

Health

*The way they see us,
the way we choose to be seen.*

by Dariana Pena Acosta

Strong dependencies, and mentalities.
Emotions that come and go.
Short tempered That is like a blizzard

after snow.

Loud words that we refine,
but that can't be kept in
no matter how hard we try.

One look at us
A child is what they see
A child we might be,
but Like an adult is how we will speak.

Using our youth as a shield our voice as a spear
and go into society as a battle that must not be feared.
Making our voice important.
Making our voice loud.
Choosing not to be silenced
by those around.



Children's Health Insurance

DEFINITION

Children's health insurance is the percentage of children under age 19 who were covered by any kind of private or public health insurance, including Medicaid.

SIGNIFICANCE

Children who have health insurance coverage are healthier and have fewer preventable hospitalizations than those who are uninsured.¹ Medicaid and the Children's Health Insurance Program (CHIP) provide health insurance and access to health care for children in low-income families.² Medicaid's Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) benefit entitles children to all age-specific pediatrician-recommended services to grow and thrive.³ Children insured through Medicaid and CHIP are more likely to receive primary and preventive medical and dental care, have access to specialists, and have fewer unmet health needs than uninsured children. Evidence indicates that CHIP has reduced racial/ethnic disparities in access and utilization, improved educational outcomes, and shielded children from poverty.^{4,5,6}

Children are more likely to be insured if their parents also have health insurance (especially continuous coverage).⁷ RItE Care, 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 specific groups of children who qualify for Medical Assistance based on a disability or because they are in foster care or receiving an adoption subsidy. RItE Share is Rhode Island's premium assistance program that helps income-qualifying families afford an employer's health insurance plan. On December 31, 2022, 62% of RItE Care members who qualified based on family income and 66% of RItE Share enrollees were children under age 19.^{8,9}

Nationally, children living in poverty, Black and Hispanic children, foreign born, and non-citizen children, are most likely to be uninsured.¹⁰ In 2021, an estimated 2.5% of Rhode Island children were uninsured.¹¹

Children Under Age 19 Without Health Insurance		
	2013	2021
RI	5.7%	2.5%
US	7.5%	5.4%
National Rank*		4th
New England Rank**		4th

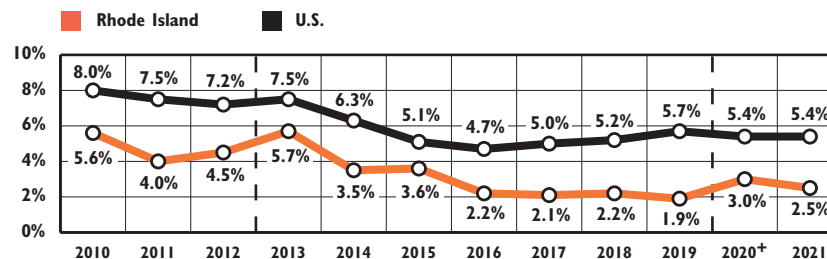
*1st is best; 50th is worst

**1st is best; 6th is worst

Source: For 2021: U.S. Census Bureau, American Community Survey, 2021. Table R2702. For 2013: U.S. Census Bureau, American Community Survey, 2013. Table CP03.



Children Without Health Insurance, Rhode Island, 2010-2021



Source: *U.S. Census Bureau, American Community Survey, 2020. Experimental Table XK202701. The U.S. Census Bureau urges caution when comparing to standard ACS data due to low response rate during COVID-19 pandemic. U.S. Census Bureau, American Community Survey, 2012-2019, 2021. Data from 2010 to 2012 are for children under 18 years of age and data from 2013 to 2021 are for children under 19 years of age. Prior Factbooks are not comparable.

◆ In 2021, 2.5% of Rhode Island's children under age 19 were uninsured. Rhode Island ranked fourth best state in the U.S., with 97.5% of children covered. In 2021, 49% of Rhode Island children under age 19 were covered by private health insurance, most of which was obtained through their parents' employers.^{12,13}

◆ Younger children are more likely to live in low-income families compared to older children and therefore are more likely to meet the income-eligibility threshold for RItE Care (up to 261% of the federal poverty level).^{14,15} Approximately 55% of children under the age of three were enrolled in RItE Care/Medical Assistance in 2022.^{16,17}

◆ Approximately 60% (2,746) of the estimated 4,585 uninsured children under age 18 in Rhode Island between 2017 and 2021 were eligible for RItE Care coverage based on their family incomes but were not enrolled (some due to immigration status who may now be eligible).¹⁸

◆ An estimated 1,839 uninsured children lived in families with incomes above the income limit for RItE Care eligibility and 67% (1,225) of them may have been eligible for financial assistance through HealthSource RI (Rhode Island's health insurance marketplace) based on income.¹⁹ As of December 31, 2022, 1,782 children and 925 adults (2,707 total) were enrolled in RItE Share.²⁰ As of October 2022, 1,695 children were enrolled in private health coverage through HealthSource RI, 63% of whom received financial assistance through a premium tax credit or a cost sharing reduction.²¹

Table 16.

Children Under Age 19 Receiving Medical Assistance, Rhode Island, December 31, 2022

CITY/TOWN	RITE CARE	SSI	KATIE BECKETT PROVISION	ADOPTION SUBSIDY	FOSTER CARE	TOTAL
Barrington	616	16	43	38	<10	719
Bristol	963	30	11	42	12	1,058
Burrillville	1,223	39	10	72	17	1,361
Central Falls	5,356	211	<10	55	33	5,658
Charlestown	448	13	<10	17	<10	492
Coventry	2,177	91	40	165	60	2,533
Cranston	7,374	217	64	235	109	7,999
Cumberland	2,097	77	47	87	29	2,337
East Greenwich	543	19	32	37	28	659
East Providence	4,085	147	36	135	88	4,491
Exeter	337	<10	<10	17	12	382
Foster	328	<10	<10	28	<10	377
Glocester	398	15	<10	46	33	501
Hopkinton	441	<10	<10	23	<10	479
Jamestown	127	<10	<10	<10	<10	147
Johnston	2,851	102	46	89	49	3,137
Lincoln	1,725	58	26	72	30	1,911
Little Compton	144	<10	<10	<10	<10	157
Middletown	1,072	40	15	42	26	1,195
Narragansett	376	<10	<10	28	25	442
New Shoreham	83	0	0	0	0	83
Newport	1,907	101	<10	53	28	2,094
North Kingstown	1,510	55	23	75	34	1,697
North Providence	1,579	45	12	35	40	1,711
North Smithfield	678	17	13	52	14	774
Pawtucket	12,381	471	21	216	157	13,246
Portsmouth	714	19	11	53	34	831
Providence	37,205	1,554	57	520	567	39,903
Richmond	405	12	<10	37	<10	466
Scituate	363	<10	11	28	<10	414
Smithfield	929	18	27	45	18	1,037
South Kingstown	1,286	44	28	92	28	1,478
Tiverton	912	22	<10	32	12	987
Warren	807	29	<10	38	13	895
Warwick	5,451	163	78	285	98	6,075
West Greenwich	277	<10	10	22	<10	323
West Warwick	3,314	161	18	118	65	3,676
Westerly	1,760	46	21	62	32	1,921
Woonsocket	7,617	475	13	167	83	8,355
Four Core Cities	62,559	2,711	94	958	840	67,162
Remainder of State	49,937	1,644	703	2,215	1,078	44,706
Rhode Island	112,496	4,355	797	3,173	1,918	122,739

Source of Data for Table/Methodology

Rhode Island Executive Office of Health and Human Services, MMIS Database, December 31, 2022.

The table includes children enrolled in RlTe Care managed care as of December 31, 2022. Children with special health care needs who are covered through RlTe Care or Medical Assistance are also included because they receive SSI, adoption subsidies, or qualify for the Katie Beckett provision.

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

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

References

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Childhood Immunizations

DEFINITION

Childhood immunizations is the percentage of children ages 19 months to 24 months who have received the entire 4:3:1:3:3:1:4 series of vaccinations as recommended by the Advisory Committee on Immunization Practices (ACIP). In 2020 the complete series included 4 doses of diphtheria, tetanus and pertussis (DTaP); 3 doses of polio; 1 dose of measles, mumps, rubella (MMR); 3–4 doses of Haemophilus influenzae type b (Hib); 3 doses of hepatitis B vaccines (Hep B); 1 dose of varicella (chickenpox); and 4 doses of pneumococcal conjugate vaccine (PCV).

SIGNIFICANCE

Timely and complete immunization protects children against many infectious diseases that were once common and resulted in death or disability. Vaccines interact with the immune system to produce antibodies that protect the body if it is later exposed to disease. The benefits of immunization include improved quality of life and productivity, reduced health spending, and prevention of illness and death. Society benefits from high vaccination levels because disease outbreaks are minimized, and those who cannot be vaccinated for medical reasons are less likely to be exposed. Although many of the diseases against which children are vaccinated are rare,

it is important to continue to immunize against them until the diseases are completely eradicated.^{1,2,3}

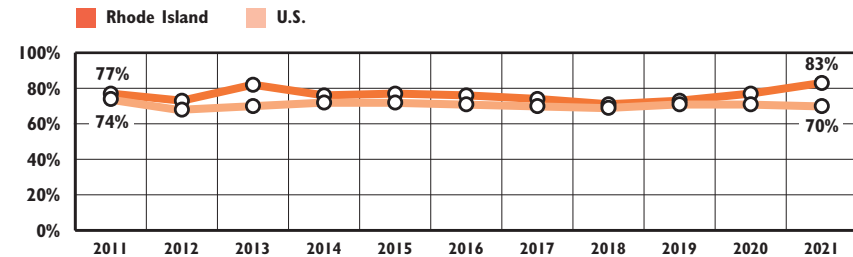
The federal *Vaccines for Children* program is used to eliminate cost as a barrier to vaccination. It allows states to obtain vaccines at a discounted price. Local providers then administer the vaccines at no cost to eligible children under age 19, including those who are uninsured, underinsured, or Medicaid-eligible.⁴ Due to the federal *Affordable Care Act*, children and individuals enrolled in health insurance plans have access to recommended vaccines without deductibles or copays, when delivered by an in-network provider.⁵

The Rhode Island Department of Health obtains and distributes vaccines and works in partnership with local health care providers to maintain and share KIDSNET immunization data for children from birth through age 18.⁶

Rhode Island requires vaccination against the following diseases prior to entry into child care, preschool, Head Start, or Kindergarten: diphtheria, tetanus, and pertussis; Haemophilus influenza type b; hepatitis A; hepatitis B; influenza; measles, mumps, and rubella; pneumococcal conjugate; polio; rotavirus; and varicella (chickenpox). Kindergarten entry requires all of these and additional doses of DTaP, MMR, polio, and varicella.^{7,8}



Fully Immunized Children*, Rhode Island and United States, 2011-2021



*Fully immunized children received the 4:3:1:3:3:1:4 series. In 2018, the National Immunization Survey-Child (NIS-Child) methodology changed from coverage among children 19 to 35 months of age to coverage by age 24 months.

Source: Centers for Disease Control and Prevention, *National Immunization Survey-Children*, 2011-2021.

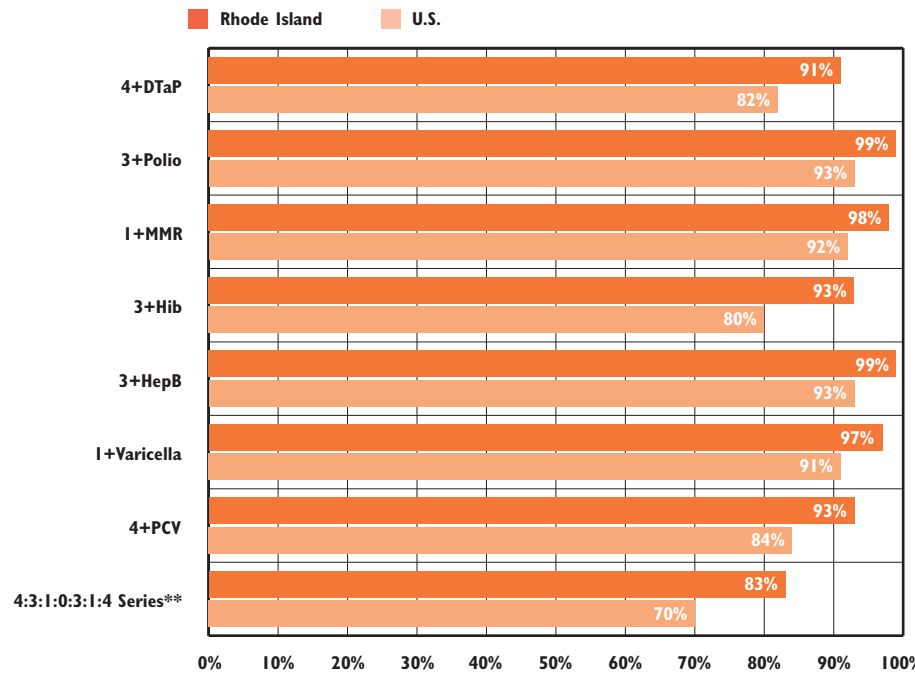
- ◆ In 2021, 83% of Rhode Island's children were fully immunized by age 24 months, above the national average of 70%.⁹
- ◆ In 2019-2021, the U.S. rate for children being fully immunized by age 24 months was 45% for uninsured children, 64% for children with Medicaid coverage, and 78% for children with private health insurance coverage.¹⁰
- ◆ Vaccine concerns have led some parents to request alternative vaccination schedules or to refuse some or all immunizations, which contribute to under-immunization.¹¹ Federal law requires that families be provided with information about each vaccine, including risks and benefits about the vaccine.¹²



Immunizations for School Entry

- ◆ Of the immunizations needed for school entry in 2022, entering kindergarteners had coverage rates between 90% and 96%, while entering 7th grade students had rates between 72% and 83%.¹³
- ◆ In Rhode Island, children may be exempt from receiving one or more vaccines for medical or religious reasons.¹⁴ In the 2022-2023 school year, 149 kindergarten students and 346 students in 7th grade had exemptions from vaccination requirements. Of these exemptions, for kindergarten, 93% were for religious reasons and 7% were for medical reasons. For 7th grade, 91% were for religious reasons and 9% were for medical reasons.¹⁵

Vaccination Coverage Among Children, by Age 24 Months, Rhode Island and United States, 2021



Source: Rhode Island Department of Health analysis of data from the *National Immunization Survey-Children*, 2021.

*Depending on the product type received, 3+ or 4+ doses of Hib vaccine is a full dose.

◆ The U.S. Centers for Disease Control and Prevention recommends that everyone ages six months and older receive the COVID-19 vaccine, and that everyone ages five years and older receive boosters if eligible.¹⁶

◆ As of January 2023, 40% of Rhode Island children ages five to nine, 57% of Rhode Island children ages 10 to 14, and 73% of Rhode Island youth ages 15 to 18 were at least partially vaccinated for the prevention of COVID-19.¹⁷

Adolescent Immunization

◆ All Rhode Island seventh grade students are required to receive the human papillomavirus (HPV); tetanus, diphtheria, pertussis (Tdap); and meningococcal conjugate (MCV4) vaccines, as well as any needed catch-up doses, for entry into school.¹⁸

◆ According to the 2021 *National Immunization Survey*, 83% of Rhode Island adolescents received the 3+HPV vaccine, compared to 62% nationally; 97% of Rhode Island adolescents received the 1+Tdap vaccine, compared to 92% nationally; and 93% of Rhode Island adolescents received the 1+MenACWY vaccine, compared to 89% nationally.¹⁹

◆ To ensure that all high school seniors are fully vaccinated before beginning college or work, the Rhode Island Office of Immunization runs the *Vaccinate Before You Graduate* (VBYG) program in high schools throughout the state. The program holds vaccination clinics throughout the year at each participating school. The immunizations are funded by the federal *Vaccines for Children* program, local insurers, and other federal grants and are offered at no cost to students.^{20,21}

◆ During the 2021-2022 school year, 74 schools participated in VBYG, up from 47 schools the year prior. In total, 2,889 vaccine doses were administered to 1,201 students; up from 1,055 vaccine doses administered to 451 students the year prior, returning to toward pre-pandemic numbers. Vaccines administered included influenza, HPV, MCV4, hepatitis A, hepatitis B, measles, mumps, and rubella, polio, tetanus, diphtheria, tetanus, diphtheria, pertussis, and varicella (chicken pox).²²

◆ The School Located Vaccination (SLV) program administered 19,271 doses of the influenza vaccine to both children and adults at school-based clinics throughout Rhode Island from October 2022 to November 2022. The goal of SLV is to ensure all Rhode Island children receive their annual flu vaccination at no out-of-pocket cost.²³

References

¹ U.S. Department of Health & Human Services. (2022). *Five important reasons to vaccinate your child*. Retrieved February 3, 2023, from www.hhs.gov

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Access to Dental Care

DEFINITION

Access to dental care is the percentage of children and youth under age 21 who were enrolled in RItE Smiles on June 30, 2022 and who had received dental services at any point during the previous State Fiscal Year.

