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Fatalities Associated with Ingestion of Diethylene Glycol-Contaminated Glycerin Used to Manufacture Acetaminophen Syrup — Haiti, November 1995–June 1996

From November 1995 through June 1996, acute anuric renal failure was diagnosed in 86 children (aged 3 months–13 years) in Haiti; most (85%) children were aged ≤5 years. On June 14, 1996, a joint investigation was initiated by the Ministry of Health of Haiti, the University General Hospital in Port-au-Prince, the Pan American Health Organization/World Health Organization, the Caribbean Epidemiology Center, and CDC. This report summarizes the preliminary findings of this ongoing investigation, which indicate that this outbreak was associated with diethylene glycol (DEG)-contaminated glycerin used to manufacture acetaminophen syrup.

Most cases were characterized by a nonspecific febrile prodromal illness followed within 2 weeks by anuric renal failure, pancreatitis, hepatitis, and neurologic dysfunction progressing to coma. Ten children were transferred to medical centers in the United States for intensive care and dialysis; nine are still living. Of the 76 children who remained in Haiti, only one is known to have survived. Histopathology of kidney tissue from four patients indicated acute tubular necrosis with regeneration consistent with a toxic exposure.

The investigation indicated that at least 79% of patients had consumed one of two locally manufactured acetaminophen syrup preparations ("Afebril" and "Valodon"), which were subsequently found to contain DEG. On June 22, the Ministry of Health of Haiti issued an alert to parents not to administer these products and prohibited their sale. The manufacturing company announced a recall of these and other syrup products it produces. Following the recall and an ongoing public information campaign, the number of new cases declined sharply; the last reported case-patient was admitted to a hospital on June 29. The traceback investigation, which is being conducted in collaboration with the U.S. Food and Drug Administration (FDA), indicates that glycerin used in the formulation of these syrups was contaminated with DEG. The contaminated glycerin was imported to Haiti from another country.

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Diethylene Glycol-Contaminated Glycerin — Continued

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Editorial Note: DEG, a known nephrotoxin and hepatotoxin, is used in industrial solvents and antifreeze. The mechanism of toxicity is unknown but probably is different from oxalate toxicity associated with ethylene glycol poisoning. Management of patients with DEG toxicity relies on early diagnosis with supportive and symptomatic care for multi-organ failure. Although data on outcome are limited, survival with resolution of signs and symptoms has been reported (*1*).

The outbreak in Haiti is the fourth large outbreak associated with pharmaceutical products contaminated with DEG. Previous outbreaks (in the United States, Nigeria, and Bangladesh) resulted from ingestion of DEG-contaminated sulfanilamide or acetaminophen syrups (*1–3*). In two of the outbreaks, propylene glycol was the contaminated raw material, and in a third, DEG was used as a diluent. A cluster of 14 deaths occurred in India among patients in one hospital who ingested DEG-contaminated glycerin used for control of intracranial pressure (*4*).

Glycerin is used as a sweetener in formulations of many pharmaceutical syrups ingested orally. Complexities in the distribution of glycerin and other pharmaceutical raw materials that may involve many handlers (importers and exporters) underscore the need for manufacturers to adequately identify raw materials and end products. However, infrared spectroscopy tests required by the United States Pharmocopoeia (USP) would not have detected this DEG-contaminated glycerin syrup. A gas chromatography method capable of separating and detecting glycerin, ethylene glycol, and DEG can be used to determine that glycerin is free of these contaminants. The outbreak in Haiti emphasizes the need for pharmaceutical producers worldwide to be aware of possible contamination of glycerin and other raw materials with DEG and to use appropriate quality-control measures to identify and prevent potential contamination.

References

1. Hanif M, Mobarak MR, Ronan A, Rahman D, Donovan JJ, Bennish ML. Fatal renal failure caused by diethylene glycol in paracetamol elixir: the Bangladesh epidemic. Br Med J 1995;311:88–91.
2. Okuonghae HO, Ighogboja IS, Lawson JO, Nwana EJ. Diethylene glycol poisoning in Nigerian children. Ann Trop Paediatr 1992;12:235–8.
3. Geiling EMK, Cannon PR. Pathologic effects of elixir of sulfanilamide (diethylene glycol) poisoning. A clinical and experimental correlation: final report. JAMA 1938;111:919–26.
4. Pandya SK. An unmitigated tragedy. Br Med J 1988;297:117–9.

Invasive Infection with *Streptococcus iniae* — Ontario, 1995–1996

During December 1995–February 1996, four cases of a bacteremic illness (three accompanied by cellulitis and the fourth with infective endocarditis, meningitis, and probable septic arthritis) were identified among patients at a hospital in Ontario. *Streptococcus iniae*, a fish pathogen not previously reported as a cause of illness in humans (*1–3*), was isolated from all four patients. All four patients were of Chinese

descent had a history of preparing fresh, whole fish; three patients for whom information was available had had an injury associated with preparation of fresh, whole fish purchased locally. This report summarizes information about these cases and presents preliminary findings of an ongoing investigation by health officials in Canada (*4*), which suggests that *S. iniae* may be an emerging pathogen associated with injury while preparing fresh aquacultured fish.

Case Reports

The first three cases occurred during December 15–20, 1995, among previously healthy women who ranged in age from 40–74 years. Each had a history of injury to the hand while preparing fresh, whole, aquacultured fish. The first case-patient reported a puncture wound to her hand with a fish bone while preparing a newly purchased tilapia (*Oreochromis* species)*, a freshwater fish marketed primarily as whole fish; the second lacerated the skin over her finger with a knife that had just been used to cut and clean a freshwater fish of unknown type; and the third punctured her finger with the dorsal fin while scaling a fresh tilapia.

The period from injury to onset of symptoms for the three cases ranged from 16 hours to 2 days. At the time of hospitalization, physical examination findings included fever (range: 100.4 F [38.0 C] to 101.3 F [38.5 C]) and cellulitis with lymphangitic spread proximate to the site of injury. Leukocyte counts ranged from 12,900/mm^3 to 16,900/mm^3 with an increased proportion of neutrophils. Blood cultures from all three patients were positive for *S. iniae*, and treatment with beta-lactam antibiotics or clindamycin resulted in complete resolution of all manifestations of illness.

The fourth patient, a 77-year-old man, was admitted to the hospital on February 1, 1996, because of a 1-week history of increasing knee pain, intermittent sweats, fever, dyspnea, and confusion. Past medical history included diabetes mellitus, hypertension, rheumatic heart disease, chronic renal failure, Paget's disease, and osteoarthritis. Approximately 10 days before admission, he had prepared a fresh tilapia, although it was unknown whether he incurred an injury while preparing the fish. Findings on examination included temperature of 96.1 F (35.6 C) and a large effusion and warmth of the right knee without overlying cellulitis. New murmurs of aortic insufficiency and mitral regurgitation were noted. While in the emergency department, he had a respiratory arrest and was intubated; treatment included administration of a beta-lactam agent and erythromycin. The leukocyte count on admission was 25,200/mm^3 with 95% neutrophils. Ten hours following admission, his knee was aspirated, and a lumbar puncture was performed. Analysis of the joint fluid included a leukocyte count of 72,000/mm^3 but no evidence of crystals. Analysis of the cerebrospinal fluid (CSF) included a leukocyte count of 87/mm^3 (54% neutrophils), a glucose of 14 mg/dL, and a protein of 320 mg/dL. Cultures of samples of synovial fluid and CSF were negative, but blood cultures yielded *S. iniae*. Based on the clinical and laboratory findings, and a transesophageal echocardiogram that documented a mitral-valve vegetation, *S. iniae* endocarditis and meningitis were diagnosed. Treatment with beta-lactam antibiotics was continued, and he recovered.

