CENTERS FOR DISEASE CONTROL

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Current Trends

Statewide Prevalence of Illicit Drug Use by Pregnant Women — Rhode Island

The effects of illicit drug use by women during the perinatal period—including inadequate prenatal care, premature labor, low birthweight infants, and other adverse pregnancy outcomes (*1–9*)—have been given high priority by the Rhode Island Department of Health (RIDH) and other maternal and child health leaders in Rhode Island. In 1989, the RIDH, the state medical society, and the state college of obstetricians and gynecologists conducted a statewide survey of illicit drug use in pregnant women to aid in the development of programs to reduce drug abuse during pregnancy.

The survey measured the prevalence of illicit drug use among women admitted in active labor to the regional perinatal center and to seven other maternity hospitals in the state. For 17-day periods in October and November 1989, each hospital provided aliquots of routinely collected urine specimens to the RIDH for testing. Names were not provided in an effort to protect patient confidentiality. Labor and delivery nurses recorded race, age, parity, insurance status, town or city of residence, and hospital of delivery for each patient.

Each urine specimen was tested by enzyme-multiplied immunoassays for cocaine metabolites, opiates, marijuana, and amphetamines. Toxicology screen cutoffs were: cocaine, 300 ng/dL; amphetamines, 1000 ng/dL; opiates, 300 ng/dL; and cannabinoids, 100 ng/dL.* Positive results were confirmed with thin-layer chromatography for cocaine (150 ng/dL), opiates (200 ng/dL), and cannabinoids (50 ng/dL); gas chromatography was used to confirm positive results for amphetamines (50 ng/dL). Whether the opiate use was illicit or by prescription could not be determined.

*Amphetamines, opiates, and cannabinoids can be detected in the urine at the stated cutoffs 2–3 days after use; cannabinoid metabolites can be detected at this cutoff for several days longer in chronic users. Cocaine is likely to be detected for 1–2 days.

Drug Use — Continued

During the study period, 713 birth certificates were filed in the state. Specimens and data were obtained from 465 (65.2%) women in active labor during the same period. A urine sample was not obtained from other patients admitted during that period because the patient did not have to void, delivery was imminent, or labor and delivery staff did not collect the specimen. However, based on a comparison using birth certificate data, characteristics of tested and untested women were similar except for age of mother. Women aged <25 years were more likely to be included in the sample than were women aged ≥25 years.

Specimens for 35 (7.5%) of the 465 women were positive for at least one drug (Table 1). Women with public insurance coverage were four times more likely to be positive (16.1%) than were women with private insurance (4.1%) ($p<0.0001$, Fisher's exact test).

Cocaine was detected more commonly in women who were other than white (8.2%; $p<0.0001$), used public insurance (8.9%; $p<0.0001$), were classified as living in

TABLE 1. Prevalence of drug use detected among women in labor admitted to hospitals — Rhode Island, 1989

Characteristic	No. screened	Any drug No. (%)	Cocaine No. (%)	Marijuana No. (%)	Opiates No. (%)	Amphetamines No. (%)
Race						
White	356	25 (7.0)	4*(1.1)	12 (3.4)	8 (2.2)	1 (0.3)
Other	98	10 (10.2)	8 (8.2)	2 (2.0)	0 (0.0)	0 (0.0)
Parity						
1st Birth	194	11 (5.7)	1† (0.5)	4 (2.1)	5 (2.6)	1 (0.5)
≥2nd Birth	260	24 (9.2)	11 (4.2)	10 (3.8)	3 (1.2)	0 (0.0)
Age (yrs)						
<25	154	14 (9.1)	5 (3.2)	6 (3.9)	2 (1.3)	0 (0.0)
≥25	300	21 (7.0)	7 (2.3)	8 (2.7)	6 (2.0)	1 (0.3)
Insurance						
Private	316	13*(4.1)	1*(0.3)	6† (1.9)	5 (1.6)	1 (0.3)
Public	124	20 (16.1)	11 (8.9)	7 (5.6)	2 (1.6)	0 (0.0)
Socioeconomic status§						
Poverty	118	11 (9.3)	8*(6.8)	2 (1.7)	1 (0.8)	0 (0.0)
All other	334	22 (6.6)	3 (0.9)	11 (3.3)	7 (2.1)	1 (0.3)
Hospital						
Regional perinatal center	259	23 (8.9)	10† (3.9)	8 (3.1)	4 (1.5)	1 (0.4)
Other	199	12 (6.0)	2 (1.0)	6 (3.0)	4 (2.0)	0 (0.0)
Total¶	465	35 (7.5)**	12 (2.6)	14 (3.0)	8 (1.7)	1 (0.2)

*Statistically significant at $p<0.0001$ by Fisher's exact test.
†Statistically significant at $p<0.01$ by Fisher's exact test.
§Determined by geographic area of residence.
¶Numbers and percentages may not equal totals because of missing information.
**95% confidence interval = 5.1–9.9.

Drug Use — Continued

poverty (6.8%; $p<0.0001$), had one or more children (4.2%; $p<0.01$), and delivered at the regional perinatal center (3.9%; $p<0.01$). Women who were using public insurance were also more likely to be positive for marijuana (5.6%; $p<0.01$).

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Editorial Note: The Rhode Island survey represents one approach to estimating the prevalence of illicit drug use in a population subgroup. Most previous studies have sampled high-risk inner-city populations, which are less representative of the general population (*10–12*); in these studies, overall rates of illicit drug use have ranged from 6% to 11%.

The Rhode Island sample was representative of all births occurring in the state during the study period. The protocol was simple and produced a more complete measure of the prevalence of drug use at delivery than has been available by other means. These rates are probably underestimated, however, because they reflect drug use only within 48 hours of labor and delivery and because only a limited number of drugs were assessed.

These data identify and suggest patterns of drug use that warrant clinical and preventive attention. The findings in this study have been used in Rhode Island for public health program planning and evaluation. The study has provided estimates of the number of pregnant women who are in need of drug counseling and treatment in Rhode Island. The findings also have provided baseline evaluation data to measure the effectiveness of new program interventions aimed at reducing illicit drug use by pregnant women.

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Epidemiologic Notes and Reports

Foodborne Hepatitis A — Alaska, Florida, North Carolina, Washington

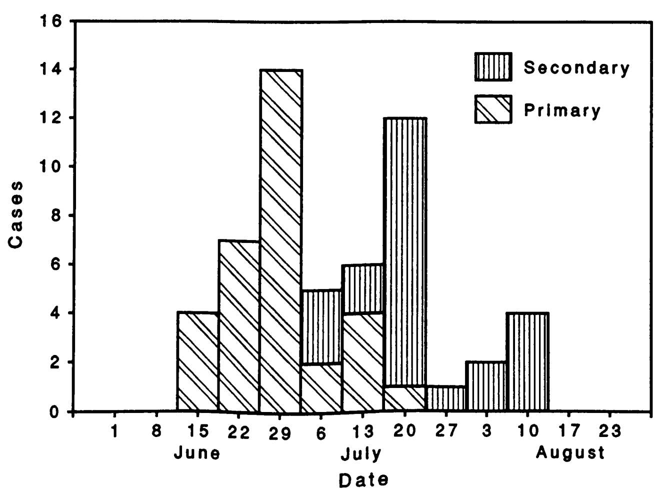
From 1983 through 1989, the incidence of hepatitis A in the United States increased 58% (from 9.2 to 14.5 cases per 100,000 population). Based on analysis of hepatitis A cases reported to CDC's national Viral Hepatitis Surveillance Program in 1988, 7.3% of hepatitis A cases were associated with foodborne or waterborne outbreaks (*1*). This report summarizes recent foodborne-related outbreaks of hepatitis A in Alaska, Florida, North Carolina, and Washington.

