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Bronchoscopy-Related Infections and Pseudoinfections — New York, 1996 and 1998

Bronchoscopy is a useful diagnostic technique that can be performed safely by trained specialists when the bronchoscopes in both inpatient and ambulatory-care settings are reprocessed properly to prevent transmission of infection. The New York State Department of Health received reports of three clusters of culture-positive bronchoscopy specimens obtained in 1996 and 1998 from patients at local health-care facilities. This report summarizes the results of investigations of these clusters, which indicated involvement of *Mycobacterium tuberculosis, M. intracellulare,* or imipenem-resistant *Pseudomonas aeruginosa*. Between patient uses, bronchoscopes had been cleaned, visually inspected, leak tested, and processed by STERIS System 1 processors (STERIS, Mentor, Ohio)*.

Cluster 1

During November–December 1996, bronchial specimens from five patients at a health-care facility yielded *M. tuberculosis* with the same restriction fragment length polymorphism (RFLP) pattern suggesting a common source. The index case-patient had tuberculosis with persistent acid-fast bacillus (AFB) smear- and culture-positive specimens. The four subsequent case-patients had no clinical evidence of tuberculosis, although one had a positive tuberculin skin test 6 weeks postbronchoscopy and was treated with isoniazid. Investigators concluded that all specimens from the four patients were contaminated but could not determine whether contamination occurred during the bronchoscopy or in the mycobacteriology laboratory. Specimens from three of the four case-patients were processed in the laboratory on the same day as the index case-patient's specimen.

The bronchoscopies were performed using three Olympus BF-P20D (Olympus America, Inc., Melville, New York) bronchoscopes, each processed in the same STERIS System 1 processor. Cultures from all three bronchoscopes, taken 5 weeks after the last case procedure, were negative. The same cleaning brushes used on all three bronchoscopes also were culture negative. Investigators identified an inconsistency between the disinfection/sterilization procedures recommended in the STERIS manual

*Use of trade names and commercial sources is for identification only and does not imply endorsement by CDC or the U.S. Department of Health and Human Services.

Bronchoscopy-Related Infections — Continued

and those followed by the facility personnel—the biopsy port cap was not replaced before loading for cleaning in the STERIS System 1 processor. The bronchoscope manufacturer did not provide recommendations for processing in the STERIS System 1, but the manual suggests removal of the biopsy port cap before cleaning and replacing it immediately before the next use. At the investigators' request, the STERIS device testing program performed pressure and flow studies with the biopsy port cap removed and observed a 50% flow reduction and a 25% flow pressure reduction. Therefore, STERIS could not assure bronchoscope sterility when the biopsy port cap was not replaced before processing, as specified in the STERIS manual.

Cluster 2

During March–April 1998, an increase in positive bronchial specimens for *M. avium-intracellulare* (MAI) occurred among patients in an ambulatory surgery unit (ASU) at a health-care facility. Seven cases without clinical evidence of MAI were identified over a 2-month period compared with two MAI cases during the preceding 8 months. All seven patients had undergone bronchoscopy in the same ASU with the same bronchoscope. Typing by polymerase chain reaction restriction enzyme analysis indicated that all of the isolates from the ASU bronchoscopy-associated patients were *M. intracellulare* (nontypable), and all of the isolates from the environmental and control patients with previously diagnosed atypical mycobacterial disease were *M. avium.* Mycobacterial cultures of the implicated bronchoscope, taken 12 days after diagnosis of the last MAI case, were negative.

The bronchoscope used was an Olympus BF-P20D model and was processed in a STERIS System 1. Olympus connectors were used for processing the bronchoscope in the STERIS System 1 rather than the connector kit and methods specifically developed by STERIS.

Cluster 3

During August–October 1998, 18 patients (11 inpatients and seven outpatients) at a health-care facility had bronchial specimens that grew imipenem-resistant *P. aeruginosa* (IRPA). None of the 18 patients had IRPA isolated from sputum cultures obtained before bronchoscopy. At least three patients had persistent infection with IRPA with an associated clinical illness postbronchoscopy. All but one of the isolates from the 18 patients had identical DNA patterns by pulsed-field gel electrophoresis analysis.

In July 1998, the facility began processing bronchoscopes and other endoscopes using a STERIS System 1 processor. The facility used Pentax (Pentax, Orangeburg, New York) and Olympus bronchoscopes but did not document the specific bronchoscope used on each patient. Neither the Pentax nor the Olympus bronchoscopes were connected to the STERIS System 1 in accordance with the STERIS manufacturer's recommendations. The person responsible for cleaning and disinfecting the endoscopes had received training at the STERIS Corporation; however, the specific scopes used at the facility were not demonstrated during the training.

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Bronchoscopy-Related Infections — Continued

Editorial Note: The number of bronchoscopy procedures performed in the United States reached an estimated 497,000 in 1996 (*1*). Although reported infectious complications caused by bronchoscopy are rare (*2*), the incidence is probably underestimated, with many episodes unrecognized or unreported. Most reported bronchoscopy-related outbreaks or pseudo-outbreaks have been associated with inadequate cleaning and disinfection procedures (*3–9*).

The findings in this report identified additional problems related to using automated reprocessing machines. Conflicting recommendations for disinfection/sterilization exist between bronchoscope and reprocessor system manufacturers. Some individual bronchoscope models are not compatible with certain automated reprocessing systems. However, users may not be aware of these incompatibilities unless they make a device-specific inquiry to the manufacturers. Personnel using automated reprocessing machines in these clusters did not receive adequate device-specific training, and the wrong set up or connector systems were used. Inadequate documentation in the third cluster about which bronchoscope was used in which patient prevented traceback of the culture-positive respiratory specimens to a particular bronchoscope.

Bronchoscopes are designed with small lumens, multiple ports with obtuse angles, and linings vulnerable to damage and subsequent biofilm formation, presenting obstacles to proper cleaning and disinfection or sterilization. Manual cleaning and sterilization with chemical agents, such as glutaraldehyde, is the reprocessing method most widely recommended by bronchoscopy equipment manufacturers; however, this process is laborious, time consuming, and poses a chemical contact risk to health-care workers. Thus, many health-care facilities use automated reprocessing machines. These machines can become colonized and cause bronchoscopy-related outbreaks or pseudo-outbreaks (*5–8*).

To address the challenges of reprocessing bronchoscopes, all users should comply with guidelines for cleaning and disinfection/sterilization (*2,10*). The following additional steps should be taken to reduce bronchoscopy-related infections or pseudo-infections. First, bronchoscope users should obtain and review model-specific reprocessing protocols from both bronchoscope and automated reprocessing system manufacturers. Second, bronchoscope and reprocessor system manufacturers should collaborate to develop and validate device- and model-specific high-level disinfection or sterilization protocols. Third, user education should include on-site training and observation during the set up of each bronchoscope model to clarify device- and model-specific differences in procedure. Fourth, instruction manuals provided by both bronchoscopy equipment and automated reprocessing system manufacturers should address procedural differences among varying models of bronchoscopes and highlight proper connector system(s) to be used with their machine. Fifth, connector systems should be clearly labeled (e.g., color coded) to ensure proper selection and use. Finally, quality-control procedures should be developed in each health-care facility to include visual inspection of the bronchoscope, regular testing for bronchoscope integrity, maintenance, and surveillance for unusual clusters of organisms.