Microbiology

Isolates from all patients grew on sheep-blood agar incubated in room air at 95.0 F (35 C), appeared as gram-positive cocci in short chains or pairs, and were catalase-

*Tilapia is one of the fastest growing aquaculture industries in the United States and the world.

Streptococcus iniae — *Continued*

negative. During the first 18 hours of incubation, colonies were alpha-hemolytic and initially were identified as viridans streptococci. Further testing conducted by reference laboratories identified them as *S. iniae*. Three strains were resistant to bacitracin, and the fourth was susceptible. Pulsed-field gel electrophoresis patterns of chromosomal *Sma*1 digests of all four isolates were identical. Microbroth-dilution testing for susceptibility indicated that all isolates were susceptible to beta-lactams, macrolides, trimethoprim-sulfamethoxazole, and tetracycline.

Follow-Up Investigation

All four patients had prepared fresh, whole fish, three of which were known to be tilapia, that had been purchased from different stores. In two cases, the fish were taken live from holding tanks in different fish markets. Surface cultures were obtained from four fresh tilapia purchased at selected fish markets in the community during March 1996. Cultures from three of the four fish yielded *S. iniae*; however, pulsed-field gel electrophoresis patterns were different for each, and none matched the outbreak strain. None of the vendors at the markets where the fish were purchased reported that the fish appeared to be sick. Fresh, whole tilapia sold in Ontario were imported from U.S. fish farms.

The ongoing epidemiologic and microbiologic investigation includes the establishment of surveillance for cases of upper-extremity cellulitis in patients visiting the emergency departments of 10 Toronto-area hospitals and use of a standardized questionnaire for interviewing patients. In addition, to better characterize the prevalence of *S. iniae* in fish, samples from live, aquacultured fish imported into Canada are being collected and tested by Canadian health officials for *S. iniae*.

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Editorial Note: Because of recent increases in aquaculture, the occurrence of infections caused by a variety of streptococcal species is increasing among some saltwater and freshwater fish. *S. iniae* was first recognized in 1972 as a cause of disease in an Amazon freshwater dolphin, *Inia geoffrensis*. In 1986, *S. iniae* (reported as *S. shiloi*) was identified as a cause of meningoencephalitis among tilapia and trout in Israel; the organism was identified subsequently among tilapia in the United States and Taiwan. Infections with *S. iniae* may be asymptomatic or may cause disease associated with death rates of 30% to 50% in affected fishponds (*2*).

The first recognized case of *S. iniae* infection in humans occurred in Texas in 1991, and a second case occurred in Ottawa, Canada, in 1994; however, potential sources for both cases were not determined. The pulsed-field gel electrophoresis digest from the isolates causing both of these infections was identical to the isolates of the cases described in this report, except for a one-band shift.

Whether the recent cases of *S. iniae* infection represent the emergence of a new human pathogen or previously unrecognized disease is unclear. *S. iniae* infection may not be recognized because cultures rarely are obtained from patients with wound infections or cellulitis and, if cultured, viridans streptococcus isolates may be consid-

Streptococcus iniae — *Continued*

ered contaminants and not be further characterized. In addition, it is unclear whether human infections may be caused by any *S. iniae* strain or whether the strain implicated in all six of the cases is more virulent than other strains. Finally, because all four persons described in this report were of Chinese descent, potential racial/ethnic associations with risk for this infection should be further considered. Additional culture surveys and laboratory studies of tilapia should assist in characterizing the diversity and virulence among *S. iniae*.

To more clearly define the role of *S. iniae* as a human pathogen, physicians are encouraged to obtain blood and wound cultures from persons with upper-extremity cellulitis and to seek a history of recently having prepared a fresh, whole fish. Microbiology laboratories should be able to make a preliminary identification of *S. iniae* based on several distinguishing phenotypic characteristics.[†] Possible *S. iniae* isolates can be confirmed at the CDC Streptococcal Reference Laboratory and tested to determine whether they are the same strain as identified from the six cases of human disease.

References

1. Eldar A, Frelier P, Assenta L, et al. *Streptococcus shiloi*, the name for an agent causing septicemic infection in fish is a junior synonym of *Streptococcus iniae*. Int J Syst Bacteriol 1995;45:840–2.
2. Eldar A, Bejerano Y, Bercovier H. *Streptococcus shiloi*, and *Streptococcus difficile*: two new streptococcal species causing a meningoencephalitis in fish. Curr Microbiol 1994;28:139–43.
3. Perera R, Johnson S, Collins M, et al. *Streptococcus iniae* associated with mortality of *Tilapia nilotica* and *T. aurea* hybrids. Journal of Aquatic Animal Health 1994;6:335–40.
4. Weinstein M, Low D, McGeer A, et al. Invasive infection due to *Streptococcus iniae*: a new or previously unrecognized disease—Ontario, 1995–1996. Canada Communicable Disease Report 1996;22:129–32.
5. Pier GB, Madin SH. *Streptococcus iniae* sp. nov., a beta-hemolytic streptococcus isolated from an Amazon freshwater dolphin, *Inia geoffrensis*. Int J Syst Bacteriol 1976;26:545–53.
6. Pier GB, Madin SH, Al-Nakeeb S. Isolation and characterization of a second isolate of *Streptococcus iniae*. Int J Syst Bacteriol 1978;28:311–4.

[†] *S. iniae* is beta-hemolytic; however, some strains may appear to be alpha-hemolytic because a narrow zone of beta-hemolysis is surrounded by a larger zone of alpha-hemolysis (*5,6*). Beta-hemolysis always is observed under anaerobic incubation and in the area of stabs in the agar. *S. iniae* is nongroupable with Lancefield group A through U antisera. In addition, the pyrrolidonylarylaminase and leucine aminopeptidase tests are positive, the Voges-Proskauer test is negative, and the organism may have variable susceptibility to bacitracin.

