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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 imipenemresistant *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 the reader 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 devicespecific 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 pseudoinfections. 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 modelspecific 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

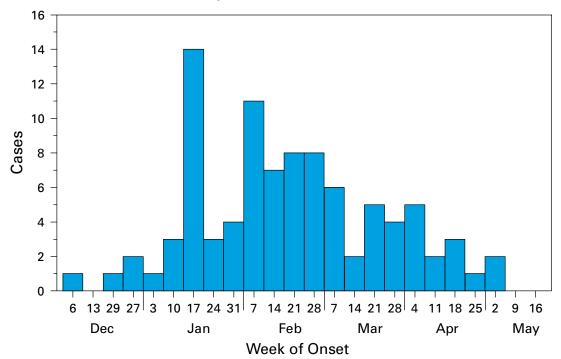
Rubella Outbreak — Continued

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 laboratoryconfirmed 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 casepatient 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 \geq 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 \geq 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.

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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 thimerosalcontaining 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

- 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.
- 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.
- Monitoring immunization practices, future immunization coverage, and vaccinepreventable 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.

Reported by: Public Health Service, US Dept of Health and Human Services. American Academy of Pediatrics, Elk Grove Village, Illinois.

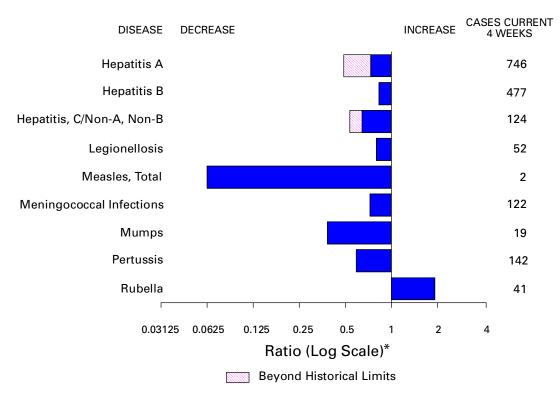


FIGURE I. Selected notifiable disease reports, comparison of provisional 4-week totals ending July 3, 1999, with historical data — United States

*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 Brucellosis* Cholera Congenital ru Cyclosporias Diphtheria Encephalitis:		17 2 3 11 - 2 2 -	HIV infection, pediatric* [§] Plague Poliomyelitis, paralytic Psittacosis* Rabies, human Rocky Mountain spotted fever (RMSF) Streptococcal disease, invasive Group A Streptococcal toxic-shock syndrome* Syphilis, congenital [¶] Tetanus	81 2 - 14 - 148 1,152 22 94 11
	human granulocytic (HGE)* human monocytic (HME)*	49 6 40 7 24	Toxic-shock syndrome Trichinosis Typhoid fever Yellow fever	63 5 136

-: no reported cases

*Not notifiable in all states.

*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.

