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Perspectives in Disease Prevention and Health Promotion

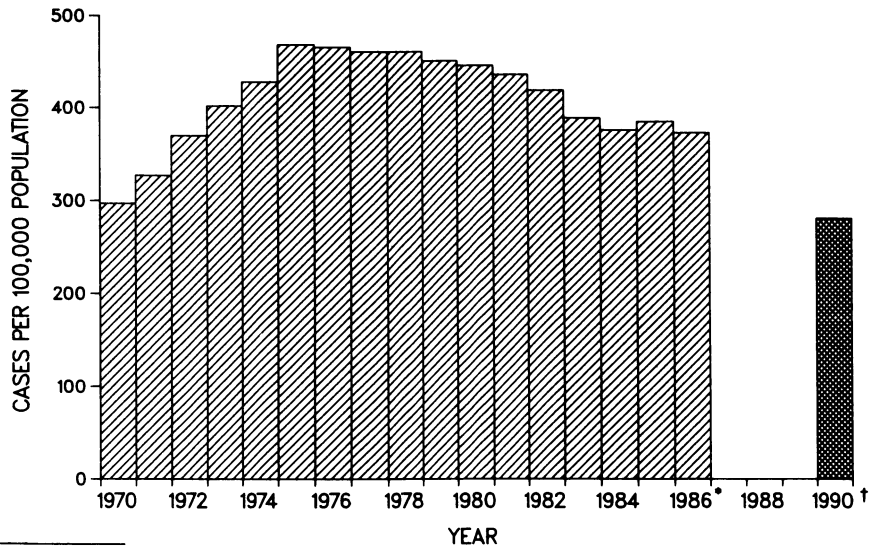
Progress Toward Achieving the National 1990 Objectives for Sexually Transmitted Diseases

The health objectives for the nation, established in 1979 (*1*), included 11 goals relating to the control of sexually transmitted diseases (STDs). Five are considered appropriate areas for federal involvement: gonorrhea, gonococcal pelvic inflammatory disease, syphilis, provider awareness, and student awareness. A statement of each of these objectives and the progress toward their achievement follows:

By 1990, reported gonorrhea incidence should be reduced to a rate of 280 cases per 100,000 population.

During the 1960s, reported gonorrhea rates increased approximately 15% per year. In 1972, a national gonorrhea control program was initiated, and, by 1975, the rapid increase had halted. The rate of decline was slow through 1979, but it accelerated from 1979 to 1984 (Figure 1). Then, in 1985, overall gonorrhea rates increased slightly, reversing the

FIGURE 1. Incidence of gonorrhea by year — United States, 1970-1990



*1986 projected.
†1990 objective.

Achieving National Objectives — Continued

downward trend that had lasted for a decade (*2*). In 1986, total gonorrhea rates decreased to 372 cases per 100,00 population, returning to the 1984 level. However, all of the 1986 decline occurred among males; gonorrhea rates among females continued to increase. It now appears that the 1990 target of 280 cases per 100,000 population may not be met. One of the primary factors limiting the effective control of gonorrhea within the United States is the epidemic of organisms that are resistant to standard therapies (Figure 2). Since 1984, the number of resistant strains has been increasing rapidly. Reported numbers increased 98% in 1985 and an additional 90% in 1986 (*3*).

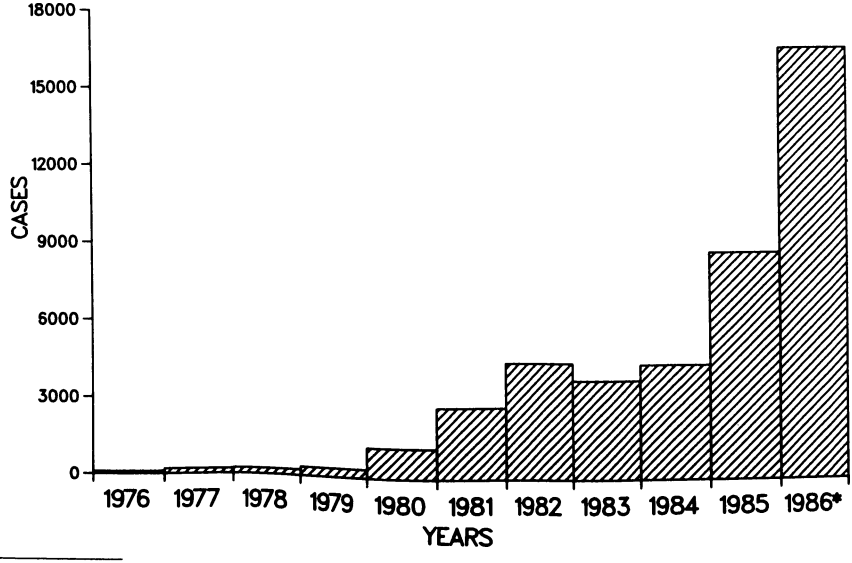
By 1990, reported incidence of gonococcal pelvic inflammatory disease should be reduced to a rate of 60 cases per 100,000 females.

Based on 1984 rates, the 1990 objective addressing gonococcal pelvic inflammatory disease (GPID) is likely to be achieved. However, GPID accounts for less than half of all pelvic inflammatory disease (PID). For example, *Chlamydia trachomatis* infection is estimated to account for one-quarter to one-half of all PID cases occurring each year (*4*). Therefore, in 1985, the Public Health Service (PHS) broadened the original emphasis of this objective to include all PID. CDC has established a target of 560 PID cases per 100,000 population by 1990. Currently, data from the Hospital Discharge Survey conducted by the National Center for Health Statistics and the National Drug and Therapeutic Index indicate a trend toward a decline in the overall PID rate.

By 1990, the reported incidence of primary and secondary syphilis should be reduced to 7 cases per 100,000 population per year, with a reduction in congenital syphilis to 1.5 cases per 100,000 children under 1 year of age.

Rates of primary and secondary syphilis decreased markedly between 1982 and 1986 (Figure 3). The majority of the decrease has occurred in males and probably reflects behavioral changes among homosexual males in response to acquired immunodeficiency syndrome (AIDS) prevention recommendations (*5*). Behavioral changes among populations at high risk for AIDS are likely to result in lower incidence rates for other STDs in these same groups (*6, 7*).

FIGURE 2. Cases of gonorrhea involving resistant strains — United States, 1976—1986



*1986 projected.

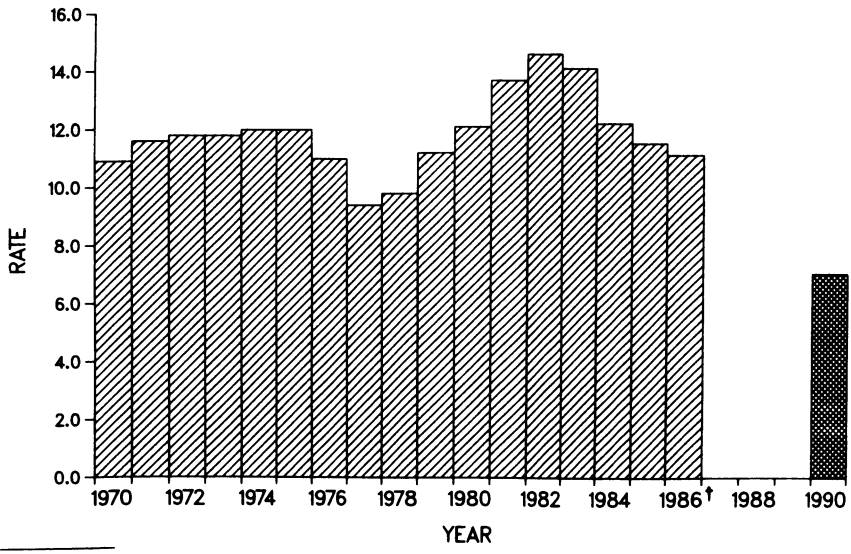
Achieving National Objectives – Continued

Reported rates of congenital syphilis among infants reached an all-time low of 3.0 cases per 100,000 live births in 1980, but, with the exception of FY 1982, have increased steadily since then. The 1986 rate was almost 13% higher than the 1985 rate, with three-fourths of the cases occurring in California, Florida, New York, and Texas. Several factors have contributed to the apparent increase. They include improved national surveillance, increased emphasis on reporting of stillbirths attributable to syphilis, and actual increases in the rate of infectious syphilis among females of childbearing age (*8*).

