Health

Wise

by Mia Malo

people say i'm wise for my age

but how can they tell from the very small, short conversation we've held

my friends and family say that they wish they were as wise as me at 15

but how is it that i don't feel wise at all?

my decisions are poor,

sometimes i waste an entire day

and don't get out of bed until 4.

with all truth, i feel like the opposite of wise.

i cry because i struggle

and panic and often cant even put my pride aside to ask for help

it makes me confused when people tell me

i'm wise.

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, 2023, 62% of RIte Care members who qualified based on family income and 62% of RIte Share enrollees were children under age 19.[8,9]

Between April 2023 and April 2024, all Rhode Island Medicaid beneficiaries, including 75,000 households with children, went through a renewal process to redetermine their Medicaid eligibility for the first time since the start of the COVID-19 public health emergency in 2020.[10,11]

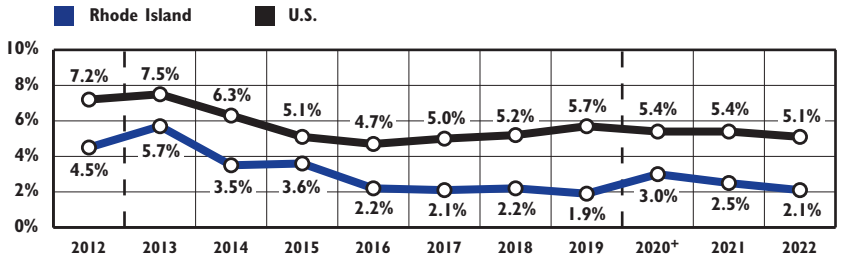
Children Under Age 19 Without Health Insurance

	2022
RI	2.1%
US	5.1%
National Rank*	*2nd*
New England Rank**	*2nd*

**1st is best; 50th is worst*
***1st is best; 6th is worst*

Source: U.S. Census Bureau, American Community Survey, 2022. Table R2702.

Children Without Health Insurance, Rhode Island, 2012-2022



Source: U.S. Census Bureau, American Community Survey, 2012-2019, 2021-2022. Data from 2012 are for children under 18 years of age and data from 2013 to 2022 are for children under 19 years of age. +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 COVD-19 pandemic. Prior Factbooks are not comparable.

★ **In 2022, 2.1% of Rhode Island's children under age 19 were uninsured. Rhode Island ranked second best state in the U.S. with 97.9% of children covered. In 2022, 53% 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 62% of children under the age of three were enrolled in RIte Care/Medical Assistance in 2022.**[16,17]

★ **Approximately 56% (2,646) of the estimated 4,754 uninsured children under age 18 in Rhode Island between 2018 and 2022 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 2,108 uninsured children lived in families with incomes above the income limit for RIte Care eligibility and 65% (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, 2023, 1,480 children and 904 adults (2,384 total) were enrolled in RIte Share.**[20] **As of October 2023, 1,623 children were enrolled in private health coverage through HealthSource RI, 61% of whom received financial assistance through a premium tax credit or a cost sharing reduction.**[21]

Table 15.

Children Under Age 19 Receiving Medical Assistance, Rhode Island, December 31, 2023

CITY/TOWN	RITE CARE	SSI	KATIE BECKETT PROVISION	ADOPTION SUBSIDY	FOSTER CARE	TOTAL
Barrington	631	13	37	40	<10	727
Bristol	935	32	15	39	17	1,038
Burrillville	1,138	37	<10	64	30	1,275
Central Falls	5,614	214	<10	56	26	5,913
Charlestown	450	13	<10	28	13	512
Coventry	2,226	90	46	163	60	2,585
Cranston	8,408	247	70	234	105	9,064
Cumberland	2,189	83	54	85	27	2,438
East Greenwich	559	15	34	40	15	663
East Providence	4,209	147	34	150	65	4,605
Exeter	320	10	<10	19	<10	364
Foster	331	<10	<10	26	<10	380
Glocester	438	11	11	47	31	538
Hopkinton	686	14	<10	51	<10	766
Jamestown	134	<10	<10	<10	<10	155
Johnston	2,983	95	44	92	34	3,248
Lincoln	1,786	71	33	79	30	1,999
Little Compton	146	<10	<10	<10	<10	159
Middletown	1,131	43	17	44	20	1,255
Narragansett	459	<10	10	35	30	543
New Shoreham	89	0	0	0	0	89
Newport	1,932	101	<10	48	28	2,115
North Kingstown	1,395	56	21	68	16	1,556
North Providence	3,193	97	24	93	70	3,477
North Smithfield	666	22	15	49	11	763
Pawtucket	12,746	457	25	207	139	13,574
Portsmouth	712	16	12	50	31	821
Providence	36,140	1,462	45	454	472	38,573
Richmond	334	10	<10	<10	<10	359
Scituate	515	17	16	51	<10	608
Smithfield	906	20	31	44	19	1,020
South Kingstown	1,229	43	25	79	19	1,395
Tiverton	916	26	<10	34	<10	992
Warren	821	30	10	42	17	920
Warwick	5,652	163	84	287	107	6,293
West Greenwich	276	<10	11	27	<10	322
West Warwick	3,359	154	21	120	67	3,721
Westerly	1,661	50	28	64	13	1,816
Woonsocket	7,713	452	13	179	98	8,455
Four Core Cities	*62,213*	*2,585*	*86*	*896*	*735*	*66,515*
Remainder of State	*52,815*	*1,754*	*765*	*2,317*	*930*	*58,581*
Rhode Island	*115,028*	*4,339*	*851*	*3,213*	*1,665*	*125,096*

Source of Data for Table/Methodology

Rhode Island Executive Office of Health and Human Services, MMIS Database, December 31, 2023.

The table includes children enrolled in RIte Care managed care as of December 31, 2023. Children with special health care needs who are covered through RIte 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

[1] Murphey, D. (2017). *Health insurance coverage improves child well-being.* Washington, DC: Child Trends.

[2] *Medicaid's role for children.* (2017). Washington, DC: Georgetown University Health Policy Institute, Center for Children and Families.

[3] *EPSDT: A primer on Medicaid's pediatric benefit.* (2017). Washington, DC: Georgetown University Health Policy Institute, Center for Children and Families.

[4] Paradise, J. (2014). *The impact of the Children Health Insurance Program (CHIP): What does the research tell us?* Washington, DC: The Henry J. Kaiser Family Foundation.

[5] American Academy of Pediatrics. (2014). Policy statement: Children's Health Insurance Program (CHIP): Accomplishments, challenges, and policy recommendations. *Pediatrics, 122*(3), 784-793.

[6] Wagnerman, K., Chester, A., & Alker, J. (2017). *Medicaid is a smart investment in children.* Washington, DC: Georgetown University Health Policy Institute, Center for Children and Families.

[7] *Health coverage for parents and caregivers helps children.* (2017). Washington, DC: Georgetown University Health Policy Institute, Center for Children and Families.

[8,15] Rhode Island Executive Office of Health & Human Services. (2024). *Healthcare programs.* Retrieved from www.eohhs.ri.gov

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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

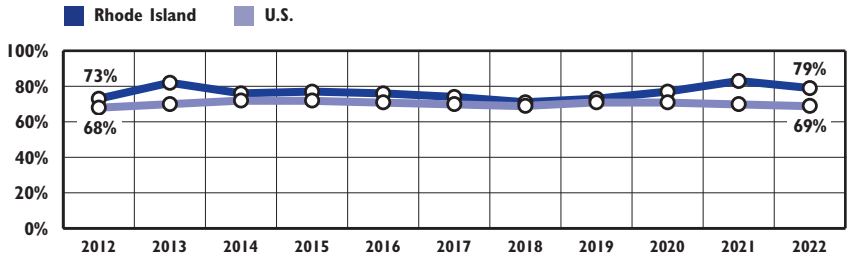
Timely and complete immunization protects children against many infectious diseases that were once common and resulted in death or disability. Vaccines interact with the immune system to produce antibodies that protect the body if it is later exposed to disease. The benefits of immunization include improved 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, 2012-2022



**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. 2022 data are preliminary.*

Source: Centers for Disease Control and Prevention, *National Immunization Survey-Children*, 2012-2022.

★ **In 2022, 79% of Rhode Island's children were fully immunized by age 24 months, above the national average of 69%.[9]**

★ **In 2020-2022, the U.S. rate for fully immunized children by age 24 months was 43% for uninsured children, 64% for children with Medicaid coverage, and 77% for children with private health insurance coverage.[10]**

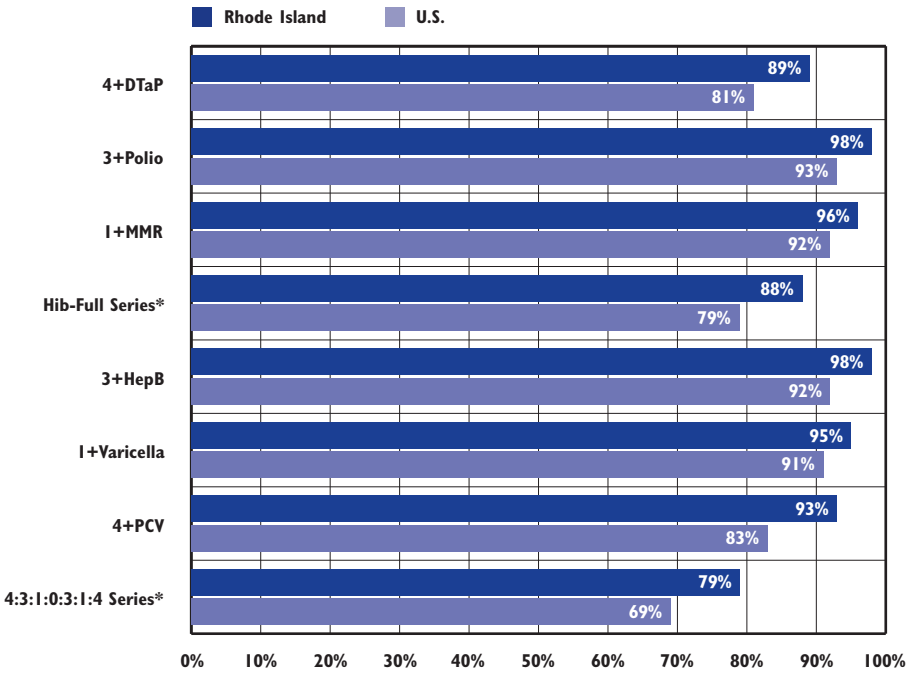
★ **Vaccine concerns have led some parents to request alternative vaccination schedules or to refuse some or all immunizations, which contribute to under-immunization.[11] Federal law requires that families be provided with information about each vaccine, including risks and benefits about the vaccine.[12]**

Immunizations for School Entry

★ **Of the immunizations needed for school entry in 2023 in Rhode Island, entering kindergarteners had coverage rates between 91% and 98%, while entering 7th grade students had rates between 77% and 89%.[13]**

★ **In Rhode Island, children may be exempt from receiving one or more vaccines for medical or religious reasons.[14] In the 2023-2024 school year, 171 kindergarten students and 386 students in 7th grade had exemptions from vaccination requirements. Of these exemptions, for kindergarten, 91% were for religious reasons and 10% were for medical reasons. For 7th grade, 94% were for religious reasons and 6% were for medical reasons.[15]**

Vaccination Coverage Among Children, by Age 24 Months, Rhode Island and United States, 2022



Source: Rhode Island Department of Health analysis of data from the *National Immunization Survey-Children*, 2022.

