

Immunizations were one of the outstanding achievements of medicine and public health during the 20th century. Transmission of smallpox and poliomyelitis have been eliminated world wide and in the Americas, respectively. Measles, diphtheria, pertussis (whooping cough), tetanus, mumps, rubella, and invasive *Haemophilus influenzae B* were reduced by 95-99%.

Despite those successes, immunization programs were challenged during the 1990s by a resurgence of measles that highlighted inadequate immunization coverage rates.

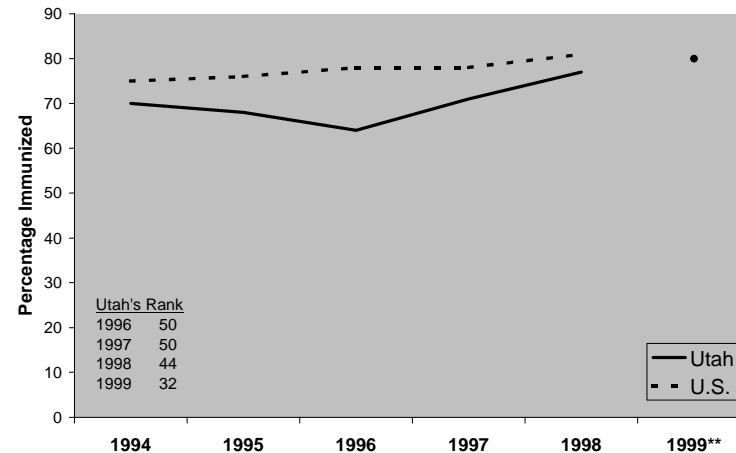
This Health Status Update reviews progress in childhood immunization coverage and trends in selected vaccine-preventable diseases.

Immunization

- Utah's immunization rate in two-year olds improved from 64% in 1996 to 80% in preliminary 1999 results (see figure).
- Utah's immunization rate in two-year olds improved from 50th in 1996, to 32nd in 1999. The gap between Utah's rate and that in the best state decreased from 24% to 11%.
- About 40% of immunizations in Utah are given by public clinics. In 1995, only 63% of children seen by public clinics achieved complete immunization (4:3:1 schedule) by age two years. By 1999, that rate had improved to 84% (see figure).
- In 1999, 10 of 46 public clinics had achieved the targeted 90% coverage rate for the year 2000. Coverage rates by local health district varied from 69% in Utah County to 95% in Summit County.
- Two barriers to high immunization coverage are the complexities of 1) the immunization schedule and 2) the delivery system. The recommended schedule requires administration of 14 vaccinations at 5 or more visits. Many children receive vaccines from more than one provider for reasons that include convenience, health insurance coverage and cost, and health plan-related changes in pediatrician. These factors make it difficult for parents and doctors to know whether a child is up-to-date or not.

Two-Year Old Immunization Rate

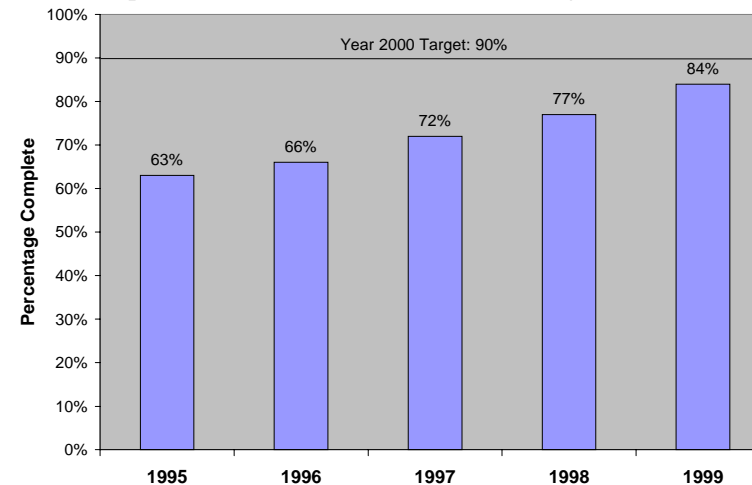
Percentages of children aged 19-35 months who had completed immunizations*, Utah and United States, 1995 - June 1999.



* Completed immunizations based on the 4:3:1 schedule which includes 4 doses of DTaP/DTP/DT (Diphtheria/Pertussis/Tetanus), 3 of polio, and 1 of MMR (Measles/Mumps/Rubella).
 ** Utah 1999 rate is a preliminary estimate based on survey data from July 1998 - June 1999.
 Source: National Immunization Survey, CDC.

Public Clinic Immunization Rates

Percentage of children attending Utah public immunization clinics with complete immunization* at 24 months of age, 1995-1999.



