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Adverse Events Associated with 17D-Derived Yellow Fever Vaccination — United States, 2001–2002

In June 2001, seven cases of yellow fever vaccine–associated viscerotropic disease (YEL-AVD) (previously called multiple organ system failure) in recipients of 17D-derived yellow fever vaccine (YEL) were reported to the Advisory Committee on Immunization Practices (ACIP) (*1–3*). ACIP reviewed the cases, recommended enhanced surveillance for adverse events, and updated the ACIP statement on YEL (*4*). This report summarizes the preliminary surveillance findings, including two new suspected cases of YEL-AVD and four suspected cases of YEL-associated neurotropic disease (YEL-AND) (previously called postvaccinal encephalitis). Although YEL remains essential for travelers to areas in which yellow fever (YF) is endemic (Figure), these findings underscore the need for continued enhanced surveillance and timely clinical assessment of YEL-associated disease.

The Vaccine Adverse Event Reporting System (VAERS) receives reports of adverse events following licensed vaccine administration in the United States (*5*). Enhanced surveillance for YEL adverse events was initiated in June 2001 and includes soliciting reports from health-care providers at certified YF-vaccination clinics and reviewing all VAERS case reports of febrile illness associated temporally with YEL (i.e., illness onset ≤30 days following receipt of YEL). During June 20, 2001–August 31, 2002, a total of 117 reports of adverse events following YEL administration were reported compared with 104 reports during a comparable period in 2000–2001. Of the 117 reports, six cases of persons with severe adverse events consistent with YEL-AND or YEL-AVD were reported. All six patients were vaccinated in the United States with 17D-derived YEL, required hospitalization, and recovered without sequelae. The first case was reported initially as nonserious in May 2001 but was reclassified after the enhanced surveillance system was in place.

Case Reports

Case 1. On April 27, 2001, a man aged 25 years received YEL and influenza and poliovirus vaccines in preparation for travel to North Africa, Israel, Turkey, and Ecuador. One day after vaccination, he had lymphadenopathy, headache, and malaise; 2 days later, he reported nausea, diarrhea, diaphoresis, and fever. Nine days after vaccination, he was hospitalized with a fulminant illness characterized by fever of 101.6° F (38.7° C) and acute hepatic and renal failure (Table). The next day, he had hypotension and respiratory failure requiring resuscitation, vasopressors, dialysis, and mechanical ventilation. No bacterial pathogens were identified from urine, blood, or stool specimens. A toxicology screen was negative. After 24 days of hospitalization, he recovered and was discharged. No acute-phase serum or tissue samples for viral isolation or polymerase chain reaction (PCR) were obtained. Convalescent-phase serum samples collected 351 days after vaccination demonstrated a YF-neutralizing antibody titer of 1:640.

Case 2. On March 28, 2002, a man aged 70 years received YEL in preparation for travel to Venezuela. He had fever, dyspnea, myalgia, and malaise 5 days after vaccination; 3 days

INSIDE

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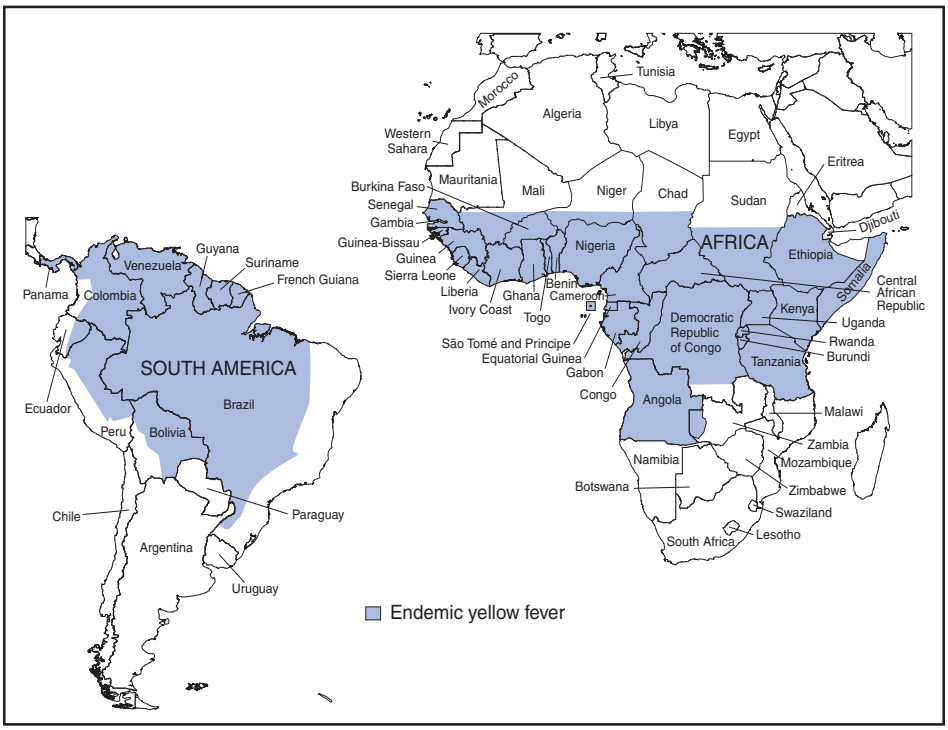
later, he was hospitalized because of fever, thrombocytopenia, and elevated hepatocellular enzymes, bilirubin, and creatinine (Table). He subsequently became hypotensive and was intubated for respiratory failure. Hyponatremia developed and dialysis was required for renal failure. Blood and urine cultures were negative for bacteria, fungi, and viruses. Serum collected on hospital days 21, 25, and 33 and pleural fluid collected on day 26 were negative by real-time, quantitative PCR (TaqMan®) with consensus flavivirus primers and viral culture. Serum collected on hospital day 26 had a neutralizing antibody titer of 1:1,280. After a 41-day hospitalization, he recovered and was discharged.

Case 3. On September 17, 2001, a man aged 36 years received YEL in preparation for travel to Brazil. He had diaphoresis, fever of 102.2º F (39.0º C), rigors, and headache 13 days after vaccination; 16 days after vaccination, he lost consciousness and was hospitalized with severe headache and fever of 106.0º F (41.1º C) (Table). Examination of cerebrospinal fluid (CSF) revealed 406 white blood cells per mm^3 (WBC/mm^3) (predominantly lymphocytes) and elevated protein. Blood, urine, and CSF cultures were negative for bacteria, fungi, and viruses. YF-specific IgM-capture ELISA (MAC-ELISA) of CSF was strongly positive (Table). CSF viral testing by TaqMan® and viral culture was negative. Additional MAC-ELISA results were negative for Eastern equine encephalitis, St. Louis encephalitis, West Nile encephalitis, and La Crosse encephalitis viruses. After a 5-day hospitalization, he recovered and was discharged.

Case 4. On October 4, 2001, a man aged 71 years received YEL and typhoid and hepatitis A vaccines in preparation for travel to Guatemala. He had fever and malaise 6 days later; 13 days after vaccination, he became confused, had expressive aphasia, and was hospitalized with fever of 101.1º F (38.4º C). He had leukocytosis but normal hepatocellular enzymes. CSF had 137 WBC/mm^3 and elevated protein. CSF YF-specific IgM testing by MAC-ELISA was positive (Table); viral testing by TaqMan® and viral culture was negative. CSF was negative for herpes viruses, flaviviruses, and enteroviruses. After a 7-day hospitalization, he recovered and was discharged.

Case 5. On February 7, 2002, a man aged 41 years received YEL and hepatitis A vaccine in preparation for travel to Venezuela. Six days after vaccination, he had low-grade fever, headache, and myalgia, which worsened over several days; 16 days after vaccination, he was hospitalized with fever of 104.0º F (40.0º C), headache, and rigors. CSF had 63 WBC/mm^3 (predominantly mononuclear) and elevated protein. Hepatocellular enzymes were normal (Table). Bacterial and fungal cultures of blood and CSF and CSF cryptococcal antigen were negative. CSF enteroviral testing and *Leptospira* serology were negative. CSF YF-specific IgM testing by MAC-ELISA was

FIGURE. Areas in which yellow fever is endemic



strongly positive (Table); viral testing by TaqMan® and viral culture was negative. After 5 days, he recovered and was discharged.

Case 6. On May 17, 2002, a boy aged 16 years received YEL in preparation for travel to South America; 23 days after vaccination, he had left-arm numbness, inability to speak, loss of right-side fine motor control, expressive aphasia, and severe dysarthria. Magnetic resonance imaging showed diffuse, bilateral, white-matter disease; CSF examination was normal. MAC-ELISA YF-specific IgM tests on CSF collected 26 days after vaccination were strongly positive (Table); CSF tests by TaqMan® with consensus flavivirus primers and viral cell culture were negative. Tests for Rocky Mountain spotted fever, herpes simplex, multiple sclerosis, lupus, autoimmune diseases, and metabolic enzyme deficiencies were

TABLE. Clinical features and laboratory values of patients with suspected cases of yellow fever vaccine–associated adverse events reported to the Vaccine Adverse Event Reporting System — United States, 2001–2002

	Case number					
Features/Laboratory values	**1**	**2**	**3**	**4**	**5**	**6**
Suspected condition*	YFV-AVD	YFV-AVD	YFV-AND	YFV-AND	YFV-AND	YFV-AND
Age (yrs)/sex	25/male	70/male	36/male	71/male	41/male	16/male
Other vaccines†	P, I	None	None	T, H	H	None
Past medical history	Healthy	MG, thyroid§	Healthy	RF, gout¶	Healthy	Depression
Illness onset (days after vaccination)	1	5	13	6	4	23
Impaired cognition	Yes	Yes	Yes	Yes	No	Yes
Clinical shock	Yes	Yes	No	No	No	No
Respiratory failure	Yes	Yes	No	No	No	No
Hemodialysis	Yes	Yes	No	No	No	No
Aspartate aminotransferase (U/L; max.)	436	400	52	25	22	29
Alanine aminotrasferase (U/L; max.)	362	239	13	20	27	32
Bilirubin (mg/dL; max.)	8.3	1.4	1.3	1.6	0.4	0.3
Creatine kinase (U/L; max.)	789	ND**	2,680	84	471	ND
Creatinine (mg/dL; max.)	10.4	6.2	1.2	1.5	1.0	1.0
White blood cells (K/mm^3; max.)	18.5	39.0	11.1	12.8	14.8	6.3
Platelets (K/mm^3; min.)	64	50	257	185	447	205
Hemorrhage and DIC††	Yes	Yes	No	No	No	No
CSF§§ pleocytosis (WBC/mm^3)	ND	ND	406	137	63	0
CSF protein (normal: 20–45 mg/dL)	ND	ND	59	64	82	70
CSF MAC-ELISA¶¶	ND	ND	19.9	27.0	16.3	15.5
Serum-neutralizing antibody to YF***	1:640	1:1,280	ND	ND	ND	ND

* YFV-AVD=yellow fever vaccine–associated viscerotropic disease; YFV-AND=yellow fever vaccine–associated neurotropic disease.
† P=polio; I=influenza; T=typhoid; H=hepatitis A.
§ Status post thymectomy, myasthenia gravis, hypothyroidism, hypertension, but otherwise healthy.
¶ History of childhood rheumatic fever and gout.
** Not done.
†† Disseminated intravascular coagulation.
§§ Cerebrospinal fluid.
¶¶ YF-specific IgM-capture ELISA expressed as a ratio of optical density of the patient's sample to that of a negative control; >3.0 is considered positive. CSF is tested in an undiluted fashion. Serum is tested at a 1:400 dilution.
*** Determined by plaque reduction neutralization test.

negative. Reverse-transcriptase PCR with primers for Colorado tick fever was negative; serum collected 4 months after illness onset did not contain neutralizing antibodies for that virus. No bacteria or fungi were cultured from CSF. The patient was afebrile throughout his illness and was discharged after a 3-day hospitalization.

