



PROGRESS REVIEW

Immunization and Infectious Diseases

DEPARTMENT OF HEALTH & HUMAN SERVICES ■ PUBLIC HEALTH SERVICE ■ December 1, 1999

The Assistant Secretary for Health and Surgeon General chaired the third and final review of progress in achieving Healthy People 2000 objectives for Immunization and Infectious Diseases. The review was organized by the Centers for Disease Control and Prevention (CDC), the lead agency for this Healthy People 2000 priority area. The proceedings were broadcast by satellite to viewers at remote sites, who were able to submit questions by telephone and fax. A taped version of the live broadcast, as well as materials relating to the broadcast, may be viewed at www.cdc.gov/ncidod/healthypeople/. While data for the decade are not yet complete, of the 19 objectives in this priority area, two have met their targets and six are moving in the right direction. Six others show mixed progress, three have moved away from their targets, and two lack recent data. Discussion focused on the following objectives in priority area 20 of Healthy People 2000:

20.1 For the six **vaccine-preventable diseases** with a Healthy People 2000 target of zero cases, 1998 data show the following: one case of diphtheria among people aged <25 (no change from the 1988 baseline); nine cases of tetanus among people aged <25 years (an increase of three cases from the 1988 baseline); zero cases of polio caused by wild virus (no change from the 1988 baseline); 100 cases of measles (continuing a downward trend from the 1988 baseline of 3,396 cases); 364 cases of rubella (an increase from the 1988 baseline of 225 cases); and seven cases of congenital rubella syndrome (a slight increase from the 1988 baseline of six cases). The number of cases of measles, rubella and congenital rubella syndrome rose sharply in the early 1990s, but has since declined. The incidence of mumps decreased from 4,866 cases in 1988 to 666 cases in 1998, nearing the target of 500 cases. The incidence of pertussis reached 7,796 cases in 1996 and showed a general increase over the decade from 3,450 cases in 1988 to 7,405 cases in 1998, moving away from the target of 1,000 cases.

20.2 Tracked in 3-year moving averages, the rate of **epidemic-related pneumonia and influenza deaths** among people aged 65 and over fluctuated during the decade of the 1990s, reaching an average low of 15.7 cases per 100,000 in 1991-93 (target, 15.9 cases per 100,000). More recently, the 3-year average rate in 1994-96 was 17.3 cases per 100,000.

20.3 The estimated incidence of **hepatitis A** infection fluctuated in the 1990s ranging from 43.3 cases per 100,000 in 1989 to 27.2 cases per 100,000 in 1992. The overall rate decreased from 33.0 cases per 100,000 in 1987 to 25.8 in 1998, nearing the year 2000 target of 16.1 cases per 100,000. The rate of hepatitis A among Hispanics increased to 72.6 cases per 100,000 in 1997, before decreasing to 41.0 in 1998, nearing the target of 26.9. The rate among American Indians/Alaska Natives declined dramati-

cally from 256.0 cases per 100,000 in 1992 to 30 per 100,000 in 1998, surpassing the target of 128.

The estimated incidence of **hepatitis B** decreased from 63.5 cases per 100,000 in 1987 to 22.5 cases per 100,000 in 1998 (target, 40). Targets set for special populations have also been achieved for all groups except heterosexually active people, men who have sex with men, and children of Asians/Pacific Islanders, although the estimated number of hepatitis B cases among the third group decreased from 10,817 cases in 1987 to 4,281 in 1998 (target, 1,500).

The overall estimated rate of **hepatitis C** declined from 18.3 cases per 100,000 in 1987 to 2.4 cases per 100,000 in 1997, surpassing the target of 13.7. Among Hispanics, the rate of hepatitis C declined from 17.2 cases per 100,000 in 1992 to 7.7 in 1996 (target, 13.7).

