

*State of Alaska
Epidemiology*



Bulletin

*Recommendations
and
Reports*

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Immunizations in Alaska

Achievements

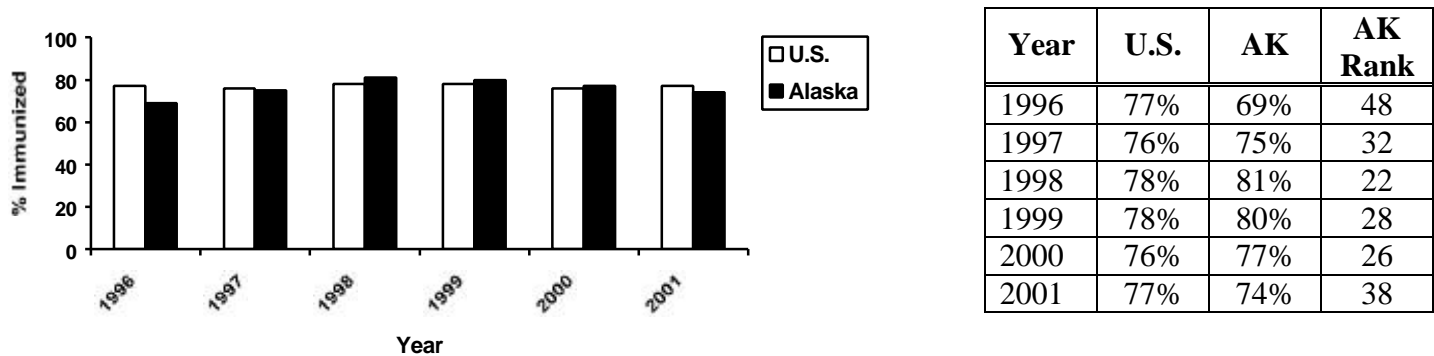
Challenges

Opportunities

National Immunization Survey

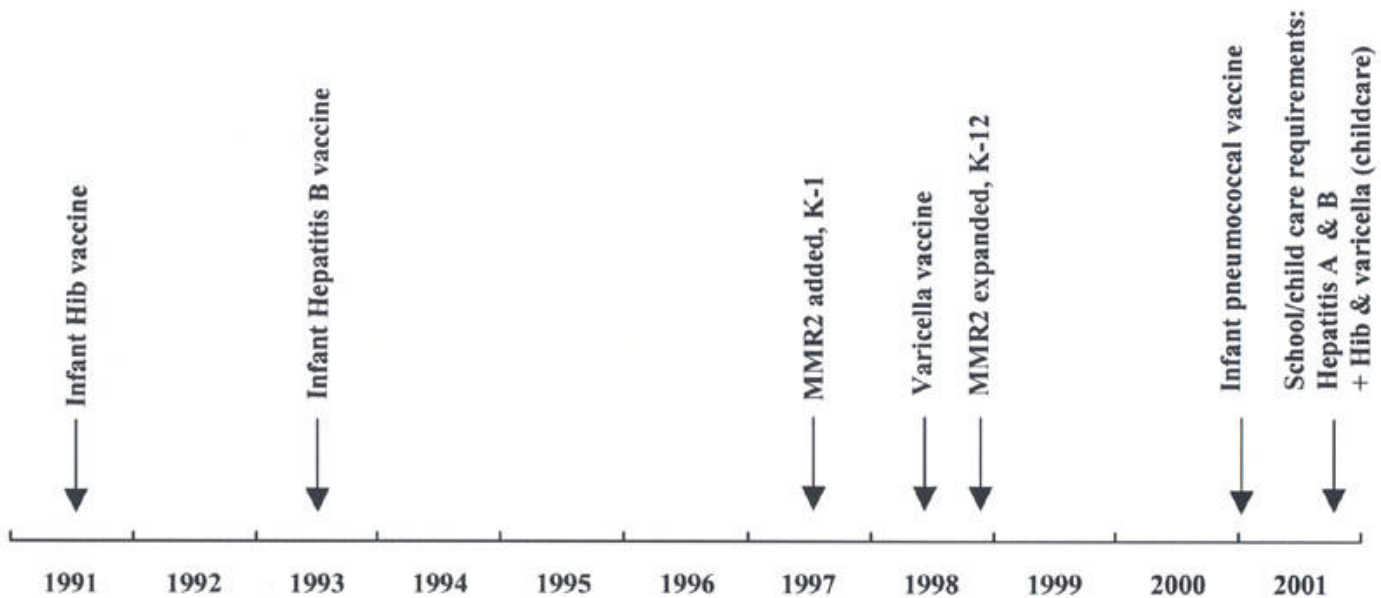
The National Centers for Disease Control and Prevention (CDC) annually conducts the National Immunization Survey (NIS), a random-digit-dialing telephone survey to determine children's immunization levels in all 50 states. Immunization completion rates for children 19-35 months of age in Alaska and the United States are shown below.

