

# 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

Vaccines interact with the immune system to produce antibodies that protect the body if it is later exposed to disease. Timely and complete immunization protects children against many infectious diseases that were once common and resulted in death or disability. The benefits of immunization include improved quality of life and productivity, reduced health spending, and prevention of illness and death. High vaccination levels also protect society by reducing disease outbreaks and reducing exposure for medically vulnerable children who cannot be vaccinated for medical reasons. As a result of decades of immunization, many of the diseases against which children are vaccinated are rare, but

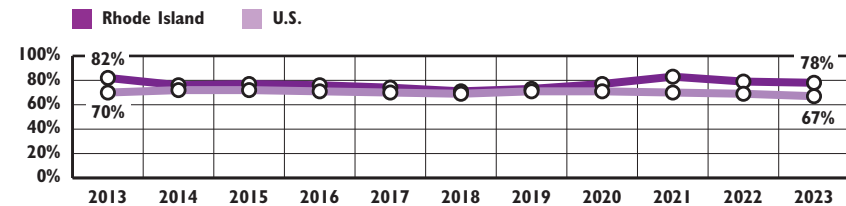
outbreaks still occur. It is important to continue to immunize against them until the diseases are completely eradicated.<sup>1,2,3</sup>

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.<sup>4</sup> 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.<sup>5</sup>

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 with authorized health care professionals for children from birth through age 18.<sup>6</sup>

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; seasonal flu (influenza); measles, mumps, and rubella; pneumococcal conjugate; polio; rotavirus; and varicella (chickenpox). Kindergarten entry requires all of these except seasonal flu and additional doses of DTaP, hepatitis B, MMR, polio, and varicella.<sup>7,8</sup>

## Fully Immunized Children\*, Rhode Island and United States, 2013-2023



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

Source: Centers for Disease Control and Prevention, *National Immunization Survey-Children*, 2013-2023.

◆ In 2023, 78% of Rhode Island's children were fully immunized by age 24 months, above the national average of 67%.<sup>9</sup>

◆ In 2021-2023, the U.S. rate for fully immunized children by age 24 months was 45% for uninsured children, 62% for children with Medicaid coverage, and 74% for children with private health insurance coverage.<sup>10</sup>

◆ Despite their well-demonstrated safety, misinformation leads some parents to request an alternate schedule or refuse some vaccines, leaving all children at greater risk if an outbreak occurs.<sup>11,12</sup> At every immunization, parents or guardians receive information about possible side effects, risks, and benefits.<sup>13</sup>

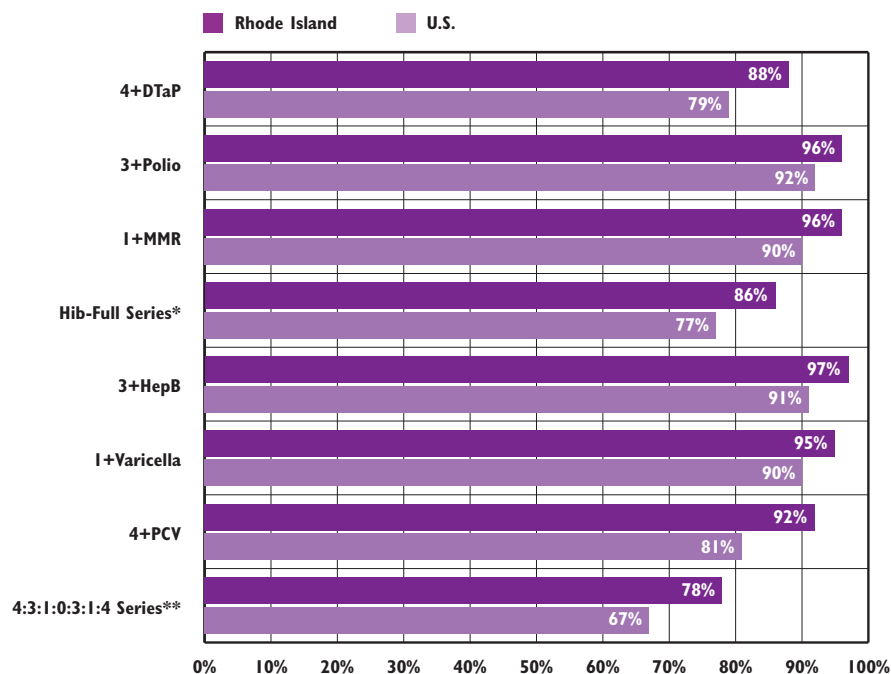
## Immunizations for School Entry

◆ Of the immunizations needed for school entry in 2024 in Rhode Island, entering kindergarteners had coverage rates between 91% and 97%, while entering 7th grade students had rates between 76% and 83%.<sup>14</sup>

◆ Although all major religions support routine childhood immunizations, Rhode Island allows parents to request religious exemptions from vaccines required to attend child care or school. In rare cases, a doctor will determine that a child is medically exempt from immunization requirements.<sup>15</sup> In the 2024-2025 school year, 185 kindergarten students and 382 seventh grade students had exemptions from vaccination requirements. Ninety percent of kindergarten exemptions and 93% of 7th grade exemptions were for religious reasons.<sup>16</sup>

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## Vaccination Coverage Among Children, by Age 24 Months, Rhode Island and United States, 2023



Source: Rhode Island Department of Health analysis of data from the *National Immunization Survey-Children*, 2023. Data is for 2020-2021 birth cohort, and 2021 birth cohort is preliminary.

\*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 a seasonal (2024-2025) COVID-19 vaccine. The seasonal flu (influenza) vaccination is also recommended for everyone ages six months and older.<sup>17,18</sup>

◆ As of January 2025, 5% of Rhode Island children under age five and 6% of Rhode Island children ages five to 17 had received the 2024-2025 COVID-19 vaccine. For 2023-2024, 72% of children in Rhode Island ages six months to 17 years received the seasonal flu vaccination.<sup>19,20</sup>

## 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.<sup>21</sup>

◆ According to the *2023 National Immunization Survey*, 80% of Rhode Island adolescents (ages 13-17) have completed the HPV series, compared to 57% nationally; 95% of Rhode Island adolescents received the Tdap vaccine, compared to 89% nationally; and 96% of Rhode Island adolescents received the MCV4 vaccine, compared to 88% nationally.<sup>22</sup>

◆ To ensure that all high school seniors are fully vaccinated before beginning college or work, the Rhode Island Department of Health Office of Immunization runs the *Vaccinate Before You Graduate (VBYG)* program at school-based clinics 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.<sup>23,24</sup>

◆ During the 2023-2024 school year, 90 schools participated in VBYG, up from 88 schools the year prior. In total, 4,800 vaccine doses were administered to 2,041 students; up from 3,536 vaccine doses administered to 1,535 students the year prior, returning to toward pre-pandemic numbers. Vaccines administered included seasonal flu, HPV, MCV4, hepatitis A, hepatitis B, measles, mumps, and rubella, polio, tetanus, diphtheria, pertussis, and varicella (chicken pox).<sup>25,26</sup>

◆ The *School Located Vaccination (SLV)* program administered 14,387 doses of the seasonal flu vaccine to both children and adults at school-based clinics throughout Rhode Island in the 2024-2025 school year, as of January 2025. The goal of SLV is to ensure all Rhode Island children receive their seasonal flu vaccination at no out-of-pocket cost.<sup>27</sup>

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