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

★ It is recommended that everyone ages six months and older get the COVID-19 vaccine, and boosters for everyone ages five years and older if eligible. The seasonal flu vaccination is also recommended for everyone ages six months and older.[16,17]

★ As of June 2023, 38% of Rhode Island children ages five to nine, 55% of Rhode Island children ages 10 to 14, and 71% of Rhode Island youth ages 15 to 18 were at least partially vaccinated for the prevention of COVID-19. For 2022-2023, 76% of children in Rhode Island ages six months to 17 years received the season flu vaccination.[18,19]

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.[20]

★ According to the *2022 National Immunization Survey*, 85% of Rhode Island adolescents (ages 13-17) received the 3+HPV vaccine, compared to 63% nationally; 95% of Rhode Island adolescents received the Tdap vaccine, compared to 90% nationally; and 96% of Rhode Island adolescents received the MCV4 vaccine, compared to 89% nationally.[21]

★ 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.[22,23]

★ During the 2022-2023 school year, 88 schools participated in VBYG, up from 74 schools the year prior. In total, 3,536 vaccine doses were administered to 1,535 students; up from 2,889 vaccine doses administered to 1,201 students the year prior, returning to 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).[24]

★ The School Located Vaccination (SLV) program administered 17,401 doses of the influenza vaccine and 1,510 doses of the COVID-19 vaccine to both children and adults at 213 school-based clinics throughout Rhode Island from October 2023 to February 2024. The goal of SLV is to ensure all Rhode Island children receive their annual flu vaccination at no out-of-pocket cost. SLV also began offering COVID-19 vaccinations this year.[25]

References

[1] U.S. Department of Health & Human Services. (2022). *Five important reasons to vaccinate your child.* Retrieved February 13, 2024 from www.hhs.gov

[2] Centers for Disease Control and Prevention. (2021). *Immunity types.* Retrieved February 13, 2024, from www.cdc.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, 2023 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]

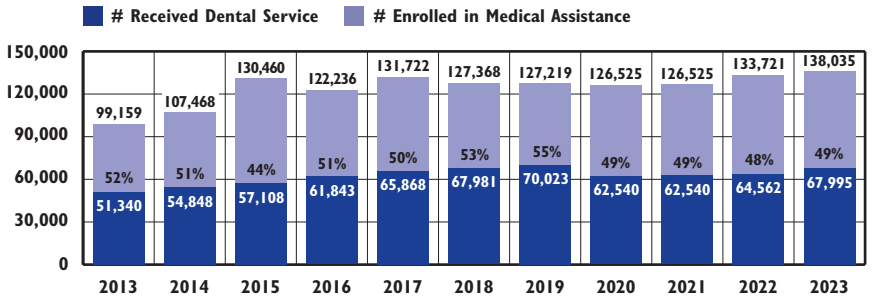
Children living in poverty are more likely to have untreated tooth decay than higher-income children. For children in low-income families, the efficacy and continuity of public dental insurance is a critical factor in access to dental care. In the U.S. and in Rhode Island, children who have public health 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 to 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 2013-2023



Source: Rhode Island Executive Office of Health and Human Services, State Fiscal Years (SFY) 2013-2023. *Medical Assistance includes RIte Care, RIte Share, and Medicaid fee-for-service.

★ **Forty-nine percent (67,995) of the children who were enrolled in RIte Care, RIte Share, or Medicaid fee-for service on June 30, 2023 received a dental service during State Fiscal Year 2023.**[17]

★ **RIte Smiles, Rhode Island's managed care oral health program for children in low-income families, has been credited with improving access to dental care for children. The program covers children and youth born on or after May 1, 2000.**[18]

★ **As of December 31, 2023, there were 127,088 children and youth enrolled in RIte Smiles (compared to 131,905 the year prior). Fifty-three percent (66,195) of the children who were enrolled in RIte Smiles on June 30, 2023 received a dental service during State Fiscal Year 2023.**[19]

★ **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.**[20] **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.**[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 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 and streamlining administrative procedures can encourage enrollment and utilization.[24,25]

★ When RIte Smiles started, dental provider reimbursement rates were raised to encourage participation.[26] The number of Medicaid-participating dentists increased from 27 before RIte Smiles began to 471 in 2023.[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, there were many disruptions in dental care. Nationally, children's oral health declined because of the pandemic.[30]

★ In Rhode Island in 2022, 341 children and youth under age 21 were treated for dental issues in emergency departments. This is an increase from 2021, when 288 children and youth were treated for dental issues in emergency departments.[31]

★ In Rhode Island in 2022, 58 children and youth under age 21 were hospitalized with a diagnosis that *included* a dental problem. That same year, nine children and youth under age 21 were hospitalized with a dental problem as the *primary* reason for the hospitalization. This is about the same as the year prior.[32]

Importance of Early Dental Visits

★ 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]

★ 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.[35]

★ 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.[36]

Disparities in Dental Health

★ Between 2019-2022, 21% of Rhode Island kindergartners and 24% of Rhode Island third graders had untreated tooth decay. There are disparities by race/ethnicity and income, with Black, Hispanic, and low-income children having the highest rates.[37]

★ Nationally, there are disparities in access to dental care and untreated tooth decay for children and adults. Those in low-income families, those in rural areas, as well as Black, Hispanic, Asian, and Native American populations are more likely to have dental issues and less likely to receive dental treatment.[38]

References

[1,6,9,15,22,24,33] *The state of little teeth: Second edition.* (2019). Chicago, IL: American Academy of Pediatric Dentistry.

[2,16,38] *Oral health in America: Advances and challenges* (2021). Bethesda, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health.

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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 2022, more than one in four (28.7%) 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 2022, more than half (59%) 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 2023, there were 7,921 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]

Continuum of Mental Health Care Throughout the Life Course

★ **Mental health systems tend to be crisis-driven with disproportionate spending on high-end care and inadequate investments in prevention and community-based services.[14,15,16] Increasing the availability of outpatient services could reduce 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 2023, 4,399 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

★ **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) 2023, 25% (32,597) of children under age 19 enrolled in Medicaid/RIte Care had a mental health diagnosis.[28]**

★ **In SFY 2023, 959 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 2,598 children had a mental health related emergency department visit (up from 2,246 in SFY 2021).[29]**

★ **In 2023, LGBTQ+ Rhode Island high school students reported higher rates of sadness and hopelessness than their peers.[30] 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.[31]**

Psychiatric Hospitals

Children Under Age 18 Treated at Rhode Island Psychiatric Hospitals, October 1, 2022 – September 30, 2023 (FFY 2023)

	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	551	33 days	116	54 days	545	9 days
Residential	144	84 days**	39	5.1 years	--	--
Partial Hospitalization	893	42 visits	130	42 visits	785	5 visits
Home-Based	0	NA	19	16 visits	--	--
Outpatient**	3,903	NA	45	NA	368	NA

Source: Lifespan, 2022-2023 and Butler Hospital, 2022-2023. 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 2023). The average length of stay is based on discharges. **Outpatient services includes Bradley and Hasbro Outpatient Services.

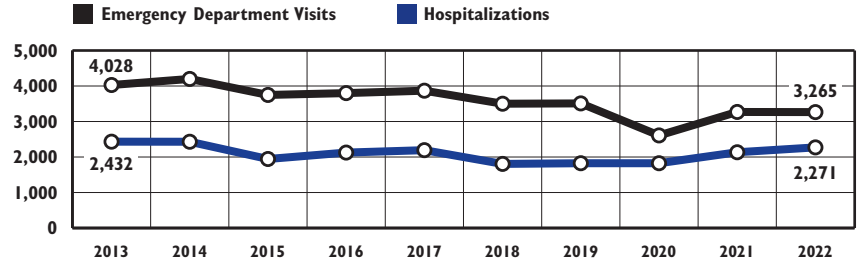
-- = Service not offered. NA = Data not available for this service.

★ **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.[32] The most common diagnoses for youth treated at Butler or Bradley Hospitals in FFY 2023 in an inpatient setting were depressive disorders, anxiety disorders, adjustment disorders, and childhood/adolescent disorders.[33,34]**

★ **In Federal Fiscal Year (FFY) 2023, there were 673 children and youth awaiting psychiatric inpatient admission (psychiatric boarding), compared to FFY 2022 when there were 1,144 boarders. The average wait time for psychiatric admission in FFY 2023 was 3.5 days, compared to 6.2 days in FFY 2022. In FFY 2023, 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 396 students in FFY 2023.[37]**

Emergency Care for Primary Diagnosis of Mental Disorder, Children Under Age 18, Rhode Island, 2013-2022*



Source: Rhode Island Department of Health, Hospital Discharge Database, 2013-2022. *Data are for emergency department visits and hospitalizations, not children. Children may visit the 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 2022, there were 3,265 emergency department visits and 2,271 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 36% 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 2023, 36% of Rhode Island high school students reported feeling sad or hopeless for more than two weeks during the past year. Girls were twice as likely as boys to report these feelings. In 2023, 9% of Rhode Island high school students reported attempting suicide one or more times during the past year.[41]**

★ **In Rhode Island between 2018 and 2022, there were 2,448 emergency department visits and 1,349 hospitalizations of youth ages 13 to 19 due to suicide attempts or intentional self-harm.[42] Suicidal or self-injurious behavior accounted for 10% of the reasons for calls to Kids' Link RI during FY 2023.[43]**

★ **Twelve children ages 15 to 19 died due to suicide in Rhode Island between 2018-2022.[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 21% of children in the U.S. and 23% 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 34% of parents nationally reported completing a developmental screening.[3]

In Rhode Island, 17% of CSHCN have "more complex heath needs", which is slightly higher than the national level (16%). 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, 2023, nine certified EI provider agencies served 1,852 children in Rhode Island. Of these children receiving EI services, 702 were female and 1,150 were male. Of these children, 53% were white, 34% were Hispanic, 7% were Black, 3% were Multiracial, 3% 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, 2023, in Rhode Island, there were 3,368 children ages three to five who received preschool special education services.[16]**

★ **In Rhode Island as of June 2023, 22,120 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 2023, 66% of the 1,305 children who reached age three while in EI were determined to be eligible for preschool special education, 14% were found not eligible, and 16% 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, 2023, there were 4,339 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, 2023, there were 851 Rhode Island children enrolled through the Katie Beckett provision, a decline of 52% 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, 2023, 1,665 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 74% of all eligible former foster youth were enrolled in Medicaid coverage as of December 31, 2023.[30]

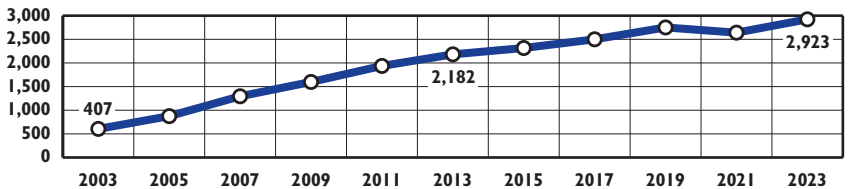
★ Children who are adopted through the Rhode Island Department of Children, Youth and Families and have special needs may qualify for Medical Assistance coverage.[31] As of December 31, 2023, 3,329 children were enrolled in Medical Assistance because of special needs adoptions.[32]

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 2003 – June 2023



Source: Rhode Island Department of Education, June 2003– June 2023. Numbers include parentally-placed students.

