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Tropical Storm Allison Rapid Needs Assessment — Houston, Texas, June 2001

On June 5, 2001, Tropical Storm Allison made landfall on Galveston Island, Texas. During the next 2 days, the system soaked much of southeast Texas and south-central Louisiana with more than 10 inches of rain as it moved slowly northward. On June 7, the storm made a clockwise loop back to the southwest, bringing even more rain to already drenched areas. The record rainfall caused billions of dollars in flood-related damage and approximately 25 deaths and led to a presidential disaster declaration covering 31 Texas counties (Figure 1) and 28 Louisiana parishes. Harris County, Texas (2000 population: 3,400,578), center of the Houston metropolitan area, was among the hardest hit with some areas receiving up to 37 inches of rain in 24 hours (*1*) (Figure 2). To evaluate the community's immediate public health needs, the City of Houston Department of Health and Human Services (HDHHS) conducted a rapid needs assessment in the areas most affected by flooding. This report summarizes assessment results, which identified increased illness in persons living in flooded homes, suggesting a need for rapid resolution of flood-related damage and the possibility that residents should seek temporary housing during clean-up and repair. The findings underscore the usefulness of rapid needs assessment as a tool to minimize misinformation, identify actual health threats, and ensure delivery of resources to those with the greatest and most immediate need.

Severely flood-affected areas of Houston, identified by the City of Houston Office of Emergency Management, were divided into two sectors: Area A, in the northeast section of the city, comprised 96 census tracts, 148,654 housing units, and 443,356 residents; and Area B, covering the western part of the city, comprised 72 census tracts, 167,158 housing units, and 400,868 residents. Using modified cluster sampling (*2,3*), HDHHS obtained a random sample of 30 census tracts from each of the two areas by using statistical software (SPSS V.10). One neighborhood from each of these 60 tracts was selected by delineating block groups using 1997 household estimates (housing unit data from the 2000 census were not yet available), breaking into quintiles the distribution of household population, and selecting the block group with the highest population and concentration of streets. A standardized questionnaire was developed to collect information about demographics, extent of home damage, number of residents forced to

FIGURE 1. Texas counties included in June 9, 2001 disaster declaration as a result of Tropical Storm Allison

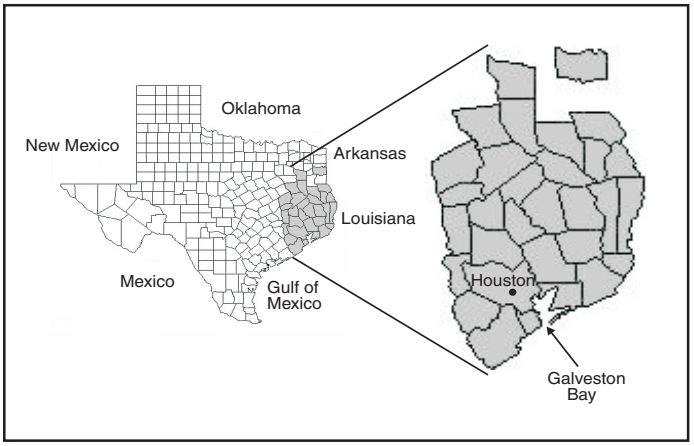

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FIGURE 2. U.S. Highway 59 North, heading towards downtown Houston, was covered by flood waters following Tropical Storm Allison

Photo/Kevin Whited

leave their homes, reported illnesses and injuries among household members, disruption of public services, and current needs. The goal was to obtain completed questionnaires from seven households in each of the 60 selected census tracts for a total sample of 420 households. Data were analyzed by using SAS for Windows (release 8.01). Data were stratified by census tract for calculation of illness and injury odds ratios for living in a flooded versus nonflooded home.

HDHHS conducted the survey door to door on June 16, 2001, 1 week after the heaviest rainfall caused the worst flooding, and met its goal of 420 completed questionnaires (Table 1). The overall response rate was 59.3%; nonresponses included 257 instances of no one at home, 20 refusals, seven uninhabited households, and four households in which a language barrier prevented communication. Of the 420 households surveyed, 389 (92.6%) were single-family homes, and mean household size was 3.3 persons (range: 0–20 persons). A total of 137 (32.6%) surveyed households had floodwaters in the home; mean floodwater depth was 16 inches (median: 12 inches, range: 1–60 inches), and mean duration floodwaters remained in the home was 36.8 hours (median: 24 hours, range: 1–168 hours). A total of 149 (35.5%) surveyed households reported damage to the home; all but one of these were either habitable (116 [77.9%]) or repairable (32 [21.5%]). Survey participants in 57 (13.6%) households reported spending at least 1 night away from home. For some period during or after the flooding, 138 (32.9%) households reported interruption in telephone service, 63 (15.0%) had no sewage service, 61 (14.5%) lost electricity, 44 (10.5%) lost natural gas supply, and 23 (5.5%) had no running water. At the time of the survey, some households were still without telephone service (38 [9.0%]), natural gas (29 [6.9%]), sewage service

TABLE 1. Number and percentage of households affected by Tropical Storm Allison, by selected variables and area of residence — Houston, Texas, June 16, 2001

Variable	Area A (n=210) No.	Area A (n=210) (%)	Area B (n=210) No.	Area B (n=210) (%)	Total (n=420) No.	Total (n=420) (%)
Dwelling type						
Single family	197	(93.8)	192	(91.4)	**389**	**(92.6)**
Duplex/Fourplex	5	(2.4)	12	(5.7)	**17**	**(4.0)**
Apartment	2	(1.0)	4	(1.9)	**6**	**(1.4)**
Mobile home*	1	(0.5)	1	(0.5)	**2**	**(0.5)**
Unknown	5	(2.4)	1	(0.5)	**6**	**(1.4)**
Flooding	84	(40.0)	53	(25.2)	**137**	**(32.6)**
Home damage†	88	(41.9)	61	(29.0)	**149**	**(35.5)**
Currently habitable§	67	(76.1)	49	(80.3)	**116**	**(77.9)**
Uninhabitable but repairable§	21	(23.9)	11	(18.0)	**32**	**(21.5)**
Destroyed§	0	(0.0)	1	(1.6)	**1**	**(0.7)**
One or more nights away from home	36	(17.1)	21	(10.0)	**57**	**(13.6)**
Service disruption						
Telephone	60	(28.6)	78	(37.1)	**138**	**(32.9)**
Sewerage	32	(15.2)	31	(14.8)	**63**	**(15.0)**
Electricity	28	(13.3)	33	(15.7)	**61**	**(14.5)**
Natural gas supply	24	(11.4)	0	(9.5)	**44**	**(10.5)**
Water	17	(8.1)	6	(2.9)	**23**	**(5.5)**
Immediate need						
Mosquito control	12	(5.7)	23	(11.0)	**35**	**(8.3)**
Pharmacy access	14	(6.7)	12	(5.7)	**26**	**(6.2)**
New household furnishings¶	17	(8.1)	5	(2.4)	**22**	**(5.2)**
Medical access	14	(6.7)	8	(3.8)	**22**	**(5.2)**
Shelter	12	(5.7)	8	(3.8)	**20**	**(4.8)**
Food	11	(5.2)	6	(2.9)	**17**	**(4.0)**
Home/roof/foundation repair	11	(5.2)	5	(2.4)	**16**	**(3.8)**
Clothing	9	(4.3)	5	(2.4)	**14**	**(3.3)**
Transportation	7	(3.3)	4	(1.9)	**11**	**(2.6)**
Drainage assistance	2	(1.0)	8	(3.8)	**10**	**(2.4)**
Financial assistance	5	(2.4)	3	(1.4)	**8**	**(1.9)**
Heavy trash pick-up	3	(1.4)	5	(2.4)	**8**	**(1.9)**
Other**	14	(6.7)	3	(1.4)	**17**	**(4.0)**
Damaged vehicle(s)	58	(27.6)	30	(14.3)	**88**	**(21.0)**

* Uninhabitable homes (especially mobile homes, which are very vulnerable to disaster effects) might be underrepresented because residents were not present.
† Total reporting damage is more than total reporting floodwaters in the home because some households might have reported a flood-damaged garage or rainwater leakage through roof in the absence of floodwaters in the home.
§ Percentages calculated by using the number of homes damaged (area A, area B, and total, respectively) as denominator.
¶ Refrigerator, water heater, furniture, mattresses, or carpet.
** Disability, mold problems, septic/sewage system repair, rodent control, price gouging, 911 problems, or clean-up.

(21 [5.0%]), electricity (eight [1.9%]), or running water (eight [1.9%]). The most commonly identified needs were mosquito control, pharmacy access, and new household furnishings. Other needs included medical access, shelter, food, home repair, clothing, transportation, drainage assistance, financial assistance, and heavy trash pick-up.

Fifty-four (12.9%) surveyed households reported at least one person with illness that occurred after the onset of flooding. Persons living in flooded homes were significantly more likely than those living in nonflooded homes to report illness; the only specific illness significantly associated with residing in a flooded home was diarrhea/stomach conditions (Table 2). A total of 17 (4.0%) surveyed households reported at least one person injured after the onset of flooding. No significant association existed between likelihood of reporting an injury and living in a flooded home compared with a nonflooded home, nor were any specific injuries so associated.

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TABLE 2. Number and percentage of households with one or more persons reporting illness or injury within 1 week after Tropical Storm Allison, by flood status of home — Houston, Texas, June 16, 2001

Condition	Flooded (n=137) No.	(%)	Nonflooded (n=283) No.	(%)	OR*	(95% CI†)	p value§
Illness	35	(25.5)	19	(6.7)	4.7	(1.8– 12.0)	<0.001
Diarrhea/Stomach condition	15	(10.9)	9	(3.2)	6.2	(1.4– 28.0)	0.017
Respiratory symptoms/Cold	14	(10.2)	7	(2.5)	3.2	(0.9– 10.9)	0.046
Headache/Dizziness	10	(7.3)	4	(1.4)	4.4	(0.8– 25.6)	0.056
Anxiety/Distress	5	(3.6)	0	(0.0)	undefined	undefined	0.059
Heart attack/Heart problems	4	(2.9)	0	(0.0)	undefined	undefined	0.059
Chronic illness made worse	3	(2.2)	0	(0.0)	undefined	undefined	0.134
Undefined generalized illness	1	(0.7)	1	(0.4)	undefined	undefined	0.149
Sleep disturbance/Nightmare	12	(8.8)	2	(7.1)	3.3	(0.5– 22.3)	0.240
Rash	2	(1.5)	2	(0.7)	6.0	(0.2–149.6)	0.286
Allergies	0	(0.0)	1	(0.4)	undefined	undefined	0.527
Injury	11	(8.0)	6	(2.1)	1.9	(0.4– 8.4)	0.463
Fall	2	(1.5)	0	(0.0)	undefined	undefined	0.153
Blunt injury	1	(0.7)	0	(0.0)	undefined	undefined	0.387
Insect bite	3	(2.2)	0	(0.0)	undefined	undefined	0.394
Abrasion/Cut/Puncture	2	(1.5)	3	(1.1)	0.4	(0.0– 8.1)	0.596
Auto accident	0	(0.0)	1	(0.4)	undefined	undefined	0.683
Other undefined injury	1	(0.7)	0	(0.0)	undefined	undefined	0.683
Animal bite	2	(1.5)	2	(0.7)	1.0	(0.1– 20.0)	1.000

* Odds ratio.
† Confidence interval.
§ Analysis of odds ratio, confidence interval, and p value stratified by census tract.