By 1990, at least 95% of health care providers seeing patients with suspected cases of sexually transmitted diseases should be capable of diagnosing and treating all currently recognized sexually transmitted diseases. . . .

Although training for health care professionals in the treatment of STDs has improved in recent years, it is still short of the necessary quality and scope. Since 1979, PHS has emphasized four approaches to improving the training of clinicians treating STD patients. First, 10 STD Prevention/Training Centers were established to improve the diagnostic, therapeutic, and patient management skills of mid-career clinicians directly involved with STD patients (*9*). Second, PHS has funded the development and pilot testing of STD curricula in six medical schools. A survey in 1986 found that, in these medical schools, STD training had increased to an average of 10 hours per student (CDC, unpublished data). The same survey showed that 44% of medical schools had no clinical curriculum on STDs. Third, PHS has funded an increasing number of STD Research Training centers to encourage young scientists to pursue an academic career in STD research (*10*). Fourth, PHS has funded the development of an instructional package for clinicians who do not frequently see STD patients in their practices. This package should be available by late fall 1987. Despite these efforts, it is unlikely that this objective will be met by 1990. Making a meaningful impact on medical school training will require more intensive marketing of the value of the STD curriculum and followup on these efforts.

FIGURE 3. Primary and secondary syphilis incidence rates* — United States, 1970—1990



*per 100,000.
†1986 projected.
§1990 objective.

Achieving National Objectives – Continued

By 1990, every junior and senior high school student in the United States should be receiving accurate, timely education about sexually transmitted diseases.

No systematic measures of this objective are available. In 1983, the Gallup Institute Youth Survey found that only one-third of high school respondents considered themselves "very informed", and almost one-half considered themselves "somewhat informed" about STDs (Gallup Institute, unpublished data). CDC has since placed more emphasis on behavioral knowledge and attitudes related to biological facts. Principally through state STD units, CDC actively promotes adoption of STD education for junior and senior high school students. Increased attention to school-based education as a way to prevent AIDS should improve knowledge, attitudes, and behaviors affecting other STDs as well.

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Editorial Note: Between the time of establishing the health objectives for the nation in 1979 and the third review of progress toward their achievement in November 1986, the national STD status has followed an irregular course. During this interval, a major new sexually transmissible agent, human immunodeficiency virus (HIV), has come to dominate the field. Moreover, the variety and burden of STDs have increased markedly. More than 50 diseases and syndromes account for over 13 million cases and 7,000 deaths annually from STDs, excluding AIDS. The costs of treating PID and its sequelae alone are estimated to exceed $2.6 billion annually.

The population at risk for STDs increased markedly between 1970 and 1980, with the coming of age of the "baby boom" cohort and the increased sexual activity among this segment of the population (*11*). This factor greatly influenced trends in both bacterial and viral STDs from 1979 to 1986. However, in the 1980s, as this group has become older and their sexual behaviors have stabilized, the chances for progress toward achieving the 1990 objectives have improved.

STD control for the balance of the 1980s and into the next decade will focus on the primary prevention of all sexually transmitted infections, especially the persistent viral infections for which no therapies or vaccines exist. This new emphasis will require a shifting of priorities, which have historically been focused on secondary prevention efforts. However, if current primary prevention efforts are successful, an overall reduction in all STDs will result.

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Progress in Chronic Disease Prevention

Survey of Worksite Smoking Policies — New York City

In August 1986, the New York City (NYC) Department of Health conducted a telephone survey on worksite smoking policies in private NYC businesses. The survey was conducted to assess the status of worksite smoking policies in the city and to gather baseline data for evaluating the impact of policies restricting workplace smoking.

A sample of companies was obtained from the 1985 Dun and Bradstreet Corporation listing of 172,000 businesses that had applied for a credit rating sometime in the past. Because about half of all NYC employees work for companies with ≤10 employees (New York State Department of Labor, unpublished data), an equal number of companies with ≤10 employees and companies with >10 employees were sampled. Businesses were selected randomly from these two groups to produce a total sample of 1,130 companies.

The telephone survey was conducted during a 3-week period in August 1986 by six Health Resource Coordinators employed and trained by the NYC Department of Health. The coordinators interviewed the company employee designated by the telephone respondent as the person most likely to be familiar with a worksite smoking policy.

Of the 1,130 businesses in the sample, 770 had working telephones with the correct telephone number available. Of these, 573 (74.4%) agreed to participate in the survey. Most companies responding to the survey had <100 employees (Table 1). The distribution of respondents, by type of company, was as follows: 33.5%, trade; 27.7%, services excluding health care; 16.8%, manufacturing; 10.5%, finance, insurance, or real estate; 6.3%, transportation, communication, or utility; 2.8%, construction; and 2.4%, health care.

Twenty-four companies (4.2%) reported that they had a written smoking policy. Another 17 (3.0%) said that they planned to adopt a written policy within the next 12 months, and 33 (5.8%) said that they were considering developing a smoking policy. Of the 24 companies with a written smoking policy, nine (37.5%) had adopted the policy within the past 12 months.

Companies with more employees were slightly more likely to have a written smoking policy (Table 1). The proportion of companies with a written smoking policy ranged from 7.3% for manufacturing companies to 0% for construction companies and for the category including transportation, communication, and utility companies. The proportion of companies with a written smoking policy varied with the smoking status of the company's administrator. Of companies whose administrator was a current smoker, 2.7% (5/185) had a written smoking policy, compared with 5.6% (18/319) of companies whose administrator did not smoke ($p = 0.09$, Fisher's Exact test). A 1979 survey of smoking policies in hospitals found a similar association between the smoking status of the administrator and the sale of cigarettes on hospital premises (*1*).

TABLE 1. Companies with a written smoking policy, by number of employees — New York City, August 1986

No. of employees	Total companies	Companies with written smoking policy*	
		No.	(%)
<10	258	6	(2.3)
11-99	281	15	(5.3)
100-499	29	2	(6.9)
≥500	5	1	(20.0)
Total	**573**	**24**	**(4.2)**

*p = 0.02, chi-square test for trend.

Smok g Policies — Continued

The proportions of all companies (those with and without a written smoking policy) banning or restricting smoking in various settings were as follows: 84.0%, storage areas for hazardous or flammable materials; 79.9%, elevators; 57.7%, areas with electronic instrumentation or computers; 57.3%, manufacturing or assembly areas; 38.0%, stairways; 28.0%, corridors; 25.8%, open work areas with desks; 23.7%, shared offices; 23.3%, cafeterias or dining rooms; 20.9%, lobbies or waiting areas; 20.7%, private offices; 19.3%, lounges; 18.7%, meeting or conference rooms; and 14.8%, restrooms.

The proportion of companies restricting smoking in open work areas (25.8%) varied by type of company and smoking status of the company's administrator. Health care companies were more likely to restrict smoking in open work areas (61.5%), whereas transportation, communication, and utility companies were less likely to have such restrictions (6.5%) ($p < 0.01$). Companies whose administrator was a smoker were less likely to restrict smoking in open work areas (18.0%) than were companies whose administrator did not smoke (31.7%) ($p = 0.002$).

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Editorial Note: The control of smoking in the workplace and in public places has received increasing attention in recent years as the hazards of exposure to environmental tobacco smoke (ETS) have been documented. The Surgeon General's 1986 report on the health consequences of involuntary smoking concluded that: 1) involuntary smoking is a cause of disease, including lung cancer, in healthy nonsmokers; 2) children of parents who smoke have an increased frequency of respiratory illness compared with children of nonsmoking parents; and 3) the simple separation of smokers and nonsmokers within the same air space may reduce, but does not eliminate, the exposure of nonsmokers to ETS (*2*).

