

Immunizations/ Vaccine Preventable Diseases

Key Findings:

- In 2008, about 74 percent of Washington children 19-35 months of age received all recommended immunizations (4:3:1:3:3:1). This is not significantly different from the 2008 national rate of 76 percent.^{1,b} This combination of vaccines has been the standard of practice since 2002. Over this time period, Washington's rate has steadily improved and moved closer to the national rate.
- In 2009-10, estimated immunization rates for children entering kindergarten or first grade (school entry-level) included: DTaP/Td: 92 percent, polio: 92 percent, measles: 92 percent, mumps: 92 percent, rubella: 92 percent, Hepatitis B: 93 percent and varicella 89 percent.²
- Sometimes needed vaccines are not given during routine medical visits or multiple vaccines are not given during the same visit. Barriers to adequate immunization include transportation problems, lack of immunization schedule at home, multiple family moves, multiple providers, and objections to some immunizations. The most frequently missed immunization is the 4th DTaP, recommended between 15 and 23 months.¹

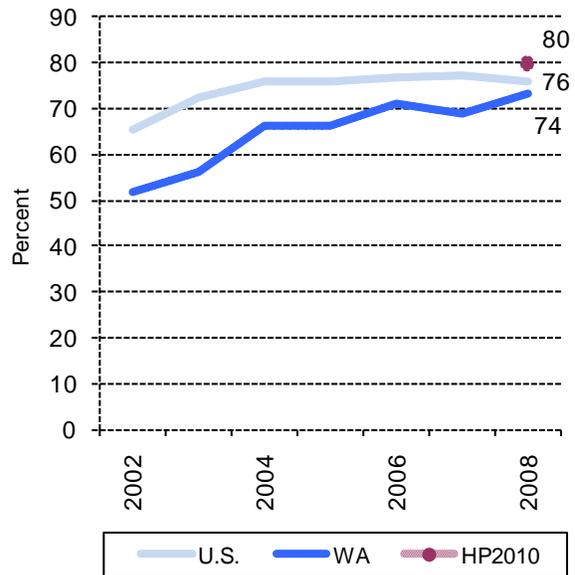
Definition: The standard measure of appropriate immunization for two-year olds is a series of vaccinations that includes 4 doses of diphtheria, tetanus, pertussis (DTP or DTaP), 3 doses polio, 1 dose measles, mumps and rubella (MMR), 3 doses haemophilus influenzae type b (Hib); 3 doses Hepatitis B and 1 dose of varicella (4:3:1:3:3:1). This measure has changed over time with new antigens added as they become the standard of practice.^a

- Washington is one of about 20 states that permit immunization exemptions for school admittance due to personal or philosophical reasons.³ In 2009-10, the statewide exemption rate for children beginning school in Washington was about 6 percent. Over 90 percent of exemptions were for personal or philosophical reasons. Other exemptions were for medical and religious reasons.²
- As the following graphs show, although cases are rare and rates low, outbreaks of vaccine-preventable diseases still occur. This emphasizes the importance of continued immunization.
- The last diphtheria case seen in Washington was in 1981.⁵ There have been no recent wild type (non-vaccine related) polio cases in Washington and the last vaccine-related case was in 1993.⁵ In Washington State, there have been three cases of tetanus in recent years in 1997, 2000, and 2005.⁵
- Pertussis rates in Washington are high. In 2008, Washington's pertussis incidence rate was 7.0/100,000 (US, 2008 4.18/100,000⁴) with one reported infant death. The rates were highest among children under one year of age (69.9/100,000) and 5 to 9 years (22.5/100,000). About a third of cases were reported as "up to date" for pertussis vaccine.

- In 2008, the NIS estimated coverage rate for varicella vaccination of children 19-35 months of age in Washington State was around 87%. The rate of varicella immunization of two year olds has risen consistently since 1996 when it was about 6%. However, the rate remains lower than the United States rate of 91% in 2008.¹

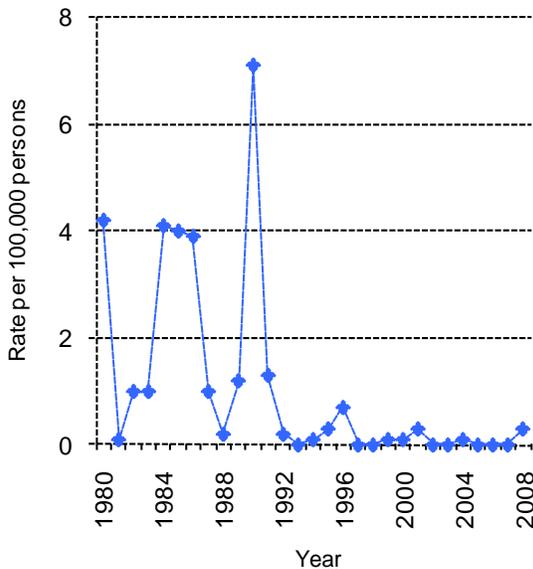
Immunization Rates ¹

Percent Children Ages 19-35 Months Immunized with 4:3:1:3:3:1 WA and US, NIS 2002-2008