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Editorial Note: This report documents two probable new cases of 17D-derived YEL-AVD and four probable new cases of 17D-derived YEL-AND in the United States. YEL-AND has long been recognized as a vaccine-associated adverse event, but incidence decreased substantially with implementation of the seed-lot standardization process in 1945. Since then, 27 cases of YEL-AND, including seven U.S. cases, have been reported worldwide (*1,6*). YEL-AVD was recently recognized; since 1996, 12 cases of YEL-AVD, including six U.S. cases, have been reported worldwide (*1–4*).

This report describes the first U.S. case of YEL-AVD in a person aged <50 years. Of the 12 cases reported worldwide, five were in persons aged <50 years. Similar to the YEL-AVD cases reported previously, onset of symptoms occurred 1–6 days after vaccination (*1*). Two of the four persons with YEL-AND became ill 13–23 days after vaccination.

YF is a flavivirus that causes a febrile illness in humans that can progress to hepatic and renal failure and hemorrhage caused by platelet and clotting abnormalities. In primates and mice, YF also can cause meningo-encephalitis (*6*). YEL is a live virus preparation containing 17D vaccine strain made by serial passage of wild type YF virus to attenuate neurotropic and viscerotropic properties while preserving immunogenicity (*4*). Sequencing evidence suggest that YEL-AVD and YEL-AND might represent an aberrant host response to 17D vaccine strain rather than a reversion of vaccine virus to wild type (*1,3*).

The cases of neurologic disease had evidence that 17D-derived YEL was the likely cause of illness. The four patients had onset of illness soon after YEL was administered and had high levels of YF-specific IgM antibody in CSF; no other causes of neurologic disease were identified. However, viral isolation of YEL-associated virus in these patients was either negative or not performed because of inadequate samples. The presence of IgM antibody in CSF might be caused by serum antibody from recent vaccination crossing an inflamed blood-brain barrier; however, this is unlikely because of the large size of IgM. The two patients with visceral involvement also had illness associated temporally with YEL, had clinical features similar to other reported cases of YEL-AVD (*1–3*), and had extensive diagnostic testing, excluding other infectious and noninfectious etiologies. However, tissue samples were not available for testing because both patients survived despite multiple organ system failure.

Enhanced surveillance was useful in identifying additional suspect cases of YEL-AVD and YEL-AND. These findings indicate the need for continued enhanced surveillance, timely clinical assessment, and a refined risk estimate for severe adverse events following receipt of YEL. However, enhanced VAERS surveillance efforts alone might not detect all serious adverse events after receipt of YEL (*7*).

Clinicians are encouraged to report promptly to VAERS any patients with symptoms suggestive of viscerotropic or neurotropic illness or any patients with fever of ≥101.3º F (≥38.5º C) for >24 hours and illness onset ≤30 days following receipt of YEL. VAERS report forms are available online at http://www.vaers.org or by telephone, 800-822-7967. Completed forms can be submitted online; by fax, 877-721-0366; or by mail, P.O. Box 1100, Rockville, MD 20849-1100. Supplemental clinical information and information about the availability of clinical, autopsy, or residual vaccine specimens may be requested. CDC will conduct virologic and immunohistochemical studies of these specimens. Additional information is available from CDC at http://www.cdc.gov/ncidod/dvbid/yellowfever/index.htm and http://www.cdc.gov/travel and by telephone, 970-221-6400 and 404-498-1600.

Because of the potential severity of YF infection, YF vaccination is recommended for persons aged ≥9 months traveling to countries where YF is endemic or epidemic. YF has caused recent deaths in unvaccinated U.S. and European travelers to endemic areas of sub-Saharan Africa and tropical South America (*8–10*). To mitigate the risk for YEL-associated disease, health-care providers should provide YEL only to persons planning to travel to areas reporting ongoing YF activity or with a history of endemic transmission.

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Global Progress Toward Laboratory Containment of Wild Polioviruses — July 2001–August 2002

Since the World Health Assembly launched the Global Poliomyelitis Eradication Initiative in 1988 (see box), the number of countries in which wild poliovirus is endemic has decreased from 125 to 10 in 2001. Three of the six World Health Organization (WHO) regions (Americas, European, and Western Pacific) have been certified as free of wild poliovirus transmission (*1–4*). The Global Commission for the Certification of the Eradication of Poliomyelitis will declare the world polio-free when all regions have documented the absence of wild poliovirus transmission for at least 3 consecutive years and when laboratories with wild poliovirus–containing materials have implemented appropriate containment conditions (*5*). This report describes preparations for laboratory containment and the creation of a global inventory of laboratories and institutions retaining wild poliovirus and summarizes global progress since July 2001 (*6*). The data indicate that substantial progress has been made in identifying laboratories with wild poliovirus–containing materials and in conducting national wild poliovirus inventories.

In 1999, the World Health Assembly recommended that all member states "begin the process leading to laboratory containment of wild poliovirus" (*7*). As of August 2002, a total of 138 (64%) of 214 countries and areas had appointed national task forces for laboratory containment activities, compared with 110 (51%) in June 2001 (*6*); 121 (57%) countries and areas were conducting surveys of laboratories, and 76 (36%) had completed surveys and submitted national inventories to regional certification commissions (Figure),

BOX. International effort to eradicate polio

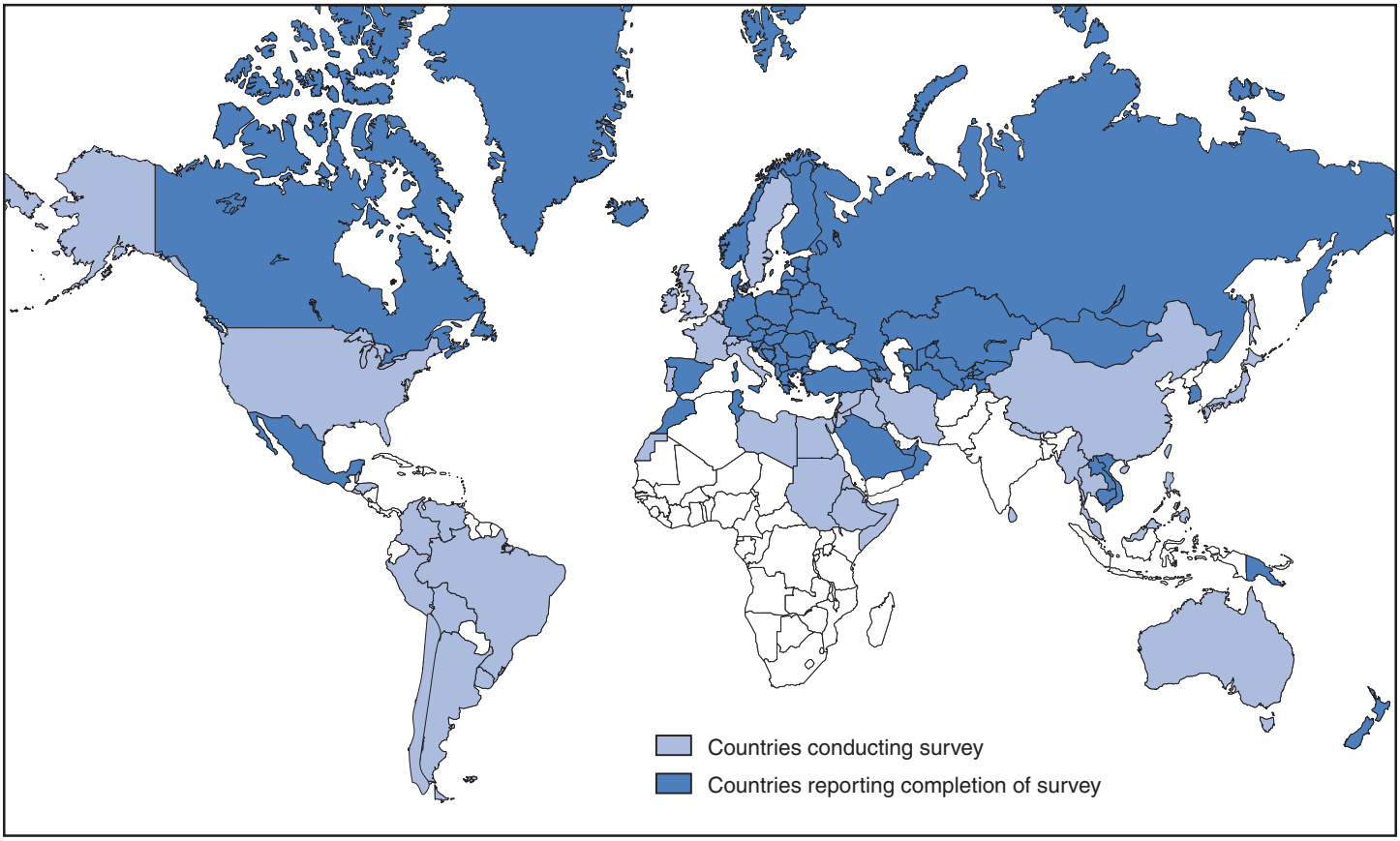
The Global Poliomyelitis Eradication Initiative (GPEI) was launched in 1988 by the World Health Assembly following the success of poliomyelitis elimination efforts in the Americas. The goal of GPEI is to protect all children from a debilitating and sometimes fatal disease and to build an infrastructure that can support other disease control efforts. CDC will continue to provide poliovirus vaccine and epidemiologic and laboratory support for this important humanitarian effort.

GPEI is led by the World Health Organization (WHO), Rotary International, the United Nations Children's Fund (UNICEF), and CDC in partnership with health ministries from WHO member states, donor governments, foundations, the World Bank, the European Union, private-sector donors, other United Nations agencies, and nongovernment organizations. In 2001, approximately 10 million volunteers helped vaccinate 575 million children as part of the final push to interrupt transmission of wild poliovirus worldwide.

Progress through late 2002 confirms that transmission of all three serotypes of wild poliovirus can be interrupted globally. Three WHO regions (Americas, European, and Western Pacific) with a total population of >3 billion persons in 134 countries, territories, and areas have been certified as polio-free (i.e., having no indigenous polio caused by wild viruses). Wild polioviruses are circulating in the lowest number of countries in history, with six countries reporting ongoing polio transmission through October 2002; 90% of all polio cases have been reported from nine of 76 states and provinces in India, Nigeria, and Pakistan. Type II wild poliovirus has not been detected since October 1999.