Editorial Note: Flooding is the most common type of natural disaster worldwide, and flash flooding, often associated with the heavy, localized rainfall that occurs in a tropical storm, is the leading cause of weather-related deaths in the United States (*4*). Public health impacts of flooding include damage to homes and consequent displacement of occupants, infectious disease morbidity exacerbated by crowded living conditions and compromised personal hygiene, contamination of water sources, disruption of sewage service and solid-waste collection, increased vector populations, injuries sustained during clean-up, stress-related mental health and substance-abuse problems, and death (*5–7*).

The finding of increased illness prevalence is consistent with previous reports of flood-related morbidity (*5,8*); this report shows the increase as significantly associated with residing in a flooded versus a nonflooded home. Conversely, recovery-period surveillance conducted at selected emergency departments, shelters, and contingency clinics immediately after the onset of flooding detected neither outbreaks of specific diseases nor unusual incidence of injuries or gastrointestinal or respiratory disease (HDHHS, unpublished data, 2001). Although these contradictory findings might be attributed to difficulties associated with collecting adequate surveillance information from clinics and shelters during the immediate post-disaster response, they also might represent potential limitations of the rapid needs assessment approach. Differences might exist between the nature of illnesses and injuries reported by clinic-based surveillance conducted immediately post-disaster and those self-reported through a survey a week later. Furthermore, persons not at home and therefore unable to participate in the needs assessment survey might have been away from home because of illness or injury.

In addition to the potential for actual flood-related health impacts, rumors of epidemics often follow floods and other natural disasters and quickly gain public credibility when reported by the media (*5,9,10*). Actual threats and the potential for rumors combine to underscore the need for rapid information gathering to facilitate decision making and address public concerns. Rapid needs assessment—combining epidemiologic, anthropologic, and statistical methods—provides accurate information quickly and at low cost to minimize misinformation and identify actual health threats (*2*).

This assessment was planned, conducted, and analyzed within 1 week and quickly provided important information to the City of Houston Mayor's Office, City Council members, City of Houston Office of Emergency Management, American Red Cross, Federal Emergency Management Agency, CDC's Emergency Response team, Texas Department of Health, and other agencies assisting with flood recovery efforts. These findings underscore the usefulness of rapid needs assessment as a practical and responsive data-gathering tool to complement clinic-based surveillance in disaster settings. The results were integral in assessing damage, setting priorities for service delivery, and directing assistance efforts. Numerous

persons with special needs were identified and the appropriate assistance agencies quickly notified, heavy trash pick-up crews were redirected to neighborhoods where they were needed most, and residents of an area with chronic drainage problems were put in contact with the city engineering department to work out plans for future improvements. The results of this assessment will guide future needs assessments, disaster-response planning, and disaster-effects mitigation.

References

1. National Weather Service. Storm summary number 52 for the history of Allison. Camp Springs, Maryland: National Centers for Environmental Protection, Hydrological Prediction Center, National Weather Service, 2001.
2. Malilay J, Flanders WD, Brogan D. A modified cluster-sampling method for post-disaster rapid assessment of needs. Bull World Health Organ 1996;74:399–405.
3. Hlady GW, Quenemoen LE, Armenia-Cope RR, et al. Use of a modified cluster sampling method to perform rapid needs assessment after Hurricane Andrew. Ann Emerg Med 1994;23:719–25.
4. French JG, Holt KW. Floods. In: Gregg MB, ed. The public health consequences of disasters. New York, New York: Oxford, 1997.
5. CDC. Public health consequences of a flood disaster—Iowa, 1993. MMWR 1993;42:653–6.
6. French JG, Ing R, Von Allmen S, Wood R. Mortality from flash floods: a review of National Weather Service reports, 1969–81. Public Health Rep 1983;98:584–8.
7. Cotton P. Health threat from mosquitoes rises as flood of the century recedes. JAMA 1993;270:685–6.
8. CDC. Morbidity surveillance following the Midwest flood—Missouri, 1993. MMWR 1993;42:797–8.
9. Seaman J, Leivesley S, Hogg C. Epidemiology of natural disasters. In: Klingberg MA, Papier C, eds. Contributions to epidemiology and biostatistics. Vol 5. Basel, New York: Karger, 1984.
10. Glass RI, Noji EK. Epidemiologic surveillance following disasters. In: Halperin WE, Baker EL, Monson RR, eds. Public health surveillance. New York, New York: Van Nostrand Reinhold, 1992:195–205.

Laboratory Surveillance for Wild Poliovirus and Vaccine-Derived Poliovirus, 2000–2001

After the 1988 World Health Assembly resolution to eradicate poliomyelitis (*1*), the Global Laboratory Network for Poliomyelitis Eradication (the laboratory network) was established by the World Health Organization (WHO). The laboratory network is one component of the international surveillance system for detecting polio through notification of cases of acute flaccid paralysis (AFP)*. As progress is made in eradicating polio worldwide (*2*), the laboratory network provides critical virologic evidence about where poliovirus is circulating as a guide to supplementary vaccination activities aimed at interrupting transmission. This report summarizes the laboratory data for documenting the decline in wild poliovirus transmission and the occurrence of vaccine-derived polioviruses and highlights the expanding role of the laboratory network in global polio eradication.

In December 2001, the laboratory network was fully operational in all six WHO regions and included 147 laboratories: seven global specialized laboratories, 16 regional reference laboratories, 84 national laboratories, and 40 subnational laboratories in large countries. As of April 2002, a total of 135 (92%) laboratories were fully accredited, six (4%) laboratories were provisionally† accredited, four (3%) laboratories were pending an accreditation review, and two (1%) subnational laboratories had failed to reach accreditation standards.

Laboratories are evaluated according to several key performance indicators, including the timeliness of reporting poliovirus isolation results to national programs (i.e., within 28 days of receipt of a specimen) and the nonpolio enterovirus (NPEV) rate, which indicates both an adequate reverse cold chain during specimen transportation and the technical capability of the laboratory to detect enteroviruses. During 2000–2001, the time taken to report virus isolation results decreased, with 92% of results reported within 28 days of receipt of the specimen in the laboratory in 2001 compared with 77% in 2000 (Table 1).

Although the number of stool specimens tested increased from 59,666 in 2000 to 64,443 in 2001, the number of polioviruses isolated from AFP cases declined from 719 to 473; substantial disappearance of poliovirus lineages was detected through genomic sequencing. Approximately 10,000 NPEV isolates were identified each year from these stool specimens.

Vaccine-derived poliovirus (VDPV) associated with an outbreak of polio (circulating VDPV [cVDPV]) was detected on the island of Hispaniola during October 2000 (*3–5*). Laboratory network activities were extended subsequently to include screening for these viruses (Table 2), which have acquired wild-like neurovirulence and transmissibility and possess molecular characteristics that differentiate them from either vaccine or wild virus. Since January 2001, all poliovirus isolates are subjected to two methods of intratypic differentiation (ITD): one antigenic and one molecular. Concordant non-Sabin–like ITD results are classified as wild polioviruses, concordant Sabin-like results are classified as Sabin-like (vaccine virus), and any discordant results or Sabin-like isolates lacking two ITD tests are forwarded immediately for sequence analysis of

* This system is supported by WHO member countries and the Training in Epidemiology and Public Health Interventions Network.

† Deficient in one of the areas examined and given a limited time to improve performance before re-assessment.

TABLE 1. Number of specimens and poliovirus (PV) isolates, percentage of nonpolio enterovirus (NPEV), and laboratory reporting of results within 28 days, by World Health Organization region and year, 2000–2001

	2000					2001				
Region	No. specimens	No. PV isolates Wild*	No. PV isolates Sabin	% NPEV	% results in 28 days	No. specimens	No. PV isolates Wild	No. PV isolates Sabin	% NPEV	% results in 28 days
African	11,891	160	664	9%	36%	18,515	63	979	14%	88%
Americas	1,495	0	31	15%	NA†	3,404	0	41	15%	NA
Eastern Mediterranean	6,110	287	145	12%	80%	7,258	140	108	15%	83%
European	9,092	0	143	6%	81%	4,716	2	130	16%	91%
South-East Asian	20,442	272	387	16%	94%	19,752	268	268	19%	99%
Western Pacific	10,636	0	235	12%	87%	10,798	0	227	11%	92%
Total	**59,666**	**719**	**1,605**	**12%**	**77%**	**64,443**	**473**	**1,753**	**15%**	**92%**

* Number of cases with wild poliovirus isolated.
† Not available.

TABLE 2. Screening results of vaccine virus isolates with two intratypic differentiation (ITD) tests, by World Health Organization region, 1999–2001

Region	Two ITD results	Sabin-like*	Pending sequencing	cVDPV† isolates	iVDPV§ isolates	VDPV with unknown source¶
African	197	187	10	0	0	0
Americas	256	224	0	31	1	0
Eastern Mediterranean	478	398	80	0	0	0
European	853	824	26	0	2	1
South-East Asian	1,561	1,561	0	0	0	0
Western Pacific	78	63	12	3	0	0
Total	**3,423**	**3,257**	**128**	**34**	**3**	**1**

* Either concordant Sabin-like results in ITD tests or <1% sequence difference compared with Sabin vaccine virus.
† Circulating vaccine-derived poliovirus.
§ Vaccine-derived poliovirus associated with an immunodeficient person.
¶ VDPV not associated with an outbreak or immunodeficiency.

the major viral capsid surface protein (VP1). These isolates are then classified based on the sequencing results: <1% difference from Sabin vaccine virus is classified as Sabin-like, 1%–15% difference is classified as VDPV, and >15% difference is classified as wild virus. The effectiveness of using this approach was demonstrated when three cases of AFP associated with cVDPV isolates were detected in the Philippines during March 2001 (*6*).

In addition to prospective testing, several network laboratories have retested stored vaccine-like poliovirus isolates from before 2001 by using the two ITD methods and subjecting strains with atypical results to further investigation. Of the 3,423 isolates examined to date, 3,257 (95%) were typical vaccine-like viruses and 128 (4%) are pending sequencing results (Table 2). The only highly divergent identified viruses not directly associated with the outbreaks on Hispaniola and in the Philippines have been three polioviruses isolated from immunodeficient persons and one isolate from the Russian Federation in 1999 that had no clear association with an outbreak or immunodeficiency.

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Editorial Note: During 2000–2001, the laboratory network initiated genomic sequencing of all wild poliovirus isolates and expanded its mandate to include surveillance for VDPV, which preliminary evidence indicates is rare. Laboratory surveillance conducted by the network documented the interruption of indigenous transmission in the Western Pacific Region (*7*), the elimination of poliovirus lineages in remaining reservoir countries, and the importation of poliovirus into polio-free countries.

In addition to its primary functions of isolation and ITD of polioviruses (i.e., determining wild versus vaccine) from AFP cases (*8*), the laboratory network provides detailed molecular epidemiologic data on every wild poliovirus isolated within 90 days of onset of paralysis, and often within 60 days of onset in high-priority cases. Genomic sequencing information and close collaboration among network laboratories has allowed the tracking of virus strains within and among countries and the identification of the origin of viruses imported into polio-free countries (*9*).

Timeliness of reporting of stool specimen results improved in all regions during 2000–2001, particularly in the African

Region, where the rate more than doubled. Although the expected isolation rate for NPEV can vary widely because of climate, hygiene, and altitude, all regions achieved a rate >10% by 2001. During 2000–2001, the status of the Enterovirus Research Center in Mumbai, India, was upgraded to a Global Specialized Laboratory, and the laboratory in Pyongyang in the Democratic People's Republic of Korea was provisionally accredited. The remaining network laboratories that are not fully accredited have made arrangements to have their specimens processed in parallel in a fully accredited laboratory.