★ In June 2023, there were 2,923 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.). *2022 National Survey of Children's Health: Children with special health care needs.* Retrieved on March 15, 2024, from childhealthdata.org

[2] Health Resources & Services Administration, Maternal and Child Health Bureau. (2024). *Children and youth with special health care needs.* Retrieved on March 15, 2024, 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.

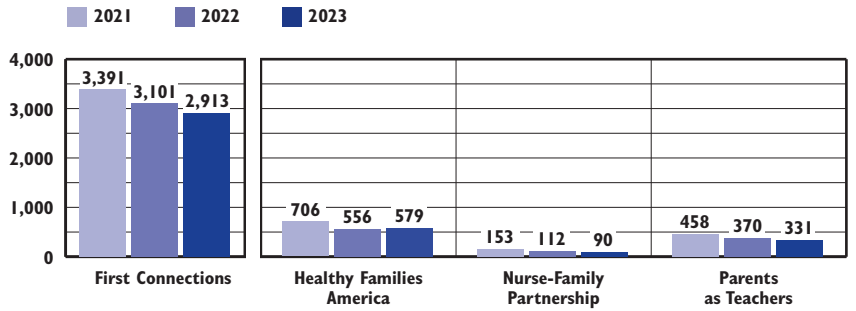
SIGNIFICANCE

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 appropriate 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 2023, there were 26 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, 2021-2023



Source: Rhode Island Department of Health, Family Home Visiting, Family Visiting Database enrollment in MIECHV-funded programs on October 1, 2021, October 1, 2022, and October 1, 2023 and KIDSNET, unduplicated families receiving at least one First Connections visit in Calendar Year.

★ **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 2023, 2,913 families received at least one First Connections home visit, down 6% from 2022. Fifty-three percent of children lived in one of the four core cities and 47% in the remainder of the state.[12]**

★ **As of October 2023, 1,000 families were participating in an evidence-based home visiting program in Rhode Island, down 4% from October 2022. Home visiting is in a workforce crisis across the country. Ongoing staffing challenges are due to low pay, high stress, and excessive workloads leading to burnout.[13,14]**

★ **Among the children enrolled in an evidence-based, comprehensive model, 42% were white, 20% were Black, 4% were Multiracial, 2% were Asian, <1% were American Indian or Alaska Native, <1% were Native Hawaiian or Other Pacific Islander, and 32% were of an unknown race or declined to answer. Within these race categories, 56% of enrolled children were Hispanic.[15]**

★ **Home-based Early Head Start is also recognized as an evidence-based home visiting program that improves child outcomes.[16] As of October 2023 in Rhode Island, there were 295 children enrolled in home-based Early Head Start.[17]**

Table 16.

Family Home Visiting, Rhode Island, 2023

CITY/TOWN	COMMUNITY CONTEXT, 2023: TOTAL # OF BIRTHS	# OF BABIES BORN WHO SCREENED RISK POSITIVE	# OF BIRTHS TO LOW-INCOME FAMILIES	# RECEIVED FIRST CONNECTIONS VISIT IN 2023	# FAMILIES ENROLLED IN EVIDENCE-BASED HOME VISITING PROGRAMS, OCTOBER 1, 2023: HEALTHY FAMILIES AMERICA	NURSE-FAMILY PARTNERSHIP	PARENTS AS TEACHERS	TOTAL
Barrington	91	43	12	10	4	2	1	7
Bristol	108	62	24	21	3	1	1	5
Burrillville	121	77	45	26	1	0	0	1
Central Falls	250	220	216	60	54	12	22	88
Charlestown	46	20	10	12	2	0	2	4
Coventry	259	143	53	78	18	0	8	26
Cranston	795	498	333	246	53	5	34	92
Cumberland	268	136	55	53	5	0	2	7
East Greenwich	119	49	10	21	1	0	2	3
East Providence	437	268	152	40	9	3	6	18
Exeter	36	18	3	11	1	0	1	2
Foster	42	23	12	9	0	1	0	1
Glocester	54	21	8	8	1	0	0	1
Hopkinton	64	32	22	16	0	0	6	6
Jamestown	28	15	4	5	1	0	0	1
Johnston	273	169	93	45	4	0	3	7
Lincoln	173	94	54	35	3	2	4	9
Little Compton	9	2	1	1	1	0	0	1
Middletown	122	71	33	33	5	0	4	9
Narragansett	58	29	14	18	1	0	2	3
New Shoreham	7	6	4	6	0	0	1	1
Newport	190	120	90	29	4	0	4	8
North Kingstown	178	69	22	49	6	0	0	6
North Providence	285	186	113	61	5	3	1	9
North Smithfield	93	41	17	18	1	1	1	3
Pawtucket	750	601	462	137	66	27	32	125
Portsmouth	91	42	15	15	0	0	3	3
Providence	2,136	1,715	1,475	1188	241	30	94	365
Richmond	62	30	10	12	1	0	1	2
Scituate	89	38	14	15	0	0	0	0
Smithfield	99	40	14	15	1	0	1	2
South Kingstown	182	80	37	51	2	0	4	6
Tiverton	82	50	31	12	4	0	6	10
Warren	70	40	16	9	3	1	0	4
Warwick	682	395	183	178	29	1	10	40
West Greenwich	45	20	8	13	1	0	0	1
West Warwick	288	182	114	93	17	1	5	23
Westerly	131	78	46	59	2	1	31	33
Woonsocket	458	367	317	157	28	0	38	66
Unknown	*NA*	*NA*	*NA*	*48*	*1*	*0*	*1*	*2*
Four Core Cities	*3,594*	*2,903*	*2,470*	*1,542*	*389*	*69*	*186*	*644*
Remainder of State	*5,677*	*3,187*	*1,672*	*1,371*	*190*	*21*	*145*	*356*
Rhode Island	*9,271*	*6,090*	*4,142*	*2,913*	*579*	*90*	*331*	*1,000*

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.

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 Legislators.

[4,7,16] *Early childhood home visiting models: Reviewing evidence of effectiveness.* (2023). Washington, DC: U.S. Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research, and Evaluation.

[6] National Home Visiting Resource Center. (2018). *Home visiting primer.* Arlington, VA: James Bell Associates and the Urban Institute.

[8,11] *Family visiting legislative report.* (2023). Providence, RI: Rhode Island Department of Health.

[9] *Head Start program facts: Fiscal Year 2021.* (2022). Retrieved March 21, 2023, from eclkc.ohs.acf.hhs.gov

[10] Home Visiting Evidence of Effectiveness. (2022). *Models eligible for Maternal, Infant, and Early Childhood Home Visiting (MIECHV) funding.* Retrieved March 21, 2023, from homvee.acf.hhs.gov

[12,13,15] Rhode Island Department of Health, 2022 and 2023.

(continued on page 181)

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]

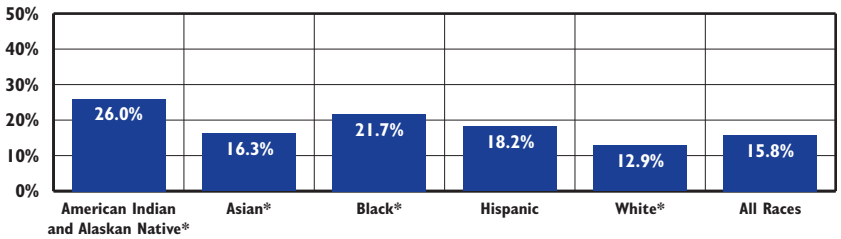
Effective prenatal care screens for and intervenes with a range of maternal needs including nutrition, social support, mental health, smoking cessation, substance use, domestic violence, and unmet needs for food and shelter. A prenatal visit is the first step in establishing an infant's medical home 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 Women of Color.[10]

Women With Delayed or No Prenatal Care by Race/Ethnicity, Rhode Island, 2018-2022



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2018-2022. * Race categories are non-Hispanic.

★ **In Rhode Island between 2018 and 2022, 15.8% of women who gave birth did not begin care until the second or third trimester if at all. Between 2018 and 2022 in Rhode Island, American Indian and Alaska Native (26.0%), Black (21.7%), Hispanic (18.2%), and Asian women (16.3%) were more likely to receive delayed prenatal care than white women (12.9%).**[11]

★ **Between 2018 and 2022 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 (25.0% 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 (19.6%) pregnant women in the four core cities received delayed prenatal care compared to 13.5% 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 2018 and 2022, 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 (42.2%). Women with private insurance coverage were the least likely to receive delayed/no prenatal care (12.0%).**[16]

Women with Delayed Prenatal Care

Racial/Ethnic Disparities in Severe Maternal Morbidity

★ Nationally, Black women are almost 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. Rhode Island instead reports the prevalence of severe maternal morbidity defined as unintended outcomes of labor and delivery that result in significant consequences to a woman's health.[25]

★ In 2022, the Rhode Island severe maternal morbidity rate was 87 per 10,000 delivery hospitalizations up from 72 per 10,000 in 2020. Black women (124 per 10,000) and Hispanic women (106 per 10,000) had higher rates of maternal morbidity than white women (73 per 10,000) between 2018 and 2022.[26]

Table 17. **Delayed Prenatal Care, Rhode Island, 2018-2022**

CITY/TOWN	# BIRTHS	# DELAYED CARE	% DELAYED CARE
Barrington	563	91	16.2
Bristol	661	98	14.8
Burrillville	619	94	15.2
Central Falls	1,441	318	22.1
Charlestown	275	25	9.1
Coventry	1,455	163	11.2
Cranston	3,720	562	15.1
Cumberland	1,653	231	14.0
East Greenwich	601	65	10.8
East Providence	2,160	317	14.7
Exeter	235	23	9.8
Foster	203	24	11.8
Glocester	344	57	16.6
Hopkinton	311	29	9.3
Jamestown	130	11	8.5^
Johnston	1,322	200	15.1
Lincoln	882	127	14.4
Little Compton	73	10	13.7 ^
Middletown	746	82	11.0
Narragansett	265	28	10.6
New Shoreham	29	4	*
Newport	1,025	155	15.1
North Kingstown	1,066	116	10.9
North Providence	1,564	248	15.9
North Smithfield	445	78	17.5
Pawtucket	4,182	755	18.1
Portsmouth	648	73	11.3
Providence	11,343	2,279	20.1
Richmond	339	32	9.4
Scituate	433	68	15.7
Smithfield	733	113	15.4
South Kingstown	807	69	8.6
Tiverton	534	66	12.4
Warren	393	65	16.5
Warwick	3,440	431	12.5
West Greenwich	242	36	14.9
West Warwick	1,409	180	12.8
Westerly	858	92	10.7
Woonsocket	2,438	442	18.1
*Unknown***	*228*	*32*	*14.0*
Four Core Cities	*19,404*	*3,794*	*19.6*
Remainder of State	*30,183*	*4,063*	*13.5*
Rhode Island	*49,815*	*7,889*	*15.8*

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2018-2022.