The challenges to stopping the final chains of wild poliovirus transmission include vaccination of children isolated by conflict, geography, or minority status and ensuring adequate political and financial support to implement eradication strategies fully. Work is ongoing to minimize the risks for inadvertent laboratory release of wild poliovirus and to determine when it will be feasible to end vaccination with oral polio vaccine, which is a major goal of the program. Additional information about GPEI is available at http://www.polioeradication.org.

FIGURE. Countries conducting and reporting completion of national laboratory surveys to identify laboratories with wild poliovirus–containing materials, July 2001–August 2002



compared with 11 (5%) in June 2001. These inventories have identified 1,242 laboratories with wild poliovirus materials (Table).

Laboratory containment activities are of the highest priority in those regions that have been certified as free of wild poliovirus transmission. In the Americas, laboratory surveys are ongoing in 14 (29%) of the region's 48 countries. Canada completed a survey of approximately 1,700 institutions in 2001 and is following up with 22 (1%) laboratories that reported holding wild poliovirus–containing materials. In 2002, the United States completed a pilot survey of 306 institutions with 2,951 laboratories, 47 (2%) of which reported retaining wild poliovirus–containing materials; in October 2002, a nationwide survey began of 30,097 clinics, 450 academic institutions, 637 biomedical institutions, 56 state and local health departments, and 12 federal government departments. Completion of the inventory is anticipated in mid-2003.

In 2001, containment activities in the European Region were accelerated in anticipation of the region being certified polio-free in June 2002 (*4*). Each of the region's 51 countries has established a national task force, created a plan of action, compiled a list of laboratories, and initiated a national survey, and 41 (80%) countries have submitted national inventories to the European Regional Certification Commission. The 10 (20%) countries that have not yet submitted inventories are highly industrialized Western European nations that face substantial logistical challenges in contacting a large number of biomedical institutions.

In 2001, Germany enacted legislation requiring laboratories with wild poliovirus materials to comply with the survey and with recommended biosafety procedures. Approximately 3,500 institutions were identified and surveyed; the response rate was 100%. The contents of approximately 7,000 deep freezers were reviewed. Wild poliovirus–containing materials were reported in 54 (2%) laboratories, 26 (48%) of them in academic institutions; 30 (56%) laboratories destroyed the materials, and 24 (44%) retained them under the required biosafety conditions.

In the Western Pacific, the first WHO region to begin containment activities, 31 (86%) of 36 countries have submitted national inventories; 69 of 13,178 surveyed laboratories

TABLE. Number of countries with national task forces, surveys, and laboratory registries and number of laboratories reporting wild poliovirus–containing materials, by World Health Organization (WHO) region, July 2001–August 2002

WHO region	No. countries in region*	No. countries with task force	No. countries surveying laboratories	No. laboratories registered to be surveyed†	No. laboratories surveyed	No. laboratories reporting wild poliovirus–containing materials§	No. countries with national inventory reviewed by commission¶
Americas**	48	18	14	39,247	2,913	68	0
European**	51	51	50	42,065	35,510	807	41
Western Pacific**	36	36	36	13,855	13,178	69	31
African††	46	7	0	0	0	0	0
Eastern Mediterranean††	23	17	16	8,569	6,430	128	4
South East Asian††	10	9	5	4,920	1,327	170	0
Total	**214**	**138**	**121**	**108,656**	**59,358**	**1,242**	**76**

* Number of countries and territories.
† Some countries report number of laboratories, and others report institutions with jurisdiction over several laboratories.
§ Includes materials potentially containing wild poliovirus; data reported but not confirmed.
¶ Laboratories identified by the survey as holding wild poliovirus–containing materials.
** Certified polio-free.
†† Polio endemic.

reported stocks of materials containing wild poliovirus. Of the five countries with surveys still in progress, the three countries (Australia, China, and Japan) with the largest numbers of laboratories in the region face logistical challenges similar to those facing countries in Western Europe and North America. The other two countries (the Philippines and Malaysia) also face challenges in identifying correct contact information for many unregistered laboratories.

Laboratory containment activities also are under way in the three regions (African, Eastern Mediterranean, and South East Asian) that have not yet been certified as polio-free. Countries in regions that have not reported polio cases in several years have been encouraged to begin containment activities. Seven African countries have established national task forces, with Cameroon and Uganda serving as pilot countries, and 17 Eastern Mediterranean countries and five South East Asian countries have initiated surveys. Four countries in the Eastern Mediterranean Region have submitted national inventories to the Eastern Mediterranean Region Certification Commission.

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Editorial Note: Considerable progress has been made toward completing the global inventory of laboratories and institutions retaining wild poliovirus–containing materials. Countries in all six WHO Regions are implementing laboratory containment activities, and the WHO Global Action Plan for Laboratory Containment has been revised to incorporate the lessons learned from these experiences (*8*). The experience in Germany illustrates the challenges countries with a long history of biomedical research and decentralized health structures face in compiling inventories. The action plan recommends that the number of laboratories with wild poliovirus–containing materials be decreased but allows such materials to be retained by laboratories listed on the national inventory that meet prescribed biosafety conditions, including having basic biosafety level (BSL-2) facilities and practices, limited laboratory access, polio vaccination of personnel, and accurate records of poliovirus materials.

When global wild poliovirus transmission is interrupted, laboratories will be notified that high-containment laboratory (BSL-3/polio) measures are required for all laboratory activities involving known wild poliovirus–containing materials. The same measures are required for all activities involving poliovirus replication in permissive cells or animals using potential wild poliovirus–infectious materials (e.g., fecal, respiratory, and environmental samples collected for any purpose when and where wild poliovirus was known or suspected to be present). For all other activities with potential wild poliovirus–infectious materials, the requirements remain unchanged. Bacteriology and parasitology laboratories may continue to work with potential wild poliovirus–containing materials under BSL-2/polio conditions, which include the use of standard class II biological safety cabinets.

These biosafety recommendations are anticipated to remain in effect as long as current global polio vaccination policies continue. However, the plan recognizes that the consequences of a reintroduction of wild poliovirus from a laboratory will increase after polio vaccination is stopped within a country or region. Containment requirements under this scenario will be reexamined and increased for wild poliovirus and oral poliovirus vaccine materials.

Laboratory containment of wild poliovirus–containing materials is an essential component for the eradication of wild poliovirus. Countries are cooperating successfully to implement laboratory containment activities, and the goal of identifying laboratories with wild poliovirus materials is being achieved. All countries in which polio is not endemic are anticipated to complete a national inventory of laboratories holding wild poliovirus–containing materials by the end of 2003.

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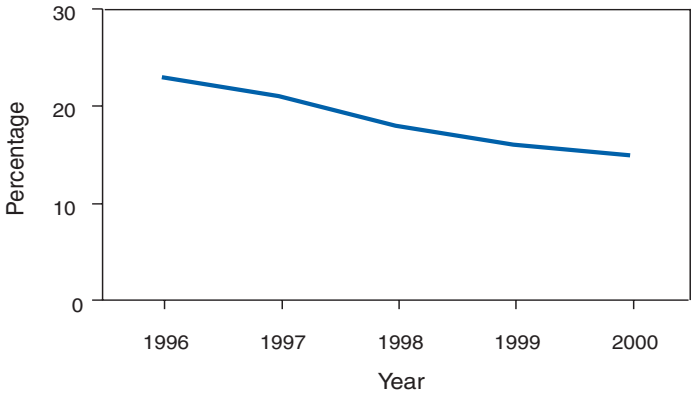
Vaginal Birth After Cesarean Birth — California, 1996–2000

In 2000, of all births in the United States, 23% were cesarean (*1*), approximately 37% of which were repeat cesarean births (i.e., births to women who had a previous cesarean birth). Approximately 60% of cesarean births might be by elective repeat cesarean delivery (ERCD) (*2*). Because cesarean birth is associated with higher maternal morbidity than routine vaginal birth (*2,3*), two of the national health objectives for 2010 are to reduce the cesarean birth rate among women at low risk to 15% of women who are giving birth for the first time (objective no. 16-9a) and to 63% of women with previous cesarean births (objective no. 16-9b) (*4*). A key strategy to reduce the repeat cesarean birth rate is to promote vaginal birth after cesarean (VBAC) as an alternative to ERCD. Achieving the national health objective for 2010 will require increasing the VBAC rate to 37% (*1,3,4*). During 1989–1999, VBAC rates in the United States increased from 19% in 1989 to 28% in 1996 and then decreased to 23% in 1999 (*1*). This report summarizes an analysis of California's VBAC rates during 1996–2000, which indicates that the VBAC rate in California decreased by 35%, from 23% in 1996 to 15% in 2000. Strategies to improve VBAC rates might include educating women about the risks for complications and benefits of VBAC, ensuring careful selection of VBAC candidates, developing guidelines for management of labor, and educating health-care providers about reducing VBAC risks.

To assess California's progress toward meeting the national health objectives for 2010, CDC analyzed birth certificate data from the California Office of Vital Statistics. The analysis included all births to California residents during 1996–2000 for which the mother had a previous cesarean birth (i.e., the delivery method as recorded on the birth certificate was either a repeat cesarean birth or VBAC). Birth certificate files with unknown delivery methods were excluded. A birth was defined as VBAC if the delivery method was recorded either as VBAC or as VBAC and another type of vaginal birth (e.g., forceps- or vacuum-assisted delivery). The VBAC rate for each year during 1996–2000 was determined by dividing the number of women having VBAC per year by the number of women with previous cesarean birth giving birth that year, and trends were tested for statistical significance using Chi-square for linear trend. Maternal race/ethnicity, age, education, and insurance type were stratified, and VBAC rates were calculated for each population. VBAC rates for each population during 1996–2000 were compared to determine the relative percentage change and 95% confidence intervals.

During 1996–2000, the VBAC rate in California decreased from 23% (12,767 of 55,985 women with previous cesarean births) in 1996 to 15% (8,562 of 58,005) in 2000, a decline of 35% (Figure). After maternal race/ethnicity, age, insurance status, and education were stratified, a consistent downward trend in VBAC rates was observed for all populations (Table). By race/ethnicity, Asian/Pacific Islander women had the highest VBAC rates, ranging from 25% in 1996 to 18% in 2000; VBAC rates among American Indian/Alaska Native women declined the most, and rates among non-Hispanic black women declined the least. By age, the highest VBAC rates occurred in 1996 among women aged ≤19 years and in 2000 among women aged 20–29 years, and the lowest rates occurred among women aged ≥40 years in all years; VBAC rates declined the most (49%) among women aged ≤19 years. By education level, college graduates had the highest VBAC rates, and women with less than a high school education had the lowest rates; declines in VBAC rates were similar among women of all education levels. By insurance coverage, women with Health Maintenance Organization (HMO) coverage had the highest VBAC rates, and women with MediCal/Medicaid had the lowest rates; the decline in VBAC rates was

FIGURE. Percentage of women having a vaginal birth after a previous cesarean birth* — California, 1996–2000



* p value for trend <.001.