In 2001, the Technical Consultative Group on Polio Eradication (TCG) recommended that laboratories reduce the time interval between paralysis onset and reporting of ITD results from 90 days to ≤60 days and the interval between ITD results and sequencing of wild polioviruses to ≤28 days. By the end of 2000, almost all reports of wild poliovirus isolation were available within 45 days of receipt of the specimen, and sequence information about almost all critical isolates in 2001 was available within 60 days of receipt of an original stool specimen. Further progress in meeting TCG recommendations will require improved specimen transport among laboratories and more timely analysis and communication of sequencing results.

Extending their activities and reducing time intervals has increased the workload of laboratories conducting ITD and sequence analysis, placing substantial pressure on the laboratory network to meet the demands for providing essential reagents for ITD. To ensure that regional reference laboratories are not overburdened, three national laboratories have been accredited to conduct ITD, and several more will be accredited during 2002. Support for laboratories in polio-free areas must continue to ensure early detection of imported wild poliovirus or emergence of cVDPV.

The laboratory network is developing and validating methods of supplementary surveillance for polioviruses, including environmental surveillance and enterovirus surveillance. Evidence generated through these methods will be essential for certification of eradication in some areas of the world and for enhanced surveillance and early detection of VDPV after certification. Timely integration of data from the laboratory network into programmatic planning of vaccination responses and identification of the frequency and risk factors associated with cVDPV will be critical for planning in the final stages of the polio eradication effort. All regions will need to continue to support their national and regional laboratories well after interrupting transmission to assure the achievement and maintenance of polio eradication globally.

References

1. World Health Assembly. Global eradication of poliomyelitis by the year 2000. Geneva, Switzerland: World Health Organization, 1988 (WHA resolution no. 41.28)
2. CDC. Progress toward global eradication of poliomyelitis, 2001. MMWR 2002;51:253–6.
3. CDC. Outbreak of poliomyelitis—Dominican Republic and Haiti, 2000. MMWR 2000;48:1094,1103.
4. CDC. Outbreak of poliomyelitis—Dominican Republic and Haiti, 2000–2001. MMWR 2001;50:147–8.
5. CDC. Update: outbreak of poliomyelitis—Dominican Republic and Haiti, 2000–2001. MMWR 2001;50:855–6.
6. CDC. Acute flaccid paralysis associated with circulating vaccine-derived poliovirus—Philippines, 2001. MMWR 2001;50:874–5.
7. CDC. Certification of poliomyelitis eradication—Western Pacific Region, October 2000. MMWR 2001;50:1–3.
8. CDC. Developing and expanding contributions of the Global Laboratory Network for Poliomyelitis Eradication, 1997–1999. MMWR 2000;49:156–60.
9. CDC. Imported wild poliovirus causing poliomyelitis—Bulgaria, 2001. MMWR 2001;50:1033–5.

Trends in Deaths from Systemic Lupus Erythematosus — United States, 1979–1998

Systemic lupus erythematosus (SLE) is a serious autoimmune disease of unknown etiology that can affect several organs. Because SLE affects connective tissues and because painful joints and arthritis are among its most common manifestations, this disease is classified with arthritis and other rheumatic diseases (*1*). SLE is one of the more fatal forms of rheumatic diseases and non-Causcasian race is a risk factor for death from SLE; however, trends in death from SLE have not been analyzed recently. To characterize deaths from SLE, CDC reviewed SLE deaths during 1979–1998. This report presents the results of that analysis, which indicate that marked age-, sex-, and race-specific disparities exist in SLE death rates and that death rates have increased by approximately 70% during the study period among black women aged 45–64 years. Prevention of deaths requires early recognition and diagnosis of SLE and appropriate therapeutic management.

The analysis used National Center for Health Statistics Multiple Cause-of-Death Public Use Data Tapes for 1979–1998. These national mortality statistics were based on data from death certificates filed in state vital statistics offices. Demographic data (e.g., age and race/ethnicity) listed on death certificates were reported by funeral directors, usually from information provided by the decedent's family. Causes of death listed on death certificates were reported by a physician,

medical examiner, or coroner by using a format specified by the World Health Organization and endorsed by CDC. An SLE death was defined as any death of a U.S. resident coded with an underlying cause of death of systemic lupus erythematosus (*International Classification of Diseases, Ninth Revision,* code 710.0). Death rates were calculated by using annual deaths and corresponding U.S. residential population estimates (*2*). Death rates were calculated for whites and blacks. Rates for other races were not calculated because numbers were too small for meaningful analysis.

During 1979–1998, the annual number of deaths increased from 879 to 1,406, and the crude death rate increased from 39 to 52 per 10 million population, with 22,861 deaths reported during the study period (Table 1). Of all SLE deaths, 36.4% occurred among persons aged 15–44 years. For each year, crude death rates increased with age, were >5 times higher among women than men, and were >3 times higher among blacks than whites. Among black women, death rates were highest and increased most (69.7%) among those aged 45–64 years, with little difference in rates among other age groups (Figure 1).

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Editorial Note: The findings in this report document marked age-, sex-, and race-specific disparities in SLE deaths. Although SLE mortality is most frequently caused by active SLE or by associated organ failure, infection, or cardiovascular disease from accelerated atherosclerosis (*3*), some studies suggest that renal disease might account for excess SLE deaths among blacks (*4*). Differential ascertainment and reporting of SLE deaths by race is possible, but probably does not account for the magnitude of observed differences, especially among different age groups for white and black women.

A higher incidence of SLE among black women might account for the racial differences in death rates. However, no ongoing population-based studies exist that determine how changes in SLE incidence contributed to the increase in the death rate. Beyond a change in incidence, other remediable reasons for an increase in SLE mortality among black women include later diagnosis, problems in access to care, less effective treatments, and poorer compliance with therapeutic regimens (*5*).

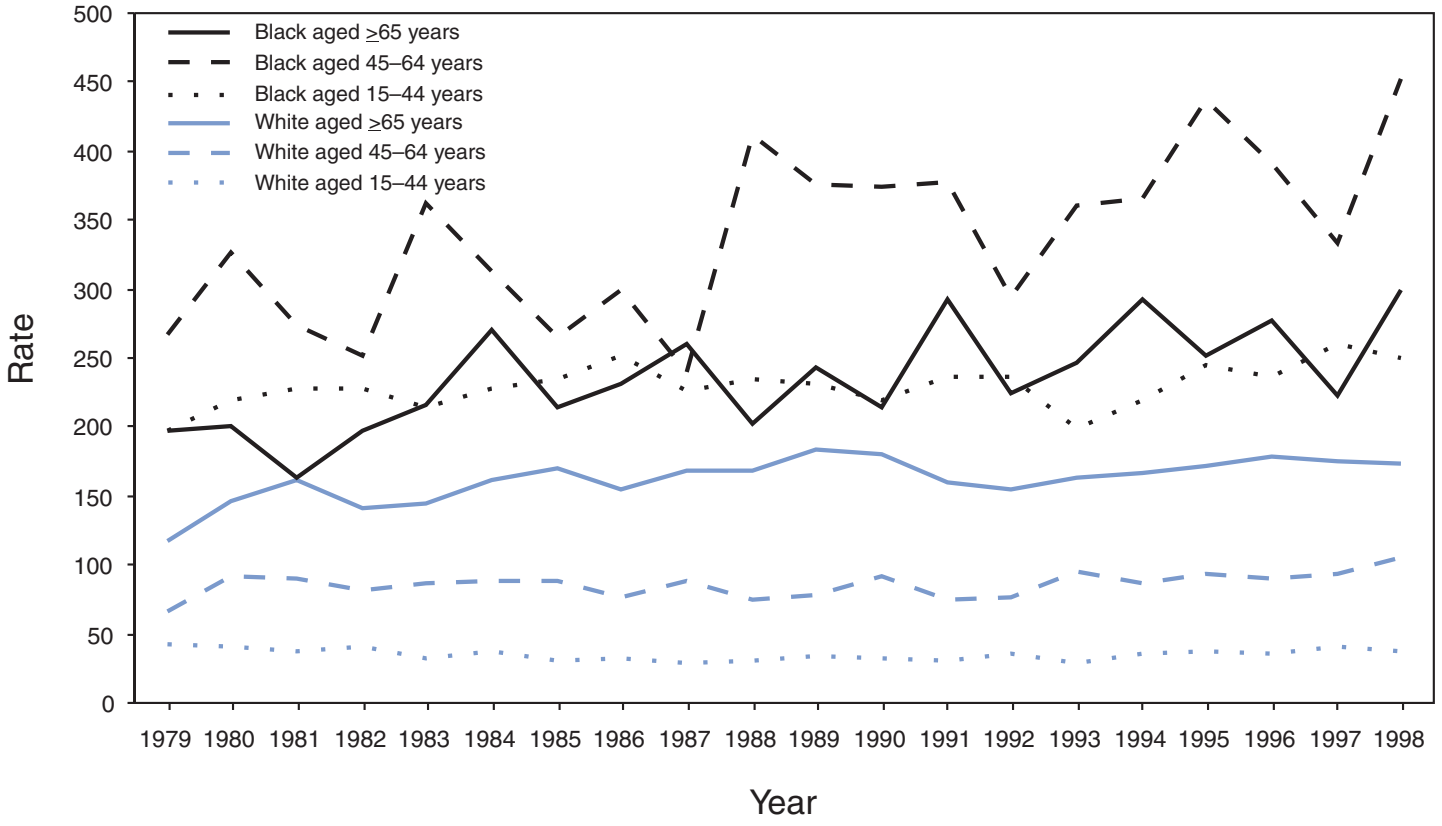
The findings in this report are subject to at least four limitations. First, death rates might be underestimated. Because multiple cause-of-death data were used in this analysis, other causes of death (e.g., kidney disease and heart disease) might have been listed as the underlying cause of death rather than SLE. An additional 17,450 persons who died during 1979–1998 had SLE listed as an associated cause of death on their death certificates. Second, SLE can be difficult to diagnose clinically, and both underdiagnosis and overdiagnosis (e.g., because of positive antinuclear antibody tests) occur (*6*). However, physicians reporting SLE as the underlying cause of death presumably had sufficient data supporting the diagnosis to cite SLE first instead of other causes. Third, rates for racial/ethnic populations other than white and black were not

TABLE 1. Number of deaths from systemic lupus erythematosus, by age group, sex, and race — United States, 1979–1998

	Age group (yrs)				Sex		Race*			
Year	<15	15–44	45–64	≥65	Female	Male	White	Black	Other	Total
1979	15	369	253	242	725	154	610	249	16	**879**
1980	11	383	313	298	848	157	700	276	23	**1,005**
1981	15	390	302	339	863	183	747	270	21	**1,046**
1982	19	407	283	304	840	173	706	276	27	**1,013**
1983	12	375	333	339	855	204	695	329	20	**1,059**
1984	13	402	302	362	910	169	743	307	24	**1,079**
1985	8	383	310	373	889	185	723	313	30	**1,074**
1986	16	412	289	352	886	183	700	336	24	**1,069**
1987	5	364	303	374	886	160	718	299	21	**1,046**
1988	11	399	317	386	933	180	717	359	26	**1,113**
1989	10	439	317	429	979	216	778	379	38	**1,195**
1990	11	402	349	418	998	182	801	338	41	**1,180**
1991	6	406	299	405	942	174	703	376	37	**1,116**
1992	17	443	308	382	968	182	749	352	49	**1,150**
1993	11	388	368	415	981	201	779	354	49	**1,182**
1994	10	440	370	416	1036	200	799	388	49	**1,236**
1995	11	474	405	434	1119	205	837	437	50	**1,324**
1996	8	464	404	456	1127	205	857	417	58	**1,332**
1997	9	501	414	433	1160	197	868	427	62	**1,357**
1998	8	471	485	442	1214	192	887	469	50	**1,406**
Total	**226**	**8,312**	**6,724**	**7,599**	**19,159**	**3,702**	**15,117**	**6,951**	**715**	**22,861**

* Totals do not add to 22,861 because of missing data.