Under the Safe Medical Devices Act of 1990, facilities are required to report to the Food and Drug Administration (FDA) instances when endoscopes (including bronchoscopes) and endoscope reprocessing systems may have caused or contributed to serious injury or a patient's death. Questions concerning this mandatory reporting

Bronchoscopy-Related Infections — Continued

requirement can be directed to FDA's Center for Devices and Radiological Health, Office of Surveillance and Biometrics, telephone (310) 827-0360. In addition, health-care workers are requested to report bronchoscopy-related colonization episodes, infection, or pseudoinfection to their state health department, to FDA's MedWatch program, telephone (800) 332-1088, fax (800) 332-0178, or World-Wide Web site, http://www.fda.gov/medwatch, and to CDC's Hospital Infections Program, telephone (404) 639-6413 or fax (404) 639-6459.

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Rubella Outbreak — Westchester County, New York, 1997–1998

Since licensure of rubella vaccines in 1969, the incidence of rubella and congenital rubella syndrome (CRS) in the United States has decreased substantially. Rubella infection during the first trimester of pregnancy can result in miscarriage, stillbirth, or infants with a pattern of birth defects (i.e., CRS) (*1*). One of the national health objectives for 2000 is to eliminate indigenous rubella and CRS (objective 20.1) (*2*). During 1997–1998, 524 cases of rubella were reported in the United States (CDC, unpublished data, 1999). This report describes a rubella outbreak in Westchester County, New York, demonstrates the importance of accurately defining and vaccinating at-risk populations to prevent transmission, and underscores how collaboration with community-based organizations can facilitate the development and implementation of control measures.

During the outbreak, a clinical case of rubella was defined as an illness with an acute onset of generalized maculopapular rash, a temperature of >99 F (>37.2 C), and arthralgia/arthritis, lymphadenopathy, or conjunctivitis. Laboratory confirmation of rubella required a positive serologic test for rubella IgM antibody, a substantial increase

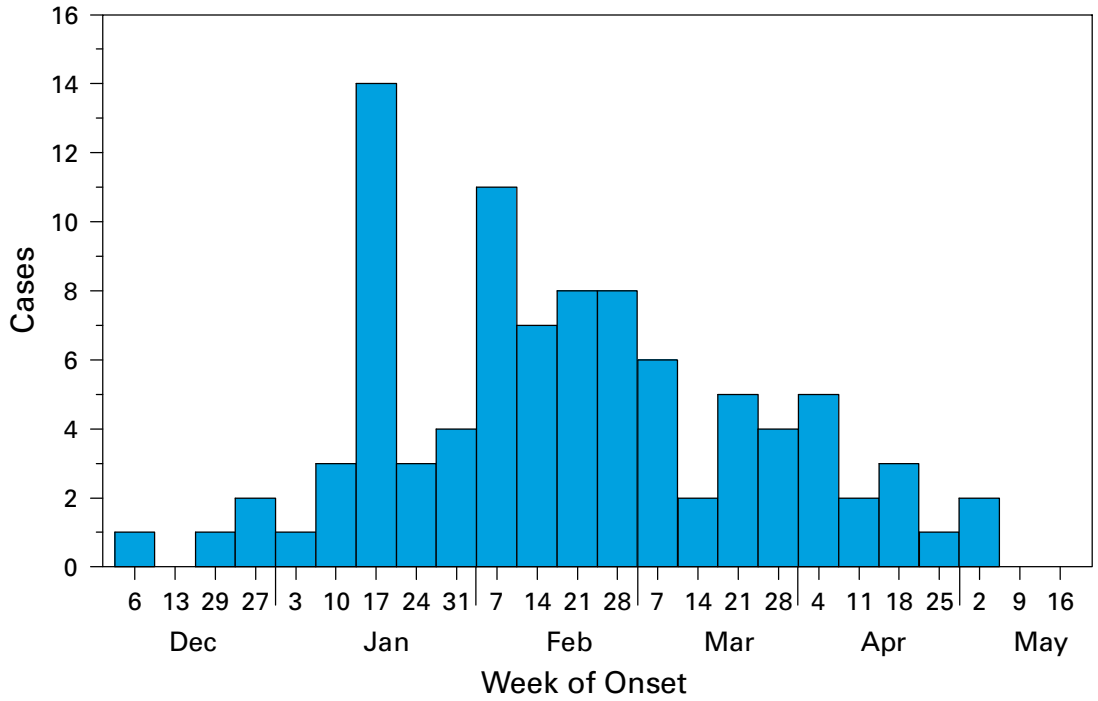
Rubella Outbreak — Continued

in acute- and convalescent-phase titers in serum rubella IgG antibody levels by any standard serologic assay, or isolation of rubella virus (*3*). A confirmed case of rubella required either laboratory confirmation or meeting the clinical case definition and epidemiologic linkage to a laboratory-confirmed case.

From December 1997 through May 1998, 95 confirmed rubella cases were identified in Westchester County (attack rate: 10.7 per 100,000 population); 79 (83%) were laboratory-confirmed and 16 (17%) were linked epidemiologically to a laboratory-confirmed case. During this period, 333 cases were reported in the United States. The outbreak peaked during mid-January and mid-February (Figure 1). The index case-patient in Westchester County was a 23-year-old man from Mexico who first noticed a rash on December 6, 1997. He was exposed previously to a Hispanic co-worker with rubella in Port Chester, New York, who resided in Connecticut, where there was an ongoing rubella outbreak. Port Chester reported 53 (50%) cases; cases were identified in 14 towns, cities, or villages. The outbreak spread through the county along train lines and through work sites.

The median age of case-patients was 23 years (range: 4 months–59 years); 76% were males aged 16–54 years. Of the 22 female patients, 19 were of childbearing age (15–44 years). Of five (26%) pregnant women, three were infected during the first trimester and elected to terminate their pregnancies. The other pregnant women delivered infants with no CRS. Eighty-eight (93%) patients were foreign born; the median time in the United States was 4 years (range: 12 days–26 years). Among foreign-born patients, 34 (39%) were born in Mexico and 31 (35%) in Guatemala. The remaining 23 (27%) patients were born in Colombia, Dominican Republic, El Salvador, Ecuador,

FIGURE 1. Confirmed cases of rubella,* by week of rash onset — Westchester County, New York, December 1997–May 1998



*n=93. Two patients did not have a rash.

Rubella Outbreak — Continued

Nicaragua, or Portugal. None of the patients born outside the United States had received rubella vaccine. Of the seven U.S.-born patients, four were aged ≥29 years with no history of rubella vaccination, and three were aged <1 year and had parents who were born in Latin American countries.

Local health authorities initiated control measures including case and contact investigations, vaccination of contacts and susceptible persons in the community, and increased awareness to screen pregnant women for susceptibility to rubella and asymptomatic infection. Active surveillance for rash illness was conducted at 28 sites in the county, including emergency departments, health departments, and private providers. Health alerts in Spanish and English were sent to all schools and physicians and distributed in Hispanic communities. Although rubella vaccine was available at no cost at the county health department, special clinics, and work sites, only 248 doses were administered during December 6, 1997–February 9, 1998.

To facilitate rubella-control efforts, health department staff identified community leaders and formed partnerships between Hispanic community-based organizations and Hispanic outreach workers from the Westchester County Health Department. These community-based organizations collaborated with the health department to provide targeted educational materials and one-on-one counseling about the importance of rubella vaccination and bilingual personnel for vaccination sites.

The number of sites offering measles, mumps, and rubella (MMR) vaccine was increased by the health department at work sites (e.g., restaurants, landscaping companies, and cleaning services), special vaccination clinics (e.g., churches, day labor pick-up sites, and a mobile van), and at district public health clinics. The number of vaccinations administered increased, and by the end of May 1998, 4539 doses of MMR vaccine had been administered. The last case of rubella associated with the outbreak was identified on May 2, 1998.