SIGNIFICANCE

Dental caries (tooth decay) is the most common chronic disease among children. Poor oral health has immediate and significant negative impacts on children's overall health, growth and development, school attendance, and academic achievement.^{1,2}

Insurance is a strong predictor of access to health and dental care. In Rhode Island, pediatric dental coverage is embedded in most private health insurance coverage, and RItE Smiles is Rhode Island's dental insurance for Medicaid-eligible children. The cost of care is another strong predictor of access to services. In 2022 in the U.S., 35% of adults delayed or skipped dental care in the past year due to cost.^{3,4,5}

Children living in poverty are more likely to have untreated tooth decay than higher-income children. 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. and in Rhode Island, children who have public health insurance coverage have greater access to

dental and medical care than children who have no insurance.^{6,7,8}

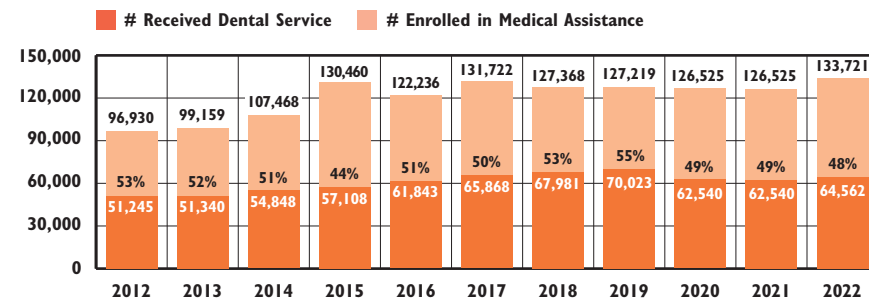
Children of Color have the highest rates of tooth decay and untreated dental problems. In Rhode Island and the U.S., higher-income, Asian, and non-Hispanic white children are less likely to have untreated tooth decay than lower income, non-Hispanic Black, or Hispanic children.^{9,10,11}

Improving children's dental health can begin with improving pregnant women's oral health, as well as the oral health of caregivers. Good oral health during pregnancy may decrease cavity-causing bacteria passed on to their baby, and good oral health of caregivers can improve the oral health of young children in their care. Some evidence suggests that poor oral health during pregnancy is a risk factor for some pregnancy complications and poor birth outcomes. Dental care can be safely provided during pregnancy. Women without insurance and women with low incomes are less likely receive dental care.^{12,13,14}

A dental home can provide comprehensive, continuously accessible, coordinated, and family-centered dental care for all children, including those with special needs. It is important to note that children with special health care needs may have problems finding and accessing dental providers who are equipped and able to address their special dental, medical, behavioral, and mobility needs.^{15,16}



Children Under 21 Enrolled in Medical Assistance* Programs Who Received Any Dental Service, Rhode Island, SFY 2012-2022



Source: Rhode Island Executive Office of Health and Human Services, State Fiscal Years (SFY) 2012-2022. *Medical Assistance includes RItE Care, RItE Share, and Medicaid fee-for-service.

◆ Forty-eight percent (64,562) of the children who were enrolled in RItE Care, RItE Share, or Medicaid fee-for-service on June 30, 2022 received a dental service during State Fiscal Year 2022. This is a slight decrease from last year.¹⁷

◆ The federal Early and Periodic Screening, Diagnostic and Treatment (EPSDT) standard requires that states provide comprehensive dental benefits to children with Medicaid coverage, including preventive dental services.¹⁸ In Rhode Island, 33% of children under age 18 with Medicaid received a preventive dental visit in 2020, compared to 46% of children with private coverage.¹⁹

◆ RItE Smiles, Rhode Island's managed care oral health program for children, has been credited with improving access to dental care for children. The program began in 2006, and covers low-income children and youth up to age 21.²⁰ As of December 31, 2022, there were 131,905 children and youth enrolled in RItE Smiles.²¹

◆ The federal *Affordable Care Act* made pediatric dental benefits mandatory offerings in individual and small employer plans.²² In Rhode Island, most health coverage on HealthSource RI (Rhode Island's state-based insurance marketplace) includes pediatric dental benefits as part of health coverage.²³



Dental Provider Participation in Medicaid and RIte Smiles

- ◆ Nationally, children and adults with public insurance coverage face access problems because many private dentists do not accept Medicaid. Dental providers cite low reimbursement rates and cumbersome administrative requirements as obstacles to providing care. Additional access barriers for children and families with public insurance include difficulty with transportation, lack of child care, and issues with paperwork. Family education, case management, and streamlining administrative procedures can encourage provider enrollment and patient utilization.^{24,25}
- ◆ When RIte Smiles started in 2006, reimbursement rates were raised for RIte Smiles dental providers to encourage participation.²⁶ The number of dentists accepting children with Medicaid coverage increased from 27 before RIte Smiles began to 213 in 2022, however participating peak in 2019 with 312 providers.^{27,28}
- ◆ In 2022, the Rhode Island General Assembly authorized a rate increase for dentists who provide adult Medicaid dental services. This was the first provider rate increase since 1992.²⁹



Consequences of Untreated Dental Disease

- ◆ Delayed dental care causes dental issues to worsen. Due to the COVID-19 pandemic and subsequent lockdown, there were many disruptions in dental care. Emergency care was the only type available in the beginning of COVID-19, and school closures also disrupted access to school-based care. Nationally, children's oral health declined as a result of the pandemic.³⁰
- ◆ In Rhode Island in 2021, 288 children and youth under age 21 were treated for a primary dental-related condition in Rhode Island emergency departments.³¹
- ◆ In Rhode Island in 2021, 58 children and youth under age 21 were hospitalized with a diagnosis that included an oral health condition. That same year, 11 children and youth under age 21 were hospitalized with an oral health condition as the primary reason for the hospitalization.³²



Importance of Early Dental Visits for Very Young Children

- ◆ Clinical recommendations are that children first visit the dentist before age one. However, nearly three-quarters (74%) of babies in the U.S. have not seen the dentist by their first birthday.³³
- ◆ Children can see general dentists, as well as pediatric dentists. Pediatric dentists are dentists with specialized training to work with only children.³⁴
- ◆ Between 2019-2022, 21% of Rhode Island kindergartners had untreated tooth decay. There are disparities by race/ethnicity and income, with Black and low income kindergartners having the highest rates.³⁵
- ◆ In 2015, the Rhode Island General Assembly passed legislation to increase access to oral health care for children by allowing dental hygienists to perform approved services in public health settings, including for young children.³⁶
- ◆ Primary care providers can conduct oral health risk assessments, provide anticipatory guidance, encourage establishing a dental home, and provide preventive services, all of which can improve oral health outcomes.³⁷
- ◆ All 50 state Medicaid programs reimburse primary care medical providers for preventive oral health services for very young children, including risk assessment and fluoride varnish application.³⁸

References

- ^{1,6,9,15,22,24,33} *The state of little teeth: Second edition.* (2019). Chicago, IL: American Academy of Pediatric Dentistry.
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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 concerns in Rhode Island.

SIGNIFICANCE

Mental health in childhood and adolescence is defined as the achievement of expected developmental, cognitive, social, and emotional milestones and the ability to use effective coping skills. Mental health influences children's health and behavior at home, in school, and in the community. Mental health conditions can impair daily functioning, prevent or affect academic achievement, increase involvement with the juvenile justice and child welfare systems, result in high treatment costs, diminish family incomes, and increase the risk for suicide. Children with mental health issues are also likely to have other chronic health conditions.^{1,2,3,4}

Mental health problems affect children of all backgrounds. In 2021, one in four (24.4%) children ages three to 17 had a mental, emotional, or behavioral health problem in Rhode Island.⁵ However, many children and youth have trouble getting mental health treatment. In Rhode Island in

2021, more than one-third (36%) of children ages three to 17 who needed mental health treatment or counseling had a problem obtaining needed care.⁶

Risk factors for childhood mental health disorders include environmental factors like prenatal exposure to toxins (including alcohol), physical or sexual abuse, adverse childhood experiences, toxic stress, a family history of mental health issues, involvement with the juvenile justice and child welfare systems, and living in poverty.^{7,8,9}

Nationally, children and youth were experiencing mental health challenges before the COVID-19 pandemic, but since the onset of the pandemic, the number of children experiencing anxiety and depression has increased.¹⁰ In 2022, Rhode Island pediatric and behavioral health organizations declared a Child and Adolescent Mental Health State of Emergency.¹¹ Kids' Link RI, a behavioral health triage service and referral network, saw an increase in calls during the pandemic. In FY 2022, there were 7,611 calls to Kids' Link RI. The number of calls peaked in FY 2021 (9,702), when there were twice as many calls received as in FY 2019, before the onset of the pandemic (4,849).^{12,13} Mental health systems tend to be fragmented and crisis-driven with disproportionate spending on high-end care and inadequate investments in prevention and community-based services.^{14,15,16}



Continuum of Mental Health Care Throughout the Life Course

- ◆ Increasing the availability of outpatient services could reduce the dependency on higher-end care by intervening prior to mental health crises.¹⁷ Collaboration across systems connected to youth mental health needs -- primary care/pediatrician offices, schools, community organizations, child welfare programs, and child care centers -- is crucial.^{18,19}
- ◆ In Rhode Island, Community Mental Health Organizations (CMHOs) are the primary source of public mental health treatment services for children and adults.²⁰ During 2022, 6,389 children under age 18 were treated at CMHOs.²¹ Rhode Island also has a growing number of Certified Community Behavioral Health Clinics (CCBHCs) that provide a comprehensive range of services to individuals with behavioral health needs.²²
- ◆ Mental health conditions and mental wellness must be addressed throughout all stages of life, including early childhood and as youth transition to adults.²³ Infants who do not develop secure attachment with at least one caregiver are at risk for learning delays, relationship dysfunction, difficulty expressing emotions, and future mental health disorders.^{24,25} Children with mental health diagnoses often continue to have mental health needs and require a proper transition into the adult behavioral health system.²⁶



Disparities in Mental Health Needs and Care for Children and Adolescents

- ◆ Children living in poverty are two to three times more likely to develop mental health conditions than their peers.²⁷ In State Fiscal Year (SFY) 2022, 26% (31,627) of children under age 19 enrolled in Medicaid/RIte Care had a mental health diagnosis.²⁸
- ◆ In SFY 2022, 901 children under age 19 enrolled in Medicaid/RIte Care were hospitalized due to a mental health related condition (down from 1,096 in SFY 2021), and 2,515 children had a mental health related emergency department visit (up from 2,246 in SFY 2021).²⁹
- ◆ In 2021, LGBTQ+ Rhode Island high school students reported higher rates of sadness and hopelessness than their peers.^{30,31} LGBTQ+ students, as well as Youth of Color, are more likely to have had their mental health impacted by the COVID-19 pandemic and have additional barriers to accessing and receiving adequate mental health treatment.³²



Psychiatric Hospitals

Children Under Age 18 Treated at Rhode Island Psychiatric Hospitals,
October 1, 2021 – September 30, 2022 (FFY 2022)

	BRADLEY HOSPITAL GENERAL PSYCHIATRIC SERVICES		BRADLEY HOSPITAL DEVELOPMENTAL DISABILITIES PROGRAM		BUTLER HOSPITAL ADOLESCENT PSYCHIATRIC SERVICES	
	# TREATED	AVERAGE LENGTH OF STAY	# TREATED	AVERAGE LENGTH OF STAY	# TREATED	AVERAGE LENGTH OF STAY
Inpatient	513	34 days	85	62 days	596	9 days
Residential	138	79 days**	40	7.8 years	--	--
Partial Hospitalization	650	35 visits	112	35 visits	733	4 visits
Home-Based	0	NA	22	15 visits	--	--
Outpatient	906	**	26	**	900	NA

Source: Lifespan, 2021-2022 and Butler Hospital, 2021-2022. Programs can have overlapping enrollment. Number treated is based on the hospital census (i.e., the number of patients seen in any program during FFY 2022). The average length of stay is based on discharges. ** Only total number treated with outpatient services by the Lifespan Physician Group is available.

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

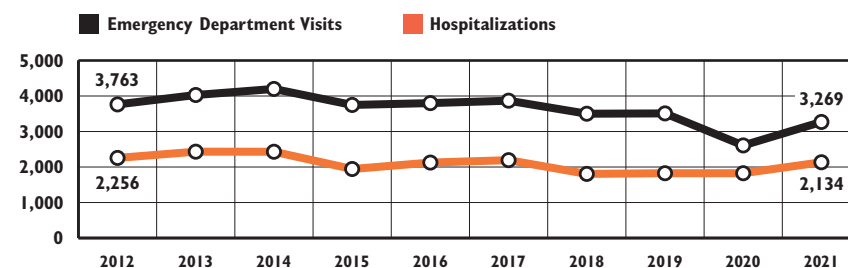
◆ The two hospitals in Rhode Island that specialize in providing intensive inpatient treatment and psychiatric care to children and youth are Bradley Hospital and Butler Hospital. The most common diagnoses for youth treated at Butler or Bradley Hospitals in FFY 2022 in an inpatient setting were depressive disorders, anxiety disorders, adjustment disorders, and childhood/adolescent disorders.^{33,34}

◆ In Federal Fiscal Year (FFY) 2022, there were 1,144 children and youth awaiting psychiatric inpatient admission (psychiatric boarding), compared to FFY 2019 when there were 437 boarders. The average wait time for psychiatric admission in FFY 2022 was 6.2 days, compared to 3.2 days in FFY 2020. In FFY 2022, an average of two children per day were ready to leave the psychiatric hospital but were unable due to a lack of step-down availability or there being no other safe placement (including at home).^{35,36}

◆ Bradley Hospital has a Developmental Disabilities Program that offers highly specialized inpatient and residential services to children and adolescents who show signs of serious emotional and behavioral problems in addition to developmental disabilities. Lifespan School Solutions owns and operates six Bradley schools and four community-based classrooms/public school partnerships. The programs had an average daily enrollment of 378 students in FFY 2022.³⁷



Emergency Care for Primary Diagnosis of Mental Disorder, Children Under Age 18, Rhode Island, 2012-2021*



Source: Rhode Island Department of Health, Hospital Discharge Database, 2012-2021. *Data are for emergency department visits and hospitalizations, not children. Children may visit emergency department or be hospitalized more than once. *Emergency department counts include all visits regardless of outcome and are not comparable to previous Factbooks. Note: Effective October 1, 2015, the International Classification of Disease (ICD) codes changed from the 9th classification to the 10th classification, which may impact comparability across the years.

◆ In 2021, there were 3,269 emergency department visits and 2,134 hospitalizations of Rhode Island children with a primary diagnosis of mental disorder.³⁸ Of these emergency department visits, 60% were of children enrolled in RIte Care/Medicaid and 37% had commercial insurance.³⁹



Suicide Among Rhode Island Children and Youth

◆ Children and youth with mental health conditions are at increased risk for suicide.⁴⁰ In 2021, 38% of Rhode Island high school students reported feeling sad or hopeless for more than two weeks during the past year, continuing an upward trend. Girls were twice as likely as boys to report these feelings. Almost 10% of Rhode Island high school students reported attempting suicide one or more times during the past year.⁴¹

◆ In Rhode Island between 2017 and 2021, there were 2,458 emergency department visits and 1,305 hospitalizations of youth ages 13 to 19 due to suicide attempts or intentional self-harm.⁴² Suicidal or self-injurious behavior accounted for 15% of the reasons for calls to Kids' Link RI during FY 2022.⁴³

◆ Seventeen children ages 15 to 19 died due to suicide in Rhode Island between 2017-2021. Of the 17 youth who died from suicide, 24% were female, and 76% were male.⁴⁴

(References are on page 179)

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 those required generally by children. Special needs can be physical, developmental, behavioral, and/or emotional. This indicator measures the number of children with special health care needs enrolled in Early Intervention, special education, Supplemental Security Income (SSI), and Medical Assistance.

SIGNIFICANCE

An estimated 20% of children in the U.S. and 22% of children in Rhode Island have at least one special health care need.¹ Children with special health care needs (CSHCN) can have impairments of varying degrees in physical, developmental, emotional, and/or behavioral functioning.² In 2021, 46% of parents with young children in Rhode Island and 35% of parents nationally reported completing a developmental screening.³ In Rhode Island, 15% of CSHCN have “more complex health needs”, which is the same nationally. Needs among CSHCN can include physical challenges, chronic health conditions, learning challenges, and emotional or developmental issues.⁴ The COVID-19 pandemic disproportionately affected children

with special needs including an increased risk of severe illness, disruptions in necessary services, loss of in-person instruction, and barriers to effective remote learning.⁵

Raising a child with special health care needs is often challenging; however, many parents report caring for a CSHCN can increase patience, compassion, personal strength, and deepen relationships with family and professionals. CSHCN can be a positive influence on other children and adults.⁶

CSHCN may require physical health, mental health, and education services, special equipment, or assistive technology. Health-related needs are best met with a comprehensive, coordinated, and family-centered medical home. Families may also need help with transportation, child care, family support, and home modifications. Having children with special needs can significantly impact parents’ finances, employment, and family lives.^{7,8,9}

In 2014, Congress passed the *Achieving a Better Life Experience Act (ABLE)*, which created tax-exempt saving accounts for people who become disabled before age 26. *ABLE* accounts can cover a range of expenses, including health care, education, housing, transportation, and employment training.^{10,11} In 2015, the Rhode Island General Assembly established *ABLE* savings accounts for Rhode Islanders with special health care needs.¹²



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 (EI) services to all infants and toddlers under age three who have developmental delays or have a diagnosed physical or mental condition that is associated with a developmental delay.¹³
- ◆ As of June 30, 2022, nine certified EI provider agencies served 1,921 children in Rhode Island. 682 of those children receiving EI services were female and 1,239 were male. Of these children, 55% were white, 31% were Hispanic, 8% were Black, 3% were Multiracial, 2% were Asian, and <1% were American Indian or Alaska Native.¹⁴



Children Enrolled in Special Education

- ◆ Under *IDEA Part B*, local school systems are responsible for identifying, evaluating, and serving students ages three to 21 who have disabilities that might require special education and related services.¹⁵
- ◆ As of June 30, 2022, in Rhode Island, there were 2,920 children ages three to five who received preschool special education services.¹⁶
- ◆ In Rhode Island as of June 2022, 22,165 students in public schools in grades K-12 received special education services (16% of all students). Thirty-six percent 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 services at age three. In 2022, 67% of the 1,153 children who reached age three while in EI were determined to be eligible for preschool special education, 16% were found not eligible, and 12% did not have eligibility determined when exiting EI. The remainder completed their service plan prior to reaching the maximum age for EI, moved out of state, withdrew, or were otherwise unreachable for follow-up.¹⁸