FIGURE 1. Systemic lupus erythematosus death rates* among females, by age group and race — United States, 1979–1998



* Per 10 million population.

calculated because numbers were too small for meaningful analysis. These populations might have high rates of SLE (*7*). Finally, because prevalence estimates for SLE are variable, population death rates were calculated rather than case fatality rates.

Arthritis and other rheumatic conditions are highly prevalent, disabling, and costly (*8*). SLE accounts for 14.5% of all deaths from arthritis (CDC, unpublished data, 1997) and represents one of these conditions that has premature mortality; approximately one third of deaths from SLE occur among persons aged <45 years. Of all deaths from arthritis, SLE accounts for 44.0% of deaths among persons aged <45 years (CDC, unpublished data, 1997).

Because of SLE's protean manifestations, preventing excess and premature deaths will require clinical suspicion of the diagnosis, early recognition, appropriate therapeutic management, compliance with treatment, and improved treatment of long-term consequences (e.g., renal disease or accelerated atherosclerosis) (*9*). One of the public health strategies outlined in *The National Arthritis Action Plan* (*8*) is to better define issues related to rheumatic conditions such as SLE. Because further research into the causes of the marked age-, sex-, and race-specific disparities in death rates and temporal changes in death rates is necessary, CDC plans to develop a large population-based registry of SLE to monitor trends in SLE incidence and prevalence and better characterize persons with this disease. Studies conducted from this registry will examine why disparities and death rates exist and how mortality from SLE can be reduced.

References

1. JH Klippel, LJ Crofford, JH Stone, CM Weyand, eds. Primer on the rheumatic diseases. Atlanta, Georgia: Arthritis Foundation, 2001.
2. U.S. Census Bureau. Resident population estimates of the U.S. by age, sex, and race. Available at http://www.census.gov/population/estimates/nation.
3. Trager J, Ward MM. Mortality and causes of death in systemic lupus erythematosus. Curr Opin Rheum 2001;13:345–51.
4. Walsh SJ, Algert C, Gregorio DI, Reisine ST, Rothfield NF. Divergent racial trends in mortality from systemic lupus erythematosus. J Rheumatol 1995;22:1663–8.
5. Walsh SJ, Algert C, Rothfield NF. Racial aspects of comorbidity in systemic lupus erythematosus. Arth Care and Res 1996;96:509–16.
6. McAlindon T. Update on the epidemiology of systemic lupus erythematosus: new spins on old ideas. Curr Opin Rheum 2000;12:104–12.
7. Manzi S. Epidemiology of systemic lupus erythematosus. Am J Managed Care 2001;7:S474–S479.

8. Arthritis Foundation, Association of State and Territorial Health Officials, CDC. National arthritis action plan: a public health strategy. Atlanta, Georgia: Arthritis Foundation, 1999.
9. American College of Rheumatology Ad Hoc Committee on Systemic Lupus Erythematosus. Guidelines for referral and management of systemic lupus erythematosus in adults. Arth Rheum 1999;42:1785–96.

Notice to Readers

Interpretation of Provisional Data Presented in *Morbidity and Mortality Weekly Report* Tables

Periodically, readers of *MMWR* interpret provisional data about the incidence of notifiable infectious disease presented in *MMWR* incorrectly as finalized incidence data. This occurred recently in a media report that included a misinterpretation of the provisional acquired immunodeficiency syndrome (AIDS) data reported to the National Notifiable Diseases Surveillance System (NNDSS) and presented in *MMWR* Table II (*1*). Although the characteristics of the *MMWR* morbidity data (provisional versus finalized) are footnoted, this notice reminds readers about the different characteristics of provisional and finalized data.

Provisional NNDSS data are a running count of infectious disease (including AIDS) cases that have not been adjusted for variations in reporting procedures across different states or for delays in reporting. In addition, data in *MMWR* Table II reflect the date cases were reported to CDC rather than the date persons were actually diagnosed with the notifiable condition. Morbidity data adjusted to reflect the number of notifiable disease cases diagnosed during a given year reflect disease incidence trends more accurately than a comparison of end-of-year provisional data (e.g., week 52 data for a current year) with finalized data. For example, although 46,143 AIDS cases were reported to CDC in 1999, an estimated 41,850 persons were diagnosed with AIDS; duplicates, errors, or persons who had AIDS diagnosed earlier than 1999 accounted for the remainder of cases (*2*).

To provide timely NNDSS data, state and territorial health departments voluntarily report notifiable disease incidence data to CDC as soon as they become aware of these cases. These provisional data are published each week in *MMWR* to disseminate the most current national information about infectious diseases to public health officials and health-care providers so they can initiate prevention and control activities. These data include case reports considered "suspect" or "probable" for surveillance purposes in addition to those considered "confirmed"(*3*). As a result, provisional data are subject to change based on the outcome of further case investigation. As part of the process for finalizing surveillance data, provisional NNDSS data, including AIDS incidence data, also are adjusted for variations in reporting practices and delayed reporting. CDC amends and edits provisional data periodically throughout the year as updates are reported by states. The process for finalizing case counts can take several months to complete after the end of the year. Cumulative (i.e., year-to-date) incidence data from the previous year also are presented in Table II as a crude method to identify aberrations or discrepancies in reported disease incidence data—whether because of disease incidence or reporting artifacts. Because of differences in timing of reports, the source of the data, and the use of different case definitions, NNDSS data published in the weekly edition of *MMWR* also might differ from data published in other CDC surveillance reports.

References

1. CDC. Table II. Provisional cases of selected notifiable diseases, United States, weeks ending December 29, 2001 and December 30, 2000 (52nd week). MMWR 2002;51&52:1170–3.
2. CDC. Letter dated January 22, 2002 to the Editor, Knight Ridder Washington Bureau, from Harold W. Jaffe, MD, Acting Director of the National Center for HIV, STD, and TB Prevention.
3. CDC. Case definitions for infectious conditions under public health surveillance. MMWR 1997;46(no. RR-10).

Notice to Readers

National Arthritis Month — May 2002

May is National Arthritis Month. Systemic lupus erythematosus, one of more than 100 arthritis and rheumatic conditions, is a chronic and potentially life-threatening inflammatory disease that can affect various parts of the body, especially the skin, joints, blood, and kidneys. Arthritis and other rheumatic conditions are the leading cause of disability in the United States, affecting approximately 43 million persons in 1997 and possibly 60 million by 2020 (*1,2*). Early diagnosis and appropriate management are needed for better control of arthritis. CDC, the Arthritis Foundation, the Lupus Foundation of America, and other organizations continue to work to meet the goals of the National Arthritis Action Plan: A Public Health Strategy (*3*) and the arthritis-related national health objectives for 2010 (*4*).

Additional information about arthritis, National Arthritis Month, Arthritis Action Day, the National Arthritis Action Plan, and local Arthritis Foundation programs and services is available from the Arthritis Foundation, telephone 800-283-7800, or at http://www.arthritis.org. Information about systemic lupus erythematosus, patient education programs, and support services is available from the Lupus Foundation of America, telephone 800-558-0121, or at http://www.lupus.org.

References

1. CDC. Prevalence of disabilities and associated health conditions among adults—United States, 1999. MMWR 2001;50:120–5.
2. CDC. Arthritis prevalence and activity limitations—United States, 1990. MMWR 1994;43:433–8.
3. Arthritis Foundation, Association of State and Territorial Health Officials, and CDC. National arthritis action plan: a public health strategy. Atlanta, Georgia: Arthritis Foundation, 1999.
4. U.S. Department of Health and Human Services. Healthy people 2010 (conference ed., 2 vols). Washington, DC: U.S. Department of Health and Human Services, 2000.

Notice to Readers

Satellite Broadcast: Enhancing Environmental Health Services in the 21st Century

"Enhancing Environmental Health Services in the 21st Century," a live, interactive satellite program, will be broadcast Thursday, May 9, 2002, from 1:00–2:30 p.m., EST. During this program, environmental health services (EHS) experts will address six goals CDC developed in collaboration with its many environmental health partners to revitalize the EHS system. The program will highlight the issues, challenges, and activities facing the EHS system in the 21st century. The broadcast will feature a question-and-answer session in which participants nationwide can interact with CDC staff through toll-free telephone lines.

Environmental health services and sanitation have been an important part of public health in the United States for many decades. In recent years, the capabilities of the EHS system at state, tribal, territorial, and local levels have decreased. The emergence of many new issues and threats (e.g., *Cryptosporidium* in drinking water, hantavirus, *E. coli O157:H7*, West Nile virus, and domestic terrorism) underscore the need for a well-prepared EHS system and workforce that can anticipate, recognize, and respond to these types of threats.

This broadcast is designed for environmental health practitioners and managers, directors of health departments and other public health officials, environmental health program directors and managers, agriculture program directors and managers, food protection program directors and managers, public health nurses, environmental protection practitioners, policy makers, boards of health, academic institutions, national advocacy organizations, and civic leaders.

Additional information about the program is available at http://www.phppo.cdc.gov/phtn/envhlth. Registration is available at http://www.phppo.cdc.gov/phtnonline. Assistance registering online is available at 800-418-7246 or 404-639-1292.

Notice to Readers

Public Meeting: Annual Report on Antimicrobial Resistance Action Plan

A public meeting will be held June 26, 2002, to present the first annual report on implementation of "A Public Health Action Plan to Combat Antimicrobial Resistance (Part I: Domestic Issues)" and to receive comments from the public. The plan was prepared by the Interagency Task Force on Antimicrobial Resistance, co-chaired by CDC, the Food and Drug Administration, the National Institutes of Health, and seven other federal agencies and departments. The meeting will be from 10:00 a.m.–5:00 p.m., EST at the Holiday Inn Select, Versailles Ballroom, 8120 Wisconsin Avenue, Bethesda, Maryland, 20814, telephone 877-888-3001.

Time will be available for oral questions, comments, and suggestions from the public. A time limit of 3 minutes might be imposed. Visual aids will not be permitted, although written material may be submitted for subsequent review by the task force.

The Action Plan is available at http://www.cdc.gov/drugresistance; the meeting agenda and annual report will be posted when available. Persons who anticipate attending the meeting should send written notification by June 22, 2002, including name, organization (if applicable), address, phone, fax, and e-mail address. Written comments and suggestions should be submitted by July 31, 2002. Notification of attendance and/or written comments should be submitted to Ms. Vickie Garrett, Antimicrobial Resistance, CDC, 1600 Clifton Rd., MS C-12, Atlanta, GA 30333; telephone 404-639-2603; fax 404-639-4197; or e-mail aractionplan@cdc.gov.