TABLE. Percentage of women having a vaginal birth after a previous cesarean birth, by maternal demographic characteristics — California, 1996–2000

Characteristic	1996	2000	% change*	(95% CI†)
Race/Ethnicity				
White, non-Hispanic	24.7	15.3	-38	(-36%– -41%)
Black, non-Hispanic	20.0	14.7	-27	(-20%– -33%)
American Indian/ Alaska Native	16.8	9.8	-42	(-9%– -52%)
Asian/Pacific Islander	24.9	17.6	-29	(-24%– -35%)
Hispanic	21.5	13.9	-35	(-33%– -38%)
Age group (yrs)				
<19	25.4	12.9	-49	(-39%– -57%)
20–29	24.1	15.9	-34	(-32%– -36%)
30–39	21.9	14.2	-35	(-33%– -38%)
>40	18.0	11.9	-34	(-25%– -42%)
Insurance status				
MediCal/Medicaid	19.8	11.9	-40	(-37%– -42%)
Fee-for-service	20.3	12.2	-40	(-36%– -43%)
HMO/Prepaid	28.5	19.7	-31	(-29%– -34%)
Other§	24.0	17.1	-29	(-18%– -39%)
Education				
<High school	21.6	13.6	-37	(-34%– -40%)
High school	21.9	14.3	-35	(-32%– -38%)
1–4 years of college	22.7	15.3	-33	(-29%– -36%)
>4 years of college	26.6	16.4	-38	(-35%– -41%)

* Relative percentage change when comparing 1996 with 2000.
† Confidence interval.
§ Payment source is state/local government program, Title V funds, or military.

significantly smaller among women with HMO insurance than among women with MediCal/Medicaid or private (i.e., fee-for-service) insurance.

Reported by: *GF Chavez, MD, E Takahashi, PhD, Maternal Child Health Br, California Dept of Health Svcs; K Gregory, MD, Cedars-Sinai Medical Center, Los Angeles, California. S Durousseau, MD, EIS Officer, CDC.*

Editorial Note: The findings in this report highlight changes in obstetric practice during 1996–2000 across all populations of women in California toward more repeat cesarean births and fewer VBACs. The decreasing trends in VBAC rates described in this report indicate that California probably will not meet the national health objective for VBAC rates in 2010. The decreasing trend in California VBACs is similar to national data demonstrating a decline in VBAC rates across all racial/ethnic and age populations during 1996–2000 (*1*). The decrease in VBAC rates might reflect medical and legal pressures, provider preferences, changed standards of obstetric practice, concerns about convenience, fear of prolonged or failed labor, and maternal preferences (*3,5*).

Before the 1980s, obstetricians performed ERCD for women with a previous cesarean birth routinely because of the risk for uterine rupture among women in labor who had uterine scars, a complication associated with high perinatal and maternal mortality (*2,3,5,6*). In 1980, the National Institutes of Health concluded that a trial of labor after cesarean (TOLAC) birth was safe for women with previous cesarean births with low transverse uterine scars (*7*). Studies conducted in the early 1990s indicated that VBAC and TOLAC were not associated with increased maternal and perinatal mortality and morbidity compared with ERCD and that 60%–80% of women with TOLAC will deliver vaginally successfully (*3,6,8*). In 1999, the American College of Obstetricians and Gynecologists issued guidelines specifying that the majority of women with low-transverse incisions with no contraindication to vaginal birth are candidates for TOLAC (*3*).

Data are conflicting about the use of TOLAC, and this conflict might be contributing to the declining VBAC rates in California. Some data have suggested an association between TOLAC and uterine rupture (*1*). A recent U.S. study of 20,000 women with previous cesarean births found that women who had TOLAC, especially women who had labor induced by prostaglandins, were more likely to have uterine rupture than those women with ERCD and no labor (*9*). Women with unsuccessful TOLAC resulting in nonelective cesarean births have more fevers, infections, and prolonged hospitalizations than women delivering by VBAC or by ERCD (*3,6*). Conversely, compared with women delivering successfully by VBAC, women delivering by ERCD have more infections, hemorrhages, problems with subsequent pregnancies, and potentially decreased infant bonding (*3,5,6*). In addition, the choice of birthing method is influenced by a mother's values and beliefs (*3,5*).

The findings in this report are subject to at least three limitations. First, because birth certificates do not record information on provider or maternal preferences, it was not possible

to identify the reasons for the decline in the VBAC rate. Second, because birth certificate data do not record how many women have TOLAC, it was not possible to assess whether fewer women are offered, accept, or attempt TOLAC or to calculate the VBAC success rate. Finally, because birth certificates might not record delivery methods correctly (e.g., VBAC classified as another type of vaginal birth or a primary cesarean birth classified as a repeat cesarean birth) (*10*), VBAC rates might be underestimated. Despite these limitations, conclusions about trends in VBAC rates can be made because the methodology used to collect and record information on birth certificates remained unchanged during 1989–2000 (*2*).

The reasons for the decreasing trend in VBAC rates are unclear, and potential research priorities might include determining the maternal, provider, and institutional factors affecting VBAC rates. The changing trends noted in this report highlight the complexity of birth-related medical, socioeconomic, and cultural issues and indicate a need for increased understanding of these issues.

VBAC rates might be improved by ensuring careful selection of VBAC candidates (i.e., women with one previous low-transverse cesarean incision delivering full-term singletons in vertex presentation), developing guidelines to manage labor, and educating health-care providers about reducing the risks for complications from VBAC (*3,5*). Surveillance of VBAC rates should continue at both institutional and population levels. Women should be informed about the risks for complications and benefits of VBAC and cesarean birth so they can make informed birth choices; the decision to attempt VBAC should be based on the clinical status of the pregnancy and on discussions between the woman and her health-care provider.

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Public Health Dispatch

Update: Fatal and Severe Liver Injuries Associated with Rifampin and Pyrazinamide Treatment for Latent Tuberculosis Infection

Reports of fatal and severe liver injury associated with treatment of latent tuberculosis infection (LTBI) with the drug combination rifampin and pyrazinamide (RZ) prompted CDC to issue revised guidelines for the use of this regimen on August 31, 2001 (*1*). To determine if these revised guidelines were effective in reducing morbidity and mortality, CDC has continued to collect reports on adverse effects associated with this regimen. This update summarizes the results of this ongoing investigation.

A case of severe liver injury was defined as a hospital admission or death of a patient being treated for LTBI with RZ (*1,2*). As of September 25, 2002, a total of 40 cases (eight fatal) were reported, of which 23 (five fatal) have been described (*1,2*). Of the 17 cases (three fatal) that have not been described in previous reports, two occurred in patients who started RZ after publication of the revised guidelines. Both patients survived. One patient had contraindications for RZ (i.e., hepatitis and alcoholism). The other did not have contraindications for RZ and received RZ twice a week by directly observed therapy (DOT). According to information collected during DOT visits, the patient did not complain of any symptoms until the last week of the regimen. However, because the patient did not speak English, comprehension might have been a barrier. The patient missed two scheduled clinic appointments; serum aminotransferase and bilirubin levels were measured before treatment, but no biweekly tests were performed while the patient was on RZ, as is recommended in the revised guidelines. Physicians who choose to administer RZ instead of the preferred INH should follow the revised guidelines.

Summary of Revised Guidelines

The 9-month regimen of isoniazid (INH) remains the preferred treatment for patients who have LTBI and indications for treatment (*1,3*). Daily RZ for 2 months or twice-weekly RZ for 2 or 3 months should be used with caution, especially in patients taking other medications associated with liver injury and in those with alcoholism, even if alcohol is discontinued during treatment. RZ is not recommended for persons with underlying liver disease or for those who have had INH-associated liver injury. If RZ is prescribed, evaluation of patients should include tests of serum aminotransferase and bilirubin at baseline and at 2, 4, and 6 weeks of treatment. No more than a 2-week supply of RZ (with a pyrazinamide dose of ≤20 mg/kg/d and a maximum of 2 gm/d) should be dispensed at a time.

CDC continues to collect data on reports of severe liver injury leading to hospital admission or death in persons receiving any treatment for LTBI. To determine the incidence of and risk factors for this problem, CDC is investigating cohorts of patients who received RZ. Health-care providers should report possible cases to CDC's Division of Tuberculosis Elimination, telephone 404-639-8442.

Reported by: *State and territorial health depts. Lambert L, MPH, Div of Tuberculosis Elimination, National Center for HIV, STD, and TB Prevention, CDC.*

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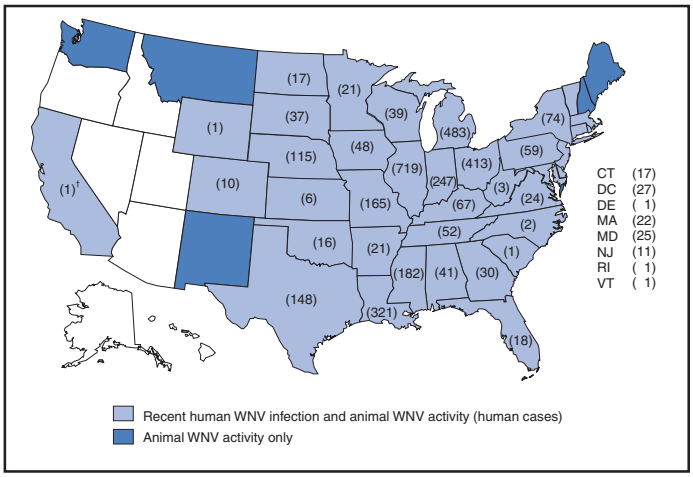
West Nile Virus Activity — United States, October 31–November 6, 2002

This report summarizes West Nile virus (WNV) surveillance data reported to CDC through ArboNET and by states and other jurisdictions as of 8 a.m. Mountain Standard Time, November 6, 2002.

During October 31–November 6, a total of 88 laboratory-positive human cases of WNV-associated illness were reported from Ohio (n=28), Michigan (n=11), Kentucky (n=eight), Oklahoma (n=eight), Texas (n=eight), Georgia (n=five), Louisiana (n=four), Iowa (n=three), Missouri (n=three), Florida (n=two), Wisconsin (n=two), Tennessee (n=two), Maryland (n=one), Massachusetts (n=one), Minnesota (n=one), and New York (n=one). During the same period, WNV infections were reported in 219 dead crows and 93 other dead birds. A total of 810 veterinary cases and 45 WNV-positive mosquito pools were reported.