The denominator is the total number of live births to Rhode Island residents from 2018-2022.

*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/Missing: 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.

References

[1,4] Yogman, M., Lavin, A., & Cohen, G. (2018). The prenatal visit. *Pediatrics 142*(1): e20181218.

[2,6] U.S. Department of Health & Human Services, Office on Women's Health. (2021). *Prenatal care.* Retrieved February 23, 2024, from www.womenshealth.gov

[3] Hagan, J. F., Shaw, J. S., & Duncan, P. M. (Eds.). (2017). *Bright futures: Guidelines for health supervision of infants, children, and adolescents (4th ed.).* Elk Grove Village, IL: American Academy of Pediatrics.

[5] Shore, R. & Shore, B. (2009). *KIDS COUNT indicator brief: Reducing infant mortality.* Baltimore, MD: The Annie E. Casey Foundation.

[7] Kim, H., Cain, R., & Viner-Brown, S. (2014). *2014 Rhode Island Pregnancy Risk Assessment Monitoring System data book.* Providence, RI: Rhode Island Department of Health.

[8] Kim, H., Monteiro, K., Cooper, T., Viner-Brown, S., & Weber, A. (2018). *2018 Rhode Island Pregnancy Risk Assessment Monitoring System data book: 3rd edition.* Providence, RI: Rhode Island Department of Health.

(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]

The three leading risk factors of preterm birth 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 substance use.[7,8]

In 2022, the U.S. preterm birth rate was 10.38%, a decrease from the year prior (10.49%). The preterm birth rate varies by race/ethnicity, with non-Hispanic Black women (14.6%) continuing to have the highest preterm birth rate in the U.S. in 2022. American Indian and Alaska Native women (12.6%) and Native Hawaiian and Other Pacific Islander women (11.9%) had higher rates than Hispanic women (10.1%), non-Hispanic white women (9.4%), and Asian women (9.2%). The rate decreased for Black, Hispanic, and white groups from 2022, while the other groups had changes that were not significant.[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]

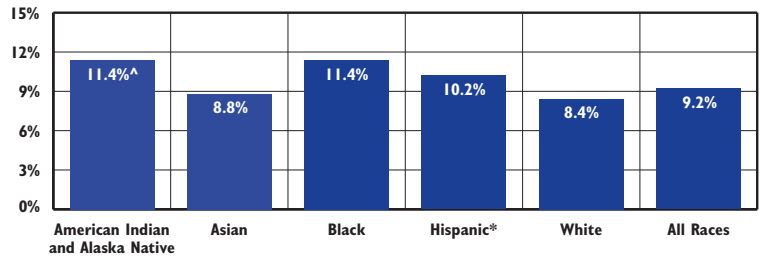
Preterm Births

	2012	2022
RI	11.0%	9.0%
US	11.5%	10.4%
National Rank*		*6th*
New England Rank**		*3rd*

**1st is best; 50th is worst*
***1st is best; 6th is worst*

Source: For 2012: Martin, J. A., et al. (2014). Births: Final data for 2012. NVSR, 62(9), 1-20. For 2022: Martin, J. A., et al. (2023).Births: Provisional data for 2022). Vital Statistics Rapid Release no 28.

Preterm Birth Infants by Race/Ethnicity, Rhode Island, 2018-2022



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2018-2022. *Hispanic infants can be of any race. ^ The data are statistically unstable and should be interpreted with caution.

★ **Between 2018 and 2022, 11.4% of births of non-Hispanic Native American and 11.4% of births of non-Hispanic Black infants in Rhode Island were preterm, compared with 8.8% of non-Hispanic Asian and 8.4% of non-Hispanic white infants. During this same time, 10.2% of births to Hispanic women in Rhode Island were preterm.**[12]

★ **Between 2018 and 2022, 73.0% of all preterm births in Rhode Island were late preterm births (34-36 weeks gestation), and 15.3% of all preterm births were very preterm (<32 weeks gestation).**[13] **Multiple births are more likely to be born preterm. In Rhode Island between 2018 and 2022, 61.7% of multiple births were preterm, compared with 7.5% of singleton births.**[14]

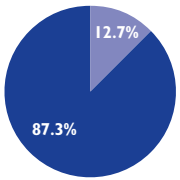
★ **Between 2018 and 2022, 12.4% of births to women who smoked during pregnancy were preterm compared to 9.0% of those who did not smoke during pregnancy. During this period, 10.3% of births to women with a high school degree or less were preterm, compared with 8.5% of those with higher education levels.**[15]

★ **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 Insurance Status, Rhode Island, 2018-2022

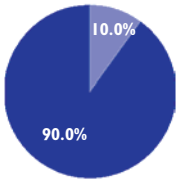
Uninsured

12.7% Preterm Births
87.3% Full-term Births



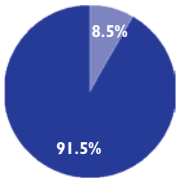
Public Insurance (RIte Care)

10.0% Preterm Births
90.0% Full-term Births



Private Insurance

8.5% Preterm Births
91.5% Full-term Births



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2018-2022.

Table 18. **Preterm Births, Rhode Island, 2018-2022**

CITY/TOWN	# BIRTHS	# PRETERM BIRTHS	% PRETERM BIRTHS
Barrington	585	45	7.7
Bristol	673	55	8.2
Burrillville	654	56	8.6
Central Falls	1,505	178	11.8
Charlestown	280	29	10.4
Coventry	1,491	119	8.0
Cranston	3,810	353	9.3
Cumberland	1,740	147	8.4
East Greenwich	614	43	7.0
East Providence	2,229	185	8.3
Exeter	242	17	7.0 ^
Foster	208	21	10.1 ^
Glocester	359	25	7.0
Hopkinton	316	23	7.3 ^
Jamestown	131	10	*
Johnston	1,361	122	9.0
Lincoln	914	71	7.8
Little Compton	77	4	*
Middletown	763	53	6.9
Narragansett	273	22	8.1 ^
New Shoreham	31	1	*
Newport	1,048	75	7.2
North Kingstown	1,094	82	7.5
North Providence	1,605	152	9.5
North Smithfield	481	46	9.6
Pawtucket	4,332	431	9.9
Portsmouth	659	54	8.2
Providence	11,726	1,189	10.1
Richmond	348	31	8.9
Scituate	445	41	9.2
Smithfield	747	54	7.2
South Kingstown	827	74	8.9
Tiverton	550	46	8.4
Warren	405	34	8.4
Warwick	3,528	305	8.6
West Greenwich	249	21	8.4 ^
West Warwick	1,462	145	9.9
Westerly	874	75	8.6
Woonsocket	2,604	268	10.3
Unknown	*235*	*18*	*
Four Core Cities	*20,167*	*2,066*	*10.2*
Remainder of State	*31,308*	*2,654*	*8.5*
Rhode Island	*51,475*	*4,720*	*9.2*

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2018-2022. The denominator is the total number of live births to Rhode Island residents from 2018-2022. Future reports with birth counts may change.

*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 2018-2022 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. (2023). *Preterm birth.* Retrieved March 14, 2024, from cdc.gov

[2,5,8] Mayo Clinic. (2013). *Premature birth.* Retrieved March 14, 2024, 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. (2023). *Preterm births.* Retrieved March 14, 2024, from who.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 2018 and 2022, 4.0% of births were to mothers who smoked during their pregnancy. During that time, Rhode Island smokers (14.3%) were more likely to deliver a low birthweight infant compared to women who did not smoke (7.4%).[7]

Children born at very low birthweight (less than 3.3 pounds or 1,500 grams) are almost 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]

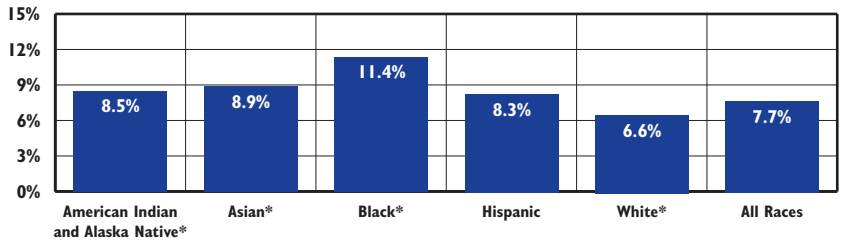
In the U.S. in 2021, 8.5% of infants were born at low birthweight, which is a slight increase from 8.1% in 2011. In Rhode Island in 2021, 7.9% of infants were born at low birthweight.[11,12] The low birthweight related infant mortality rate decreased between 2020 and 2021 but still remains a top cause 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, 2018-2022*



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2018-2022. *Race categories are non-Hispanic.

★ **In Rhode Island between 2018 and 2022, 8.5% of American Indian and Alaskan Native infants, 8.9% of Asian infants, 11.4% of Black infants, and 8.3% 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 2018 and 2022 in Rhode Island, 9.7% of births among women under age 20 were low birthweight compared to 7.6% of those over age 20; 8.8% of infants born to women living in the four core cities were low birthweight compared to 7.0% in the remainder of the state; and 8.9% 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]**

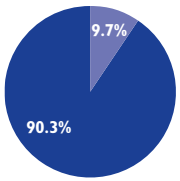
★ **Rhode Island women who deliver a low birthweight infant are more likely to report smoking while pregnant, feeling unsafe in their neighborhood, delayed or no prenatal care, a depression diagnosis, and domestic violence; as well as health issues during their pregnancy (such as high blood pressure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

★ **Between 2018 and 2022 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 by Mother's Insurance Type, Rhode Island, 2018-2022

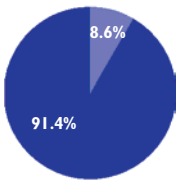
Uninsured

9.7% Low Birthweight
90.3% Normal Birthweight



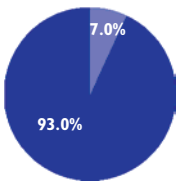
Public Insurance (RIte Care)

8.6% Low Birthweight
91.4% Normal Birthweight



Private Insurance

7.0% Low Birthweight
93.0% Normal Birthweight



Source: Rhode Island Department of Health, Center for Health Data and Analysis. Maternal and Child Health Database, 2018-2022. Data for births in 2022 are provisional.