Notice to Readers

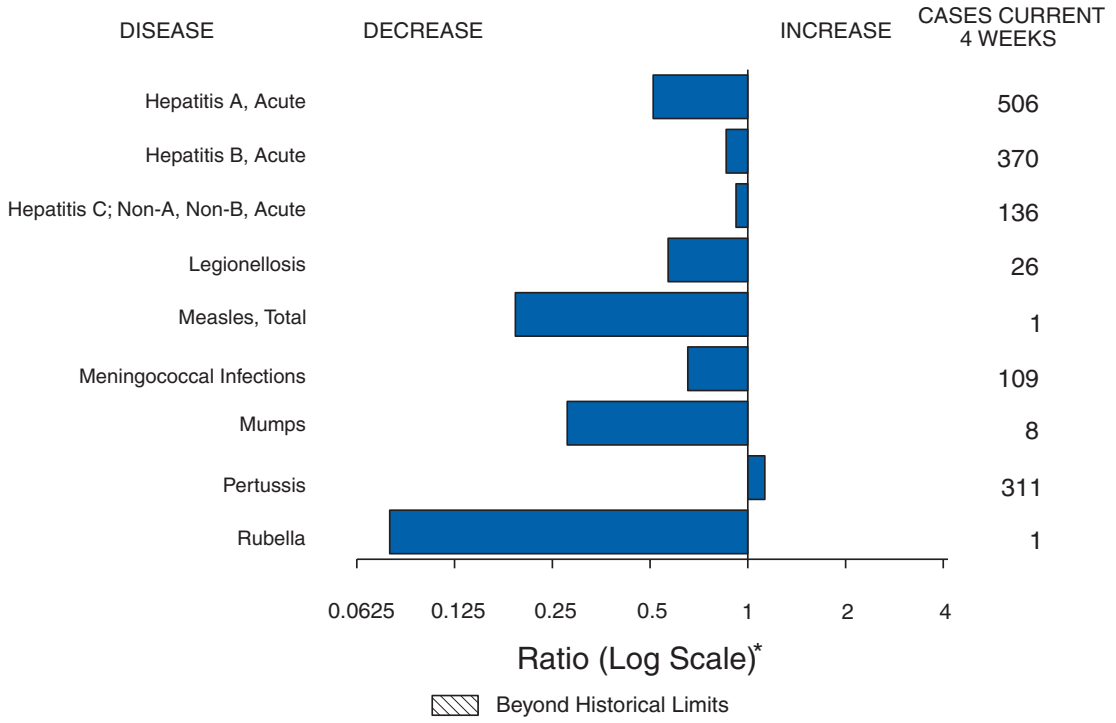
Applied Epidemiology

CDC and Emory University's Rollins School of Public Health will co-sponsor a course, "International Course in Applied Epidemiology," during September 30–October 25, 2002, in Atlanta, Georgia. The course is directed at public health professionals from countries other than the United States and will include presentations and discussions of epidemiologic principles, basic statistical analysis, public health surveillance, field investigations, surveys and sampling, and discussions of the epidemiologic aspects of current major public health problems in international health. Included are small group discussions of epidemiologic case exercises based on field investigations. Participants are encouraged to give a short presentation reviewing some epidemiologic data from their own country.

Computer training using Epi Info 2000 (Windows version), a software program developed by CDC and the World Health Organization for epidemiologists, is included. Prerequisites include familiarity with the vocabulary and principles of basic epidemiology or completion of CDC's "Principles of Epidemiology" home-study course (SS3030) or equivalent. Preference will be given to applicants whose work involves priority public health problems in international health. Early registration deadline is June 1, 2002; late registration deadline is September 1, 2002. There is a tuition charge.

Additional information and applications are available from Emory University's Rollins School of Public Health, International Health Dept. (PIA), 1518 Clifton Rd. N.E., Rm. 746, Atlanta, GA 30322; telephone 404-727-3485; fax 404-727-4590; or at http://www.sph.emory.edu/epicourses, or e-mail pvaleri@sph.emory.edu.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals ending April 27, 2002, with historical data



* 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 of provisional cases of selected notifiable diseases, United States, cumulative, week ending April 27, 2002 (17th Week)*

		Cum. 2002	Cum. 2001		Cum. 2002	Cum. 2001
Anthrax		1	-	Encephalitis: West Nile†	14	-
Botulism:	foodborne	6	7	Hansen disease (leprosy)†	25	31
	infant	17	34	Hantavirus pulmonary syndrome†	-	3
	other (wound & unspecified)	7	4	Hemolytic uremic syndrome, postdiarrheal†	34	28
Brucellosis†		25	19	HIV infection, pediatric†§	31	62
Chancroid		20	12	Plague	-	-
Cholera		1	1	Poliomyelitis, paralytic	-	-
Cyclosporiasis†		35	42	Psittacosis†	9	4
Diphtheria		1	-	Q fever†	9	2
Ehrlichiosis:	human granulocytic (HGE)†	21	22	Rabies, human	-	-
	human monocytic (HME)†	7	11	Streptococcal toxic-shock syndrome†	23	32
	other and unspecified	-	-	Tetanus	2	12
Encephalitis:	California serogroup viral†	6	2	Toxic-shock syndrome	40	50
	eastern equine†	-	-	Trichinosis	4	6
	Powassan†	-	-	Tularemia†	6	9
	St. Louis†	-	-	Yellow fever	1	-
	western equine†	-	-			

-:No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).
† Not notifiable in all states.
§ 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 April 28, 2002.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending April 27, 2002, and April 28, 2001 (17th Week)*

Reporting Area	AIDS		Chlamydia†		Cryptosporidiosis		*Escherichia coli* O157:H7		*Escherichia coli* Shiga Toxin Positive, Serogroup non-O157	
	Cum. 2002§	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	11,809	13,017	218,650	241,899	598	584	391	371	17	21
NEW ENGLAND	396	455	8,302	7,689	28	20	28	36	2	8
Maine	1	14	458	428	1	2	1	5	-	-
N.H.	13	13	475	411	8	-	1	5	-	2
Vt.	5	10	249	196	6	6	1	2	-	-
Mass.	243	266	3,401	3,132	5	7	15	18	2	1
R.I.	41	33	856	945	5	3	3	1	-	-
Conn.	93	119	2,863	2,577	3	2	7	5	-	5
MID. ATLANTIC	2,278	3,711	21,228	24,481	67	82	29	33	-	-
Upstate N.Y.	221	584	4,822	4,007	21	20	25	19	-	-
N.Y. City	1,328	2,043	8,408	9,580	34	36	-	1	-	-
N.J.	458	602	919	3,066	1	4	4	13	-	-
Pa.	271	482	7,079	7,828	11	22	N	N	-	-
E.N. CENTRAL	1,146	758	33,380	46,048	160	200	105	83	-	1
Ohio	195	104	5,189	12,083	46	35	19	22	-	1
Ind.	133	84	4,881	5,107	17	17	7	12	-	-
Ill.	478	329	8,355	13,699	16	14	26	12	-	-
Mich.	282	191	10,483	9,735	38	43	25	15	-	-
Wis.	58	50	4,472	5,424	43	91	28	22	-	-
W.N. CENTRAL	184	249	10,395	12,750	49	23	55	38	3	1
Minn.	45	48	2,874	2,734	21	-	21	17	3	-
Iowa	34	24	629	1,422	5	11	14	3	-	-
Mo.	65	113	3,357	4,443	11	7	14	7	-	-
N. Dak.	-	1	286	341	5	-	-	-	-	-
S. Dak.	2	-	704	607	4	2	1	3	-	1
Nebr.	17	25	424	1,193	-	3	-	-	-	-
Kans.	21	38	2,121	2,010	3	-	5	8	-	-
S. ATLANTIC	4,064	3,603	45,901	47,285	125	111	49	43	8	9
Del.	58	72	875	987	1	1	1	-	-	-
Md.	641	430	4,569	4,795	4	19	-	2	-	-
D.C.	152	233	1,105	1,211	3	7	-	-	-	-
Va.	275	304	5,342	5,530	1	5	7	7	-	1
W. Va.	23	26	720	771	1	-	1	1	-	-
N.C.	262	166	7,349	7,110	16	14	8	20	-	-
S.C.	297	237	4,484	5,619	2	1	-	2	-	-
Ga.	656	389	9,565	10,288	65	43	24	5	5	6
Fla.	1,700	1,746	11,892	10,974	32	21	8	6	3	2
E.S. CENTRAL	515	654	16,622	16,163	38	13	16	16	-	-
Ky.	49	121	2,829	2,832	1	1	3	3	-	-
Tenn.	225	197	5,254	4,819	20	2	10	7	-	-
Ala.	118	174	5,431	4,430	14	4	2	5	-	-
Miss.	123	162	3,108	4,082	3	6	1	1	-	-
W.S. CENTRAL	1,479	1,266	32,277	34,429	5	12	2	32	-	-
Ark.	100	81	1,365	2,620	2	2	-	1	-	-
La.	367	319	5,900	5,622	1	4	-	-	-	-
Okla.	77	67	3,367	3,199	2	2	2	7	-	-
Tex.	935	799	21,645	22,988	-	4	-	24	-	-
MOUNTAIN	392	510	12,614	13,375	37	39	39	34	3	-
Mont.	6	11	673	639	3	3	8	3	-	-
Idaho	8	7	667	571	10	5	1	5	-	-
Wyo.	2	1	282	260	2	-	-	1	1	-
Colo.	96	121	2,147	3,833	9	13	8	12	1	-
N. Mex.	28	42	1,989	1,930	4	8	3	3	1	-
Ariz.	134	189	3,571	4,163	4	1	5	6	-	-
Utah	22	47	1,674	279	2	8	8	3	-	-
Nev.	96	92	1,611	1,700	3	1	6	1	-	-
PACIFIC	1,355	1,811	37,931	39,679	89	84	68	56	1	2
Wash.	147	198	4,620	4,482	15	U	8	11	-	-
Oreg.	129	69	2,236	2,324	11	10	23	7	1	2
Calif.	1,057	1,520	28,808	30,672	62	74	29	34	-	-
Alaska	2	8	1,092	857	-	-	2	-	-	-
Hawaii	20	16	1,175	1,344	1	-	6	4	-	-
Guam	-	8	-	-	-	-	N	N	-	-
P.R.	273	406	1,114	891	-	-	-	-	-	-
V.I.	54	2	30	51	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	80	U	-	U	-	U	-	U

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

* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

† Chlamydia refers to genital infections caused by *C. trachomatis*.

§ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update April 28, 2002.