							Escherichia coli O157:H7			
	A	IDS	Chla	mydia	Cryptosp	oridiosis	NE	TSS	PH	LIS
Reporting Area	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 N.H.	29 26	18 15	193 458	461 477	10 5	18 3	10 15	10 18	- 8	- 19
Vt.	20	10	235	194	6	9	15	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 21	3	6 21	1
Conn. MID. ATLANTIC	282 5,913	326 6,918	2,967 34,009	3,634 29,954	- 98	296	21 46	21 85	21 11	19 29
Upstate N.Y.	725	856	34,009 N	29,954 N	57	185	40	55	-	- 29
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 100	N	-	4
E.N. CENTRAL Ohio	1,502 241	1,760 339	40,428 11,228	48,935 13,281	57 18	105 39	122 51	166 36	60 8	136 22
Ind.	191	323	5,280	5,319	9	20	17	51	13	25
III.	682	693	13,376	12,834	11	31	28	47	12	31
Mich. Wis.	308 80	305 100	10,544 U	10,844 6,657	19	15	26 N	32 N	14 13	26 32
						-			57	
W.N. CENTRAL Minn.	537 82	441 64	14,443 3,264	16,891 3,435	51 14	116 41	145 47	97 30	33	98 43
lowa	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. S. Dak.	4 11	4 9	325 803	498 798	4 3	14 14	3 5	2 6	- 4	6 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	- 7	- 8	2	- 12	-	1 7
Md. D.C.	720 242	717 480	4,848 826	4,131 N	5	3	6	12	-	-
Va.	340	424	7,414	5,454	10	1	29	-	17	24
W. Va.	31	51	1,011	1,171	- 4	1	4	3	1	2
N.C. S.C.	390 588	389 381	11,466 8,635	10,898 9,311	4	-	22 11	12 2	16 3	13 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. Tenn.	152 405	126 330	3,333 6,850	3,051 6,412	2 4	5 6	14 23	15 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. La.	90 463	104 507	3,058 7,726	1,812 6,732	- 21	3 6	5 3	4	3 3	4 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. Idaho	4 12	15 15	654 617	632 914	7 2	4 14	4 1	6 10	2	2 3
Wyo.	3	10	333	329	-	-	3	2	4	16
Colo.	172	146	3,726	3,978	4	3	22	22	12	19
N. Mex. Ariz.	46 427	130 327	1,731 6,474	1,878 5,409	15 7	26 10	3 11	10 15	1 4	6 11
Utah	427	65	946	5,409 1,144	-	10	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 2,894	5,581 2,586	- 73	22	30 22	27 33	26 14	36 29
Oreg. Calif.	88 3,036	94 2,930	2,894 29,385	2,586 37,174	/3 112	176	22 37	33 70	14 13	29 43
Alaska	13	12	925	950	-	-	-	2	-	-
Hawaii	46	67	998	1,152	-	3	-	-	1	4
Guam	5	-	149	182	-	-	N	Ν		
P.R. V.I.	734 15	995 17	U N	U N	-	-	6 N	N	U U	U U
Amer. Samoa	-	-	Ŭ	U	-	-	N	N	U	Ŭ
C.N.M.I.	-	-	N	Ň	-	-	N	N	Ŭ	Ŭ

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

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of Northern Mariana Islands -: 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). [†]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.