During 2002, a total of 3,507 human cases with laboratory evidence of recent WNV infection have been reported from Illinois (n=719), Michigan (n=483), Ohio (n=413), Louisiana (n=321), Indiana (n=247), Mississippi (n=182), Missouri (n=165), Texas (n=148), Nebraska (n=115), New York (n=74), Kentucky (n=67), Pennsylvania (n=59), Tennessee (n=52), Iowa (n=48), Minnesota (n=42), Alabama (n=41), Wisconsin (n=39), South Dakota (n=37), Georgia (n=30), the District of Columbia (n=27), Maryland (n=25), Virginia (n=24), Massachusetts (n=22), Arkansas (n=21), Florida (n=18), Connecticut (n=17), North Dakota (n=17), Oklahoma (n=16), New Jersey (n=11), Colorado (n=10), Kansas (n=six), West Virginia (n=three), North Carolina (n=two), California (n=one), Delaware (n=one), Rhode Island (n=one), South Carolina (n=one), Vermont (n=one), and Wyoming (n=one) (Figure). Among the 3,148 patients for whom data were available, the median age was 56 years (range: 1 month–99 years); 1,676 (54%) were male, and the dates of illness onset ranged from June 10 to October 19. A total of 187 human deaths have been reported. The median age of decedents was 78 years (range: 24–99 years); 111 (59%) deaths were among men. In addition, 7,312 dead crows and 5,436 other dead birds with WNV infection were reported from 42 states and the District of Columbia; 8,143 WNV infections

FIGURE. Areas reporting West Nile virus (WNV) activity — United States, 2002*



*As of 8 a.m. Mountain Standard Time, November 6, 2002.
†California has reported human WNV activity only.

in mammals (8,130 equines, three canines, and 10 other species) have been reported from 36 states (Alabama, Arkansas, Colorado, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, Wisconsin, and Wyoming). During 2002, WNV seroconversions have been reported in 366 sentinel chicken flocks from Florida, Iowa, Nebraska, North Carolina, Pennsylvania, Texas, and New York City; 4,827 WNV-positive mosquito pools have been reported from 27 states (Alabama, Arkansas, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Maryland, Massachusetts, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Vermont, and Virginia), New York City, and the District of Columbia.

Additional information about WNV activity is available at http://www.cdc.gov/ncidod/dvbid/westnile/index.htm and http://www.cindi.usgs.gov/hazard/event/west_nile/west_nile.html.

Notice to Readers

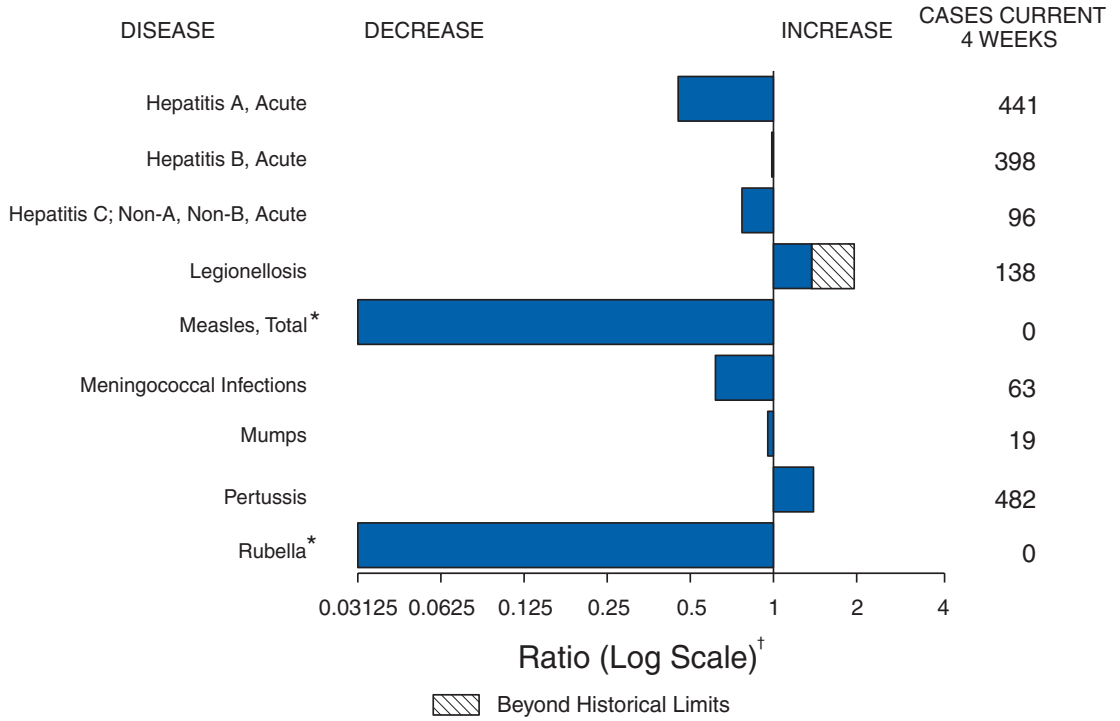
National Epilepsy Month, November 2002

November is National Epilepsy Month. Epilepsy, a central nervous system disorder characterized by unprovoked recurrent seizures, affects approximately 2.3 million persons in the United States. Of the 181,000 new cases of epilepsy and seizures every year, approximately one third start during childhood.

Epilepsy is often an added burden to teenagers who already face many challenges as they encounter physiologic and social changes. Seizures in teenagers can lead to isolation, limit independence, and make them vulnerable to teasing and bullying from their peers. To help alleviate this burden, the Epilepsy Foundation, in collaboration with CDC, is conducting the second year of its "Entitled to Respect" campaign during this year's National Epilepsy Month. During November, the Epilepsy Foundation will initiate activities to educate teenagers about epilepsy. The goals of the campaign are to promote peer understanding and increase social acceptance of young persons living with epilepsy.

Additional information about epilepsy and the "Entitled to Respect" campaign is available at 800-332-1000 or at http://www.efa.org.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals ending November 2, 2002, with historical data



* No measles or rubella cases were reported for the current 4-week period yielding a ratio for week 44 of zero (0).
† 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 November 2, 2002 (44th Week)*

		Cum. 2002	Cum. 2001		Cum. 2002	Cum. 2001
Anthrax		2	20	Encephalitis: West Nile	1,243	51
Botulism:	foodborne	12	33	Hansen disease (leprosy)†	58	59
	infant	47	83	Hantavirus pulmonary syndrome†	13	7
	other (wound & unspecified)	23	13	Hemolytic uremic syndrome, postdiarrheal†	169	153
Brucellosis†		66	111	HIV infection, pediatric†§	116	172
Chancroid		62	31	Plague	-	2
Cholera		4	4	Poliomyelitis, paralytic	-	-
Cyclosporiasis†		156	138	Psittacosis†	18	17
Diphtheria		1	2	Q fever†	40	22
Ehrlichiosis:	human granulocytic (HGE)†	291	194	Rabies, human	2	1
	human monocytic (HME)†	150	100	Streptococcal toxic-shock syndrome†	64	66
	other and unspecified	8	5	Tetanus	19	26
Encephalitis:	California serogroup viral†	105	105	Toxic-shock syndrome	97	100
	eastern equine†	2	8	Trichinosis	12	21
	Powassan†	-	-	Tularemia†	54	120
	St. Louis†	8	76	Yellow fever	1	-
	western equine†	2	-			

-: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 October 31, 2002.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending November 2, 2002, and November 3, 2001 (44th Week)*

Reporting Area	AIDS		Chlamydia†		Cryptosporidiosis		*Escherichia coli, Enterohemorrhagic*			
							O157:H7		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	24,713	34,080	648,547	651,607	2,456	3,309	3,044	2,766	139	128
NEW ENGLAND	1,011	1,268	22,571	20,496	164	133	243	225	32	37
Maine	23	40	1,428	1,133	10	17	34	25	5	1
N.H.	20	31	1,342	1,163	28	14	30	31	-	3
Vt.	8	13	792	517	31	31	12	13	1	1
Mass.	519	654	8,925	8,731	60	51	110	109	9	9
R.I.	71	84	2,338	2,484	19	4	13	13	-	1
Conn.	370	446	7,746	6,468	16	16	44	34	17	22
MID. ATLANTIC	5,619	8,977	73,256	70,586	294	298	209	208	-	-
Upstate N.Y.	404	1,168	14,474	11,717	116	88	154	134	-	-
N.Y. City	3,210	4,773	23,170	25,160	115	109	12	15	-	-
N.J.	925	1,509	10,290	11,462	10	17	43	59	-	-
Pa.	1,080	1,527	25,322	22,247	53	84	N	N	-	-
E.N. CENTRAL	2,494	2,499	109,937	121,251	771	1,479	744	711	15	10
Ohio	453	476	24,315	32,158	115	157	141	180	13	8
Ind.	347	306	14,133	13,135	41	74	55	75	-	-
Ill.	1,170	1,110	31,045	36,554	83	475	158	161	-	-
Mich.	398	457	26,837	25,412	105	172	133	86	2	2
Wis.	126	150	13,607	13,992	427	601	257	209	-	-
W.N. CENTRAL	421	718	35,479	33,136	377	457	467	450	33	36
Minn.	90	118	8,044	6,952	194	137	150	182	28	27
Iowa	54	80	4,452	4,199	40	79	111	73	-	-
Mo.	189	337	12,637	11,874	32	45	67	57	N	N
N. Dak.	1	2	740	853	20	13	15	19	-	2
S. Dak.	3	23	1,813	1,460	28	6	37	40	2	6
Nebr.	43	72	2,456	2,736	47	174	54	59	3	1
Kans.	41	86	5,337	5,062	16	3	33	20	-	-
S. ATLANTIC	7,537	10,268	125,089	125,355	307	328	284	215	35	25
Del.	131	217	2,268	2,390	3	6	7	4	-	1
Md.	1,066	1,517	13,997	12,964	21	35	25	27	-	-
D.C.	371	733	2,819	2,739	4	11	-	-	-	-
Va.	538	843	13,551	15,387	20	24	56	48	9	3
W. Va.	58	71	2,081	2,022	2	2	8	10	-	-
N.C.	555	778	21,221	17,900	31	26	72	46	-	-
S.C.	547	612	10,486	13,155	6	7	5	15	-	-
Ga.	1,160	1,232	24,721	27,163	133	146	52	39	10	9
Fla.	3,111	4,265	33,945	31,635	87	71	59	26	16	12
E.S. CENTRAL	1,128	1,532	40,181	42,018	107	44	95	124	-	-
Ky.	173	299	7,523	7,639	7	5	30	62	-	-
Tenn.	483	488	13,610	12,409	51	12	40	36	-	-
Ala.	197	378	11,021	11,756	42	13	18	16	-	-
Miss.	275	367	8,027	10,214	7	14	7	10	-	-
W.S. CENTRAL	2,696	3,435	90,883	90,810	36	116	68	176	-	-
Ark.	163	176	6,094	6,394	8	6	10	15	-	-
La.	693	699	16,086	15,678	5	7	2	7	-	-
Okla.	133	204	9,310	8,839	17	13	21	28	-	-
Tex.	1,707	2,356	59,393	59,899	6	90	35	126	-	-
MOUNTAIN	790	1,175	39,196	39,047	146	209	318	258	17	14
Mont.	8	15	1,754	1,569	5	33	27	19	-	-
Idaho	18	19	2,114	1,662	29	21	44	63	8	3
Wyo.	6	3	792	689	9	6	14	9	2	2
Colo.	157	262	11,663	11,174	51	38	84	83	3	6
N. Mex.	53	133	5,123	5,231	18	26	10	13	3	3
Ariz.	327	446	12,666	12,350	16	7	34	26	1	-
Utah	43	98	2,055	2,115	14	72	79	30	-	-
Nev.	178	199	3,029	4,257	4	6	26	15	-	-
PACIFIC	3,017	4,208	111,955	108,908	254	245	616	399	7	6
Wash.	302	427	12,407	11,530	43	U	131	114	-	-
Oreg.	216	177	5,778	6,260	38	48	216	63	7	6
Calif.	2,416	3,525	87,092	85,446	170	193	225	201	-	-
Alaska	17	19	3,033	2,239	1	1	7	4	-	-
Hawaii	66	60	3,645	3,433	2	3	37	17	-	-
Guam	2	11	-	348	-	-	N	N	-	-
P.R.	668	1,017	1,997	2,243	-	-	-	2	-	-
V.I.	66	2	125	125	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	138	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 October 31, 2002.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 2, 2002, and November 3, 2001 (44th Week)*

