Childhood Overweight and Obesity

DEFINITION

Childhood 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 immediate and/or long-term risk of many health problems, including type 2 diabetes, cardiovascular disease, asthma, joint problems, sleep apnea, and other acute and chronic health problems. Over time, these conditions may contribute to a shorter lifespan. They may also experience social and psychological problems, including depression, bullying, and social marginalization. Obese children and youth are also more likely to repeat a grade, be absent from school, and have reduced academic performance than their peers.[2,3,4]

Nationally, there is a continued upward trend in obesity.[5] In 2015-2016 in the U.S., the prevalence of obesity in children ages two to 19 was 19% with a significant increase in severe obesity for children ages two to five years.[6,7]

Prior to 2018, Rhode Island did not have adequate clinical childhood BMI data. A recent study of 41,394 de-identified records with clinical and related billing code data from 2016 found that 15% of Rhode Island children ages two to 17 are overweight and 20% are obese.[8]

The increased prevalence of childhood obesity is the result of complex interactions among many factors, including excess calorie consumption, genes, metabolism, behavior, environment, and culture.[9] Low consumption of healthy foods, high consumption of sugar-sweetened beverages and energy dense foods, low levels of physical activity, and high levels of screen time are all associated with obesity.[10]

Prevention and intervention for at-risk, overweight, and obese children should occur early and at all ages.[11] Reducing overweight and obesity will require a comprehensive, multi-system approach.

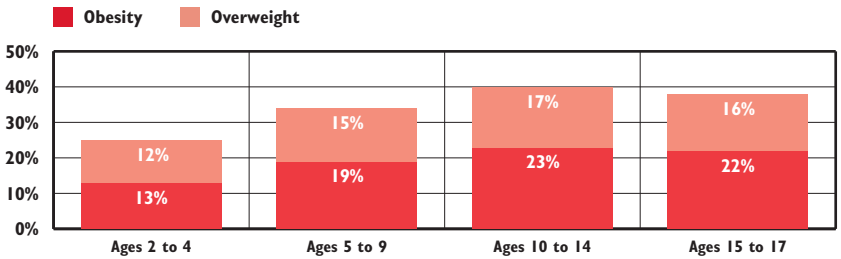
Overweight and Obesity Among Children Age 10-17
(Combined Overweight and Obesity)

	2017
RI	31%
US	31%
National Rank*	*31st*
New England Rank**	*5th*

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

Source: Data Resource Center for Child and Adolescent Health, *2017 National Survey of Children's Health*, childhealthdata.org

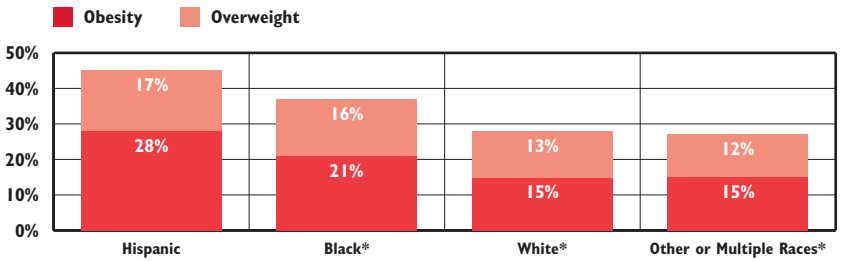
Rhode Island Childhood Overweight and Obesity by Age, 2016



Source: Hassenfeld Child Health Innovation Institute analysis of BMI clinical and billing records of children ages two to 17 in Rhode Island from KIDSNET, Current Care, Blue Cross & Blue Shield of Rhode Island, Neighborhood Health Plan of Rhode Island, and United Healthcare collected by the Department of Health, 2016.

- **Fifteen percent of Rhode Island children age two to 17 are overweight and 20% are obese.[12]**
- **Older children are more likely to be overweight or obese. Twenty-three percent of children ages 10 to 14 and 22% of children ages 15 to 17 are obese.[13]**
- **Twenty-six percent of children covered by public insurance are obese compared to 14% of children with private health insurance.[14]**

Rhode Island Childhood Overweight and Obesity by Race/Ethnicity, 2016



Source: Hassenfeld Child Health Innovation Institute analysis of BMI clinical and billing records of children ages two to 17 in Rhode Island from KIDSNET, Current Care, Blue Cross & Blue Shield of Rhode Island, Neighborhood Health Plan of Rhode Island, and United Healthcare collected by the Department of Health, 2016. **Non-Hispanic.*