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Editorial Note: The rubella outbreak in Westchester County occurred among young Hispanic adults who were born in countries either without national rubella vaccination programs or where such programs were implemented recently. The demographic characteristics of case-patients were similar to those reported in other recent rubella outbreaks in the United States (*4*). Most cases occurred among unvaccinated persons aged ≥20 years and among persons who were foreign born, primarily Hispanics (63% of reported cases in 1997) (CDC, unpublished data, 1998). Previous community outbreaks were localized in close-knit, circumscribed, Hispanic neighborhoods (CDC, unpublished data, 1997). The Westchester County outbreak differed in that it did not remain localized, but spread to 14 towns, cities, and villages and occurred among eight different Hispanic nationalities. The wide distribution of cases and the multiple Hispanic nationalities made it difficult to identify and access the at-risk population for targeted control measures. Factors that may have contributed to the low receipt of rubella vaccine included difficulty identifying who the leaders were in the Hispanic communities, limited demographic information about the Hispanic communities, and the Hispanic communities' distrust of persons affiliated with the government because of immigration concerns.

Rubella Outbreak — Continued

In outbreaks of rubella in foreign-born populations, both prevention and control measures require a culturally sensitive approach. Collaboration between health departments and community-based organizations may be useful in effectively informing and mobilizing the at-risk population.

In recent years, rubella vaccination programs have been introduced throughout the Americas to decrease the morbidity and mortality from rubella infections during pregnancy. However, because these programs were only recently implemented, persons who have entered the United States as adults probably are not vaccinated and may be susceptible to rubella. Further decreases in rubella incidence in the United States will require increased vaccine coverage in susceptible populations.

During rubella outbreaks, vaccination is the most effective preventive measure. In the United States, two doses of MMR vaccine are recommended at age 12–15 months and 4–6 years (*5*). For adults who have not received rubella vaccine, a single dose of a rubella-containing vaccine is considered evidence of immunity (*6*). Reduction in rubella morbidity in Latin America is expected to lower the number of cases imported from this area and indigenous outbreaks in the United States.

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Notice to Readers

Thimerosal in Vaccines: A Joint Statement of the American Academy of Pediatrics and the Public Health Service

The Food and Drug Administration (FDA) Modernization Act of 1997 called for FDA to review and assess the risk of all mercury-containing food and drugs. In line with this review, U.S. vaccine manufacturers responded to a December 1998 and April 1999 FDA request to provide more detailed information about the thimerosal content of their preparations that include this compound as a preservative. Thimerosal has been used as an additive to biologics and vaccines since the 1930s because it is very effective in killing bacteria used in several vaccines and in preventing bacterial contamination, particularly in opened multidose containers. Some but not all of the vaccines recommended routinely for children in the United States contain thimerosal.

Thimerosal in Vaccines — Continued

There is a significant safety margin incorporated into all the acceptable mercury exposure limits. Furthermore, there are no data or evidence of any harm caused by the level of exposure that some children may have encountered in following the existing immunization schedule. Infants and children who have received thimerosal-containing vaccines do not need to be tested for mercury exposure.

The recognition that some children could be exposed to a cumulative level of mercury over the first 6 months of life that exceeds one of the federal guidelines on methyl mercury now requires a weighing of two different types of risks when vaccinating infants. On the one hand, there is the known serious risk of diseases and deaths caused by failure to immunize our infants against vaccine-preventable infectious diseases; on the other, there is the unknown and probably much smaller risk, if any, of neurodevelopmental effects posed by exposure to thimerosal. The large risks of not vaccinating children far outweigh the unknown and probably much smaller risk, if any, of cumulative exposure to thimerosal-containing vaccines over the first 6 months of life.

Nevertheless, because any potential risk is of concern, the Public Health Service (PHS), the American Academy of Pediatrics (AAP), and vaccine manufacturers agree that thimerosal-containing vaccines should be removed as soon as possible. Similar conclusions were reached this year in a meeting attended by European regulatory agencies, European vaccine manufacturers, and FDA, which examined the use of thimerosal-containing vaccines produced or sold in European countries.

PHS and AAP are working collaboratively to assure that the replacement of thimerosal-containing vaccines takes place as expeditiously as possible while at the same time ensuring that our high vaccination coverage levels and their associated low disease levels throughout our entire childhood population are maintained.

The key actions being taken are

1. A formal request to manufacturers for a clear commitment and a plan to eliminate or reduce as expeditiously as possible the mercury content of their vaccines.
2. A review of pertinent data in a public workshop.
3. Expedited FDA review of manufacturers' supplements to their product license applications to eliminate or reduce the mercury content of a vaccine.
4. Provide information to clinicians and public health professionals to enable them to communicate effectively with parents and consumer groups.
5. Monitoring immunization practices, future immunization coverage, and vaccine-preventable disease levels.
6. Studies to better understand the risks and benefits of this safety assessment.

PHS and AAP continue to recommend that all children should be immunized against the diseases indicated in the recommended immunization schedule. Given that the risks of not vaccinating children far outweigh the unknown and much smaller risk, if any, of exposure to thimerosal-containing vaccines over the first 6 months of life, clinicians and parents are encouraged to immunize all infants even if the choice of individual vaccine products is limited for any reason.

While there is a margin of safety with existing vaccines containing thimerosal, there are steps that can be taken to increase that margin even further. Clinicians and parents can take advantage of the flexibility within the existing schedule for infants born to hepatitis B surface antigen (HBsAg)-negative women to postpone the first

Thimerosal in Vaccines — Continued

dose of hepatitis B vaccine from birth until 2 to 6 months of age when the infant is considerably larger. Preterm infants born to HBsAg-negative mothers should similarly receive hepatitis B vaccine, but ideally not until they reach term gestational age and a weight of at least 5.5 lbs (2.5 kg). Because of the substantial risk of disease, there is no change in the recommendations for infants of HBsAg-positive mothers or of mothers whose status is not known. Also, in populations where HBsAg screening of pregnant women is not routinely performed, vaccination of all infants at birth should be maintained, as is currently recommended. In addition to the key actions mentioned above, the PHS Advisory Committee on Immunization Practices and the AAP Committee on Infectious Diseases will be reviewing these issues and may make additional statements.

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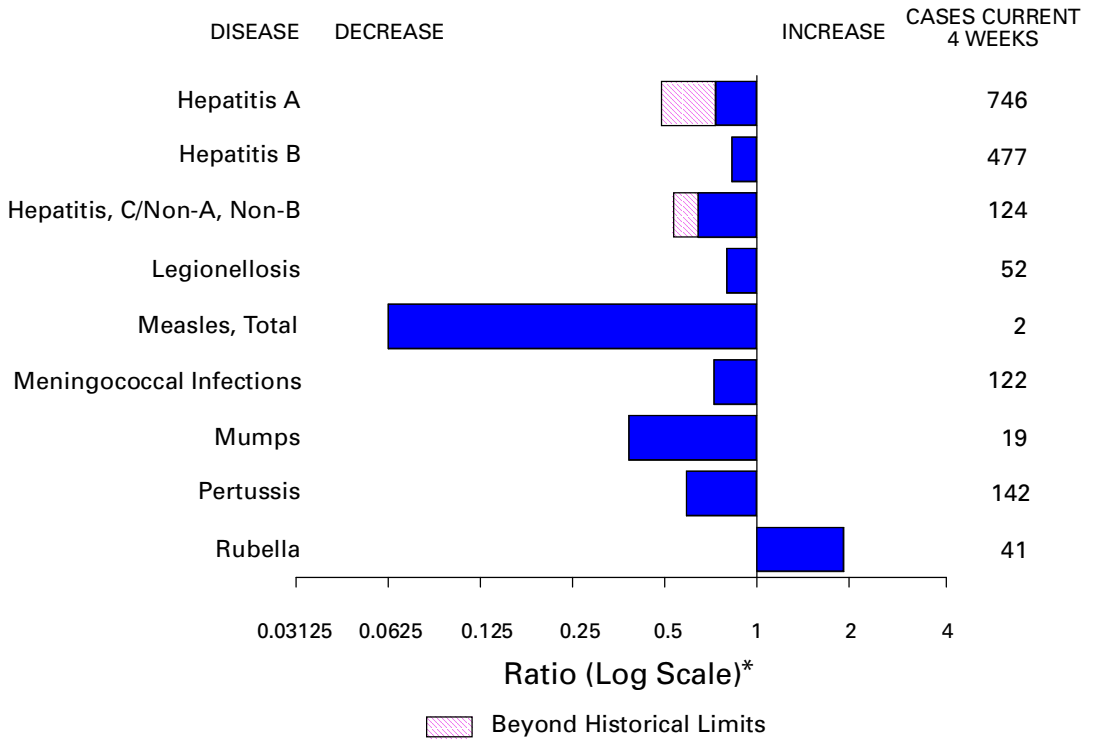
FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending July 3, 1999, with historical data — United States