Table 19. **Low Birthweight Infants, Rhode Island, 2018-2022**

CITY/TOWN	# BIRTHS	# LOW BIRTHWEIGHT	% LOW BIRTHWEIGHT
Barrington	585	37	6.3
Bristol	673	47	7.0
Burrillville	654	44	6.7
Central Falls	1,505	125	8.3
Charlestown	280	16	5.7 ^
Coventry	1,491	92	6.2
Cranston	3,810	311	8.2
Cumberland	1,740	117	6.7
East Greenwich	614	32	5.2
East Providence	2,229	165	7.4
Exeter	242	13	5.4 ^
Foster	208	17	8.2 ^
Glocester	359	20	5.6 ^
Hopkinton	316	14	4.4 ^
Jamestown	131	10	*
Johnston	1,361	105	7.7
Lincoln	914	55	6.0
Little Compton	77	3	*
Middletown	763	54	7.1
Narragansett	273	22	8.1 ^
New Shoreham	31	2	*
Newport	1,048	70	6.7
North Kingstown	1,094	54	4.9
North Providence	1,605	139	8.7
North Smithfield	481	29	6.0
Pawtucket	4,332	400	9.2
Portsmouth	659	41	6.2
Providence	11,726	1,027	8.8
Richmond	348	15	4.3 ^
Scituate	445	33	7.4
Smithfield	747	41	5.5
South Kingstown	827	51	6.2
Tiverton	550	39	7.1
Warren	405	29	7.2
Warwick	3,528	246	7.0
West Greenwich	249	17	6.8 ^
West Warwick	1,462	124	8.5
Westerly	874	67	7.7
Woonsocket	2,604	230	8.8
Unknown	*235*	*16*	*
Four Core Cities	*20,167*	*1,782*	*8.8*
Remainder of State	*31,308*	*2,187*	*7.0*
Rhode Island	*51,475*	*3,969*	*7.7*

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2018-2022. Data from January 2024 and future reports with birth counts may change.

The denominator is the total number of live births to Rhode Island residents between 2018 and 2022.

*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

[3] Echevarria, E., Lorch, S. (2022). Family educational attainment and racial disparities in low birth weight. *Pediatrics 150*(1):e2021052369

[5] Healthy Children (2019). *Where we stand: Smoking during pregnancy.* Retrieved April 6, 2022, from www.healthychildren.org

[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, 2018-2022.

[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. (2023). Infant mortality in the United States, 2021: Data from the period linked birth/infant death file. *National Vital Statistics Reports 72*(11), 1-18.

(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 2021, 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. The leading causes of infant death were the same in 2020.[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 2021 due to improvements in nutrition, medical advances, improved access to care, economic growth, and safer sleep practices.[4,5,6] Despite this decline, the U.S. continues to have a higher rate of infant mortality than other industrialized countries, in part due 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 2021, the non-Hispanic Black infant mortality rate was 10.6 deaths per 1,000 births, the American Indian/Alaska Native rate was 7.5, the Native Hawaiian or Other Pacific Islander rate was 7.8, the Hispanic rate was 4.8, the non-Hispanic white rate was 4.4, and the Asian rate was 3.7.[8]

Between 2018 and 2022, the overall infant mortality rate in Rhode Island was 4.6 deaths per 1,000 live births. Mothers with a high school degree or less had a higher infant mortality rate (5.4 per 1,000 live births) than mothers with higher educational attainment (3.1 per 1,000 live births). Mothers with public insurance had a higher infant mortality rate (5.6 per 1,000 live births) than mothers with private insurance (3.1 per 1,000 live births).[9]

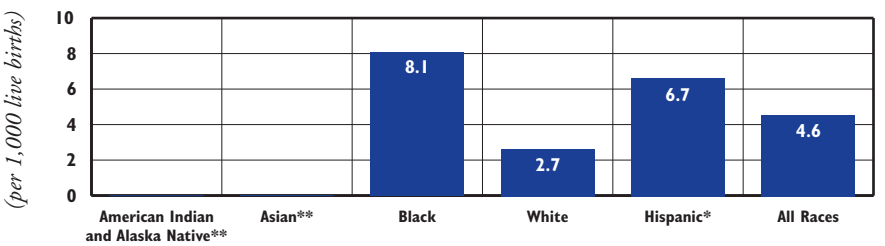
Infant Mortality Rate
(rate per 1,000 live births)

	2011	2021
RI	6.4	4.4
US	6.1	5.4
National Rank*		*10th*
New England Rank**		*3rd*

**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, 2018-2022



Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2018-2022 *Hispanic infants can be of any race. **Rate or percentage is too unstable to report.

★ **In Rhode Island between 2018 and 2022, the Black infant mortality rate was 8.1 deaths per 1,000 live births, which is three times the white infant mortality rate of 2.7 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]**

★ **The overall 2018-2022 infant mortality rate in Rhode Island of 4.6 meets the Healthy People 2030 target of 5.0 per 1,000 live births. However, there are disparities by race/ethnicity with the non-Hispanic Black, and Hispanic 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 the cumulative effect of structural racism and work to 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 for all other Asian subgroups. Enhancing the availability of disaggregated data for Asian, Native Hawaiian, Pacific Islander, and Southeast Asian people is important for efforts to advance health equity.[15]**

Causes of Infant Mortality in Rhode Island

★ Between 2018 and 2022, 238 infants died in Rhode Island before their first birthday, a rate of 4.6 per 1,000 live births. Between 2018 and 2022, 66% of infants who died were low birthweight (less than 2,500 grams) and 26% were born at normal weights. Between 2018 and 2022, 66% (158) of all infant deaths were preterm (born before the 37th week of pregnancy).[16]

★ Of the 238 infant deaths between 2018 and 2022 in Rhode Island, 75% (178) 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 2018 and 2022, 25% (60) of the 238 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, 2018-2022

CITY/TOWN	# OF BIRTHS	# OF INFANT DEATHS	RATE PER 1,000 LIVE BIRTHS
Four Core Cities	20,167	120	6.0
Remainder of State	31,308	118	3.8
Rhode Island	*51,475*	*238*	*4.6*

Source: Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2018-2022. Core cities are Central Falls, Pawtucket, Providence, and Woonsocket. Unknown and missing counts were excluded and includes 16 infant deaths that did not link to a birth certificate.

★ The overall infant mortality rate in Rhode Island between 2018 and 2022 was 4.6 deaths per 1,000 live births. The infant mortality rate was higher in the four core cities (6.0 per 1,000 live births) than in the remainder of the state (3.8 per 1,000 live births).[19]

★ During 2018 and 2022, Providence had 79 infant deaths and an infant mortality rate of 6.7 per 1,000 live births, the highest of any city/town in Rhode Island.[20]

★ Two cities in Rhode Island had 16 or more infant deaths, 26 other cities and towns in Rhode Island had between one and 15 infant deaths and due to small numbers, the respective infant mortality rates are not reported or should be interpreted with caution. In Rhode Island, 10 cities and towns had no infant deaths between 2018 and 2022.[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 2023, there were 1,000 families enrolled in evidence-based family home visiting programs coordinated by the Rhode Island Department of Health.[29]

References

[1] Federal Interagency Forum on Child and Family Statistics. (2023). *America's children: Key national indicators of well-being, 2023.* Washington, DC: U.S. Government Printing Office.

[2] Centers for Disease Control and Prevention. (n.d.). *Infant mortality.* Retrieved February 29, 2024, from cdc.gov

[3,5,8] Ely D. M., & Driscoll A. K. (2023). Infant mortality in the United States, 2021: Data from the period linked birth/infant death file. *National Vital Statistics Reports, 72*(11), 1-19.

(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 for two years or beyond.[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]

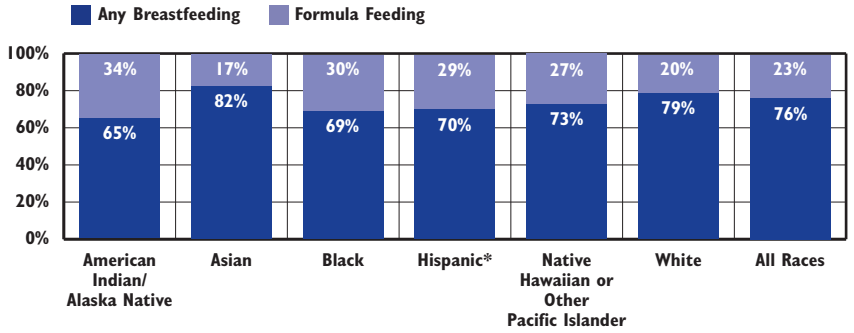
Breastfeeding Rates

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

**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 for infants born in 2019.

Breastfeeding and Formula Feeding at Birth by Race/Ethnicity, Rhode Island, 2018-2022*



Source: Rhode Island Department of Health, Center for Health Data and Analysis, KIDSNET , 2018-2022.
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 2018 and 2022, 76% of mothers of newborns in Rhode Island indicated that they intended to breastfeed when discharged from the hospital and 23% 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 for breastfeeding and inadequate workplace policies for breastfeeding moms.[13,14]**

★ **In Rhode Island between 2019 and 2021, 71% of infants of moms who had private insurance during the postpartum period were breastfed for at least three months compared to only 48% of infants of moms who had Medicaid or RIte Care.[15]**

Rhode Island Supports for Breastfeeding

★ 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 would help ensure equitable access to paid leave, especially for Women of Color.[17,18]

★ 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 including support for 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 to establish licensure for International Board-Certified Lactation Consultants (IBCLCs) who provide comprehensive lactation support and counseling for pregnant and postpartum women. In March 2023, Rhode Island had 65 licensed IBCLCs.[22,23] Other lactation professionals can support health equity and reduce barriers to breastfeeding.[24]

Table 20. **Breastfeeding at Time of Birth, Rhode Island, 2018-2022**

CITY/TOWN	NUMBER OF BIRTHS SCREENED	NUMBER ANY BREASTFEEDING	PERCENT WITH ANY BREASTFEEDING
Barrington	554	501	90%
Bristol	619	507	82%
Burrillville	583	440	75%
Central Falls	1,470	978	67%
Charlestown	260	224	86%
Coventry	1,464	1,149	78%
Cranston	3,750	2,899	77%
Cumberland	1,513	1,239	82%
East Greenwich	628	558	89%
East Providence	2,127	1,619	76%
Exeter	239	207	87%
Foster	201	166	83%
Glocester	320	262	82%
Hopkinton	286	234	82%
Jamestown	124	116	94%
Johnston	1,323	1,009	76%
Lincoln	881	728	83%
Little Compton	47	39	83%
Middletown	732	631	86%
Narragansett	249	224	90%
New Shoreham	32	31	97%
Newport	1,000	813	81%
North Kingstown	1,089	968	89%
North Providence	1,567	1,167	74%
North Smithfield	418	357	85%
Pawtucket	4,073	2,864	70%
Portsmouth	583	525	90%
Providence	11,429	7,819	68%
Richmond	347	309	89%
Scituate	441	373	85%
Smithfield	707	582	82%
South Kingstown	806	717	89%
Tiverton	345	277	80%
Warren	366	275	75%
Warwick	3,441	2,720	79%
West Greenwich	246	208	85%
West Warwick	1,421	1,065	75%
Westerly	709	624	88%
Woonsocket	2,350	1,552	66%
Four Core Cities	*19,322*	*13,213*	*68%*
Remainder of State	*29,418*	*23,763*	*81%*
Rhode Island	*48,740*	*36,976*	*76%*

Sources of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, KIDSNET, 2018-2022.