Alaska

Between June 18 and July 20, 1988, 32 serologically confirmed hepatitis A cases among persons who resided in or had visited Peters Creek, Alaska (population 4000), were reported to the Alaska Department of Health and Social Services (Figure 1). Patients ranged in age from 1 to 54 years (median: 13 years). Between July 8 and August 14, 23 additional (secondary) cases occurred among household contacts of the original patients.

To examine potential sources of infection, the Alaska Department of Health and Social Services conducted a case-control study of the first 14 reported patients and 22 asymptomatic household members. All 14 patients and seven (32%) household members had consumed an ice-slush beverage purchased from a local convenience market between May 23 and June 10 (odds ratio [OR] cannot be calculated; 95% confidence interval [CI] = 3.4–infinity). No other food-consumption or exposure category (including social events, restaurants, grocery stores, or international travel) was statistically associated with illness. The 18 other patients had also consumed the ice-slush beverage.

FIGURE 1. Reported hepatitis A cases, by week of onset — Peters Creek, Alaska, June 1–August 23, 1988



Foodborne Hepatitis A — Continued

The ice-slush beverage mixture was prepared daily with tap water from a bathroom sink using utensils stored beside a toilet. All five employees of the market denied having hepatitis symptoms; four of these were tested and were negative for IgM antibody to hepatitis A virus (IgM anti-HAV). The fifth employee, who was one of the two persons who prepared the ice-slush beverage, refused to be tested. However, a household contact of this employee had had serologically confirmed hepatitis A in early June and reported that the employee had been jaundiced concurrently with her illness.

Florida

In August 1988, the Alabama Department of Public Health noted an increase in cases of serologically confirmed hepatitis A in persons living in several areas of the state. Within 6 weeks before onset of illness, most affected persons had eaten raw oysters harvested from coastal waters of Bay County, Florida. The Florida Department of Health and Rehabilitative Services (FDHRS) contacted state health departments in neighboring and other states about hepatitis A cases in July or August 1988 in persons who had attended events serving seafood within 10–50 days of becoming ill. The 61 persons who were identified resided in five states: Alabama (23 persons), Florida (18), Georgia (18), Hawaii (one), and Tennessee (one). Patients ranged in age from 8 to 60 years (median: 31 years); all were white, and 49 (80%) were male. Fifty-nine (97%) had eaten raw oysters; one, raw scallops; and one, baked oysters. All the oysters and scallops were traced to the same growing area of Bay County coastal waters. The median incubation period between consumption of raw oysters and onset of illness was 29 days (range: 16–48 days).

To further study oyster consumption as a potential risk factor for hepatitis A, the FDHRS conducted a case-control study using uninfected eating companions of the patients as controls. Fifty-three patients who had serologically confirmed hepatitis A and 64 controls were interviewed by telephone; 51 (96%) of the patients and 33 (52%) of the controls had eaten raw oysters (OR=24; 95% CI=5.4–252.6). Consumption of other seafoods (i.e., clams, mussels, and shrimp) was not statistically associated with illness.

The implicated oysters apparently had been illegally harvested from outside approved coastal waters of Bay County. Sources of human fecal contamination were identified near oyster beds unapproved for harvesting and included boats with inappropriate sewage disposal systems and a local sewage treatment plant with discharges containing high levels of fecal coliforms.

North Carolina

Beginning September 30, 1988, hepatitis A cases among employees of businesses located in east Greensboro were reported to county health departments in central North Carolina. Only day-shift employees became ill. Preliminary investigation suggested a common exposure to one nearby restaurant (restaurant A), which served as many as 400 meals per day to regular clientele. A total of 32 outbreak-associated cases was eventually reported.

The North Carolina Department of Human Resources conducted a case-control study to assess a possible association between illness and exposure to restaurant A. Twenty-seven patients and 50 controls (randomly selected from co-workers) were interviewed about exposures to different restaurants since August 15. Patients were

Foodborne Hepatitis A – Continued

more likely than controls to have eaten at restaurant A (OR=4.1; 95% CI=1.3–14.4). No other restaurant was statistically associated with illness.

Based on additional information obtained from 16 patients and 20 controls who reported eating lunch at restaurant A 2–6 weeks before the outbreak, only consumption of iced tea (OR=8.1; 95% CI=0.8–387.8) or hamburgers (OR=11.4; 95% CI=1.1–551.3) was associated with illness. However, 15 (94%) of the ill persons drank iced tea, whereas only six (38%) of the ill persons reported eating hamburgers.

All foodhandlers at the restaurant were tested for IgM anti-HAV; one employee, who was IgM anti-HAV–positive, denied symptoms of and risk factors for hepatitis A. However, this employee was a suspected intravenous (IV)-drug user and had job tasks that included preparation of fountain drinks and sandwiches.

Immune globulin (IG) was given to all foodhandlers at the restaurant. Because primary/secondary-case status and infectiousness of the IgM anti-HAV–positive foodhandler were unknown and because her hygiene and foodhandling practices were questionable, the local health department recommended administration of IG to all patrons who had eaten at the restaurant within 2 weeks before the association between hepatitis A and the restaurant had been determined. More than 1000 IG doses were given. The restaurant voluntarily closed for 24 days, and no persons with hepatitis A were identified with onset after November 8.

Washington

In May 1989, the Seattle-King County Department of Public Health (SKCDPH) received reports of and investigated 213 cases of hepatitis A—a threefold increase over the average of 68 cases reported in each of the first 4 months of 1989. Onsets of illness clustered during April 28–May 5. One hundred seventeen (55%) of the patients had eaten at one outlet of a Seattle-area restaurant chain (chain A). One of the patients was a recent employee and three were current employees of three of the chain's restaurants. Interviews with past and present chain A employees did not identify any worker with illness during the period of likely exposure for most patients (2–6 weeks before onset of illness). All other current workers in the three restaurants were tested for IgM anti-HAV. None were positive, and all were given IG. Because two of the ill employees had poor hygiene and had worked while ill with diarrhea, the SKCDPH recommended IG for patrons who had eaten at two of the restaurants from May 3 through May 6.

The SKCDPH conducted a case-control study to further examine the potential role of chain A restaurants in the outbreak. Sixteen patients were randomly selected and re-interviewed by telephone; 16 age-group– and sex-matched controls were obtained by increasing each patient's telephone number by one. Exposure to 11 multi-outlet restaurant chains (including chain A) was ascertained for patients during the 2–6 weeks before onset and for controls during April 14–May 12. Mean total of any restaurant visits was higher among patients (7.7) than among controls (4.3). In addition, patients (89%) were more likely than controls (25%) to have eaten at restaurants from chain A (OR=11.0; 95% CI=2.2–56.0); differences in exposure to the 10 other multi-outlet restaurants were not statistically significant.