*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 — provisional cases of selected notifiable diseases, United States, cumulative, week ending July 3, 1999 (26th Week)

	Cum. 1999		Cum. 1999
Anthrax	-	HIV infection, pediatric*§	81
Brucellosis*	17	Plague	2
Cholera	2	Poliomyelitis, paralytic	-
Congenital rubella syndrome	3	Psittacosis*	14
Cyclosporiasis*	11	Rabies, human	-
Diphtheria	-	Rocky Mountain spotted fever (RMSF)	148
Encephalitis: California*	2	Streptococcal disease, invasive Group A	1,152
eastern equine*	2	Streptococcal toxic-shock syndrome*	22
St. Louis*	-	Syphilis, congenital¶	94
western equine*	1	Tetanus	11
Ehrlichiosis human granulocytic (HGE)*	49	Toxic-shock syndrome	63
human monocytic (HME)*	6	Trichinosis	5
Hansen Disease*	40	Typhoid fever	136
Hantavirus pulmonary syndrome*†	7	Yellow fever	-
Hemolytic uremic syndrome, post-diarrheal*	24		

-: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 from reports to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP), last update June 23, 1999.
¶ Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending July 3, 1999, and July 4, 1998 (26th Week)

Reporting Area	AIDS		Chlamydia		Cryptosporidiosis		*Escherichia coli* O157:H7*			
							NETSS		PHLIS	
	Cum. 1999†	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998
UNITED STATES	23,194	23,725	281,030	286,678	661	972	738	820	361	690
NEW ENGLAND	1,120	810	9,555	10,113	32	70	106	116	76	103
Maine	29	18	193	461	10	18	10	10	-	-
N.H.	26	15	458	477	5	3	15	18	8	19
Vt.	6	10	235	194	6	9	12	4	2	4
Mass.	716	372	4,521	4,118	11	36	42	60	39	60
R.I.	61	69	1,181	1,229	-	4	6	3	6	1
Conn.	282	326	2,967	3,634	-	-	21	21	21	19
MID. ATLANTIC	5,913	6,918	34,009	29,954	98	296	46	85	11	29
Upstate N.Y.	725	856	N	N	57	185	40	55	-	-
N.Y. City	3,003	3,888	17,606	13,211	22	100	-	7	3	6
N.J.	1,158	1,215	4,808	5,740	9	11	6	23	8	19
Pa.	1,027	959	11,595	11,003	10	-	N	N	-	4
E.N. CENTRAL	1,502	1,760	40,428	48,935	57	105	122	166	60	136
Ohio	241	339	11,228	13,281	18	39	51	36	8	22
Ind.	191	323	5,280	5,319	9	20	17	51	13	25
Ill.	682	693	13,376	12,834	11	31	28	47	12	31
Mich.	308	305	10,544	10,844	19	15	26	32	14	26
Wis.	80	100	U	6,657	-	-	N	N	13	32
W.N. CENTRAL	537	441	14,443	16,891	51	116	145	97	57	98
Minn.	82	64	3,264	3,435	14	41	47	30	33	43
Iowa	50	49	1,225	2,071	9	20	15	23	6	17
Mo.	261	210	5,099	5,990	11	11	15	13	13	21
N. Dak.	4	4	325	498	4	14	3	2	-	6
S. Dak.	11	9	803	798	3	14	5	6	4	8
Nebr.	39	37	1,258	1,421	9	14	50	14	-	-
Kans.	90	68	2,469	2,678	1	2	10	9	1	3
S. ATLANTIC	6,366	5,825	66,029	54,881	160	89	95	56	46	57
Del.	80	75	1,392	1,241	-	-	2	-	-	1
Md.	720	717	4,848	4,131	7	8	6	12	-	7
D.C.	242	480	826	N	5	3	-	-	-	-
Va.	340	424	7,414	5,454	10	1	29	-	17	24
W. Va.	31	51	1,011	1,171	-	1	4	3	1	2
N.C.	390	389	11,466	10,898	4	-	22	12	16	13
S.C.	588	381	8,635	9,311	-	-	11	2	3	1
Ga.	958	618	15,832	11,919	86	28	6	21	-	-
Fla.	3,017	2,690	14,605	10,604	48	48	15	6	9	9
E.S. CENTRAL	1,034	933	19,520	19,595	8	15	52	51	19	35
Ky.	152	126	3,333	3,051	2	5	14	15	-	-
Tenn.	405	330	6,850	6,412	4	6	23	22	12	23
Ala.	257	274	5,211	5,015	1	-	12	11	6	11
Miss.	220	203	4,126	5,117	1	4	3	3	1	1
W.S. CENTRAL	2,491	2,889	40,943	43,010	33	15	28	31	11	46
Ark.	90	104	3,058	1,812	-	3	5	4	3	4
La.	463	507	7,726	6,732	21	6	3	-	3	2
Okla.	70	170	3,702	4,858	2	3	7	6	5	4
Tex.	1,868	2,108	26,457	29,608	10	3	13	21	-	36
MOUNTAIN	860	816	15,941	15,856	37	65	55	86	27	74
Mont.	4	15	654	632	7	4	4	6	-	2
Idaho	12	15	617	914	2	14	1	10	2	3
Wyo.	3	1	333	329	-	-	3	2	4	16
Colo.	172	146	3,726	3,978	4	3	22	22	12	19
N. Mex.	46	130	1,731	1,878	15	26	3	10	1	6
Ariz.	427	327	6,474	5,409	7	10	11	15	4	11
Utah	80	65	946	1,144	-	1	9	15	2	10
Nev.	116	117	1,460	1,572	2	7	2	6	2	7
PACIFIC	3,371	3,333	40,162	47,443	185	201	89	132	54	112
Wash.	188	230	5,960	5,581	-	-	30	27	26	36
Oreg.	88	94	2,894	2,586	73	22	22	33	14	29
Calif.	3,036	2,930	29,385	37,174	112	176	37	70	13	43
Alaska	13	12	925	950	-	-	-	2	-	-
Hawaii	46	67	998	1,152	-	3	-	-	1	4
Guam	5	-	149	182	-	-	N	N	-	-
P.R.	734	995	U	U	-	-	6	-	U	U
V.I.	15	17	N	N	-	-	N	N	U	U
Amer. Samoa	-	-	U	U	-	-	N	N	U	U
C.N.M.I.	-	-	N	N	-	-	N	N	U	U

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

*Individual cases may be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

†Updated monthly from reports to the Division of HIV/AIDS Prevention–Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention, last update June 23, 1999.