For adults living in a household where no one smokes, the workplace is the greatest source of ETS exposure. As a result, the workplace has become the focus of particular attention. State legislation restricts smoking in the workplace for public-sector employees in 22 states and for private-sector employees in nine states. These laws vary considerably in their comprehensiveness: they may contain provisions to require a written policy (five states), limit smoking to designated areas (eight states), require the posting of signs (10 states), and give preference to nonsmokers in resolving conflicts over the designation of a work area (two states) (*2*). On February 6, 1987, the New York State Public Health Council adopted a statewide regulation that will restrict smoking in the workplace; the regulation is scheduled to take effect on May 7, 1987.

Recent national surveys have shown that 35% to 40% of private-sector businesses restrict or ban smoking in the workplace (*2*). Most of these surveys have included primarily companies with $\geq$ 100 employees. On the other hand, in the NYC survey, only 4.2% of companies had a written smoking policy, and 25.8% restricted smoking in open work areas. The prevalence of smoking restrictions in this sample may be lower because most of the companies surveyed were small (94% with $<$ 100 employees, 45% with $\leq$ 10 employees). Within this sample of small businesses, the likelihood of having a written smoking policy increased as the number of employees increased. Two other surveys have found a positive association between the number of employees and the likelihood of having smoking restrictions (National Interagency Council on Smoking and Health, unpublished data) (*3*).

Small companies may be less likely to restrict smoking in the workplace for several reasons. Employees of small companies may more easily resolve smoking-related disputes on

Smoking Policies — Continued

their own; they and their employers may believe that smoking policies are unnecessary. On the other hand, employees of small companies may favor smoking restrictions but may be more reluctant to complain about smoking in the workplace because of their closer working relationship with the employer and fellow employees. Finally, restricting smoking in the workplace may involve greater logistical obstacles for small companies than for larger ones.

Several public opinion polls have shown strong support, among both smokers and nonsmokers, for restricting smoking in the workplace and in public places. Although only a few studies have evaluated the impact of worksite smoking restrictions, workplace smoking policies appear to improve air quality, are met with good compliance, and are generally well accepted by both smokers and nonsmokers. Policies restricting smoking appear to be followed by a decrease in smokers' cigarette consumption at work and an increase in enrollment in company-sponsored smoking cessation programs (*2*). Policies may also have positive economic effects for employers because the excess annual cost to a company per smoking employee is conservatively estimated at $300 to $600 (*4*).

In the preface to his report on the health consequences of involuntary smoking, the Surgeon General stated, "The scientific case against involuntary smoking as a health risk is more than sufficient to justify appropriate remedial action, and the goal of any remedial action must be to protect the nonsmoker from environmental tobacco smoke" (*2*). Such remedial action should apply to companies of all sizes. Small companies should be included for two reasons: 1) a large percentage of the workforce is employed by small companies and 2) small companies appear to be less likely to restrict smoking in the workplace.

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Perspectives in Disease Prevention and Health Promotion

Years of Potential Life Lost Before Age 65 Due to Perinatal Conditions — United States, 1980-1983

According to national death certificate data (Table V) (*1*), three of the 13 leading causes of years of potential life lost before age 65 (YPLL)—congenital anomalies, prematurity, and sudden infant death syndrome—occur primarily in the first year of life. Deaths are attributed to prematurity in Table V if the underlying cause is classified as category 765 or 769 according to The International Classification of Diseases, 9th Revision (ICD-9). This definition of prematurity includes infants with one or more of the following three conditions: low birthweight (<2,500 grams), preterm delivery (gestation <37 completed weeks), and respiratory distress syndrome.

Years of Potential Life Lost — Continued

The Table V definition, however, underestimates the total YPLL attributable to low birthweight because low birthweight also increases the risk of death from other perinatal conditions* and from all other causes of infant mortality (*2*). By analyzing cause- and birthweight-specific mortality data for 1980 from the National Infant Mortality Surveillance (NIMS) project, CDC found that 82.4% of YPLL for perinatal conditions was attributable to low birthweight (*2*). The NIMS data showed that less than half the YPLL for perinatal conditions resulted solely from the causes of death included in the Table V definition of prematurity. Thus, YPLL for perinatal conditions may be a more comprehensive estimate of YPLL attributable to low birthweight.

In the analysis for 1980-1983 reported here, all infant deaths (< 1 year of life) in the United States were examined using numbers and underlying causes of death from the National Center for Health Statistics (NCHS) national mortality computer tapes. Underlying causes of death were divided into two groups, perinatal conditions and other causes, by modifying pre-

*Conditions occurring in the first year of life and classified as ICD-9 codes 760-779, excluding perinatal infections.

(Continued on page 185)

TABLE I. Summary — cases specified notifiable diseases, United States

Disease	12th Week Ending			Cumulative, 12th Week Ending		
	Mar. 28, 1987	Mar. 22, 1986	Median 1982-1986	Mar. 28, 1987	Mar. 22, 1986	Median 1982-1986
Acquired Immunodeficiency Syndrome (AIDS)	342	148	N	4,430	2,611	N
Aseptic meningitis	79	75	71	999	990	947
Encephalitis: Primary (arthropod-borne & unspec)	21	18	22	173	202	202
Post-infectious	-	4	4	8	20	20
Gonorrhea: Civilian	12,748	15,508	16,578	184,785	189,230	189,230
Military	247	400	394	3,954	3,775	5,043
Hepatitis: Type A	463	392	444	5,598	5,220	5,220
Type B	513	514	484	5,572	5,533	5,509
Non A, Non B	51	74	N	635	743	N
Unspecified	88	63	117	781	1,177	1,177
Legionellosis	16	13	N	145	131	N
Leprosy	3	3	4	48	61	58
Malaria	10	22	14	144	163	153
Measles: Total*	126	175	58	602	1,035	433
Indigenous	123	170	N	513	991	N
Imported	3	4	N	89	40	N
Meningococcal infections: Total	75	68	81	883	776	798
Civilian	75	68	80	882	775	788
Military	-	-	-	1	1	1
Mumps	268	73	82	4,075	663	952
Pertussis	38	33	33	434	493	404
Rubella (German measles)	7	20	20	66	115	121
Syphilis (Primary & Secondary): Civilian	793	496	561	7,758	5,824	6,535
Military	2	4	4	49	54	80
Toxic Shock syndrome	7	9	N	65	67	N
Tuberculosis	425	445	421	4,358	4,239	4,379
Tularemia	-	1	1	17	16	18
Typhoid Fever	10	2	6	54	49	74
Typhus fever, tick-borne (RMSF)	1	3	1	9	12	11
Rabies, animal	103	109	109	872	1,043	1,043

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1987		Cum. 1987
Anthrax	-	Leptospirosis (Hawaii 1)	7
Botulism: Foodborne	1	Plague	1
Infant (Tex. 2, Conn. 1)	15	Poliomyelitis, Paralytic	-
Other	-	Psittacosis (Wash. 1)	15
Brucellosis (Mo. 1, Calif. 2)	16	Rabies, human	-
Cholera	-	Tetanus	7
Congenital rubella syndrome	2	Trichinosis	10
Congenital syphilis, ages < 1 year	-	Typhus fever, flea-borne (endemic, murine)	5
Diphtheria	2		