Follow-up investigation did not detect deficiencies in sanitation practices or history of recent hepatitis among employees of chain A's distributors of foodstuffs, paper goods, and related supplies. The cause of the outbreak remains undetermined.

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Foodborne Hepatitis A — Continued

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Editorial Note: The outbreaks reported here illustrate two principal modes of transmission associated with foodborne hepatitis A outbreaks: 1) contamination of food during preparation by a foodhandler infected with hepatitis A virus and 2) contamination of food, such as shellfish, before it reaches the food service establishment.

Contamination of food during preparation by a hepatitis A-infected foodhandler is the most common mode of transmission in foodborne outbreaks. The Alaska and North Carolina outbreaks are atypical in that ice or drinks as vehicles are rare; usually the vehicles are sandwiches or green salads that are not cooked or are improperly handled after cooking. The outbreak in North Carolina is also consistent with a nationwide phenomenon of increased reports of hepatitis A among IV-drug users (*2*), who can become sources of foodborne outbreaks if they are also foodhandlers.

Contamination of food with virus before the food reaches the service establishment is less common. Shellfish filter large quantities of water during feeding and in the process can concentrate microorganisms, including enterically transmitted viruses such as hepatitis A (*3*). Transmission to humans occurs when contaminated shellfish are consumed raw or undercooked. Hepatitis A outbreaks attributed to consumption of contaminated shellfish have been reported intermittently in the United States and abroad (*4–8*); in 1988, an outbreak associated with clams involved more than 250,000 cases in Shanghai, People's Republic of China (*7*). The Florida outbreak reported here is the largest attributed to shellfish in the United States since 1973 (*4*) and the largest ever reported in Florida. Outbreaks due to pre-retail contamination of products other than shellfish have rarely been reported. In 1988, a multifocal outbreak linked to lettuce possibly contaminated before local distribution occurred in Louisville, Kentucky (*9*).

Measures to prevent foodborne hepatitis A outbreaks include training of foodhandlers regarding proper hygiene and foodhandling practices, investigation of foodhandlers who have symptoms of hepatitis or are otherwise ill, prompt reporting by health-care providers to local health departments of patients with suspected foodborne hepatitis A, and prompt investigation by health departments of possible sources of infection. Consistent maintenance of good handwashing and other personal hygiene measures by foodhandlers is important because the source patient in foodborne outbreaks is often asymptomatic (as apparently occurred in North Carolina and Alaska). Prevention of hepatitis A outbreaks associated with shellfish relies on surveillance of water beds where shellfish are harvested to ensure that there is no evidence of fecal contamination. Transmission and infection from shellfish also can be prevented by thorough cooking and proper storage and handling before and after cooking.

When a foodhandler is diagnosed with hepatitis A, IG is usually recommended for other foodhandlers at the same establishment (*10*). IG is generally not recommended

Foodborne Hepatitis A — Continued

for patrons because common-source transmission is infrequent; however, it may be considered if the infected person handles high-risk foods, has poor hygiene, or has diarrhea during the early stages of illness and if patrons can be identified and treated within 2 weeks after exposure (*10*). Once a foodborne hepatitis outbreak has occurred, it is usually too late to prevent further cases because the 2-week period after exposure during which IG is effective has already passed. The increasing number of hepatitis A cases nationwide underscores the importance of focusing on food-handlers with hepatitis A and decisions regarding IG administration to food service patrons.

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Recommendations of the Immunization Practices Advisory Committee (ACIP)

Supplementary Statement: Change in Administration Schedule for Haemophilus b Conjugate Vaccines

In December 1989, the Food and Drug Administration licensed a new vaccine—Haemophilus b Conjugate Vaccine (Meningococcal Protein Conjugate) (PRP-OMP)—for routine use in children ≥18 months of age. The license contains the statement that PRP-OMP can be given to children as young as 15 months of age when "it is expected that the child will not return at 18 months of age for Haemophilus b immunization." Since December 1989, two vaccines previously licensed for use in children at 18 months of age—Haemophilus b Conjugate Vaccine (Diphtheria Toxoid Conjugate) (PRP-D) and Haemophilus b Conjugate Vaccine (Diphtheria CRM_{197} Protein Conjugate) (PRP-HbOC)—also have been approved for use in children as young as 15 months of age.

ACIP: Haemophilus b Conjugate Vaccines — Continued

Some differences in immunogenicity may exist among different Haemophilus b conjugate vaccines (*1*). However, further studies are needed to confirm any differences and evaluate their clinical relevance. In addition, immunogenicity is age-dependent, with immune response improving with increasing age (Table 1).

Approximately 7% of all *Haemophilus influenzae* type b disease in children <5 years of age occurs in children 15–17 months of age. Because of the substantial immunogenicity of the Haemophilus b conjugate vaccines when given to children in this age group, the Immunization Practices Advisory Committee (ACIP) now recommends routine vaccination of children at 15 months instead of at 18 months of age using any of the Haemophilus b conjugate vaccines licensed for use. Prior ACIP recommendations for the use of PRP-D are applicable to the newer conjugate vaccines (*2*).

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2. ACIP. Update: prevention of *Haemophilus influenzae* type b disease. MMWR 1988;37:13–6.

TABLE 1. Haemophilus b conjugate vaccines: differences in immunogenicity by age of child at vaccination*

	Children 15–17 mos.			Children 18–23 mos.		
Vaccine	**No.**	**% >1 μg/mL†**	**GMT§**	**No.**	**% >1 μg/mL†**	**GMT§**
PRP-D¶	43	53**	1.2	180	73**	3.1
PRP-HbOC††	236	98§§	10.8	141	97§§	12.3
PRP-OMP¶¶	71	80**	3.3	84	97**	7.2

*Because of interlaboratory variability in assays for antibody to the capsular polysaccharide of *Haemophilus influenzae* type b (PRP), definitive comparisons between vaccines cannot be made based on these data.
†Percentage of children with >1 μg/mL PRP antibody 4–8 weeks after vaccination.
§Geometric mean titer of PRP antibody (μg/mL).
¶Haemophilus b Conjugate Vaccine (Diphtheria Toxoid Conjugate). Source: Connaught Laboratories, Inc., unpublished data.
**p<0.05 (15–17 months vs. 18–23 months). PRP-D data for "children 18–23 mos." column are from children 18–24 months at vaccination.
††Haemophilus b Conjugate Vaccine (Diphtheria CRM_{197} Protein Conjugate). Source: Praxis Biologics, unpublished data.
§§Not significant (15–17 months vs. 18–23 months).
¶¶Haemophilus b Conjugate Vaccine (Meningococcal Protein Conjugate). Source: Merck Sharp and Dohme, unpublished data.

Addendum: Vol. 39, No. 13

In the article "Moth-Associated Dermatitis—Cozumel, Mexico," D Ramírez, MD, should be added to the third line of credits on page 220 between A Moreno, MD, and C Ruiz, MD.