Medical Assistance for Children With Special Health Care Needs

◆ As of December 31, 2022, there were 4,392 Rhode Island children and youth under age 19 receiving Medical Assistance benefits through their enrollment in the federal SSI program.^{19,20}

◆ In Rhode Island, the Katie Beckett eligibility provision provides Medical Assistance coverage to children under age 19 who have serious disabling conditions, to enable them to be cared for at home instead of in an institution.²¹ As of December 31, 2022, there were 797 Rhode Island children enrolled through the Katie Beckett provision, a decline of 55% from the peak enrollment of 1,770 in 2007.^{22,23}

◆ Children with special health care needs have a variety of coverage options under Medicaid. Medicaid coverage also provides access to the Early and Periodic Screening, Diagnostic, and Treatment benefit, which requires that children receive all the services they need.^{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 problems, developmental delays, and serious health problems than other children. They often enter the child welfare system in poor health and face difficulties accessing services while in care.^{26,27}

◆ As of December 31, 2022, 1,918 children in Rhode Island were enrolled in Medical Assistance through the child welfare system.²⁸ Per provisions of the federal *Affordable Care Act*, all youth who turned age 18 while in foster care are eligible for Medicaid coverage until they reach age 26 in the state in which they aged out of care.²⁹ In Rhode Island, estimates show that 75% of all eligible former foster youth were enrolled in Medicaid coverage as of December 31, 2022.³⁰

◆ Children who are adopted through the Rhode Island Department of Children, Youth and Families and have special needs may qualify for Medical Assistance coverage.³¹ As of December 31, 2022, 3,280 children were enrolled in Medical Assistance because of special needs adoptions.³²



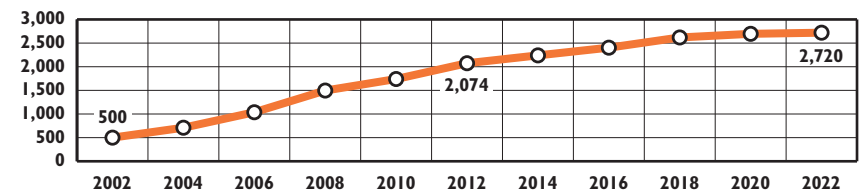
Children With Autism Spectrum Disorder (ASD)

◆ Autism Spectrum Disorder (ASD) is a developmental disability that can cause significant social, communication, and behavioral challenges. Children diagnosed with ASD have a variety of symptoms and experience challenges and abilities that range widely in severity. Many children with ASD face challenges in social interaction, speech/language, and communication and demonstrate repetitive behaviors and routines.³³

◆ The national ASD prevalence among children age eight is estimated to be 27.6 per 1,000 children. ASD prevalence is significantly higher among boys (43.0 per 1,000 boys) than girls (11.4 per 1,000 girls). ASD prevalence is higher among Asian/Pacific Islander, Hispanic, and Black children (33.4, 31.6, and 29.3 per 1,000 children, respectively) than non-Hispanic white children (24.3 per 1,000 children).³⁴



Children Ages Three to 21 With Autism Spectrum Disorder (ASD), Rhode Island, June 2002 – June 2022



Source: Rhode Island Department of Education, June 2002– June 2022. Numbers include parentally-placed students.

◆ In June 2022, there were 2,720 Rhode Island children ages three to 21 with ASD who received special education services.³⁵ The increase in number of children with ASD has been attributed, in part, to improved awareness and better screening and evaluation tools, as well as the broadening of the definition of ASD.³⁶ Early and appropriate identification and sustained interventions by skilled professionals can result in improvements in the levels of independent functioning of children and youth with ASD.^{37,38}

References

¹ Child and Adolescent Health Measurement Initiative. (n.d.). *2020-2021 National Survey of Children's Health: Children with special health care needs*. Retrieved from childhealthdata.org

² Health Resources & Services Administration, Maternal and Child Health Bureau. (2021). *Children and youth with special health care needs*. Retrieved from mchb.hrsa.gov

(continued on page 180)

Family Home Visiting

DEFINITION

Family home visiting is the number of families enrolled in home visiting programs funded by the Rhode Island Department of Health.

SIGNIFICANCE

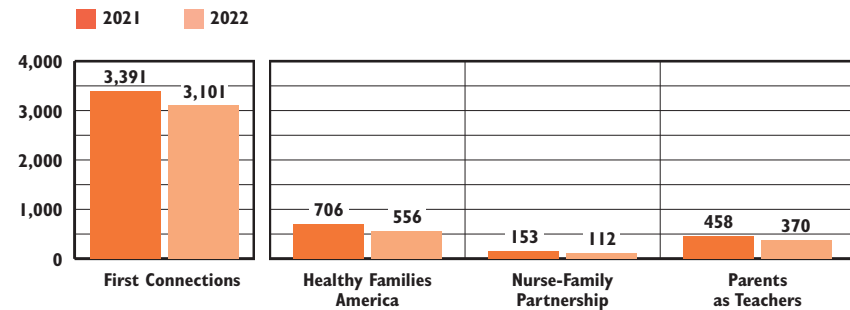
Parents are the most important individuals in a child's life, particularly during infancy and early childhood. Infants and toddlers who receive responsive, nurturing care and are provided with opportunities to learn have a strong foundation for success. When parents face obstacles that impact their ability to meet the needs of their babies, the child's health, development, and learning trajectory are threatened.^{1,2}

Home visiting programs are designed to reach young children and their families at home. Each program is different, but all provide parenting education to foster healthy, safe, and stimulating environments for young children. Children in vulnerable families who participate in high-quality home visiting programs have improved language, cognitive, and social-emotional development and are less likely to experience child neglect and abuse. Families who participate are more likely to provide an enriching home environment, use positive discipline strategies, and become more economically secure through education

and employment. Some home visiting programs can also improve maternal and child health, reducing long-term health care costs.^{3,4,5}

In 2010, federal legislation established the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) program to expand and improve state-administered home visiting programs for vulnerable families with young children. This funding must be spent by states on approved models that meet rigorous evidentiary standards.⁶ In 2022, there were 24 home visiting models identified as effective, evidence-based programs for families during the prenatal period and early childhood years, with evidence showing they produce statistically significant improvements in outcomes for children and families.⁷ Rhode Island uses MIECHV funding to implement three of these evidence-based models: Healthy Families America, Nurse-Family Partnership, and Parents as Teachers, and the federal government directly funds the Early Head Start home-based option.^{8,9} In order to achieve improved outcomes for children, evidence-based programs must meet the needs of the community, follow national high-quality program standards, and focus on continuous program improvement.¹⁰


Family Home Visiting Program Participation, Rhode Island, 2021-2022



Source: Rhode Island Department of Health, Family Home Visiting, Family Visiting Database enrollment in MIECHV-funded programs on October 1, 2021 and October 1, 2022 and KIDSNET, unduplicated families receiving at least one First Connections visit in Calendar Year 2022.

◆ **Rhode Island's First Connections Family Visiting Program is a statewide, short-term home visiting program designed to help families get connected to needed resources and is the Child Find program to identify children who may be eligible for Early Intervention services under the *Individuals with Disabilities Education Act*.¹¹ In 2022, 3,101 children received at least one First Connections home visit, down 9% from 2021. Fifty-two percent of children lived in one of the four core cities and 48% in the remainder of the state.¹²**

◆ **As of October 2022, 1,038 families were participating in an evidence-based home visiting program in Rhode Island, down 21% from October 2021. The decrease in participation can be attributed to a reduction in funded program capacity to increase wages for family home visitors in response to the ongoing staffing crisis and staffing challenges.¹³**

◆ **Among the children enrolled in an evidence-based, comprehensive model, 44% were white, 19% were Black, 6% were Multiracial, 1% were Asian, <1% were American Indian or Alaska Native, <1% were Native Hawaiian or Other Pacific Islander, and 29% were of an unknown race or declined to answer. Within these race categories, 49% of enrolled children were Hispanic.¹⁴**

◆ **Home-based Early Head Start is also recognized as an evidence-based home visiting program that improves child outcomes.¹⁵ As of October 2022 in Rhode Island, there were 268 children enrolled in home-based Early Head Start.¹⁶**

Table 17.

Family Home Visiting, Rhode Island, 2022

CITY/TOWN	COMMUNITY CONTEXT, 2022			# RECEIVED FIRST CONNECTIONS VISIT IN 2022	# FAMILIES ENROLLED IN EVIDENCE-BASED HOME VISITING PROGRAMS, OCTOBER 1, 2022			
	TOTAL # OF BIRTHS	# OF BABIES BORN WHO SCREENED RISK POSITIVE	# OF BIRTHS TO LOW-INCOME FAMILIES		HEALTHY FAMILIES AMERICA	NURSE- FAMILY PARTNERSHIP	PARENTS AS TEACHERS*	TOTAL
Barrington	114	41	11	9	5	0	2	7
Bristol	127	70	26	22	3	0	35	38
Burrillville	110	63	36	15	2	0	2	4
Central Falls	275	236	213	98	50	19	24	93
Charlestown	51	27	13	19	2	0	4	6
Coventry	327	198	91	87	18	1	8	27
Cranston	754	474	267	264	32	6	22	60
Cumberland	294	141	63	49	6	1	1	8
East Greenwich	141	53	15	24	0	0	0	0
East Providence	418	265	142	53	10	4	12	26
Exeter	49	22	11	14	0	0	2	2
Foster	38	23	11	5	1	0	0	1
Glocester	70	44	12	16	1	0	1	2
Hopkinton	55	24	8	18	0	0	5	5
Jamestown	19	8	4	7	1	0	0	1
Johnston	263	167	87	66	4	2	5	11
Lincoln	193	109	51	38	1	2	5	8
Little Compton	7	4	1	1	1	0	0	1
Middletown	138	65	36	37	4	0	5	9
Narragansett	65	34	13	22	0	0	2	2
New Shoreham	10	6	3	2	0	0	2	2
Newport	190	127	84	48	13	1	3	17
North Kingstown	204	90	35	59	1	1	0	2
North Providence	311	191	94	71	7	1	5	13
North Smithfield	79	40	17	14	0	0	3	3
Pawtucket	805	622	464	164	59	21	40	120
Portsmouth	111	49	21	26	6	0	1	7
Providence	2,245	1,780	1,440	1178	238	43	73	354
Richmond	89	37	17	16	1	0	0	1
Scituate	86	39	16	9	0	0	0	0
Smithfield	157	77	32	29	1	0	1	2
South Kingstown	159	73	35	60	3	0	2	5
Tiverton	62	39	19	12	4	0	2	6
Warren	80	49	23	12	3	1	8	12
Warwick	663	382	171	202	33	3	15	51
West Greenwich	48	26	7	11	0	1	0	1
West Warwick	274	183	105	103	17	3	7	27
Westerly	142	84	47	58	2	0	24	26
Woonsocket	468	384	304	163	27	2	48	77
Unknown	NA	NA	NA	0	0	0	1	1
Four Core Cities	3,793	3,022	2,421	1,603	374	85	185	644
Remainder of State	5,898	3,324	1,624	1,498	182	27	185	394
Rhode Island	9,691	6,346	4,045	3,101	556	112	370	1,038

Source of Data for Table/Methodology

Evidence-Based Family Home Visiting program data are from the Rhode Island Department of Health, Family Home Visiting, Family Visiting Database. Birth data and First Connections data are from Rhode Island Department of Health, Center for Health and Data Analysis, KIDSNET. Number of births with one or more risk factor is the “risk positive” definition from the Developmental Risk Assessment. Births to low-income families are births to families with public health insurance (Medicaid/RIteCare) or no insurance.

*From 2018 to 2021, enrolled families included all families participating in Parents as Teachers programs, including those without MIECHV funding.

Unknown: Specific city/town information is unavailable.

Core cities are Central Falls, Pawtucket, Providence, and Woonsocket

References

- ^{1,3} *Home visiting: Improving outcomes for children.* (2021). Washington, DC: National Conference of State Legislatures.
- ^{2,5} *Early childhood home visiting: What legislators need to know.* (2019). Washington, DC: National Conference of State Legislatures.
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- ⁹ *Head Start program facts: Fiscal Year 2021.* (2022). Retrieved March 21, 2023, from eclkc.ohs.acf.hhs.gov
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Women with Delayed Prenatal Care

DEFINITION

Women with delayed prenatal care is the percentage of women receiving prenatal care beginning in the second or third trimester of pregnancy. Data are reported by place of mother's residence, not place of infant's birth.

SIGNIFICANCE

Early prenatal care is an important way to identify and treat health problems as well as influence health behaviors that can affect 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 low birthweight or who die within the first year of life.^{1,2}

Effective prenatal care screens for and intervenes with a range of maternal needs including nutrition, social support, mental health, smoking cessation, substance use, domestic violence, and unmet needs for food and shelter. A prenatal visit is the first step in establishing an infant's medical home and can provide valuable links to other services.^{3,4}

Early prenatal care is especially important for women who face multiple risks for poor birth outcomes, as is ensuring access to health care services before pregnancy. Effective monitoring and treatment of chronic disease,

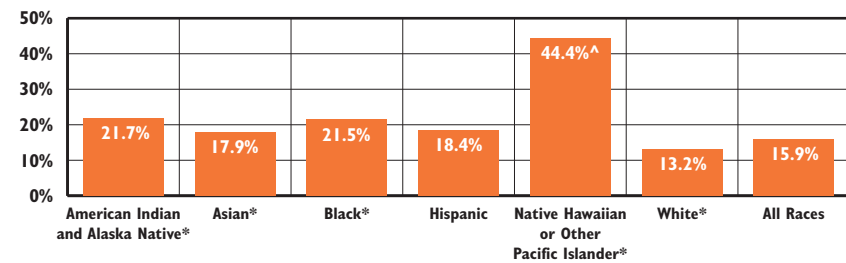
providing health education, implementing and enhancing Medicaid policies, improving health insurance coverage, and ensuring access to culturally and linguistically competent health providers can improve prenatal care for women of childbearing age.^{5,6}

Barriers to prenatal care include not knowing one is pregnant, not being able to get an appointment or start care when desired, lack of transportation or child care, inability to get time off work, and financial constraints (including lack of insurance or money to pay for desired care).⁷ Rhode Island women with delayed prenatal care are more likely to report their pregnancy was unintended than women who initiated care in the first trimester. Access to contraception, preventative health care services, and the overall health and economic well-being of individuals impact pregnancy intention.^{8,9}

Maternal health before pregnancy (preconception), during pregnancy, and after birth (postpartum) impact health outcomes. Currently, there is a maternal health crisis nationally and in Rhode Island. Beyond that, there are persistent racial and ethnic disparities that disproportionately impact health outcomes for Black, Indigenous, People of Color (BIPOC) women.¹⁰



Women With Delayed or No Prenatal Care by Race/Ethnicity, Rhode Island, 2017-2021



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021. * Race categories are non-Hispanic. ^Due to small numbers please interpret percentage with caution.

◆ In Rhode Island between 2017 and 2021, 15.9% of women who gave birth did not begin care until the second or third trimester if at all. Between 2017 and 2021 in Rhode Island, Native Hawaiian or Other Pacific Islander (44.4%), American Indian and Alaska Native (21.7%), Black (21.5%), Hispanic (18.4%), and Asian women (17.9%) were more likely to receive delayed prenatal care than white women (13.2%).¹¹

◆ Between 2017 and 2021 in Rhode Island, women who did not graduate from high school were more likely to receive delayed prenatal care than women with more than a high school education (25.2% compared to 13.0%). Adolescent and teen mothers were more likely to receive delayed prenatal care than older mothers in Rhode Island.¹² About one in five (19.8%) pregnant women in the four core cities received delayed prenatal care compared to 13.4% in the remainder of the state.¹³



Insurance Coverage Improves Access to Prenatal Care

◆ In the U.S. and Rhode Island, women with private insurance have the highest rates of timely prenatal care. Health care before pregnancy is important for maintaining women's reproductive health and ensuring that they can access the reproductive health services they may need to become pregnant, if and when they want to.^{14,15}

◆ Between 2017 and 2021, women with health coverage through RIte Care (Rhode Island's Medicaid managed care program) were much less likely (20.0%) to receive delayed/no prenatal care than women who were uninsured (39.9%). Women with private insurance coverage were the least likely to receive delayed/no prenatal care (11.9%).¹⁶



Racial/Ethnic Disparities in Severe Maternal Morbidity

◆ Nationally, Black women are three times more likely than white women to die of pregnancy-related complications.^{17,18} Racial disparities in maternal mortality span all levels of education, age, income, and insurance status.^{19,20}

◆ Pervasive racial bias and unequal treatment of Black women in the health care system often result in inadequate treatment for pain.^{21,22} This, coupled with stress from racism and racial discrimination, contribute to the unacceptable health outcomes among Black women and their infants.^{23,24}

◆ In Rhode Island, maternal mortality numbers are too small to report. To better measure maternal health during pregnancy and after childbirth, Rhode Island reports the prevalence of severe maternal morbidity. Severe maternal morbidity is defined as unintended outcomes of labor and delivery that result in significant consequences to a woman's health.²⁵

◆ In 2021, the Rhode Island severe maternal morbidity rate was 85 per 10,000 delivery hospitalizations up from 72 per 10,000 in 2020. Black women (112 per 10,000) and Hispanic women (99 per 10,000) had higher rates of maternal morbidity than white women (78 per 10,000) between 2017 and 2021.²⁶

Table 18. Delayed Prenatal Care, Rhode Island, 2017-2021

CITY/TOWN	# BIRTHS	# DELAYED CARE	% DELAYED CARE
Barrington	544	82	15.1
Bristol	660	95	14.4
Burrillville	593	85	14.3
Central Falls	1,457	312	21.4
Charlestown	264	23	8.7
Coventry	1,422	152	10.7
Cranston	3,691	580	15.7
Cumberland	1,603	228	14.2
East Greenwich	535	60	11.2
East Providence	2,147	317	14.8
Exeter	231	22	9.5 ^
Foster	200	27	13.5
Glocester	326	51	15.6
Hopkinton	327	32	9.8
Jamestown	134	11	8.2 ^
Johnston	1,290	192	14.9
Lincoln	858	131	15.3
Little Compton	70	10	14.3 ^
Middletown	786	90	11.5
Narragansett	259	27	10.4
New Shoreham	24	5	*
Newport	1,053	158	15.0
North Kingstown	1,065	117	11.0
North Providence	1,525	231	15.1
North Smithfield	424	75	17.7
Pawtucket	4,196	776	18.5
Portsmouth	655	70	10.7
Providence	11,409	2,306	20.2
Richmond	299	28	9.4
Scituate	420	70	16.7
Smithfield	717	116	16.2
South Kingstown	811	79	9.7
Tiverton	542	70	12.9
Warren	405	64	15.8
Warwick	3,509	417	11.9
West Greenwich	239	29	12.1
West Warwick	1,446	186	12.9
Westerly	887	89	10.0
Woonsocket	2,433	461	18.9
Unknown**	226	32	14.2
Four Core Cities	19,495	3,855	19.8
Remainder of State	29,961	4,019	13.4
Rhode Island	49,682	7,906	15.9

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021.