	Gond	orrhea		atitis A,NB	Legion	ellosis	Lyr Dise	
Reporting Area	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 N.H.	15 38	31 46	1	-	4 3	1 3	-	18 16
Vt. Mass.	28 1,261	13 985	3 49	2 40	4 9	1 14	- 260	4 275
R.I.	304	179	49	40	3	4	77	31
Conn.	1,219	1,567	-	-	6	6	138	777
MID. ATLANTIC Upstate N.Y.	18,889 3,024	17,899 3,384	86 51	117 59	95 26	122 33	1,652 819	1,791 800
N.Y. City	7,494	5,925	-	-	7	26	6	69
N.J. Pa.	2,760 5,611	3,548 5,042	35	58	5 57	5 58	124 703	327 595
E.N. CENTRAL	26,515	32,818	985	283	125	184	49	198
Ohio Ind.	6,668 3,049	8,169 3,066	- 1	6 4	41 39	65 31	26 20	19 11
III.	9,481	10,491	10	27	10	22	2	6
Mich. Wis.	7,317 U	8,269 2,823	392 582	246	32 3	33 33	1 U	8 154
W.N. CENTRAL	5,815	8,241	66	19	23	31	38	29
Minn. Iowa	1,208 306	1,225 666	2	6 5	1 11	3 5	13 10	9 10
Mo.	2,625	4,509	56	6	8	9	-	6
N. Dak. S. Dak.	31 80	44 127	-	-	- 1	- 1	1	-
Nebr.	553	539	3	2	2	11	6	2 2
Kans. S. ATLANTIC	1,012 48,013	1,131 44,210	5 120	54	- 54	2 64	8 290	266
Del.	840	673	-	-	4	7	9	15
Md. D.C.	4,186 2,490	4,711 1,966	29	5	7	15 4	199 1	199 4
Va.	4,944	3,079	10	5	13	7	22	21
W. Va. N.C.	276 9,750	391 9,146	13 25	4 12	N 8	N 6	7 34	5 13
S.C. Ga.	4,645 10,464	6,043 9,717	12 1	2 9	7	5 2	4	2 2
Fla.	10,418	8,484	30	17	15	17	14	5
E.S. CENTRAL	15,362	18,428	120	80	55 44	32	44 19	31 10
Ky. Tenn.	1,494 5,349	1,753 5,421	8 44	15 62	9	17 7	13	10
Ala. Miss.	4,637 3,882	6,346 4,908	1 67	3	2	3 5	6 6	10
W.S. CENTRAL	22,652	25,788	128	278	2	10	7	8
Ark.	1,509	1,988	3	11	-	1	1	5
La. Okla.	6,054 1,878	5,638 2,635	100 6	10 2	1 1	1 6	- 4	-
Tex.	13,211	15,527	19	255	-	2	2	3
MOUNTAIN Mont.	4,414 21	4,214 23	75 4	252 5	27	32 1	6	3
Idaho	32	83	4	85	-	-	1	1
Wyo. Colo.	11 1,061	15 1,029	25 15	59 13	5	1 6	1	1
N. Mex. Ariz.	311 2,305	371 1,951	4 18	52 4	1 4	2 3	1	-
Utah	89	112	2	18	11	16	1	-
Nev.	584	630	3	16	6	3	2	1
PACIFIC Wash.	7,443 1,034	11,256 953	181 8	411 10	44 9	37 5	86 2	48 2
Oreg. Calif.	411 5.718	338 9,571	9 164	10 336	N 34	N 31	5 79	8 37
Alaska	152	157	-	1	1	-	-	1
Hawaii	128	237	-	54	-	1	-	-
Guam	22 145	24 210	-	-	-	2	-	-
P.R.								
P.R. V.I. Amer. Samoa	U U	U U	U U	U U	U U	U U	U U	U U

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

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

					JIY 4, 1998 (26th Week) Salmonellosis*						
	Ма	laria	Rabies,	Animal	NE	TSS	PHLIS				
Reporting Area	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 3	75 27	127 33	58 44	72 69	35 39	29			
N.H. Vt.	- 1	-	60	33	33	69 45	26	101 39			
Mass.	8	14	91	223	474	557	407	552			
R.I.	2 8	2	50	36	49	62 205	48	37			
Conn.			104	239	151	205	148	191			
MID. ATLANTIC Upstate N.Y.	123 36	172 35	481 307	782 541	1,700 480	2,604 585	1,103 454	2,547 555			
N.Y. City	38	101	Ű	Ŭ	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 Ohio	55 9	58 3	39 11	56 38	1,609 396	2,688 609	1,199 117	1,895 522			
Ind.	8	2	-	4	185	295	127	284			
III.	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 Minn.	23 5	37 17	305 52	397 67	882 238	957 248	729 248	1,029 286			
lowa	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. Nebr.	-	- 1	44 2	92 3	44 105	40 79	26	52 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. Va.	10 30	10 22	265	336	39 503	44 419	- 371	- 391			
W. Va.	1	-	62	42	43	67	37	71			
N.C.	10	12	205	325	450	385	414	444			
S.C. Ga.	1 12	4 15	78 99	77 103	172 453	167 412	134 543	147 439			
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 2	8	48	84	191	218	139	334			
Ala. Miss.	2	4 2	64	44 2	220 124	189 155	107 17	166 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. Tex.	1 1	1 5	54	85	145 520	149 714	88 423	58 1,130			
			05	07				879			
MOUNTAIN Mont.	23 3	32	95 35	97 29	1,307 28	940 41	802 1	22			
daho	1	3	-	-	40	52	35	41			
Wyo.	1		28	41	15	32	17	27			
Colo. N. Mex.	8 2	7 11	1 2	2 2	384 145	236 91	367 79	228 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. Oreg.	10 13	9 11	- 1	- 1	221 180	192 141	279 205	320 184			
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. V.I.	Ū	- U	36 U	28 U	184	310	-	-			
Amer. Samoa	U	Ŭ	U	U	-	-	-	-			
C.N.M.I.	-	-	-	-	-	13	_	_			

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

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).