Notice to Readers

Changes in Format for Presentation of Notifiable Disease Report Data

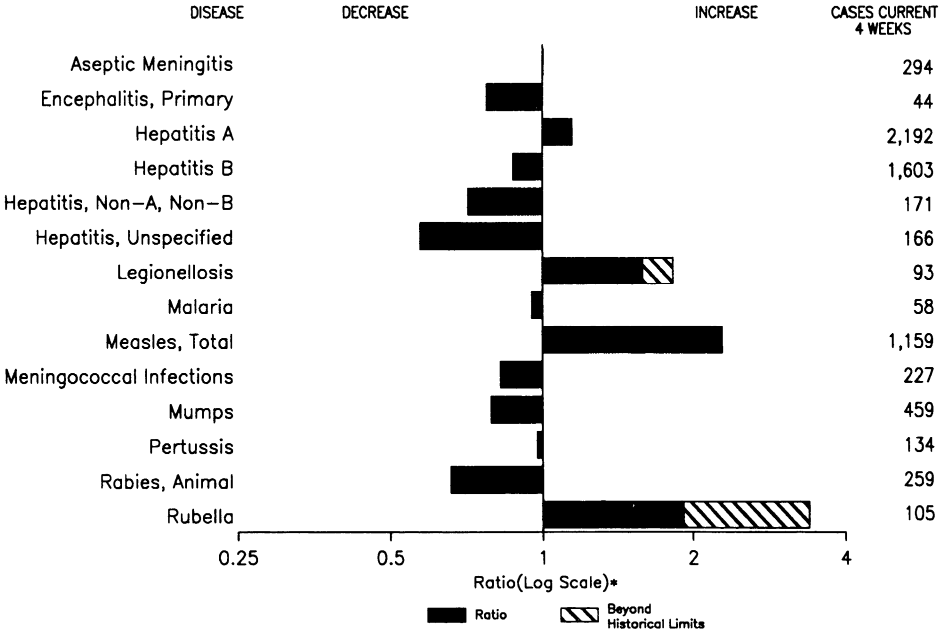
This issue of *MMWR* incorporates changes in the presentation of the national notifiable disease data (Tables I and II and Figures I–V). Based on readers' suggestions, several modifications in the original proposal (*1*) have been incorporated into the format appearing in this issue. Data on acquired immunodeficiency syndrome (AIDS) will be retained in Table I (page 235) and Table II (pages 236–238). Several modifications have been made to improve the readability of Figures II–V (pages 240 and 241), which will appear quarterly; Tables I–III and Figures I–V will appear at the end of those issues.

The new report format is intended to provide more useful information and to facilitate interpretation of national disease data. CDC will continue to assess graphic and statistical techniques to improve interpretation and use of public health surveillance data.

Reference

1. CDC. Proposed changes in format for presentation of notifiable disease report data. MMWR 1989;38:805–9.

FIGURE I. Notifiable disease reports, comparison of 4-week totals ending April 7, 1990, with historical data — United States



*Ratio of current 4-week total to mean of 15 4-week totals (from comparable, previous, and subsequent 4-week periods for past 5 years).

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending April 7, 1990 (14th Week)

	Cum. 1990		Cum. 1990
AIDS	10,563	Plague	-
Anthrax	-	Poliomyelitis, Paralytic*	-
Botulism: Foodborne	1	Psittacosis	47
Infant	11	Rabies, human	-
Other	1	Syphilis: civilian	12,755
Brucellosis	9	military	75
Cholera	1	Syphilis, congenital, age < 1 year	-
Congenital rubella syndrome	-	Tetanus	14
Diphtheria	2	Toxic shock syndrome	97
Encephalitis, post-infectious	29	Trichinosis	12
Gonorrhea: civilian	179,030	Tuberculosis	4,989
military	2,656	Tularemia	8
Leprosy	34	Typhoid fever	93
Leptospirosis	11	Typhus fever, tickborne (RMSF)	21
Measles: imported	399		
indigenous	4,092		

*One case of suspected poliomyelitis has been reported in 1990; none of 13 suspected cases in 1989 have been confirmed to date. Nine of 14 suspected cases in 1988 were confirmed and all were vaccine-associated.

TABLE II. Cases of specified notifiable diseases, United States, weeks ending April 7, 1990, and April 8, 1989 (14th Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990
UNITED STATES	10,563	1,128	162	29	179,030	180,640	7,612	5,295	538	489	301	34
NEW ENGLAND	447	64	6	-	5,163	5,094	170	278	12	23	12	-
Maine	15	2	1	-	63	84	1	15	2	1	1	-
N.H.	29	5	-	-	58	57	4	15	-	2	1	-
Vt.	3	8	-	-	21	22	3	15	2	-	3	-
Mass.	238	18	1	-	1,905	2,030	123	180	6	19	4	-
R.I.	20	19	-	-	276	420	19	19	-	1	3	-
Conn.	142	12	4	-	2,840	2,481	20	34	2	-	-	-
MID. ATLANTIC	3,654	179	13	1	24,801	30,498	1,206	841	67	33	80	9
Upstate N.Y.	496	78	12	-	3,425	4,429	284	202	10	9	34	1
N.Y. City	2,243	26	1	-	10,892	13,287	99	228	10	12	8	5
N.J.	557	-	-	-	3,872	3,835	140	180	21	-	7	2
Pa.	358	75	-	1	6,612	8,947	683	231	26	12	31	1
E.N. CENTRAL	676	187	32	5	35,841	30,777	498	710	26	40	85	-
Ohio	145	59	10	2	11,096	7,882	68	150	10	4	35	-
Ind.	70	30	2	2	3,028	2,079	56	195	3	15	16	-
Ill.	289	27	9	1	11,301	9,198	172	72	5	10	-	-
Mich.	128	65	11	-	8,612	8,926	137	183	7	11	24	-
Wis.	44	6	-	-	1,804	2,692	65	110	1	-	10	-
W.N. CENTRAL	260	47	11	1	9,875	7,795	435	246	30	10	16	-
Minn.	43	4	4	1	1,188	788	62	25	10	-	-	-
Iowa	12	5	1	-	754	696	95	27	1	2	2	-
Mo.	155	21	1	-	5,736	4,694	178	144	7	6	12	-
N. Dak.	-	1	-	-	24	39	2	3	2	1	-	-
S. Dak.	1	2	2	-	50	73	12	4	1	-	-	-
Nebr.	16	8	3	-	497	473	32	15	2	-	1	-
Kans.	33	6	-	-	1,626	1,032	54	28	7	1	1	-
S. ATLANTIC	1,984	257	45	9	50,050	48,884	822	1,016	80	74	45	1
Del.	27	8	1	-	689	798	42	25	2	-	3	-
Md.	256	47	6	-	5,136	5,523	392	141	10	3	13	1
D.C.	146	1	-	-	2,727	3,105	7	7	3	-	-	-
Va.	276	50	17	2	4,687	4,297	52	60	9	59	5	-
W. Va.	17	4	3	-	378	384	6	28	2	-	-	-
N.C.	157	24	12	-	8,212	7,018	164	309	38	-	9	-
S.C.	101	3	-	-	4,346	4,410	15	176	8	6	6	-
Ga.	399	15	3	1	11,029	9,486	65	121	3	3	7	-
Fla.	605	105	3	6	12,846	13,863	79	149	5	3	2	-
E.S. CENTRAL	264	80	12	-	14,579	14,896	88	406	35	3	21	-
Ky.	51	20	2	-	1,611	1,322	23	120	13	2	7	-
Tenn.	82	19	7	-	4,682	4,838	33	225	14	-	7	-
Ala.	50	31	3	-	4,814	4,899	31	57	6	-	7	-
Miss.	81	10	-	-	3,472	3,837	1	4	2	1	-	-
W.S. CENTRAL	1,013	50	6	2	16,638	19,023	674	331	58	51	15	10
Ark.	44	2	-	-	2,306	1,907	149	21	2	6	4	-
La.	192	10	3	-	3,284	4,023	33	72	-	1	3	-
Okla.	41	7	-	2	1,606	1,740	162	41	9	8	8	-
Tex.	736	31	3	-	9,442	11,353	330	197	47	36	-	10
MOUNTAIN	304	48	4	-	3,724	3,679	1,215	383	37	50	20	-
Mont.	3	1	-	-	38	53	28	27	2	3	-	-
Idaho	12	-	-	-	26	64	18	25	6	-	1	-
Wyo.	1	1	1	-	42	34	17	6	1	-	-	-
Colo.	83	16	-	-	903	784	83	65	11	17	3	-
N. Mex.	23	3	-	-	290	371	172	45	-	-	2	-
Ariz.	114	14	3	-	1,560	1,399	720	118	13	23	8	-
Utah	28	5	-	-	119	134	65	15	3	2	1	-
Nev.	40	8	-	-	746	840	112	82	1	5	5	-
PACIFIC	1,961	216	33	11	18,359	19,994	2,504	1,084	193	205	7	14
Wash.	172	-	1	1	1,585	1,795	420	166	35	8	2	1
Oreg.	80	-	-	-	692	779	283	117	11	5	-	-
Calif.	1,651	195	30	9	15,694	17,045	1,715	762	143	189	4	9
Alaska	10	2	1	-	298	251	49	20	3	-	-	-
Hawaii	48	19	1	1	90	124	37	19	1	3	1	4
Guam	1	-	-	-	48	40	2	1	-	4	-	-
P.R.	462	29	4	-	347	276	43	48	-	17	-	-
V.I.	5	-	-	-	137	166	-	4	-	-	-	-
Amer. Samoa	-	-	-	-	24	11	11	-	-	-	-	4
C.N.M.I.	-	-	-	-	47	21	2	1	-	-	-	1