The denominator is the total number of live births to Rhode Island residents from 2017-2021.

*The data are statistically unreliable and rates are not reported and should not be calculated.

^The data are statistically unstable and rates or percentages should be interpreted with caution.

**Unknown: Specific city/town information unavailable

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

Due to birth certificate changes that began in 2015, comparisons with previous years should be made with caution. Delayed prenatal care is now a calculated variable that is based on the number of visits over 90 days (3 months). "No prenatal care" is not broken out.

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(continued on page 181)

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 in the U.S. Infants born before 37 weeks gestation are at higher risk than full-term infants for neurodevelopmental, respiratory, gastrointestinal, immune system, central nervous system, hearing, dental, and vision problems. Children who were born preterm may experience physical disabilities, learning difficulties, and behavioral problems later in life.^{1,2,3}

Late preterm infants (34-36 weeks gestation) can experience immediate and long-term complications but infants born very preterm (<32 weeks gestation) are at highest risk for death, enduring health problems, more and longer hospitalizations, and increased health care costs later in life.^{4,5} Preventive interventions and treatments can improve outcomes for preterm infants and their caregivers.⁶

While the specific causes of preterm births are largely unknown, research indicates that there are several interrelated risk factors involved. The three leading risk factors are a history of preterm birth, pregnancy with multiples, and uterine

and/or cervical abnormalities. Other risk factors include some health conditions and infections, maternal weight, delayed or no prenatal care, stress, domestic violence, having pregnancies close together, and maternal substance use.^{7,8}

In 2021, the U.S. preterm birth rate (10.49%) was the highest since 2007. The preterm birth rate varies by race/ethnicity, with non-Hispanic Black women (14.8%) continuing to have the highest preterm birth rate in the U.S. in 2021. American Indian and Alaska Native women (12.3%) and Native Hawaiian and Other Pacific Island women (12.7%) also had preterm birth rates higher than Hispanic women (10.2%), non-Hispanic white women (9.5%), and Asian women (9.2%). The rate increased for each group between 2020 and 2021 following a slight decline the previous year.^{9,10} Higher rates of preterm-related causes of death account for more than half of the racial disparity in infant mortality between Black women and white women.¹¹

Preterm Births		
	2011	2021
RI	10.4%	9.7%
US	11.7%	10.5%
National Rank*	13th	
New England Rank**	6th	

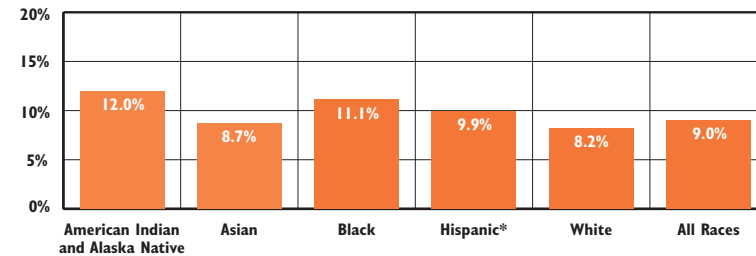
*1st is best; 50th is worst

**1st is best; 6th is worst

Source: For 2011: Martin, J. A., et al. (2013). Births: Final data for 2011. *NVSR*, 62(1), 1-19. For 2021: Martin, J. A., et al. (2023). Births: Final data for 2021. *NVSR*, 72(1), 1-19.



Preterm Birth Infants by Race/Ethnicity, Rhode Island, 2017-2021



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021. *Hispanic infants can be of any race.

◆ Between 2017 and 2021, 12.0% of births of non-Hispanic American Indian and Alaska Native and 11.1% of births of non-Hispanic Black infants in Rhode Island were preterm, compared with 8.7% of non-Hispanic Asian and 8.2% of Non-Hispanic white infants. During this same time, 9.9% of births to Hispanic women in Rhode Island were preterm.¹²

◆ Between 2017 and 2021, 72.5% of all preterm births in Rhode Island were late preterm births (34-36 weeks gestation), and 15.7% of all preterm births were very preterm (<32 weeks gestation).¹³ Multiple births are more likely to be born preterm. In Rhode Island between 2017 and 2021, 60.6% of multiple births were preterm, compared with 7.3% of singleton births.¹⁴

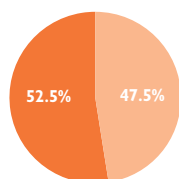
◆ Between 2017 and 2021, 11.8% of births to women who smoked during pregnancy were preterm compared to 8.9% of those who did not smoke during pregnancy. During this period, women with no insurance were more likely to have a preterm birth (12.1%) compared to 9.8% those with public insurance (RIte Care) and 8.3% of those with private insurance.¹⁵

◆ Social determinants of health, including poverty, housing, and access to reproductive care are important factors in preterm birth disparities. Racism and associated social stressors are additional risk factors that disproportionately impact Black women and Women of Color.^{16,17}

Preterm Births by Mother's Education Level, Rhode Island, 2017-2021

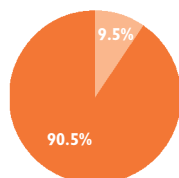
Less than High School

47.5% ■ Preterm Births
52.5% ■ Full-term Births



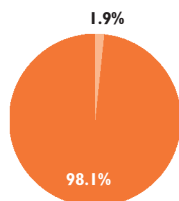
High School Diploma

9.5% ■ Preterm Births
90.5% ■ Full-term Births



Greater than High School

1.9% ■ Preterm Births
98.1% ■ Full-term Births



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021.

Table 19.

Preterm Births, Rhode Island, 2017-2021

CITY/TOWN	# BIRTHS	# PRETERM BIRTHS	% PRETERM BIRTHS
Barrington	567	43	7.6
Bristol	679	59	8.7
Burrillville	650	51	7.8
Central Falls	1,540	179	11.6
Charlestown	270	34	12.6
Coventry	1,463	112	7.7
Cranston	3,797	336	8.8
Cumberland	1,713	136	7.9
East Greenwich	551	42	7.6
East Providence	2,247	179	8.0
Exeter	237	18	7.6
Foster	205	19	9.3 ^
Glocester	345	25	7.2
Hopkinton	334	23	6.9 ^
Jamestown	136	9	*
Johnston	1,338	123	9.2
Lincoln	898	71	7.9
Little Compton	76	2	*
Middletown	805	56	7.0
Narragansett	266	24	9.0
New Shoreham	25	2	*
Newport	1,092	74	6.8
North Kingstown	1,098	91	8.3
North Providence	1,576	141	8.9
North Smithfield	469	38	8.1
Pawtucket	4,417	439	9.9
Portsmouth	665	47	7.1
Providence	11,913	1,197	10.0
Richmond	307	29	9.4
Scituate	432	36	8.3
Smithfield	734	55	7.5
South Kingstown	830	71	8.6
Tiverton	565	42	7.4
Warren	419	40	9.5
Warwick	3,620	305	8.4
West Greenwich	247	16	6.5 ^
West Warwick	1,512	154	10.2
Westerly	907	77	8.5
Woonsocket	2,668	256	9.6
Unknown	234	17	*
Four Core Cities	20,538	2,071	10.1
Remainder of State	31,075	2,580	8.3
Rhode Island	51,847	4,668	9.0

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021. The denominator is the total number of live births to Rhode Island residents from 2017-2021.

*The data are statistically unreliable and rates are not reported and should not be calculated.

^The data are statistically unstable and rates or percentages should be interpreted with caution.

Beginning in 2015, the federal Centers for Disease Control and Prevention and the Rhode Island Department of Health transitioned to a new standard for estimating the gestational age of the newborn. The new measure – the obstetric estimate of gestation at delivery (OE) – replaces the measure based on the data of the last normal menses (LMP).

The 2017-2021 five-year preterm birth percentage and the single year average are measured by OE. Because of this change, preterm birth data reported prior to the 2016 Factbook are not comparable. National preterm birth data use the OE measurement as of the 2007 data year at the time of publication of this Factbook.

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

References

¹ Centers for Disease Control and Prevention. (2019). *Preterm birth*. Retrieved February 24, 2022, from cdc.gov

^{2,5,8} Mayo Clinic. (2017). *Premature birth*. Retrieved February 24, 2022, from mayoclinic.org

³ Beauregard, J.L., et. al. (2018). Preterm birth, poverty, and cognitive development. *Pediatrics*, 141(1): e20170509.

⁴ Martin J.A., Osterman M.J.K. (2018). Describing the increase in preterm births in the United States, 2014–2016. *NCHS Data Brief, no 312*. Hyattsville, MD: National Center for Health Statistics.

⁶ World Health Organization (2022). *Preterm births*. Retrieved February 10, 2023, from who.org

⁷ March of Dimes. (2018). *Preterm labor and premature birth: Are you at risk?* Retrieved February 24, 2022, from marchofdimes.org

(continued on page 181)

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 and death than babies of normal weights. Factors that influence infant birthweight include maternal smoking, poverty, level of educational attainment, infections, exposure to violence, stress, prenatal nutrition, and environmental hazards.^{1,2,3}

Low birthweight is often a result of a premature birth but can also occur after a full-term pregnancy. Fetal growth restriction results in low birthweight babies and may be caused by infection, birth defects, or simply because the baby’s parents are small.⁴

Smoking during pregnancy increases risk of low birthweight.^{5,6} In Rhode Island between 2017 and 2021, 4.7% of births were to mothers who smoked during their pregnancy. During that time, Rhode Island smokers (13.8%) were more likely to deliver a low birthweight infant compared to women who did not smoke (7.3%).⁷

Children born at very low birthweight (less than 3.3 pounds or 1,500 grams) are more than 100 times more likely to die within the first year of life than infants of normal birthweight. Those who survive are at higher risk of long-term health issues, including heart disease, diabetes, obesity, and intellectual and developmental disabilities. Low birthweight babies are also at greater risk for long-term learning difficulties and mental health issues than their peers.^{8,9,10}

In the U.S. in 2021, 8.5% of infants were born at low birthweight, which is a slight increase from 8.1% in 2011. In Rhode Island in 2021, 7.9% of Rhode Island’s infants were born at low birthweight, which is higher than 7.4% in 2011.^{11,12} The low birthweight related infant mortality rate decreased between 2020 and 2019 but still remains a top cause of infant mortality in the U.S.¹³

Low Birthweight Infants		
	2011	2021
RI	7.4%	7.9%
US	8.1%	8.5%
National Rank*		21st
New England Rank**		5th

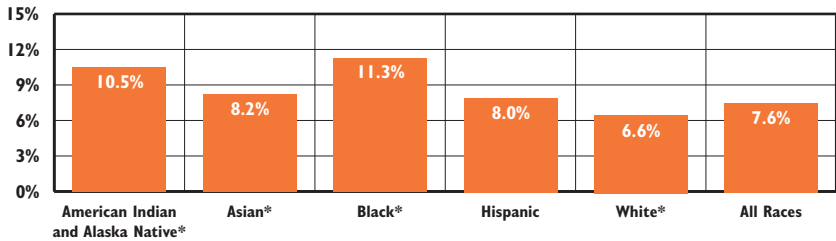
*1st is best; 50th is worst

**1st is best; 6th is worst

Source: For 2011: Martin, J. A., et al. (2013). Births: Final data for 2011. *National Vital Statistics Reports*, 62(1), 1-70. For 2021: Martin, J. A., Hamilton, B. E., Osterman, M. J. K., Driscoll, A. K., & Drake, P. (2023). Births: Final data for 2021. *National Vital Statistics Reports*, 72(1), 1-43.



Low Birthweight Infants by Race/Ethnicity, Rhode Island, 2017-2021*



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021. * Race categories are non-Hispanic.

◆ In Rhode Island between 2017 and 2021, 10.5% of American Indian and Alaska Native infants, 8.2% of Asian infants, 11.3% of Black infants, and 8.0% of Hispanic infants, were born at low birthweight, compared to 6.6% of white infants.¹⁴ Nationally, there are racial and ethnic disparities in low birthweight including for Black, Native American, and Native Hawaiian and Other Pacific Islander Infants.¹⁵

◆ Factors that persist throughout Women of Color’s lives, —such as increased stress, income inequality, insufficient health care, toxic environmental exposures, lack of safe and affordable housing, and/or discrimination — have been shown to increase the likelihood of delivering a low birthweight baby.^{16,17}

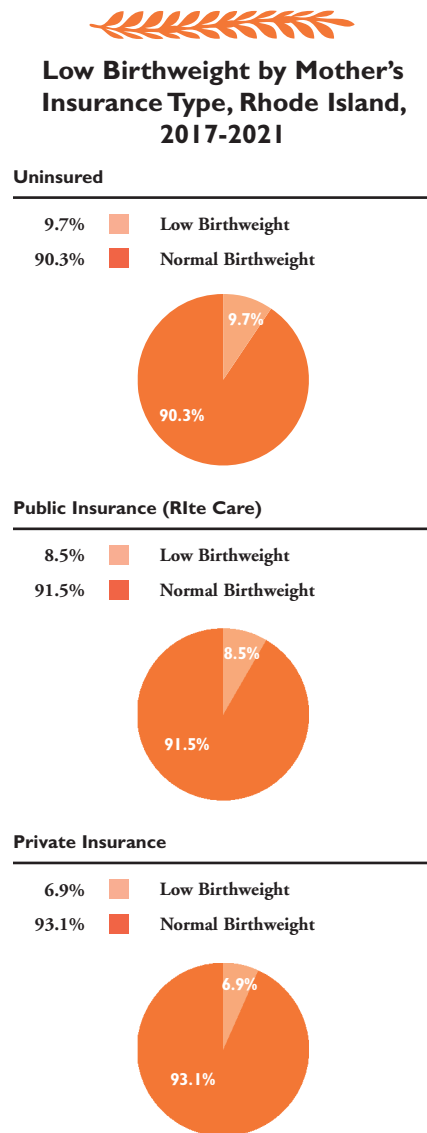
◆ Between 2017 and 2021 in Rhode Island, 10.3% of births among women under age 20 were low birthweight compared to 7.5% of those over age 20; 8.7% of infants born to women living in the four core cities were low birthweight compared to 6.8% in the remainder of the state; and 8.7% of infants born to women with a high school degree or less were low birthweight, compared to 7.0% of those born to women with higher education levels.¹⁸

◆ Rhode Island women who deliver a low birthweight infant are more likely to report smoking while pregnant, feeling unsafe in their neighborhood, delayed or no prenatal care, a depression diagnosis, and domestic violence; as well as health issues during their pregnancy (such as high blood pressure or hypertension) than those with a normal weight baby.^{19,20}

◆ Between 2017 and 2021 in Rhode Island, 1.3% of all live births were born at very low birthweight (less than 1,500 grams or 3.3 pounds).²¹

Low Birthweight Infants

Table 20. Low Birthweight Infants, Rhode Island, 2017-2021



Source: Rhode Island Department of Health, Center for Health Data and Analysis. Maternal and Child Health Database, 2017-2021. Data for births in 2021 are provisional.

CITY/TOWN	# BIRTHS	# LOW BIRTHWEIGHT	% LOW BIRTHWEIGHT
Barrington	567	36	6.3
Bristol	679	46	6.8
Burrillville	650	41	6.3
Central Falls	1,540	127	8.2
Charlestown	270	19	7.0 [^]
Coventry	1,463	84	5.7
Cranston	3,797	286	7.5
Cumberland	1,713	109	6.4
East Greenwich	551	33	6.0
East Providence	2,247	166	7.4
Exeter	237	13	5.5 [^]
Foster	205	16	7.8 [^]
Glocester	345	23	6.7 [^]
Hopkinton	334	15	4.5 [^]
Jamestown	136	10	*
Johnston	1,338	103	7.7
Lincoln	898	59	6.6
Little Compton	76	2	*
Middletown	805	58	7.2
Narragansett	266	23	8.6
New Shoreham	25	1	*
Newport	1,092	72	6.6
North Kingstown	1,098	63	5.7
North Providence	1,576	136	8.6
North Smithfield	469	24	5.1
Pawtucket	4,417	395	8.9
Portsmouth	665	39	5.9
Providence	11,913	1,040	8.7
Richmond	307	14	4.6 [^]
Scituate	432	26	6.0
Smithfield	734	42	5.7
South Kingstown	830	48	5.8
Tiverton	565	38	6.7
Warren	419	27	6.4
Warwick	3,620	250	6.9
West Greenwich	247	15	6.1 [^]
West Warwick	1,512	128	8.5
Westerly	907	73	8.0
Woonsocket	2,668	227	8.5
Unknown	234	17	*
Four Core Cities	20,538	1,789	8.7
Remainder of State	31,075	2,105	6.8
Rhode Island	51,847	3,911	7.5

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021.