		Shigel	losis*		Sypt	nilis			
	NET	SS	PHL	IS	(Primary &		Tuberculosis		
Reporting Area	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 N.H.	3 7	7 7	- 6	- 9	-	1 1	10 4	5 6	
/t.	4	4	3	-	2	3	-	1	
Mass. R.I.	95 14	132 15	82 9	124 12	19 1	23	106 19	117 30	
Conn.	27	46	26	40	8	9	48	65	
VID. ATLANTIC	384	1,287	185	1,091	126	115	974	1,106	
Jpstate N.Y. N.Y. City	113 98	245 419	31 81	77 453	17 57	18 25	138 609	151 655	
۷.J. ´	103	392	73	382	16	54	227	300	
Pa.	70	231	-	179	36	18	U	U	
E.N. CENTRAL Dhio	832 256	1,268 283	334 14	642 67	606 47	505 76	428 U	603 U	
nd.	54	87	11	24	178	91	U	U	
ll. Miah	312	665	218 73	528	268 113	211	252	376 173	
vlich. Vis.	162 48	123 110	73 18	4 19	U 113	89 38	137 39	54	
W.N. CENTRAL	514	450	311	196	52	77	241	195	
Minn.	84	79	83	84	5	5	95	66	
owa Mo.	7 361	33 57	9 201	27 39	5 34	- 59	26 84	2 82	
N. Dak.	2	4	-	3	-	-	2	3	
S. Dak. Nebr.	8 30	22 239	4	18 15	- 4	1 4	3 12	14 5	
Kans.	22	16	14	10	4	8	12	23	
6. ATLANTIC	1,106	1,678	239	535	1,013	1,319	815	833	
Del. Vid.	7 59	9 98	2 15	2 30	4 201	15 369	12 U	17 U	
D.C.	30	98 11	-	- 50	42	49	24	58	
/a. V. Va.	40 5	69 7	10 2	28 5	89 2	87 2	104 23	144 24	
N.C.	5 113	7 142	2 54	83	243	370	23	24	
S.C.	55	78	18	31	125	161	124	161	
Ga. Fla.	105 692	453 811	34 104	135 221	156 151	139 127	319 U	225 U	
E.S. CENTRAL	626	426	217	252	573	591	284	405	
Ky.	113	77	-	38	46	59	82	95	
Tenn. Ala.	419 55	69 250	197 19	94 118	327 130	285 135	U 146	U 194	
Miss.	39	30	1	2	70	112	56	116	
V.S. CENTRAL	877	1,695	339	1,883	460	456	752	1,041	
Ark. _a.	47 76	80 130	21 29	16 159	38 121	60 155	80 U	53 U	
Okla.	267	119	77	30	103	25	63	66	
Tex.	487	1,366	212	1,678	198	216	609	922	
MOUNTAIN Mont.	350 6	536 3	152	311 3	111	127	62 5	134 12	
daho	6	11	3	8	1	-	-	7	
Nyo.	2 52	1 66	1 37	- 49	- 1	1 8	1 U	2 U	
Colo. N. Mex.	40	129	13	49 53	-	18	23	31	
Ariz.	197	291	92	178	102	87	U	U	
Jtah Nev.	26 21	16 19	- 6	13 7	2 5	3 10	18 15	33 49	
ACIFIC	994	1,049	104	, 140	140	191	249	297	
Wash.	52	57	51	58	39	12	82	124	
Dreg. Calif.	35 885	64 904	34	58	2 96	1 178	57 U	58 U	
Alaska	-	4	-	2	1	-	29	26	
lawaii	22	20	19	22	2	-	81	89	
Guam	3 23	20 28	-	-	82	113	- 41	39 80	
?R. /.I.	- 23	- 28	-	-	82 U	U	41 U	U	
Amer. Samoa	-	-	-	-	U	U	U	U	
C.N.M.I.	-	12	-	-	-	135	-	58	

