ◆ In Rhode Island between 2004 and 2008, more than one in six (17.3%) Native American births was preterm, compared with 14.8% of Black, 13.3% of Asian and 11.4% of White births. During this time period, 13.4% of births to Hispanic women were preterm (Hispanic women can be of any race).¹⁷
- ◆ Women under age 20 have higher preterm birth rates than women over age 20. The rate of preterm births among women under age 20 between 2004 and 2008 was 13.4%. The preterm birth rate was 24.7% for mothers under age 14, 15.8% for 15 to 17 year olds and 12.0% for 18 to 19 year olds.¹⁸
- ◆ Among women with private health insurance coverage in Rhode Island between 2004 and 2008, 11.0% of all births were premature, compared with 12.8% of those with public insurance (RIte Care or Medicaid) and 22.0% of those with no health insurance.¹⁹

Table 19.

Preterm Births, Rhode Island, 2004-2008

City/Town	# Births	# Preterm Births	% Preterm Births
Barrington	667	67	10.0%
Bristol	921	76	8.3%
Burrillville	754	84	11.1%
Central Falls	2,021	243	12.0%
Charlestown	370	34	NA
Coventry	1,683	209	12.4%
Cranston	4,325	507	11.7%
Cumberland	1,784	192	10.8%
East Greenwich	517	44	8.5%
East Providence	2,606	309	11.9%
Exeter	261	32	NA
Foster	233	17	NA
Glocester	398	48	NA
Hopkinton	458	52	NA
Jamestown	187	16	NA
Johnston	1,390	150	10.8%
Lincoln	909	105	11.6%
Little Compton	141	15	NA
Middletown	984	89	9.0%
Narragansett	492	54	11.0%
Newport	1,516	181	11.9%
New Shoreham	49	6	NA
North Kingstown	1,272	120	9.4%
North Providence	1,615	195	12.1%
North Smithfield	439	51	NA
Pawtucket	5,668	683	12.1%
Portsmouth	810	69	8.5%
Providence	14,774	2,046	13.8%
Richmond	460	49	NA
Scituate	417	48	NA
Smithfield	730	68	9.3%
South Kingstown	1,161	117	10.1%
Tiverton	625	58	9.3%
Warren	527	62	11.8%
Warwick	4,193	476	11.4%
West Greenwich	245	25	NA
West Warwick	1,989	217	10.9%
Westerly	1,340	146	10.9%
Woonsocket	3,304	455	13.8%
Unknown	5	3	NA
Core Cities	29,272	3,825	13.1%
Remainder Of State	32,963	3,590	10.9%
Rhode Island	62,240	7,418	11.9%

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2004-2008. Data for 2008 are provisional.

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

NA: Percentages were not calculated for cities and towns with fewer than 500 births, because percentages with small denominators are statistically unreliable.

Preterm births are defined as live births that occurred before the 37th week of pregnancy.

The denominator is the total number of live births to Rhode Island residents between 2004 and 2008.

References

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- ⁶ Zwicker, J. G., and Harris, S. R. (2008). Quality of life of formerly preterm and very low birth weight infants from preschool age to adulthood: A systematic review. *Pediatrics*, 121(2), 366-376.
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- ¹⁴ *Fertility drugs contribute heavily to multiple births*. (2010). Retrieved January 27, 2010 from www.marchofdimes.com/aboutus/49267_62811.asp

Low Birthweight Infants

DEFINITION

Low birthweight infants is the percentage of infants born weighing less than 2,500 grams (5 pounds, 8 ounces). The data are reported by place of mother's residence, not place of infant's birth.

SIGNIFICANCE

An infant's birthweight is a key indicator of newborn health. Infants born weighing less than 5 pounds, 8 ounces are at greater risk for physical and developmental problems than infants of normal weights.¹ Some important social and demographic factors that influence infant birthweight are maternal poverty, smoking, prenatal nutrition, and level of educational attainment.²

Low birthweight is often a result of a premature birth but can also occur after a full-term pregnancy. In 2006 in the U.S., 43% of all preterm infants (less than 37 weeks gestation) were born with low birthweight, while 3.2% of full-term infants (37 to 41 weeks gestation) were born with low birthweight.³

Cigarette smoking during pregnancy is the single most important known cause of low birthweight, with smokers nearly twice as likely to deliver a low birthweight baby as non-smokers.⁴ Between 2004 and 2008 in Rhode Island, 10.4% of infants were born to mothers who smoked during their pregnancy.⁵

Children born at low birthweight face greater risks of long-term illness, long-term disability and death than infants of normal birthweight. Children born at very low birthweight (less than 1,500 grams or 3 pounds, 4 ounces) are nearly 100 times more likely to die within the first year of life than infants of normal birthweight. Those who survive are at significantly higher risk of severe problems, including physical and visual difficulties, developmental delays, and cognitive impairments.⁶

Nationally in 2007, 8.2% of infants were born low birth weight. The 2007 national rate of low birthweight is 17% higher than the 1990 national rate (7.0%). Rhode Island's low birthweight rate increased from 6.2% in 1990 to 8.0% in 2007, a 29% increase.^{7,8}

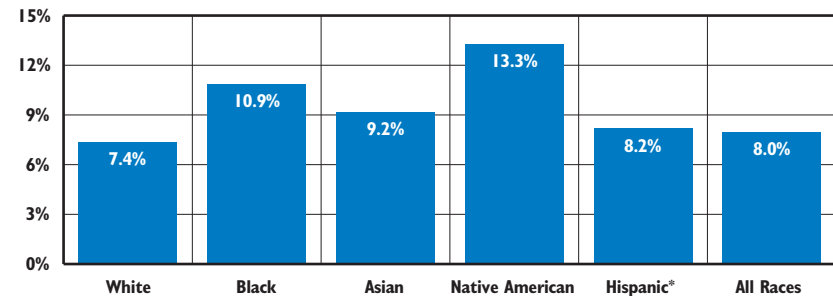
Low Birthweight Infants		
	1990	2007
RI	6.2%	8.0%
US	7.0%	8.2%
National Rank*		21st
New England Rank**		5th

*1st is best; 50th is worst

**1st is best; 6th is worst

Sources: 1990 data: The Annie E. Casey Foundation, KIDS COUNT Data Center, datacenter.kidscount.org. 2007 data: Hamilton, B.E., Martin, J.A., & Ventura, S.J. (2009). Births: Preliminary data for 2007. *National Vital Statistics Reports*, 57(12). Hyattsville, MD: Centers for Disease Control and Prevention. Data for 2007 are provisional.

Low Birthweight Infants by Race/Ethnicity, Rhode Island, 2004-2008



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2004-2008. Data for 2008 are provisional. *Hispanic infants can be of any race.

- ◆ Low birthweight babies are at greater risk for long-term cognitive problems and poor school performance, and are substantially less likely to complete high school than their peers.⁹
- ◆ Nationally, the percentage of low birthweight infants has been increasing over the past two decades. Racial and ethnic disparities still remain.¹⁰ In Rhode Island between 2004 and 2008, 13.3% of Native American infants, 10.9% of Black infants, 9.2% of Asian infants, and 8.2% of Hispanic infants were born with low birthweight, compared to 7.4% of White infants.¹¹
- ◆ In both Rhode Island and the U.S., the rate of low birthweight infant births is higher for women under the age of 20 than for older women and is particularly high for mothers who give birth when they are under age 15.^{12,13} Between 2004 and 2008 in Rhode Island, the percentage of low birthweight infants born to mothers under the age of 20 was 9.9%, compared to 7.8% for mothers age 20 and older.¹⁴
- ◆ In Rhode Island between 2004 and 2008, 1.6% (969) of all live births were born at very low birthweight (less than 1,500 grams).¹⁵

Table 20.