The denominator is the total number of live births to Rhode Island residents between 2017 and 2021.

*The data are statistically unreliable and rates are not reported and should not be calculated.

[^]The data are statistically unstable and rates or percentages should be interpreted with caution.

Unknown: Births were to Rhode Island residents, but specific city/town information was unavailable.

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

References

- ¹ Low birth weight. (n.d.) Stanford Medicine Children's Health. Retrieved February 13, 2023, from stanfordchildrens.org
- ^{2,4,10} March of Dimes. (2021). *Low birthweight*. Retrieved February 13, 2023, from marchofdimes.org
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- ⁶ Centers for Disease Control and Prevention. (2020). *Tobacco use and pregnancy*. Retrieved February 25, 2022, from cdc.gov
- ^{7,14,18,19,21} Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021.
- ⁸ American Psychological Association. (2017). *Low birth weight babies at higher risk for mental health problems later in life*. [Press release]. Retrieved February 25, 2022, from www.apa.org
- ⁹ Ely, D. M. & Driscoll, A. K. (2021). Infant mortality in the United States, 2019: Data from the period linked birth/infant death file. *National Vital Statistics Reports* 70(14), 1-12.

(continued on page 181)

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, race and ethnicity, quality of and access to medical care, socioeconomic conditions, and public health practices. In the U.S., infant mortality rates are highest in the South.^{1,2}

In 2020, the five main causes of infant death in the U.S. were congenital malformations, low birthweight, sudden infant death syndrome (SIDS), unintentional injuries, and maternal complications. Sudden infant deaths now rank third most common and unintentional injuries rank fourth, exchanging rankings from 2019.³

The U.S. infant mortality rate has declined from 26.0 deaths per 1,000 live births in 1960 to 5.4 deaths per 1,000 live births in 2020 due to improvements in nutrition, medical advances, improved access to care, economic growth, and safer sleep practices.^{4,5,6} Relative to other industrialized countries, the U.S. has higher rates of infant mortality due in part to a relatively high number of preterm births.⁷

While infant mortality has declined in the U.S. across all racial and ethnic groups, disparities remain. Nationally in 2020, the non-Hispanic Black infant mortality rate was 10.4 deaths per 1,000 births, the American Indian/Alaska Native rate was 7.7, the Native Hawaiian or Other Pacific Islander rate was 7.2, the Hispanic rate was 4.7, the non-Hispanic white rate was 4.4, and the Asian rate was 3.1.⁸

The overall infant mortality rate in Rhode Island between 2017 and 2021 was 5.1 deaths per 1,000 live births. Mothers with a high school degree or less had a higher infant mortality rate (5.5 per 1,000 live births) than mothers with higher educational attainment (3.3 per 1,000 live births). Mothers with public insurance had a higher infant mortality rate (6.3 per 1,000 live births) than mothers with private insurance (3.2 per 1,000 live births).⁹

Infant Mortality Rate (rate per 1,000 live births)		
	2010	2020
RI	7.1	4.2
US	6.1	5.4
National Rank*	5th	
New England Rank**	2nd	

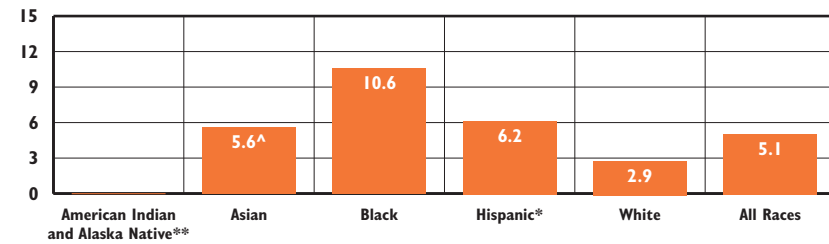
*1st is best; 49th is worst

**1st is best; 5th is worst

Source: The Annie E. Casey Foundation, KIDS COUNT Data Center, datacenter.kidscount.org



Infant Mortality Rate per 1,000 Live Births by Race/Ethnicity, Rhode Island, 2017-2021



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021. ^The data are statistically unstable and should be interpreted with caution. *Hispanic infants can be of any race. **Rate or percentage is too unstable to report.

◆ In Rhode Island between 2017 and 2021, the Black infant mortality rate was 10.6 deaths per 1,000 live births, which is more than three times the white infant mortality rate of 2.9 deaths per 1,000 live births.¹⁰ The Black infant mortality rate is the highest of any racial or ethnic group even after controlling for risk factors such as socioeconomic status and educational attainment.¹¹

◆ While the overall 2017-2021 infant mortality rate in Rhode Island of 5.1 is on track to meet the Healthy People 2030 target of 5.0 per 1,000 live births, there are disparities by race/ethnicity with the non-Hispanic Black, Hispanic, and Asian infant mortality rates well above the target.^{12,13}

◆ Structural racism and the associated stresses are at the root of disparities in maternal and infant mortality, resulting in dramatically higher mortality rates among Black mothers and their babies. It is critical to acknowledge structural racism and work to identify and remove systemic barriers that keep Black mothers and their babies from receiving needed care.¹⁴

◆ Nationally, although the Asian population has the lowest infant mortality rate, there are significant differences within subgroups. The Filipino infant mortality rate is significantly higher than all other Asian subgroups. Enhancing availability of disaggregated data for Asian, Native Hawaiian, Pacific Islander, and Southeast Asian people are important for efforts to advance health equity.¹⁵



Causes of Infant Mortality in Rhode Island

- ◆ Between 2017 and 2021, 265 infants died in Rhode Island before their first birthday, a rate of 5.1 per 1,000 live births. Between 2017 and 2021, 65% of infants who died were low birthweight (less than 2,500 grams) and 27% were born at normal weights. Between 2017 and 2021, 65% (173) of all infant deaths were preterm (born before the 37th week of pregnancy).¹⁶
- ◆ Of the 265 infant deaths between 2017 and 2021 in Rhode Island, 74% (195) occurred in the neonatal period (during the first 27 days of life). Generally, infant deaths in the neonatal period are related to short gestation and low birthweight, malformations at birth, and/or conditions occurring in the perinatal period. Between 2017 and 2021, 26% (70) of the 265 infant deaths in Rhode Island occurred in the post-neonatal period (between 28 days and one year after delivery).^{17,18}



Infant Mortality by Core City Status, Rhode Island, 2017-2021

CITY/TOWN	# OF BIRTHS	# OF INFANT DEATHS	RATE PER 1,000 LIVE BIRTHS
Four Core Cities	20,538	137	6.7
Remainder of State	31,309	128	4.1
<i>Rhode Island</i>	<i>51,847</i>	<i>265</i>	<i>5.1</i>

Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021. Core cities are Central Falls, Pawtucket, Providence, and Woonsocket. Unknown and missing counts were excluded and includes 17 infant deaths that did not link to a birth certificate.

- ◆ The overall infant mortality rate in Rhode Island between 2017 and 2021 was 5.1 deaths per 1,000 live births. The infant mortality rate was higher in the four core cities (6.7 per 1,000 live births) than in the remainder of the state (4.1 per 1,000 live births).¹⁹
- ◆ During 2017 and 2021, Providence had 93 infant deaths and an infant mortality rate of 7.8 per 1,000 live births, the highest of any city/town in Rhode Island. Pawtucket had the second highest with 24 infant deaths and a rate of 5.4 per 1,000 live births.²⁰
- ◆ 26 other cities and towns in Rhode Island had between 1 and 16 infant deaths and due to small numbers, the respective infant mortality rates are not reported or should be interpreted with caution. In Rhode Island, 11 cities and towns had no infant deaths between 2017 and 2021.²¹



Reducing Infant Mortality

- ◆ Strategies to reduce the risk of infant mortality include reducing risk factors or causes of infant mortality (birth defects, preterm and low birthweight infants), improving preconception and prenatal care, improving safe sleep practices, and newborn screening.²²
- ◆ Comprehensive state initiatives to reduce infant mortality should improve access to critical services; improve the quality of care to pregnant women; address maternal and infant mental health; enhance supports for families before and after birth; and improve data collection and oversight.²³
- ◆ Strategies to reduce racial and ethnic disparities in infant mortality include improving the quality of perinatal health care for Black families, increasing support in navigating the health care system, increasing access to midwives and doulas, training providers to address implicit racial biases, increasing diversity of the health care workforce, and dismantling barriers to mental health care for Families of Color.²⁴
- ◆ Policies that address the racial inequities in the social determinants of health (economic well-being, education access, health care, community/environment, social context) are important in reducing disparities. Reducing environmental, social, and economic stressors through laws and policies can help eliminate disparities in infant mortality (e.g., expanding access to health insurance and improving paid family leave policies, economic support policies, and smoke free laws).^{25,26}
- ◆ Participation in evidence-based family home visiting programs has been shown to reduce the risk of infant death.^{27,28} As of October 2022, there were 1,038 families enrolled in one of the evidence-based family home visiting programs coordinated by the Rhode Island Department of Health.²⁹

References

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- ² Centers for Disease Control and Prevention. (n.d.). *Infant mortality*. Retrieved March 18, 2022, from [cdc.gov](https://www.cdc.gov)
- ³ Murphy, S.L., Kochanek, K. D., Xu, J., & Arias, E. (2021). Mortality in the United States, 2020. *NCHS Data Brief, 427*, 1-7.
- ⁴ MacDorman, M. F. & Rosenberg, H. M. (1993). Trends in infant mortality by cause of death and other characteristics, 1960-88. *National Vital Statistics Reports, 20(20)*, 1-51.

(continued on page 181)

Breastfeeding

DEFINITION

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

SIGNIFICANCE

Breastfeeding is widely recognized as the ideal method of feeding and nurturing infants and is a critical component in achieving optimal infant and child health, growth, and development.^{1,2} National health experts recommend exclusive breastfeeding for six months after birth and continuous breastfeeding for at least 12 months after birth or longer as mutually desired by mother and child.³

Breastfeeding decreases infant mortality and morbidity. Infant benefits include optimal nutrition, stronger immune systems, and reduced risk for Sudden Infant Death Syndrome and chronic conditions such as asthma, obesity, type 1 diabetes, and ear infections. Breastfeeding benefits mothers by creating a strong bond with infants and decreasing risk for postpartum depression, type 2 diabetes, and hypertension. Breastfeeding provides significant social and economic benefits, including reduced cost to the family, reduced health care costs, and reduced employee absenteeism.^{4,5,6}

Breastfeeding can be effectively promoted by hospital and other birth

facility policies and practices that take place before, during, and after labor and delivery, including access to professional lactation consultants and involvement in community breastfeeding support networks.⁷ In 2015, Women & Infants Hospital became the second-largest hospital in the U.S. to achieve the “Baby-Friendly” designation, which recognizes breastfeeding support and promotion by birth facilities.⁸ There are now four Baby-Friendly hospitals in Rhode Island: Kent Hospital, Newport Hospital, South County Hospital, and Women & Infants Hospital.⁹

Breastfeeding rates generally increase with higher educational attainment and higher income levels.¹⁰ Healthy People 2030 sets target breastfeeding rates of 42% of infants breastfed exclusively through 6 months and 54% of infants breastfed at any extent at one year of age.¹¹

Breastfeeding Rates		
	6 months [^]	12 months
RI	23%	33%
US	25%	36%
National Rank*	39 th	37 th
New England Rank**	6 th	6 th

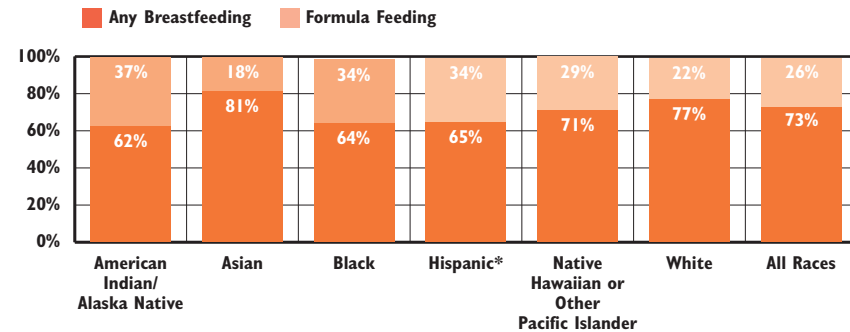
*1st is best; 50th is worst

**1st is best; 6th is worst

[^]exclusively breastfed

Source: Centers for Disease Control, *National Immunization Surveys* (NIS), 2020 and 2021.
Note: Data is from 2019.

Breastfeeding and Formula Feeding at Birth by Race/Ethnicity, Rhode Island, 2017-2021*



Source: Rhode Island Department of Health, Center for Health Data and Analysis, KIDSNET, 2017-2021.

Breastfeeding and formula feeding are defined as intended feeding method at hospital discharge.* Hispanic infants can be of any race. Totals may not sum to 100% because data on feeding methods were not available for all births.

◆ Between 2017 and 2021, 73% of new mothers in Rhode Island indicated that they intended to breastfeed when discharged from the hospital and 26% intended to formula feed.¹² American Indian/Alaska Native, Black, and Hispanic infants are less likely to be breastfed than white and Asian infants, due to structural, interpersonal, cultural, and historical barriers that Women of Color face. Structural barriers include lack of support and discrimination from the health care and workplace settings, including limited paid family leave. Interpersonal barriers include lack of family support and inadequate workplace policies for breastfeeding moms.^{13,14}

Paid Family Leave and Breastfeeding

◆ Paid family leave provides compensation to workers, including parents of a new child. Rhode Island established a paid family leave program in 2013, but has since fallen behind the 11 other states with programs. Rhode Island currently offers the lowest wage replacement rate and only six weeks of leave, the fewest of any state.¹⁵

◆ Access to 12 weeks of paid family leave increases the initiation and overall duration of breastfeeding and the likelihood of breastfeeding for at least six months.¹⁶ Improving the state’s paid family leave program to meet national standards would help ensure equitable access to paid leave and breastfeeding support, especially for Women of Color.^{17,18}



Rhode Island Supports for Breastfeeding

◆ All 50 states have passed legislation that provides mothers with the explicit right to breastfeed in all public or private places.¹⁹ Since 2015, Rhode Island law has prohibited job discrimination based on pregnancy, childbirth, and related medical conditions and required employers to make reasonable accommodations for workers for conditions related to pregnancy and childbirth, including breastfeeding.²⁰ Other barriers to supporting breastfeeding include accessibility and accommodations for lactation in the workplace and community.²¹

◆ In 2014, Rhode Island became the first state in the U.S. to establish licensure for International Board-Certified Lactation Consultants (IBCLCs). State-certified and trained lactation consultants provide comprehensive lactation support and counseling for pregnant and postpartum women. In January 2023, Rhode Island had 70 licensed IBCLCs.^{22,23}

Table 21. Breastfeeding at Time of Birth, Rhode Island, 2017-2021

CITY/TOWN	NUMBER OF BIRTHS SCREENED	NUMBER ANY BREASTFEEDING	PERCENT WITH ANY BREASTFEEDING
Barrington	543	489	90%
Bristol	619	497	80%
Burrillville	589	446	76%
Central Falls	1,517	914	60%
Charlestown	246	209	85%
Coventry	1,438	1,122	78%
Cranston	3,769	2,786	74%
Cumberland	1,545	1,232	80%
East Greenwich	596	523	88%
East Providence	2,158	1,582	73%
Exeter	234	200	85%
Foster	205	171	83%
Glocester	297	235	79%
Hopkinton	264	211	80%
Jamestown	131	124	95%
Johnston	1,311	942	72%
Lincoln	860	686	80%
Little Compton	48	38	79%
Middletown	757	643	85%
Narragansett	238	212	89%
New Shoreham	27	24	89%
Newport	1,041	839	81%
North Kingstown	1,097	958	87%
North Providence	1,546	1,091	71%
North Smithfield	408	344	84%
Pawtucket	4,143	2,738	66%
Portsmouth	583	513	88%
Providence	11,572	7,373	64%
Richmond	324	282	87%
Scituate	436	363	83%
Smithfield	693	557	80%
South Kingstown	811	722	89%
Tiverton	359	282	79%
Warren	377	276	73%
Warwick	3,513	2,705	77%
West Greenwich	244	207	85%
West Warwick	1,478	1,059	72%
Westerly	711	628	88%
Woonsocket	2,400	1,516	63%
Four Core Cities	19,632	12,541	64%
Remainder of State	29,496	23,198	79%
Rhode Island	49,128	35,739	73%

Sources of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021.

Breastfeeding is defined as “breastfeeding as intended feeding method at hospital discharge.” “Percent With Any Breastfeeding” includes infants fed breast milk in combination with formula and those exclusively breastfed.

*Note: The data collection process at the Rhode Island Department of Health was changed in 2015. Prior to 2015, breastfeeding was recorded as “Breast,” “Bottle,” or “Both.” Since 2015, a “Yes” or “No” question on the birth certificate worksheet “Is the infant being breastfed at discharge?” has been used. Data from and prior to 2015 for “Exclusive breastfeeding” and “Both breast and formula” have been combined into the “Any breastfeeding” category to align with current data collection practices.

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. Births to Rhode Island women that occurred outside Rhode Island are not included.

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

References

- ^{1,3} Meek J.Y., Noble, L. (2022). Policy statement: Breastfeeding and the use of human milk. *Pediatrics*, 150(1), e2022057988.
- ^{2,22} *Breastfeeding: 2015-2020 Rhode Island strategic plan*. (2015). Providence, RI: Rhode Island Department of Health.
- ⁴ *The benefits of breastfeeding for you and baby*. (2022). Cleveland, OH: The Cleveland Clinic.
- ⁵ Centers for Disease Control and Prevention. (2022). *Frequently asked questions*. Retrieved March 12, 2023, from cdc.gov
- ⁶ Hauck, K., Miraldo, M., & Singh, S. (2020). Integrating motherhood and employment: A 22-year analysis investigating impacts of US workplace breastfeeding policy. *SSM – Population Health*, 11, 1-10.