Reporting Area	*Escherichia coli Enterohemorrhagic* Shiga Toxin Positive, Not Serogrouped		Giardiasis	Gonorrhea		*Haemophilus influenzae*, Invasive All Ages, All Serotypes		*Haemophilus influenzae*, Invasive 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	34	16	14,349	273,807	302,327	1,256	1,232	20	21
NEW ENGLAND	1	1	1,440	6,331	5,837	89	91	-	1
Maine	-	-	183	115	113	1	2	-	-
N.H.	-	-	37	113	156	8	4	-	-
Vt.	1	1	122	81	55	7	3	-	-
Mass.	-	-	717	2,707	2,704	48	40	-	1
R.I.	-	-	138	776	706	10	5	-	-
Conn.	-	-	243	2,539	2,103	15	37	-	-
MID. ATLANTIC	-	3	3,069	33,551	35,741	228	190	3	3
Upstate N.Y.	-	-	1,047	7,418	7,130	102	64	2	-
N.Y. City	-	-	1,108	9,677	10,588	54	50	-	-
N.J.	-	-	306	5,724	6,845	48	41	-	-
Pa.	-	3	608	10,732	11,178	24	35	1	3
E.N. CENTRAL	11	5	2,765	53,395	63,732	182	228	3	2
Ohio	10	5	808	13,561	17,945	69	60	-	1
Ind.	-	-	-	6,093	5,821	36	43	1	-
Ill.	-	-	662	16,593	20,235	57	81	-	-
Mich.	1	-	792	12,194	14,585	13	13	2	-
Wis.	-	-	503	4,954	5,146	7	31	-	1
W.N. CENTRAL	1	3	1,721	13,835	14,199	57	60	1	1
Minn.	1	-	668	2,464	2,222	42	33	1	-
Iowa	-	-	266	1,045	1,108	1	-	-	-
Mo.	N	N	417	7,199	7,345	10	16	-	-
N. Dak.	-	3	27	42	40	-	7	-	-
S. Dak.	-	-	62	222	232	-	-	-	-
Nebr.	-	-	133	713	1,003	1	2	-	1
Kans.	-	-	148	2,150	2,249	3	2	-	-
S. ATLANTIC	1	-	2,460	71,054	78,299	323	304	4	1
Del.	-	-	44	1,358	1,449	-	-	-	-
Md.	-	-	104	7,474	7,756	77	73	2	-
D.C.	-	-	37	2,340	2,441	-	-	-	-
Va.	-	-	254	7,929	9,211	30	27	-	-
W. Va.	1	-	48	812	581	15	14	-	1
N.C.	-	-	-	13,702	14,311	30	44	-	-
S.C.	-	-	114	6,304	9,402	12	5	-	-
Ga.	-	-	757	13,669	15,058	80	79	-	-
Fla.	-	-	1,102	17,466	18,090	79	62	2	-
E.S. CENTRAL	8	3	319	23,041	27,137	59	65	1	-
Ky.	8	3	-	3,214	3,048	4	2	-	-
Tenn.	-	-	151	7,974	8,350	30	35	-	-
Ala.	-	-	168	7,059	9,050	16	26	1	-
Miss.	-	-	-	4,794	6,689	9	2	-	-
W.S. CENTRAL	1	-	205	40,716	44,609	56	49	2	2
Ark.	-	-	143	3,861	3,922	2	1	-	-
La.	-	-	3	9,909	10,729	8	9	-	-
Okla.	-	-	59	4,011	4,040	41	37	-	-
Tex.	1	-	-	22,935	25,918	5	2	2	2
MOUNTAIN	11	1	1,408	8,415	8,831	149	127	3	7
Mont.	-	-	77	77	88	-	-	-	-
Idaho	-	-	109	81	65	2	1	-	-
Wyo.	-	-	28	55	68	1	1	-	-
Colo.	11	1	462	2,914	2,703	31	35	-	-
N. Mex.	-	-	135	1,047	855	23	21	-	1
Ariz.	-	-	189	3,132	3,336	63	52	1	4
Utah	-	-	274	208	162	17	6	1	-
Nev.	-	-	134	901	1,554	12	11	1	2
PACIFIC	-	-	962	23,469	23,942	113	118	3	4
Wash.	-	-	346	2,427	2,563	3	5	2	-
Oreg.	-	-	381	738	980	55	33	-	-
Calif.	-	-	63	19,225	19,507	22	52	1	4
Alaska	-	-	94	508	362	1	6	-	-
Hawaii	-	-	78	571	530	32	22	-	-
Guam	-	-	-	-	44	-	-	-	-
P.R.	-	-	36	292	501	1	1	-	-
V.I.	-	-	-	31	23	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	1	13	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. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 2, 2002, and November 3, 2001 (44th 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	201	206	15	26	7,196	8,705	5,591	6,107	12,293	3,393
NEW ENGLAND	11	15	-	-	262	594	200	118	22	33
Maine	-	-	-	-	8	10	9	5	-	-
N.H.	-	1	-	-	11	15	19	13	-	-
Vt.	-	-	-	-	1	14	4	5	13	7
Mass.	8	7	-	-	125	283	108	28	9	26
R.I.	-	-	-	-	30	59	24	25	-	-
Conn.	3	7	-	-	87	213	36	42	-	-
MID. ATLANTIC	27	31	-	3	880	1,087	1,246	1,168	1,413	1,143
Upstate N.Y.	11	9	-	1	163	219	114	105	60	26
N.Y. City	8	11	-	-	412	377	624	548	-	-
N.J.	5	4	-	-	117	254	316	250	1,322	1,056
Pa.	3	7	-	2	188	237	192	265	31	61
E.N. CENTRAL	29	36	1	2	923	1,039	531	805	91	149
Ohio	8	11	1	-	281	199	89	88	7	8
Ind.	7	6	-	1	42	89	42	46	-	1
Ill.	11	13	-	-	251	389	123	122	13	11
Mich.	2	-	-	1	212	292	277	511	71	129
Wis.	1	6	-	-	137	70	-	38	-	-
W.N. CENTRAL	6	3	3	6	270	338	192	185	702	994
Minn.	5	2	1	2	37	38	26	21	-	9
Iowa	-	-	-	-	70	31	13	21	1	-
Mo.	-	-	2	4	75	75	105	104	683	972
N. Dak.	-	1	-	-	1	3	4	1	-	-
S. Dak.	-	-	-	-	3	2	2	1	1	-
Nebr.	1	-	-	-	17	31	22	26	13	6
Kans.	-	-	-	-	67	158	20	11	4	7
S. ATLANTIC	44	41	2	6	2,094	2,107	1,421	1,273	158	93
Del.	-	-	-	-	12	15	7	24	5	10
Md.	4	7	-	1	271	213	105	125	6	7
D.C.	-	-	-	-	70	47	22	11	-	-
Va.	4	5	-	-	124	113	172	150	13	-
W. Va.	1	1	1	1	17	18	18	20	3	9
N.C.	3	2	-	4	194	198	204	173	24	19
S.C.	2	1	-	-	56	66	106	28	4	6
Ga.	17	16	-	-	398	833	338	373	29	-
Fla.	13	9	1	-	952	604	449	369	74	42
E.S. CENTRAL	13	12	1	3	237	356	329	406	180	180
Ky.	1	-	-	1	41	121	45	49	3	9
Tenn.	7	6	-	1	106	136	115	200	24	61
Ala.	3	5	1	1	35	70	93	77	10	4
Miss.	2	1	-	-	55	29	76	80	143	106
W.S. CENTRAL	13	8	-	-	574	753	461	714	9,572	636
Ark.	1	1	-	-	42	63	75	83	7	10
La.	2	2	-	-	62	83	84	109	51	140
Okla.	8	5	-	-	48	103	43	85	5	4
Tex.	2	-	-	-	422	504	259	437	9,509	482
MOUNTAIN	35	21	7	1	501	625	530	400	59	50
Mont.	-	-	-	-	13	11	9	3	1	1
Idaho	1	-	-	-	25	52	6	11	-	2
Wyo.	-	-	-	-	3	7	17	3	5	7
Colo.	3	2	-	-	72	78	68	86	18	8
N. Mex.	6	9	1	1	26	38	128	113	1	11
Ariz.	16	8	5	-	263	317	199	120	4	9
Utah	5	2	-	-	52	62	49	22	4	3
Nev.	4	-	1	-	47	60	54	42	26	9
PACIFIC	23	39	1	5	1,455	1,806	681	1,038	96	115
Wash.	1	3	-	2	139	127	57	124	21	20
Oreg.	5	6	-	-	61	92	111	143	16	14
Calif.	13	28	1	1	1,244	1,557	501	745	59	81
Alaska	1	1	-	-	9	14	4	9	-	-
Hawaii	3	1	-	2	2	16	8	17	-	-
Guam	-	-	-	-	-	1	-	-	-	-
P.R.	-	1	-	-	89	194	77	233	-	1
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	37	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. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 2, 2002, and November 3, 2001 (44th 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	929	925	486	513	14,210	13,344	1,075	1,278	22†	108§
NEW ENGLAND	84	60	52	51	4,132	3,878	56	86	-	5
Maine	2	7	5	2	111	-	5	4	-	-
N.H.	4	10	4	4	216	92	7	2	-	-
Vt.	36	5	3	3	31	16	4	1	-	1
Mass.	29	19	26	26	1,149	1,092	21	47	-	3
R.I.	2	10	1	1	314	436	5	9	-	-
Conn.	11	9	13	15	2,311	2,242	14	23	-	1
MID. ATLANTIC	255	218	143	94	8,339	7,297	259	389	7	19
Upstate N.Y.	87	60	51	25	4,451	3,012	39	56	1	4
N.Y. City	46	42	30	23	142	61	163	232	6	6
N.J.	22	21	30	17	1,448	1,954	28	59	-	1
Pa.	100	95	32	29	2,298	2,270	29	42	-	8
E.N. CENTRAL	213	267	55	79	71	696	118	155	3	10
Ohio	94	116	24	13	53	37	20	22	1	3
Ind.	18	18	6	8	18	22	12	16	2	4
Ill.	-	24	1	23	-	30	28	64	-	3
Mich.	73	68	18	23	-	17	45	35	-	-
Wis.	28	41	6	12	U	590	13	18	-	-
W.N. CENTRAL	47	44	17	15	294	354	54	33	3	5
Minn.	11	9	3	-	207	285	17	6	1	3
Iowa	11	8	2	2	32	31	4	6	-	-
Mo.	13	18	8	8	39	32	15	13	2	2
N. Dak.	-	1	1	-	1	-	1	-	-	-
S. Dak.	2	3	1	-	1	-	1	-	-	-
Nebr.	10	4	1	1	6	4	5	2	-	-
Kans.	-	1	1	4	8	2	11	6	-	-
S. ATLANTIC	174	156	71	65	1,142	872	315	254	2	5
Del.	7	12	-	2	150	152	4	2	-	-