*Three of the 126 reported cases for this week were imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending March 28, 1987 and March 22, 1986 (12th Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum 1987	1987	Cum 1987	Cum 1987	Cum 1987	Cum 1986	1987	1987	1987	1987	1987	Cum 1987
UNITED STATES	4,430	79	173	8	184,785	189,230	463	513	51	88	16	48
NEW ENGLAND	175	3	9	1	6,919	4,159	7	46	2	6	1	1
Maine	8	-	1	-	223	200	-	3	-	-	-	-
N H	5	-	-	-	101	120	-	-	-	-	-	-
Vt	2	-	2	-	53	73	-	-	1	-	-	-
Mass	103	-	3	-	2,584	1,714	2	39	1	5	1	1
R I	15	1	2	1	532	416	4	4	-	-	-	-
Conn	42	2	1	-	3,426	1,636	1	-	-	1	-	-
MID ATLANTIC	1,395	7	23	-	30,982	30,509	5	35	3	7	-	-
Upstate N Y	168	2	13	-	3,873	3,703	3	13	-	-	-	-
N Y City	882	2	4	-	17,241	17,569	-	12	-	6	-	-
N J	239	3	1	-	3,672	3,535	2	10	3	1	-	-
Pa	106	-	5	-	6,196	5,702	-	-	-	-	-	-
E N CENTRAL	239	4	46	-	20,837	27,299	23	60	4	1	3	1
Ohio	23	1	22	-	5,414	6,717	2	19	1	-	1	1
Ind	23	-	1	-	2,083	3,036	-	-	-	-	-	-
Ill	123	2	7	-	2,824	6,459	4	21	1	1	-	-
Mich	46	1	15	-	8,567	8,097	17	20	2	-	2	-
Wis	24	-	1	-	1,949	2,990	-	-	-	-	-	-
W N CENTRAL	105	8	10	-	7,676	8,429	15	24	2	1	3	-
Minn	22	-	7	-	1,210	1,205	-	-	-	-	-	-
Iowa	5	1	-	-	755	853	2	5	-	-	-	-
Mo	59	-	-	-	3,847	3,961	2	17	2	-	3	-
N Dak	-	-	-	-	79	80	-	-	-	-	-	-
S Dak	1	-	-	-	153	165	-	-	-	-	-	-
Nebr	4	2	2	-	483	605	-	-	-	-	-	-
Kans	14	5	1	-	1,149	1,560	11	2	-	1	-	-
S ATLANTIC	705	16	27	4	49,670	46,407	36	98	3	4	2	4
Del	9	-	1	-	711	782	-	-	-	-	-	-
Md	110	-	1	-	6,120	5,577	4	16	-	1	-	2
D C	108	-	-	-	3,090	3,414	2	3	-	-	-	-
Va	54	2	11	1	3,963	4,096	5	9	2	1	-	-
W Va	2	-	5	-	406	556	-	3	-	-	-	-
N C	31	2	7	-	7,405	7,984	9	7	-	1	2	-
S C	11	1	-	-	4,515	4,396	1	8	-	-	-	1
Ga	112	-	-	-	8,482	6,682	4	15	1	-	-	-
Fla	268	11	2	3	14,978	12,920	11	37	-	1	-	1
E S CENTRAL	22	1	9	2	13,712	16,013	5	29	3	-	2	-
Ky	14	-	2	1	1,442	1,840	1	1	-	-	2	-
Tenn	-	-	3	-	4,751	6,400	2	13	-	-	-	-
Ala	3	1	4	-	4,470	4,385	2	15	3	-	-	-
Miss	5	-	-	1	3,049	3,388	-	-	-	-	-	-
W S CENTRAL	451	13	15	1	20,660	23,478	50	40	5	27	3	4
Ark	11	-	-	1	2,078	2,093	-	1	-	-	1	-
La	67	-	2	-	4,440	4,159	2	4	-	-	-	-
Okla	16	1	6	-	2,219	2,701	9	8	-	2	-	-
Tex	357	12	7	-	11,923	14,525	39	27	5	25	2	4
MOUNTAIN	108	3	5	-	5,071	5,658	55	47	3	4	1	-
Mont	1	-	-	-	127	146	1	1	-	-	-	-
Idaho	2	1	-	-	176	193	8	1	-	-	-	-
Wyo	2	-	-	-	75	132	1	2	-	-	-	-
Colo	51	1	1	-	1,025	1,572	4	6	1	2	-	-
N Mex	12	-	1	-	541	630	5	3	1	2	-	-
Ariz	13	-	3	-	1,863	1,730	20	18	1	-	-	-
Utah	8	-	-	-	200	257	14	-	-	-	1	-
Nev	19	1	-	-	1,064	998	2	16	-	-	-	-
PACIFIC	1,230	24	29	-	29,258	27,278	267	134	26	38	1	38
Wash	52	1	4	-	1,890	2,137	41	20	3	4	-	2
Oreg	12	-	-	-	1,017	1,023	44	15	2	-	-	-
Calif	1,148	21	25	-	25,578	23,037	171	96	21	32	1	33
Alaska	3	-	-	-	510	772	11	3	-	2	-	-
Hawaii	15	2	-	-	263	309	-	-	-	-	-	3
Guam	-	-	-	-	53	13	-	-	-	-	-	-
P R	17	-	-	1	542	516	-	1	-	-	-	-
V I	-	-	-	-	55	53	-	1	-	-	-	-
Pac Trust Terr	-	-	-	-	109	17	-	-	-	1	-	17
Amer Samoa	-	-	-	-	25	8	3	-	-	-	-	-

N Not notifiable U Unavailable

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending March 28, 1987 and March 22, 1986 (12th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported *		Total									
	Cum. 1987	1987	Cum. 1987	1987	Cum. 1987	Cum. 1986	Cum. 1987	1987	Cum. 1987	1987	Cum. 1987	Cum. 1986	1987	Cum 1987	Cum 1986
UNITED STATES	144	123	513	3	89	1,035	883	268	4,075	38	434	493	7	66	1
NEW ENGLAND	12	-	1	2	7	9	82	2	11	-	11	30	-	-	1
Maine	-	-	-	-	-	-	5	-	-	-	-	2	-	-	-
N.H.	-	-	-	-	-	-	7	-	6	-	1	11	-	-	1
Vt.	-	-	1	-	5	-	6	1	2	-	3	1	-	-	-
Mass.	6	-	-	2†	2	9	43	-	1	-	3	8	-	-	-
R.I.	4	-	-	-	-	-	7	-	-	-	-	1	-	-	-
Conn.	2	-	-	-	-	-	14	1	2	-	4	7	-	-	-
MID. ATLANTIC	8	19	68	1	32	390	59	6	60	7	54	65	2	3	22
Upstate N.Y.	3	4	8	-	8	3	38	6	21	5	39	40	1	1	14
N.Y. City	2	15	57	1†	7	53	5	-	-	-	-	3	1	1	5
N.J.	1	-	3	-	2	334	-	-	21	2	4	5	-	1	3
Pa.	2	-	-	-	15	-	16	-	18	-	11	17	-	-	-
E.N. CENTRAL	4	-	54	-	4	222	118	151	2,517	1	55	127	-	12	5
Ohio	3	-	-	-	4	-	43	-	32	-	19	58	-	-	-
Ind.	-	-	-	-	-	-	12	26	303	-	-	9	-	-	-
Ill.	1	-	31	-	-	107	21	94	1,370	-	3	19	-	11	2
Mich.	-	-	23	-	-	-	38	13	368	1	16	11	-	1	2
Wis.	-	-	-	-	-	111	4	18	444	-	17	30	-	-	1
W.N. CENTRAL	4	2	3	-	1	58	44	27	320	1	25	31	-	-	4
Minn.	3	-	-	-	-	-	11	15	173	-	3	15	-	-	-
Iowa	-	-	-	-	-	-	3	11	111	1	3	4	-	-	-
Mo.	1	2	3	-	1	-	12	-	6	-	10	3	-	-	1
N. Dak.	-	-	-	-	-	-	1	-	-	-	1	2	-	-	-
S. Dak.	-	-	-	-	-	-	1	1	12	-	1	-	-	-	-
Nebr.	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-
Kans.	-	-	-	-	-	58	15	-	18	-	7	6	-	-	3
S. ATLANTIC	23	11	16	-	-	157	159	9	40	7	111	111	-	6	1
Del.	1	-	-	-	-	-	4	-	-	-	-	18	-	-	-
Md.	5	-	-	-	-	4	14	-	7	-	-	22	-	1	-
D.C.	3	-	-	-	-	-	3	-	-	-	-	-	-	-	-
Va.	4	-	-	-	-	-	27	2	3	-	30	9	-	-	-
W. Va.	-	-	-	-	-	-	-	3	12	1	23	1	-	-	-
N.C.	3	-	-	-	-	-	20	-	2	1	45	11	-	-	-
S.C.	1	-	-	-	-	140	15	1	2	-	-	2	-	-	-
Ga.	2	-	-	-	-	1	31	-	1	5	10	36	-	-	-
Fla.	4	11	16	-	-	12	45	3	13	-	3	12	-	5	1
E.S. CENTRAL	1	-	-	-	-	-	49	23	594	-	6	12	-	2	1
Ky.	-	-	-	-	-	-	8	-	110	-	1	1	-	2	1
Tenn.	-	-	-	-	-	-	18	17	477	-	-	2	-	-	-
Ala.	-	-	-	-	-	-	19	6	7	-	3	9	-	-	-
Miss.	1	-	-	-	-	-	4	-	-	-	2	-	-	-	-
W.S. CENTRAL	8	-	5	-	1	49	67	39	339	11	34	19	-	-	23
Ark.	1	-	-	-	-	21	3	13	198	-	2	-	-	-	-
La.	-	-	-	-	-	-	8	18	61	3	5	3	-	-	-
Okla.	2	-	-	-	1	2	11	N	N	8	27	16	-	-	-
Tex.	5	-	5	-	-	26	45	8	80	-	-	-	-	-	23
MOUNTAIN	5	28	77	-	11	38	30	-	85	2	36	58	1	3	-
Mont.	-	-	-	-	1	1	-	-	-	1	1	-	-	-	-
Idaho	1	-	-	-	-	-	1	-	1	-	11	13	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-
Colo.	1	-	-	-	-	2	10	-	8	1	12	12	-	-	-
N. Mex.	-	28	77	-	9	13	3	N	N	-	1	8	-	-	-
Ariz.	1	-	-	-	1	22	14	-	71	-	8	19	-	-	-
Utah	-	-	-	-	-	-	-	-	4	-	1	6	1	2	-
Nev.	2	-	-	-	-	-	2	-	1	-	-	-	-	-	-
PACIFIC	79	63	289	-	33	112	275	11	109	9	102	40	4	40	58
Wash.	3	-	-	-	-	28	36	2	18	3	17	18	-	-	-
Oreg.	1	-	1	-	26	2	14	N	N	-	12	2	-	1	-
Calif.	73	63	287	-	6	66	221	8	81	3	48	18	4	37	58
Alaska	2	-	-	-	-	-	2	-	3	-	2	1	-	-	-
Hawaii	-	-	1	-	1	16	2	1	7	3	23	1	-	2	-
Guam	-	-	1	-	-	1	2	-	4	-	-	-	-	-	2
P.R.	-	-	139	-	-	4	1	-	1	-	8	2	-	1	-
V.I.	-	-	-	-	-	-	-	1	3	-	-	-	-	-	-
Pac. Trust Terr.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable †International §Out-of-state