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending April 27, 2002, and April 28, 2001 (17th Week)*

Reporting Area	*Escherichia coli* Shiga Toxin Positive, Not Serogrouped		Giardiasis	Gonorrhea		*Haemophilus influenzae*, Invasive			
						All Ages, All Serotypes		Age <5 Years Serotype B	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	3	3	4,070	93,576	110,300	554	572	4	9
NEW ENGLAND	-	-	448	2,520	2,044	45	19	-	1
Maine	-	-	56	22	45	1	1	-	-
N.H.	-	-	17	39	43	4	-	-	-
Vt.	-	-	35	34	28	3	-	-	-
Mass.	-	-	193	1,126	933	19	16	-	1
R.I.	-	-	36	304	245	8	-	-	-
Conn.	-	-	111	995	750	10	2	-	-
MID. ATLANTIC	-	-	858	9,445	11,683	94	85	1	-
Upstate N.Y.	-	-	327	2,609	2,479	49	20	1	-
N.Y. City	-	-	382	3,421	4,020	27	24	-	-
N.J.	-	-	-	651	1,411	10	35	-	-
Pa.	-	-	149	2,764	3,773	8	6	-	-
E.N. CENTRAL	2	2	767	15,871	23,299	70	87	1	1
Ohio	2	2	269	2,853	6,377	41	27	-	1
Ind.	-	-	-	2,200	2,136	16	16	-	-
Ill.	-	-	126	4,684	7,270	-	32	-	-
Mich.	-	-	259	4,631	5,618	8	4	1	-
Wis.	-	-	113	1,503	1,898	5	8	-	-
W.N. CENTRAL	-	-	476	4,447	5,188	19	19	-	1
Minn.	-	-	192	890	846	14	9	-	-
Iowa	-	-	77	170	379	1	-	-	-
Mo.	-	-	141	2,302	2,555	2	9	-	-
N. Dak.	-	-	6	13	11	-	-	-	-
S. Dak.	-	-	20	84	72	-	-	-	-
Nebr.	-	-	-	131	439	-	1	-	1
Kans.	-	-	40	857	886	2	-	-	-
S. ATLANTIC	-	-	735	26,426	29,293	151	169	-	1
Del.	-	-	14	558	528	-	-	-	-
Md.	-	-	32	2,542	2,783	37	41	-	-
D.C.	-	-	14	943	1,029	-	-	-	-
Va.	-	-	52	3,457	2,919	8	9	-	-
W. Va.	-	-	9	304	168	2	4	-	1
N.C.	-	-	-	4,748	5,899	13	22	-	-
S.C.	-	-	11	2,587	4,305	3	3	-	-
Ga.	-	-	280	5,035	5,540	56	46	-	-
Fla.	-	-	323	6,252	6,122	32	44	-	-
E.S. CENTRAL	-	1	99	9,376	10,299	20	32	1	-
Ky.	-	1	-	1,099	1,091	2	1	-	-
Tenn.	-	-	43	2,875	3,165	11	12	-	-
Ala.	-	-	56	3,488	3,482	5	17	1	-
Miss.	-	-	-	1,914	2,561	2	2	-	-
W.S. CENTRAL	-	-	14	14,418	16,537	21	17	-	1
Ark.	-	-	14	873	1,677	1	-	-	-
La.	-	-	-	3,706	3,804	1	2	-	-
Okla.	-	-	-	1,476	1,498	19	14	-	-
Tex.	-	-	-	8,363	9,558	-	1	-	1
MOUNTAIN	1	-	371	2,969	3,221	77	76	1	2
Mont.	-	-	25	38	34	-	-	-	-
Idaho	-	-	19	28	29	1	1	-	-
Wyo.	-	-	2	20	17	1	-	-	-
Colo.	1	-	124	1,035	1,072	16	17	-	-
N. Mex.	-	-	47	368	318	14	12	-	-
Ariz.	-	-	48	864	1,102	35	37	1	1
Utah	-	-	67	132	26	8	2	-	-
Nev.	-	-	39	484	623	2	7	-	1
PACIFIC	-	-	302	8,104	8,736	57	68	-	2
Wash.	-	-	117	973	1,002	1	1	-	-
Oreg.	-	-	125	286	390	30	18	-	-
Calif.	-	-	-	6,509	7,013	9	32	-	2
Alaska	-	-	24	183	107	1	1	-	-
Hawaii	-	-	36	153	224	16	16	-	-
Guam	-	-	-	-	-	-	-	-	-
P.R.	-	-	-	206	223	-	-	-	-
V.I.	-	-	-	17	7	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	5	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending April 27, 2002, and April 28, 2001 (17th Week)*

Reporting Area	*Haemophilus influenzae*, Invasive, Age <5 Years, Non-Serotype B		*Haemophilus influenzae*, Invasive, Age <5 Years, Unknown Serotype		Hepatitis (Viral, Acute), By Type, A		B		C; Non-A, Non-B	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	96	105	5	11	2,793	3,787	1,902	2,364	650	1,622
NEW ENGLAND	5	5	-	-	128	148	64	42	13	20
Maine	-	-	-	-	4	3	1	3	-	-
N.H.	-	-	-	-	6	4	5	6	-	-
Vt.	-	-	-	-	-	2	2	3	6	5
Mass.	3	4	-	-	61	50	35	8	7	15
R.I.	-	-	-	-	17	6	9	6	-	-
Conn.	2	1	-	-	40	83	12	16	-	-
MID. ATLANTIC	14	14	-	-	355	449	450	495	221	770
Upstate N.Y.	7	2	-	-	63	80	43	38	18	10
N.Y. City	5	4	-	-	156	132	263	212	-	-
N.J.	2	4	-	-	38	177	76	149	197	736
Pa.	-	4	-	-	98	60	68	96	6	24
E.N. CENTRAL	11	16	-	1	370	756	273	227	33	88
Ohio	5	3	-	-	123	90	31	41	5	5
Ind.	5	4	-	1	19	33	9	6	-	-
Ill.	-	7	-	-	103	481	21	20	4	20
Mich.	-	-	-	-	85	123	212	160	24	63
Wis.	1	2	-	-	40	29	-	-	-	-
W.N. CENTRAL	2	1	2	2	120	130	65	77	189	449
Minn.	2	1	1	-	19	9	3	6	-	-
Iowa	-	-	-	-	30	14	9	6	1	-
Mo.	-	-	1	2	24	27	44	49	188	445
N. Dak.	-	-	-	-	1	-	1	-	-	-
S. Dak.	-	-	-	-	3	1	-	1	-	-
Nebr.	-	-	-	-	-	19	-	6	-	1
Kans.	-	-	-	-	43	60	8	9	-	3
S. ATLANTIC	24	30	-	4	870	662	520	545	53	34
Del.	-	-	-	-	3	3	2	5	3	1
Md.	1	4	-	-	110	82	43	49	8	8
D.C.	-	-	-	-	31	15	9	3	-	-
Va.	2	4	-	-	30	45	65	44	1	-
W. Va.	-	-	-	-	9	2	11	8	1	4
N.C.	1	1	-	4	105	38	72	83	8	7
S.C.	1	1	-	-	17	21	22	5	3	2
Ga.	13	13	-	-	206	287	183	232	10	1
Fla.	6	7	-	-	359	169	113	116	19	11
E.S. CENTRAL	4	6	-	1	54	102	56	129	64	30
Ky.	-	-	-	-	23	16	13	18	1	3
Tenn.	2	2	-	-	-	44	-	42	15	21
Ala.	2	3	-	1	12	36	21	37	2	1
Miss.	-	1	-	-	19	6	22	32	46	5
W.S. CENTRAL	4	3	-	-	34	636	95	275	4	167
Ark.	-	-	-	-	11	18	26	34	-	3
La.	-	-	-	-	10	38	6	37	4	81
Okla.	4	3	-	-	12	57	1	31	-	2
Tex.	-	-	-	-	1	523	62	173	-	81
MOUNTAIN	18	8	2	1	191	251	125	165	23	26
Mont.	-	-	-	-	5	4	3	1	-	-
Idaho	-	-	-	-	-	26	-	4	-	1
Wyo.	-	-	-	-	3	1	6	-	4	4
Colo.	2	-	-	-	36	26	34	37	13	5
N. Mex.	4	5	-	1	6	8	15	38	-	9
Ariz.	8	3	1	-	98	131	41	59	-	4
Utah	3	-	-	-	19	22	11	10	-	-
Nev.	1	-	1	-	24	33	15	16	6	3
PACIFIC	14	22	1	2	671	653	254	409	50	38
Wash.	1	-	-	1	51	24	18	31	4	9
Oreg.	4	3	-	-	37	45	47	57	7	6
Calif.	6	18	1	1	576	568	184	310	39	23
Alaska	1	-	-	-	7	10	3	3	-	-
Hawaii	2	1	-	-	-	6	2	8	-	-
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	25	42	15	69	-	1
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	22	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending April 27, 2002, and April 28, 2001 (17th Week)*

Reporting Area	Legionellosis		Listeriosis		Lyme Disease		Malaria		Measles Total	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	182	269	108	148	1,291	1,372	293	366	8†	61§
NEW ENGLAND	7	8	12	14	50	206	14	29	-	5
Maine	1	-	2	-	-	-	1	2	-	-
N.H.	1	2	2	-	17	2	4	2	-	-
Vt.	-	3	-	-	1	1	1	-	-	1
Mass.	3	2	5	8	29	89	3	12	-	3
R.I.	-	-	1	-	3	-	-	1	-	-
Conn.	2	1	2	6	-	114	5	12	-	1
MID. ATLANTIC	36	62	17	30	1,033	912	69	97	4	8
Upstate N.Y.	12	13	9	9	730	227	12	12	-	4
N.Y. City	10	5	4	6	46	24	45	51	4	1
N.J.	1	9	-	11	54	185	6	22	-	1
Pa.	13	35	4	4	203	476	6	12	-	2
E.N. CENTRAL	57	72	18	17	10	43	36	51	-	7
Ohio	31	31	9	3	9	5	7	5	-	2
Ind.	3	5	1	1	1	-	1	8	-	2
Ill.	-	9	-	5	-	4	7	16	-	3
Mich.	17	16	6	6	-	-	17	15	-	-
Wis.	6	11	2	2	U	34	4	7	-	-
W.N. CENTRAL	10	17	4	2	19	25	20	8	-	4
Minn.	1	1	-	-	13	15	8	1	-	2
Iowa	1	4	1	-	3	3	2	1	-	-
Mo.	7	8	1	1	3	5	5	3	-	2
N. Dak.	-	-	1	-	-	-	1	-	-	-
S. Dak.	1	-	-	-	-	-	-	-	-	-
Nebr.	-	3	-	-	-	-	-	1	-	-
Kans.	-	1	1	1	-	2	4	2	-	-
S. ATLANTIC	37	30	15	20	134	127	89	86	1	4
Del.	3	-	-	-	11	12	1	1	-	-
Md.	4	7	3	2	72	95	21	30	-	3
D.C.	-	1	-	-	6	7	2	4	-	-
Va.	2	4	1	3	6	8	7	13	-	-
W. Va.	N	N	-	2	-	1	1	-	-	-
N.C.	3	3	2	-	18	3	7	1	-	-
S.C.	3	1	2	1	1	-	2	3	-	-
Ga.	5	3	3	5	-	-	33	20	-	1
Fla.	17	11	4	7	20	1	15	14	1	-
E.S. CENTRAL	5	25	6	7	6	2	5	8	-	-
Ky.	3	6	1	1	2	2	1	2	-	-
Tenn.	-	8	2	3	1	-	1	3	-	-
Ala.	2	7	3	3	3	-	2	3	-	-
Miss.	-	4	-	-	-	-	1	-	-	-
W.S. CENTRAL	1	6	3	14	2	31	2	4	-	1
Ark.	-	-	-	1	-	-	-	1	-	-
La.	-	3	-	-	1	2	2	1	-	-
Okla.	1	1	3	-	-	-	-	1	-	-
Tex.	-	2	-	13	1	29	-	1	-	1
MOUNTAIN	15	15	9	10	7	2	11	19	-	1
Mont.	1	-	-	-	-	-	-	2	-	-
Idaho	-	-	-	-	1	1	-	2	-	1
Wyo.	3	1	-	-	-	-	-	-	-	-
Colo.	4	5	2	1	2	-	6	9	-	-
N. Mex.	1	1	-	2	1	-	-	1	-	-
Ariz.	2	6	5	2	1	-	2	1	-	-
Utah	4	-	2	1	1	-	2	2	-	-
Nev.	-	2	-	4	1	1	1	2	-	-
PACIFIC	14	34	24	34	30	24	47	64	3	31
Wash.	1	6	1	2	-	1	3	2	-	15
Oreg.	N	N	2	4	1	3	2	6	-	3
Calif.	13	24	21	28	29	20	39	50	3	11
Alaska	-	1	-	-	-	-	1	1	-	-
Hawaii	-	3	-	-	N	N	2	5	-	2
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	-	2	-	-	N	N	-	2	-	-
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).
† Of eight cases reported, three were indigenous and five were imported from another country.
§ Of 61 cases reported, 32 were indigenous and 29 were imported from another country.