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending July 3, 1999, and July 4, 1998 (26th Week)

Reporting Area	Gonorrhea		Hepatitis C/NA,NB		Legionellosis		Lyme Disease	
	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998
UNITED STATES	151,968	165,675	1,817	1,538	454	541	2,647	3,495
NEW ENGLAND	2,865	2,821	56	44	29	29	475	1,121
Maine	15	31	1	-	4	1	-	18
N.H.	38	46	-	-	3	3	-	16
Vt.	28	13	3	2	4	1	-	4
Mass.	1,261	985	49	40	9	14	260	275
R.I.	304	179	3	2	3	4	77	31
Conn.	1,219	1,567	-	-	6	6	138	777
MID. ATLANTIC	18,889	17,899	86	117	95	122	1,652	1,791
Upstate N.Y.	3,024	3,384	51	59	26	33	819	800
N.Y. City	7,494	5,925	-	-	7	26	6	69
N.J.	2,760	3,548	-	-	5	5	124	327
Pa.	5,611	5,042	35	58	57	58	703	595
E.N. CENTRAL	26,515	32,818	985	283	125	184	49	198
Ohio	6,668	8,169	-	6	41	65	26	19
Ind.	3,049	3,066	1	4	39	31	20	11
Ill.	9,481	10,491	10	27	10	22	2	6
Mich.	7,317	8,269	392	246	32	33	1	8
Wis.	U	2,823	582	-	3	33	U	154
W.N. CENTRAL	5,815	8,241	66	19	23	31	38	29
Minn.	1,208	1,225	2	6	1	3	13	9
Iowa	306	666	-	5	11	5	10	10
Mo.	2,625	4,509	56	6	8	9	-	6
N. Dak.	31	44	-	-	-	-	1	-
S. Dak.	80	127	-	-	1	1	-	-
Nebr.	553	539	3	2	2	11	6	2
Kans.	1,012	1,131	5	-	-	2	8	2
S. ATLANTIC	48,013	44,210	120	54	54	64	290	266
Del.	840	673	-	-	4	7	9	15
Md.	4,186	4,711	29	5	7	15	199	199
D.C.	2,490	1,966	-	-	-	4	1	4
Va.	4,944	3,079	10	5	13	7	22	21
W. Va.	276	391	13	4	N	N	7	5
N.C.	9,750	9,146	25	12	8	6	34	13
S.C.	4,645	6,043	12	2	7	5	4	2
Ga.	10,464	9,717	1	9	-	2	-	2
Fla.	10,418	8,484	30	17	15	17	14	5
E.S. CENTRAL	15,362	18,428	120	80	55	32	44	31
Ky.	1,494	1,753	8	15	44	17	19	10
Tenn.	5,349	5,421	44	62	9	7	13	11
Ala.	4,637	6,346	1	3	2	3	6	10
Miss.	3,882	4,908	67	-	-	5	6	-
W.S. CENTRAL	22,652	25,788	128	278	2	10	7	8
Ark.	1,509	1,988	3	11	-	1	1	5
La.	6,054	5,638	100	10	1	1	-	-
Okla.	1,878	2,635	6	2	1	6	4	-
Tex.	13,211	15,527	19	255	-	2	2	3
MOUNTAIN	4,414	4,214	75	252	27	32	6	3
Mont.	21	23	4	5	-	1	-	-
Idaho	32	83	4	85	-	-	1	1
Wyo.	11	15	25	59	-	1	1	1
Colo.	1,061	1,029	15	13	5	6	-	-
N. Mex.	311	371	4	52	1	2	1	-
Ariz.	2,305	1,951	18	4	4	3	-	-
Utah	89	112	2	18	11	16	1	-
Nev.	584	630	3	16	6	3	2	1
PACIFIC	7,443	11,256	181	411	44	37	86	48
Wash.	1,034	953	8	10	9	5	2	2
Oreg.	411	338	9	10	N	N	5	8
Calif.	5,718	9,571	164	336	34	31	79	37
Alaska	152	157	-	1	1	-	-	1
Hawaii	128	237	-	54	-	1	-	-
Guam	22	24	-	-	-	2	-	-
P.R.	145	210	-	-	-	-	-	-
V.I.	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	-	19	-	-	-	-	-	-

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

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending July 3, 1999, and July 4, 1998 (26th Week)

Reporting Area	Malaria		Rabies, Animal		Salmonellosis*			
					NETSS		PHLIS	
	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998
UNITED STATES	535	595	2,645	3,743	13,207	15,304	9,355	14,287
NEW ENGLAND	21	22	407	688	809	1,010	703	949
Maine	2	3	75	127	58	72	35	29
N.H.	-	3	27	33	44	69	39	101
Vt.	1	-	60	30	33	45	26	39
Mass.	8	14	91	223	474	557	407	552
R.I.	2	2	50	36	49	62	48	37
Conn.	8	-	104	239	151	205	148	191
MID. ATLANTIC	123	172	481	782	1,700	2,604	1,103	2,547
Upstate N.Y.	36	35	307	541	480	585	454	555
N.Y. City	38	101	U	U	377	856	368	788
N.J.	29	21	101	100	332	525	281	459
Pa.	20	15	73	141	511	638	-	745
E.N. CENTRAL	55	58	39	56	1,609	2,688	1,199	1,895
Ohio	9	3	11	38	396	609	117	522
Ind.	8	2	-	4	185	295	127	284
Ill.	18	26	-	6	558	819	399	428
Mich.	18	24	25	6	432	528	380	415
Wis.	2	3	3	2	38	437	176	246
W.N. CENTRAL	23	37	305	397	882	957	729	1,029
Minn.	5	17	52	67	238	248	248	286
Iowa	6	3	65	82	90	159	60	135
Mo.	10	10	9	20	266	261	321	371
N. Dak.	-	2	84	74	15	28	2	45
S. Dak.	-	-	44	92	44	40	26	52
Nebr.	-	1	2	3	105	79	-	20
Kans.	2	4	49	59	124	142	72	120
S. ATLANTIC	152	128	1,043	1,268	2,925	2,641	2,007	2,150
Del.	1	1	29	20	43	30	51	48
Md.	48	44	216	266	336	363	296	396
D.C.	10	10	-	-	39	44	-	-
Va.	30	22	265	336	503	419	371	391
W. Va.	1	-	62	42	43	67	37	71
N.C.	10	12	205	325	450	385	414	444
S.C.	1	4	78	77	172	167	134	147
Ga.	12	15	99	103	453	412	543	439
Fla.	39	20	89	99	886	754	161	214
E.S. CENTRAL	10	16	134	148	696	732	263	627
Ky.	2	2	22	18	161	170	-	89
Tenn.	5	8	48	84	191	218	139	334
Ala.	2	4	64	44	220	189	107	166
Miss.	1	2	-	2	124	155	17	38
W.S. CENTRAL	8	11	54	104	990	1,187	653	1,568
Ark.	-	1	-	19	166	123	76	93
La.	6	4	-	-	159	201	66	287
Okla.	1	1	54	85	145	149	88	58
Tex.	1	5	-	-	520	714	423	1,130
MOUNTAIN	23	32	95	97	1,307	940	802	879
Mont.	3	-	35	29	28	41	1	22
Idaho	1	3	-	-	40	52	35	41
Wyo.	1	-	28	41	15	32	17	27
Colo.	8	7	1	2	384	236	367	228
N. Mex.	2	11	2	2	145	91	79	84
Ariz.	5	5	29	21	414	264	250	269
Utah	2	1	-	2	203	145	-	120
Nev.	1	5	-	-	78	79	53	88
PACIFIC	120	119	87	203	2,289	2,545	1,896	2,643
Wash.	10	9	-	-	221	192	279	320
Oreg.	13	11	1	1	180	141	205	184
Calif.	91	97	80	182	1,687	2,093	1,291	2,012
Alaska	-	-	6	20	21	19	6	15
Hawaii	6	2	-	-	180	100	115	112
Guam	-	1	-	-	18	12	-	-
P.R.	-	-	36	28	184	310	-	-
V.I.	U	U	U	U	-	-	-	-
Amer. Samoa	U	U	U	U	-	-	-	-
C.N.M.I.	-	-	-	-	-	13	-	-