- **Hispanic children have the highest rates of overweight and obesity at 17% overweight and 28% obese.[15]**

Nutrition and Physical Activity

◆ Nutrition and physical activity are important components of supporting a healthy weight. Many children and adolescents consume diets with too many calories and not enough nutrients.[16,17] In 2017, 88% of Rhode Island high school students reported eating less than three servings of vegetables a day, the recommended amount. Eleven percent of Rhode Island high school students reported drinking soda at least once a day.[18]

◆ Regular physical activity, including school-based physical education and recess, has been shown to have physical, social, emotional, cognitive, academic, and health benefits.[19,20] In 2017, 54% of Rhode Island middle school students and 59% of high school students reported less than five days of physical activity in a week.[21]

◆ Policy strategies to reduce obesity include improving access to nutritional and affordable foods and beverages, ensuring healthy food in schools, increasing options for physical activity before, during, and after school as well as in early learning programs, and improving access to safe and walkable neighborhoods and recreational areas.[22]

Table 26. **Prevalence of Overweight and Obesity in Rhode Island Children Ages 2 to 17, 2016**

CITY/TOWN	% OVERWEIGHT	% OBESE	% OVERWEIGHT AND OBESE COMBINED
Barrington	13%	7%	20%
Bristol	18%	15%	33%
Burrillville	16%	16%	32%
Central Falls	19%	29%	48%
Charlestown	17%	19%	36%
Coventry	12%	15%	27%
Cranston	14%	19%	33%
Cumberland	15%	16%	31%
East Greenwich	13%	9%	22%
East Providence	15%	21%	36%
Exeter	10%	12%	22%
Foster	15%	13%	28%
Glocester	14%	11%	25%
Hopkinton	14%	14%	28%
Jamestown	*	17%^	NA
Johnston	16%	19%	35%
Lincoln	16%	17%	33%
Little Compton	24%^	32%^	NA
Middletown	12%	25%	37%
Narragansett	16%	19%	35%
New Shoreham	*	*	NA
Newport	15%	21%	36%
North Kingstown	9%	12%	21%
North Providence	17%	18%	35%
North Smithfield	16%	13%	29%
Pawtucket	17%	26%	43%
Portsmouth	10%^	23%	NA
Providence	17%	26%	43%
Richmond	13%	16%	29%
Scituate	14%	12%	26%
Smithfield	12%	12%	24%
South Kingstown	18%	16%	34%
Tiverton	13%	20%	34%
Warren	18%	17%	35%
Warwick	15%	15%	30%
West Greenwich	12%	16%	28%
West Warwick	14%	20%	34%
Westerly	12%	16%	28%
Woonsocket	14%	25%	39%
Four Core Cities	*17%*	*26%*	*43%*
Remainder of State	*14%*	*16%*	*30%*
Rhode Island	*15%*	*20%*	*35%*

Source of Data for Table/Methodology

Hassenfeld Child Health Innovation Institute analysis of BMI clinical and billing records of children ages 2 to 17 in Rhode Island from KIDSNET, Current Care, Blue Cross & Blue Shield of Rhode Island, Neighborhood Health Plan of Rhode Island, and United Healthcare collected by the Department of Health, 2016.

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

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

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

References

[1] Centers for Disease Control and Prevention. (2015). *About child and teen BMI.* Retrieved January 23, 2019, from www.cdc.gov

[2] Centers for Disease Control and Prevention. (2016). *Childhood obesity causes and consequences.* Retrieved January 23, 2019, from www.cdc.gov

[3,22] 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] Halfon, N., Larson, K., & Slusser, W. (2013). Associations between obesity and comorbid mental health, developmental, and physical health conditions in a nationally representative sample of US children aged 10 to 17. *Academic Pediatrics, 13*(1), 6-13.

[5,7] Skinner, A.C., Ravanbakht, S.N., Skelton, J.A., et al. (2018) Prevalence of obesity and severe obesity in US children, 1999-2016. *Pediatrics. 141*(3):e20173459.

[6] Hales, C.M., Carroll, M.D., Fryar, C.D., & Ogden, C.L. (2017). *Prevalence of obesity among adults and youth: United States, 2015-2016.* Retrieved January 23, 2019, from www.cdc.gov/nchs

[8,12,13,14,15] Hassenfeld Child Health Innovation Institute analysis of BMI clinical and billing records of children ages two to 17 in Rhode Island from KIDSNET, Current Care, Blue Cross & Blue Shield of Rhode Island, Neighborhood Health Plan of Rhode Island, and United Healthcare collected by the Department of Health, 2016.

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