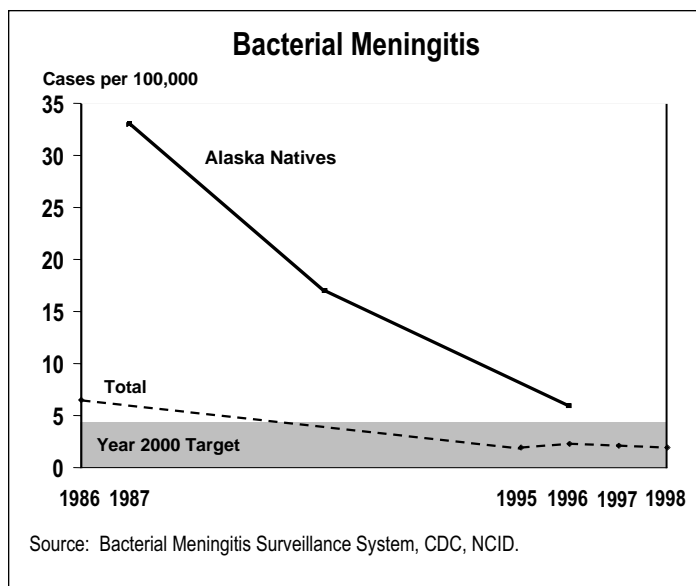
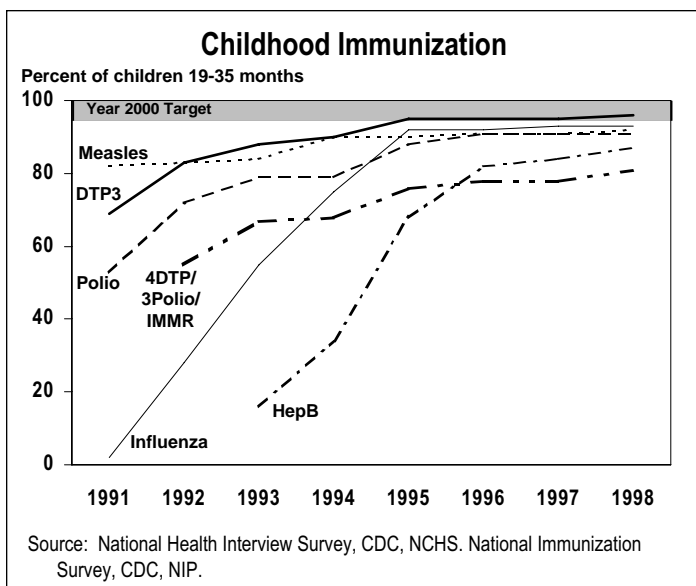
20.4 From 9.1 cases per 100,000 in 1988, the **tuberculosis** case rate in the U.S. rose to 10.5 in 1992, then decreased to 6.8 in 1998, well above the year 2000 target of 3.5. Among special populations, the rate also fluctuated during this period, although these populations continue to have higher rates than the entire U.S. population. In 1998, the rate for Asians/Pacific Islanders was 36.6 cases per 100,000 (target, 15.0); for Blacks, 17.8 (target, 10.0); for Hispanics, 13.6 (target, 5.0); and for American Indians/Alaska Natives, 12.6 (target, 5.0). The resurgence of tuberculosis from 1985 to 1992 was associated with the HIV epidemic, imported cases from immi-

grants from tuberculosis-endemic areas, and the occurrence of multi-drug resistant strains of the disease.

20.5 In 1999, preliminary data show that the **surgical wound infection rate** was 1.4 per 100 operations for low-risk patients (compared with 1.1 in 1986-90 and the year 2000 target of 1.0); 2.3 for medium-low-risk patients (3.2 in 1986-90, with the target of 2.9); 3.9 for medium-high-risk patients

DEVELOPMENTS

- Since 1995, three expert groups – the Advisory Community on Immunization Practices, the American Academy of Pediatrics, and the American Academy of Family Physicians – have collaborated to issue a single childhood immunization schedule. Recommended immunization schedules have also been issued for adolescents and adults. Improved vaccination coverage levels have led to the decreased incidence of vaccine-preventable diseases.
- In the 1980's, *Haemophilus influenzae b* (Hib) was the leading cause of childhood bacterial meningitis and postnatal mental retardation. Since licensure ten years ago of conjugate vaccines against Hib for use in infants and young children, the number of cases of Hib invasive diseases in children under 5 years of age has declined by 99 percent.
- Almost 60 percent of respondents to a survey by the Health Care Financing Administration reported that they had never received a pneumococcal vaccination and nearly one-third were unaware that immunization against pneumococcal disease is recommended for all older adults.
- Between 1985 and 1992, new cases of tuberculosis increased by 20 percent. This necessitated a rebuilding of the network for diagnosis, treatment and follow-up of cases and contacts, resulting in a 30 percent decline in new cases over the last six years.
- From 1993 to 1998, 45 States and the District of Columbia reported cases of multi-drug resistant tuberculosis. In 1993, almost 3 percent of new tuberculosis cases were of the multi-drug resistant type, and one or more such cases were reported by 36 States and the District of Columbia. However, the percentage of multi-drug resistant cases had been reduced to 1.1 percent by 1998.
- Under the Vaccines for Children (VFC) program, CDC assists States in distributing vaccine to over 40,000 provider sites, 70 percent of which are in the private sector. In 1997, 75 percent of all children 19-35 months of age received some or all vaccinations from a VFC-enrolled provider.