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending March 28, 1987 and March 22, 1986 (12th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum 1987	Cum 1986	1987	Cum 1987	Cum 1986	Cum 1987	Cum 1987	Cum 1987	Cum 1987
UNITED STATES	7,758	5,824	7	4,358	4,239	17	54	9	872
NEW ENGLAND	110	121	1	102	130	-	3	-	-
Maine	1	8	-	10	14	-	-	-	-
N H	1	6	-	3	8	-	-	-	-
Vt	1	5	-	3	6	-	-	-	-
Mass	59	62	-	30	59	-	3	-	-
R I	2	6	1	14	5	-	-	-	-
Conn	46	34	-	42	38	-	-	-	-
MID ATLANTIC	1,300	811	-	823	838	-	5	-	93
Upstate N Y	42	40	-	139	133	-	2	-	8
N Y City	913	463	-	395	400	-	-	-	-
N J	148	163	-	138	148	-	3	-	1
Pa	197	145	-	151	157	-	-	-	84
E N CENTRAL	120	219	2	515	561	1	8	-	20
Ohio	16	31	2	104	82	1	3	-	-
Ind	15	26	-	42	67	-	1	-	-
Ill	52	113	-	207	255	-	1	-	12
Mich	26	35	-	147	125	-	2	-	-
Wis	11	14	-	15	32	-	1	-	8
W N CENTRAL	36	60	-	126	109	6	3	-	172
Minn	4	8	-	31	23	-	1	-	48
Iowa	6	4	-	8	11	2	-	-	53
Mo	19	33	-	66	58	4	2	-	12
N Dak	-	2	-	1	2	-	-	-	23
S Dak	3	-	-	5	2	-	-	-	22
Nebr	3	8	-	7	4	-	-	-	4
Kans	1	5	-	8	9	-	-	-	10
S ATLANTIC	2,597	1,664	-	876	827	2	5	2	237
Del	21	10	-	11	9	1	-	-	-
Md	153	102	-	81	53	-	-	-	65
D C	79	90	-	29	36	-	-	-	16
Va	62	115	-	83	76	1	-	-	85
W Va	4	3	-	29	34	-	1	-	15
N C	154	137	-	85	113	-	1	-	-
S C	155	172	-	95	112	-	-	2	7
Ga	402	256	-	111	98	-	-	-	37
Fla	1,567	779	-	352	296	-	3	-	12
E S CENTRAL	492	380	2	392	392	2	1	3	70
Ky	3	25	2	90	105	1	-	-	40
Tenn	243	167	-	113	107	-	1	2	16
Ala	132	144	-	130	133	-	-	-	14
Miss	114	44	-	59	47	1	-	1	-
W S CENTRAL	1,038	1,278	-	446	514	5	2	3	127
Ark	53	63	-	37	55	1	-	-	38
La	177	206	-	80	119	-	-	-	3
Okla	29	38	-	56	44	4	1	3	3
Tex	779	971	-	273	296	-	1	-	83
MOUNTAIN	194	158	-	113	87	1	1	-	56
Mont	7	2	-	8	5	-	-	-	31
Idaho	1	1	-	13	4	-	-	-	-
Wyo	22	-	-	-	-	-	-	-	15
Colo	25	50	-	-	3	-	-	-	-
N Mex	15	17	-	24	21	-	1	-	-
Ariz	84	70	-	59	40	1	-	-	10
Utah	2	3	-	1	4	-	-	-	-
Nev	38	15	-	8	10	-	-	-	-
PACIFIC	1,871	1,133	2	965	781	-	26	1	97
Wash	12	27	-	48	48	-	-	-	-
Oreg	49	26	-	22	31	-	-	-	-
Calif	1,806	1,068	2	827	650	-	25	1	96
Alaska	2	-	-	18	12	-	-	-	1
Hawaii	2	12	-	50	40	-	1	-	-
Guam	1	1	-	2	-	-	-	-	-
P R	233	193	-	56	64	-	-	-	15
V I	2	-	-	1	-		-	-	-
Pac Trust Terr	53	4	-	30	5	-	6	-	-
Amer Samoa	2	-	-	-	-	-	-	-	-

U Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending March 28, 1987 (12th Week)