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 8, 2024, 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 µg/dL) at any time prior to December 31, 2023.[1,2] These data are for children eligible to enter kindergarten in the fall of 2025 (i.e., children born between September 1, 2019 and August 31, 2020).

SIGNIFICANCE

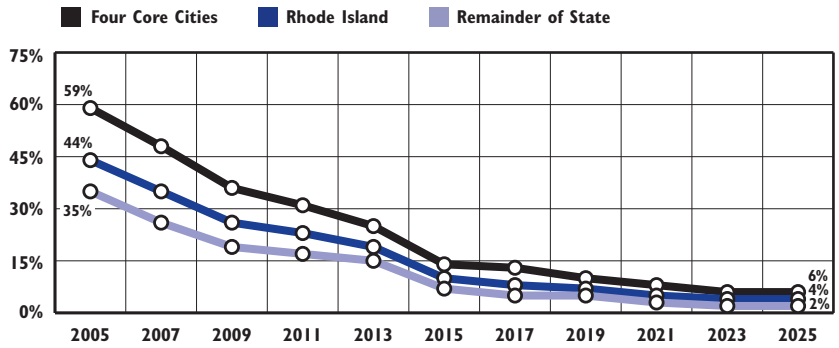
Lead poisoning is a preventable childhood disease. Infants, toddlers, and preschool-age children are most susceptible to the toxic effects of lead because they absorb lead more readily than adults and have inherent vulnerability due to developing central nervous systems.[3] Lead exposure, even at very 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 µg/dL to 3.5 µg/dL, based on the top 2.5% BLLs of children ages one to five. 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 2023, 595 (2.4%) of the 24,741 Rhode Island children under age six who were screened had confirmed elevated blood lead levels of ≥5 µg/dL. Children living in the four core cities (4.0%) were three times as likely than children in the remainder of the state (1.3%) to have confirmed elevated blood lead levels of ≥5 µg/dL.[14]

Children Entering Kindergarten with History of Elevated* Blood Lead Level (≥5 µg/dL), Rhode Island, Four Core Cities, and Remainder of State, 2005-2025



Source: Rhode Island Department of Health, Healthy Homes and Childhood Lead Poisoning Prevention Program, Children entering kindergarten between 2005 and 2025. *Elevated blood lead level of ≥5 µg/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. Compared to the remainder of the state, the four core cities have over two 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 risked 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]

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

★ With a new reference value of 3.5 µg/dL the rate of childhood lead poisoning is predicted to jump to over 5% compared to 2.4% at 5 µg/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 venous test is ≥5µg/dL. The 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 2024, 433 environmental inspections were offered, 321 were performed, 138 were refused, had no response or were unable to be contacted, and seven 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 2023, 72% of children received a test by age 15 months, and 57% received one test by 15 months and a second at least 12 months later and by age 36 months.[25,26,27]

Table 21. **Lead Poisoning in Children Entering Kindergarten in the Fall of 2025, Rhode Island**

CITY/TOWN	NUMBER TESTED FOR LEAD POISONING	CONFIRMED WITH BLOOD LEAD LEVEL ≥5 µg/dL	
		NUMBER	PERCENT
Barrington	188	<5	*
Bristol	129	<5	*
Burrillville	128	<5	*
Central Falls	345	27	7.8%
Charlestown	49	<5	*
Coventry	310	<5	*
Cranston	845	26	3.1%
Cumberland	408	5	1.2%
East Greenwich	168	<5	*
East Providence	488	15	3.1%
Exeter	42	<5	*
Foster	39	<5	*
Glocester	66	<5	*
Hopkinton	56	<5	*
Jamestown	38	<5	*
Johnston	325	8	2.5%
Lincoln	209	7	3.3%
Little Compton	29	0	0.0%
Middletown	189	<5	*
Narragansett	54	0	0.0%
New Shoreham	8	<5	*
Newport	223	12	5.4%
North Kingstown	263	<5	*
North Providence	361	10	2.8%
North Smithfield	115	<5	*
Pawtucket	906	40	4.4%
Portsmouth	141	0	0.0%
Providence	2,556	179	7.0%
Richmond	55	0	0.0%
Scituate	105	0	0.0%
Smithfield	149	<5	*
South Kingstown	173	<5	*
Tiverton	127	<5	*
Warren	86	0	0.0%
Warwick	702	8	1.1%
West Greenwich	57	<5	*
West Warwick	297	8	2.7%
Westerly	143	<5	*
Woonsocket	545	14	2.6%
Four Core Cities	*4,352*	*260*	*6.0%*
Remainder of State	*6,765*	*141*	*2.1%*
Rhode Island	*11,119*	*401*	*3.6%*

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 2025 reflect the number of Rhode Island children eligible to enter school in the fall of 2025 (i.e., born between 09/01/19 and 08/31/20)

Children confirmed positive for lead poisoning (blood lead level ≥5 µg/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 2023. The Rhode Island Healthy Homes and Childhood Lead Poisoning Prevention Program recommends that children under age six with a capillary blood lead level of ≥5 µg/dL receive a confirmatory venous test.

The denominator for percent confirmed is the number of children entering kindergarten in the fall of 2025 who were tested for lead poisoning. Data include both venous and confirmed capillary tests.

Of the 547 children entering kindergarten in 2025 who had an initial blood lead screen of ≥5 µg/dL, 191 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 February 20, 2024, from www.cdc.gov

[2] Rhode Island Department of Health. (n.d.). *Environmental lead program.* Retrieved February 20, 2024, 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]

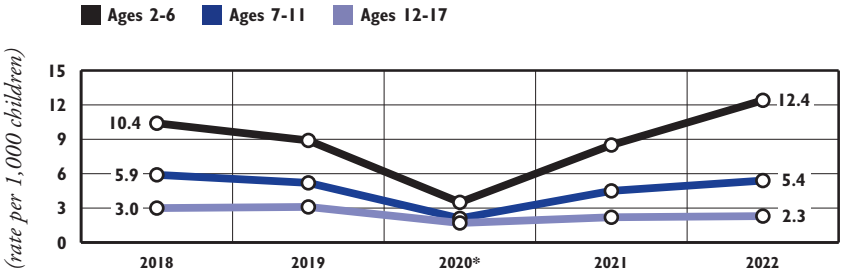
Asthma is the most common chronic condition among children and adolescents worldwide.[5] Current asthma prevalence among U.S. children fell from 8.1% in 2016 to 6.5% in 2021.[6] However, disparities in asthma rates continue to persist. Puerto Rican and non-Hispanic Black children have much higher asthma 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.[7,8] Social and environmental risk factors for asthma account for much of the pronounced racial and ethnic disparities in asthma rates and severity.[9]

Compared with adults, children have much higher rates of emergency department visits for asthma, slightly higher hospitalization rates, and lower death rates.[10] Asthma is a leading cause of emergency department visits and hospitalization for children under age 18 and school absenteeism.[11,12]

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.[13,14,15]

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.[16]

Asthma Emergency Department Visit Rates By Age, Rhode Island Children, 2018-2022*



Source: Rhode Island Department of Health, Emergency Department Visit Data, 2018-2022. *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 2018 and 2021, excluding 2020. In 2022, however, the ED visit rate for a primary diagnosis of asthma among children began to go up, notably among children aged 2 to 6 years. In 2022, the rate for children ages 2 to 6 was 12.4 per 1,000 children; a slightly higher rate than in 2018. Asthma is a chronic condition with many triggers, so ED visit rates for pediatric asthma can vary from one year to the next.[17]

★ In Rhode Island between 2018 and 2022, there were 710 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).[18]

★ There was a steep decline in pediatric asthma emergency department visits and hospitalizations in Rhode Island during the spring of 2020.[19] 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.[20]

Asthma Prevalence and Support Programs

★ In 2021, Rhode Island parents reported rates of current asthma prevalence of their children of 6.6% (down from 9.5% in 2020) compared to the average of 6.5% for parents surveyed in 29 states and Washington, DC. Rhode Island had the fourteenth highest reported asthma prevalence among the 29 participating states.[21]

★ Between 2018 and 2022, 45% of emergency department visits with a primary diagnosis of asthma were for Hispanic children, 32% were for white children, and 16% were for Black children. Nearly three quarters (71%) of emergency department visits were for children with RIte Care/Medicaid.[22] 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.[23]

★ The Rhode Island Department of Health Asthma Control Program serves children with asthma who have had a recent ED visit or hospitalization for asthma and who live in Central Falls, Pawtucket, Providence, or Woonsocket, communities with high child poverty rates.[24]

Table 22. **Asthma Emergency Department Visits for Children Under Age 18, Rhode Island, 2018-2022**

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	64	2.9
Bristol	2,887	29	2.0
Burrillville	3,229	40	2.5
Central Falls	6,411	229	7.1
Charlestown	1,161	7	*
Coventry	6,655	94	2.8
Cranston	15,744	323	4.1
Cumberland	7,550	93	2.5
East Greenwich	3,465	20	*
East Providence	7,886	203	5.1
Exeter	1,175	10	*
Foster	790	10	*
Glocester	1,896	9	*
Hopkinton	1,613	30	3.7
Jamestown	871	10	*
Johnston	5,119	100	3.9
Lincoln	4,640	68	2.9
Little Compton	568	5	*
Middletown	3,487	90	5.2
Narragansett	1,651	12	1.5^
New Shoreham	189	1	*
Newport	3,660	124	6.8
North Kingstown	5,496	63	2.3
North Providence	5,802	130	4.5
North Smithfield	2,274	31	2.7
Pawtucket	16,455	499	6.1
Portsmouth	3,444	40	2.3
Providence	41,021	1,814	8.8
Richmond	1,627	8	*
Scituate	1,866	13	1.4^
Smithfield	3,411	32	1.9
South Kingstown	4,339	37	1.7
Tiverton	2,723	22	1.6^
Warren	1,826	28	3.1
Warwick	14,034	194	2.8
West Greenwich	1,251	30	4.8
West Warwick	5,787	136	4.7
Westerly	3,826	49	2.6
Woonsocket	9,467	404	8.5
Four Core Cities	*73,354*	*2,946*	*8.0*
*Remainder State***	*136,431*	*2,155*	*3.2*
*Rhode Island***	*209,785*	*5,101*	*4.9*

Source of Data for Table/Methodology

Rhode Island Department of Health, Emergency Department, and Hospital Discharge Data, 2018-2022.