Md.	39	32	16	12	609	527	101	105	-	3
D.C.	6	7	-	-	20	12	19	13	-	-
Va.	21	20	8	12	138	114	30	44	-	1
W. Va.	N	N	-	5	17	11	3	1	-	-
N.C.	11	9	6	5	119	38	21	16	-	-
S.C.	8	13	8	5	20	5	7	6	-	-
Ga.	16	11	11	11	2	-	69	41	-	1
Fla.	66	52	22	13	67	13	61	26	2	-
E.S. CENTRAL	40	54	16	21	43	61	20	35	-	2
Ky.	18	12	3	7	21	22	8	14	-	2
Tenn.	14	26	9	8	19	24	3	11	-	-
Ala.	8	12	4	6	3	8	4	6	-	-
Miss.	-	4	-	-	-	7	5	4	-	-
W.S. CENTRAL	10	22	15	31	27	80	15	82	2	1
Ark.	-	-	-	1	3	-	2	3	-	-
La.	1	6	-	-	3	8	4	6	-	-
Okla.	3	3	7	2	-	-	8	3	-	-
Tex.	6	13	8	28	21	72	1	70	2	1
MOUNTAIN	40	46	27	34	19	11	42	51	1	2
Mont.	3	-	-	-	-	-	2	3	-	-
Idaho	1	3	2	1	4	5	-	3	-	1
Wyo.	1	2	-	1	1	1	-	-	-	-
Colo.	6	13	6	9	3	-	22	22	-	-
N. Mex.	2	3	3	7	1	-	3	3	-	-
Ariz.	8	15	12	7	3	1	7	9	-	1
Utah	14	6	3	2	6	1	5	3	-	-
Nev.	5	4	1	7	1	3	3	8	1	-
PACIFIC	66	58	90	123	143	95	196	193	4	59
Wash.	7	9	8	9	10	7	21	9	-	15
Oreg.	N	N	9	12	15	11	9	14	-	3
Calif.	58	43	65	96	115	75	157	158	3	34
Alaska	-	1	-	-	3	2	2	1	-	-
Hawaii	1	5	8	6	N	N	7	11	1	7
Guam	-	-	-	-	-	-	-	1	-	-
P.R.	-	2	1	-	N	N	-	5	-	1
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 22 cases reported, nine were indigenous and 13 were imported from another country.
§ Of 108 cases reported, 54 were indigenous and 54 were imported from another country.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 2, 2002, and November 3, 2001 (44th 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	1,425	1,961	227	208	6,399	4,642	5,301	6,178
NEW ENGLAND	83	92	7	1	525	439	803	645
Maine	7	4	-	-	13	22	54	63
N.H.	11	12	4	-	17	17	44	19
Vt.	4	5	-	-	117	33	86	58
Mass.	42	49	2	1	340	345	263	239
R.I.	5	4	-	-	13	5	68	62
Conn.	14	18	1	-	25	17	288	204
MID. ATLANTIC	131	219	25	24	394	297	997	1,145
Upstate N.Y.	39	58	7	3	283	125	622	699
N.Y. City	21	39	2	12	13	51	10	33
N.J.	25	36	-	3	3	18	157	168
Pa.	46	86	16	6	95	103	208	245
E.N. CENTRAL	187	306	31	25	761	741	142	133
Ohio	71	79	13	1	366	270	37	42
Ind.	29	34	2	3	113	78	31	2
Ill.	36	77	8	16	136	83	30	24
Mich.	39	68	7	3	47	132	44	46
Wis.	12	48	1	2	99	178	-	19
W.N. CENTRAL	129	134	16	8	657	314	356	332
Minn.	32	18	4	3	335	146	36	43
Iowa	18	28	1	-	129	44	67	76
Mo.	43	47	5	1	124	89	49	39
N. Dak.	-	6	1	-	-	4	26	35
S. Dak.	2	5	-	-	6	4	65	50
Nebr.	26	16	-	1	8	5	-	4
Kans.	8	14	5	3	55	22	113	85
S. ATLANTIC	252	298	25	36	371	216	2,215	2,156
Del.	7	3	-	-	3	-	24	30
Md.	8	38	5	5	57	35	321	445
D.C.	-	-	-	-	2	1	-	-
Va.	37	36	4	8	128	40	441	411
W. Va.	4	12	-	-	31	3	157	127
N.C.	30	61	2	5	40	63	632	505
S.C.	28	30	3	5	41	31	131	102
Ga.	32	44	4	8	21	20	347	359
Fla.	106	74	7	5	48	23	162	177
E.S. CENTRAL	84	122	13	9	228	146	149	197
Ky.	13	21	3	3	87	51	26	26
Tenn.	36	55	2	1	100	56	95	106
Ala.	21	30	3	-	32	35	24	61
Miss.	14	16	5	5	9	4	4	4
W.S. CENTRAL	185	291	17	11	1,476	537	109	983
Ark.	23	21	-	-	459	111	3	-
La.	30	71	1	2	7	8	-	8
Okla.	19	27	-	-	66	26	105	57
Tex.	113	172	16	9	944	392	1	918
MOUNTAIN	77	83	18	14	847	1,194	272	246
Mont.	2	4	-	1	5	34	18	36
Idaho	3	7	2	1	64	170	37	28
Wyo.	-	5	-	1	11	1	18	28
Colo.	21	31	2	3	348	274	59	-
N. Mex.	4	10	1	2	151	127	7	15
Ariz.	23	13	1	1	128	496	113	124
Utah	4	7	7	1	93	74	12	14
Nev.	20	6	5	4	47	18	8	1
PACIFIC	297	416	75	80	1,140	758	258	341
Wash.	57	59	-	2	379	134	-	-
Oreg.	41	56	N	N	173	47	13	4
Calif.	188	287	61	39	567	535	221	299
Alaska	4	2	-	1	4	9	24	38
Hawaii	7	12	14	38	17	33	-	-
Guam	-	-	-	-	-	-	-	-
P.R.	5	5	-	1	2	-	49	83
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	1	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. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 2, 2002, and November 3, 2001 (44th 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	891	525	13	21	2	-	34,841	34,003
NEW ENGLAND	7	3	-	-	-	-	1,920	2,117
Maine	-	-	-	-	-	-	134	159
N.H.	-	1	-	-	-	-	121	152
Vt.	-	-	-	-	-	-	69	73
Mass.	4	2	-	-	-	-	1,061	1,216
R.I.	3	-	-	-	-	-	149	120
Conn.	-	-	-	-	-	-	386	397
MID. ATLANTIC	38	31	1	8	-	-	4,273	4,473
Upstate N.Y.	7	2	1	1	-	-	1,331	1,037
N.Y. City	8	2	-	6	-	-	1,161	1,127
N.J.	10	9	-	1	-	-	621	1,052
Pa.	13	18	-	-	-	-	1,160	1,257
E.N. CENTRAL	15	16	1	2	-	-	4,560	4,365
Ohio	10	2	-	-	-	-	1,226	1,163
Ind.	2	1	-	-	-	-	400	461
Ill.	-	12	-	2	-	-	1,409	1,235
Mich.	3	1	1	-	-	-	778	766
Wis.	-	-	-	-	-	-	747	740
W.N. CENTRAL	97	67	-	3	-	-	2,281	1,994
Minn.	-	-	-	-	-	-	501	544
Iowa	3	2	-	1	-	-	436	304
Mo.	89	61	-	1	-	-	756	542
N. Dak.	-	1	-	-	-	-	42	58
S. Dak.	1	2	-	-	-	-	99	140
Nebr.	4	1	-	-	-	-	150	138
Kans.	-	-	-	1	-	-	297	268
S. ATLANTIC	463	257	5	5	-	-	9,526	7,909
Del.	4	10	-	-	-	-	78	84
Md.	54	37	-	1	-	-	832	691
D.C.	2	-	-	-	-	-	66	72
Va.	37	23	-	-	-	-	1,037	1,168
W. Va.	2	-	-	-	-	-	124	115
N.C.	262	147	-	-	-	-	1,305	1,157
S.C.	68	27	-	2	-	-	716	778
Ga.	21	9	-	-	-	-	1,697	1,484
Fla.	13	4	5	2	-	-	3,671	2,360
E.S. CENTRAL	94	101	-	-	1	-	2,754	2,354
Ky.	5	2	-	-	-	-	328	332
Tenn.	70	71	-	-	1	-	694	562
Ala.	16	14	-	-	-	-	756	632
Miss.	3	14	-	-	-	-	976	828
W.S. CENTRAL	158	38	2	1	-	-	3,066	4,391
Ark.	97	7	-	-	-	-	914	816
La.	-	2	-	-	-	-	659	772
Okla.	61	29	-	-	-	-	437	421
Tex.	-	-	2	1	-	-	1,056	2,382
MOUNTAIN	13	11	1	-	-	-	1,901	1,897
Mont.	1	1	-	-	-	-	77	68
Idaho	-	1	-	-	-	-	129	123
Wyo.	4	2	-	-	-	-	61	55
Colo.	2	2	-	-	-	-	485	529
N. Mex.	1	1	-	-	-	-	273	247
Ariz.	-	-	-	-	-	-	524	528
Utah	-	3	1	-	-	-	176	194
Nev.	5	1	-	-	-	-	176	153
PACIFIC	6	1	3	2	1	-	4,560	4,503
Wash.	-	-	-	-	-	-	448	455
Oreg.	2	1	-	-	-	-	319	246
Calif.	4	-	3	1	-	-	3,479	3,453
Alaska	-	-	-	-	-	-	72	39
Hawaii	-	-	-	1	1	-	242	310
Guam	-	-	-	-	-	-	-	20
P.R.	-	-	-	3	-	-	182	817
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	25	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. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 2, 2002, and November 3, 2001 (44th 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	15,473	16,389	3,480	3,128	2,000	2,212	217	358
NEW ENGLAND	280	273	165	194	18	107	3	38
Maine	10	6	20	10	-	-	-	-
N.H.	11	6	34	N	-	-	N	N
Vt.	1	7	9	14	5	7	2	1
Mass.	168	192	87	58	N	N	N	N
R.I.	16	17	15	12	13	4	1	3
Conn.	74	45	-	100	-	96	-	34
MID. ATLANTIC	1,155	1,330	564	581	94	142	59	91
Upstate N.Y.	259	428	259	233	81	135	58	91
N.Y. City	355	365	133	156	U	U	U	U
N.J.	332	251	118	119	N	N	N	N
Pa.	209	286	54	73	13	7	1	-
E.N. CENTRAL	1,540	3,784	604	703	195	155	90	110
Ohio	558	2,508	189	177	49	1	14	-
Ind.	86	190	45	56	141	154	51	51
Ill.	600	530	105	225	2	-	-	59
Mich.	156	275	265	194	3	-	N	N
Wis.	140	281	-	51	N	N	25	-