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending April 27, 2002, and April 28, 2001 (17th Week)*

Reporting Area	Meningococcal Disease		Mumps		Pertussis		Rabies, Animal	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	586	1,154	92	66	1,541	1,729	1,441	1,953
NEW ENGLAND	44	58	4	-	218	183	249	182
Maine	3	1	-	-	3	-	14	26
N.H.	5	4	3	-	3	16	3	4
Vt.	3	4	-	-	36	22	48	28
Mass.	22	33	1	-	172	137	83	54
R.I.	3	1	-	-	-	1	16	22
Conn.	8	15	-	-	4	7	85	48
MID. ATLANTIC	57	123	10	4	104	130	256	123
Upstate N.Y.	21	30	2	1	74	72	171	-
N.Y. City	7	20	1	2	5	16	8	3
N.J.	6	44	1	-	3	2	32	49
Pa.	23	29	6	1	22	40	45	71
E.N. CENTRAL	80	143	14	11	220	190	10	14
Ohio	37	42	3	1	133	115	2	1
Ind.	16	6	-	1	15	11	3	1
Ill.	-	37	4	9	34	18	2	2
Mich.	18	33	7	-	25	18	3	6
Wis.	9	25	-	-	13	28	-	4
W.N. CENTRAL	53	63	7	3	186	76	108	104
Minn.	15	8	-	1	67	17	7	15
Iowa	6	14	-	-	59	10	13	16
Mo.	26	24	3	-	36	34	8	8
N. Dak.	-	3	1	-	-	-	7	17
S. Dak.	2	2	-	-	5	3	20	14
Nebr.	-	3	-	-	-	2	-	-
Kans.	4	9	3	2	19	10	53	34
S. ATLANTIC	110	181	14	6	138	82	600	667
Del.	4	-	-	-	1	-	9	12
Md.	3	23	2	3	14	10	95	92
D.C.	-	-	-	-	-	1	-	-
Va.	16	20	2	2	62	8	171	126
W. Va.	-	4	-	-	3	1	57	46
N.C.	14	40	1	-	13	25	187	192
S.C.	11	16	2	1	23	14	20	40
Ga.	16	29	3	-	11	14	59	94
Fla.	46	49	4	-	11	9	2	65
E.S. CENTRAL	28	72	7	1	41	34	48	122
Ky.	4	13	4	1	12	11	8	7
Tenn.	11	24	1	-	24	14	34	106
Ala.	9	27	1	-	5	6	6	9
Miss.	4	8	1	-	-	3	-	-
W.S. CENTRAL	22	228	5	7	150	86	29	518
Ark.	7	9	-	1	5	5	-	-
La.	6	48	-	2	2	1	-	2
Okla.	8	15	-	-	12	2	29	30
Tex.	1	156	5	4	131	78	-	486
MOUNTAIN	50	49	4	5	256	709	66	90
Mont.	2	-	-	-	2	5	4	13
Idaho	2	5	1	-	26	156	-	-
Wyo.	-	-	-	1	3	-	3	16
Colo.	14	19	-	1	113	135	-	-
N. Mex.	1	7	-	2	25	41	2	2
Ariz.	17	9	-	-	69	355	56	59
Utah	4	5	2	-	12	12	-	-
Nev.	10	4	1	1	6	5	1	-
PACIFIC	142	237	27	29	228	239	75	133
Wash.	27	33	-	-	110	29	-	-
Oreg.	21	34	N	N	20	13	-	-
Calif.	90	161	22	15	93	187	53	97
Alaska	1	1	-	1	2	-	22	36
Hawaii	3	8	5	13	3	10	-	-
Guam	-	-	-	-	-	-	-	-
P.R.	2	2	-	-	-	2	18	35
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending April 27, 2002, and April 28, 2001 (17th Week)*

Reporting Area	Rocky Mountain Spotted Fever		Rubella				Salmonellosis	
			Rubella		Congenital Rubella			
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	93	48	1	6	2	-	7,516	8,541
NEW ENGLAND	-	-	-	-	-	-	438	631
Maine	-	-	-	-	-	-	52	72
N.H.	-	-	-	-	-	-	21	39
Vt.	-	-	-	-	-	-	18	24
Mass.	-	-	-	-	-	-	234	362
R.I.	-	-	-	-	-	-	19	26
Conn.	-	-	-	-	-	-	94	108
MID. ATLANTIC	7	1	-	3	-	-	910	1,310
Upstate N.Y.	2	-	-	1	-	-	307	225
N.Y. City	-	-	-	2	-	-	349	300
N.J.	-	-	-	-	-	-	80	468
Pa.	5	1	-	-	-	-	174	317
E.N. CENTRAL	3	2	-	1	-	-	1,299	1,168
Ohio	3	-	-	-	-	-	384	387
Ind.	-	1	-	-	-	-	96	90
Ill.	-	1	-	1	-	-	406	301
Mich.	-	-	-	-	-	-	258	198
Wis.	-	-	-	-	-	-	155	192
W.N. CENTRAL	10	9	-	1	-	-	561	472
Minn.	-	-	-	-	-	-	123	156
Iowa	-	1	-	1	-	-	90	72
Mo.	10	8	-	-	-	-	242	117
N. Dak.	-	-	-	-	-	-	9	1
S. Dak.	-	-	-	-	-	-	26	27
Nebr.	-	-	-	-	-	-	-	36
Kans.	-	-	-	-	-	-	71	63
S. ATLANTIC	65	31	1	-	-	-	1,976	1,979
Del.	-	-	-	-	-	-	11	22
Md.	9	2	1	-	-	-	168	183
D.C.	-	-	-	-	-	-	25	24
Va.	1	-	-	-	-	-	202	306
W. Va.	-	-	-	-	-	-	19	16
N.C.	39	10	-	-	-	-	274	325
S.C.	6	1	-	-	-	-	102	210
Ga.	9	15	-	-	-	-	521	435
Fla.	1	3	-	-	-	-	654	458
E.S. CENTRAL	7	3	-	-	1	-	437	434
Ky.	-	-	-	-	-	-	81	75
Tenn.	5	2	-	-	1	-	129	111
Ala.	2	1	-	-	-	-	141	155
Miss.	-	-	-	-	-	-	86	93
W.S. CENTRAL	-	-	-	-	-	-	169	871
Ark.	-	-	-	-	-	-	49	77
La.	-	-	-	-	-	-	43	191
Okla.	-	-	-	-	-	-	75	42
Tex.	-	-	-	-	-	-	2	561
MOUNTAIN	1	2	-	-	-	-	522	513
Mont.	-	-	-	-	-	-	20	19
Idaho	-	1	-	-	-	-	37	21
Wyo.	-	-	-	-	-	-	12	22
Colo.	-	-	-	-	-	-	147	150
N. Mex.	-	-	-	-	-	-	74	60
Ariz.	-	-	-	-	-	-	132	156
Utah	-	1	-	-	-	-	44	54
Nev.	1	-	-	-	-	-	56	31
PACIFIC	-	-	-	1	1	-	1,204	1,163
Wash.	-	-	-	-	-	-	85	106
Oreg.	-	-	-	-	-	-	93	69
Calif.	-	-	-	-	-	-	944	875
Alaska	-	-	-	-	-	-	18	15
Hawaii	-	-	-	1	1	-	64	98
Guam	-	-	-	-	-	-	-	-
P.R.	-	-	-	-	-	-	42	247
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	10	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending April 27, 2002, and April 28, 2001 (17th Week)*

Reporting Area	Shigellosis		Streptococcal Disease, Invasive, Group A		*Streptococcus pneumoniae*, Drug Resistant, Invasive		*Streptococcus pneumoniae*, Invasive (<5 Years)	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	3,811	4,146	1,466	1,600	976	1,228	68	54
NEW ENGLAND	78	69	63	56	1	6	1	1
Maine	2	1	13	7	-	-	-	-
N.H.	3	1	18	6	-	-	-	-
Vt.	-	2	5	7	1	6	1	-
Mass.	53	48	21	33	-	-	-	-
R.I.	4	4	6	3	-	-	-	1
Conn.	16	13	-	-	-	-	-	-
MID. ATLANTIC	191	498	234	269	44	68	27	46
Upstate N.Y.	45	128	133	104	41	66	27	46
N.Y. City	99	130	60	79	U	U	-	-
N.J.	19	151	24	69	-	-	-	-
Pa.	28	89	17	17	3	2	-	-
E.N. CENTRAL	459	576	224	362	74	83	19	5
Ohio	270	150	91	94	-	-	1	-
Ind.	23	83	11	16	72	83	15	5
Ill.	87	158	2	133	2	-	-	-
Mich.	49	113	120	95	-	-	3	-
Wis.	30	72	-	24	-	-	-	-
W.N. CENTRAL	300	428	103	159	241	24	17	1
Minn.	46	181	59	65	178	-	17	-
Iowa	31	74	-	-	-	-	-	-
Mo.	42	83	24	39	5	7	-	-
N. Dak.	7	9	-	4	-	2	-	1
S. Dak.	126	26	5	5	1	2	-	-
Nebr.	-	23	-	12	-	3	-	-
Kans.	48	32	15	34	57	10	-	-
S. ATLANTIC	1,633	611	294	290	520	846	4	1
Del.	5	4	1	2	3	1	-	-
Md.	207	37	43	22	-	-	-	-
D.C.	18	19	3	2	26	3	1	-
Va.	324	39	33	46	-	-	-	-
W. Va.	2	4	7	8	25	26	-	1
N.C.	101	131	60	52	-	-	-	-
S.C.	18	33	20	3	81	146	3	-
Ga.	622	135	76	97	152	302	-	-
Fla.	336	209	51	58	233	368	-	-
E.S. CENTRAL	311	337	45	36	65	130	-	-
Ky.	52	117	5	16	8	16	-	-
Tenn.	19	32	40	20	57	113	-	-
Ala.	133	83	-	-	-	1	-	-
Miss.	107	105	-	-	-	-	-	-
W.S. CENTRAL	138	786	15	157	11	49	-	-
Ark.	24	180	-	-	2	12	-	-
La.	22	77	-	-	9	37	-	-
Okla.	91	6	14	24	-	-	-	-
Tex.	1	523	1	133	-	-	-	-
MOUNTAIN	161	216	267	181	20	21	-	-
Mont.	1	-	-	-	-	-	-	-
Idaho	2	7	4	3	-	-	-	-
Wyo.	1	-	3	4	7	2	-	-
Colo.	37	46	108	70	-	-	-	-
N. Mex.	41	43	45	36	13	19	-	-
Ariz.	56	91	107	65	-	-	-	-
Utah	14	12	-	3	-	-	-	-
Nev.	9	17	-	-	-	-	-	-
PACIFIC	540	625	221	90	-	1	-	-
Wash.	21	56	26	-	-	-	-	-
Oreg.	31	34	-	-	-	-	-	-
Calif.	469	522	178	69	-	-	-	-
Alaska	2	2	-	-	-	-	-	-
Hawaii	17	11	17	21	-	1	-	-
Guam	-	-	-	-	-	-	-	-
P.R.	1	6	-	-	-	-	-	-
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	-	-	U	U
C.N.M.I.	3	U	-	U	-	-	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (Cont'd) Provisional cases of selected notifiable diseases, United States, weeks ending April 27, 2002, and April 28, 2001 (17th Week)*