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

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)

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

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

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.

		ococcal ease	Mumps Pertussis					Rubella			
Reporting Area	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 N.H.	5 10	4 8	-	- 1	-	-	- 53	5 34	-	-	-
Vt.	4	1	-	-	-	-	9	38	-	-	-
Mass. R.I.	45 2	30 3	-	2	1	-	176 8	355 3	-	6	8
Conn.	8	23	-	-	-	-	8	15	-	-	29
MID. ATLANTIC	117	165	1	22	168	9	577	299	-	17	130
Upstate N.Y. N.Y. City	34 27	43 20	-	5 3	2 153	3	498 10	148 14	-	13	108 9
N.J.	23 33	39 63	- 1	- 14	5 8	- 6	12 57	8	-	1 3	12
Pa. E.N. CENTRAL	206	244	-	14 23	8 49	0 1	208	129 229	-	3 1	1
Ohio	91	82	-	7	19	-	107	72	-	-	-
Ind. III.	37 50	43 69	-	3 6	5 8	-	14 38	61 26	-	1	-
Mich.	27	26	-	7	17	1	22	32	-	-	-
Wis.	1	24	-	-	-	-	27	38	-	-	-
W.N. CENTRAL Minn.	151 30	133 24	-	7 1	20 10	8 8	92 33	176 100	-	71	29
lowa	28	19	-	3	6	-	20	43	-	21	-
Mo. N. Dak.	59 3	52	Ū	1	3 1	Ū	15	13	Ū	2	2
S. Dak.	8	6	-	-	-	-	4	4	-	-	-
Nebr. Kans.	9 14	8 24	Ū	2	-	Ū	1 19	6 10	Ū	48	- 27
S. ATLANTIC	231	256	1	36	26	4	142	122	3	20	7
Del. Md.	3 35	1 23	-	- 3	-	- 1	- 39	1 27	-	- 1	-
D.C.	1	-	-	2	-	-	-	1	-	-	-
Va. W. Va.	26 4	23 9	-	8	5	-	13 1	6 1	-	-	-
N.C.	27	39	-	8	8	-	35	44	3	19	5
S.C. Ga.	28 41	41 58	-	3 2	4 1	-	8 16	15 6	-	-	-
Fla.	66	62	1	10	8	3	30	21	-	-	2
E.S. CENTRAL	108 29	116 16	-	1	8	-	43 3	53 20	-	1	-
Ky. Tenn.	29 38	41	-	-	1	-	25	20 17	-	-	-
Ala. Miss.	24 17	40 19	-	1	4 3	-	11 4	14 2	-	1	-
W.S. CENTRAL	97	186	_	21	35	1	62	150	_	5	70
Ark.	22	23	-	-	-	1	7	16	-	-	-
La. Okla.	34 19	35 27	-	3 1	5	-	3 7	1 15	-	-	-
Tex.	22	101	-	17	30	-	45	118	-	5	70
MOUNTAIN	89	85	-	12	24	3	248	508	-	14	5
Mont. Idaho	2 8	3 4	Ū	- 1	- 3	Ū	2 93	1 184	Ū	-	-
Wyo. Colo.	3 24	3 17	-	- 3	1 3	-	2 60	7 120	-	-	-
N. Mex.	11	15	N	N	N	3	27	64	-	-	1
Ariz. Utah	28 8	30 8	-	- 5	5 3	-	29 33	88 26	-	13	1 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. Oreg.	38 44	41 55	N	2 N	5 N	3 1	502 18	148 29	-	-	9
Calif.	166	227	1	46	54	2	383	275	-	3	2
Alaska Hawaii	5 4	1 4	- 1	1 6	2 14	-	3 7	2 7	-	-	- 2
Guam	-	2	U	1	2	U	1	-	U	-	-
P.R. V.I.	5 U	6 U	Ū	Ū	2 U	Ū	9 U	3 U	Ū	- U	- U
Amer. Samoa	U	U	U	U	Ŭ	U	U	U	Ŭ	Ŭ	Ŭ
C.N.M.I.	-	-	U	-	2	U	-	1	U	-	-