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

*Individual cases may be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

TABLE II. (Cont'd.) Provisional cases of selected notifiable diseases, United States, weeks ending July 3, 1999, and July 4, 1998 (26th Week)

Reporting Area	Shigellosis*				Syphilis (Primary & Secondary)		Tuberculosis	
	NETSS		PHLIS					
	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999†	Cum. 1998†
UNITED STATES	5,833	8,600	2,007	5,235	3,111	3,418	3,992	4,838
NEW ENGLAND	150	211	126	185	30	37	187	224
Maine	3	7	-	-	-	1	10	5
N.H.	7	7	6	9	-	1	4	6
Vt.	4	4	3	-	2	3	-	1
Mass.	95	132	82	124	19	23	106	117
R.I.	14	15	9	12	1	-	19	30
Conn.	27	46	26	40	8	9	48	65
MID. ATLANTIC	384	1,287	185	1,091	126	115	974	1,106
Upstate N.Y.	113	245	31	77	17	18	138	151
N.Y. City	98	419	81	453	57	25	609	655
N.J.	103	392	73	382	16	54	227	300
Pa.	70	231	-	179	36	18	U	U
E.N. CENTRAL	832	1,268	334	642	606	505	428	603
Ohio	256	283	14	67	47	76	U	U
Ind.	54	87	11	24	178	91	U	U
Ill.	312	665	218	528	268	211	252	376
Mich.	162	123	73	4	113	89	137	173
Wis.	48	110	18	19	U	38	39	54
W.N. CENTRAL	514	450	311	196	52	77	241	195
Minn.	84	79	83	84	5	5	95	66
Iowa	7	33	9	27	5	-	26	2
Mo.	361	57	201	39	34	59	84	82
N. Dak.	2	4	-	3	-	-	2	3
S. Dak.	8	22	4	18	-	1	3	14
Nebr.	30	239	-	15	4	4	12	5
Kans.	22	16	14	10	4	8	19	23
S. ATLANTIC	1,106	1,678	239	535	1,013	1,319	815	833
Del.	7	9	2	2	4	15	12	17
Md.	59	98	15	30	201	369	U	U
D.C.	30	11	-	-	42	49	24	58
Va.	40	69	10	28	89	87	104	144
W. Va.	5	7	2	5	2	2	23	24
N.C.	113	142	54	83	243	370	209	204
S.C.	55	78	18	31	125	161	124	161
Ga.	105	453	34	135	156	139	319	225
Fla.	692	811	104	221	151	127	U	U
E.S. CENTRAL	626	426	217	252	573	591	284	405
Ky.	113	77	-	38	46	59	82	95
Tenn.	419	69	197	94	327	285	U	U
Ala.	55	250	19	118	130	135	146	194
Miss.	39	30	1	2	70	112	56	116
W.S. CENTRAL	877	1,695	339	1,883	460	456	752	1,041
Ark.	47	80	21	16	38	60	80	53
La.	76	130	29	159	121	155	U	U
Okla.	267	119	77	30	103	25	63	66
Tex.	487	1,366	212	1,678	198	216	609	922
MOUNTAIN	350	536	152	311	111	127	62	134
Mont.	6	3	-	3	-	-	5	12
Idaho	6	11	3	8	1	-	-	7
Wyo.	2	1	1	-	-	1	1	2
Colo.	52	66	37	49	1	8	U	U
N. Mex.	40	129	13	53	-	18	23	31
Ariz.	197	291	92	178	102	87	U	U
Utah	26	16	-	13	2	3	18	33
Nev.	21	19	6	7	5	10	15	49
PACIFIC	994	1,049	104	140	140	191	249	297
Wash.	52	57	51	58	39	12	82	124
Oreg.	35	64	34	58	2	1	57	58
Calif.	885	904	-	-	96	178	U	U
Alaska	-	4	-	2	1	-	29	26
Hawaii	22	20	19	22	2	-	81	89
Guam	3	20	-	-	-	-	-	39
P.R.	23	28	-	-	82	113	41	80
V.I.	-	-	-	-	U	U	U	U
Amer. Samoa	-	-	-	-	U	U	U	U
C.N.M.I.	-	12	-	-	-	135	-	58

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

*Individual cases may be reported through both the National Electronic Telecommunications System for Surveillance (NETSS) and the Public Health Laboratory Information System (PHLIS).

†Cumulative reports of provisional tuberculosis cases for 1998 and 1999 are unavailable ("U") for some areas using the Tuberculosis Information System (TIMS)

TABLE III. Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending July 3, 1999, and July 4, 1998 (26th Week)

Reporting Area	*H. influenzae*, invasive		Hepatitis (Viral), by type				Measles (Rubeola)					
			A		B		Indigenous		Imported*		Total	
	Cum. 1999†	Cum. 1998	Cum. 1999	Cum. 1998	Cum. 1999	Cum. 1998	1999	Cum. 1999	1999	Cum. 1999	Cum. 1999	Cum. 1998
UNITED STATES	610	610	7,729	11,282	3,179	4,473	1	30	-	14	44	40
NEW ENGLAND	42	41	91	152	53	95	-	5	-	4	9	2
Maine	5	2	4	13	-	2	-	-	-	-	-	-
N.H.	9	6	7	7	8	10	-	-	-	1	1	-
Vt.	4	2	3	13	1	4	-	-	-	-	-	-
Mass.	17	29	30	51	28	36	-	4	-	2	6	2
R.I.	-	2	9	9	16	24	-	-	-	-	-	-
Conn.	7	-	38	59	-	19	-	1	-	1	2	-
MID. ATLANTIC	85	92	510	856	392	640	-	-	-	2	2	11
Upstate N.Y.	49	29	128	166	103	124	-	-	-	2	2	2
N.Y. City	13	28	82	313	89	219	-	-	-	-	-	-
N.J.	23	28	57	160	40	107	-	-	-	-	-	8
Pa.	-	7	243	217	160	190	-	-	-	-	-	1
E.N. CENTRAL	83	98	1,499	1,552	304	498	-	1	-	-	1	15
Ohio	35	34	366	177	45	37	-	-	-	-	-	1
Ind.	14	23	98	89	27	55	-	1	-	-	1	3
Ill.	27	37	220	384	-	133	-	-	-	-	-	-
Mich.	7	-	789	777	231	225	-	-	-	-	-	10
Wis.	-	4	26	125	1	48	-	-	-	-	-	1
W.N. CENTRAL	49	51	374	876	244	209	-	-	-	-	-	-
Minn.	13	37	33	69	19	18	-	-	-	-	-	-
Iowa	13	1	76	355	103	33	-	-	-	-	-	-
Mo.	16	8	195	365	94	129	-	-	-	-	-	-
N. Dak.	-	-	1	3	-	4	U	-	U	-	-	-
S. Dak.	1	-	8	16	1	1	-	-	-	-	-	-
Nebr.	3	-	33	14	10	9	-	-	-	-	-	-
Kans.	3	5	28	54	17	15	U	-	U	-	-	-
S. ATLANTIC	144	112	954	863	571	466	-	1	-	3	4	6
Del.	-	-	2	3	-	-	-	-	-	-	-	1
Md.	33	38	159	175	85	88	-	-	-	-	-	1
D.C.	4	-	32	30	11	6	-	-	-	-	-	-
Va.	12	12	79	129	51	53	-	1	-	2	3	2
W. Va.	4	4	17	1	13	3	-	-	-	-	-	-
N.C.	22	15	65	51	117	110	-	-	-	-	-	-
S.C.	2	3	19	17	38	9	-	-	-	-	-	-
Ga.	38	22	259	247	66	90	-	-	-	-	-	1
Fla.	29	18	322	210	190	107	-	-	-	1	1	1
E.S. CENTRAL	46	37	237	225	235	206	-	-	-	-	-	1
Ky.	6	5	37	14	25	23	-	-	-	-	-	-
Tenn.	25	23	125	127	118	142	-	-	-	-	-	-
Ala.	13	7	36	45	47	41	-	-	-	-	-	1
Miss.	2	2	39	39	45	-	-	-	-	-	-	-
W.S. CENTRAL	34	30	1,415	1,992	298	1,009	-	1	-	2	3	-
Ark.	1	-	26	43	25	49	-	-	-	-	-	-
La.	7	13	59	41	72	47	-	-	-	-	-	-
Okla.	24	15	258	290	67	31	-	-	-	-	-	-
Tex.	2	2	1,072	1,618	134	882	-	1	-	2	3	-
MOUNTAIN	60	77	747	1,725	321	437	-	2	-	-	2	-
Mont.	1	-	12	56	16	3	-	-	-	-	-	-
Idaho	1	-	27	140	16	17	U	-	U	-	-	-
Wyo.	1	-	4	23	5	2	-	-	-	-	-	-
Colo.	9	14	134	129	45	52	-	-	-	-	-	-
N. Mex.	13	4	29	86	110	168	-	-	-	-	-	-
Ariz.	29	39	454	1,059	84	107	-	1	-	-	1	-
Utah	4	3	25	115	17	39	-	1	-	-	1	-
Nev.	2	17	62	117	28	49	U	-	U	-	-	-
PACIFIC	67	72	1,902	3,041	761	913	1	20	-	3	23	5
Wash.	2	4	164	570	33	53	-	-	-	-	-	1
Oreg.	26	30	141	240	50	93	-	8	-	-	8	-
Calif.	32	31	1,585	2,188	661	752	1	11	-	3	14	4
Alaska	5	1	3	14	10	7	-	-	-	-	-	-
Hawaii	2	6	9	29	7	8	-	1	-	-	1	-
Guam	-	-	2	-	2	2	U	1	U	-	1	-
P.R.	1	2	80	25	76	130	-	-	-	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	-	1	-	35	U	-	U	-	-	-