Adequacy of Prenatal-Care Utilization — California, 1989–1994

A national health objective for the year 2000 is to increase to at least 90% the proportion of pregnant women who receive prenatal care during the first trimester of pregnancy (objective 14.11) (*1*). Adequate prenatal care is believed to result in better pregnancy outcomes, including reduced maternal and infant morbidity and mortality and reduced risk for preterm delivery and for low birthweight (<2500 g [<5 lb 8 oz]) (*2*). However, measures of prenatal-care utilization based on first-trimester initiation of prenatal care address only the timing of prenatal-care initiation and do not include the frequency of visits thereafter, which can provide a more comprehensive measure

Prenatal-Care Utilization — Continued

of prenatal-care utilization. To calculate rates of prenatal-care utilization for California during 1989–1994, the California Department of Health Services (CDHS) analyzed data from birth certificates using a more comprehensive measure of prenatal-care utilization. This report presents annual rates of adequate prenatal-care utilization (APNCU) for California during 1989–1994 (the most recent year for which complete data were available), compares these data with the year 2000 objective for prenatal-care utilization, and examines rates of APNCU in California by payment source (for prenatal care) for 1989, 1992, and 1994.

CDHS defines APNCU as care initiated during the first 4 months of pregnancy, followed by ≥80% of the expected total number of visits recommended by the American College of Obstetricians and Gynecologists (ACOG), adjusted for the length of gestation (*3*). For a full-term (40-week) pregnancy with no complications, ACOG recommends prenatal-care visits "...every 4 weeks for the first 28 weeks of pregnancy, every 2–3 weeks until 36 weeks of gestation, and weekly, thereafter, although flexibility is desirable" (*4*). Birth certificate data for live-born infants in California were used to calculate annual APNCU rates by accounting for both the time of prenatal-care initiation and the number of visits relative to gestational age (*3*). Information obtained from the birth certificate included prenatal-care utilization as self-reported by the mother and gestational age. Infants of women who had no prenatal care or for whom the source of payment for prenatal care was unknown were excluded from this analysis, accounting for approximately 1.8% of live-born infants in 1989, 1.3% in 1992, and 1.6% in 1994. In addition, gestational age was missing for 3.1% of birth certificates in 1989, 2.8% in 1992, and 3.1% in 1994; however, the algorithm used to calculate APNCU estimated gestational age from sex and birthweight data.

During 1989–1994, the overall annual rate of prenatal-care initiation during the first trimester increased 6.9%, from 72.1 per 100 live-born infants to 77.1 per 100. In comparison, the rate of APNCU increased 18.2%, from 56.2 per 100 to 66.4 per 100, an annual rate of increase of 2.2 per 100 per year. In 1994, 16% of women in California who initiated prenatal care during the first trimester had <80% of the ACOG-recommended visits.

While the total number of live-born infants in California remained stable during 1989–1994, the distribution of live-born infants within payment source categories changed disproportionately (Table 1). From 1989 to 1994, there were decreases in the number of live-born infants whose care was uninsured (70.8% [from 85,407 to 24,909]) or covered by fee-for-service arrangements (31.1% [from 161,937 to 111,632]) or other sources of payment (35.1% [from 22,852 to 14,831]). In comparison, the numbers covered by California's Medicaid program (Medi-Cal) and health-maintenance organizations (HMOs) increased 67.9% (from 154,660 to 259,643) and 9.2% (from 134,473 to 146,854), respectively. In 1994, the cost of prenatal-care services for nearly half (46.5%) of all live-born infants was paid through Medi-Cal.

During 1989–1994, rates of APNCU increased within all payment source categories. The largest percentage increases in APNCU rates were among Medi-Cal recipients (34.9%) and the uninsured (29.7%). Despite these large increases, in 1994 the APNCU rates were lowest among Medi-Cal (56.7 per 100 live-born infants) and uninsured (42.2 per 100) groups. Rates of APNCU were highest among privately insured groups (81.7 per 100 for fee-for-service providers and 75.0 per 100 for HMOs).

Prenatal-Care Utilization — Continued

TABLE 1. Prevalence rate of adequate prenatal-care utilization, by payment source and selected years — California, 1989–1994

Source of payment/ Year	Total births within payment source		Births with adequate prenatal-care utilization*	
	No.	(%)	No.	(%)
Uninsured†				
1989	85,407	15.3	27,789	32.5
1992	38,027	6.4	15,742	41.4
1994	24,909	4.5	10,520	42.2
Health-maintenance organization				
1989	134,473	24.0	89,773	66.8
1992	146,825	24.8	107,230	73.0
1994	146,854	26.3	110,187	75.0
Fee-for-service§				
1989	161,937	29.0	117,372	72.5
1992	130,042	21.9	101,683	78.2
1994	111,632	20.0	91,238	81.7
Medi-Cal¶				
1989	154,660	27.7	64,929	42.0
1992	257,683	43.5	127,424	49.5
1994	259,643	46.5	147,078	56.7
Other**				
1989	22,852	4.1	14,423	63.1
1992	20,456	3.5	14,998	73.3
1994	14,831	2.7	11,575	78.1
Total††				
1989	**559,329**	**100.0**	**314,286**	**56.2**
1992	**593,033**	**100.0**	**367,077**	**61.9**
1994	**557,869**	**100.0**	**370,598**	**66.4**

* Care initiated during the first 4 months of pregnancy, followed by ≥80% of the total number of visits recommended by the American College of Obstetricians and Gynecologists, adjusted for the length of gestation (*3*).
† Includes persons who self-paid, those not charged, and those who were indigent.
§ Non–health-maintenance organization private insurance.
¶ The state Medicaid program for California residents.
** Includes Medicare, Workers' Compensation, and other governmental and nongovernmental programs.
†† Infants of women who had no prenatal care or for whom the source of payment for prenatal care was unknown were excluded from this analysis, accounting for approximately 1.8% of live-born infants in 1989, 1.3% in 1992, and 1.6% in 1994.

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Editorial Note: The findings in this report indicate that in California during 1989–1994, the rate of first-trimester initiation of prenatal care increased 6.9%; in contrast, the overall rate of APNCU increased 18.2%. The primary reason for the difference in rates is that first-trimester initiation addresses only the timing of prenatal-care initiation

Prenatal-Care Utilization — Continued

and, therefore, presents an incomplete assessment of prenatal-care utilization. If the trends in both rates continue until the year 2000, the rates of first-trimester initiation and APNCU should converge at 80 per 100 live-born infants. Although the rate of first-trimester initiation was higher than the rate of APNCU in 1994, the trend toward decreasing differences in the rates indicates that, in 1994, among women who initiated prenatal care, a greater proportion had the appropriate number of prenatal-care visits recommended by ACOG than in 1989. The findings for California can not be generalized to the entire population of live-born infants in the United States; however, other states can use similar analyses to calculate more comprehensive measures of APNCU.