* Completed immunizations based on the 4:3:1 schedule which includes 4 DTaP/DTP/DT, 3 Polio, and 1 MMR.
 Source: UDOH Immunization Program

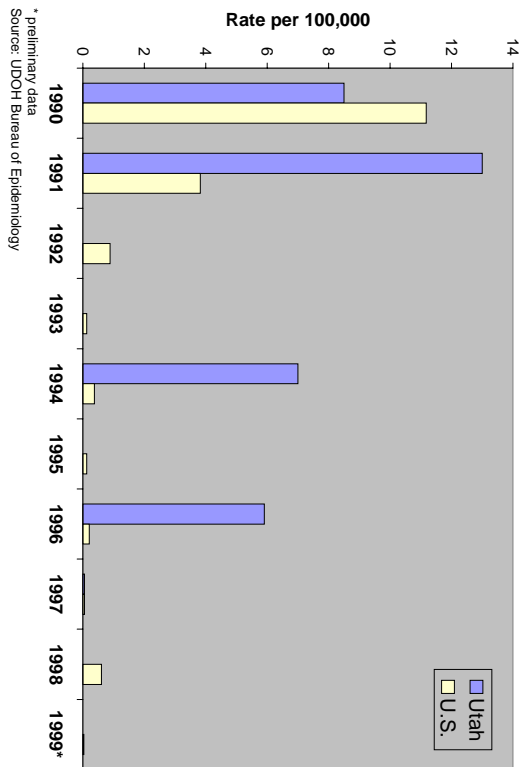
The Utah Statewide Immunization Information System (USIIS) is a tool that can consolidate records for children immunized in the state and provide services on reminder/recall, forecast, reports, and HEDIS data collection. This system will encompass all children and public and private health care providers in Utah. Participation for both families and physicians is voluntary. As of May 2000, 35 providers, 4 health plans, WIC, Medicaid, and Vital Records have participated in USIIS. USIIS has collected over 1.8 million immunization records for more than 300,000 children.

Vaccine-preventable diseases

- Measles (rubeola) is a potentially serious illness that was thought to be near elimination in the 1980s. Utah experienced measles outbreaks in 5 of 8 years from 1989 to 1996. Only one measles case was reported in 1997, and no cases during 1998-1999 (see figure on back). A small outbreak related to a visiting athlete occurred in 2000 (3 Utah cases). As of July 1999, a second dose measles vaccine is required for school entry (K-12) in Utah.
- Pertussis (whooping cough) can be very serious in infants and young children. Utah experienced a large outbreak related to low immunization rates in an isolated fundamentalist community during 1998. Nine children under 5 years of age were hospitalized (see figure on back).
- Utah experienced its first case of congenital rubella syndrome in 10 years during 1999.
 Despite the long and short term successes described above, challenges remain. Increasing numbers of new vaccines are being developed. These new vaccines offer health benefits, but will make an already complex schedule even more complicated. Perhaps the most important challenge will be to maintain the attention and cooperation needed to achieve high coverage rates even when we see few cases. Failure to do so will lead to future outbreaks and preventable morbidity and mortality.

Measles

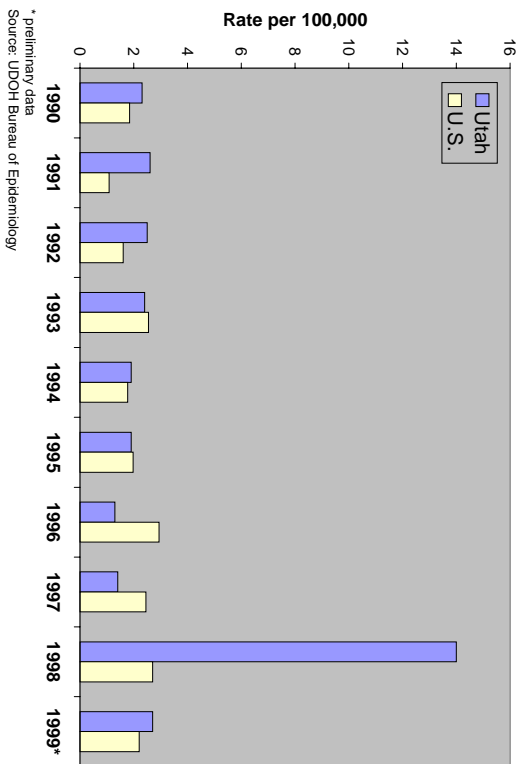
Rate per 100,000 persons of reported measles, Utah and United States, 1990-1999.



* preliminary data
Source: UDOH Bureau of Epidemiology

Pertussis

Rate per 100,000 persons of reported pertussis, Utah and United States, 1990-1999.



* preliminary data
Source: UDOH Bureau of Epidemiology

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Additional information about this topic can be obtained from the Office of Public Health Assessment, Utah Department of Health, P. O. Box 142101, Salt Lake City, Utah 84114-2101, (801) 538-6108, FAX (801) 536-0947 or (801) 538-9346, email: phdata@doh.state.ut.us, the Immunization Program, Utah Department of Health, P.O. Box 142001, Salt Lake City, Utah 84114-2001, (801) 538-9450, FAX (801) 538-9440, the Bureau of Epidemiology, Utah Department of Health, P. O. Box 142104, Salt Lake City, Utah 84114-2104, (801) 538-6191, FAX (801) 538-9923, or the Centers for Disease Control at www.cdc.gov/nip.

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