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of the Northern Mariana Islands

TABLE II. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending April 7, 1990, and April 8, 1989 (14th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1990	1990	Cum. 1990	1990	Cum. 1990	Cum. 1989	Cum. 1990	1990	Cum. 1990	1990	Cum. 1990	Cum. 1989	1990	Cum. 1990	Cum. 1989
UNITED STATES	251	384	4,092	18	399	2,707	848	129	1,516	39	671	528	51	192	77
NEW ENGLAND	30	1	61	1	11	101	54	2	16	6	92	14	1	3	1
Maine	-	-	-	-	-	-	6	-	-	-	1	4	-	-	-
N.H.	2	-	-	1†	8	1	2	-	6	-	7	5	-	-	-
Vt.	3	-	-	-	1	1	4	-	1	-	2	1	-	-	1
Mass.	17	1	3	-	-	20	26	-	4	3	74	-	-	-	-
R.I.	3	-	20	-	2	20	3	-	3	-	-	2	-	1	-
Conn.	5	-	38	-	-	59	13	2	2	3	8	2	1	2	-
MID. ATLANTIC	58	44	389	1	113	265	135	12	90	2	149	40	-	2	2
Upstate N.Y.	13	11	137	-	101	40	46	8	38	-	117	18	-	1	1
N.Y. City	21	-	33	-	5	30	10	-	-	-	-	1	-	-	1
N.J.	10	-	8	-	-	186	29	-	19	-	7	17	-	-	-
Pa.	14	33	211	1§	7	9	50	4	33	2	25	4	-	1	-
E.N. CENTRAL	11	21	1,496	4	130	287	109	11	157	15	157	73	-	9	4
Ohio	3	-	213	-	2	147	38	8	37	12	42	1	-	-	-
Ind.	-	-	100	-	-	-	11	-	5	-	31	7	-	-	-
Ill.	2	-	593	-	3	136	26	-	38	-	33	29	-	9	3
Mich.	4	20	193	4§	125	1	23	3	57	3	30	7	-	-	-
Wis.	2	1	397	-	-	3	11	-	20	-	21	29	-	-	1
W.N. CENTRAL	3	14	100	4	5	257	35	2	52	-	16	17	-	-	2
Minn.	-	10	37	2§	3	1	6	-	-	-	-	-	-	-	-
Iowa	-	-	21	-	-	-	1	-	7	-	3	6	-	-	-
Mo.	3	-	35	-	-	234	12	2	28	-	9	9	-	-	2
N. Dak.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	2§	2	-	2	-	-	-	1	1	-	-	-
Nebr.	-	-	-	-	-	-	5	-	1	-	1	-	-	-	-
Kans.	-	4	7	-	-	22	9	-	16	-	2	1	-	-	-
S. ATLANTIC	57	5	224	-	38	116	152	47	537	3	60	43	-	9	1
Del.	1	-	4	-	-	-	1	-	-	-	1	-	-	-	-
Md.	15	4	21	-	11	10	16	13	307	-	19	4	-	-	1
D.C.	5	-	2	-	1	2	2	-	6	-	1	-	-	-	-
Va.	13	1	18	-	2	-	16	5	24	-	7	3	-	-	-
W. Va.	1	-	6	-	-	-	6	3	35	-	5	7	-	-	-
N.C.	5	-	3	-	-	98	26	1	34	2	11	13	-	-	-
S.C.	-	-	1	-	-	-	11	3	14	-	3	-	-	-	-
Ga.	5	-	2	-	4	-	31	17	42	1	9	4	-	-	-
Fla.	12	-	167	-	20	6	43	5	75	-	4	12	-	9	-
E.S. CENTRAL	5	1	41	-	-	2	44	-	34	1	30	27	-	1	-
Ky.	1	-	2	-	-	1	12	-	-	-	-	-	-	-	-
Tenn.	3	1	19	-	-	-	14	-	14	-	13	13	-	1	-
Ala.	1	-	5	-	-	1	16	-	3	1	15	11	-	-	-
Miss.	-	-	15	-	-	-	2	N	N	-	2	3	-	-	-
W.S. CENTRAL	2	58	451	6	28	1,343	54	19	323	-	11	16	-	-	8
Ark.	-	-	-	6§	7	-	5	3	85	-	1	4	-	-	-
La.	-	-	-	-	-	4	11	-	54	-	1	4	-	-	3
Okla.	2	58	110	-	-	8	8	1	83	-	9	8	-	-	-
Tex.	-	-	341	-	21	1,331	30	15	101	-	-	-	-	-	5
MOUNTAIN	5	18	148	-	15	22	23	5	110	-	68	229	-	8	2
Mont.	-	-	-	-	1	13	5	-	-	-	-	-	-	5	1
Idaho	2	1	6	-	-	1	-	3	57	-	6	23	-	3	-
Wyo.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Colo.	-	-	11	-	2	1	10	1	9	-	45	17	-	-	-
N. Mex.	-	2	49	-	1	6	1	N	N	-	3	4	-	-	-
Ariz.	3	-	46	-	8	1	2	-	31	-	7	178	-	-	-
Utah	-	-	-	-	-	-	1	-	2	-	3	6	-	-	-
Nev.	-	15	36	-	3	-	4	1	9	-	4	1	-	-	1
PACIFIC	80	222	1,182	2	59	314	242	31	197	12	88	69	50	160	57
Wash.	6	-	7	-	38	1	27	2	19	4	28	13	-	-	-
Oreg.	4	-	-	-	-	-	27	N	N	-	3	2	-	-	-
Calif.	69	222	1,127	2†§	20	308	183	29	175	5	48	52	50	156	41
Alaska	-	-	47	-	-	-	4	-	-	-	-	-	-	-	-
Hawaii	1	-	1	-	1	5	1	-	3	3	9	2	-	4	16
Guam	1	U	-	U	-	1	-	U	-	U	-	1	U	-	-
P.R.	-	-	300	-	-	196	5	-	3	-	4	2	-	-	3
V.I.	-	-	-	-	-	-	-	1	4	-	-	-	-	-	-
Amer. Samoa	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
C.N.M.I.	-	U	-	U	-	-	-	U	3	U	-	-	U	-	-