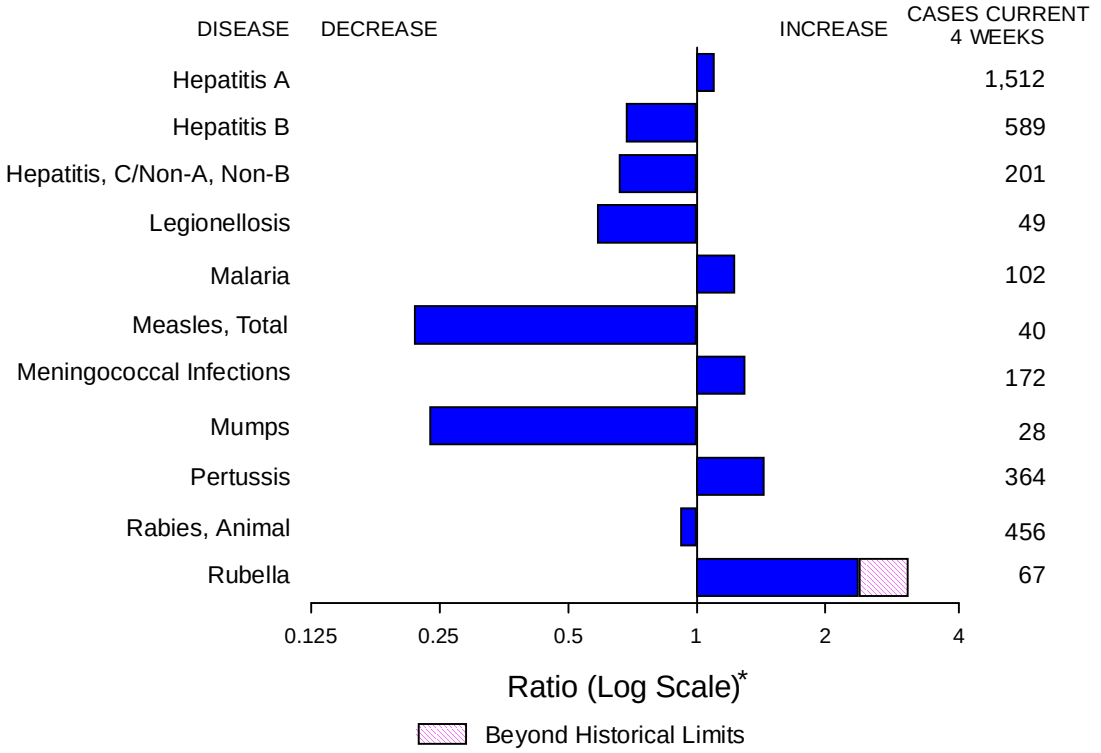
In California, efforts to improve the availability and financial accessibility of prenatal care have included use of federal Medicaid options and state-based funding to nearly double Medi-Cal eligibility levels for health-care coverage for pregnant women since 1989 and to promote early, continuous, and comprehensive prenatal care. For example, eligibility requirements for coverage of pregnancy-related services under Medi-Cal were increased from 185% of the poverty level in 1989 to 200% in 1990. During the same period, implementation of several Medi-Cal obstetric initiatives improved provider participation and improved and expanded prenatal-care services to women in California. These initiatives include the BabyCal campaign, a statewide media effort promoting the importance of prenatal care and assistance in obtaining Medi-Cal; the Comprehensive Perinatal Services Program, a program that provides support services during prenatal care; and improved access to Medi-Cal through presumptive and continuous eligibility, waived asset tests, and reduced application paperwork. In addition, most (86%) women and children who are Medi-Cal beneficiaries in California are expected to be enrolled in some form of managed care by 1997.

The year 2000 objective reflects only initiation of prenatal care during the first trimester; however, additional important factors include a minimum of 14 subsequent prenatal-care visits (for a full-term pregnancy), adjusted for the length of gestation (*3*). Although the definition of APNCU used in this report neither addresses the quality or content of the prenatal-care visit nor adjusts for maternal risk conditions (*3*), it does provide a readily available measure of APNCU. The findings of this report will be used in California for assessing the impact of changes in the health-care system on prenatal-care utilization.

References

1. Public Health Service. Healthy people 2000: national health promotion and disease prevention objectives—full report, with commentary. Washington, DC: US Department of Health and Human Services, Public Health Service, 1991; DHHS publication no. (PHS)91-50212.
2. Office of Technology Assessment, US Congress. Healthy children: investing in the future. Washington, DC: US Congress, Office of Technology Assessment, 1988.
3. Kotelchuck M. An evaluation of the Kessner adequacy of prenatal care index and a proposed adequacy of prenatal care utilization index. Am J Public Health 1994;84:1414–20.
4. American Academy of Pediatrics/American College of Obstetricians and Gynecologists. Guidelines for perinatal care. 3rd ed. Washington, DC: American Academy of Pediatrics/American College of Obstetricians and Gynecologists, 1992:53.

FIGURE I. Selected notifiable disease reports, comparison of 4-week totals ending July 27, 1996, with historical data — United States



*Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — cases of selected notifiable diseases, United States, cumulative, week ending July 27, 1996 (30th Week)

	Cum. 1996		Cum. 1996
Anthrax	-	HIV infection, pediatric*§	138
Brucellosis	52	Plague	-
Cholera	2	Poliomyelitis, paralytic¶	-
Congenital rubella syndrome	1	Psittacosis	22
Cryptosporidiosis*	972	Rabies, human	-
Diphtheria	2	Rocky Mountain spotted fever (RMSF)	275
Encephalitis: California*	4	Streptococcal toxic-shock syndrome*	10
eastern equine*	1	Syphilis, congenital**	-
St. Louis*	-	Tetanus	11
western equine*	-	Toxic-shock syndrome	79
Hansen Disease	57	Trichinosis	11
Hantavirus pulmonary syndrome*†	9	Typhoid fever	178

-: no reported cases
*Not notifiable in all states.
† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).
§ Updated monthly to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention (NCHSTP), last update June 25, 1996.
¶ Three suspected cases of polio with onset in 1996 have been reported to date.
**Updated quarterly from reports to the Division of STD Prevention, NCHSTP. First quarter 1996 is not yet available.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending July 27, 1996, and July 29, 1995 (30th Week)