Low Birthweight Infants, Rhode Island, 2004-2008

CITY/TOWN	# BIRTHS	# LOW BIRTHWEIGHT	% LOW BIRTHWEIGHT
Barrington	667	28	4.2%
Bristol	921	50	5.4%
Burrillville	754	55	7.3%
Central Falls	2,021	139	6.9%
Charlestown	370	25	NA
Coventry	1,683	133	7.9%
Cranston	4,325	333	7.7%
Cumberland	1,784	116	6.5%
East Greenwich	517	39	7.5%
East Providence	2,606	232	8.9%
Exeter	261	25	NA
Foster	233	16	NA
Glocester	398	29	NA
Hopkinton	458	29	NA
Jamestown	187	11	NA
Johnston	1,390	89	6.4%
Lincoln	909	64	7.0%
Little Compton	141	7	NA
Middletown	984	62	6.3%
Narragansett	492	37	NA
New Shoreham	49	4	NA
Newport	1,516	121	8.0%
North Kingstown	1,272	78	6.1%
North Providence	1,615	124	7.7%
North Smithfield	439	31	NA
Pawtucket	5,668	484	8.5%
Portsmouth	810	52	6.4%
Providence	14,774	1,394	9.4%
Richmond	460	33	NA
Scituate	417	23	NA
Smithfield	730	40	5.5%
South Kingstown	1,161	78	6.7%
Tiverton	625	40	6.4%
Warren	527	30	5.7%
Warwick	4,193	329	7.8%
West Greenwich	245	13	NA
West Warwick	1,989	140	7.0%
Westerly	1,340	103	7.7%
Woonsocket	3,304	330	10.0%
Unknown	5	1	NA
Core Cities	29,272	2,608	8.9%
Remainder of State	32,963	2,358	7.2%
Rhode Island	62,240	4,967	8.0%

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2004-2008. Data for 2008 are provisional.

The denominator is the total number of live births to Rhode Island residents between 2004 and 2008.

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

NA: Percentages were not calculated for cities and towns with less than 500 births over the five-year period, as percentages for small denominators are statistically unreliable.

References

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Infant Mortality

DEFINITION

Infant mortality is the number of deaths of infants under one year of age per 1,000 live births. The data are reported by place of mother's residence, not place of infant's birth.

SIGNIFICANCE

Infant mortality rates are associated with maternal health, quality of and access to medical care, socio-economic conditions, and public health practices.¹ Communities with multiple problems such as poverty, unemployment and low literacy levels tend to have higher infant mortality rates than more advantaged communities.²

The two chief causes of infant death are birthweights of less than 750 grams and prematurity.³ Other leading causes of infant death include congenital abnormalities and malformations, Sudden Infant Death Syndrome (SIDS), maternal complications, and unintentional injuries.⁴ Nationwide, approximately 20% of infant deaths are attributed to birth defects, compared with 14% in Rhode Island. The majority of birth defects affect the cardiovascular system.⁵

The U.S. infant mortality rate fell from 26.0 deaths per 1,000 live births in 1960 to 6.9 deaths per 1,000 live births in 2000, a decrease due to improvements in sanitary conditions,

antibiotics, and health care access for low-income families. The U.S. has higher infant mortality rates than other industrialized countries, due in large part to disparities among various racial and ethnic groups, particularly for African Americans.⁶ Between 1990 and 2007, the infant mortality rate among African Americans remained at more than twice the national average.⁷

Risk factors for infant mortality include delayed or no prenatal care, smoking during pregnancy, pregnancies involving more than one fetus, maternal age over 40 or under 20 at the time of birth, having low education levels, and being unmarried.⁸

The overall infant mortality rate in Rhode Island between 2004 and 2008 was 6.2 deaths per 1,000 live births. The infant mortality rate was 55% higher in the core cities than in the remainder of the state.⁹

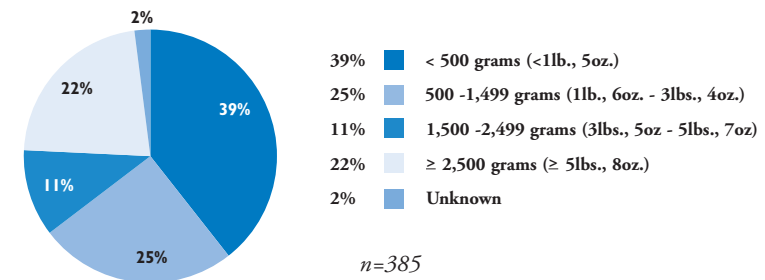
Infant Mortality Rate (rate per 1,000 live births)		
	2000	2006
RI	6.3	6.1
US	6.9	6.7
National Rank*	17th	
New England Rank**	3rd	

*1st is best; 50th is worst

**1st is best; 6th is worst

Source: 2009 KIDS COUNT data book: State profiles in child well-being 2009. (2009). Baltimore, MD: The Annie E. Casey Foundation.

Infant Mortality by Birthweight, Rhode Island, 2004-2008



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2004-2008. Data for births in 2007 and 2008 are provisional. Data for deaths in 2008 are provisional. Percentages may not sum to 100% due to rounding.

- ◆ Between 2004 and 2008, 385 infants died in Rhode Island before their first birthday. Seventy-six percent of infants who died during this time period were low birthweight, 22% were born at normal weights and 2% had unknown birthweights.¹⁰
- ◆ Of the 385 infant deaths between 2004 and 2008 in Rhode Island, 295 (77%) occurred in the neonatal period (during the first 27 days of life).¹¹ Neonatal mortality is generally related to short gestation and low birthweight (less than 2,500 grams), malformations at birth and/or conditions occurring in the perinatal period.¹²
- ◆ Between 2004 and 2008, 90 (23%) of the 385 infant deaths in Rhode Island occurred in the post-neonatal period (between 28 days and one year after delivery).¹³ Nationally, most of the progress in reducing the rate of infant mortality has resulted from improving outcomes during the post-neonatal period.¹⁴
- ◆ In Rhode Island between 2004 and 2008, the Black infant mortality rate was 12.1 deaths per 1,000 live births, the Asian infant mortality rate was 6.2 per 1,000 live births and the Native American infant mortality rate was 9.3 per 1,000 live births. All minority groups had infant mortality rates greater than the rate for White infants (5.4 per 1,000 births). The Hispanic infant mortality rate was 8.2 per 1,000 live births compared with 7.1 deaths per 1,000 live births among non-Hispanics in Rhode Island.¹⁵
- ◆ Preterm births are a major determinant of infant mortality in the U.S. In Rhode Island between 2004 and 2008 there were 7,418 preterm births (11.9% of all births).¹⁶

Table 21.

Infant Mortality Rate, Rhode Island, 2004-2008

CITY/TOWN	# OF BIRTHS	# OF INFANT DEATHS	RATE PER 1,000 BIRTHS
Barrington	667	2	3.0
Bristol	921	2	2.2
Burrillville	754	1	1.3
Central Falls	2,021	17	8.4
Charlestown	370	0	NA
Coventry	1,683	9	5.3
Cranston	4,325	27	6.2
Cumberland	1,784	4	2.2
East Greenwich	517	4	7.7
East Providence	2,606	17	6.5
Exeter	261	4	NA
Foster	233	1	NA
Glocester	398	1	NA
Hopkinton	458	0	NA
Jamestown	187	0	NA
Johnston	1,390	5	3.6
Lincoln	909	4	4.4
Little Compton	141	0	NA
Middletown	984	4	4.1
Narragansett	492	2	NA
New Shoreham	49	1	NA
Newport	1,516	6	4.0
North Kingstown	1,272	9	7.1
North Providence	1,615	7	4.3
North Smithfield	439	5	NA
Pawtucket	5,668	38	6.7
Portsmouth	810	3	3.7
Providence	14,774	137	9.3
Richmond	460	4	NA
Scituate	417	1	NA
Smithfield	730	2	2.7
South Kingstown	1,161	6	5.2
Tiverton	625	1	1.6
Warren	527	0	0.0
Warwick	4,193	25	6.0
West Greenwich	245	1	NA
West Warwick	1,989	8	4.0
Westerly	1,340	10	7.5
Woonsocket	3,304	17	5.1
Unknown	5	NA	NA
Core Cities	29,272	223	7.6
Remainder of State	32,963	162	4.9
Rhode Island	62,240	385	6.2

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2004-2008. Data for births in 2007 and 2008 are provisional. Data for deaths in 2008 are provisional.