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 2018-2022 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.

Data excludes Rhode Island cities and towns unknown.

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

References

[1,8] 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]

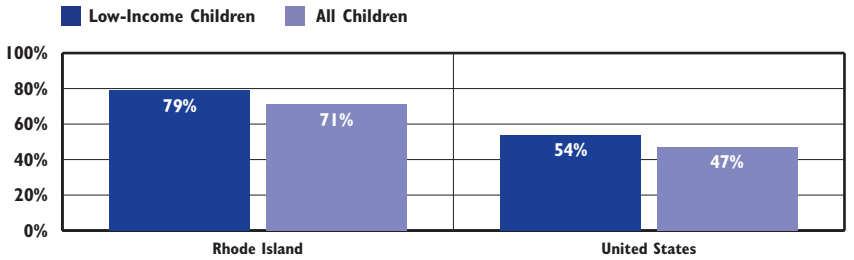
Unhealthy housing can cause or intensify many health conditions. Studies have connected poor quality construction, utility deficiencies, water intrusion, lead paint, radon, and pests to respiratory illnesses, asthma, unintentional injuries, lead poisoning, and cancer. Children under age five, low-income 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 their 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*, 2018-2022, Rhode Island and the United States



Source: Population Reference Bureau analysis of 2018-2022 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 2018 and 2022, Rhode Island had the highest percentage of low-income children (79%) 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 2023, 2.4% (595) of Rhode Island children under age six who were screened had a confirmed blood lead level of ≥5 µg/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 2018 and 2022, there were 2,941 emergency department visits of Rhode Island children ages six and under (7.9 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 2022, housing-related falls resulted in 987 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 2023, 693 Rhode Island children under age 18 benefited from 1,212 completed weatherization projects, a return to previous levels after disruptions caused by the pandemic.[18,19]**

Table 23.

Housing and Health, Rhode Island

CITY/TOWN	TOTAL # OF CHILDREN AGES 6 AND UNDER, 2020	CHILDREN <6 WITH LEAD POISONING 2023 #	CHILDREN <6 WITH LEAD POISONING 2023 TESTED	CHILDREN <6 WITH LEAD POISONING 2023 %	PRIMARY ASTHMA ED VISITS* 2018-2022 #	PRIMARY ASTHMA ED VISITS* 2018-2022 RATE PER 1,000	HOUSING RELATED FALLS 2022	WEATHER-IZATION PROJECTS 2023	% HOUSING STOCK PRE-1980
Barrington	1,262	<5	439	*	35	5.5	18	4	82%
Bristol	937	<5	322	*	14	3.0^	7	10	67%
Burrillville	1,044	6	289	*	23	4.4^	13	11	65%
Central Falls	2,304	43	846	5.1%	124	10.8	23	13	78%
Charlestown	364	0	99	0.0%	3	*	5	9	50%
Coventry	2,267	6	650	0.9%	54	4.8	27	49	66%
Cranston	5,492	44	1,928	2.3%	201	7.3	61	170	77%
Cumberland	2,716	10	798	1.3%	53	3.9	38	24	63%
East Greenwich	996	5	361	*	13	2.6^	15	2	60%
East Providence	2,907	10	1,170	3.1%	142	9.8	34	59	81%
Exeter	397	<5	103	*	7	*	*	12	45%
Foster	246	<5	90	*	4	*	*	5	56%
Glocester	651	<5	154	*	3	*	5	21	62%
Hopkinton	539	0	106	0.0%	18	6.7^	*	12	60%
Jamestown	223	<5	80	*	8	*	*	5	57%
Johnston	1,784	8	697	1.1%	48	5.4	24	57	66%
Lincoln	1,522	10	425	2.4%	34	4.5	9	14	68%
Little Compton	175	<5	46	*	4	*	*	0	63%
Middletown	1,257	<5	269	*	54	8.6	23	4	65%
Narragansett	461	<5	100	*	4	*	10	6	60%
New Shoreham	62	<5	14	*	1	*	*	0	50%
Newport	1,444	8	350	2.3%	71	9.8	26	7	85%
North Kingstown	1,831	6	498	1.2%	31	3.4	22	28	64%
North Providence	2,174	11	746	1.5%	59	5.4	23	56	65%
North Smithfield	726	<5	216	*	17	4.7^	7	9	62%
Pawtucket	6,199	51	1,888	2.7%	309	10.0	76	113	85%
Portsmouth	1,141	<5	288	*	20	3.5^	13	14	61%
Providence	15,026	289	6,589	4.4%	1,060	14.1	261	196	83%
Richmond	576	0	127	0.0%	8	*	5	0	43%
Scituate	607	<5	243	*	7	*	7	5	62%
Smithfield	1,122	<5	363	*	24	4.3^	22	20	58%
South Kingstown	1,339	<5	346	*	18	2.7^	18	5	55%
Tiverton	907	<5	302	*	13	2.9^	8	43	61%
Warren	626	<5	216	*	21	6.7^	*	15	82%
Warwick	5,228	19	1,548	1.2%	125	4.8	53	124	78%
West Greenwich	380	0	99	0.0%	11	*	5	6	32%
West Warwick	2,276	6	601	1.0%	71	6.2	36	40	66%
Westerly	1,257	<5	226	*	17	2.7^	19	18	59%
Woonsocket	3,684	33	1,104	3.0%	212	11.5	56	26	85%
Four Core Cities	*27,213*	*416*	*10,427*	*4.0%*	*1,705*	*12.5*	*416*	*348*	*84%*
Remainder of State	*46,936*	*179*	*14,309*	*1.3%*	*1,236*	*5.3*	*571*	*864*	*68%*
Rhode Island	*74,149*	*595*	*24,741*	*2.4%*	*2,941*	*7.9*	*987*	*1,212*	*72%*

Source of Data for Table/Methodology

U.S. Census Bureau, Census 2020., Table PCT 12.

Children with Lead Poisoning: Rhode Island Department of Health, Healthy Homes and Childhood Lead Poisoning Prevention Program, 2023. The numerator is the number of Rhode Island children with a confirmed blood lead level ≥5 µg/dL in calendar year 2023. The denominator is the number of children who were tested in calendar year 2023. Data are for children under age six.

Children with Asthma: Rhode Island Department of Health, Hospital Discharge Database, 2018-2022. 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, 2022. 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, 2023. Weatherization projects are defined as those receiving a final inspection by the end of calendar year 2023.

Housing Stock Pre-1980: Population Reference Bureau analysis of 2018-2022 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 a statewide clinical childhood BMI data set. A recent study of data collected in 2022 found that 15% 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.

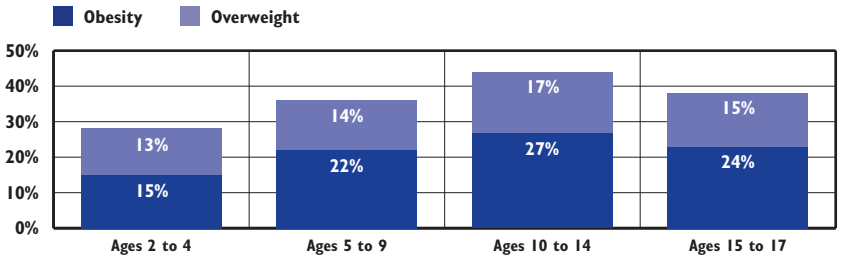
Overweight and Obesity Among Children Age 10-17
(Combined Overweight and Obesity)

	2022
RI	35%
US	32%
National Rank*	*39th*
New England Rank**	*6th*

**1st is best; 50th is worst*
***1st is best; 6th is worst*

Source: Data Resource Center for Child and Adolescent Health, *2022 National Survey of Children's Health*, childhealthdata.org.

Rhode Island Childhood Overweight and Obesity by Age, 2022

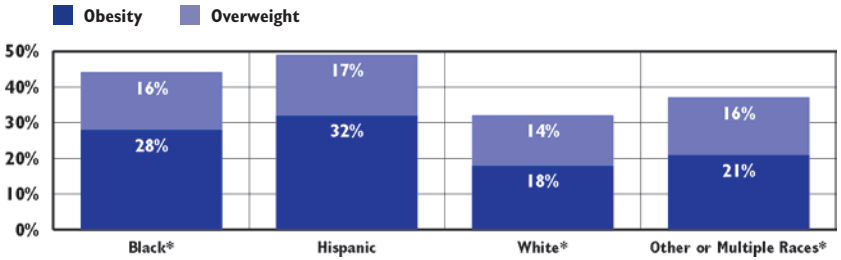


Source: Brown School of Public Health analysis of BMI clinical and billing records of children ages two to 17 in Rhode Island from KIDSNET, Current Care, Blue Cross & Blue Shield of Rhode Island, Cigna HealthCare, Neighborhood Health Plan of Rhode Island, United Healthcare, and Tufts Health Plan collected by the Rhode Island Department of Health, 2023.