(continued on page 182)

Children with Lead Poisoning

DEFINITION

Children with lead poisoning is the percentage of children under age six with a confirmed elevated blood lead level (EBLL, ≥ 5 $\mu\text{g}/\text{dL}$) at any time prior to December 31, 2022.^{1,2} These data are for children eligible to enter kindergarten in the fall of 2024 (i.e., children born between September 1, 2018 and August 31, 2019).

SIGNIFICANCE

Lead poisoning is a preventable childhood disease. 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, even at very low levels, can cause irreversible damage, including slowed growth and development, learning disabilities, behavioral problems, and neurological damage. Though rare, severe poisoning can result in seizures, comas, and even death.^{4,5} The societal costs of childhood lead poisoning include the loss of future earnings due to cognitive impairment, and increased medical, special education, and juvenile justice costs.^{6,7} Children can be exposed to lead in the places they spend the most time. Homes, schools, and child care settings can be contaminated with lead from

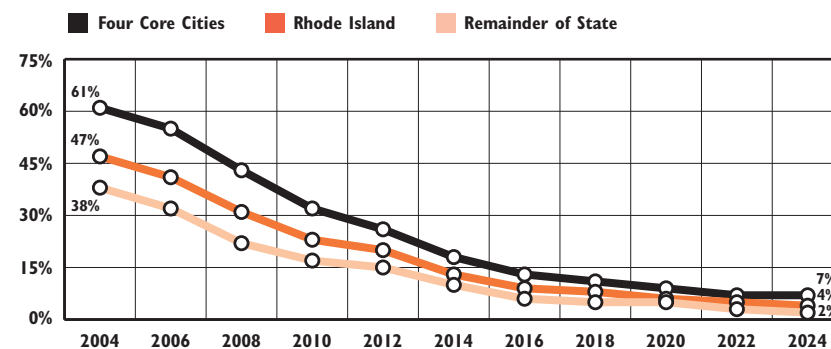
paint or paint dust if built before 1978. Children can also be exposed to lead poisoning through corrosion of lead service lines where the water pipe from a house or building connects to the public water main.⁸

There is no safe lead level in children. In late 2021, the Centers for Disease Control and Prevention lowered its blood reference value from 5 $\mu\text{g}/\text{dL}$ to 3.5 $\mu\text{g}/\text{dL}$. This new lower reference value will allow parents and health officials to take corrective actions sooner for children with the highest BLLs.^{9,10}

Although the percentage of children with elevated blood lead levels is declining nationally and in Rhode Island, low-income children continue to be at higher risk of lead exposure. In Rhode Island, children living in the four core cities are at increased risk for lead exposure because the housing stock tends to be older.^{11,12,13}

In 2022, 550 (2.5%) of the 24,334 Rhode Island children under age six who were screened had confirmed elevated blood lead levels of ≥ 5 $\mu\text{g}/\text{dL}$. Children living in the four core cities (3.9%) were three times as likely than children in the remainder of the state (1.1%) to have confirmed elevated blood lead levels of ≥ 5 $\mu\text{g}/\text{dL}$.¹⁴


Children Entering Kindergarten with History of Elevated* Blood Lead Level Screening (≥ 5 $\mu\text{g}/\text{dL}$), Rhode Island, Four Core Cities, and Remainder of State, 2004-2024



Source: Rhode Island Department of Health, Healthy Homes and Childhood Lead Poisoning Prevention Program, Children entering kindergarten between 2004 and 2024. *Elevated blood lead level of ≥ 5 $\mu\text{g}/\text{dL}$.

◆ The number of children with elevated blood lead levels has been steadily declining in all areas of Rhode Island over the past two decades with the exception of 2020. Compared to the remainder of the state, the four core cities have three times the rate of children with elevated blood levels.¹⁵

Lead Exposure and Academic Performance

◆ Exposure to lead can negatively impact academic performance in early childhood.¹⁶ Rhode Island children with a history of lead exposure, even at low levels, have been shown to have decreased reading readiness at kindergarten entry and diminished reading and math proficiency in the third grade. Children with lead exposure are also at increased risk for absenteeism, grade repetition, and special education services.^{17,18}

◆ Safe lead-free homes, schools, and communities are important to prevent lead exposure. This includes ensuring that Rhode Island homes (including rental properties), schools, and buildings are free of lead exposure through lead in the paint, dust, and water (through corrosion of lead services lines) by complying with lead inspections, remediations and practices, and providing equitable plans for full replacements of lead pipes.^{19,20}

Table 22. Lead Poisoning in Children Entering Kindergarten in the Fall of 2024, Rhode Island

CITY/TOWN	NUMBER TESTED FOR LEAD POISONING	CONFIRMED WITH BLOOD LEAD LEVEL ≥ 5 $\mu\text{g}/\text{dL}$	
		NUMBER	PERCENT
Barrington	184	<5	*
Bristol	147	<5	*
Burrillville	114	6	5.3%
Central Falls	310	23	7.4%
Charlestown	54	0	0.0%
Coventry	312	<5	*
Cranston	768	24	3.1%
Cumberland	348	<5	*
East Greenwich	168	0	0.0%
East Providence	448	11	2.5%
Exeter	56	<5	*
Foster	45	<5	*
Glocester	53	<5	*
Hopkinton	66	0	0.0%
Jamestown	26	0	0.0%
Johnston	280	7	2.5%
Lincoln	168	<5	*
Little Compton	14	0	0.0%
Middletown	175	<5	*
Narragansett	32	0	0.0%
New Shoreham	3	<5	*
Newport	206	13	6.3%
North Kingstown	244	<5	*
North Providence	303	5	1.7%
North Smithfield	77	<5	*
Pawtucket	849	46	5.4%
Portsmouth	146	<5	*
Providence	2,538	197	7.8%
Richmond	55	<5	*
Scituate	103	<5	*
Smithfield	140	<5	*
South Kingstown	191	<5	*
Tiverton	121	<5	*
Warren	90	<5	*
Warwick	686	8	1.2%
West Greenwich	55	0	0.0%
West Warwick	289	8	2.8%
Westerly	148	<5	*
Woonsocket	470	19	4.0%
Four Core Cities	4,167	285	6.8%
Remainder of State	6,314	128	2.0%
Rhode Island	10,482	413	3.9%



Children Under Age Six with a Blood Lead Level Above the Reference Value

◆ With new reference value of $3.5\mu\text{g}/\text{dL}$ the rate of childhood lead poisoning is predicted to jump to 5% compared to 2.5% at $5\mu\text{g}/\text{dL}$ which will allow parents and health officials to take corrective actions sooner.^{21,22}

◆ An environmental inspection of a child's home is offered when a single venous test is $\geq 5\mu\text{g}/\text{dL}$. The Rhode Island Department of Health sends certified lead inspectors to determine whether lead hazards are present and works with owners to make the property lead-safe. In 2022, 334 environmental inspections were offered, of which 237 were performed, 101 were refused or had no response, and 6 of the children had moved.^{23,24}



Lead Poisoning Screening for Children Age Three

◆ All Rhode Island children must have at least two blood lead screening tests by age three and annual screening through age six. Lead screening is a mandated covered health insurance benefit in Rhode Island and is free of charge. In 2022, 72% of children received a test by age 15 months, and 51% received one test by 15 months and a second at least 12 months later and by age 36 months.^{25,26,27}

Source of Data for Table/Methodology

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

Data reported in this year's Factbook are not comparable to editions prior to 2012, due to a change in definition and data improvements within the Healthy Homes and Childhood Lead Poisoning Prevention Program.

Data for children entering kindergarten in the fall of 2024 reflect the number of Rhode Island children eligible to enter school in the fall of 2024 (i.e., born between 09/01/18 and 08/31/19)

Children confirmed positive for lead poisoning (blood lead level $\geq 5\mu\text{g}/\text{dL}$) 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 2022. The Rhode Island Healthy Homes and Childhood Lead Poisoning Prevention Program recommends that children under age six with a capillary blood lead level of $\geq 5\mu\text{g}/\text{dL}$ receive a confirmatory venous test.

The denominator for percent confirmed is the number of children entering kindergarten in the fall of 2024 who were tested for lead poisoning. Data include both venous and confirmed capillary tests.

Of the 513 children entering kindergarten in 2024 who had an initial blood lead screen of $\geq 5\mu\text{g}/\text{dL}$, 128 did not receive a confirmatory second test. Their lead poisoning status is unknown.

*The data are not reported in accordance with the Rhode Island Department of Health's small number data policy.

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

See Methodology Section for more information.

References

^{1,10,22} Centers for Disease Control and Prevention. (2022). *Blood lead reference value*. Retrieved March 31, 2023, from www.cdc.gov

² Rhode Island Department of Health. (n.d.). *Environmental lead program*. Retrieved March 31, 2023, from <https://health.ri.gov>

(continued on page 182)

Children with Asthma

DEFINITION

Children with asthma is the rate of emergency department visits where asthma was the primary diagnosis per 1,000 children under age 18.

SIGNIFICANCE

Asthma is a chronic respiratory disease that causes treatable episodes of coughing, wheezing, shortness of breath, and chest tightness, which can be life threatening when not controlled. Asthma attacks can be triggered by respiratory infections, air pollutants (such as high levels of ozone), cigarette smoke, and allergens. While the exact cause is unknown, various genetic factors, environmental factors (such as long-term exposure to traffic pollution), climate change, and socio-economic factors (such as poverty and persistent or prolonged stress) have been linked to an increased risk for asthma.^{1,2,3,4}

Asthma is the most common chronic condition among children and adolescents in the U.S.⁵ Current asthma prevalence among U.S. children fell from 8.5% in 2015 to 7.5% in 2020.⁶ However, disparities in asthma rates continue to persist. Puerto Rican and non-Hispanic Black children have much higher asthma rates than non-Hispanic white children. Rates of asthma are also higher among males than females and among children living in poverty than among children in higher income

families.⁷ Social and environmental risk factors for asthma account for much of the pronounced racial and ethnic disparities in asthma rates and severity.⁸

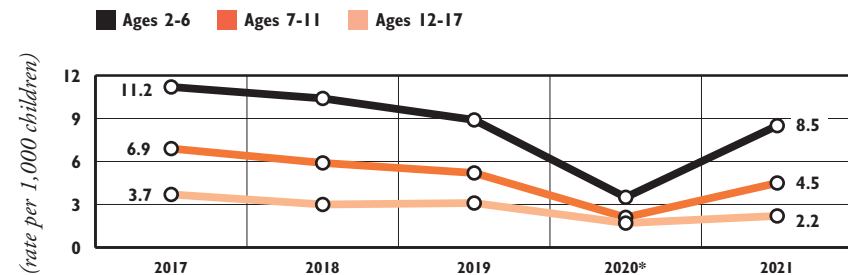
Compared with adults, children have much higher rates of emergency department visits for asthma, slightly higher hospitalization rates, and lower death rates.⁹ Asthma is a leading cause of emergency department visits and hospitalization for children under age 18 and school absenteeism.^{10,11}

Proper asthma management requires continued assessment and monitoring, patient education, assessment of environmental factors, and appropriate medication. Health care providers should work with the child and family to create an asthma action plan with instructions on how to avoid asthma triggers and use medications properly. An asthma action plan can improve health outcomes and reduce hospitalizations if adhered to and supported by enhanced care and community-based interventions.^{12,13,14}

Rhode Island middle and high school staff provide information about and referrals for asthma. In Rhode Island in 2020, 67% of middle and high schools reported providing health care referrals for students diagnosed with or suspected of having asthma, 69% of schools reported providing asthma education to students, and 41% provided families with information on asthma.¹⁵



Asthma Emergency Department Visit Rates By Age, Rhode Island Children, 2017-2021*



Source: Rhode Island Department of Health, Emergency Department Visit Data, 2017-2021. *Asthma-related emergency department visits decreased substantially in spring 2020 and must be interpreted with caution due to the COVID-19 pandemic.

◆ Pediatric asthma emergency department (ED) visit rates where asthma was the primary diagnosis decreased in each age group between 2017 and 2021. The decrease was most notable in the youngest age group (ages two to six years), with an asthma emergency department visit rate of 11.2 per 1,000 children in 2017 and a rate of 8.5 per 1,000 children in 2021.¹⁶

◆ In Rhode Island between 2017 and 2021, there were 731 hospitalizations with a primary asthma diagnosis of children under age 18, a rate of 0.7 per 1,000 children. The rate of primary asthma hospitalizations was more than twice as high in the four core cities (1.1 per 1,000 children) than in the remainder of the state (0.5 per 1,000 children).¹⁷

◆ There was a steep decline in pediatric asthma emergency department visits and hospitalizations in Rhode Island the spring of 2020.¹⁸ One contributor for this was families' reluctance to visit the hospital due to fear of contracting COVID-19. In addition, with public schools closed in the spring of 2020, it is likely that children with asthma had less exposure to viral infections and environmental allergens than in prior years, which may have decreased asthma problems.¹⁹



Asthma Prevalence and Support Programs

◆ In 2020, Rhode Island parents reported rates of current asthma prevalence of their children of 9.5% (up from 8.7% in 2019) compared to the average of 7.5% for parents surveyed in 30 states and Washington, DC. Rhode Island has the fifth highest self-reported child current asthma prevalence among the 30 ranked states.²⁰

◆ Between 2017 and 2021, 44% of emergency department visits with a primary diagnosis of asthma were for Hispanic children, 33% were for white children, and 17% were for Black children. Nearly three quarters (72%) of emergency department visits were for children with RIte Care/Medicaid.²¹ Inequities in social determinants of health (housing policies, environmental quality and pollution, and social stressors) contribute to the racial and ethnic disparities in asthma development, progression, and management.²²

◆ The Rhode Island Department of Health Asthma Control Program has been implementing a home-based, multicomponent intervention since 2010. This program serves children with asthma who have had a recent emergency department visit or hospitalization for asthma and who live in the core cities of Central Falls, Pawtucket, Providence, or Woonsocket, communities with high child poverty rates.²³

Table 23. Asthma Emergency Department Visits for Children Under Age 18, Rhode Island, 2017-2021

CITY/TOWN	ESTIMATED # OF CHILDREN UNDER AGE 18	# OF CHILD EMERGENCY DEPT. VISITS WITH PRIMARY ASTHMA DIAGNOSIS	RATE OF CHILD EMERGENCY DEPT. VISITS WITH PRIMARY ASTHMA DIAGNOSIS, PER 1,000 CHILDREN
Barrington	4,489	70	3.1
Bristol	2,887	36	2.5
Burrillville	3,229	35	2.2
Central Falls	6,411	248	7.7
Charlestown	1,161	11	*
Coventry	6,655	103	3.1
Cranston	15,744	297	3.8
Cumberland	7,550	88	2.3
East Greenwich	7,886	18	1.0 [^]
East Providence	3,465	191	4.8 [^]
Exeter	1,175	11	*
Foster	790	11	*
Glocester	1,896	11	*
Hopkinton	1,613	18	2.2 [^]
Jamestown	871	10	*
Johnston	5,119	97	3.8
Lincoln	4,640	60	2.6
Little Compton	568	5	*
Middletown	3,487	87	5.0
Narragansett	1,651	11	*
New Shoreham	189	1	*
Newport	3,660	146	8.0
North Kingstown	5,496	65	2.4
North Providence	5,802	144	5.0
North Smithfield	2,274	26	2.3 [^]
Pawtucket	16,455	521	6.3
Portsmouth	3,444	43	2.5
Providence	41,021	1,891	9.2
Richmond	1,627	8	*
Scituate	1,866	10	*
Smithfield	3,411	31	1.8
South Kingstown	4,339	41	1.9
Tiverton	2,723	23	1.7 [^]
Warren	1,826	25	2.7 [^]
Warwick	14,034	194	2.8
West Greenwich	1,251	9	*
West Warwick	5,787	131	4.5
Westerly	3,826	59	3.1
Woonsocket	9,467	432	9.1
Four Core Cities	73,354	3,092	8.4
Remainder State**	136,431	2,126	3.1
Rhode Island**	209,785	5,218	5.0

Source of Data for Table/Methodology

Rhode Island Department of Health, Emergency Department and Hospital Discharge Data, 2017-2021.

**Data for 2020 are not comparable to prior years. Asthma-related emergency department visits and hospitalizations decreased substantially in spring 2020, due to the COVID-19 pandemic.

Data are reported by place of child's residence at the time of the emergency department visit.

The Rhode Island Department of Health defines emergency department visits with primary asthma diagnosis as those resulting in a home discharge or another facility, but not admitted to the hospital as an inpatient. As such, data are not comparable to *Factbooks* prior to 2017.

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

The data are event-level files. Children admitted to the hospital (ED or inpatient) more than once are counted as a new event for each admission.

The denominator used to compute the 2017-2021 rate of emergency department visits is the number of children according to the 2020 U.S. Census, multiplied by five.

[^] The data are statistically unstable and rates should be interpreted with caution.

* The data are statistically unreliable and rates are not reported and should not be calculated.

** Excludes Rhode Island cities and towns unknown.

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

References

¹ Subbarao, P., Mandhane, P.J., Sears, M.R. (2009). Asthma: epidemiology, etiology and risk factors. *CMAJ*, 181(9), E181-E190.

² Rice, M. B., et al. (2018). Lifetime air pollution exposure and asthma in a pediatric birth cohort. *Journal of Clinical Immunology*, 141(5), 1932-1933.

(continued on page 182)

Housing and Health

DEFINITION

Housing and health is the percentage of children under age 18 who live in low-income families that reside in older housing, defined as housing built before 1980. Low-income families are those with incomes less than 200% of the federal poverty level.