**Immunization Completion Rates*, U.S. & Alaska,
National Immunization Survey, 1996-2001
(Children 19-35 months of age)**



* Completion rates = 4 doses of DTaP/ 3 doses of polio/ 1 dose of MMR/ 3 doses of Hib vaccine

Alaska Immunization Milestones, 1991 to 2001



Reported Incidence of Vaccine-Preventable Diseases, 1972 – 2001

| Disease | Year of Disease Report | | | | | | | | | | | | | | | | | | | | | | | | | | | | Total | | |
|------------|------------------------|-----|-----|-----|-------|-----|-----|-----|-----|-----|-----|-----|----|----|-----|-----|-----|-----|-----|----|-----|-----|-----|----|----|----|----|----|-------|-----|-------|
| | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | | 00 | 01 |
| Diphtheria | 2 | 2 | 6 | 11 | 9 | 1 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 |
| Hep A | 246 | 240 | 284 | 414 | 1,399 | 568 | 130 | 63 | 27 | 45 | 20 | 52 | 33 | 16 | 108 | 241 | 596 | 644 | 190 | 96 | 130 | 773 | 209 | 50 | 53 | 34 | 17 | 15 | 13 | 16 | 6,722 |
| Hep B | N/A | 18 | 26 | 46 | 30 | 37 | 46 | 26 | 33 | 73 | 60 | 50 | 27 | 48 | 120 | 117 | 53 | 60 | 57 | 41 | 21 | 15 | 13 | 13 | 16 | 15 | 13 | 18 | 13 | 10 | 1,115 |
| Hib * | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 24 | 32 | 58 | 22 | 24 | 24 | 19 | 10 | 2 | 6 | 3 | 2 | 5 | 4 | 1 | 5 | 5 | 1 | 247 |
| Measles | 13 | 65 | 0 | 0 | 25 | 49 | 1 | 17 | 6 | 0 | 1 | 2 | 0 | 0 | 1 | 2 | 1 | 80 | 5 | 9 | 2 | 10 | 0 | 63 | 0 | 33 | 0 | 1 | 0 | 386 | |
| Mumps | 165 | 125 | 42 | 26 | 25 | 22 | 15 | 8 | 11 | 13 | 16 | 12 | 14 | 10 | 8 | 11 | 13 | 2 | 6 | 18 | 3 | 11 | 4 | 12 | 3 | 8 | 3 | 3 | 8 | 1 | 618 |
| Pertussis | 1 | 4 | 0 | 4 | 0 | 5 | 20 | 10 | 5 | 1 | 0 | 4 | 5 | 30 | 5 | 4 | 8 | 1 | 18 | 15 | 18 | 5 | 0 | 1 | 3 | 16 | 15 | 5 | 21 | 16 | 240 |
| Polio | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Rubella | 28 | 19 | 0 | 0 | 2 | 1 | 8 | 4 | 12 | 1 | 5 | 1 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 86 |
| Tetanus | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |

*Hib = *Haemophilus influenzae* type b meningitis

Growth in Alaska Population and Vaccine Recommendations

Since 1980, both the number of Alaska children 0-18 years of age and the number of vaccines each of these children should receive to be fully protected has increased tremendously.

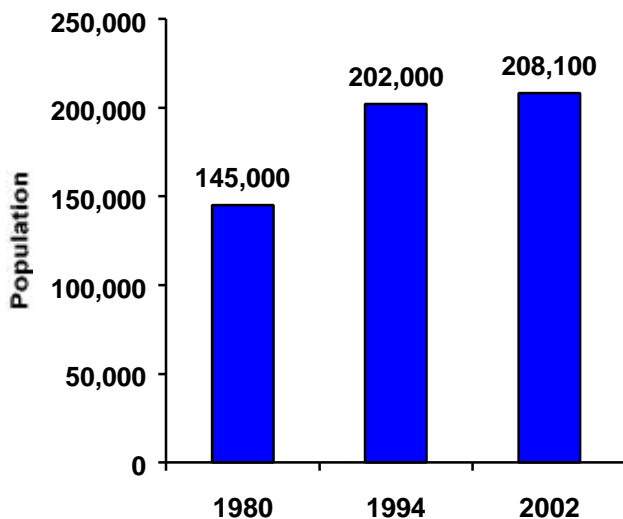
Growth in Alaska Population (0-18 years) and the Number of Recommended Vaccines, 1980, 1994, and 2002

| | # of Alaska Children Ages 0-18 | # Vaccine Doses Recommended for Each Child | Total # of Doses Needed to Provide All Medically Recommended Vaccines to Alaska Children Age 0-18 years |
|-------------|--------------------------------|--|---|
| 1980 | 145,000 | 9 | 1,305,000 |
| 1994 | 202,000 | 18 | 3,636,000 |
| 2002 | 208,117* | 25 | 5,202,925 |