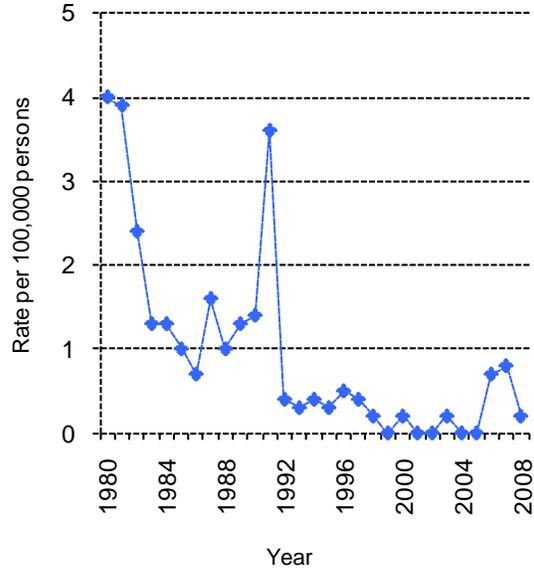
Measles Disease ⁵

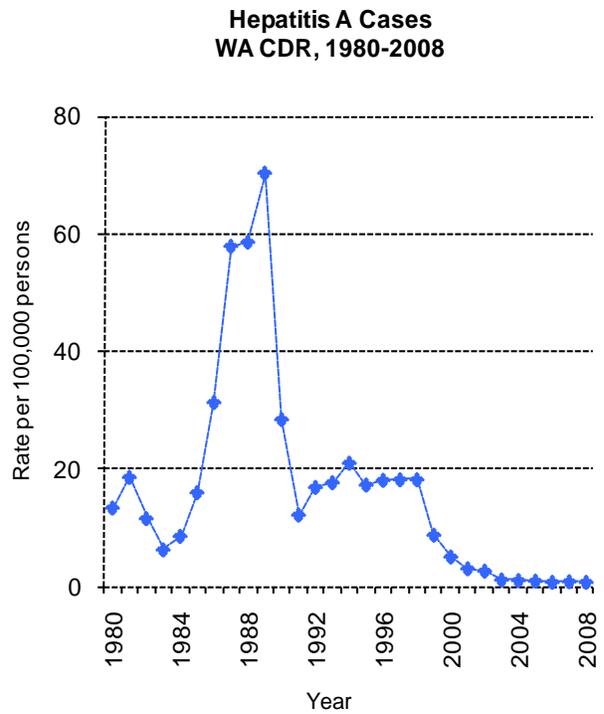
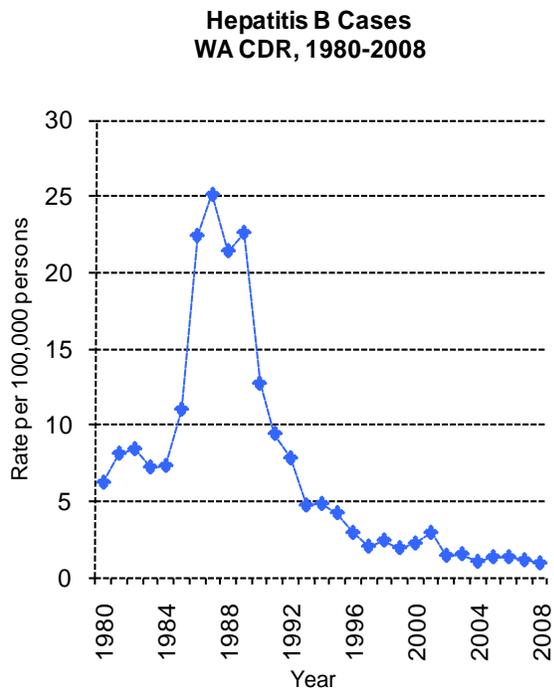
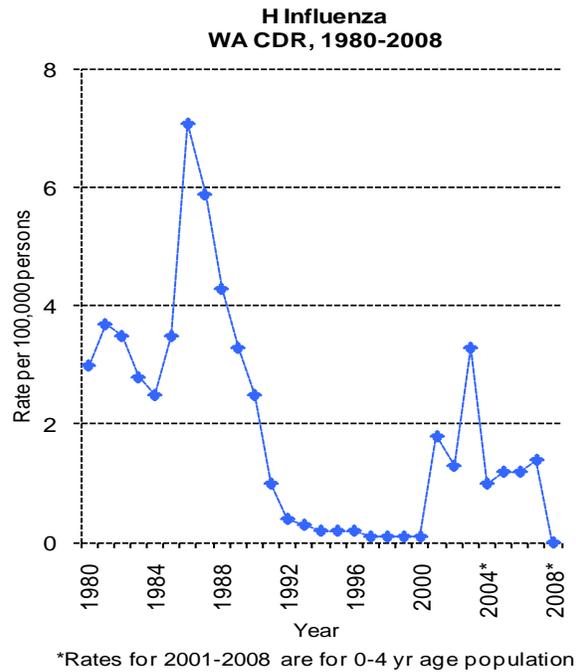
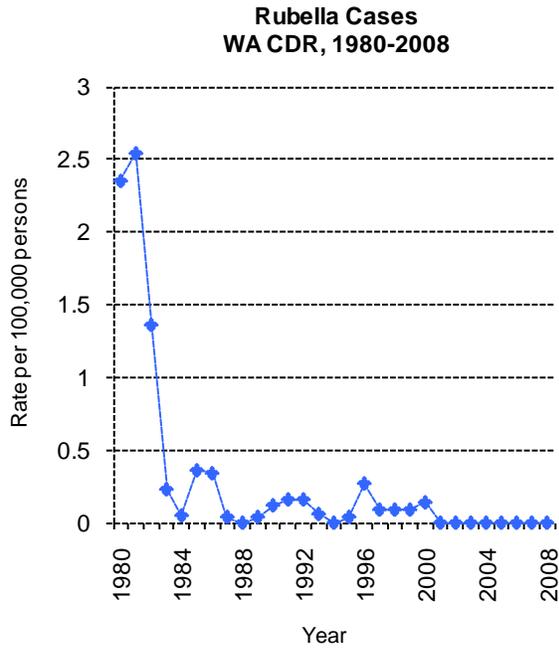
Measles Cases WA CDR, 1980-2008