(6.3 in 1986-90, with the target of 5.7); and 5.7 for high-risk patients (14.4 in 1986-90, with the target of 13.0). Thus, only the target for low-risk patients appears not to have been met.

20.7 The rate of infection with **bacterial meningitis** decreased from 6.5 cases per 100,000 in 1986 to 1.9 in 1998, well below the year 2000 target of 4.7. Among Alaska Natives, a group particularly at risk, the infection rate fell from 33 cases per 100,000 in 1987 to 6.0 in 1996, also below its target of 8 cases per 100,000. (See chart following.)

20.11 In 1998, **vaccination coverage** at a national level among children aged 19-35 months was 96% with diphtheria-tetanus-pertussis or DTP (three or more doses); 91% with poliovirus vaccine; 92% with measles-mumps-rubella (MMR); 93% with *Haemophilus influenzae* type b or Hib (three or more doses); 87% with hepatitis B (three or more doses); and 81% with the combined series 4DTP/3polio/1MMR. (See chart.) However, not all geographic areas and population subgroups achieved the year 2000 target of 90% for each vaccine type.

In 1997, the rate of pneumococcal vaccination among non-institutionalized people aged 65 years and older was 43%, 22% for Blacks, and 23% for Hispanics. The comparable baseline levels in 1989 were 15%, 6% and 11%, respectively. The year 2000 target is 60%. The influenza vaccination coverage rate for non-institutionalized people aged 65 years and older was 63% in 1997 (33% in 1989), exceeding the target of 60%. However, the rate for Blacks in that age group in 1997 was only 45% (20% in 1989), and for Hispanics, 53% (28% in 1989).

20.18 The proportion of infected people who had completed **preventive therapy for tuberculosis** changed little over the decade; it was 66.3% in 1987 and 62.2% in 1997. The year 2000 target is 85%.

RECOMMENDED ACTION

- Augment surveillance of infectious diseases, with particular attention to emerging, re-emerging, antimicrobial resistant, and newly vaccine-preventable diseases.
- Increase research aimed at counteracting antimicrobial resistance.
- Through public education campaigns, provide accurate information on the actual benefits and risks of vaccination.
- Support additional research to develop a safe and effective vaccine against tuberculosis and to devise new methods to test for latent tuberculosis infection.
- With new acellular pertussis vaccines now available to protect infants and young children from pertussis, increase efforts to make such vaccines available for adolescents and adults.
- Expand development of immunization registries in all 50 States. In addition

to enabling providers to have complete and accurate vaccination histories at their fingertips, registries should be able to accurately access vaccination coverage rates at the local or population level, increase coverage through reminder/recall notices to parents, and assist with vaccination decision-making by providing automated decision support.

- Forge partnerships to provide common gateway sites for immunizing adults (as schools do for children), for example, at workplaces.
- Ensure that culturally and linguistically competent services and staff are readily available to provide information about infectious diseases and immunizations to members of ethnic minorities, particularly those who are recent immigrants.
- Increase public awareness that many common fevers and respiratory ailments are not amenable to effective treatment with antibiotics.
- Provide additional resources to ensure that cases of tuberculosis are diagnosed, reported and treated in a timely fashion and that follow-up services are available to guarantee a successful course of therapy.

PARTICIPANTS

- Advisory Council for Elimination of Tuberculosis
- Alabama Department of Public Health
- American Academy of Pediatrics
- American Lung Association
- American Society for Microbiology
- Association of Public Health Laboratories
- Association of State and Territorial Health Officials
- Centers for Disease Control and Prevention
- Congress of National Black Churches
- Eli Lilly Company
- Infectious Diseases Society of America
- Mayo Clinic and Foundation
- National Coalition for Adult Immunization
- National Vaccine Advisory Committee
- Office of Disease Prevention and Health Promotion
- Office of Public Health and Science
- Office on Women's Health
- Pan American Health Organization
- Pulmonary Critical Care Associates
- Rhode Island Department of Health
- Vanderbilt University
- Vermont Department of Health
- Wake Forest University



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