



# Childhood and Adolescent Vaccination Coverage Report

Rhode Island Department of Health, Office of Immunization, March 2011

## BACKGROUND

Each year, the Centers for Disease Control and Prevention (CDC) publish state and national estimates of vaccination coverage rates among children from 19 to 35 months of age and adolescents from 13 to 17 years of age from the [National Immunization Survey](#) (NIS). State immunization programs use NIS coverage rates to identify children and adolescents at risk for disease, to track uptake of new vaccines, and to monitor progress towards state and national [Healthy People 2020](#) immunization goals. So, how does Rhode Island measure up?

## CHILDHOOD VACCINATION COVERAGE RATES

Healthy People 2020 immunization goals for children from 19 to 35 months of age include achieving coverage rates of 90% or greater for each individual vaccine series and 80% coverage rates for the combination series 4:3:1:3:3:1:4 (4 DTaP, 3 polio, 1 MMR, 3 Hib, 3 Hep B, 1 varicella, 4 PCV).

Historically, Rhode Island's coverage rates have been among the nation's highest. In 2009, estimated coverage rates in the state were greater than 90% for most vaccines, surpassing Healthy People 2020 goals (Table 1). However, recent data reveal a disturbing trend in the second year of life. For the fifth consecutive year, Rhode Island's DTaP coverage rate remained below 90% (this rate fell from 94.7% in 2004 to 82.3% in 2009). Our PCV coverage rate fell from 90.7% in 2007 to 83.6% in 2009. Coverage rates for the combination 4:3:1:3:3:1:4 series (69.7%) were below the national average (70.5%) in 2006, 2007, and 2009 (Hib vaccine excluded due to the vaccine shortage from 2007 to 2009). This downward trend can be attributed to the decline in timely completion of the fourth dose of DTaP and PCV in the second year of life. As a result, Rhode Island's ranking for the complete 4-dose series of DTaP and other vaccines has dropped. This also holds down our rate for the combination series of 4:3:1:3:3:1:4.

**Table 1. Vaccination coverage among children 19-35 months of age: Rhode Island, 2004-2009**

Vaccine	2004 (%)	2005 (%)	2006 (%)	2007 (%)	2008 (%)	2009 (%)
4 DTaP	94.7	87.9	86.6	84.9	88.4	82.3
3 Polio	95.4	95.6	96.8	98.0	97.1	96.5
1 MMR	95.6	95.2	96.2	94.7	93.7	90.8
3 Hib	94.2	94.2	96.8	96.4	89.0	86.3
3 HepB	94.9	96.3	97.8	97.7	97.0	98.8
1 Varicella	91.7	96.2	96.4	92.1	93.0	93.0
4 PCV	N/A	72.6	83.9	90.7	83.9	83.6
4:3:1:3:3:1:4*	N/A	N/A	69.2	68.6	73.9	69.7

\* Hib vaccine shortage from December 2007 to July 2009 affected Hib coverage rates in 2008 and 2009. Hib was excluded from the series measure (4:3:1:0:3:1:4 series for 2008 and 2009).

The NIS also measures the number of vaccine doses received by age milestones 3, 5, 7, 19, and 24 months. Vaccination rates for DTaP vaccine fell steadily in Rhode Island between each age milestone up to 19-months (Table 2). The fourth dose of DTaP vaccine was, however, often administered by 24 months of age.

**Table 2. Estimated DTaP vaccination coverage rates by age milestone: Rhode Island, 2003-2009**

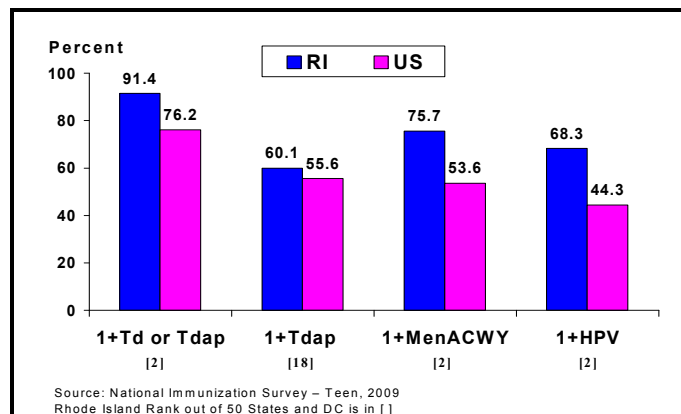
Year	1 dose by 3 months (%)	2 doses by 5 months (%)	3 doses by 7 months (%)	4 doses by 19 months (%)	4 doses by 24 months (%)
2003	95.1	90.4	82.1	80.3	93.1
2004	92.3	86.3	74.1	75.0	88.2
2005	92.2	86.3	77.8	71.6	86.2
2006	96.7	90.6	79.7	72.0	84.5
2007	93.7	90.2	83.4	66.3	78.6
2008	95.0	87.3	79.7	74.0	82.8
2009	93.4	86.5	75.6	69.2	78.8

## ADOLESCENT VACCINATION COVERAGE RATES

Since 2006, three new vaccine recommendations for children at 11-12 years of age have been introduced to the CDC's immunization schedule—a combined tetanus, diphtheria and pertussis vaccine (Tdap), meningococcal conjugate vaccine (MCV), and human papilloma virus (HPV) vaccine. The target coverage rate for adolescent vaccines (1-Tdap, 1-MCV, 3-HPV for females) is 80% or greater.