Reporting Area	AIDS*		Chlamydia	*Escherichia coli* O157:H7		Gonorrhea		Hepatitis C/NA,NB		Legionellosis	
				NETSS†	PHLIS§						
	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1996	Cum. 1996	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995
UNITED STATES	34,213	42,080	165,822	1,004	328	151,848	222,508	2,017	2,259	420	691
NEW ENGLAND	1,391	2,092	9,533	137	21	4,130	4,296	65	75	20	14
Maine	22	75	-	10	-	24	44	-	-	1	4
N.H.	42	59	397	12	5	80	69	3	11	-	1
Vt.	10	16	-	11	6	34	30	25	7	2	-
Mass.	648	922	3,810	60	10	1,245	1,527	32	55	11	8
R.I.	94	144	1,158	7	-	292	288	5	2	6	1
Conn.	575	876	4,168	37	-	2,455	2,338	-	-	N	N
MID. ATLANTIC	9,450	10,844	22,107	90	26	16,647	24,800	196	240	89	117
Upstate N.Y.	1,164	1,272	N	55	12	3,460	4,802	163	119	28	30
N.Y. City	5,299	5,643	9,512	4	-	4,931	10,223	1	1	1	3
N.J.	1,796	2,544	2,332	31	5	2,526	2,226	-	99	7	19
Pa.	1,191	1,385	10,263	N	9	5,730	7,549	32	21	53	65
E.N. CENTRAL	2,777	3,280	23,545	262	95	24,044	44,800	273	181	121	199
Ohio	622	670	11,474	68	33	8,362	14,376	18	6	52	94
Ind.	393	335	5,785	30	19	3,827	5,242	7	1	27	45
Ill.	1,202	1,394	1,447	118	16	9,588	11,203	44	53	9	21
Mich.	407	667	U	46	27	U	10,202	204	121	26	21
Wis.	153	214	4,839	N	-	2,267	3,777	-	-	7	18
W.N. CENTRAL	820	963	13,675	207	78	6,673	11,333	71	40	24	47
Minn.	157	218	-	75	38	U	1,668	1	2	2	-
Iowa	57	53	2,305	57	23	595	798	36	7	5	14
Mo.	402	421	7,208	26	-	4,629	6,483	20	13	6	13
N. Dak.	8	4	2	8	6	1	17	-	4	-	3
S. Dak.	8	9	689	7	-	95	111	-	1	2	-
Nebr.	55	75	885	10	2	159	621	3	9	7	11
Kans.	133	183	2,586	24	9	1,194	1,635	11	4	2	6
S. ATLANTIC	8,571	10,712	30,851	50	13	56,632	61,838	141	133	77	109
Del.	167	191	-	-	1	816	1,206	1	-	7	1
Md.	1,026	1,416	3,549	N	3	7,410	7,193	1	6	9	20
D.C.	591	639	N	-	-	2,566	2,595	-	-	6	4
Va.	546	880	6,240	N	2	5,430	6,170	8	9	12	8
W. Va.	64	46	-	N	2	276	470	7	26	1	3
N.C.	464	586	-	14	2	10,819	13,808	30	33	6	23
S.C.	443	569	-	6	3	6,309	7,209	16	14	4	21
Ga.	1,288	1,459	7,122	14	-	12,288	11,558	U	15	2	14
Fla.	3,982	4,926	13,940	13	-	10,718	11,629	78	30	30	15
E.S. CENTRAL	1,136	1,391	16,621	29	14	17,636	23,135	384	670	30	37
Ky.	174	179	3,789	5	2	2,325	2,643	17	21	3	8
Tenn.	444	561	7,271	12	12	6,256	7,717	308	647	14	15
Ala.	325	375	4,663	7	-	7,448	9,720	3	2	2	5
Miss.	193	276	U	5	-	1,607	3,055	56	U	11	9
W.S. CENTRAL	3,320	3,694	10,673	31	5	11,070	30,767	275	158	3	12
Ark.	145	166	-	9	2	2,220	2,900	3	3	-	5
La.	787	602	3,891	5	2	4,315	6,925	117	100	-	2
Okla.	138	173	4,349	4	-	2,707	3,092	69	28	3	3
Tex.	2,250	2,753	2,433	13	1	1,828	17,850	86	27	-	2
MOUNTAIN	984	1,328	6,711	77	26	4,264	5,215	370	U	23	82
Mont.	14	14	-	7	-	15	40	11	10	1	4
Idaho	23	31	882	18	5	60	76	88	33	-	2
Wyo.	3	8	350	-	2	16	29	113	115	3	7
Colo.	301	454	-	26	5	1,043	1,682	31	42	7	30
N. Mex.	56	111	U	4	-	512	590	38	34	1	4
Ariz.	287	350	3,631	N	11	2,165	1,903	41	18	7	7
Utah	104	87	825	12	-	160	131	40	10	2	12
Nev.	196	273	1,023	10	3	293	764	8	9	2	16
PACIFIC	5,764	7,776	32,106	121	50	10,752	16,324	242	491	33	74
Wash.	383	576	5,076	25	5	1,114	1,473	35	122	3	12
Oreg.	266	256	U	42	17	269	453	4	32	-	-
Calif.	5,013	6,733	22,672	51	23	8,903	13,655	89	327	28	57
Alaska	14	50	629	3	-	251	398	2	1	1	-
Hawaii	88	161	724	N	5	215	345	112	9	1	5
Guam	4	-	114	N	-	26	74	1	4	-	1
P.R.	1,057	1,615	N	12	U	167	335	72	125	-	-
V.I.	14	25	N	N	U	-	-	-	-	-	-
Amer. Samoa	-	-	-	N	U	-	14	-	-	-	-
C.N.M.I.	-	-	N	N	U	11	30	-	5	-	-

N: Not notifiable U: Unavailable -: no reported cases C.N.M.I.: Commonwealth of Northern Mariana Islands

*Updated monthly to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention, last update June 25, 1996.
†National Electronic Telecommunications System for Surveillance.
§Public Health Laboratory Information System.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending July 27, 1996, and July 29, 1995 (30th Week)