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

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

TABLE II. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending April 7, 1990, and April 8, 1989 (14th Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1989	Cum. 1990	Cum. 1990	Cum. 1990	Cum. 1990
UNITED STATES	12,755	10,970	97	4,989	4,921	8	93	21	864
NEW ENGLAND	519	426	6	100	106	-	4	-	-
Maine	5	3	-	-	3	-	-	-	-
N.H.	28	1	1	1	4	-	-	-	-
Vt.	1	-	-	2	1	-	-	-	-
Mass.	182	140	4	41	55	-	3	-	-
R.I.	1	11	-	23	18	-	-	-	-
Conn.	302	271	1	33	25	-	1	-	-
MID. ATLANTIC	2,735	2,312	9	1,185	1,050	1	25	3	213
Upstate N.Y.	160	209	4	24	97	-	8	-	4
N.Y. City	1,422	895	2	753	625	-	8	-	-
N.J.	434	375	-	213	157	1	8	3	70
Pa.	719	833	3	195	171	-	1	-	139
E.N. CENTRAL	868	423	28	553	535	-	13	1	12
Ohio	140	30	11	64	97	-	4	-	2
Ind.	8	17	2	33	40	-	-	-	-
Ill.	324	185	2	268	245	-	5	-	5
Mich.	295	173	13	166	131	-	3	1	-
Wis.	101	18	-	22	22	-	1	-	5
W.N. CENTRAL	112	87	11	128	136	4	-	2	124
Minn.	32	6	-	22	28	-	-	-	54
Iowa	10	13	1	13	24	-	-	-	10
Mo.	50	38	7	61	47	3	-	2	4
N. Dak.	1	1	-	5	6	-	-	-	12
S. Dak.	-	-	-	4	7	-	-	-	31
Nebr.	3	15	2	9	6	1	-	-	-
Kans.	16	14	1	14	18	-	-	-	13
S. ATLANTIC	3,965	3,934	2	974	1,032	2	8	5	273
Del.	56	47	-	11	11	-	-	-	3
Md.	331	204	-	87	86	-	4	-	95
D.C.	228	246	-	28	45	-	-	-	-
Va.	185	150	-	82	91	-	-	-	52
W. Va.	5	4	-	17	24	-	-	-	6
N.C.	468	220	1	121	94	1	-	3	2
S.C.	216	202	-	125	100	1	-	2	35
Ga.	919	837	-	138	141	-	1	-	65
Fla.	1,557	2,024	1	365	440	-	3	-	15
E.S. CENTRAL	1,201	691	6	431	426	-	-	3	35
Ky.	22	17	-	109	112	-	-	-	16
Tenn.	509	253	3	132	94	-	-	3	1
Ala.	364	256	3	123	132	-	-	-	18
Miss.	306	165	-	67	88	-	-	-	-
W.S. CENTRAL	1,977	1,420	6	580	551	-	2	6	108
Ark.	118	103	-	62	70	-	-	-	6
La.	619	317	1	62	61	-	-	-	-
Okla.	56	22	5	49	53	-	-	6	23
Tex.	1,184	978	-	407	367	-	2	-	79
MOUNTAIN	249	214	12	113	142	1	6	-	28
Mont.	-	-	-	4	4	-	-	-	9
Idaho	4	-	1	2	3	-	-	-	-
Wyo.	-	-	1	-	-	-	-	-	15
Colo.	15	39	4	6	3	-	-	-	-
N. Mex.	16	7	4	28	24	1	-	-	2
Ariz.	148	62	2	52	64	-	4	-	-
Utah	2	8	-	3	26	-	-	-	-
Nev.	64	98	-	18	18	-	2	-	2
PACIFIC	1,129	1,463	17	925	943	-	35	1	71
Wash.	62	99	3	79	52	-	-	-	-
Oreg.	29	83	-	34	33	-	-	-	-
Calif.	1,029	1,274	13	770	799	-	33	1	55
Alaska	3	2	-	16	13	-	-	-	16
Hawaii	6	5	1	26	46	-	2	-	-
Guam	-	3	-	11	25	-	-	-	-
P.R.	254	130	-	29	60	-	-	-	7
V.I.	1	1	-	2	2	-	-	-	-
Amer. Samoa	-	-	-	3	2	-	-	-	-
C.N.M.I.	-	1	-	8	4	-	4	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending April 7, 1990 (14th Week)

Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	670	470	113	52	11	24	68
Boston, Mass.	173	116	24	19	3	11	28
Bridgeport, Conn.	41	31	5	5	-	-	4
Cambridge, Mass.	29	22	4	1	-	2	-
Fall River, Mass.	24	19	5	-	-	-	-
Hartford, Conn.	71	45	14	7	4	1	5
Lowell, Mass.	28	25	3	-	-	-	4
Lynn, Mass.	14	9	4	1	-	-	1
New Bedford, Mass.	34	27	6	1	-	-	2
New Haven, Conn.	40	28	7	4	-	1	3
Providence, R.I.	57	42	12	1	2	-	5
Somerville, Mass.	6	3	3	-	-	-	-
Springfield, Mass.	54	33	10	4	2	5	7
Waterbury, Conn.	31	21	6	4	-	-	7
Worcester, Mass.	68	49	10	5	-	4	2
MID. ATLANTIC	2,746	1,741	557	311	72	65	176
Albany, N.Y.	58	41	12	4	-	1	5
Allentown, Pa.	18	11	6	1	-	-	-
Buffalo, N.Y.	109	70	30	2	5	2	6
Camden, N.J.	37	22	10	5	-	-	-
Elizabeth, N.J.	20	12	3	3	1	1	3
Erie, Pa.†	36	31	2	1	2	-	5
Jersey City, N.J.	41	28	8	5	-	-	-
N.Y. City, N.Y.	1,456	886	287	196	44	43	79
Newark, N.J.	63	26	16	16	2	3	8
Paterson, N.J.	26	12	6	5	2	1	2
Philadelphia, Pa.	392	255	85	32	10	10	30
Pittsburgh, Pa.†	66	44	13	8	-	1	2
Reading, Pa.	35	23	6	4	2	-	7
Rochester, N.Y.	120	88	20	10	-	2	16
Schenectady, N.Y.	24	18	3	3	-	-	-
Scranton, Pa.†	24	17	5	1	-	1	2
Syracuse, N.Y.	125	85	31	7	2	-	2
Trenton, N.J.	35	23	4	6	2	-	2
Utica, N.Y.	24	19	4	1	-	-	-
Yonkers, N.Y.	37	30	6	1	-	-	7
E.N. CENTRAL	2,230	1,487	459	142	42	100	132
Akron, Ohio	46	33	8	1	1	3	-
Canton, Ohio	20	15	2	1	1	1	3
Chicago, Ill.§	564	362	125	45	10	22	16
Cincinnati, Ohio	161	108	32	6	2	13	21
Cleveland, Ohio	146	91	34	11	3	7	6
Columbus, Ohio	158	102	27	10	7	12	6
Dayton, Ohio	126	87	29	6	2	2	5
Detroit, Mich.	227	127	53	25	7	15	9
Evansville, Ind.	28	22	4	2	-	-	2
Fort Wayne, Ind.	47	36	11	-	-	-	5
Gary, Ind.	15	8	5	1	-	1	-
Grand Rapids, Mich.	56	47	4	2	1	2	9
Indianapolis, Ind.	160	101	41	11	4	3	3
Madison, Wis.	46	36	8	2	-	-	5
Milwaukee, Wis.	145	100	25	9	2	9	5
Peoria, Ill.	43	33	8	-	1	1	4
Rockford, Ill.	54	37	11	5	-	1	8
South Bend, Ind.	42	29	8	3	-	2	5
Toledo, Ohio	90	67	16	2	1	4	10
Youngstown, Ohio	56	46	8	-	-	2	10
W.N. CENTRAL	722	511	131	45	17	18	47
Des Moines, Iowa	85	57	21	3	2	2	6
Duluth, Minn.	22	17	2	2	1	-	2
Kansas City, Kans.	30	23	5	1	-	1	2
Kansas City, Mo.	116	87	21	5	3	-	10
Lincoln, Nebr.	35	23	3	6	1	2	2
Minneapolis, Minn.	125	96	15	8	1	5	7
Omaha, Nebr.	61	38	15	2	4	2	3
St. Louis, Mo.	120	84	19	11	3	3	15
St. Paul, Minn.	62	41	17	4	-	-	-
Wichita, Kans.	66	45	13	3	2	3	-
S. ATLANTIC	1,241	744	259	136	41	60	68
Atlanta, Ga.	169	84	44	18	8	15	3
Baltimore, Md.	161	100	34	16	7	4	9
Charlotte, N.C.	89	64	10	9	2	4	9
Jacksonville, Fla.	118	72	28	13	-	5	11
Miami, Fla.	135	66	37	23	5	4	2
Norfolk, Va.	49	25	12	8	2	2	2
Richmond, Va.	82	48	17	7	3	7	7
Savannah, Ga.	47	30	7	7	2	1	4
St. Petersburg, Fla.	93	67	13	6	2	5	3
Tampa, Fla.	146	102	22	9	4	9	10
Washington, D.C.	131	70	31	20	6	3	5
Wilmington, Del.	21	16	4	-	-	1	3
E.S. CENTRAL	772	517	166	44	18	27	56
Birmingham, Ala.	131	93	22	7	4	5	8
Chattanooga, Tenn.	94	68	18	4	3	1	8
Knoxville, Tenn.	90	60	22	6	1	1	6
Louisville, Ky.	91	62	23	3	2	1	7
Memphis, Tenn.	167	107	36	11	4	9	15
Mobile, Ala.	56	33	12	6	1	4	2
Montgomery, Ala.§	52	38	9	3	-	2	3
Nashville, Tenn.	91	56	24	4	3	4	7
W.S. CENTRAL	1,704	1,047	385	172	54	46	82
Austin, Tex.	57	37	11	6	-	3	4
Baton Rouge, La.	29	21	7	-	1	-	2
Corpus Christi, Tex.	53	36	9	3	2	3	4
Dallas, Tex.	206	123	48	22	6	7	9
El Paso, Tex.	65	36	15	8	4	2	2
Fort Worth, Tex	111	73	23	7	7	1	9
Houston, Tex.§	734	436	169	89	24	16	18
Little Rock, Ark.	71	42	18	7	1	3	6
New Orleans, La.	89	54	22	8	1	4	-
San Antonio, Tex.	179	114	42	15	3	5	15
Shreveport, La.	35	24	6	2	3	-	9
Tulsa, Okla.	75	51	15	5	2	2	4
MOUNTAIN	677	430	132	66	19	30	38
Albuquerque, N. Mex.	68	44	13	6	4	1	6
Colo. Springs, Colo.	46	36	4	2	1	3	4
Denver, Colo.	108	57	21	14	2	14	4
Las Vegas, Nev.	123	78	30	12	2	1	4
Ogden, Utah	13	10	2	1	-	-	3
Phoenix, Ariz.	134	73	37	13	4	7	3
Pueblo, Colo.	34	24	7	2	1	-	4
Salt Lake City, Utah	35	21	5	5	2	2	1
Tucson, Ariz.	116	87	13	11	3	2	9
PACIFIC	1,983	1,268	375	193	69	65	138
Berkeley, Calif.	22	12	7	3	-	-	2
Fresno, Calif.	79	55	11	8	2	3	5
Glendale, Calif.	25	14	7	1	1	2	3
Honolulu, Hawaii	77	50	20	2	1	4	17
Long Beach, Calif.	84	48	19	11	2	4	14
Los Angeles Calif.	581	363	100	66	23	16	28
Oakland, Calif.	83	56	16	4	3	4	2
Pasadena, Calif.	30	21	8	-	-	1	3
Portland, Oreg.	141	100	25	11	2	3	8
Sacramento, Calif.	137	86	20	16	10	5	12
San Diego, Calif.	149	94	27	11	9	8	15
San Francisco, Calif.	170	99	29	31	5	6	9
San Jose, Calif.	152	97	37	11	3	4	11
Seattle, Wash.	158	108	30	11	6	3	-
Spokane, Wash.	54	43	9	-	-	2	5
Tacoma, Wash.	41	22	10	7	2	-	4
TOTAL	12,745††	8,215	2,577	1,161	343	435	805

*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.

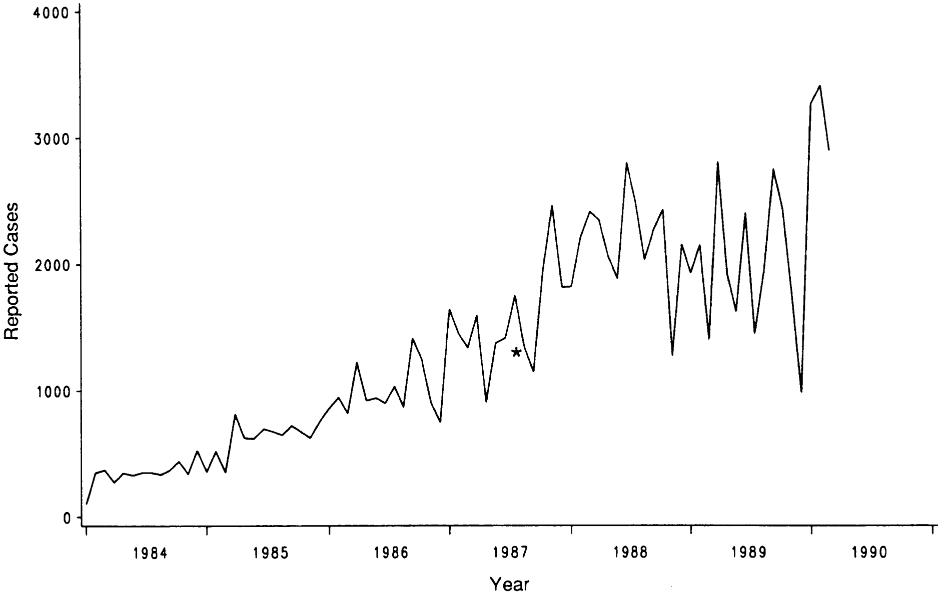
**Pneumonia and influenza.