Reporting Area	All Causes, By Age (Years)						P&I** Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	730	532	117	35	19	27	53
Boston, Mass.	165	117	28	10	6	4	16
Bridgeport, Conn.	46	32	7	4	2	1	-
Cambridge, Mass.	39	28	8	2	1	-	8
Fall River, Mass.	28	21	6	1	-	-	2
Hartford, Conn.	86	54	20	3	4	5	3
Lowell, Mass.	26	19	5	-	1	1	2
Lynn, Mass.	21	19	1	1	-	-	2
New Bedford, Mass.	19	16	3	-	-	-	2
New Haven, Conn.	56	40	6	5	-	5	1
Providence, R.I.	74	54	10	2	1	7	5
Somerville, Mass.	8	7	-	-	-	1	1
Springfield, Mass.	47	30	11	2	2	2	2
Waterbury, Conn.	41	33	5	2	-	1	4
Worcester, Mass.	74	62	7	3	2	-	5
MID ATLANTIC	2,833	1,864	565	289	56	59	137
Albany, N.Y.	50	35	8	4	1	2	1
Allentown, Pa.	16	12	3	1	-	-	-
Buffalo, N.Y.	112	79	19	7	4	3	11
Camden, N.J.	35	25	3	5	-	2	1
Elizabeth, N.J.	32	25	5	1	1	-	1
Erie, Pa.†	33	27	3	3	-	-	5
Jersey City, N.J.	43	29	9	5	-	-	1
N.Y. City, N.Y.	1,435	909	290	183	26	27	55
Newark, N.J.	87	45	19	18	3	2	4
Paterson, N.J.	30	18	6	4	1	1	2
Philadelphia, Pa.	494	316	125	33	10	10	27
Pittsburgh, Pa.†	96	61	18	10	3	4	1
Reading, Pa.	44	30	11	3	-	-	3
Rochester, N.Y.	112	92	13	3	1	3	12
Schenectady, N.Y.	22	16	1	3	2	-	-
Scranton, Pa.†	31	24	6	1	-	-	2
Syracuse, N.Y.	100	73	18	3	1	5	8
Trenton, N.J.	22	18	3	1	-	-	1
Utica, N.Y.	25	17	4	1	3	-	2
Yonkers, N.Y.	14	13	1	-	-	-	-
E.N. CENTRAL	2,364	1,590	489	158	56	71	112
Akron, Ohio	64	50	5	6	1	2	-
Canton, Ohio	43	33	5	5	-	-	2
Chicago, Ill §	564	362	125	45	10	22	16
Cincinnati, Ohio	99	67	25	5	1	1	16
Cleveland, Ohio	169	104	39	15	6	5	4
Columbus, Ohio	169	109	40	12	6	2	6
Dayton, Ohio	110	76	26	3	2	3	8
Detroit, Mich.	282	166	64	29	12	11	10
Evansville, Ind.	51	39	9	-	1	2	1
Fort Wayne, Ind.	57	47	5	2	3	-	3
Gary, Ind. §	21	14	5	1	1	-	-
Grand Rapids, Mich.	51	38	7	2	2	2	3
Indianapolis, Ind.	171	111	40	12	2	6	6
Madison, Wis.	37	27	6	3	-	1	6
Milwaukee, Wis.	139	101	24	9	3	2	6
Peoria, Ill.	56	37	12	2	1	4	3
Rockford, Ill.	56	42	10	1	3	-	8
South Bend, Ind.	48	38	7	1	-	2	2
Toledo, Ohio	111	79	23	4	1	4	12
Youngstown, Ohio	66	50	12	1	1	2	-
W.N. CENTRAL	846	587	175	45	18	21	78
Des Moines, Iowa	78	50	20	7	1	-	10
Duluth, Minn.	28	20	6	1	-	1	2
Kansas City, Kans.	29	14	8	4	1	2	1
Kansas City, Mo.	126	86	30	9	1	-	11
Lincoln, Nebr.	45	36	6	2	-	1	6
Minneapolis, Minn.	150	106	28	4	5	7	11
Omaha, Nebr.	104	78	20	2	2	2	6
St. Louis, Mo.	146	93	36	9	2	6	21
St. Paul, Minn.	73	59	10	3	1	-	3
Wichita, Kans.	67	45	11	4	5	2	7
S. ATLANTIC	1,172	705	268	93	44	59	48
Atlanta, Ga.	156	93	34	13	5	11	4
Baltimore, Md.	109	69	22	9	5	4	7
Charlotte, N.C.	67	41	14	5	2	5	-
Jacksonville, Fla.	114	68	23	14	6	3	9
Miami, Fla.	141	75	37	16	6	7	2
Norfolk, Va.	66	42	15	2	5	2	5
Richmond, Va.	76	50	16	2	2	6	3
Savannah, Ga.	53	41	9	1	1	1	6
St. Petersburg, Fla.	101	83	12	2	3	1	2
Tampa, Fla.	80	46	16	6	1	8	8
Washington, D.C.	185	79	66	22	7	11	2
Wilmington, Del.	24	18	4	1	1	-	-
E.S. CENTRAL	874	547	205	54	28	40	51
Birmingham, Ala.	126	65	37	13	5	6	3
Chattanooga, Tenn.	50	33	15	1	-	1	9
Knoxville, Tenn.	89	55	23	8	1	2	-
Louisville, Ky.	107	67	26	5	3	6	5
Memphis, Tenn.	206	130	42	9	8	17	20
Mobile, Ala.	90	56	21	5	3	5	9
Montgomery, Ala.	58	43	9	4	2	-	-
Nashville, Tenn.	148	98	32	9	6	3	5
W.S. CENTRAL	1,479	922	332	131	50	44	64
Austin, Tex.	64	41	14	5	4	-	3
Baton Rouge, La.	41	29	8	3	-	1	2
Corpus Christi, Tex.	50	36	10	2	2	-	5
Dallas, Tex.	228	129	50	29	8	12	4
El Paso, Tex.	67	42	14	9	2	-	4
Fort Worth, Tex.	104	61	22	9	5	7	5
Houston, Tex. §	308	176	74	34	13	11	7
Little Rock, Ark.	76	48	19	5	2	2	4
New Orleans, La.	155	95	43	11	6	-	2
San Antonio, Tex.	202	138	41	16	4	3	14
Shreveport, La.	69	45	11	6	1	6	3
Tulsa, Okla.	115	82	26	2	3	2	11
MOUNTAIN	656	417	141	46	27	25	25
Albuquerque, N.Mex.	89	65	15	4	4	1	3
Colo. Springs, Colo.	33	19	4	5	3	2	2
Denver, Colo.	117	74	23	10	7	3	2
Las Vegas, Nev.	94	59	25	6	2	2	2
Ogden, Utah	22	16	3	1	1	1	5
Phoenix, Ariz.	117	69	29	6	6	7	1
Pueblo, Colo.	27	15	8	3	-	1	2
Salt Lake City, Utah	32	19	5	1	3	4	1
Tucson, Ariz.	125	81	29	10	1	4	7
PACIFIC	1,991	1,331	371	178	50	47	129
Berkeley, Calif.	25	18	3	3	1	-	1
Fresno, Calif.	77	53	15	5	2	2	9
Glendale, Calif.	24	15	5	3	-	1	3
Honolulu, Hawaii	67	40	17	6	1	3	6
Long Beach, Calif.	85	59	15	7	-	4	12
Los Angeles, Calif.	481	285	107	58	14	7	20
Oakland, Calif.	65	40	17	6	2	-	5
Pasadena, Calif.	36	32	1	1	2	-	2
Portland, Oreg.	146	106	24	10	2	4	10
Sacramento, Calif.	148	101	32	11	1	3	12
San Diego, Calif.	158	106	23	13	7	7	10
San Francisco, Calif.	189	118	33	30	2	4	6
San Jose, Calif.	219	155	40	12	6	6	17
Seattle, Wash.	183	148	19	9	6	1	11
Spokane, Wash.	51	33	11	2	3	2	2
Tacoma, Wash.	37	22	9	2	1	3	3
TOTAL	12,945††	8,495	2,663	1,029	348	393	697

* Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

** Pneumonia and influenza.

† Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

†† Total includes unknown ages.

§ Data not available. Figures are estimates based on average of past 4 weeks.

Years of Potential Life Lost – Continued

TABLE V. Estimated years of potential life lost before age 65 and cause-specific mortality, by cause of death – United States, 1985

Cause of mortality (Ninth Revision ICD)	YPLL for persons dying in 1985*	Cause-specific mortality, 1985† (rate/100,000)
ALL CAUSES (Total)	11,844,475	874.8
Unintentional Injuries§ (E800-E949)	2,235,064	38.6
Malignant neoplasms (140-208)	1,813,245	191.7
Diseases of the heart (390-398,402,404-429)	1,600,265	325.0
Suicide, homicide (E950-E978)	1,241,688	20.1
Congenital anomalies (740-759)	694,715	5.5
Prematurity¶ (765, 769)	444,931	2.9
Sudden infant death syndrome (798)	313,386	2.0
Cerebrovascular disease (430-438)	253,044	64.0
Chronic liver diseases and cirrhosis (571)	235,629	11.2
Pneumonia and influenza (480-487)	168,949	27.9
Acquired Immunodeficiency Syndrome (AIDS)**	152,595	2.3
Chronic obstructive pulmonary diseases (490-496)	129,815	31.2
Diabetes mellitus (250)	128,229	16.2

*For details of calculation, see footnotes to Table V, *MMWR* 1987;36:56.

†Cause-specific mortality rates as reported in the MVSR are compiled from a 10% sample of all deaths.

§Equivalent to accidents and adverse effects.

¶Category derived from disorders relating to short gestation and respiratory distress syndrome.