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)

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

	ļ	All Cau	ses, By	/ Age (Y	ears)		P&I [↑]	t		All Cau	ises, By	/ Age (Y	ears)		P&I [†]
Reporting Area	All Ages	>65	45-64	25-44	1-24	<1	Total	Reporting Area	All Ages	>65	45-64	25-44	1-24	<1	Total
NEW ENGLAND Boston, Mass. Bridgeport, Conn. Cambridge, Mass. Fall River, Mass. Hartford, Conn. Lowell, Mass. New Bedford, Mass. New Bedford, Mass. New Haven, Conn. Providence, R.I. Somerville, Mass. Springfield, Mass. Waterbury, Conn. Worcester, Mass. MID. ATLANTIC Albany, N.Y. Allentown, Pa. Buffalo, N.Y. Camden, N.J. Elizabeth, N.J.	218 U 22 14 U 27 27 35 U 6 4 2,000 58 U 22 64 2,000 50 85 U U U	157 U 14 10 0 20 22 24 U 22 24 0 5 0 15 46 2 46 1,352 40 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	43 3 0 0 7 0 4 7 0 1 0 3 15 3 92 2 0 0 1 0 0 0 0 0	11 U U U 2 2 U U 1 2 2 U 1 2 2 U 1 2 2 U 1 2 2 U 0 1 2 2 U 0 1 2 0 0 0 1 2 0 0 0 0 0 0 0 0 0 0 0 0	3 U 1 ' U U ' U ' U ' U ' U ' U ' U ' U '	40''UU'U'10'U21 3920200	21 - 1 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -	S. ATLANTIC Atlanta, Ga. Baltimore, Md. Charlotte, N.C. Jacksonville, Fla. Miami, Fla. Norfolk, Va. Richmond, Va. Savannah, Ga. St. Petersburg, Fla. Tampa, Fla. Washington, D.C. Wilmington, Del. E.S. CENTRAL Birmingham, Ala. Chattanooga, Tenn. Knoxville, Tenn. Lexington, Ky. Memphis, Tenn. Mobile, Ala.	684 U 142 866 138 U 47 35 U 179 U 179 U 809 160 61 91 94 200 80 U	466 U 94 501 U 33 37 30 U 121 U 528 103 47 63 124 63 124 55 U	142 28 20 10 10 4 0 38 0 0 171 41 6 17 19 38 10 38 10	50 U 15 13 4 U 2 5 1 U 0 U U 7 10 5 8 7 3 7 U	14 U 2 2 3 U 1 U 6 U U 29 5 3 - 2 11 - U	12 U 3 - U 1 4 - U 4 U U 9 - 2 3 4 - U	50U15127U524U5UU 34104479 .U
Erie, Pa. Jersey City, N.J. New York City, N.Y. Newark, N.J. Philadelphia, Pa. Pittsburgh, Pa.§ Reading, Pa. Rochester, N.Y. Schenectady, N.Y. Scranton, Pa. Syracuse, N.Y. Trenton, N.J. Utica, N.Y. Yonkers, N.Y. E.N. CENTRAL Akron, Ohio	41 32	30 24 755 U 16 183 28 87 U 22 57 U 22 57 U 177 U 1,233 35	9 9 223 U - 68 8 4 21 U 9 8 U 9 U 362 13	1 101 U 34 4 - 8 U 1 7 U U 131 5	1 27 0 10 2 1 2 0 1 2 0 1 0 1 0 43	21 U 42 1 3 U 4 U 4 7 1	30 30 8 6 2 11 2 5 0 5 0 107	Nashville, Tenn. W.S. CENTRAL Austin, Tex. Baton Rouge, La. Corpus Christi, Tex. Dallas, Tex. El Paso, Tex. Ft. Worth, Tex. Houston, Tex. Little