†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 available 4 weeks.

FIGURE II. Acquired immunodeficiency syndrome cases, by 4-week period of report — United States, 1984–1990



*Change in case definition.

FIGURE III. Tuberculosis cases, by 4-week period of report — United States, 1984–1990

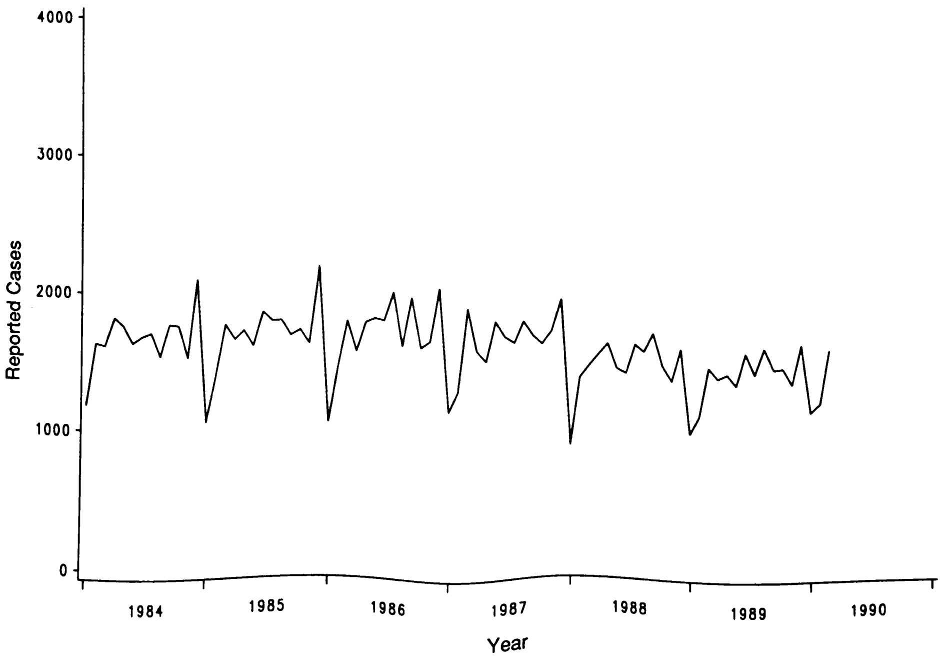


FIGURE IV. Gonorrhea cases, by 4-week period of report — United States, 1984–1990

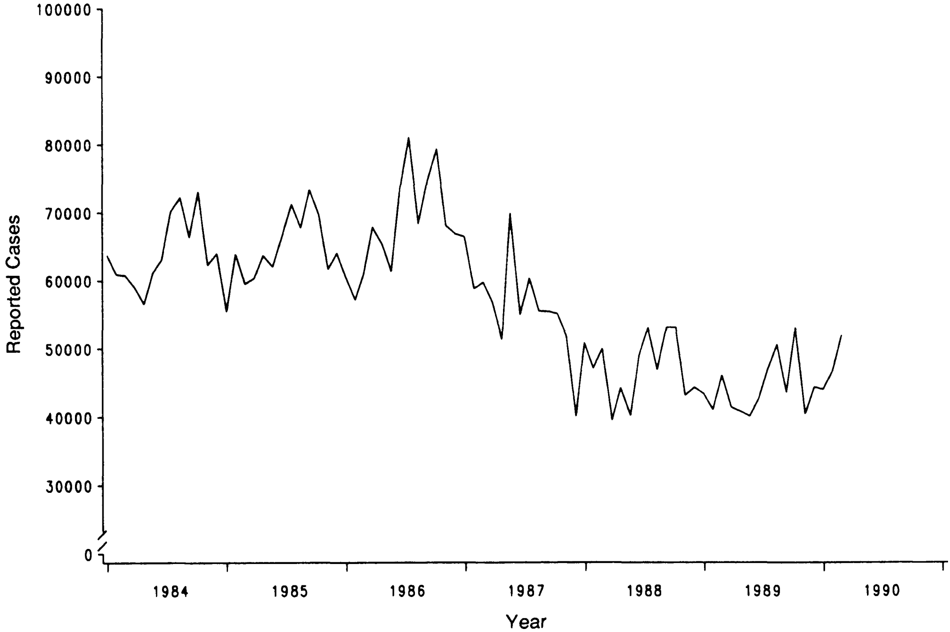
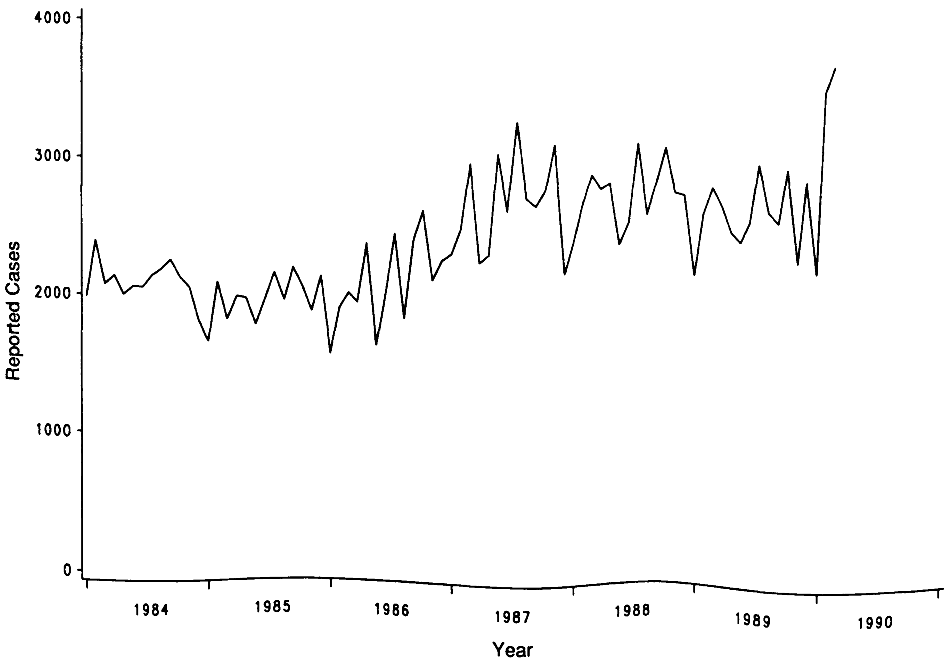


FIGURE V. Syphilis cases, by 4-week period of report — United States, 1984–1990



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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: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333; telephone (404) 332-4555.

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