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

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

†Of 127 cases among children aged <5 years, serotype was reported for 58 and of those, 13 were type b.

TABLE III. (Cont'd.) Provisional cases of selected notifiable diseases preventable by vaccination, United States, weeks ending July 3, 1999, and July 4, 1998 (26th Week)

Reporting Area	Meningococcal Disease		Mumps			Pertussis			Rubella		
	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998	1999	Cum. 1999	Cum. 1998
UNITED STATES	1,330	1,582	4	180	406	32	2,539	2,448	3	138	291
NEW ENGLAND	74	69	-	3	1	-	254	450	-	6	37
Maine	5	4	-	-	-	-	-	5	-	-	-
N.H.	10	8	-	1	-	-	53	34	-	-	-
Vt.	4	1	-	-	-	-	9	38	-	-	-
Mass.	45	30	-	2	1	-	176	355	-	6	8
R.I.	2	3	-	-	-	-	8	3	-	-	-
Conn.	8	23	-	-	-	-	8	15	-	-	29
MID. ATLANTIC	117	165	1	22	168	9	577	299	-	17	130
Upstate N.Y.	34	43	-	5	2	3	498	148	-	13	108
N.Y. City	27	20	-	3	153	-	10	14	-	-	9
N.J.	23	39	-	-	5	-	12	8	-	1	12
Pa.	33	63	1	14	8	6	57	129	-	3	1
E.N. CENTRAL	206	244	-	23	49	1	208	229	-	1	-
Ohio	91	82	-	7	19	-	107	72	-	-	-
Ind.	37	43	-	3	5	-	14	61	-	1	-
Ill.	50	69	-	6	8	-	38	26	-	-	-
Mich.	27	26	-	7	17	1	22	32	-	-	-
Wis.	1	24	-	-	-	-	27	38	-	-	-
W.N. CENTRAL	151	133	-	7	20	8	92	176	-	71	29
Minn.	30	24	-	1	10	8	33	100	-	-	-
Iowa	28	19	-	3	6	-	20	43	-	21	-
Mo.	59	52	-	1	3	-	15	13	-	2	2
N. Dak.	3	-	U	-	1	U	-	-	U	-	-
S. Dak.	8	6	-	-	-	-	4	4	-	-	-
Nebr.	9	8	-	-	-	-	1	6	-	48	-
Kans.	14	24	U	2	-	U	19	10	U	-	27
S. ATLANTIC	231	256	1	36	26	4	142	122	3	20	7
Del.	3	1	-	-	-	-	-	1	-	-	-
Md.	35	23	-	3	-	1	39	27	-	1	-
D.C.	1	-	-	2	-	-	-	1	-	-	-
Va.	26	23	-	8	5	-	13	6	-	-	-
W. Va.	4	9	-	-	-	-	1	1	-	-	-
N.C.	27	39	-	8	8	-	35	44	3	19	5
S.C.	28	41	-	3	4	-	8	15	-	-	-
Ga.	41	58	-	2	1	-	16	6	-	-	-
Fla.	66	62	1	10	8	3	30	21	-	-	2
E.S. CENTRAL	108	116	-	1	8	-	43	53	-	1	-
Ky.	29	16	-	-	-	-	3	20	-	-	-
Tenn.	38	41	-	-	1	-	25	17	-	-	-
Ala.	24	40	-	1	4	-	11	14	-	1	-
Miss.	17	19	-	-	3	-	4	2	-	-	-
W.S. CENTRAL	97	186	-	21	35	1	62	150	-	5	70
Ark.	22	23	-	-	-	1	7	16	-	-	-
La.	34	35	-	3	5	-	3	1	-	-	-
Okla.	19	27	-	1	-	-	7	15	-	-	-
Tex.	22	101	-	17	30	-	45	118	-	5	70
MOUNTAIN	89	85	-	12	24	3	248	508	-	14	5
Mont.	2	3	-	-	-	-	2	1	-	-	-
Idaho	8	4	U	1	3	U	93	184	U	-	-
Wyo.	3	3	-	-	1	-	2	7	-	-	-
Colo.	24	17	-	3	3	-	60	120	-	-	-
N. Mex.	11	15	N	N	N	3	27	64	-	-	1
Ariz.	28	30	-	-	5	-	29	88	-	13	1
Utah	8	8	-	5	3	-	33	26	-	-	2
Nev.	5	5	U	3	9	U	2	18	U	1	1
PACIFIC	257	328	2	55	75	6	913	461	-	3	13
Wash.	38	41	-	2	5	3	502	148	-	-	9
Oreg.	44	55	N	N	N	1	18	29	-	-	-
Calif.	166	227	1	46	54	2	383	275	-	3	2
Alaska	5	1	-	1	2	-	3	2	-	-	-
Hawaii	4	4	1	6	14	-	7	7	-	-	2
Guam	-	2	U	1	2	U	1	-	U	-	-
P.R.	5	6	-	-	2	-	9	3	-	-	-
V.I.	U	U	U	U	U	U	U	U	U	U	U
Amer. Samoa	U	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	-	U	-	2	U	-	1	U	-	-