**Reflects CDC AIDS surveillance data.

viously described classification schemes (Table 2) (*2,3*). YPLL was calculated by averaging age at death for each subgroup† for the period 1980-1983, the latest year for which data are available.

For 1980-1983, the average annual YPLL due to all causes of infant death was 2,787,465; 1,861,691 YPLL (66.8%) occurred because of deaths in the neonatal period (< 28 days), and 925,774 YPLL, because of deaths in the postneonatal period (28 days to < 1 year). During this same period, 46.7% of YPLL in the first year of life was due to perinatal conditions; 95.9% occurred in the neonatal period, and 4.1%, in the postneonatal period.

The average YPLL due to perinatal conditions during this 4-year period was 1,300,530. During this same period, the average annual race- and sex-specific YPLL was 501,901 for white males, 368,027 for white females, 240,042 for males of black and other races, and 190,560 for females of black and other races. The male to female ratio for white infants was 1.4:1, compared with 1.3:1 for infants of black and other races.

†YPLL = T[65-(A/365.25)], where T = total number of infant deaths for subgroup (age, sex, race, year, and cause of death) and A = average age at death in days for that subgroup.

Years of Potential Life Lost — Continued

YPLL depends directly on the number of births in any given group. The average annual YPLL due to perinatal conditions per 1,000 live births was 335.3 for white males, 259.8 for white females, 649.9 for males of black and other races, and 533.1 for females of black and other races.

The percentage of low birthweight births was approximately 6.8% for each year during the period 1980-1983. Because the percentage was about the same for each year during this 4-year period, 82.4% of the total YPLL due to perinatal conditions (as determined in the NIMS study for 1980) is probably due to low birthweight for each year. Consequently, the YPLL at-

TABLE 2. Years of potential life lost before age 65 (YPLL), by year, race, and cause of infant death — United States, 1980-1983

Underlying cause of infant death	1980			1981		
	White	Black and other	Total	White	Black and other	Total
Prematurity/ Low Birthweight	142,926	97,363	240,289	140,262	100,483	240,745
Respiratory distress syndrome	261,717	97,134	358,851	245,152	87,761	332,913
Other perinatal, respiratory	123,745	64,407	188,152	122,568	59,530	182,099
Birth trauma/ asphyxia	125,801	49,450	175,251	110,531	48,476	159,007
Other perinatal causes	288,104	145,180	433,285	279,125	144,336	423,461
Subtotal perinatal conditions	942,293	453,535	1,395,828	897,638	440,587	1,338,224
Other causes	1,126,113	431,782	1,557,895	1,079,797	391,632	1,471,430
Total*	**2,068,406**	**885,317**	**2,953,724**	**1,977,435**	**832,219**	**2,809,654**

TABLE 2 (Cont'd). Years of potential life lost before age 65 (YPLL), by year, race, and cause of infant death — United States, 1980-1983

Underlying cause of infant death	1982			1983		
	White	Black and other	Total	White	Black and other	Total
Prematurity/ Low Birthweight	140,846	97,429	238,275	127,782	91,579	219,361
Respiratory distress syndrome	231,303	88,396	319,700	217,624	88,562	306,186
Other perinatal, respiratory	110,805	60,180	170,986	103,010	53,293	156,303
Birth trauma/ asphyxia	102,144	41,519	143,662	81,285	31,515	112,800
Other perinatal causes	270,223	138,165	408,388	254,760	137,647	392,407
Subtotal perinatal conditions	855,321	425,689	1,281,010	784,461	402,596	1,187,057
Other causes	1,068,911	400,983	1,469,894	1,051,519	397,003	1,448,522
Total*	**1,924,233**	**826,672**	**2,750,904**	**1,835,980**	**799,599**	**2,635,579**

*Subtotals and totals may not add to values in table because of rounding.

Years of Potential Life Lost – Continued

tributable to low birthweight was estimated at 1,150,162 for 1980, 1,102,697 for 1981, 1,055,552 for 1982, and 978,135 for 1983. The total YPLL for each cause of death in 1980 is greater in Table 2 than in the NIMS study because the NIMS project included only singleton births of known birthweight and 95% of the reported deaths.

Reported by: Pregnancy Epidemiology Br, Research and Statistics Br, Div of Reproductive Health, Center for Health Promotion and Education, CDC.

Editorial Note: There are two causes of low birthweight: preterm delivery and intrauterine growth retardation (IUGR). As a result, there are three groups of low birthweight infants: 1) term infants who are small for their gestational age (≥37 weeks, <2,500 grams); 2) preterm infants who are appropriate in size for their gestational age (<37 weeks, greater than the tenth percentile by weight for gestational age); and 3) preterm infants who are small for their gestational age (<37 weeks, less than the tenth percentile by weight for gestational age). The first group of low birthweight infants are a result of IUGR; the second, of preterm delivery; and the third, of both IUGR and preterm delivery. It is important to distinguish between preterm delivery and IUGR as causes of YPLL due to perinatal conditions because they are associated with different levels of risk. Moreover, preterm delivery and IUGR may have different etiologies that will require different strategies for prevention.

The male excess in YPLL due to perinatal conditions per 1,000 live births (29% for whites and 22% for blacks and other races) occurs despite their lower risk of low birthweight. Much of this excess risk of death is related to a higher risk of death from respiratory distress syndrome, which accounted for 1.5 deaths per 1,000 male live births in 1983 but for 1.0 deaths per 1,000 female live births.

The rate of YPLL due to perinatal conditions per 1,000 live births for blacks is 2.3 times that for whites. This is related primarily to the higher risk of low birthweight for black infants, since the risk of birthweight-specific mortality among low birthweight black infants is lower than the risk of birthweight-specific mortality among white infants (*4*). Reducing this gap is dependent upon the prevention of low birthweight.

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Current Trends

Self-Reported Changes in Sexual Behaviors Among Homosexual and Bisexual Men from the San Francisco City Clinic Cohort

From January 1978 through April 1980, approximately 6,700 homosexual and bisexual men attending a clinic for sexually transmitted diseases in San Francisco were enrolled in studies of the prevalence and incidence of hepatitis B virus infection (*1*). Approximately 1,300 participants answered standardized questions regarding their sexual practices. From December 1983 through December 1985, a random sample from this study group was asked to participate in studies of the acquired immunodeficiency syndrome (AIDS) by providing further information about their sexual behaviors (*2,3*). Study results show that homosexual and bisexual men in San Francisco have considerably reduced both their number of nonsteady

Changes in Sexual Behaviors — Continued

sexual partners and their participation in specific sexual practices associated with increased risk of human immunodeficiency virus (HIV) infection, especially receptive anal intercourse.

Questionnaires administered to a subset of 126 members of this random sample in 1978, 1984, and 1985 provided data on their number of steady and nonsteady male partners in the 4 months preceding each interview. The numbers of steady partners (individuals with whom the participant had had sexual contact on three or more occasions during the 4-month period) rose from a mean of 1.6 per person in 1978 to 2.5 per person in 1984, then decreased to 1.5 in 1985. Numbers of nonsteady partners (defined as individuals with whom the participant had had sexual contact only once or twice) decreased from a median of 16 per person (mean = 29.3) during the 4-month period in 1978 to 3 (mean = 14.5) in 1984. By 1985 the median was 1 (mean = 5.5).

Participants also reported the percentage of time in the preceding 4 months that their sexual contacts with male partners included penetration or exchange of body fluids. To estimate a risk index of sexual activities that may have resulted in exposure to HIV in the previous 4 months, the percentage of time the participant engaged in each of several types of sexual behaviors was multiplied by the number of steady and nonsteady male partners during the same period.

The risk index for receptive anal intercourse with nonsteady partners decreased 90% between the two interview periods in 1978 and 1985. The risk index for receptive anal intercourse with a steady partner remained close to zero for each of the three 4-month periods in 1978, 1984, and 1985.

Although the risk index for receptive orogenital contact with nonsteady partners declined by 68% from 1978 to 1985, the decrease was not as striking as the decline in receptive anal intercourse. The risk index for receptive orogenital contact with steady partners remained low and relatively constant during this 7-year period.

