Childhood Immunizations

DEFINITION

Childhood immunizations is the percentage of children ages 19 months to 35 months who have received the entire 4:3:1:3:3:1:4 series of vaccinations as recommended by the Advisory Committee on Immunization Practices (ACIP). In 2013, 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; 1 dose of varicella (chickenpox); and 4 doses of pneumococcal conjugate vaccine (PCV).

SIGNIFICANCE

Timely and complete immunization protects children against a number of 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. 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 (ACA), children enrolled in new health insurance plans now have access to recommended vaccines without deductibles or copays, when delivered by an in-network provider.5

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

Starting August 2015, Rhode Island will require the following vaccinations prior to entry into licensed child care, preschool, and Head Start: diphtheria, tetanus, and pertussis; Haemophilus influenza type b; hepatitis A; influenza; hepatitis B; measles, mumps, and rubella; pneumococcal; polio; rotavirus; and varicella (chickenpox). Kindergarten entry requires all of these except influenza, Haemophilus influenza type b, and pneumococcal.7,8

In 2013, Rhode Island’s rate (82%) of children ages 19 months to 35 months that were fully immunized was above the national average of 70% and the best in the U.S.9

In 2013, the U.S. rate for fully immunized children ages 19 months to 35 months ranged from 64% for children living below the federal poverty level to 74% for children living at or above the federal poverty level. The 2013 U.S. rate was 73% for Asian, non-Hispanic children, 72% for White, non-Hispanic children, 69% for Hispanic children, and 65% for Black, non-Hispanic children.10

Concerns about vaccine safety have resulted in some parents refusing to have their children immunized and some requesting alternative vaccination schedules, both of which contribute to under-immunization.11 As required by the National Childhood Vaccine Injury Act, families must be provided with informational materials about each vaccine and given the opportunity to clarify issues or concerns with their healthcare provider.12 In Rhode Island, children may be exempt from receiving one or more vaccines for medical or religious reasons.13 In the 2013–2014 school year, 1.0% (113) of kindergarten students and 0.6% (68) of 7th grade students received exemptions from vaccination requirements. Of the 181 exemptions, 35% (64) were for medical reasons and 65% (117) were for religious reasons.14

Starting in 2015, Rhode Island child care workers will be required to obtain one dose of tetanus, diphtheria, pertussis (Tdap) vaccine, two doses of measles, mumps, and rubella (MMR) vaccine, two doses of varicella (chickenpox) vaccine, and an annual influenza vaccination.15

Fully Immunized Children*, Ages 19 Months to 35 Months, Rhode Island and United States, 2003-2013


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Immunizations for Elementary and Middle School Students

- The 2013-2014 Rhode Island School Immunization Assessment analyzed student immunization status reports through a web-based survey of all kindergarten and 7th grade school nurse teachers. The immunization statuses of 99% of kindergarten students and 97% of 7th grade students were reported. Of the five immunizations needed for school entry, entering kindergarteners had coverage rates between 95% and 98%, while entering middle school students had rates between 78% and 99%.17,24

- In 2013, Rhode Island ranked best in the U.S. for the 3+HepB, 1+VAR, 4+PCV, and the rotavirus vaccines, second for the 4+DTaP vaccine, fifth for the 1+MMR vaccine, and seventh for the 3+Polio vaccine. Rhode Island’s rate of completion for the 4:3:1:3:1:4 series (82%) exceeded the national Healthy People 2020 target (80%).18

Adolescent Immunization

- Effective August 2015, all Rhode Island students entering seventh grade will be required to receive one dose of the human papillomavirus (HPV), tetanus, diphtheria, pertussis (Tdap), and meningococcal conjugate (MCV) vaccines as well as any needed catch-up doses.19

- According to the 2013 National Immunization Survey-Teen, Rhode Island adolescents ranked best in the U.S. for all four HPV vaccines (1+HPV and 3+HPV for males and females) and 1+Tdap vaccine, third for 1+MCV vaccine, and fifth for 2+VAR and 3+HepB. In 2013, 96% of Rhode Island adolescents had received 2+MMR, 3+HepB, and 1+Tdap vaccines, 95% had received the 2+VAR vaccine, and 92% received the 1+MCV vaccine.20

- 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.21,22,23

- During the 2013-2014 school year, 90 schools participated in VBYG. In total, 10,135 vaccine doses were administered to 8,073 students. The three most administered vaccines were influenza (7,312 doses), HPV (820 doses), and hepatitis A (529 doses). Other vaccines administered included hepatitis B, measles, mumps, and rubella (MMR), meningitis, polio (IPV), tetanus, diphtheria (Td), tetanus, diphtheria, pertussis (Tdap), and varicella (chicken pox).24

References


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