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

TABLE IV. Deaths in 122 U.S. cities,* week ending July 3, 1999 (26th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	218	157	43	11	3	4	21
Boston, Mass.	U	U	U	U	U	U	U
Bridgeport, Conn.	22	14	3	4	1	-	-
Cambridge, Mass.	14	11	3	-	-	-	1
Fall River, Mass.	U	U	U	U	U	U	U
Hartford, Conn.	U	U	U	U	U	U	U
Lowell, Mass.	27	20	7	-	-	-	2
Lynn, Mass.	U	U	U	U	U	U	U
New Bedford, Mass.	28	22	4	2	-	-	4
New Haven, Conn.	35	24	7	2	1	1	4
Providence, R.I.	U	U	U	U	U	U	U
Somerville, Mass.	6	5	1	-	-	-	-
Springfield, Mass.	U	U	U	U	U	U	U
Waterbury, Conn.	22	15	3	1	1	2	2
Worcester, Mass.	64	46	15	2	-	1	8
MID. ATLANTIC	2,000	1,352	392	162	49	39	66
Albany, N.Y.	58	42	12	2	-	2	-
Allentown, Pa.	U	U	U	U	U	U	U
Buffalo, N.Y.	85	62	15	3	3	2	1
Camden, N.J.	U	U	U	U	U	U	U
Elizabeth, N.J.	U	U	U	U	U	U	U
Erie, Pa.	41	30	9	-	1	-	1
Jersey City, N.J.	32	24	6	1	1	-	-
New York City, N.Y.	1,127	755	223	101	27	21	30
Newark, N.J.	U	U	U	U	U	U	U
Paterson, N.J.	22	16	-	1	-	-	-
Philadelphia, Pa.	299	183	68	34	10	4	8
Pittsburgh, Pa.§	45	29	8	4	2	2	6
Reading, Pa.	34	28	4	-	1	1	2
Rochester, N.Y.	121	87	21	8	2	3	11
Schenectady, N.Y.	U	U	U	U	U	U	U
Scranton, Pa.	33	22	9	1	1	-	2
Syracuse, N.Y.	76	57	8	7	-	4	5
Trenton, N.J.	U	U	U	U	U	U	U
Utica, N.Y.	27	17	9	-	1	-	-
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	1,818	1,233	362	131	43	47	107
Akron, Ohio	54	35	13	5	-	1	-
Canton, Ohio	27	21	2	2	-	2	1
Chicago, Ill.	395	249	86	37	10	11	29
Cincinnati, Ohio	70	48	7	5	3	7	4
Cleveland, Ohio	142	97	29	9	3	4	6
Columbus, Ohio	164	122	30	8	1	3	15
Dayton, Ohio	112	85	20	6	1	-	7
Detroit, Mich.	202	116	50	24	6	6	7
Evansville, Ind.	U	U	U	U	U	U	U
Fort Wayne, Ind.	79	63	12	2	1	1	3
Gary, Ind.	20	9	5	2	2	2	-
Grand Rapids, Mich.	52	33	12	4	2	1	3
Indianapolis, Ind.	149	95	30	12	8	4	9
Lansing, Mich.	42	32	8	2	-	-	1
Milwaukee, Wis.	89	64	14	8	1	2	9
Peoria, Ill.	53	39	9	2	2	1	2
Rockford, Ill.	42	31	9	1	1	-	2
South Bend, Ind.	30	24	5	1	-	-	3
Toledo, Ohio	96	70	21	1	2	2	6
Youngstown, Ohio	U	U	U	U	U	U	U
W.N. CENTRAL	424	318	65	20	12	9	26
Des Moines, Iowa	55	43	9	3	-	-	4
Duluth, Minn.	U	U	U	U	U	U	U
Kansas City, Kans.	U	U	U	U	U	U	U
Kansas City, Mo.	72	54	8	4	4	2	3
Lincoln, Nebr.	25	20	3	2	-	-	1
Minneapolis, Minn.	205	151	33	10	6	5	13
Omaha, Nebr.	U	U	U	U	U	U	U
St. Louis, Mo.	U	U	U	U	U	U	U
St. Paul, Minn.	67	50	12	1	2	2	5
Wichita, Kans.	U	U	U	U	U	U	U

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
S. ATLANTIC	684	466	142	50	14	12	50
Atlanta, Ga.	U	U	U	U	U	U	U
Baltimore, Md.	142	94	28	15	2	3	15
Charlotte, N.C.	86	50	21	13	2	-	12
Jacksonville, Fla.	138	101	30	4	3	-	7
Miami, Fla.	U	U	U	U	U	U	U
Norfolk, Va.	47	33	10	2	1	1	5
Richmond, Va.	57	37	11	5	-	4	2
Savannah, Ga.	35	30	4	1	-	-	4
St. Petersburg, Fla.	U	U	U	U	U	U	U
Tampa, Fla.	179	121	38	10	6	4	5
Washington, D.C.	U	U	U	U	U	U	U
Wilmington, Del.	U	U	U	U	U	U	U
E.S. CENTRAL	809	528	171	71	29	9	34
Birmingham, Ala.	160	103	41	10	5	-	10
Chattanooga, Tenn.	61	47	6	5	3	-	4
Knoxville, Tenn.	91	64	17	8	-	2	4
Lexington, Ky.	94	63	19	7	2	3	7
Memphis, Tenn.	200	124	38	23	11	4	9
Mobile, Ala.	80	55	18	7	-	-	-
Montgomery, Ala.	U	U	U	U	U	U	U
Nashville, Tenn.	123	72	32	11	8	-	-
W.S. CENTRAL	751	523	138	50	23	17	46
Austin, Tex.	U	U	U	U	U	U	U
Baton Rouge, La.	U	U	U	U	U	U	U
Corpus Christi, Tex.	48	34	11	1	2	-	3
Dallas, Tex.	U	U	U	U	U	U	U
El Paso, Tex.	U	U	U	U	U	U	U
Ft. Worth, Tex.	114	76	20	9	2	7	6
Houston, Tex.	U	U	U	U	U	U	U
Little Rock, Ark.	67	47	14	1	3	2	4
New Orleans, La.	130	89	25	10	6	-	4
San Antonio, Tex.	202	143	33	18	5	3	15
Shreveport, La.	66	47	12	3	2	2	7
Tulsa, Okla.	124	87	23	8	3	3	7
MOUNTAIN	490	332	103	37	12	6	24
Albuquerque, N.M.	U	U	U	U	U	U	U
Boise, Idaho	U	U	U	U	U	U	U
Colo. Springs, Colo.	52	39	5	6	2	-	1
Denver, Colo.	U	U	U	U	U	U	U
Las Vegas, Nev.	204	136	49	12	5	2	9
Ogden, Utah	25	19	4	2	-	-	1
Phoenix, Ariz.	56	43	5	7	1	-	5
Pueblo, Colo.	25	19	3	3	-	-	3
Salt Lake City, Utah	U	U	U	U	U	U	U
Tucson, Ariz.	128	76	37	7	4	4	5
PACIFIC	1,216	835	231	90	25	33	87
Berkeley, Calif.	19	9	6	2	-	2	1
Fresno, Calif.	135	96	26	8	2	3	10
Glendale, Calif.	18	16	1	1	-	-	-
Honolulu, Hawaii	67	50	12	4	-	1	5
Long Beach, Calif.	70	52	12	3	1	2	13
Los Angeles, Calif.	269	183	53	19	6	8	18
Pasadena, Calif.	U	U	U	U	U	U	U
Portland, Oreg.	117	82	20	5	4	6	5
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	134	86	28	18	1	1	14
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	207	144	36	15	8	4	16
Santa Cruz, Calif.	U	U	U	U	U	U	U
Seattle, Wash.	108	66	26	9	1	6	3
Spokane, Wash.	U	U	U	U	U	U	U
Tacoma, Wash.	72	51	11	6	2	-	2
TOTAL	8,410¶	5,744	1,647	622	210	176	461

U: Unavailable -: no reported cases

*Mortality data in this table are voluntarily reported from 122 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 this Pennsylvania city, 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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