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

NA: Rates were not calculated for cities and towns with less than 500 births, as rates with small denominators are statistically unreliable.

The denominator is the total number of live births to residents between 2004 and 2008.

References

¹ Federal Interagency Forum on Child and Family Statistics. (2009). *America's children: Key national indicators of well-being 2009*. Washington, DC: Government Printing Office.

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^{3,14} Shore, R. (2005). *KIDS COUNT indicator brief: Reducing infant mortality*. Baltimore, MD: The Annie E. Casey Foundation.

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^{9,10,11,13,15,16} Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2004-2008. Data for 2004-2008 are provisional.

Children with Lead Poisoning

DEFINITION

Children with lead poisoning is the percentage of three-year-old children with a confirmed elevated blood lead level (≥ 10 mcg/dL) at any time prior to December 31, 2009.¹ These data are for children eligible to enter kindergarten in the fall of 2011 (i.e., children born between September 1, 2005 and August 31, 2006).

SIGNIFICANCE

Lead poisoning is a preventable childhood disease.² Infants, toddlers and preschool-age children are most susceptible to the toxic effects of lead because they absorb lead more readily than adults and have inherent vulnerability due to developing central nervous systems.³ Lead exposure at even very low levels can cause irreversible damage including loss of intelligence, impaired cognitive, motor, and physical abilities and behavioral problems. Though rare, acute poisoning can result in severe illness and death.^{4,5} The societal costs of childhood lead poisoning include the loss of future earnings due to decreased cognition and medical and special education costs.^{6,7}

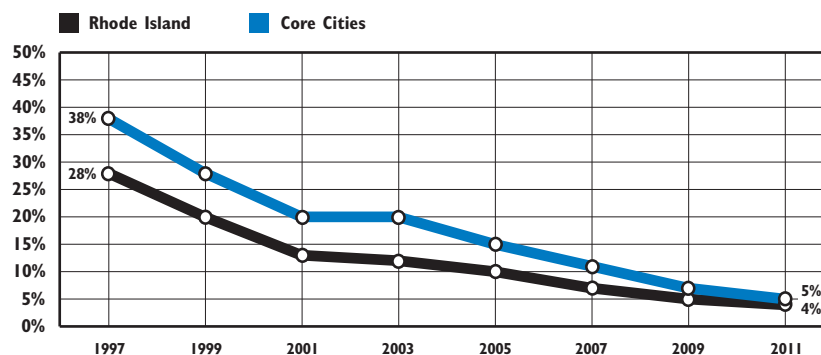
Access to healthy housing (defined as dry, clean, pest-free, ventilated, safe, free of contaminants and well-maintained) is important in preventing lead poisoning.⁸ Children living in homes built before 1978, when lead paint was

banned from interior use in the U.S., are at high risk for lead poisoning.⁹ Although the percentage of children with elevated blood lead levels are declining among all groups nationally, low-income and minority children remain the most likely to be lead poisoned.^{10,11} Children living in Rhode Island's six core cities (where most children who are racial and ethnic minorities live) are at increased risk for lead exposure because the housing stock tends to be older.¹² Nutritional factors may play a role in lead poisoning by affecting the rate of lead absorption.¹³

The U.S. Centers for Disease Control and Prevention has recognized that lead exposure at any level is harmful and recommends a focus on primary prevention of lead exposure.¹⁴ Prevention efforts should target the systematic reduction of lead paint in housing as the key source of lead exposure, through the removal and replacement of building materials that contain lead, professional cleaning and paint stabilization.¹⁵ Every dollar invested in lead paint hazard control is estimated to have a return on investment of \$17-\$221 in reduced health, education and other lifetime costs of childhood lead poisoning.¹⁶

In Rhode Island in 2009, 438 children under age six had confirmed elevated blood lead levels (1.6% of those tested).¹⁷

Children Entering Kindergarten With History of Elevated Blood Lead Level Screening, Rhode Island and Core Cities, 1997 – 2011



Source: Rhode Island Department of Health, Childhood Lead Poisoning Prevention Program, Children entering kindergarten between 1997 and 2011.

- ◆ Elevated blood lead levels have been steadily declining in the core cities and in Rhode Island over the past decade and a half. Of the 436 children entering kindergarten in 2011 who had an initial blood lead screen of ≥ 10 mcg/dL, 23 did not receive a confirmatory second test. Their lead poisoning status is unknown.¹⁸
- ◆ In Rhode Island, a child is considered to be “significantly lead poisoned” if she or he has a single venous blood test result of ≥ 20 mcg/dL or two venous tests ≥ 15 mcg/dL that are at least 90 days but no more than 365 days apart.¹⁹
- ◆ When a child is “significantly lead poisoned,” an inspection of the child’s home is offered. The Rhode Island Department of Health sends certified lead inspectors to determine whether lead hazards are present and, if hazards are found, it works with property owners to make the property lead-safe. In 2009, 65 environmental inspections were offered, of which 48 were performed. Of the 48 inspections performed, 36 are ongoing and in various stages of abatement, seven were parent-owned and therefore the parents’ responsibility to pursue, four were completed, and one was determined not to be a violation. Of the 17 inspections that were offered but not performed, 11 were refused, three were for properties from which the lead poisoned child had moved, one received no response and two are pending.²⁰

Children with Lead Poisoning

Table 22. Lead Poisoning in Children Entering Kindergarten in the Fall of 2011, Rhode Island

CITY/TOWN	NUMBER TESTED FOR LEAD POISONING	SCREENED WITH BLOOD LEAD LEVEL ≥10 mcg/dL		CONFIRMED WITH BLOOD LEAD LEVEL ≥10 mcg/dL	
		NUMBER	PERCENT	NUMBER	PERCENT
Barrington	160	2	1.3%	1	0.6%
Bristol	222	9	4.1%	1	0.5%
Burrillville	158	3	1.9%	3	1.9%
Central Falls	378	20	5.3%	18	4.8%
Charlestown	82	2	2.4%	1	1.2%
Coventry	325	4	1.2%	4	1.2%
Cranston	815	21	2.6%	16	2.0%
Cumberland	365	3	0.8%	2	0.5%
East Greenwich	148	0	0.0%	0	0.0%
East Providence	539	16	3.0%	5	0.9%
Exeter	46	0	0.0%	0	0.0%
Foster	44	0	0.0%	0	0.0%
Glocester	71	1	1.4%	1	1.4%
Hopkinton	85	3	3.5%	0	0.0%
Jamestown	32	2	6.3%	1	3.1%
Johnston	266	6	2.3%	4	1.5%
Lincoln	189	3	1.6%	1	0.5%
Little Compton	28	5	17.9%	0	0.0%
Middletown	225	5	2.2%	1	0.4%
Narragansett	89	2	2.2%	1	1.1%
New Shoreham	5	0	0.0%	0	0.0%
Newport	340	12	3.5%	4	1.2%
North Kingstown	291	5	1.7%	2	0.7%
North Providence	269	2	0.7%	2	0.7%
North Smithfield	96	1	1.0%	1	1.0%
Pawtucket	1,056	47	4.5%	35	3.3%
Portsmouth	171	2	1.2%	2	1.2%
Providence	2,937	175	6.0%	151	5.1%
Richmond	52	2	3.8%	2	3.8%
Scituate	93	4	4.3%	2	2.2%
Smithfield	155	2	1.3%	2	1.3%
South Kingstown	295	4	1.4%	3	1.0%
Tiverton	135	6	4.4%	0	0.0%
Warren	127	6	4.7%	2	1.6%
Warwick	774	18	2.3%	8	1.0%
West Greenwich	52	0	0.0%	0	0.0%
West Warwick	368	6	1.6%	2	0.5%
Westerly	257	7	2.7%	4	1.6%
Woonsocket	640	30	4.7%	20	3.1%
Unknown Residence	4	0	NA	0	NA
Core Cities	5,719	290	5.1%	230	4.0%
Remainder of State	6,661	146	2.2%	72	1.1%
Rhode Island	12,384	436	3.5%	302	2.4%

Source of Data for Table/Methodology

Rhode Island Department of Health, Childhood Lead Poisoning Prevention Program.