SIGNIFICANCE

Homes that are dry, clean, pest-free, safe, contaminant-free, well-ventilated, well-maintained, and thermally-controlled can provide a healthy environment for children and residents.¹ Safe, affordable, and stable housing maintains the health and well-being of families and children, supporting mental and emotional health as well as physical safety. Healthy housing also protects families from weather, environmental hazards, and injury and provides a safe place for children to eat, sleep, play, and grow.^{2,3}

Unhealthy housing can cause or intensify many health conditions. Studies have connected poor quality construction, utility deficiencies, water intrusion, lead paint, radon, and pests to respiratory illnesses, asthma, unintentional injuries, lead poisoning, and cancer. Children under age five, low-income children, and Children of Color are at increased risk for fall injuries due to unsafe sleep and home environments, including aging and

deteriorating housing.^{4,5}

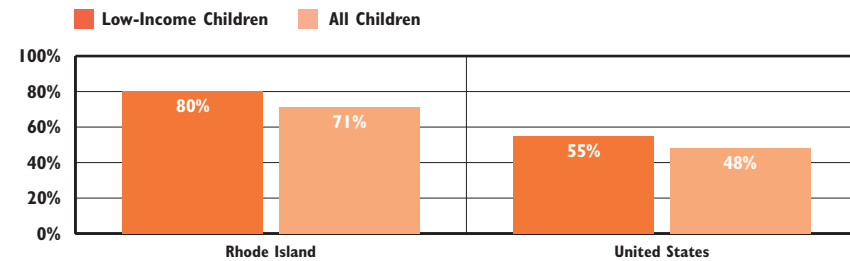
Poor quality housing is also a strong predictor of emotional and behavioral problems in low-income children and youth as well as academic achievement. Adolescents living in poorer quality homes have lower reading and math proficiency than their peers.⁶

The quality and stability of children's homes can have long-term effects on children. Lack of adequate and affordable housing puts safe, healthy, well-maintained homes out of reach for many families. Families may be forced to move frequently in search of better, more affordable housing, or to raise their children in overcrowded and unsafe environments that can interfere with their growth, development, health, and academic performance. Overcrowded housing is associated with mental health concerns, stress, sleep problems, injury, and exposure to disease, while multiple moves are associated with behavioral and mental health concerns, academic difficulties, and substance use.⁷

Adopting a comprehensive "healthy homes" approach that addresses multiple housing deficiencies simultaneously can help prevent housing-related injuries and illnesses, reduce health care costs, and improve children's quality of life. Because the causes of many health conditions related to the home environment are interconnected, it can be cost-effective to address multiple hazards simultaneously.^{8,9,10}



Children Living in Older Housing*, 2017-2021, Rhode Island and the United States



Source: Population Reference Bureau analysis of 2017-2021 American Community Survey (ACS) Public Use Microsample (PUMS) data. *Older housing is defined as built before 1980. The ACS reports housing year built by decade, so this is the best available approximation for housing built before 1978 when interior lead paint was banned. Factbooks prior to 2016 are not comparable due to the discontinuation of 3-year ACS data.

◆ **Between 2017 and 2021, Rhode Island had the highest percentage of low-income children (80%) and the second highest percentage of children of all incomes (71%) living in older housing in the U.S., after New York.**¹¹

◆ **Lead Poisoning:** Children living in homes built before 1978 are at risk for lead poisoning. Even at low levels, lead exposure can negatively affect a child's health, development, and brain.¹² In 2022, 2.5% (550) of Rhode Island children under age six who were screened had a confirmed blood lead level of ≥ 5 $\mu\text{g/dL}$.¹³

◆ **Asthma:** Asthma is the most common chronic condition in children and a leading cause of school absences and hospitalization for children under age 18 in the U.S.¹⁴ Between 2017 and 2021, there were 2,866 emergency department visits of Rhode Island children ages six and under (7.0 per 1,000) for which asthma was the primary diagnosis.¹⁵

◆ **Unintentional Injuries:** Falls are the leading cause of non-fatal unintentional injuries among children in the U.S.¹⁶ In 2021, housing-related falls resulted in 1,082 emergency room visits by Rhode Island children ages six and under.¹⁷

◆ **Weatherization Assistance Program:** This program helps income-eligible households reduce heating bills by providing whole-house energy efficiency and safety services. In 2022, 628 Rhode Island children under age 18 benefited from 562 completed weatherization projects, a decline from previous pre-pandemic years due to disruptions during the pandemic.^{18,19}

Table 24.

Housing and Health, Rhode Island

CITY/TOWN	TOTAL # OF CHILDREN UNDER AGE 6 2010	CHILDREN WITH LEAD POISONING 2022			PRIMARY ASTHMA ED VISITS 2017-2021**		HOUSING RELATED FALLS 2021	WEATHERIZATION PROJECTS 2022	% HOUSING STOCK PRE-1980
		#	TESTED	%	#	RATE PER 1,000			
Barrington	1,213	<5	507	*	36	5.9	11	2	83%
Bristol	1,316	<5	368	*	18	2.7^	10	2	67%
Burrillville	1,186	9	266	3.8%	14	2.4^	10	23	68%
Central Falls	2,374	41	725	6.2%	138	11.6	40	4	79%
Charlestown	493	<5	90	*	7	*	6	4	50%
Coventry	2,508	<5	646	*	60	4.8	27	29	68%
Cranston	5,814	28	1,887	1.6%	168	5.8	66	51	77%
Cumberland	2,603	6	786	0.8%	43	3.3	35	10	64%
East Greenwich	930	<5	354	*	9	*	13	1	59%
East Providence	3,545	10	1,173	0.9%	119	6.7	41	27	81%
Exeter	390	<5	89	*	7	*	*	6	46%
Foster	315	<5	93	*	7	*	*	2	59%
Glocester	633	<5	133	*	5	*	6	14	64%
Hopkinton	618	<5	121	*	10	*	7	2	60%
Jamestown	287	0	65	0.0%	8	*	*	1	54%
Johnston	1,930	11	625	1.9%	39	*	32	36	67%
Lincoln	1,490	8	450	2.2%	28	4.0	18	6	68%
Little Compton	188	<5	48	*	5	*	*	0	64%
Middletown	1,331	<5	292	*	54	8.1	24	3	65%
Narragansett	739	0	79	0.0%	2	*	11	1	62%
New Shoreham	57	0	14	0.0%	1	*	22	0	50%
Newport	1,792	20	355	6.2%	79	8.8	*	4	84%
North Kingstown	1,965	<5	474	*	30	3.1	25	11	63%
North Providence	2,040	11	715	1.6%	75	7.4	31	25	66%
North Smithfield	752	<5	225	*	10	*	13	6	62%
Pawtucket	6,835	51	1,897	2.9%	305	8.9	87	42	85%
Portsmouth	1,206	<5	281	*	23	3.8^	20	8	61%
Providence	16,934	281	6,629	4.6%	1,060	12.5	276	106	84%
Richmond	635	0	101	0.0%	8	2.5	*	0	47%
Scituate	608	<5	237	*	4	1.3	10	5	68%
Smithfield	1,076	0	331	0.0%	21	3.9^	9	10	59%
South Kingstown	1,707	<5	364	*	18	2.1^	20	8	56%
Tiverton	1,006	<5	291	*	12	2.4^	5	12	61%
Warren	727	5	239	2.3%	17	4.7^	10	3	79%
Warwick	5,561	<5	1,479	*	119	4.3	71	57	78%
West Greenwich	446	<5	128	*	3	1.3	6	0	32%
West Warwick	2,351	10	652	1.7%	64	5.4	26	25	70%
Westerly	1,735	<5	205	*	22	2.5^	20	5	62%
Woonsocket	4,212	26	1,036	2.7%	218	10.4	64	11	86%
Four Core Cities	30,355	399	10,287	4.2%	1,721	11.3	467	163	84%
Remainder of State	51,193	151	14,163	1.1%	1,145	4.5	605	399	68%
Rhode Island	81,548	550	24,450	2.5%	2,866	7.0	1,072	562	73%

Source of Data for Table/Methodology

U.S. Census Bureau, Census 2010.

Children with Lead Poisoning: Rhode Island Department of Health, Healthy Homes and Childhood Lead Poisoning Prevention Program, 2022. The numerator is the number of Rhode Island children with a confirmed blood lead level ≥ 5 $\mu\text{g/dL}$ in calendar year 2022. The denominator is the number of children who were tested in calendar year 2022. Data are for children under age six.

Children with Asthma: Rhode Island Department of Health, Hospital Discharge Database, 2017-2021. The Rhode Island Department of Health defines emergency department (ED) visits for children with a primary asthma diagnosis as those resulting in a home discharge or another facility, but not admitted to the hospital as an inpatient. Children with multiple ED visits are counted as a new event for each admission, so some children are counted more than once. For details, see Children with Asthma indicator. Data are for children ages six and under.

**Asthma data for 2020 are not comparable to prior years. Asthma-related emergency department visits and hospitalizations decreased substantially in spring 2020, due to the COVID-19 pandemic.

Housing Related Falls: Rhode Island Department of Health, Center for Health Data and Analysis, 2021. Data are for children ages six and under who are residents of Rhode Island.

Weatherization Projects: Rhode Island Department of Human Services, Weatherization Assistance Program data, 2022. Weatherization projects are defined as those receiving a final inspection by the end of calendar year 2022.

Housing Stock Pre-1980: Population Reference Bureau analysis of 2017-2021 American Community Survey (ACS) data. Table B25034. Older housing is defined as being built before 1980. The ACS reports housing year built by decade, so this is the best available approximation for housing built before 1978 when interior lead paint was banned.

* The data are statistically unreliable and rates are not reported and should not be calculated.

^ The data are statistically unstable and rates or percentages should be interpreted with caution.

(Continued with references on page 183)

Child Overweight and Obesity

DEFINITION

Child overweight and obesity is the percentage of children whose body mass index (BMI) meets the definition for overweight or obese. Children with a BMI at or above the 95th percentile for gender and age are considered to be obese, and children with a BMI between the 85th and 95th percentiles are considered to be overweight or at risk for obesity.¹

SIGNIFICANCE

Children and adolescents who are overweight or obese are at risk of health problems, including type 2 diabetes, cardiovascular disease, asthma, joint problems, sleep apnea, and other acute and chronic health problems. They may also experience social and psychological problems, including depression, bullying, and social marginalization more than their peers due to weight-based stigma which can impact their school attendance and academic performance.^{2,3,4}

Nationally, there is a continued upward trend in obesity.⁵ During 2017-2020 in the U.S., the prevalence of obesity in children ages two to 19 was 20% with children and adolescents ages 12 to 19 having the highest rates.⁶ Prior to 2018, Rhode Island did not have adequate clinical childhood BMI data. A recent study of data collected in 2021 found that 16% of Rhode Island

children ages two to 17 are overweight and 23% are obese.⁷

The increased prevalence of childhood obesity is the result of complex interactions among many factors, including calorie consumption, genes, metabolism, behavior, environment, and physical activity. Most of these factors are out of the individuals' control and are related to a child's socioeconomic status and the availability of healthy food and safe play areas in their community.^{8,9} Low consumption of healthy foods, low levels of physical activity, and high levels of screen time are all associated with obesity.¹⁰

The COVID-19 pandemic limited children's access to nutritious food and physical activity among other impacts. The rate of BMI increase for children ages 2 to 19 nearly doubled during the pandemic.¹¹ Reducing overweight and obesity will require a comprehensive, multi-system approach.

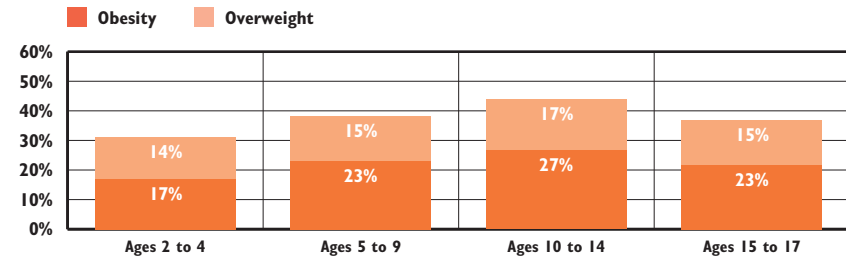
Overweight and Obesity Among Children Age 10-17 (Combined Overweight and Obesity)	
2020-2021	
RI	32%
US	33%
National Rank*	26th
New England Rank**	5th

*1st is best; 50th is worst

**1st is best; 6th is worst

Source: Data Resource Center for Child and Adolescent Health, 2020-2021 National Survey of Children's Health, childhealthdata.org


Rhode Island Childhood Overweight and Obesity by Age, 2021

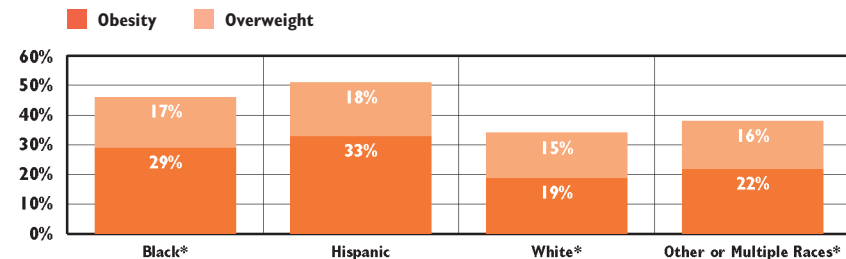


Source: Brown School of Public Health analysis of BMI clinical and billing records of children ages two to 17 in Rhode Island from KIDSNET, Current Care, Blue Cross & Blue Shield of Rhode Island, Neighborhood Health Plan of Rhode Island, United Healthcare, and Tufts Health Plan collected by the Department of Health, 2022.

◆ Sixteen percent of Rhode Island children ages two to 17 are overweight and 23% are obese. Older children are more likely to be overweight or obese. Twenty-seven percent of children ages 10 to 14 and 23% of children ages 15 to 17 are obese.¹²

◆ Thirty percent of children covered by RIte Care are obese compared to 16% of children with private health insurance.¹³


Rhode Island Childhood Overweight and Obesity by Race/Ethnicity, 2021



Source: Brown University School of Public Health analysis of BMI clinical and billing records of children ages two to 17 in Rhode Island from KIDSNET, Current Care, Blue Cross & Blue Shield of Rhode Island, Neighborhood Health Plan of Rhode Island, United Healthcare, and Tufts Health Plan collected by the Department of Health, 2022. *Non-Hispanic.

◆ Hispanic children (18% overweight and 33% obese) and non-Hispanic Black children (17% overweight and 29% obese) have the highest rates of overweight and obesity. Cultural differences and disparities in the community/environmental and socioeconomic status of Children of Color contribute to these disparities.^{14,15}

Table 25. Prevalence of Overweight and Obesity in Rhode Island Children Ages 2 to 17, 2021



Food Access, Nutrition, and Physical Activity

◆ Many children and adolescents do not have access to enough food for a healthy and active lifestyle (food insecurity) or consume diets with too many calories and not enough nutrients.^{16,17} In 2022, 41% of households with children in Rhode Island reported being food insecure.¹⁸

◆ In 2021, 21% of Rhode Island high school students reported not eating breakfast, 88% reported eating less than three servings of vegetables a day, the recommended amount, and 62% reported drinking soda at least once in the prior week.¹⁹

◆ Regular physical activity has physical, social, emotional, cognitive, and health benefits.²⁰ In 2021, 55% of Rhode Island middle school students and 59% of high school students reported less than five days of physical activity in a week.²¹

◆ A community's streets, sidewalks, parks, and housing influence physical activity choices for youth.²² Policy strategies to address obesity include improving access to nutritious and affordable foods and beverages, ensuring access to healthy food in schools, increasing options for physical activity, and improving access to safe and walkable neighborhoods and recreational areas.^{23,24}

CITY/TOWN	% OVERWEIGHT	% OBESE	% OVERWEIGHT AND OBESE COMBINED
Barrington	15%	9%	24%
Bristol	14%	19%	33%
Burrillville	17%	22%	39%
Central Falls	16%	37%	53%
Charlestown	15%	15%	30%
Coventry	14%	17%	31%
Cranston	16%	22%	38%
Cumberland	17%	21%	37%
East Greenwich	11%	11%	21%
East Providence	16%	25%	42%
Exeter	13%	16%	29%
Foster	14%	17%	31%
Glocester	15%	15%	30%
Hopkinton	16%	19%	36%
Jamestown	9%	12%	21%
Johnston	17%	24%	41%
Lincoln	17%	21%	37%
Little Compton	15% ^	10% ^	25%
Middletown	11%	14%	25%
Narragansett	13%	17%	30%
New Shoreham	*	*	27% ^
Newport	12%	21%	34%
North Kingstown	13%	13%	26%
North Providence	19%	24%	43%
North Smithfield	19%	18%	37%
Pawtucket	17%	30%	47%
Portsmouth	8%	10%	18%
Providence	18%	32%	50%
Richmond	13%	14%	27%
Scituate	14%	15%	29%
Smithfield	17%	15%	31%
South Kingstown	13%	15%	28%
Tiverton	14%	20%	33%
Warren	14%	23%	37%
Warwick	16%	21%	37%
West Greenwich	13%	15%	28%
West Warwick	14%	25%	39%
Westerly	17%	23%	40%
Woonsocket	17%	34%	50%
Four Core Cities	17%	32%	49%
Remainder of State	15%	19%	34%
Rhode Island	16%	23%	39%

Source of Data for Table/Methodology

Brown University School of Public Health analysis of BMI clinical and billing records of children ages 2 – 17 in Rhode Island from KIDSNET, Current Care, Blue Cross & Blue Shield of Rhode Island, Neighborhood Health Plan of Rhode Island, United Healthcare, and Tufts Health Plan collected by the Department of Health, 2022.

* The data are statistically unreliable; rates are not reported and should not be calculated.