Reporting Area	Syphilis				Tuberculosis		Typhoid Fever	
	Primary & Secondary		Congenital†					
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	1,778	1,792	18	151	2,588	3,505	74	88
NEW ENGLAND	26	12	-	2	109	110	8	5
Maine	-	-	-	-	5	-	-	-
N.H.	-	-	-	-	4	7	-	-
Vt.	1	-	-	-	-	3	-	-
Mass.	16	8	-	1	58	57	7	4
R.I.	2	1	-	-	11	13	-	-
Conn.	7	3	-	1	31	30	1	1
MID. ATLANTIC	179	148	2	20	618	550	17	37
Upstate N.Y.	9	4	1	13	76	-	3	5
N.Y. City	99	90	-	-	328	317	11	7
N.J.	38	25	1	5	147	147	3	24
Pa.	33	29	-	2	67	86	-	1
E.N. CENTRAL	339	290	-	26	297	339	11	6
Ohio	48	28	-	1	46	71	4	1
Ind.	20	58	-	3	33	29	1	1
Ill.	73	103	-	20	150	167	1	1
Mich.	191	92	-	2	62	51	3	2
Wis.	7	9	-	-	6	21	2	1
W.N. CENTRAL	19	24	-	3	121	135	1	4
Minn.	5	13	-	-	67	71	-	-
Iowa	-	-	-	-	-	9	-	-
Mo.	8	6	-	1	41	37	1	4
N. Dak.	-	-	-	-	-	-	-	-
S. Dak.	-	-	-	-	7	4	-	-
Nebr.	4	-	-	-	-	14	-	-
Kans.	2	5	-	2	6	-	-	-
S. ATLANTIC	478	670	2	40	510	715	11	10
Del.	6	4	-	-	7	-	-	-
Md.	48	92	-	1	54	56	1	3
D.C.	35	14	-	1	-	28	-	-
Va.	11	41	-	1	29	61	-	1
W. Va.	-	-	-	-	8	10	-	-
N.C.	108	157	-	4	101	78	-	1
S.C.	38	96	-	8	39	62	-	-
Ga.	72	103	-	9	42	147	7	3
Fla.	160	163	2	16	230	273	3	2
E.S. CENTRAL	203	183	1	8	213	241	2	-
Ky.	30	15	-	-	31	31	2	-
Tenn.	81	106	-	4	84	82	-	-
Ala.	71	27	1	2	65	90	-	-
Miss.	21	35	-	2	33	38	-	-
W.S. CENTRAL	235	226	13	25	71	518	-	4
Ark.	6	15	-	2	19	45	-	-
La.	44	48	-	-	-	-	-	-
Okla.	24	30	-	1	52	31	-	-
Tex.	161	133	13	22	-	442	-	4
MOUNTAIN	72	63	-	7	76	129	7	2
Mont.	-	-	-	-	-	-	-	1
Idaho	1	-	-	-	-	3	-	-
Wyo.	-	-	-	-	1	-	-	-
Colo.	-	8	-	-	15	34	3	-
N. Mex.	13	5	-	-	7	14	-	-
Ariz.	52	42	-	7	43	43	-	-
Utah	5	6	-	-	8	5	3	-
Nev.	1	2	-	-	2	30	1	1
PACIFIC	227	176	-	20	573	768	17	20
Wash.	18	21	-	-	73	66	-	1
Oreg.	5	4	-	-	26	29	2	3
Calif.	200	148	-	20	407	606	15	15
Alaska	-	-	-	-	22	15	-	-
Hawaii	4	3	-	-	45	52	-	1
Guam	-	-	-	-	-	-	-	-
P.R.	74	95	-	5	8	23	-	-
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	11	U	-	U	19	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).
† Updated from reports to the Division of STD Prevention, NCHSTP.

TABLE III. Deaths in 122 U.S. cities,* week ending April 27, 2002 (17th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	355	253	79	14	5	4	34
Boston, Mass.	U	U	U	U	U	U	U
Bridgeport, Conn.	U	U	U	U	U	U	U
Cambridge, Mass.	17	14	1	2	-	-	1
Fall River, Mass.	22	19	1	2	-	-	3
Hartford, Conn.	66	52	11	2	-	1	3
Lowell, Mass.	29	24	5	-	-	-	1
Lynn, Mass.	14	10	3	1	-	-	-
New Bedford, Mass.	24	18	5	1	-	-	3
New Haven, Conn.	39	22	13	2	-	2	5
Providence, R.I.	U	U	U	U	U	U	U
Somerville, Mass.	2	1	1	-	-	-	-
Springfield, Mass.	47	31	12	2	1	1	5
Waterbury, Conn.	29	20	8	-	1	-	4
Worcester, Mass.	66	42	19	2	3	-	9
MID. ATLANTIC	2,692	1,887	512	205	51	36	135
Albany, N.Y.	68	41	22	4	-	1	3
Allentown, Pa.	19	16	2	1	-	-	-
Buffalo, N.Y.	99	73	16	7	1	2	13
Camden, N.J.	19	11	6	1	-	1	2
Elizabeth, N.J.	31	25	4	1	-	1	1
Erie, Pa.	41	35	6	-	-	-	1
Jersey City, N.J.	47	29	11	5	1	1	-
New York City, N.Y.	1,160	776	232	108	25	18	44
Newark, N.J.	46	18	17	10	-	1	4
Paterson, N.J.	28	16	6	2	2	2	1
Philadelphia, Pa.	707	512	129	45	18	3	32
Pittsburgh, Pa.§	35	25	7	3	-	-	3
Reading, Pa.	18	13	4	1	-	-	2
Rochester, N.Y.	124	89	23	9	2	1	8
Schenectady, N.Y.	22	17	3	1	1	-	5
Scranton, Pa.	30	23	4	3	-	-	1
Syracuse, N.Y.	134	111	16	2	-	5	9
Trenton, N.J.	17	14	2	1	-	-	1
Utica, N.Y.	24	22	1	-	1	-	3
Yonkers, N.Y.	23	21	1	1	-	-	2
E.N. CENTRAL	1,649	1,134	335	107	34	39	132
Akron, Ohio	U	U	U	U	U	U	U
Canton, Ohio	36	26	6	2	-	2	6
Chicago, Ill.	U	U	U	U	U	U	U
Cincinnati, Ohio	125	80	22	13	5	5	17
Cleveland, Ohio	136	76	36	19	2	3	2
Columbus, Ohio	180	137	26	6	7	4	12
Dayton, Ohio	140	104	26	6	2	2	12
Detroit, Mich.	173	106	40	17	7	3	15
Evansville, Ind.	54	35	14	3	-	2	4
Fort Wayne, Ind.	81	57	14	8	1	1	10
Gary, Ind.	20	12	6	1	-	1	2
Grand Rapids, Mich.	65	48	9	3	2	3	6
Indianapolis, Ind.	198	129	47	14	5	3	14
Lansing, Mich.	34	20	11	2	-	1	4
Milwaukee, Wis.	110	73	28	3	2	4	10
Peoria, Ill.	48	36	7	3	-	2	4
Rockford, Ill.	47	37	9	1	-	-	3
South Bend, Ind.	53	41	6	5	-	1	3
Toledo, Ohio	95	73	18	1	1	2	7
Youngstown, Ohio	54	44	10	-	-	-	1
W.N. CENTRAL	355	234	76	24	12	9	25
Des Moines, Iowa	41	32	8	1	-	-	3
Duluth, Minn.	U	U	U	U	U	U	U
Kansas City, Kans.	U	U	U	U	U	U	U
Kansas City, Mo.	96	61	21	7	4	3	12
Lincoln, Nebr.	U	U	U	U	U	U	U
Minneapolis, Minn.	U	U	U	U	U	U	U
Omaha, Nebr.	96	62	21	7	3	3	10
St. Louis, Mo.	122	79	26	9	5	3	-
St. Paul, Minn.	U	U	U	U	U	U	U
Wichita, Kans.	U	U	U	U	U	U	U
S. ATLANTIC	1,372	908	283	117	35	27	86
Atlanta, Ga.	185	109	41	25	5	5	6
Baltimore, Md.	192	126	33	24	6	3	19
Charlotte, N.C.	92	67	16	4	2	3	9
Jacksonville, Fla.	154	98	34	12	4	6	11
Miami, Fla.	112	87	12	7	3	3	7
Norfolk, Va.	67	45	15	5	-	2	-
Richmond, Va.	59	37	11	6	1	2	3
Savannah, Ga.	46	33	10	2	1	-	5
St. Petersburg, Fla.	67	53	8	5	1	-	11
Tampa, Fla.	186	129	36	14	5	2	12
Washington, D.C.	200	117	62	13	7	1	3
Wilmington, Del.	12	7	5	-	-	-	-
E.S. CENTRAL	921	630	190	60	24	17	79
Birmingham, Ala.	174	122	38	12	2	-	20
Chattanooga, Tenn.	120	96	16	6	1	1	10
Knoxville, Tenn.	85	59	14	6	6	-	2
Lexington, Ky.	73	44	20	6	-	3	9
Memphis, Tenn.	241	160	58	12	7	4	13
Mobile, Ala.	59	44	6	4	3	2	3
Montgomery, Ala.	40	28	6	4	-	2	6
Nashville, Tenn.	129	77	32	10	5	5	16
W.S. CENTRAL	1,387	906	291	113	44	33	122
Austin, Tex.	92	43	17	19	12	1	11
Baton Rouge, La.	54	32	18	3	1	-	2
Corpus Christi, Tex.	41	28	9	3	1	-	-
Dallas, Tex.	197	124	43	16	6	8	15
El Paso, Tex.	109	71	27	8	2	1	7
Ft. Worth, Tex.	147	100	32	9	4	2	14
Houston, Tex.	362	239	74	33	7	9	42
Little Rock, Ark.	52	32	11	3	3	3	3
New Orleans, La.	U	U	U	U	U	U	U
San Antonio, Tex.	164	114	28	11	7	4	15
Shreveport, La.	46	33	9	2	-	2	3
Tulsa, Okla.	123	90	23	6	1	3	10
MOUNTAIN	994	697	182	67	23	25	79
Albuquerque, N.M.	132	90	22	12	3	5	9
Boise, Idaho	43	37	6	-	-	-	4
Colo. Springs, Colo.	69	48	11	8	1	1	4
Denver, Colo.	121	71	28	8	4	10	10
Las Vegas, Nev.	295	212	54	17	9	3	17
Ogden, Utah	34	27	4	1	2	-	4
Phoenix, Ariz.	U	U	U	U	U	U	U
Pueblo, Colo.	28	22	6	-	-	-	2
Salt Lake City, Utah	126	80	30	8	3	5	12
Tucson, Ariz.	146	110	21	13	1	1	17
PACIFIC	1,845	1,298	342	133	32	40	124
Berkeley, Calif.	22	14	5	2	-	1	1
Fresno, Calif.	130	98	21	5	2	4	12
Glendale, Calif.	18	15	3	-	-	-	-
Honolulu, Hawaii	70	57	10	1	1	1	7
Long Beach, Calif.	65	48	11	5	1	-	14
Los Angeles, Calif.	370	250	77	28	7	8	2
Pasadena, Calif.	31	23	2	3	-	3	2
Portland, Oreg.	236	159	49	22	3	3	14
Sacramento, Calif.	205	151	31	12	8	3	20
San Diego, Calif.	177	127	33	12	2	3	20
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	182	125	33	13	4	7	11
Santa Cruz, Calif.	34	27	4	3	-	-	5
Seattle, Wash.	149	94	38	11	3	3	6
Spokane, Wash.	60	47	6	4	-	3	7
Tacoma, Wash.	96	63	19	12	1	1	3
TOTAL	11,570¶	7,947	2,290	840	260	230	816

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. 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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