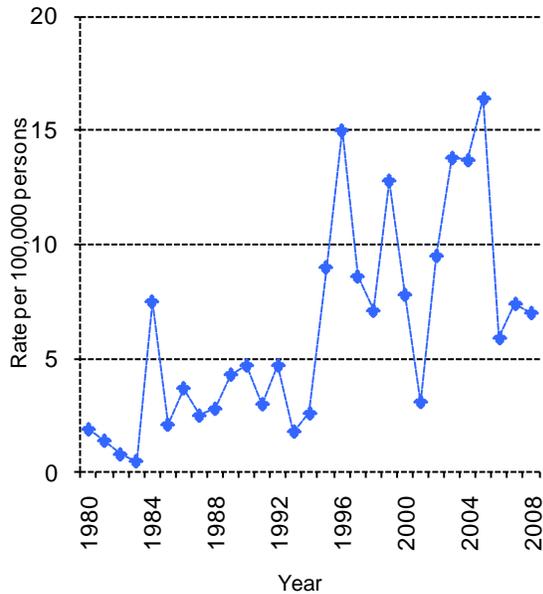
Mumps Disease ⁵

Mumps Cases WA CDR, 1980-2008





**Pertussis
 WA CDR, 1980-2008**



Data Sources

- Centers for Disease Control and Prevention. (2009, October 2) *2008 Table Data by State: Estimated Vaccination Coverage with Individual Vaccines and Selected Vaccination Series Among Children 19-35 Months of Age by State, National Immunization Survey (NIS), 2008* [Excel file]. Retrieved April 20, 2010, from http://www.cdc.gov/vaccines/stats-surv/nis/data/Tables_2008.htm.
- Washington State Dept of Health, Office of Immunization and CHILD Profile *School and Childcare Assessment Database [IMMENU] 2009-10* [Data].
- National Conference of State Legislatures' March 2011 listing of States with Religious and Philosophical Exemptions from School Immunization Requirements. (accessed 7/22/11) <http://www.ncsl.org/default.aspx?tabid=14376>
- MMWR Weekly, Summary of Notifiable Diseases – United States, 2008. June 25, 2010/57(54):1-94
- Washington State Department of Health. (2009, September) *Communicable Disease Report 2008 (CDR)*. Retrieved on April 20, 2010, from <http://www.doh.wa.gov/Portals/1/Documents/5100/420-004-CDAnnualReport2011.pdf>

Endnotes

- Abbreviations:** **DTP** - Diphtheria, Tetanus and whole cell Pertussis vaccine; **DTaP** - Diphtheria, Tetanus and acellular Pertussis vaccine; **DT** - Diphtheria, Tetanus vaccine (Pediatric); **Td** - Tetanus, Diphtheria vaccine (Adult); **MMR** - Measles, Mumps, Rubella vaccine; **Hib** - Haemophilus influenzae type b; **HepB** - Hepatitis B; **HepA** - Hepatitis A
- Significance is based on 95% confidence intervals

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