Data for children entering kindergarten in the fall of 2011 reflect the number of Rhode Island children eligible to enter school in the fall of 2011 (i.e., born between 9/1/05 and 8/31/06).

Children who screened positive for lead poisoning (blood lead level ≥10 mcg/dL) are counted if they screened positive with an unconfirmed capillary test at any time in their lives prior to the end of December 2009. Children confirmed positive for lead poisoning (blood lead level ≥10 mcg/dL) are counted if they screened positive with a venous test and/or had a confirmed capillary test at any time in their lives prior to the end of December 2009. The Rhode Island Childhood Lead Poisoning Prevention Program recommends that children under age six with a capillary blood lead level of ≥10 mcg/dL receive a confirmatory venous test.

The denominator is the number of children entering school in the fall of 2011 who were tested for lead poisoning. Screening data are based on the highest lead test result through December 2009. Data include both venous and confirmed capillary tests.

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

See Methodology Section for more information.

References

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Children with Asthma

DEFINITION

Children with asthma is the rate of hospitalizations with a primary diagnosis of 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 respiratory disease that causes 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 Childhood asthma in the U.S. increased between 1980 and 2000. The current prevalence has remained relatively 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.⁴

Nationally, asthma is the most common chronic condition in children, the third-ranked cause of hospitalization for children under age 15 and one of the leading causes of school absences.^{5,6} In 2008, nearly 14% of children under age 18 in the U.S. had ever been diagnosed with asthma and 9.5%

reported currently having asthma.⁷

Nationally, Black children have higher rates of asthma prevalence than Hispanic and non-Hispanic White children, and children living in poverty have higher rates of asthma than children in higher-income families.⁸ Racial and ethnic differences in asthma prevalence are believed to be correlated with poverty, exposure to indoor and outdoor air pollution, stress, lack of access to preventive medical care and genetic factors.⁹

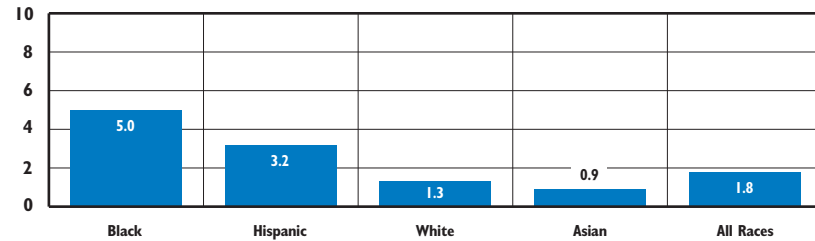
Proper asthma management requires assessment and monitoring, patient education, environmental control and medication.¹⁰ A primary care provider acting in partnership with the family as a child's medical home can provide the connections to specialty and support services needed to help manage asthma.¹¹

Children Hospitalized with Primary Diagnosis of Asthma, Core Cities and Rhode Island, 2004-2008

City/Town	Number of Children Hospitalized	Rate per 1,000 Children
Central Falls	74	2.7
Newport	43	1.7
Pawtucket	235	2.6
Providence	678	3.0
West Warwick	58	1.7
Woonsocket	105	1.9
Rhode Island	2,268	1.8

Source: Rhode Island Department of Health, Hospital Discharge Database, 2004-2008.

Asthma Hospitalizations With Primary Diagnosis of Asthma, by Race/Ethnicity, per 1,000 Children Under Age 18, Rhode Island, 2004-2008



◆ In Rhode Island between 2004 and 2008, the hospitalization rate for primary diagnosis of asthma for Black children was almost four times the rate for non-Hispanic White children. Hispanic children were hospitalized for asthma almost two and a half times as often as White children.

Source: Rhode Island Department of Health, Hospital Discharge Database, 2004-2008; U.S. Census Bureau, Census 2000.

Health Care Costs for Childhood Asthma in Rhode Island

◆ It is estimated that 17% (39,000) of all children in Rhode Island have ever been diagnosed with asthma and 11% (27,000) currently have asthma. The asthma prevalence among Rhode Island children increased 2% between 2005 and 2007.¹²

◆ In the U.S. and in Rhode Island, health care use (including hospitalizations and emergency room use) for asthma is highest among young children.^{13,14}

◆ The average length of a hospitalization stay for a child with asthma in Rhode Island is two days, with an average charge of \$7,840. In Rhode Island, children under age five have the highest number of asthma hospitalizations and the highest charges compared with all other children. Total hospital charges for children under age five are nearly six times greater than those for adolescents 12 to 17 years of age.¹⁵

◆ In Rhode Island in 2007, there were 1,856 emergency room visits by children due to a primary diagnosis of asthma, with an average charge of \$1,823 per visit. Children under age five accounted for 46% of all emergency room visits and their average charge per visit was \$2,013.¹⁶

Table 23.

Asthma Hospitalizations for Children Under Age 18, Rhode Island, 2004-2008

CITY/TOWN	ESTIMATED # OF CHILDREN UNDER AGE 18*	# OF CHILD HOSPITALIZATIONS WITH ANY ASTHMA DIAGNOSIS	RATE OF CHILD ASTHMA HOSPITALIZATIONS WITH ANY ASTHMA DIAGNOSIS, PER 1,000 CHILDREN	# OF CHILD HOSPITALIZATIONS WITH PRIMARY ASTHMA DIAGNOSIS	RATE OF CHILD HOSPITALIZATIONS WITH PRIMARY ASTHMA DIAGNOSIS, PER 1,000 CHILDREN
Barrington	23,725	41	1.7	23	1.0
Bristol	21,995	73	3.3	37	1.7
Burrillville	20,215	52	2.6	26	1.3
Central Falls	27,655	175	6.3	74	2.7
Charlestown	8,560	16	1.9	6	0.7
Coventry	41,945	115	2.7	56	1.3
Cranston	85,490	272	3.2	131	1.5
Cumberland	38,450	91	2.4	29	0.8
East Greenwich	17,820	37	2.1	15	0.8
East Providence	52,730	256	4.9	136	2.6
Exeter	7,945	15	1.9	1	0.1
Foster	5,525	7	1.3	1	0.2
Glocester	13,320	30	2.3	7	0.5
Hopkinton	10,055	28	2.8	12	1.2
Jamestown	6,190	10	1.6	5	0.8
Johnston	29,530	58	2.0	29	1.0
Lincoln	25,785	65	2.5	25	1.0
Little Compton	3,900	9	2.3	2	0.5
Middletown	21,640	62	2.9	29	1.3
Narragansett	14,165	21	1.5	3	0.2
New Shoreham	925	1	1.1	0	0.0
Newport	25,995	103	4.0	43	1.7
North Kingstown	34,240	82	2.4	25	0.7
North Providence	29,680	102	3.4	61	2.1
North Smithfield	11,895	32	2.7	10	0.8
Pawtucket	90,755	489	5.4	235	2.6
Portsmouth	21,645	60	2.8	31	1.4
Providence	226,385	1,442	6.4	678	3.0
Richmond	10,070	14	1.4	6	0.6
Scituate	13,175	27	2.0	13	1.0
Smithfield	20,095	45	2.2	18	0.9
South Kingstown	31,420	39	1.2	19	0.6
Tiverton	16,835	19	1.1	10	0.6
Warren	12,270	37	3.0	19	1.5
Warwick	93,900	296	3.2	130	1.4
West Greenwich	7,220	14	1.9	0	0.0
West Warwick	33,160	124	3.7	58	1.7
Westerly	27,030	74	2.7	21	0.8
Woonsocket	55,775	275	4.9	105	1.9
Unknown	NA	279	NA	139	NA
Core Cities	459,725	2,608	5.7	1,193	2.6
Remainder of State	779,385	2,100	2.7	936	1.2
Rhode Island	1,239,110	4,987	4.0	2,268	1.8

Source of Data for Table/Methodology

Rhode Island Department of Health, Hospital Discharge Database, 2004-2008. The Centers for Disease Control and Prevention requests that states report asthma hospitalization data only where asthma is the primary diagnosis. Due to this change, data in this indicator now include data on primary diagnosis of asthma as well as data on any asthma hospitalization (for comparison with previous Factbooks).