Reporting Area	Lyme Disease		Malaria		Meningococcal Disease		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal	
	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995
UNITED STATES	3,895	5,079	684	657	2,129	1,985	5,899	9,379	10,386	11,445	3,213	4,599
NEW ENGLAND	1,152	969	31	28	91	96	98	216	233	276	400	936
Maine	10	3	6	3	12	6	-	2	4	11	53	20
N.H.	9	16	1	1	3	16	1	1	8	9	40	101
Vt.	6	6	2	1	3	6	-	-	1	2	99	119
Mass.	97	61	11	9	34	33	42	38	109	147	63	306
R.I.	185	150	3	2	9	4	1	1	24	27	29	179
Conn.	845	733	8	12	30	31	54	174	87	80	116	211
MID. ATLANTIC	2,291	3,347	162	181	187	263	240	486	1,788	2,469	442	1,202
Upstate N.Y.	1,383	1,646	45	36	56	73	40	47	215	283	241	699
N.Y. City	173	252	79	90	29	36	71	212	995	1,424	-	-
N.J.	94	906	28	41	49	64	73	106	393	410	79	224
Pa.	641	543	10	14	53	90	56	121	185	352	122	279
E.N. CENTRAL	32	200	79	93	287	289	803	1,616	1,124	1,117	37	40
Ohio	23	13	8	5	109	85	285	529	167	160	4	4
Ind.	9	9	7	12	45	40	135	168	106	104	1	5
Ill.	-	13	35	52	76	77	272	629	638	595	6	6
Mich.	-	5	20	13	30	52	U	170	156	217	15	18
Wis.	U	160	9	11	27	35	111	120	57	41	11	7
W.N. CENTRAL	64	59	18	16	165	115	215	474	260	347	326	216
Minn.	13	-	7	3	22	18	27	26	50	87	16	11
Iowa	12	7	2	2	32	22	13	28	39	41	157	76
Mo.	18	32	6	5	69	44	154	402	114	130	15	22
N. Dak.	-	-	-	1	3	1	-	-	3	2	44	22
S. Dak.	-	-	-	1	8	5	-	-	14	13	76	57
Nebr.	-	4	1	3	13	8	6	9	13	17	3	1
Kans.	21	16	2	1	18	17	15	9	27	57	15	27
S. ATLANTIC	214	346	149	125	470	321	2,140	2,369	1,935	2,042	1,576	1,248
Del.	36	30	2	1	3	5	23	8	20	36	39	70
Md.	103	225	31	32	43	29	340	249	172	228	378	247
D.C.	1	1	7	11	7	4	95	70	80	62	8	10
Va.	19	30	21	26	35	41	252	362	149	146	328	245
W. Va.	7	16	2	1	11	7	1	8	33	49	64	71
N.C.	31	26	11	11	55	53	605	660	272	241	406	284
S.C.	3	8	8	-	43	41	237	358	203	190	50	84
Ga.	1	7	14	14	109	63	355	445	390	373	178	168
Fla.	13	3	53	29	164	78	232	209	616	717	125	69
E.S. CENTRAL	37	31	17	11	118	127	1,452	1,844	777	779	121	155
Ky.	10	7	2	1	20	34	79	113	146	173	29	14
Tenn.	14	15	8	4	15	42	554	474	249	263	42	59
Ala.	3	1	3	5	44	28	309	363	255	218	48	78
Miss.	10	8	4	1	39	23	510	894	127	125	2	4
W.S. CENTRAL	51	64	14	16	241	236	618	1,856	1,352	1,462	39	493
Ark.	14	6	-	2	28	24	105	283	111	126	13	33
La.	1	2	2	1	44	35	325	624	59	134	13	22
Okla.	3	25	-	1	23	24	114	111	106	124	13	24
Tex.	33	31	12	12	146	153	74	838	1,076	1,078	-	414
MOUNTAIN	5	5	31	37	120	147	78	142	330	346	U	86
Mont.	-	-	3	3	4	2	-	4	14	10	14	29
Idaho	2	-	-	1	18	7	2	-	5	8	-	-
Wyo.	2	3	3	-	3	5	2	-	3	1	18	21
Colo.	-	-	14	17	20	38	23	80	45	25	22	-
N. Mex.	-	1	1	4	21	26	1	5	52	50	3	3
Ariz.	-	-	4	6	33	45	45	21	134	168	16	25
Utah	1	-	4	4	12	11	2	4	34	19	2	7
Nev.	-	1	2	2	9	13	3	28	43	65	3	1
PACIFIC	49	58	183	150	450	391	255	376	2,587	2,607	194	223
Wash.	4	4	12	13	65	66	3	9	132	159	-	4
Oreg.	9	7	13	9	80	71	5	18	49	67	-	1
Calif.	35	47	151	118	298	246	246	348	2,271	2,234	186	211
Alaska	-	-	2	1	5	5	-	1	40	47	8	7
Hawaii	1	-	5	9	2	3	1	-	95	100	-	-
Guam	-	-	-	1	1	2	3	5	35	71	-	-
P.R.	-	-	-	1	4	15	81	167	63	85	29	31
V.I.	-	-	-	2	-	-	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	3	-	-
C.N.M.I.	-	-	-	1	-	-	1	1	-	23	-	-

N: Not notifiable U: Unavailable -: no reported cases

TABLE III. Cases of selected notifiable diseases preventable by vaccination, United States, weeks ending July 27, 1996, and July 29, 1995 (30th Week)

Reporting Area	*H. influenzae*, invasive		Hepatitis (viral), by type				Measles (Rubeola)			
			A		B		Indigenous		Imported†	
	Cum. 1996*	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	1996	Cum. 1996	1996	Cum. 1996
UNITED STATES	717	714	15,221	15,906	5,285	5,731	8	290	-	21
NEW ENGLAND	17	28	183	150	102	135	-	8	-	3
Maine	-	3	12	17	2	6	-	-	-	-
N.H.	8	7	9	7	8	13	-	-	-	-
Vt.	-	2	4	4	6	2	-	1	-	-
Mass.	8	8	94	62	33	46	-	6	-	3
R.I.	1	3	8	18	6	8	-	-	-	-
Conn.	-	5	56	42	47	60	-	1	-	-
MID. ATLANTIC	110	98	924	1,000	757	828	-	15	-	5
Upstate N.Y.	33	24	237	226	212	210	-	-	-	-
N.Y. City	20	25	357	491	367	270	-	6	-	3
N.J.	34	11	204	141	99	216	-	-	-	-
Pa.	23	38	126	142	79	132	-	9	-	2
E.N. CENTRAL	112	129	1,273	1,941	544	649	-	6	-	3
Ohio	66	65	521	1,106	79	73	-	2	-	-
Ind.	7	17	181	92	93	123	-	-	-	-
Ill.	27	29	238	395	117	170	-	2	-	1
Mich.	7	16	239	221	221	235	-	1	-	2
Wis.	5	2	94	127	34	48	-	1	-	-
W.N. CENTRAL	28	53	1,204	1,069	245	360	1	17	-	1
Minn.	15	28	70	110	31	32	1	14	-	1
Iowa	5	2	229	57	56	28	-	-	-	-
Mo.	5	16	564	760	124	255	-	2	-	-
N. Dak.	-	-	28	17	-	4	-	-	-	-
S. Dak.	1	1	37	25	-	2	-	-	-	-
Nebr.	1	3	130	29	11	18	-	-	-	-
Kans.	1	3	146	71	23	21	-	1	-	-
S. ATLANTIC	172	143	676	643	846	762	-	3	-	3
Del.	2	-	8	8	6	6	-	1	-	-
Md.	40	51	119	119	179	151	-	2	-	-
D.C.	5	-	19	16	27	13	-	-	-	-
Va.	6	19	90	106	87	59	-	-	-	2
W. Va.	6	6	12	11	14	29	-	-	-	-
N.C.	20	22	80	68	213	176	-	-	-	-
S.C.	4	-	31	25	48	33	-	-	-	-
Ga.	71	41	49	50	8	62	-	-	-	1
Fla.	18	4	268	240	264	233	-	-	-	-
E.S. CENTRAL	18	6	873	970	442	540	-	-	-	-
Ky.	4	1	17	32	35	49	-	-	-	-
Tenn.	7	-	589	814	258	424	-	-	-	-
Ala.	6	4	119	53	39	67	-	-	-	-
Miss.	1	1	148	71	110	-	U	-	U	-
W.S. CENTRAL	30	37	3,192	1,782	739	666	4	17	-	2
Ark.	-	5	295	221	49	31	-	-	-	-
La.	3	1	91	53	64	110	-	-	-	-
Okla.	25	18	1,298	454	59	93	-	-	-	-
Tex.	2	13	1,508	1,054	567	432	4	17	-	2
MOUNTAIN	71	81	2,452	2,427	622	493	3	89	-	1
Mont.	-	-	76	61	6	16	-	-	-	-
Idaho	1	2	142	216	64	56	-	1	-	-
Wyo.	35	4	28	74	23	16	U	-	U	-
Colo.	7	9	245	295	72	73	-	6	-	1
N. Mex.	8	11	268	526	210	190	1	8	-	-
Ariz.	9	20	995	660	157	71	-	8	-	-
Utah	6	9	552	483	64	44	2	61	-	-
Nev.	5	26	146	112	26	27	-	5	-	-
PACIFIC	159	139	4,444	5,924	988	1,298	-	135	-	3
Wash.	2	7	320	429	58	104	-	45	-	-
Oreg.	21	20	553	1,502	39	80	-	4	-	-
Calif.	133	109	3,494	3,859	877	1,094	-	22	-	2
Alaska	1	-	28	27	6	8	-	63	-	-
Hawaii	2	3	49	107	8	12	-	1	-	1
Guam	-	-	2	3	-	4	U	-	U	-
P.R.	1	2	51	51	175	337	-	7	-	-
V.I.	-	-	-	6	-	12	U	-	U	-
Amer. Samoa	-	-	-	5	-	-	U	-	U	-
C.N.M.I.	10	10	1	21	5	10	U	-	U	-

N: Not notifiable U: Unavailable -: no reported cases

*Of 164 cases among children aged <5 years, serotype was reported for 35 and of those, 10 were type b.