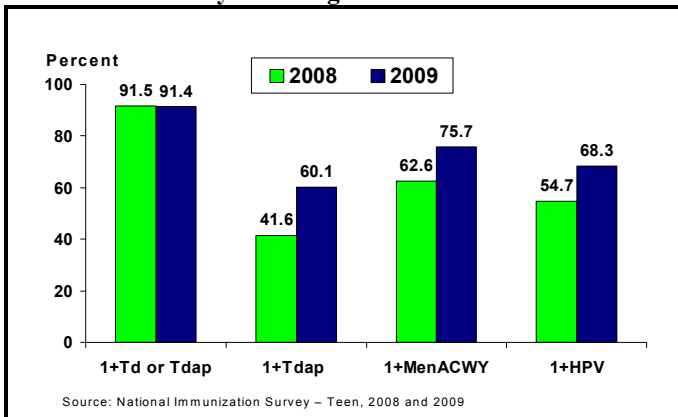
In 2009, Rhode Island's adolescent vaccination rates were the highest in the nation (Figure 1). The combined Td/Tdap vaccination rate was 91.4% (compared to the US rate of 76.2%). The coverage rate for Tdap alone was 60.1% (compared to the US rate of 55.6%), MCV was 75.7% (compared to the US rate of 53.6%), and the HPV vaccination rate was 68.3% (compared to the US rate of 44.3%).

**Figure 1. Vaccination coverage among adolescents 13-17 years of age: Rhode Island vs. US, 2009**



Through the NIS-Teen, two years of state data have been collected. Figure 2, below, displays the increases in adolescent vaccination coverage rates from 2008 to 2009.

**Figure 2. Changes in vaccination coverage among adolescents 13-17 years of age: Rhode Island 2008-2009**

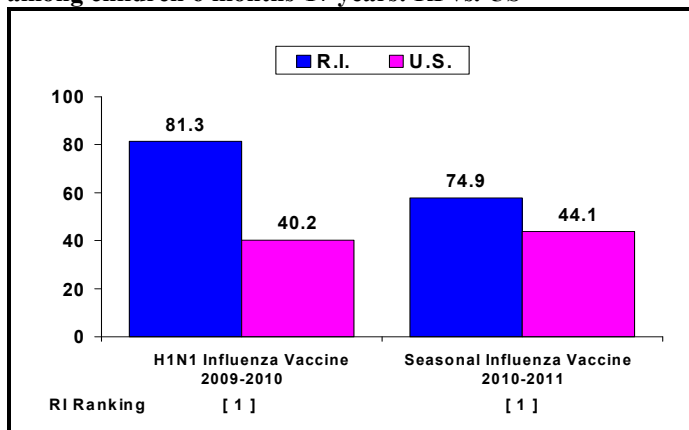


### INFLUENZA VACCINATION COVERAGE RATES

During the 2009-2010 influenza season, two separate influenza vaccines were distributed in the United States: a seasonal influenza vaccine and an influenza A (H1N1) 2009 monovalent vaccine. Figure 3 compares Rhode Island and national H1N1 vaccination coverage rates among children 6 months through 17 years of age during the 2009-2010 influenza season, and seasonal influenza vaccination coverage rates during the 2010-2011 influenza season.

Rhode Island had the highest H1N1 vaccination coverage rate (81.3%) in the country among children in this age group, double the national rate (40.2%). The high H1N1 vaccination coverage rate was likely the result of Rhode Island's prioritization of children during the H1N1 influenza pandemic, a statewide school-based clinic program, and recognition by healthcare providers and parents of the risks children faced. Rhode Island's coverage rate for seasonal influenza vaccination during the 2010-2011 also ranked highest at 74.9% compared to 44.1% nationally.

**Figure 3. H1N1 and Seasonal influenza vaccination rates among children 6 months-17 years: RI vs. US**



### IMPROVING VACCINATION COVERAGE RATES

#### WHAT IS HEATH DOING?

1. **Maintains** Rhode Island's [universal vaccine policy](#).
2. **Monitors** coverage rates using [KIDSNET](#).
3. **Conducts** quality assurance site visits at practices.
4. **Trains** providers to use [KIDSNET](#) to identify children who are missing immunizations.
5. **Provides** automated calls to parents when children have missed vaccinations (using KIDSNET data).
6. **Conducts** school-based vaccination clinics for adolescents through the [Vaccinate Before You Graduate](#) program.
7. **Coordinates** school-based influenza clinics for all school-aged children.
8. **Supports** free immunization clinics for uninsured children without primary care providers.
9. **Supports** Rhode Island's Childhood Immunization Coalition with resources and quarterly updates.
10. **Shares** immunization data with insurers for the Healthcare Effectiveness Data and Information Set (HEDIS).
11. **Provides** vaccine and schedule updates through the *Provider Briefing*.
12. **Partners** with the [American Academy of Pediatricians](#) and the [American Academy of Family Physicians](#) in their efforts to improve immunization practices.

#### WHAT SHOULD HEALTH CARE PROVIDERS DO?

1. **Use** Rhode Island's [recommended immunization schedule](#) for routine vaccination.
2. **Use** the CDC's [catch-up schedule](#) for children who fall behind schedule.
3. **Review** the CDC's [Guide to Valid Contraindications](#).
4. **Assess** vaccination status at well-child *and* sick visits.
5. **Use** KIDSNET to review and print children's immunization histories. Attach to charts prior to visits.
6. **Use** KIDSNET to identify children who are missing immunizations.
7. **Schedule** vaccinations at the earliest opportunity within a recommended age range (for example, give the 4th dose of DTaP at the 15-month visit rather than the 18-month visit).
8. **Encourage** parents/guardians to keep current records of their children's immunizations.
9. **Ensure** that office staff is aware of minimum intervals between vaccine doses when scheduling appointments.
10. **Maintain** adequate in-office supplies of vaccine.
11. **Consult** Rhode Island's [Immunization Resource Manual](#).