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

*The denominator used to compute the 2004-2008 rate is the number of children under age 18 according to the 2000 U.S. Census, multiplied by five.

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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

Healthy child development requires a home that is well-built, free of toxic hazards and that provides a place to eat well, play safely, and sleep soundly. Housing quality affects children's ability to grow, think, learn, relax, and form critical early bonds.¹

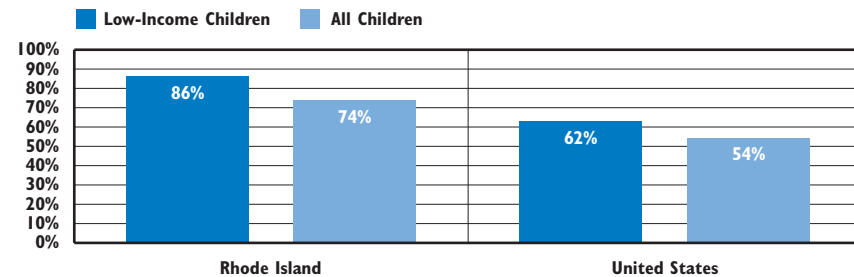
Unhealthy housing can cause or intensify many health conditions. Children living in homes built before 1978, when lead paint was banned from interior use in the United States, are at risk for lead poisoning. Studies have also connected allergies, respiratory distress, asthma, unintentional injuries, poisoning, cancer, and heart disease to poor quality construction, inadequate maintenance, and unhealthy behaviors.^{2,3,4,5}

Adopting a comprehensive "healthy homes" approach that includes both education and physical interventions 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.⁶ For example, repairing cracks in a home's foundation can help keep both water and pests from entering the house and would address multiple asthma triggers – mold, cockroaches and rodents. Similarly, most lead programs that repair painted surfaces containing lead also fix the leaks that caused the paint to peel in the first place. Fixing the leaks helps the lead repair last longer and also prevents mold problems.

The quality of children's homes and surrounding neighborhoods are important to their development. Lack of affordable housing puts safe, healthy, well-maintained housing out of reach for many families, forcing families to raise their children in overcrowded and unsafe environments that can interfere with their growth and development. Overcrowded housing is associated with feelings of helplessness, delayed cognitive development, and behavioral problems among children.⁷

Children Living in Older Housing*, 2006-2008, Rhode Island and the United States



Source: Population Reference Bureau analysis of 2006-2008 American Community Survey (ACS) Public Use Microsample (PUMS) data. *Older housing is defined here as housing built before 1980. The ACS reports data on the year a housing structure was built by decade, so this is the best available approximation for housing built before 1978 (when lead paint was banned from interior use in the United States).

- ◆ In both Rhode Island and the nation as a whole, children in low-income families are more likely to live in older housing than children in general. Between 2006 and 2008, 86% of low-income children in Rhode Island lived in older housing, while 74% of all children lived in older housing. Of all 50 states, Rhode Island has the highest percentage of low-income children living in older housing.⁸
- ◆ Rhode Island children were more likely to live in older housing (74%) than children in the nation as a whole (54%). Rhode Island has the second highest percentage of children living in older housing in the nation, after New York.⁹
- ◆ Rhode Island's older housing stock poses additional health risks for children because, until 1978, lead paint was commonly used in the interior and exterior of homes, and exposure to lead paint is associated with numerous risks to child health and development.^{10,11}
- ◆ Because affordable housing is in short supply, many low-income families must choose between poorly-maintained housing that puts the health and safety of their families at risk and housing that is safer but unaffordable.¹² When available housing costs more than a low-income family can afford to pay, they are unlikely to have the discretionary income needed to maintain, repair, or improve their homes.¹³

Key Principles of Healthy Housing

The National Center for Healthy Housing has developed seven key principles of healthy housing. According to these principles, a healthy home is: dry, clean, pest-free, safe, contaminant-free, ventilated, and maintained.

- ◆ **Dry:** Damp houses provide a welcoming environment for mites, cockroaches, rodents, and molds, all of which are associated with asthma.
- ◆ **Clean:** Clean homes are less likely to harbor household pests and reduce children's exposure to contaminants.
- ◆ **Pest-free:** Mice and cockroaches can trigger asthma in some children. The pesticides used to rid homes of household pests can also exacerbate health problems.
- ◆ **Safe:** A majority of injuries to children occur in the home. Falls are the most frequent cause of residential injuries to children, followed by injuries from objects in the home, burns, and poisonings.
- ◆ **Contaminant-free:** Many chemicals found in the home pose risks to children's health, including lead, radon, asbestos, pesticides, carbon monoxide, volatile organic compounds, and second-hand tobacco smoke.
- ◆ **Ventilated:** Having a well-ventilated home improves respiratory health.
- ◆ **Maintained:** Homes that are poorly maintained may have excessive moisture, pest problems, or deteriorating lead paint, all of which pose health risks to children.

Source: National Center for Healthy Housing. (n.d.). *Seven principles of healthy homes*. Retrieved March 13, 2009 from www.ncch.org/What-We-Do/Healthy-Homes-Principles.aspx

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Health Problems Associated With Housing

Lead Poisoning

- ◆ Children living in homes built before 1978, when lead paint was banned from interior use in the United States, are at risk for lead poisoning. Lead exposure during early childhood can cause irreversible damage, including loss of intelligence, impaired cognitive, motor, and physical abilities and behavioral problems.^{14,15,16,17}
- ◆ One in 28 (3.5%) Rhode Island children due to start kindergarten in 2011 has had a blood lead screen of ≥ 10 mcg/dL at some point in the past, indicating exposure to an environmental lead hazard.¹⁸ Children living in the core cities (who are disproportionately poor and/or minority) are at increased risk for lead exposure because the housing stock tends to be older and less well maintained.¹⁹

Asthma

- ◆ The presence of dust mites, cockroaches, mold, pet dander, and rodents can all trigger or exacerbate respiratory problems, including asthma.²⁰ Asthma is the most common chronic condition in children, the third leading cause of hospitalization for children under age 15 and a leading cause of school absences in the U.S.^{21,22}
- ◆ Between 2004 and 2008, there were 2,268 hospitalizations of children in Rhode Island for which the primary diagnosis was asthma. Asthma hospitalization rates in Rhode Island were highest for Black and Hispanic children.²³ Minority children are more likely to live in the core cities where the housing stock tends to be older and may be exposed to more asthma triggers.²⁴

Unintentional Injuries

- ◆ Falls are the leading cause of unintentional injuries among children in the U.S. More than 80% of fall-related injuries among children under age five occur in the home. Residential hazards associated with falls among children include a lack of safety devices, such as safety gates and window guards; structural problems, such as uneven floors; and insufficient lighting in stairways and other areas.^{25,26}
- ◆ In 2008, housing-related falls resulted in 4,383 emergency room visits by Rhode Island children. Half (51%) of these visits were for children under age six.²⁷

Childhood Obesity

DEFINITION

Childhood obesity is the percentage of children entering kindergarten with a body mass index (BMI) at or above the 95th percentile for gender and age. BMI is calculated based on weight and height.¹ Children and youth with a BMI at or above the 95th percentile are considered to be obese. Children and youth with a BMI between the 85th and 95th percentiles are considered to be overweight or at risk for obesity.²

SIGNIFICANCE

Children and adolescents who are overweight and obese are at increased risk for type 2 diabetes, asthma, heart disease and other acute and chronic health problems. Aside from obesity's physical consequences, obese children and youth are susceptible to mental health and psychological conditions such as depression and low self-esteem, and may experience social stigmatization and discrimination.^{3,4} Nationally, the prevalence of childhood obesity has more than tripled in recent decades, growing from 5% of children in 1980 to 17% in 2008.⁵ Current childhood obesity rates are so high that they may reduce life expectancy and diminish overall quality of life among today's generation of children.⁶

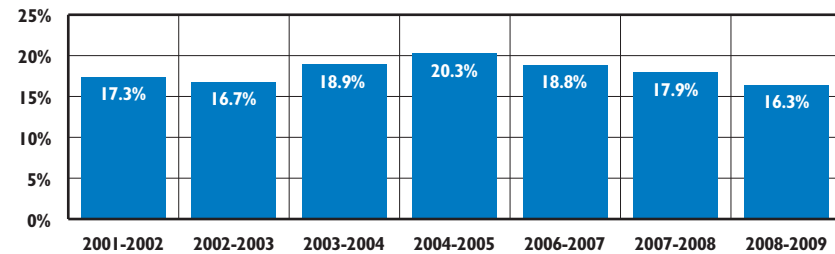
Weight gain occurs when more calories are consumed than expended,

but genes, metabolism, behavior, environmental and cultural factors also play a role in childhood overweight and obesity. The prevention of obesity requires a balance between energy intake and expenditure over time.⁷ Nutritional factors such as skipping breakfast, eating fast food, large portion sizes in meals at home and in restaurants, and frequent snacking are associated with increased obesity in children. Rates of physical activity among U.S. adolescents have generally decreased over the past decade.