†For imported measles, cases include only those resulting from importation from other countries.

TABLE III. (Cont'd.) Cases of selected notifiable diseases preventable by vaccination, United States, weeks ending July 27, 1996, and July 29, 1995 (30th Week)

Reporting Area	Measles (Rubeola), cont'd. Total		Mumps			Pertussis			Rubella		
	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995
UNITED STATES	311	248	6	368	538	170	1,991	1,856	60	172	87
NEW ENGLAND	11	8	-	-	10	45	410	257	-	12	35
Maine	-	-	-	-	4	3	16	18	-	-	-
N.H.	-	-	-	-	1	19	40	23	-	-	1
Vt.	1	-	-	-	-	-	11	36	-	2	-
Mass.	9	2	-	-	2	23	340	169	-	8	7
R.I.	-	5	-	-	-	-	-	1	-	-	-
Conn.	1	1	-	-	3	-	3	10	-	2	27
MID. ATLANTIC	20	5	1	57	79	9	145	151	1	7	11
Upstate N.Y.	-	-	1	18	19	2	74	71	1	4	3
N.Y. City	9	-	-	13	8	-	21	27	-	1	6
N.J.	-	5	-	2	13	-	5	11	-	2	2
Pa.	11	-	-	24	39	7	45	42	-	-	-
E.N. CENTRAL	9	13	-	70	90	7	201	208	-	3	2
Ohio	2	1	-	28	26	4	93	52	-	-	-
Ind.	-	-	-	5	7	-	19	18	-	-	-
Ill.	3	1	-	18	26	1	64	38	-	1	-
Mich.	3	5	-	18	31	2	20	33	-	2	2
Wis.	1	6	-	1	-	-	5	67	-	-	-
W.N. CENTRAL	18	2	1	7	32	1	84	105	-	1	-
Minn.	15	-	-	3	2	1	55	27	-	-	-
Iowa	-	-	-	-	8	-	3	5	-	1	-
Mo.	2	1	-	1	18	-	16	34	-	-	-
N. Dak.	-	-	-	2	-	-	1	6	-	-	-
S. Dak.	-	-	-	-	-	-	2	7	-	-	-
Nebr.	-	-	-	-	4	-	3	7	-	-	-
Kans.	1	1	1	1	-	-	4	19	-	-	-
S. ATLANTIC	6	11	3	56	84	11	245	157	59	89	6
Del.	1	-	-	-	-	-	10	8	-	-	-
Md.	2	1	1	16	27	2	84	19	-	-	1
D.C.	-	-	-	-	-	-	-	4	-	1	-
Va.	2	-	1	8	15	-	26	10	-	2	-
W. Va.	-	-	-	-	-	-	2	-	-	-	-
N.C.	-	-	-	11	16	-	36	73	59	75	-
S.C.	-	-	-	5	7	2	21	15	-	1	-
Ga.	1	2	-	2	6	-	13	11	-	-	-
Fla.	-	8	1	14	13	7	53	17	-	10	5
E.S. CENTRAL	-	-	-	17	7	1	57	90	-	2	-
Ky.	-	-	-	-	-	-	26	10	-	-	-
Tenn.	-	-	-	2	-	1	17	50	-	-	-
Ala.	-	-	-	3	4	-	9	30	-	2	-
Miss.	-	-	-	12	3	-	5	-	N	N	N
W.S. CENTRAL	19	20	-	16	38	3	56	141	-	2	7
Ark.	-	2	-	-	5	-	3	22	-	-	-
La.	-	18	-	11	8	1	6	10	-	1	-
Okla.	-	-	-	-	-	2	7	17	-	-	-
Tex.	19	-	-	5	25	-	40	92	-	1	7
MOUNTAIN	90	68	-	21	24	14	208	373	-	6	4
Mont.	-	-	-	-	1	5	11	3	-	-	-
Idaho	1	-	-	-	2	-	74	82	-	2	-
Wyo.	-	-	-	-	-	1	2	1	-	-	-
Colo.	7	26	-	2	-	7	43	55	-	2	-
N. Mex.	8	31	N	N	N	1	34	59	-	-	-
Ariz.	8	10	-	1	2	-	11	135	-	1	3
Utah	61	-	-	2	11	-	11	16	-	-	1
Nev.	5	1	-	16	8	-	22	22	-	1	-
PACIFIC	138	121	1	124	174	79	585	374	-	50	22
Wash.	45	17	-	18	10	6	222	78	-	1	-
Oreg.	4	1	-	-	-	1	29	21	-	1	-
Calif.	24	101	1	87	148	71	321	238	-	45	18
Alaska	63	-	-	2	12	-	2	-	-	-	-
Hawaii	2	2	-	17	4	1	11	37	-	3	4
Guam	-	-	U	3	3	U	-	2	U	-	1
P.R.	7	3	-	1	2	-	1	1	-	-	-
V.I.	-	-	U	-	3	U	-	-	U	-	-
Amer. Samoa	-	-	U	-	-	U	-	-	U	-	-
C.N.M.I.	-	-	U	-	-	U	-	-	U	-	-