Rock, Ark. New Orleans, La. San Antonio, Tex. Shreveport, La. Tulsa, Okla. MOUNTAIN Albuquerque, N.M.	123 751 U 48 U 114 U 67 130 202 66 124 490 U	72 523 U U 34 U 76 U 76 U 47 89 143 47 87 332 U	32 138 U U 11 U 20 U 14 25 33 12 23 103 U	11 50 U U 1 U 9 U 10 18 3 8 37 U	8 23 U 2 U 2 U 2 U 2 U 3 6 5 2 3 12 U	- 17 U U U U 7 U 2 3 2 3 6 U	- 46 U U 3 U U 6 U 4 4 5 7 7 24 U
Canton, Ohio Chicago, Ill. Cincinnati, Ohio Cleveland, Ohio Cleveland, Ohio Dayton, Ohio Dayton, Ohio Detroit, Mich. Evansville, Ind. Fort Wayne, Ind. Garand Rapids, Mict Indianapolis, Ind. Lansing, Mich. Milwaukee, Wis. Peoria, Ill. Rockford, Ill. South Bend, Ind. Toledo, Ohio Youngstown, Ohio W.N. CENTRAL	27 395 70 142 164 112 202 U 79 20 20 1. 52 149 42 89 53 42 30 96 U 424	21 249 48 97 122 85 116 63 9 33 95 32 64 39 31 24 70 U 318	2 86 7 20 50 12 512 30 8 14 9 9 521 0 65	2 37 5 8 6 24 U 2 2 4 12 2 8 2 1 1 1 U 20	10 3 3 1 1 6 U 1 2 2 8 1 2 1 2 U 12	-211743-6U1214-212U 9	- 1 29 4 6 15 7 7 U 3 9 1 9 2 2 3 6 U 26	Boise, Idaho Colo. Springs, Colo Denver, Colo. Las Vegas, Nev. Ogden, Utah Phoenix, Ariz. Pueblo, Colo. Salt Lake City, Utah Tucson, Ariz. PACIFIC Berkeley, Calif. Glendale, Calif. Glendale, Calif. Honolulu, Hawaii Long Beach, Calif. Pasadena, Calif. Pasadena, Calif. Portland, Oreg. Sacramento, Calif.	U 204 256 25 U 128 1,216 19 135 18 67 700 269 U 117 U 134	U 39 U 136 19 43 19 76 835 9 96 160 52 183 52 183 82 82 80	U 5 U 49 4 5 3 U 37 231 6 26 1 12 53 U 20 U 8 U 20 U 8 U	U 6 U 2 2 7 3 U 7 90 2 8 1 4 3 19 U 5 U 18	U 2 U 5 - 1 - U 4 25 - 2 - 1 6 U 4 U 1 U	U · U 2 · · · U 4 33 2 3 · 1 2 8 U 6 U 1 U	U 1 U 9 1 5 3 U 5 87 1 0 - 5 13 8 U 5 U 4 U
Des Moines, Iowa Duluth, Minn. Kansas City, Kans. Kansas City, Mo. Lincoln, Nebr. Minneapolis, Minn. Omaha, Nebr. St. Louis, Mo. St. Paul, Minn. Wichita, Kans.	55 U U 72 25	43 U 54 20 151 U 50 U	9 U 8 3 3 U U 12 U	3 U 4 2 10 U 1 U U 1 U	U 4 6 U 2 U	U U 2 5 U U 2 U 2 U	4UU313UU5U	San Francisco, Calif San Jose, Calif. Santa Cruz, Calif. Seattle, Wash. Spokane, Wash. Tacoma, Wash. TOTAL	207 U 108 U 72	U 144 U 66 U 51 5,744	36 U 26 U 11	U 15 U 9 U 6 622	U 8 U 1 U 2 210	U 4 U 6 U -	U 16 U 3 U 2 461

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

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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