Participation in daily physical education classes, and daily walking or cycling to school also have decreased.⁸

In Rhode Island in 2007, 14.4% of children ages 10 to 17 were obese, and 15.8% were overweight. In the U.S. in 2007, 16.4% of children ages 10 to 17 were obese and 15.3% were overweight, with significant disparities for racial and ethnic minorities. Nationwide, 41.1% of Black children and 41.0% of Hispanic children ages 10 to 17 were overweight or obese in 2007, compared to 26.8% of White, non-Hispanic children.^{9,10}

Obesity Among Children Entering Kindergarten, Rhode Island, 2001-2009*



Source: Immunization Program, Center for Health Data and Analysis, Rhode Island Department of Health, School Years 2001-2002 through 2008-2009. *There are no data available for the 2005-2006 school year. Data are based on a sample of recorded heights and weights at kindergarten entry.

◆ Nearly one in six (16.3%) Rhode Island children entering kindergarten during the 2008-2009 school year were obese, down from a high of 20.3% in the 2004-2005 school year.¹¹

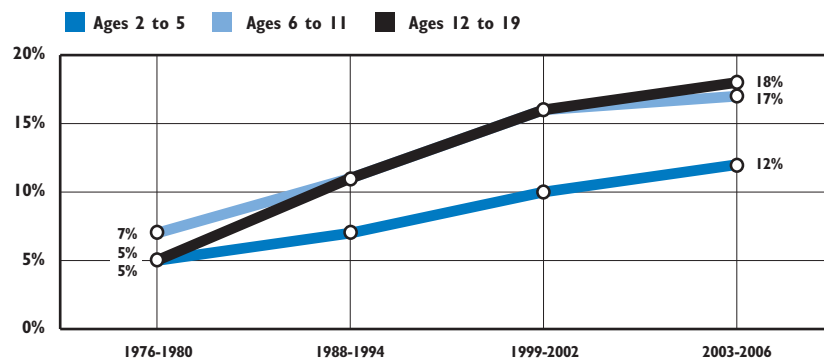
◆ Maternal excess weight during the prenatal period and gestational diabetes can put children at risk for obesity early in life. Breastfeeding has been found to have significant long-term potential for maintaining a lower BMI.¹² Nationwide, one in seven (14.6%) low-income, preschool-aged children is obese.¹³

Sedentary Behavior

◆ Technological advances in television, computers, and video games have increased children's overall "screen time", contributing to sedentary lifestyles and increasing risk for obesity. Nationally, eight to 18 year-olds spend over seven hours daily watching television or movies, using the Internet, and playing video games. Most parents do not set or enforce screen time limitations, but when families establish rules related to screen time and implement them, screen time declines by an average of two hours per day.¹⁴

◆ In Rhode Island, 29% of high school students reported watching three or more hours of TV on an average school day during the 2008-2009 school year. Twenty-eight percent also reported using computers for non-school work three or more hours on an average school day.¹⁵

Prevalence of Obesity Among U.S. Children and Adolescents, Ages 2 to 19



Source: Centers for Disease Control and Prevention. (2009). *NHANES Surveys (1976-1980 and 2003-2006)*. Retrieved February 26, 2010 from www.cdc.gov/obesity/childhood/prevalence.html. The National Health and Nutrition Examination Survey (NHANES) uses measured heights and weights to calculate a body mass index (BMI) for age.

- ◆ Nationally, the prevalence of obesity among children has increased dramatically in recent decades, and has more than tripled among adolescents ages 12 to 19. Between 2003 and 2007, obesity prevalence increased by 10% for U.S. children overall. During the same time period, the obesity prevalence among children in households with low-income, high unemployment and low-education levels increased between 23% and 33%.¹⁶
- ◆ During the 2008-2009 school year, 19% of 7th graders in Rhode Island were obese, up from 16.8% during the 2006-2007 school year.¹⁷ School-age children have the benefit of exposure to school interventions to address obesity. Schools can implement health education curriculum for pre-kindergarten through grade 12, empowering students to make healthy nutrition choices and meet physical activity recommendations.¹⁸
- ◆ In 2009, 10.4% of Rhode Island high school students were obese, and 16.7% were overweight.¹⁹ For adolescents, social stigmatization caused by overweight and obesity can cause low self-esteem and hinder academic and social functioning. Teenagers who are obese have an 80% chance of being obese as an adult.²⁰

Eating Habits of Public High School Students, Rhode Island, 2007 & 2009

	2007	2009
Ate fruit one or more times during the past 7 days	86%	87%
Ate fruits and vegetables 5 or more times per day during the past 7 days	19%	23%
Drank a container of soda one or more times per day during the past 7 days	25%	21%
Drank 3 or more glasses per day of milk during the past 7 days	16%	13%

Source: Rhode Island Department of Health, Center for Health Data and Analysis, *2007 & 2009 Rhode Island Youth Risk Behavior Surveys*.

- ◆ Rhode Island public high school students reported eating increased amounts of fruits and vegetables between 2007 and 2009, but only one in eight (13%) reported drinking recommended amounts of milk daily in 2009.^{21,22}
- ◆ Recent changes in school nutrition policy have made Rhode Island school meals among the healthiest in the country. Rhode Island is one of 19 states that implement nutritional standards for school meals and snacks that go beyond existing USDA requirements.^{23,24} The 2009 Rhode Island Nutrition Requirements (RINR), which went into effect in September 2009, encourage consumption of more fruits, vegetables, whole grains, and legumes in school meal programs such as school breakfast and school lunch.²⁵

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Births to Teens

DEFINITION

Births to teens is the number of births to teen girls ages 15 to 19 per 1,000 teen girls. Data are reported by the mother's place of residence, not the place of the infant's birth.

SIGNIFICANCE

The United States has the highest teen pregnancy and birth rates in the industrialized world.¹ Teen pregnancy and parenting threaten the development of teen parents as well as their children. Teen mothers are less likely to have the financial resources, social supports and parenting skills needed for healthy child development. Babies born to teen mothers are at increased risk for low birthweight, prematurity, and death in infancy.² Children of teen parents are more likely to experience learning and behavior problems in school, live in poverty, enter the foster care system, drop out of high school, spend time in prison, and become teen parents themselves.^{3,4}

While teen pregnancy occurs in families of all income levels, teen pregnancy and childbearing are strongly associated with poverty. As many as 83% of teen mothers are from poor or low-income families. There is a strong intergenerational pattern of early childbearing. At least one-third of teen parents (both teen mothers and fathers)

were the children of adolescent mothers themselves.⁵

Poor school achievement, attendance and involvement are predictors of teen pregnancy and childbearing. Childbirth is the leading cause of dropping out of school among teen girls. Nationally, fewer than half of teen mothers (40%) ever graduate from high school and fewer than 2% earn a college degree before age 30.⁶ Reduced educational attainment among teen parents puts them at increased risk of unemployment, low-wage jobs and poverty.⁷