Indices of exposure risk for insertive sexual contacts were also estimated. The risk index for insertive anal intercourse with nonsteady partners decreased 93% from 1978 to 1985, while the risk index for insertive orogenital contact with nonsteady partners declined 83% during the same period. Exposure risk for both insertive anal and orogenital contact with steady partners remained low and relatively constant between 1978 and 1985.

Information on condom use among these 126 men is unavailable; however, data collected during a pilot study in 1983 suggested that >95% of the men in the cohort did not use condoms during anal intercourse at that time (CDC, unpublished data). Preliminary data collected since November 1986 on a group of 104 cohort members indicate that approximately 33% of this group had anal intercourse at least once in the previous 4 months without using a condom (CDC, unpublished data). The majority (73%) of these unprotected sexual contacts were with steady partners.

Reported by: D Werdegar, MD, P O'Malley, T Bodecker, N Hessol, D Echenberg, MD, PhD, San Francisco Dept of Public Health. AIDS Program, Center for Infectious Diseases, CDC.

Editorial Note: Examination of trends in self-reported behavioral change provides an opportunity to indirectly evaluate educational efforts aimed at reducing high-risk behaviors. Within the time frame of this study (1983-1985), the Public Health Service recommended that members of high risk groups reduce their number of partners and avoid sexual contact with anyone known or suspected of having AIDS (*4*). In addition, the San Francisco Department of Public Health, in cooperation with the San Francisco AIDS Foundation, has implemented an extensive risk reduction program aimed at reducing high-risk sexual behavior in homosexual and bisexual men during this time period (*5*). Participants from this and other studies report significant reductions in certain high-risk behaviors (*6-8*). Ninety percent of the sample from this study reduced their number of nonsteady partners. The median number of partners de-

Changes in Sexual Behaviors – Continued

clined from 16 in 1978 to 1 in 1985. Thirty-four percent of the men reported having only one or no partners during the preceding 4 months in 1985.

However, in 1985, some of the men in this survey still reported having sexual contact with multiple partners or engaging in high-risk behaviors. The results from this study suggest that the major source of exposure to HIV in 1978, 1984, and 1985 may have been unprotected sexual contacts with nonsteady partners. However, unless steady partners are known to be seronegative for HIV infection, the potential for exposure through sexual contacts with steady partners cannot be discounted either. Because of the high prevalence of HIV infection in homosexual men (*9*), the Public Health Service recommendations presently state that high-risk individuals should abstain or limit their sexual contact to one steady partner. Furthermore, those at risk should protect themselves during sexual activity with any possibly infected person by taking precautions against contact with the person's blood, semen, urine, feces, saliva, or cervical or vaginal secretions (*10*).

Although homosexual and bisexual men in San Francisco are generally aware of the guidelines for avoiding transmission of HIV, there is, for some men, a discrepancy between their knowledge of these guidelines and their behavior (*6, 7*). These individuals need to be studied more intensively so that educational programs appropriate for this subgroup may be developed. Additional study of those who have already changed their behavior may also be helpful in identifying key factors motivating reductions in high-risk sexual behaviors.

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Epidemiologic Notes and Reports

Symptoms of Irritation Associated with Exposure to Glutaraldehyde — Colorado

During an evaluation by the National Institute for Occupational Safety and Health (NIOSH) of exposures to formaldehyde at a biomedical research hospital in Denver, Colorado, several employees complained of irritation from using another substance, glutaraldehyde (*1*). At the hospital, glutaraldehyde was present in solutions used for tissue fixation, histologic examinations, and disinfection and/or cold-sterilization of respiratory therapy equipment. In October 1983, NIOSH investigated these complaints.

To measure airborne levels of glutaraldehyde, the investigator collected eight samples from personal breathing zones of employees and 13 samples from area air during procedures scheduled especially for the evaluation. The employees' symptoms were recorded during informal interviews and on medical questionnaires.

Glutaraldehyde concentrations in personal breathing zones ranged from non-detectable (ND) to 1.5 mg/m^3; six of the eight samples exceeded the ceiling threshold limit value (TLV) of 0.7 mg/m^3 set by the American Conference of Governmental Industrial Hygienists. Concentrations in area air ranged from ND to 1.5 mg/m^3; six of the 13 samples exceeded the TLV. The Occupational Safety and Health Administration has no standard and NIOSH has no recommended exposure limit for occupational exposure to glutaraldehyde.

Nine of the 11 nurses who were using solutions containing glutaraldehyde as a disinfectant had symptoms of some type of irritation. Eight reported skin symptoms, ranging in severity from itching or irritation to cracking and bleeding; seven reported eye irritation; six, throat discomfort; five, nasal discomfort; five, chest tightness or other pulmonary discomfort; four, cough; and two, headache (*2*).

Another NIOSH study currently in process indicates that the Denver experience is not unique. Preliminary data from this study conducted in Morristown, Pennsylvania, reveal glutaraldehyde exposure concentrations and reported irritation symptoms that closely resemble those from the Denver evaluation (*3*).

Reported by: NIOSH Region VIII, Hazard Evaluations and Technical Assistance Br, Div of Surveillance, Hazard Evaluations, and Field Studies, National Institute for Occupational Safety and Health, CDC.

Editorial Note: Glutaraldehyde is a saturated dialdehyde with the formula $CHO-CH_2-CH_2-CH_2-CHO$ and a molecular weight of 100.12. It has a pungent odor with a threshold recognition level of 0.04 parts per million (ppm) by volume in air; eye and respiratory irritation are noted at a level of 0.3 ppm (*4*).

In health care facilities, glutaraldehyde is used as an active ingredient in a number of chemical reagents and germicides. Evidence indicates that glutaraldehyde can be a relatively strong irritant to the nose and a severe irritant to the eyes (*4,5*). It can produce skin staining and may be slightly irritating to the skin (*4,6*). It can also cause skin sensitization (allergic contact dermatitis) from occasional or incidental occupational exposures (CDC, unpublished data) (*4*). However, no epidemiologic studies on adverse effects of glutaraldehyde have been reported in the literature. Recent information suggests that although glutaraldehyde should not be considered mutagenic or carcinogenic (*7,8*), it may produce fetotoxicity in animals (*7,9*).

Within the past 10 years, the use of chemical germicides containing glutaraldehyde has increased. Originally developed as a quick-acting sporicidal agent that lacked the undesirable health effects associated with formaldehyde, glutaraldehyde-based germicides are now used primarily to disinfect and/or sterilize a variety of medical and dental equipment.

Glutaraldehyde — Continued

During the National Occupational Exposure Survey (NOES) of 1981-1983, NIOSH found that glutaraldehyde was used not only in several areas of the medical industry, but also in photography, shoe repair, and tanning operations and in the manufacture of dyes (CDC, unpublished data). The survey estimated that 14,000 workers were then being exposed to glutaraldehyde in the industries described. These data probably underestimate exposures because the ingredients of many trade name products identified during NOES have yet to be determined.

Because of the widespread and increasing use of glutaraldehyde in many areas, public health professionals should be aware of its potential for producing adverse health effects.

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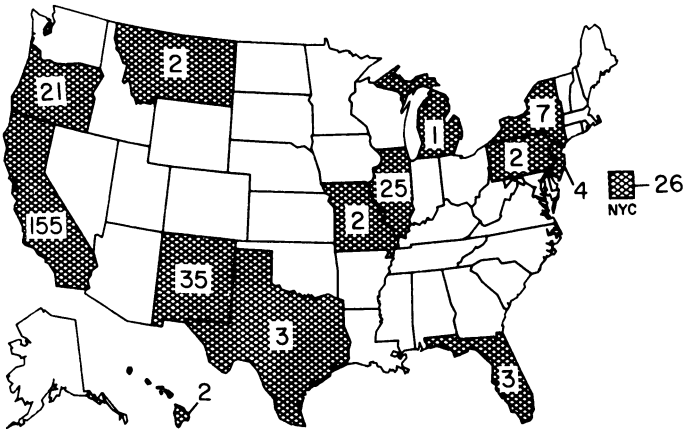
FIGURE I. Reported measles cases — United States, weeks 08-11, 1987



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The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: ATTN: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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