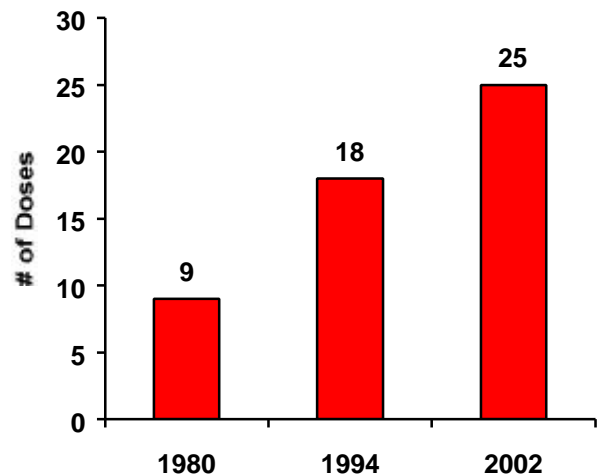
* Census information from Year 2000

Growth in Workload to Immunize Alaska Children – 1980, 1994, 2002

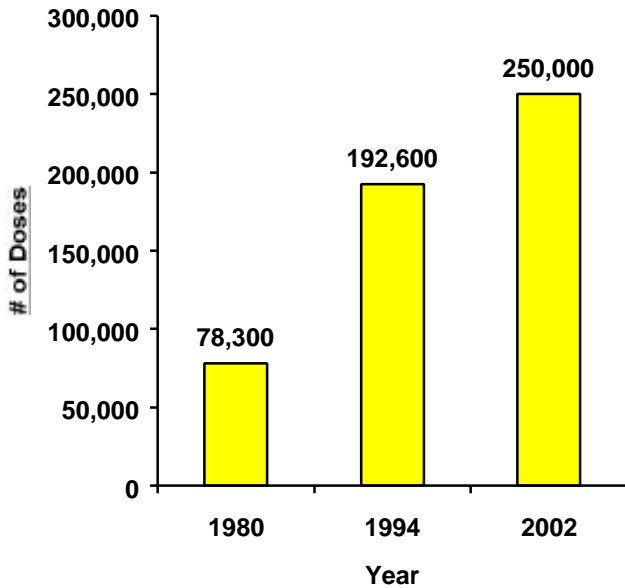
Growth in Population 0-19 Years of Age



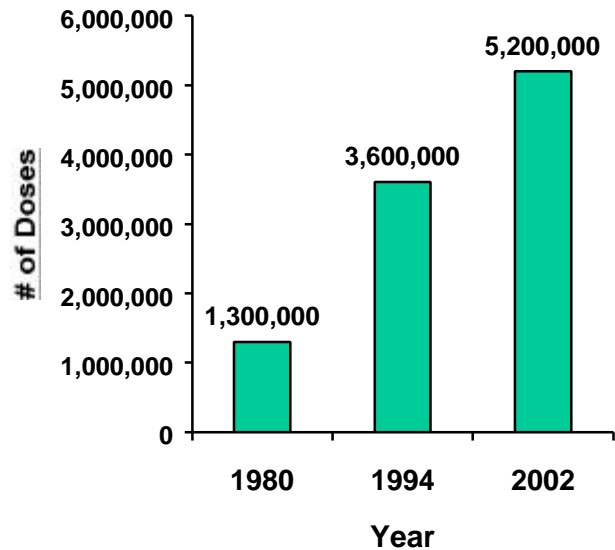
Number of Doses of Vaccine Recommended Per Person by 19 Years of Age



Number of Doses Needed to Vaccinate Annual Birth Cohort with All Vaccines Recommended by 19 Years of Age



Number of Doses Needed to Vaccinate Children 0-19 Years of Age with All Vaccines Recommended by 19 Years of Age



Immunization Requirements for School and Child Care Facility Attendance

In 1977 in order to control a statewide measles epidemic, Alaska was the first state in the United States to enforce immunization requirements for school and child care facility attendance. Immunization requirements remained unchanged until 1996 when a second dose of MMR (measles/mumps/rubella) vaccine was added for children in grades K-1. In 1998, a second dose of MMR was required for all children in grades K-12.

During 2001, Alaska implemented new vaccination requirements for all children attending schools and childcare facilities, as shown below. These requirements were added to reflect current medical recommendations for disease prevention.