★ Fifteen 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 24% of children ages 15 to 17 are obese.[12]

★ Twenty-nine percent of children covered by RIte Care are obese compared to 14% of children with private health insurance.[13]

Rhode Island Childhood Overweight and Obesity by Race/Ethnicity, 2022



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, Cigna HealthCare, Neighborhood Health Plan of Rhode Island, United Healthcare, and Tufts Health Plan collected by the Rhode Island Department of Health, 2023. **Non-Hispanic.*

★ Hispanic children (17% overweight and 32% obese) and non-Hispanic Black children (16% overweight and 28% 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]

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 2023, 38% of households with children in Rhode Island reported being food insecure, compared to 29% of all housholds.[18]

★ In 2023, 29% of Rhode Island high school students reported going hungry at some point in the past month because there was not enough food.[19]

★ Regular physical activity has physical, social, emotional, cognitive, and health benefits.[20] In 2023, 57% of Rhode Island middle school students and 60% 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]

Table 24. **Prevalence of Overweight and Obesity in Rhode Island Children Ages 2 to 17, 2022**

CITY/TOWN	% OVERWEIGHT	% OBESE	% OVERWEIGHT AND OBESE COMBINED
Barrington	14%	9%	23%
Bristol	15%	16%	31%
Burrillville	16%	22%	39%
Central Falls	15%	36%	51%
Charlestown	11%	17%	28%
Coventry	12%	17%	30%
Cranston	15%	22%	37%
Cumberland	16%	19%	35%
East Greenwich	10%	9%	20%
East Providence	16%	21%	38%
Exeter	13%	14%	27%
Foster	12%	15%	26%
Glocester	14%	14%	28%
Hopkinton	13%	20%	33%
Jamestown	12%	12%	23%
Johnston	15%	24%	39%
Lincoln	17%	20%	37%
Little Compton	13% ^	14% ^	27%
Middletown	10%	13%	24%
Narragansett	15%	15%	30%
New Shoreham	*	*	37%
Newport	11%	20%	31%
North Kingstown	11%	12%	22%
North Providence	18%	24%	42%
North Smithfield	15%	17%	32%
Pawtucket	16%	28%	44%
Portsmouth	11%	12%	23%
Providence	17%	32%	49%
Richmond	11%	16%	27%
Scituate	12%	16%	28%
Smithfield	15%	16%	31%
South Kingstown	13%	14%	27%
Tiverton	12%	18%	30%
Warren	15%	19%	34%
Warwick	16%	19%	35%
West Greenwich	12%	15%	27%
West Warwick	15%	22%	37%
Westerly	14%	22%	36%
Woonsocket	16%	37%	52%
Four Core Cities	*16%*	*32%*	*48%*
Remainder of State	*14%*	*18%*	*32%*
Rhode Island	*15%*	*23%*	*37%*

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, Cigna HealthCare, Neighborhood Health Plan of Rhode Island, United Healthcare, and Tufts Health Plan collected by the Rhode Island Department of Health, 2023.

* 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

[1] Centers for Disease Control and Prevention. (2023). *Defining child BMI categories.* Retrieved February 29, 2024, from www.cdc.gov

[2] Centers for Disease Control and Prevention. (2022). *Consequences of obesity.* Retrieved February 29, 2024, from www.cdc.gov

[3] Glickman, D., Parker, L., Sim, L., Del Valle Cook, H., & Miller, E. A. (2012). *Accelerating progress in obesity prevention: Solving the weight of the nation.* Washington, DC: Institute of Medicine of the National Academies.

[4,8,16,22,23] Warren, M., Beck, S., & West, M. (2022). *The state of obesity 2022: Better policies for a healthier America.* Washington, DC: Trust for America's Health.

[5] 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.

[6] 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 links between maternal education and educational attainment, 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 (76%) are to teens ages 18 or older. 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 the health of adolescents. This includes ensuring access to quality reproductive health care and education.[7] Nationally, fewer teens are having sex and more 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 2022. Nationally, the birth rate for teens overall declined 3% from 2021 to 2022 (from 13.9 per 1,000 to 13.5 per 1,000). 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 a rate of 47.6 per 1,000 and reaching a historic low in 2021 at a rate of 7.8 births per 1,000 teen girls.[13,14] In Rhode Island between 2018-2022, 3.2% (1,662) of babies were born to mothers under age 20.[15]

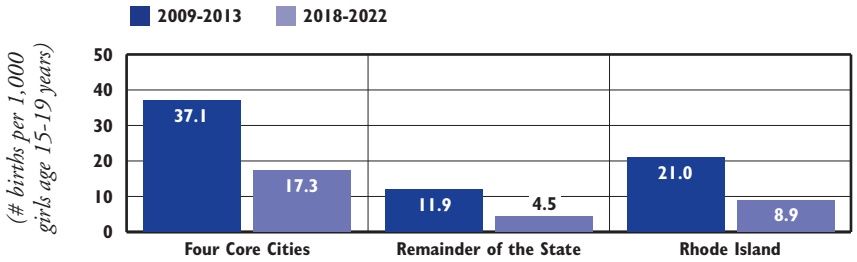
Teen Birth Rates
(rate per 1,000 girls ages 15-19)

	1991	2021
RI	44.7	7.8
US	61.8	13.9
National Rank*		*5th*
New England Rank**		*5th*

**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: 2009-2013, 2018-2022



Source: Rhode Island Department of Health, Center for Health Data and Analysis, 2009-2022.

★ In 2022, the birth rate for U.S. teens (13.5 births per 1,000 teen girls ages 15-19) was the lowest ever recorded.[16]

★ In Rhode Island, the statewide five-year average teen birth rate declined 58% between 2009-2013 and 2018-2022, from 21.0 births per 1,000 teen girls to 8.9 per 1,000. The teen birth rate in the four core cities declined 53% 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 2018 and 2022, the teen birth rates for Hispanic (24.3 per 1,000) and Non-Hispanic Black (9.8 per 1,000) teens were higher than the rates of their Non-Hispanic white (3.7 per 1,000) and Non-Hispanic Asian (3.3 per 1,000) peers.[19]

Repeat Births to Teens, Rhode Island, 2018-2022

AGE	TOTAL NUMBER OF BIRTHS	NUMBER OF REPEAT BIRTHS	PERCENT REPEAT BIRTHS
15-17	411	24	6%
18-19	1,251	161	13%
Total 15-19	*1,662*	*185*	*11%*

Source: Rhode Island Department of Health, Center for Health Data and Analysis, 2018-2022.

★ 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 a variety of needs and integrates a range of tailored services for young mothers and families.[21]

Teen Birth Rates by Location

★ In Rhode Island between 2018 and 2022, the rate of births to teens ages 15-19 in the core cities (17.3 per 1,000) was more than three times higher than the remainder of the state (4.5 per 1,000).[22]

★ Twelve percent of teen births in the core cities were repeat births, while 9% 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 2023, 68.5% of Rhode Island high school students reported never having sexual intercourse. Of survey respondents who were sexually active 56.3% reported using a condom, and 11.1% 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 2022, the rates of chlamydia have decreased by 5% (1,760 to 1,675 per 100,000) and the rates of gonorrhea have increased by 60% (144 to 230 per 100,000).[26]

Table 25. **Births to Teens, Ages 15-19, Rhode Island, 2018-2022**

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	2	2	*
Bristol	0	4	4	*
Burrillville	2	9	11	*
Central Falls	26	78	104	21.3
Charlestown	0	5	5	*
Coventry	3	20	23	4.2^
Cranston	26	74	100	9.6
Cumberland	2	21	23	3.7
East Greenwich	0	2	2	*
East Providence	12	40	52	13.0
Exeter	0	2	2	*
Foster	1	6	7	*
Glocester	0	1	1	*
Hopkinton	0	4	4	*
Jamestown	1	0	1	*
Johnston	5	13	18	4.2^
Lincoln	4	13	17	4.6^
Little Compton	0	0	0	0.0
Middletown	1	7	8	*
Narragansett	1	1	2	*
New Shoreham	0	0	0	0.0
Newport	11	34	45	7.2
North Kingstown	3	10	13	2.5^
North Providence	9	28	37	7.3
North Smithfield	0	3	3	*
Pawtucket	43	127	170	19.0
Portsmouth	3	3	6	*
Providence	188	491	679	15.5
Richmond	1	2	3	*
Scituate	4	8	12	8.4^
Smithfield	2	5	7	*
South Kingstown	4	6	10	*
Tiverton	2	8	10	*
Warren	1	4	5	*
Warwick	14	42	56	5.9
West Greenwich	1	1	2	*
West Warwick	9	40	49	16.7
Westerly	3	15	18	7.1^
Woonsocket	27	114	141	25.5
Unknown	*2*	*8*	*10*	*
Four Core Cities	*284*	*810*	*1,094*	*17.3*
Remainder of State	*125*	*433*	*558*	*4.5*
Rhode Island	*411*	*1,251*	*1,662*	*8.9*

Source of Data for Table/Methodology

Rhode Island Department of Health, Center for Health Data and Analysis, Maternal and Child Health Database, 2018-2022.

* 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.* Retrieved March 22, 2024, from cdc.gov

[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.* (2022). Washington, DC: Congressional Research Service.

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

[10,16] Hamilton, B. E., Martin, J. A., & Osterman, M. J. K.. (2023). Births: Provisional Data for 2022. *NVSS Vital Statistics Rapid Release, no 28.* Hyattsville, MD: National Center for Health Statistics.

[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 2022, 12.1% of youth ages 12-17 (about 9,000) needed substance use treatment, while only 3.9% (about 3,000) actually received any substance use treatment in the past year.[11,12]

Tobacco Use Among Rhode Island Youth

★ **In 2023, 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.[13]**

★ **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.[14] Nationally in 2023, 10% of high school students reported current e-cigarette use.[15] In Rhode Island in 2023, 17% of high school students reported current use of e-cigarettes and 32% reported ever using e-cigarettes.[16]**

★ **Cigarettes: Cigarette use has steadily declined among U.S. middle and high school students. Nationally, in 2023, 2% of students reported current cigarette use.[17] In 2023, 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 2023, 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 13% noncompliance rate in Rhode Island with some vendors continuing to sell to underage groups.[26]**

Current Substance Use, Rhode Island High School Students by Select Subgroups, 2023

	ALCOHOL USE*	E-CIGARETTE USE*	CIGARETTE USE*	MARIJUANA USE*	PRESCRIPTION DRUG MISUSE**
Female	23%	20%	2%	23%	12%
Male	13%	12%	4%	17%	9%
Asian, Non-Hispanic	15%	14%	0%	11%	4%
Black, Non-Hispanic	17%	21%	0%	25%	15%
White, Non-Hispanic	19%	15%	3%	19%	9%
All other races, Non-Hispanic	NA	NA	NA	NA	NA
Multiple races, Non-Hispanic	25%	25%	8%	33%	14%
Hispanic	18%	16%	3%	18%	13%
9th Grade	11%	13%	1%	14%	10%
10th Grade	16%	17%	2%	19%	13%
11th Grade	22%	17%	3%	23%	9%
12th Grade	26%	20%	6%	26%	10%
All Students	*18%*	*17%*	*3%*	*20%*	*11%*

Source: *2023 Rhode Island Youth Risk Behavior Survey*, Rhode Island Department of Health. *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 2023, 18% reported current alcohol consumption, 20% reported current marijuana use, 17% reported current use of e-cigarettes, 9% reported current binge drinking, 3% reported current cigarette use, and 11% reported ever misusing prescription pain medication.[27]

★ In 2023, 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 2002-2023, Rhode Island cigarette tax revenue increased from $79.4 million to $134 million and state tobacco control funding decreased from $3 million to $419,354. Only .31% of the cigarette tax in SFY 2023 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 2023, 26% of middle school students and 22% of high school students reported living with someone who smokes cigarettes. Nearly one in nine (11%) 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 2022, 61 newborns were diagnosed with NAS, at a rate of 60 per 10,000 newborn hospitalizations, which represents a decrease from 2021 at 73 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

[1,4,6] *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.

[3,11] Substance Abuse and Mental Health Services Administration. *2021-2022 National Survey on Drug Use and Health: Model-based prevalence estimates (50 states and district of Columbia),* Retrieved March 19, 2024, from www.samhsa.gov

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