^ Data are statistically unstable and rates or percentages should be interpreted with caution

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

References

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- Quickstats: Prevalence of obesity and severe obesity among persons aged 2–19 years — national health and nutrition examination survey, 1999–2000 through 2017–2018. (2020). *MMWR Morb Mortal Wkly Rep* 69(13) 390.
- Stierman B, Afful J, Carroll MD, Chen TC, Davy O, Fink S, et al. (2021). National health and nutrition examination survey 2017–March 2020 prepandemic data files—development of files and prevalence estimates for selected health outcomes. *National Health Statistics Reports; no 158*. Hyattsville, MD: National Center for Health Statistics.

(continued on page 183)

Births to Teens

DEFINITION

Births to teens is the number of births to teen girls ages 15 to 19 per 1,000 teen girls.

SIGNIFICANCE

Teen pregnancy and parenting can impact the development of teen parents as well as their children. Infants of teen parents have higher rates of prematurity, low birthweight, and infant mortality than those born to women in their twenties and thirties.¹ Children of teens have lower academic achievement, have more health issues, and are more likely to have a teen birth themselves compared with children of older mothers.²

There are strong intergenerational links between teen mothers' educational attainment and income and well-being in the next generation.³ Teen mothers are less likely to graduate from high school. Teen girls in foster care are twice as likely as their peers to become pregnant by age 19.⁴

There are disparities in teen birth rates by age, race, and ethnicity. Nationally, most teen births are to teens ages 18 or older. In 2020, 76% of teen births in the United States were to 18- and 19-year-old mothers. The teen birth rate is highest among American Indian or Alaska Native, Black, Hispanic, and Native Hawaiian or Other Pacific Islander adolescents and lowest among Asian adolescents.^{5,6}

Effective teen pregnancy prevention programs address the social determinants of health, and work within the community to support support the health of adolescents. This includes ensuring access to quality reproductive health care and education.⁷ Nationally, fewer teens are having sex and those that are sexually active are more likely to use contraception.^{8,9}

After peaking in 1991, the U.S. teen birth rate has declined almost every year and reached a historic low in 2021. Despite these declines, the U.S. teen birth rate remains higher than in other developed countries.^{10,11,12}

Rhode Island's teen birth rate mirrors national trends, peaking in 1993 at 47.6 per 1,000 and reaching a historic low in 2021 at 7.8 births per 1,000 teen girls.^{13,14} In Rhode Island between 2017-2021, 3.4% (1,791) of babies were born to mothers under age 20.¹⁵

Teen Birth Rates (rate per 1,000 girls ages 15-19)		
	1991	2021
RI	44.7	7.8
US	61.8	13.9
National Rank*		5 th
New England Rank**		5 ^h

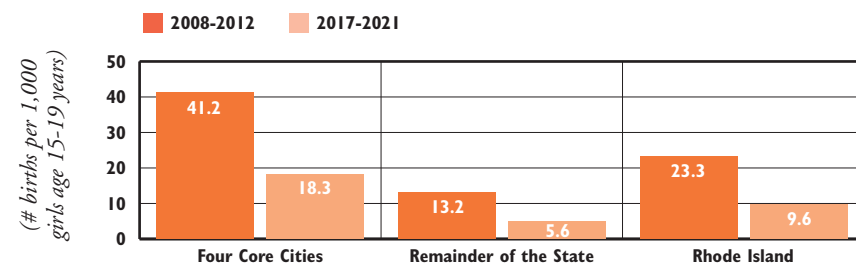
*1st is best; 50th is worst

**1st is best; 6th is worst

Source: For 1991: Ventura, S. J., et al. (2014). National and state patterns of teen births in the United States, 1940-2013. *NVSR*, 63(4), 1-33. For 2021: Osterman, M. J. K., Hamilton, B. E., Martin, J. A., Driscoll, A. K., & Valenzuela, C. (2023). Births: Final data for 2021. *National Vital Statistics Reports*, 72(1), 1-52.



Teen Birth Rates, Rhode Island, Five-Year Average Comparisons: 2008-2012, 2017-2021



Source: Rhode Island Department of Health, Center for Health Data and Analysis, 2008-2021.

- ◆ In 2021, the birth rate for U.S. teens (13.9 births per 1,000 teen girls) was the lowest ever recorded.¹⁶
- ◆ In Rhode Island, the statewide five-year average teen birth rate declined 59% between 2008-2012 and 2017-2021, from 23.3 births per 1,000 teen girls to 9.6 per 1,000. The teen birth rate in the four core cities declined 56% during that time but remains more than three times higher than the remainder of the state.¹⁷
- ◆ Despite declines among all racial and ethnic groups, disparities still exist in teen birth rates.¹⁸ In Rhode Island between 2017 and 2021, the teen birth rates for Hispanic (25.6 per 1,000), Black (14.5 per 1,000), and American Indian/Alaska Native (12.2 per 1,000) teens were higher than the rates of their white (5.5 per 1,000) and Asian (3.6 per 1,000) peers.¹⁹



Repeat Births to Teens, Rhode Island, 2017-2021

AGE	TOTAL NUMBER OF BIRTHS	NUMBER OF REPEAT BIRTHS	PERCENT REPEAT BIRTHS
15-17	430	30	7%
18-19	1,347	190	14%
Total 15-19	1,777	220	12%

Source: Rhode Island Department of Health, Center for Health Data and Analysis, 2016-2020.

- ◆ Nationally, 15% of all births to teens ages 15-19 in 2020 were repeat births.²⁰ To continue to reduce repeat teen births, pregnant and parenting teens should be connected to patient-centered primary care that addresses the needs of young mothers and families.²¹



Teen Birth Rates by Location

◆ In Rhode Island between 2017 and 2021, the rate of births to teens ages 15-19 in the core cities (18.3 per 1,000) was more than three times higher than the remainder of the state (4.9 per 1,000).²²

◆ Thirteen percent of teen births in the core cities were repeat births, while 11% of teen births in the rest of the state were repeat births.²³

◆ Health care providers can play a key role in reducing teen births by integrating comprehensive reproductive health counseling into health care for all women and men of reproductive age to help reduce unintended pregnancies.²⁴

◆ In 2021, 76.6% of Rhode Island high school students reported never having sexual intercourse. Of those who reported that they did, 47% reported using a condom, and 12% used no method to prevent pregnancy the last time they had sexual intercourse.²⁵

◆ Among 15 to 19-year-olds in Rhode Island between 2012 and 2021, the rates of chlamydia have decreased by 8% (1,760 to 1,617 per 100,000) and the rates of gonorrhea have increased by 67% (144 to 241 per 100,000).²⁶

Table 26. Births to Teens, Ages 15-19, Rhode Island, 2017-2021

CITY/TOWN	# OF BIRTHS AGES 15-17	# OF BIRTHS AGES 18-19	# OF BIRTHS AGES 15-19	BIRTH RATE PER 1,000 AGES 15-19
Barrington	0	3	3	*
Bristol	0	5	5	*
Burrillville	2	12	14	6.0 [^]
Central Falls	32	91	123	22.1
Charlestown	0	6	6	*
Coventry	3	16	19	3.1 [^]
Cranston	27	78	105	10.4
Cumberland	3	20	23	3.4
East Greenwich	0	1	1	*
East Providence	10	42	52	14.6
Exeter	0	3	3	*
Foster	1	4	5	*
Gloicester	0	1	1	*
Hopkinton	0	7	7	*
Jamestown	0	0	0	*
Johnston	3	15	18	5.3 [^]
Lincoln	5	15	20	5.8 [^]
Little Compton	0	0	0	0.0
Middletown	0	7	7	*
Narragansett	2	1	3	*
New Shoreham	0	0	0	0.0
Newport	13	37	50	8.3
North Kingstown	4	14	18	4.1 [^]
North Providence	11	27	38	7.0
North Smithfield	1	3	4	*
Pawtucket	38	134	172	17.7
Portsmouth	2	3	5	*
Providence	200	510	710	16.1
Richmond	1	1	2	*
Scituate	4	5	9	5.4 [^]
Smithfield	2	4	6	*
South Kingstown	1	9	10	0.6 [^]
Tiverton	2	9	11	9.7 [^]
Warren	2	7	9	10.5 [^]
Warwick	9	52	61	6.3
West Greenwich	0	1	1	*
West Warwick	12	41	53	14.8
Westerly	3	16	19	9.2
Woonsocket	35	138	173	33.5
Unknown	2	9	11	*
Four Core Cities	305	873	1,178	18.3
Remainder of State	125	474	599	4.9
Rhode Island	430	1,347	1,777	9.4

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2017-2021.

* The data are statistically unreliable and rates are not reported and should not be calculated.

[^] The data are statistically unstable and rates or percentages should be interpreted with caution.

The denominators for girls ages 15 to 19 are from CDC Wonder Database, 1-year estimate for race/ethnicity and American Community Survey RI 5-year estimates for city/towns

Births to teens ages 14 and younger are collected by the Rhode Island Department of Health but are not reported in the Factbook.

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

References

¹ March of Dimes. (2012). *Teenage pregnancy*.

^{2,4,8,12} Centers for Disease Control and Prevention. (2021). *About teen pregnancy*.

^{3,5,9,18,20} U.S. Department of Health & Human Services Office of Adolescent Health. (n.d.). *Trends in teen pregnancy and childbearing*.

^{6,11} *Teen Birth Trends: In Brief*. (2020). Washington, DC: Congressional Research Service.

^{10,16} Martin, J. A., Hamilton, B. E., & Osterman, M. J. K.. (2022). Births: in the United States, 2021. *NCHS Data Brief, no 442*. Hyattsville, MD: National Center for Health Statistics.

⁷ Office of Population Affairs. (n.d.). *About the teen pregnancy prevention program*.

¹³ Ventura, S. J., Hamilton, B. E. & Mathews, T.J. (2014). National and state patterns of teen births in the United States, 1940-2013. *National Vital Statistics Reports*, 63(4), 1-33.

¹⁴ Osterman, M. J. K., Hamilton, B. E., Martin, J. A., Driscoll, A. K., & Valenzuela, C. (2023). Births: Final data for 2021. *National Vital Statistics Reports*, 72(1), 1-52.

(continued on page 183)

Alcohol, Tobacco, Substance Use, and Exposure

DEFINITION

Alcohol, tobacco, substance use, and exposure is the percentage of middle school and high school students who report using alcohol, tobacco products (including e-cigarettes), and illicit substances.

SIGNIFICANCE

The use and/or abuse of alcohol, tobacco, and other substances by youth impacts the health and safety of themselves, their families, their schools, and their communities.^{1,2} Rhode Island ranks among the states with the highest percentages of adolescents reporting use of alcohol and many types of illicit drugs.³

Key risk periods for alcohol, tobacco, and other drug abuse occur during major life transitions, including the shifts to middle school and high school, when young people experience new academic, social, and emotional challenges. Adolescents are especially vulnerable to developing substance use disorders because their brains are still developing; the prefrontal cortex, which is responsible for decision-making and risk-assessment, is not mature until the mid-20s.^{4,5}

Pathways for becoming a substance user involve the relationship between risk and protective factors, which vary in their effect on different people. Risk

factors are associated with increased drug use and include early aggressive behavior, poor school achievement, peer and parental substance use, chaotic home environment, and poverty. Protective factors lessen the risk of drug use, and include a strong parent-child bond, healthy school environment, academic competence, and attachment to their communities.^{6,7} Historically, rates of substance use have varied among different racial/ethnic groups. Between 2015 and 2019 differences by demographic group remain in alcohol, marijuana, and illicit substance use.^{8,9}

Prevention and reduction in teen substance abuse can be achieved by enacting policies that support prevention, screening, early intervention, treatment, and recovery. Policy examples include preventing underage substance use and sales to minors, improving school climate and academic achievement, enacting sentencing reform, and providing adequate funding for multi-sector youth development, treatment, and recovery services.¹⁰

In Rhode Island in 2021, 8.5% of youth ages 12-17 (about 6,000) needed but did not receive specialty treatment for their substance use problem, the 17th highest rate among all states.¹¹



Tobacco Use Among Rhode Island Youth

◆ In 2021, 17% of Rhode Island high school students reported currently smoking cigarettes or using electronic vapor products (i.e., e-cigarettes, e-cigars, e-pipes, vaping pipes/pens, e-hookahs/pens), down from 32% in 2019. Current use is defined as use on at least one day during the 30 days before the survey.¹²

◆ **E-Cigarettes:** E-cigarettes and electronic vapor products contain, among other chemicals, nicotine which is highly addictive and can harm brain development. Some e-cigarette pods have as much or more nicotine as a pack of cigarettes.¹³ Nationally in 2022, 14% of high school students reported current e-cigarette use.¹⁴ In Rhode Island in 2021, 18% of high school students reported current use of e-cigarettes and 32% reported ever using e-cigarettes.^{15,16}

◆ **Cigarettes:** Cigarette use has steadily declined among U.S. middle and high school students. Nationally, in 2022, 2% of students reported current cigarette use.¹⁷ In 2021, 3% of Rhode Island high school students reported currently smoking cigarettes.¹⁸

◆ **Hookah, cigars, and smokeless tobacco:** The prevalence of youth hookah, cigar, and smokeless tobacco use has declined nationally and in Rhode Island.¹⁹ In 2021, 3% of Rhode Island high school students reported currently smoking cigars, and 3% reported current use of smokeless tobacco.²⁰



Tobacco to 21

◆ The Centers for Disease Control and Prevention, the Institute of Medicine, and the American Academy of Pediatrics suggest that raising the minimum legal sale age for tobacco products to 21 may prevent or delay initiation of tobacco use by adolescents.^{21,22,23} Nationally, 88% of adult cigarette users who smoke daily report starting by age 18.²⁴ On December 20, 2019, legislation was signed raising the federal minimum age of sale of tobacco products and electronic nicotine delivery systems from 18 to 21 years, effective immediately.²⁵ Despite this law, there is still a 14% noncompliance rate in Rhode Island with some vendors continuing to sell to underage groups.²⁶

Alcohol, Tobacco, Substance Use, and Exposure



Current Substance Use, Rhode Island High School Students by Select Subgroups, 2021

	ALCOHOL USE*	E-CIGARETTE USE*	CIGARETTE USE*	MARIJUANA USE*	PRESCRIPTION DRUG MISUSE**
Female	20%	21%	4%	17%	10%
Male	15%	15%	3%	14%	7%
Asian, Non-Hispanic	19%	13%	NA	9%	7%
Black, Non-Hispanic	10%	12%	1%	15%	9%
White, Non-Hispanic	19%	18%	3%	16%	6%
All other races, Non-Hispanic	NA	NA	NA	NA	NA
Multiple races, Non-Hispanic	22%	27%	5%	22%	11%
Hispanic	17%	18%	3%	14%	11%
9th Grade	10%	15%	3%	10%	9%
10th Grade	12%	15%	2%	13%	9%
11th Grade	21%	18%	2%	16%	5%
12th Grade	28%	24%	5%	23%	9%
All Students	17%	18%	3%	16%	8%

Source: 2021 *Rhode Island Youth Risk Behavior Survey*, Rhode Island Department of Health, Center for Health Data and Analysis. *Current use is defined as students who answered yes to using respective substances in the 30 days prior to the survey. **Prescription drug misuse is defined as ever took prescription pain medicine without a doctor's prescription or differently than doctor told them to use it. NA is not available due to small sample size.

◆ Among Rhode Island high school students in 2021, 17% reported current alcohol consumption, 16% reported current marijuana use, 18% reported current use of e-cigarettes, 8% reported current binge drinking, 3% reported current cigarette use, and 8% reported ever misusing prescription pain medication.²⁷

◆ In 2021, a majority of Rhode Island high school students reported that they have never smoked a cigarette (88%) or used an e-cigarette product (68%).²⁸

◆ Cigarette excise taxes are a potential funding stream for state tobacco control programs.²⁹ Between SFY 2002-2022, Rhode Island cigarette tax revenue increased from \$79.4 million to \$145 million and state tobacco control funding decreased from \$3 million to \$415,096. Only .29% of the cigarette tax in SFY 2022 went toward tobacco control and smoking cessation programs.^{30,31,32,33}



Family and Community Exposure

◆ Having parents or friends who use tobacco, alcohol, and other drugs, as well as living in communities where there is drug use, are risk factors for teen substance use.³⁴ In Rhode Island in 2021, 28% of middle school students and 24% of high school students reported living with someone who smokes cigarettes. Nearly one in seven (13%) Rhode Island high school students who used an e-cigarette during the past 30 days reported buying it in a store, despite laws prohibiting sales to youth under age 21.³⁵



Exposure to Substances at Birth

◆ Neonatal abstinence syndrome (NAS) refers to a withdrawal syndrome that can occur in newborns exposed to certain substances, including opioids. Neonatal opioid withdrawal syndrome, more specifically, refers to the withdrawal symptoms related to opioid exposure. Not all substance exposed newborns are diagnosed with NAS.^{36,37}

◆ In Rhode Island in 2021, 76 newborns were diagnosed with NAS, at a rate of 73 per 10,000 newborn hospitalizations, which represents an increase from 2020 at 69 per 10,000 newborn hospitalizations.³⁸

◆ NAS rates will not decrease until Opioid Use Disorder rates decrease in the general population. Adequate treatment options and services for those struggling with Opiate Use Disorder are needed before and during pregnancy, at birth, and throughout parenting for the whole family.³⁹ There is a need for universal protocols when working with parents, children, and families impacted by substance use and a critical need to address discriminatory attitudes and beliefs about maternal substance use and substance exposed children.⁴⁰

References

^{1,46} *Facing addiction in America: The Surgeon General's report on alcohol, drugs, and health.* (2016). Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General.

² *Substance-free youth.* (2015). Washington, DC: Child Trends.

³ Substance Abuse and Mental Health Services Administration. *2021 National Survey on Drug Use and Health: Model-based prevalence estimates (50 states and district of Columbia)*, Retrieved March 31, 2023, from www.samhsa.gov

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