New Immunization Requirements in Alaska Schools and Child Care Facilities, 2001

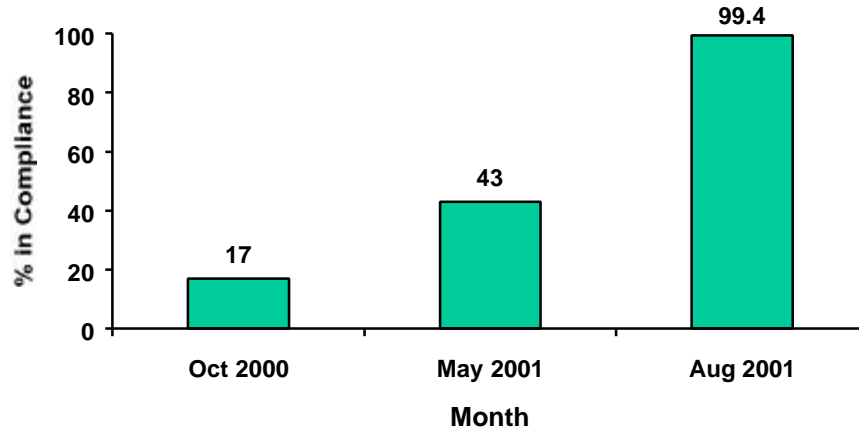
| Child Care Facilities | Schools (K-12) |
|---|----------------|
| Hepatitis A | Hepatitis A |
| Hepatitis B | Hepatitis B |
| Mumps | Mumps |
| Hib (<i>Haemophilus influenzae</i> type b) | |
| Varicella (chickenpox) | |

The deadline for compliance with these new immunization requirements was the fall of 2001. Approximately 99% of students in school and 90% of children in child care facilities are now in full compliance with all immunization requirements.

Parents, children, child care facility employees, school employees, and health care providers throughout Alaska joined together to achieve this successful prevention program – and protect Alaska children.

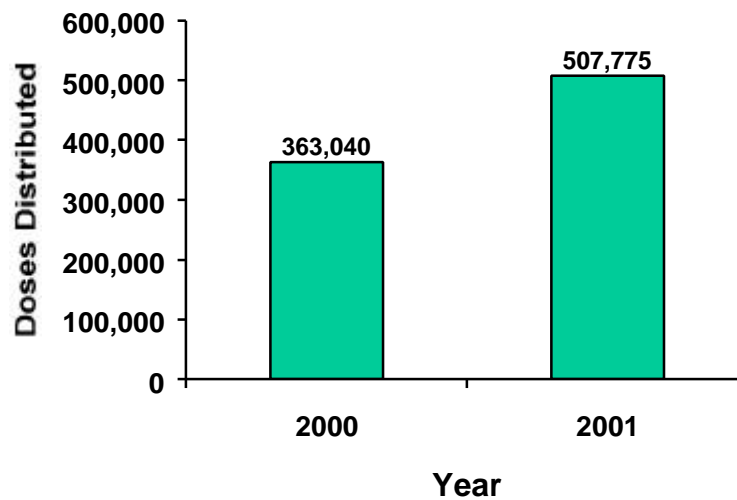
The effort was huge. For example, in Anchorage, initially only 17% of students were vaccinated against hepatitis A and hepatitis B. Less than one year later, 99.4% of students were vaccinated.

Number of Students in Compliance with Immunization Requirements for Hepatitis A & Hepatitis B, Anchorage School District, 2000-2001
(n » 49,000)



The impact of these new requirements can be measured by examining the number of vaccine doses distributed to Alaska providers by the Alaska Section of Epidemiology. From 2000 to 2001, the number of doses of pediatric vaccines distributed increased by 40%.

Doses of Pediatric Vaccine Distributed by Alaska Immunization Program, 2000-2001



Summary:

- During 2001, Alaska successfully completed a massive immunization effort to assure that all children were appropriately protected against hepatitis A and B. In addition, all children in child care facilities were required to be protected against Hib and varicella.
- As a result of the tremendous workload imposed by the new immunization requirements, efforts to maintain our high levels of immunization of children 0-3 years of age suffered, and their overall vaccination levels fell slightly to 74% from a peak of 81%.
- Additional stress on the public health system occurred as a result of the national anthrax bioterrorism attacks in September/October 2001, resulting in an increased workload on public health staff who were diverted from routine activities to respond.
- The National Immunization Survey results reflect the lack of excess capacity in the State's public health system. Responding to new needs results in taking away from basic program activities.
- The Division of Public Health in conjunction with all Alaska public and private medical providers will now redouble efforts to focus attention on catching up the immunizations of children 0-3 years of age who fell behind, as well as assuring appropriate immunization of all newborns.
- Alaska children who attend child care or school benefit from one of the nation's most comprehensive childhood immunization programs.

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