In 2009 in Rhode Island, there were 1,049 babies born to mothers under age 20, accounting for 9% of all babies born in the state.⁸ Researchers estimate that approximately 11% of Rhode Island girls (vs. 18% of all girls in the U.S.) will become teen mothers.⁹

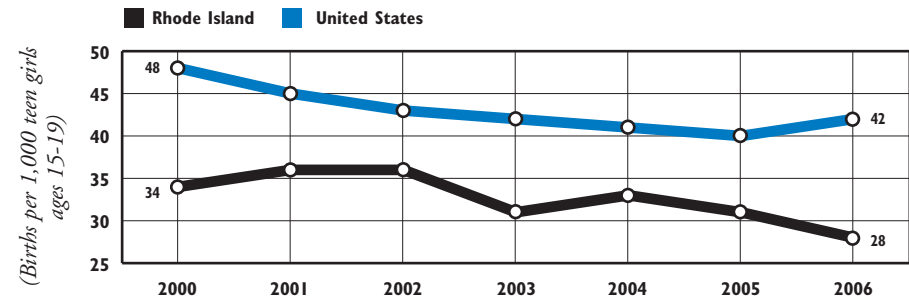
Teen Birth Rates (rate per 1,000 girls ages 15-19)		
	1991	2006
RI	44.7	27.8
US	61.8	41.9
National Rank*		9th
New England Rank**		6th

*1st is best; 50th is worst

**1st is best; 6th is worst

Source: Martin, J.A., Hamilton, B.E., Sutton, P.D., Ventura, S. J., Menacker, F., Kirmeyer, S., & Matthews, T.J. (2009). Births: Final data for 2006. *National Vital Statistics Reports*, 57(7). Hyattsville, MD: Centers for Disease Control and Prevention.

Birth Rates for Teens Ages 15-19, Rhode Island and United States, 2000-2006



Source: Annie E. Casey Foundation KIDS COUNT Data Center. (2009). *Teen births by age group: 15-19, United States and Rhode Island: 1990-2006*. Retrieved January 20, 2010 from www.kidscount.org/datacenter

◆ In Rhode Island, the teen birth rate fell by 18% between 2000 and 2006. The U.S. teen birth rate declined by 13%, with rates increasing between 2005 and 2006 after steady declines over the previous decade.^{10,11}

◆ Of the 5,711 births to Rhode Island teens ages 15 to 19 between 2004 and 2008, 70% (3,984) were to teens in the core cities, the six communities with the highest child poverty rates.¹²

Repeat Births to Teens, Rhode Island, 2004-2008

Age	Total Number of Births	Number of Repeat Births	Percent Repeat Births
12-14	89	1	1%
15-17	1,860	164	9%
18-19	3,851	861	22%
Total	5,800	1,026	18%

Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2004-2008. Data for 2008 are provisional.

◆ Once a teenager has a baby, she is at increased risk of having another as a teen. A repeat birth during the teen years compounds educational, economic, developmental and health problems for both the mothers and the children.¹³ In 2006, Rhode Island ranked 8th nationally (tied with Louisiana, New Mexico and Alaska) for the highest percentage of repeat teen births.¹⁴

Table 24.

Births to Teens, Ages 15-19, Rhode Island, 2004-2008

CITY/TOWN	NUMBER OF BIRTHS TO GIRLS AGES 15-17	BIRTH RATE PER 1,000 GIRLS AGES 15-17	NUMBER OF BIRTHS TO GIRLS AGES 18-19	BIRTH RATE PER 1,000 GIRLS AGES 18-19	NUMBER OF BIRTHS TO GIRLS AGES 15-19	BIRTH RATE PER 1,000 GIRLS AGES 15-19
Barrington	2	0.9	8	10.9	10	3.5
Bristol	7	3.8	33	8.9	40	7.2
Burrillville	5	2.8	24	22.9	29	10.2
Central Falls	115	61.3	214	136.3	329	95.5
Charlestown	4	6.0	14	NA	18	18.1
Coventry	35	10.9	74	43.8	109	22.2
Cranston	94	13.6	166	41.2	260	23.8
Cumberland	17	5.4	51	34.9	68	14.8
East Greenwich	4	2.8	5	10.0	9	4.7
East Providence	50	11.0	121	52.5	171	24.9
Exeter	4	5.5	4	NA	8	7.8
Foster	2	NA	10	NA	12	17.9
Glocester	6	5.2	22	37.0	28	16.1
Hopkinton	8	9.2	16	NA	24	18.8
Jamestown	0	0.0	2	NA	2	2.7
Johnston	24	10.5	52	39.7	76	21.1
Lincoln	10	4.6	34	36.2	44	14.1
Little Compton	0	NA	8	NA	8	NA
Middletown	13	9.5	34	50.0	47	22.9
Narragansett	4	3.2	15	13.8	19	8.1
New Shoreham	0	NA	0	NA	0	NA
Newport	48	24.1	88	25.7	136	25.1
North Kingstown	14	5.3	45	37.2	59	15.2
North Providence	26	10.5	62	42.0	88	22.3
North Smithfield	5	4.9	11	NA	16	10.8
Pawtucket	227	33.3	440	96.9	667	58.7
Portsmouth	6	3.6	15	24.8	21	9.2
Providence	796	46.7	1,435	48.7	2,231	48.0
Richmond	12	14.7	20	NA	32	28.8
Scituate	3	2.5	8	15.5	11	6.4
Smithfield	5	2.9	18	6.6	23	5.1
South Kingstown	10	3.6	42	5.0	52	4.7
Tiverton	5	3.7	20	27.4	25	12.0
Warren	10	10.0	25	43.1	35	22.2
Warwick	79	10.0	192	48.4	271	22.8
West Greenwich	3	5.6	11	NA	14	16.8
West Warwick	45	18.3	116	69.7	161	39.1
Westerly	28	12.9	70	63.3	98	29.9
Woonsocket	134	31.6	326	115.6	460	65.2
<i>Core Cities</i>	<i>1,365</i>	<i>39.6</i>	<i>2,619</i>	<i>60.2</i>	<i>3,984</i>	<i>51.1</i>
<i>Remainder of State</i>	<i>495</i>	<i>7.7</i>	<i>1,232</i>	<i>27.9</i>	<i>1,727</i>	<i>15.9</i>
<i>Rhode Island</i>	<i>1,860</i>	<i>18.9</i>	<i>3,851</i>	<i>44.0</i>	<i>5,711</i>	<i>30.7</i>

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2004-2008. Data for 2008 are provisional. The denominators are the number of girls in each age group according to Census 2000, multiplied by five to compute rates over five years.

Factbooks published before 2007 reported only on births to girls ages 15 to 17. In recent years, the definition of teen childbearing has been expanded to include teens ages 18-19 because researchers are finding that babies born to slightly older teens do not have much better outcomes than those born to teens in younger age groups.

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

NA: Rates were not calculated for cities and towns with less than 100 teen girls in the age category, as rates with small denominators are statistically unreliable.

References

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- ^{2,10} Martin, J. A., et al. (2009). Births: Final data for 2006. *National Vital Statistics Reports*, 57(7). Hyattsville, MD: Centers for Disease Control and Prevention.
- ^{3,5} Klein, J. D. & The Committee on Adolescence. (2005). Adolescent pregnancy: Current trends and issues. *Pediatrics*, 116(1), 281-286.
- ⁶ *Why it matters: Teen pregnancy and education*. (2009). Washington, DC: National Campaign to Prevent Teen Pregnancy.
- ⁸ Rhode Island Department of Health, KIDS NET Database, 2009.
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- ¹¹ Hamilton, B. E., Martin, J. A. & Ventura, S. J. (2009). Births: Preliminary data for 2007. *National Vital Statistics Reports*, 57(12). Hyattsville, MD: Centers for Disease Control and Prevention.

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Alcohol, Drug and Cigarette Use by Teens

DEFINITION

Alcohol, drug and cigarette use by teens is the percentage of middle school and high school students who report having used alcohol, illegal drugs (such as marijuana, uppers, or downers), or cigarettes at least once in the 30 days prior to taking the School Accountability for Learning and Teaching (SALT) Student Survey.