N: Not notifiable U: Unavailable -: no reported cases

TABLE IV. Deaths in 121 U.S. cities,* week ending July 27, 1996 (30th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	489	340	87	38	14	10	21
Boston, Mass.	126	78	26	11	7	4	5
Bridgeport, Conn.	23	14	7	1	1	-	2
Cambridge, Mass.	23	17	3	2	1	-	1
Fall River, Mass.	18	18	-	-	-	-	-
Hartford, Conn.	44	28	10	4	1	1	-
Lowell, Mass.	22	19	1	2	-	-	-
Lynn, Mass.	14	11	2	1	-	-	2
New Bedford, Mass.	19	17	-	1	-	1	-
New Haven, Conn.	46	31	9	5	1	-	2
Providence, R.I.	41	27	10	1	3	-	-
Somerville, Mass.	9	7	2	-	-	-	1
Springfield, Mass.	32	23	3	4	-	2	-
Waterbury, Conn.	19	11	6	2	-	-	3
Worcester, Mass.	53	39	8	4	-	2	5
MID. ATLANTIC	2,404	1,579	481	243	46	54	98
Albany, N.Y.	51	36	9	5	-	1	3
Allentown, Pa.	25	21	3	1	-	-	-
Buffalo, N.Y.	102	70	20	7	3	2	5
Camden, N.J.	42	28	8	2	3	1	4
Elizabeth, N.J.	10	5	4	1	-	-	-
Erie, Pa.§	45	32	8	3	2	-	1
Jersey City, N.J.	50	29	11	6	-	4	1
New York City, N.Y.	1,244	791	268	141	17	27	32
Newark, N.J.	81	34	25	14	4	3	8
Paterson, N.J.	20	9	7	1	-	3	2
Philadelphia, Pa.	400	278	69	41	6	6	21
Pittsburgh, Pa.§	43	32	8	1	1	1	3
Reading, Pa.	9	7	1	1	-	-	2
Rochester, N.Y.	116	86	14	9	3	4	8
Schenectady, N.Y.	18	18	-	-	-	-	-
Scranton, Pa.§	27	20	4	2	1	-	1
Syracuse, N.Y.	74	52	14	2	5	1	5
Trenton, N.J.	28	17	5	5	-	1	2
Utica, N.Y.	19	14	3	1	1	-	-
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	2,046	1,373	395	175	52	49	136
Akron, Ohio	34	24	9	1	-	-	-
Canton, Ohio	27	27	-	-	-	-	7
Chicago, Ill.	447	275	91	52	13	14	35
Cincinnati, Ohio	132	88	30	7	2	5	16
Cleveland, Ohio	159	105	32	18	3	1	3
Columbus, Ohio	171	112	38	11	7	3	16
Dayton, Ohio	116	85	16	9	5	1	15
Detroit, Mich.	193	91	62	28	3	9	3
Evansville, Ind.	46	35	6	3	2	-	2
Fort Wayne, Ind.	62	42	15	3	1	1	4
Gary, Ind.	10	4	5	1	-	-	1
Grand Rapids, Mich.	50	40	3	5	1	1	3
Indianapolis, Ind.	192	144	29	9	5	5	3
Madison, Wis.	U	U	U	U	U	U	U
Milwaukee, Wis.	103	71	19	8	4	1	5
Peoria, Ill.	44	35	4	2	-	3	5
Rockford, Ill.	56	37	11	5	2	1	10
South Bend, Ind.	62	50	5	4	2	1	2
Toledo, Ohio	90	70	8	7	2	3	4
Youngstown, Ohio	52	38	12	2	-	-	2
W.N. CENTRAL	770	539	131	52	25	15	41
Des Moines, Iowa	55	42	9	3	1	-	7
Duluth, Minn.	41	34	4	2	-	1	-
Kansas City, Kans.	27	16	9	2	-	-	-
Kansas City, Mo.	95	64	11	7	1	4	6
Lincoln, Nebr.	43	38	5	-	-	-	1
Minneapolis, Minn.	193	135	32	14	10	2	18
Omaha, Nebr.	80	51	18	1	5	5	2
St. Louis, Mo.	119	78	20	14	5	2	-
St. Paul, Minn.	45	34	7	3	1	-	4
Wichita, Kans.	72	47	16	6	2	1	3
S. ATLANTIC	1,103	671	230	132	42	28	45
Atlanta, Ga.	153	87	38	22	4	2	2
Baltimore, Md.	162	93	35	22	11	1	17
Charlotte, N.C.	69	41	14	6	2	6	1
Jacksonville, Fla.	116	74	24	8	4	6	1
Miami, Fla.	107	63	25	13	5	1	-
Norfolk, Va.	50	33	5	8	2	2	6
Richmond, Va.	63	41	15	4	2	1	2
Savannah, Ga.	44	35	3	5	-	1	5
St. Petersburg, Fla.	44	30	5	6	1	2	1
Tampa, Fla.	144	94	34	12	1	3	5
Washington, D.C.	137	73	32	24	5	3	5
Wilmington, Del.	14	7	-	2	5	-	-
E.S. CENTRAL	747	491	148	72	26	9	38
Birmingham, Ala.	120	75	24	15	4	1	3
Chattanooga, Tenn.	87	64	13	8	1	1	5
Knoxville, Tenn.	78	56	12	6	2	2	6
Lexington, Ky.	78	52	17	6	1	2	8
Memphis, Tenn.	188	121	38	16	12	1	8
Mobile, Ala.	42	32	4	3	2	1	-
Montgomery, Ala.	31	24	4	2	1	-	2
Nashville, Tenn.	123	67	36	16	3	1	6
W.S. CENTRAL	1,385	866	294	160	40	25	69
Austin, Tex.	80	46	22	10	2	-	7
Baton Rouge, La.	32	20	4	7	1	-	2
Corpus Christi, Tex.	45	27	10	6	2	-	-
Dallas, Tex.	182	101	39	31	6	5	1
El Paso, Tex.	60	39	17	3	1	-	2
Ft. Worth, Tex.	107	76	20	5	2	4	1
Houston, Tex.	359	210	78	51	13	7	31
Little Rock, Ark.	81	53	19	8	1	-	1
New Orleans, La.	70	35	20	8	5	2	-
San Antonio, Tex.	175	118	39	12	3	3	11
Shreveport, La.	87	66	11	4	2	4	6
Tulsa, Okla.	107	75	15	15	2	-	7
MOUNTAIN	817	535	156	81	25	20	35
Albuquerque, N.M.	82	58	12	7	5	-	2
Colo. Springs, Colo.	45	30	10	4	1	-	1
Denver, Colo.	98	62	16	13	3	4	5
Las Vegas, Nev.	190	114	57	11	4	4	5
Ogden, Utah	28	23	2	1	1	1	2
Phoenix, Ariz.	146	84	25	24	5	8	6
Pueblo, Colo.	31	23	7	1	-	-	2
Salt Lake City, Utah	92	64	14	10	2	2	3
Tucson, Ariz.	105	77	13	10	4	1	9
PACIFIC	1,930	1,312	327	185	60	43	172
Berkeley, Calif.	13	10	1	1	1	-	5
Fresno, Calif.	99	65	15	11	2	5	10
Glendale, Calif.	35	24	9	2	-	-	2
Honolulu, Hawaii	89	64	17	6	1	1	4
Long Beach, Calif.	73	49	15	6	2	1	15
Los Angeles, Calif.	588	387	105	63	22	11	30
Pasadena, Calif.	27	17	5	1	2	2	4
Portland, Oreg.	151	103	23	16	6	2	12
Sacramento, Calif.	155	102	21	22	6	4	15
San Diego, Calif.	99	60	21	12	4	1	9
San Francisco, Calif.	125	87	20	12	3	3	17
San Jose, Calif.	176	118	33	16	6	3	25
Santa Cruz, Calif.	25	13	8	3	1	-	3
Seattle, Wash.	110	87	12	4	3	4	3
Spokane, Wash.	58	44	8	6	-	-	11
Tacoma, Wash.	107	82	14	4	1	6	7
TOTAL	11,691¶	7,706	2,249	1,138	330	253	655

U: Unavailable -: no reported cases

*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.

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