SIGNIFICANCE

The use and/or abuse of substances such as alcohol, tobacco, and other drugs by children and youth poses health and safety risks to them, their families, their schools and their communities.¹ Rhode Island ranks among the states with the highest percentages of adolescents and adults reporting use of illicit drugs and alcohol.²

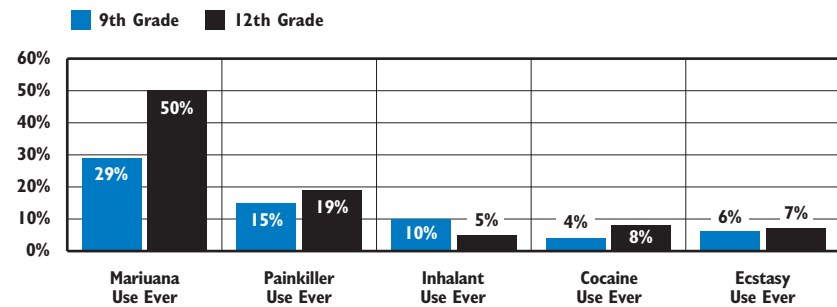
Research shows that the key risk periods for alcohol, cigarette and other drug abuse occur during major transitions in children's lives. These include the transition to middle school, which presents new academic and social situations and the transition to high school, which presents additional social and emotional challenges. There is greater exposure to drugs, to peers who abuse substances, and to social activities involving drugs and alcohol at the high school level.³

The risk for becoming a substance user involves the relationship between risk factors and protective factors, which vary in their effects by age, gender, ethnicity, and environment. Risk factors include early aggressive behavior, lack of parental supervision, peer substance abuse, poor academic achievement and poverty. Protective factors include a strong parent-child bond, parental involvement and support, consistent discipline, academic competence and a strong neighborhood attachment.⁴

Early family and school interventions can build and strengthen protective factors and be tailored to reduce risk factors, which will help to prevent substance use among young people.⁵ Adolescents who participate in school-based, community-based, faith-based or other after-school activities are less likely to use substances than those who are not involved in any such activities.⁶

Approximately one in 10 adolescents in the U.S. who meet standard diagnostic criteria indicating the need for treatment for an illicit drug use problem and one in 14 who need treatment for an alcohol use problem actually receive specialty treatment. This on-going trend indicates a need to expand the continuum of care to engage young people who are unable to go to specialty treatment programs.⁷

Illicit Drug Use by Rhode Island Students in 9th and 12th Grades, 2009



Source: 2009 Rhode Island Youth Risk Behavior Survey, Rhode Island Department of Health, Center for Health Data and Analysis.

- ◆ Among high school students in Rhode Island in 2009, 50% of 12th graders and 29% of 9th graders reported ever having used marijuana. Nearly one in five (19%) Rhode Island 12th grade students reported using painkillers, such as OxyContin, Codeine, Percocet or Tylenol III without a doctor's prescription at least once in their lifetime.⁸
- ◆ One in ten (10%) Rhode Island 9th grade students in 2009 reported ever using inhalants (sniffing glue, breathing the contents of an aerosol spray can and/or inhaling paints or sprays), 6% reported ever using ecstasy and 4% reported ever using any form of cocaine.⁹

Tobacco Use

- ◆ The percentage of Rhode Island high school students who smoked cigarettes on 20 or more days in the past month has decreased significantly over the past decade, from 19% in 1997 to 5% in 2009.¹⁰
- ◆ In 2009, almost one in ten male high school students in Rhode Island reported using chewing tobacco in the previous month.¹¹ In 2009, 46% of high school-age smokers in Rhode Island reported trying to quit in the past year, down from 59% in 2007.¹²

Alcohol, Drug and Cigarette Use by Teens

Table 25.

**Student Reports of Alcohol, Drug and Cigarette Use
by Student Grade Level, Rhode Island, 2007-2008**

SCHOOL DISTRICT	ALCOHOL USE		DRUG USE		CIGARETTE USE	
	MIDDLE SCHOOL	HIGH SCHOOL	MIDDLE SCHOOL	HIGH SCHOOL	MIDDLE SCHOOL	HIGH SCHOOL
Barrington	6%	23%	4%	19%	4%	16%
Bristol Warren	14%	39%	5%	31%	6%	26%
Burrillville	26%	42%	14%	29%	17%	26%
Central Falls	20%	29%	10%	14%	8%	9%
Charlho	13%	43%	8%	33%	9%	28%
Coventry	11%	41%	4%	30%	5%	26%
Cranston	15%	34%	7%	23%	6%	20%
Cumberland	14%	42%	8%	31%	8%	26%
East Greenwich	16%	39%	12%	23%	13%	18%
East Providence	20%	40%	9%	33%	10%	28%
Exeter-West Greenwich	14%	36%	8%	23%	7%	17%
Foster-Glocester	20%	45%	14%	33%	13%	31%
Jamestown	7%	NA	3%	NA	3%	NA
Johnston	17%	42%	7%	25%	9%	23%
Lincoln	9%	48%	4%	39%	4%	31%
Little Compton	7%	NA	3%	NA	3%	NA
Middletown	7%	44%	4%	33%	3%	30%
Narragansett	8%	36%	5%	25%	5%	16%
New Shoreham	NA	65%	NA	50%	NA	28%
Newport	16%	40%	10%	33%	9%	25%
North Kingstown	10%	43%	6%	33%	5%	24%
North Providence	14%	41%	5%	27%	5%	21%
North Smithfield	17%	37%	11%	23%	13%	21%
Pawtucket	22%	32%	12%	21%	10%	15%
Portsmouth	19%	40%	11%	27%	9%	22%
Providence	20%	33%	10%	23%	10%	19%
Scituate	14%	43%	7%	27%	8%	23%
Smithfield	12%	41%	6%	33%	5%	27%
South Kingstown	11%	39%	7%	25%	7%	19%
Tiverton	17%	47%	9%	37%	10%	31%
Warwick	18%	45%	9%	33%	9%	31%
West Warwick	15%	40%	6%	32%	9%	29%
Westerly	18%	46%	10%	30%	8%	26%
Woonsocket	21%	35%	9%	20%	9%	18%
Core Cities	20%	34%	10%	23%	9%	19%
Remainder of State	14%	40%	7%	29%	7%	25%
Rhode Island	16%	38%	8%	27%	8%	23%

NA = Community has no middle school or no high school

Data are for students reporting use in the 30 days prior to the date the SALT Survey was administered.

Sources of Data for Table/Methodology

Brand, S. & Seitsinger, A. M. (2009). *Rhode Island student reports of health risk practices by grade level, 2007-2008 school year*. Retrieved from Information Works at www.infoworks.ride.uri.edu. Data collected by the Center on School Improvement and Educational Policy at the University of Rhode Island for the Rhode Island Department of Elementary and Secondary Education.

Retrieved from Information Works at www.infoworks.ride.uri.edu. Data are for students who reported substance use in the 30 days prior to the date the survey was administered.

Rhode Island state totals include the following charter schools (Compass School, CVS Highlander Charter School, Paul Cuffee Charter School, Blackstone Academy Charter School, and BEACON Charter School) and the following state-operated schools (William M. Davies Jr. Career-Technical High School and Metropolitan Regional Career & Technical Center), as well as the Urban Collaborative (UCAP). These schools are not included in the core city and remainder of state calculations.

The School Accountability for Learning and Teaching (SALT) Student Survey is administered during one 60-minute class period each school year. All students in grades 4-12 in Rhode Island complete the survey, with the exception of students who have been excused by their parents and students with Individual Education Programs (IEPs) who are unable to take the survey. Grades included in middle and high school vary by district. For the Rhode Island percentage, middle school includes grades 5-8 and high school includes grades 9-12.

The SALT survey was not administered during the 2008-2009 school year.

References

^{1,3,4,5} *Preventing drug use among children and adolescents: A research-based guide for parents, educators, and community leaders, second edition*. (2003). NIH 04-4212(A). Bethesda, MD: National Institutes of Health, National Institute on Drug Abuse.

(continued on page 167)