W.N. CENTRAL	895	1,673	213	322	411	131	49	53
Minn.	194	378	108	143	292	58	49	44
Iowa	111	335	-	-	N	N	N	N
Mo.	165	284	42	68	5	9	-	-
N. Dak.	17	21	-	17	1	6	-	9
S. Dak.	150	507	12	11	1	3	-	-
Nebr.	179	81	18	35	29	19	N	N
Kans.	79	67	33	48	83	36	N	N
S. ATLANTIC	5,653	2,303	709	514	1,059	1,175	7	5
Del.	258	14	2	4	3	6	N	N
Md.	1,007	136	121	N	N	N	N	N
D.C.	48	52	7	21	48	5	1	3
Va.	824	325	68	69	N	N	N	N
W. Va.	9	8	19	18	37	37	6	2
N.C.	381	309	112	133	N	N	U	U
S.C.	105	232	34	10	169	242	N	N
Ga.	1,310	411	149	163	267	359	N	N
Fla.	1,711	816	197	96	535	526	N	N
E.S. CENTRAL	1,226	1,482	99	104	117	214	-	-
Ky.	145	698	18	35	15	24	N	N
Tenn.	89	89	81	69	102	189	N	N
Ala.	680	185	-	-	-	1	N	N
Miss.	312	510	-	-	-	-	-	-
W.S. CENTRAL	1,495	2,542	109	287	67	249	5	61
Ark.	164	524	6	-	6	15	-	-
La.	372	214	-	1	61	234	2	61
Okla.	505	71	39	38	N	N	3	-
Tex.	454	1,733	64	248	N	N	-	-
MOUNTAIN	794	850	493	352	39	35	4	-
Mont.	3	8	-	-	-	-	-	-
Idaho	15	37	9	7	N	N	N	N
Wyo.	9	7	7	11	9	5	-	-
Colo.	161	219	126	137	-	-	-	-
N. Mex.	185	110	93	73	29	28	-	-
Ariz.	346	350	229	121	-	-	N	N
Utah	30	50	29	3	-	-	4	-
Nev.	45	69	-	-	1	2	-	-
PACIFIC	2,435	2,152	524	71	-	4	-	-
Wash.	141	183	65	-	-	-	N	N
Oreg.	100	98	N	N	N	N	N	N
Calif.	2,131	1,811	364	-	N	N	N	N
Alaska	6	6	-	-	-	-	N	N
Hawaii	57	54	95	71	-	4	-	-
Guam	-	45	-	1	-	-	-	-
P.R.	7	16	N	N	-	-	N	N
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	-	-	U	U
C.N.M.I.	17	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. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending November 2, 2002, and November 3, 2001 (44th 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	5,263	5,097	291	423	9,795	11,677	221	310
NEW ENGLAND	119	52	-	4	319	388	14	16
Maine	2	-	-	-	10	15	-	1
N.H.	7	1	-	-	12	15	-	2
Vt.	1	3	-	-	-	4	-	-
Mass.	79	29	-	3	185	201	8	10
R.I.	6	9	-	-	31	51	-	-
Conn.	24	10	-	1	81	102	6	3
MID. ATLANTIC	557	439	55	69	1,759	1,932	47	103
Upstate N.Y.	29	16	8	5	248	307	9	15
N.Y. City	344	238	21	32	887	961	23	42
N.J.	127	105	25	32	418	421	11	37
Pa.	57	80	1	-	206	243	4	9
E.N. CENTRAL	916	896	49	59	1,011	1,197	18	32
Ohio	129	69	4	2	163	240	6	4
Ind.	58	137	-	8	99	84	2	2
Ill.	285	322	29	39	499	558	1	17
Mich.	420	345	16	6	209	250	4	5
Wis.	24	23	-	4	41	65	5	4
W.N. CENTRAL	89	89	-	9	457	456	8	14
Minn.	44	31	-	2	198	195	3	6
Iowa	2	4	-	-	24	34	-	-
Mo.	23	23	-	5	115	112	1	8
N. Dak.	-	-	-	-	1	3	-	-
S. Dak.	-	-	-	-	9	12	-	-
Nebr.	3	8	-	-	23	32	4	-
Kans.	17	23	-	2	87	68	-	-
S. ATLANTIC	1,418	1,730	64	102	1,946	2,209	42	40
Del.	10	12	-	-	13	15	-	1
Md.	168	229	13	4	243	192	7	10
D.C.	55	33	1	2	-	51	-	-
Va.	57	89	1	5	154	218	7	11
W. Va.	2	4	-	-	28	26	-	-
N.C.	246	392	18	12	295	291	2	2
S.C.	113	213	8	21	146	150	-	-
Ga.	292	334	9	22	346	421	8	9
Fla.	475	424	14	36	721	845	18	7
E.S. CENTRAL	400	561	17	29	621	708	4	1
Ky.	83	40	3	1	114	114	4	-
Tenn.	146	280	7	17	244	258	-	1
Ala.	137	108	4	5	174	222	-	-
Miss.	34	133	3	6	89	114	-	-
W.S. CENTRAL	712	627	62	70	1,342	1,760	5	17
Ark.	31	33	2	6	109	129	-	-
La.	129	146	-	-	-	100	-	-
Okla.	53	55	3	5	119	128	1	-
Tex.	499	393	57	59	1,114	1,403	4	17
MOUNTAIN	240	193	15	27	295	463	10	8
Mont.	-	-	-	-	6	6	-	1
Idaho	8	1	-	-	9	7	-	-
Wyo.	-	1	-	-	3	3	-	-
Colo.	33	20	1	1	48	111	5	1
N. Mex.	26	15	-	2	21	46	1	-
Ariz.	159	139	14	24	169	186	-	1
Utah	6	10	-	-	25	32	2	1
Nev.	8	7	-	-	14	72	2	4
PACIFIC	812	510	29	54	2,045	2,564	73	79
Wash.	52	42	1	-	189	199	4	4
Oreg.	18	13	1	-	94	88	2	7
Calif.	734	444	26	54	1,598	2,113	63	64
Alaska	-	-	-	-	41	43	-	1
Hawaii	8	11	1	-	123	121	4	3
Guam	-	9	-	1	-	52	-	2
P.R.	227	234	15	13	75	95	-	-
V.I.	1	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	15	U	-	U	32	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 III. Deaths in 122 U.S. cities,* week ending November 2, 2002 (44th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	560	374	119	49	12	6	67
Boston, Mass.	156	95	36	17	5	3	24
Bridgeport, Conn.	33	24	7	2	-	-	1
Cambridge, Mass.	19	13	5	1	-	-	5
Fall River, Mass.	12	10	-	1	1	-	1
Hartford, Conn.	34	25	5	3	-	1	5
Lowell, Mass.	27	21	3	3	-	-	1
Lynn, Mass.	16	12	4	-	-	-	2
New Bedford, Mass.	30	23	4	3	-	-	3
New Haven, Conn.	33	16	8	5	4	-	5
Providence, R.I.	72	43	22	6	-	1	-
Somerville, Mass.	3	2	-	1	-	-	-
Springfield, Mass.	34	23	7	2	1	1	2
Waterbury, Conn.	33	27	4	2	-	-	4
Worcester, Mass.	58	40	14	3	1	-	14
MID. ATLANTIC	2,347	1,639	471	161	44	32	131
Albany, N.Y.	60	45	9	3	2	1	6
Allentown, Pa.	146	102	29	10	1	4	16
Buffalo, N.Y.	82	53	18	7	-	4	6
Camden, N.J.	27	15	8	3	-	1	2
Elizabeth, N.J.	31	20	3	4	4	-	-
Erie, Pa.	43	36	4	3	-	-	-
Jersey City, N.J.	36	23	9	4	-	-	-
New York City, N.Y.	1,207	842	256	82	16	11	56
Newark, N.J.	54	27	14	6	4	3	1
Paterson, N.J.	26	18	5	2	-	1	2
Philadelphia, Pa.	260	164	61	23	9	3	13
Pittsburgh, Pa.§	31	18	6	4	1	2	2
Reading, Pa.	16	13	2	-	1	-	2
Rochester, N.Y.	137	110	19	5	2	1	15
Schenectady, N.Y.	18	16	2	-	-	-	-
Scranton, Pa.	30	24	5	1	-	-	1
Syracuse, N.Y.	94	74	13	4	2	1	7
Trenton, N.J.	28	21	6	-	1	-	1
Utica, N.Y.	21	18	2	-	1	-	1
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	1,584	1,091	304	104	39	39	94
Akron, Ohio	63	42	6	3	3	2	6
Canton, Ohio	36	29	6	-	-	1	2
Chicago, Ill.	U	U	U	U	U	U	U
Cincinnati, Ohio	104	73	21	4	3	3	11
Cleveland, Ohio	127	78	27	16	2	4	9
Columbus, Ohio	222	148	45	15	4	10	13
Dayton, Ohio	109	90	12	3	2	2	6
Detroit, Mich.	185	106	48	19	8	4	11
Evansville, Ind.	44	31	13	-	-	-	2
Fort Wayne, Ind.	57	40	11	4	-	2	4
Gary, Ind.	U	U	U	U	U	U	U
Grand Rapids, Mich.	58	40	10	3	4	1	2
Indianapolis, Ind.	135	91	31	8	2	3	9
Lansing, Mich.	30	22	6	1	1	-	2
Milwaukee, Wis.	127	86	24	12	1	4	6
Peoria, Ill.	44	29	7	3	4	1	1
Rockford, Ill.	44	33	8	2	-	1	1
South Bend, Ind.	59	49	6	3	1	-	1
Toledo, Ohio	86	61	18	4	3	-	6
Youngstown, Ohio	54	43	5	4	1	1	2
W.N. CENTRAL	561	371	103	40	28	18	39
Des Moines, Iowa	66	43	18	4	-	1	7
Duluth, Minn.	32	21	7	3	1	-	1
Kansas City, Kans.	34	22	5	3	2	2	3
Kansas City, Mo.	59	35	10	6	4	3	1
Lincoln, Nebr.	54	39	9	3	2	1	7
Minneapolis, Minn.	80	48	18	6	3	5	4
Omaha, Nebr.	89	62	14	5	6	2	6
St. Louis, Mo.	U	U	U	U	U	U	U
St. Paul, Minn.	50	42	8	-	-	-	5
Wichita, Kans.	97	59	14	10	10	4	5
S. ATLANTIC	1,251	790	305	101	36	19	78
Atlanta, Ga.	151	91	40	15	3	2	5
Baltimore, Md.	139	79	35	14	10	1	13
Charlotte, N.C.	106	76	16	9	4	1	10
Jacksonville, Fla.	153	101	36	10	5	1	13
Miami, Fla.	97	56	27	11	2	1	12
Norfolk, Va.	40	25	10	4	1	-	6
Richmond, Va.	65	36	22	3	2	2	3
Savannah, Ga.	37	25	10	2	-	-	4
St. Petersburg, Fla.	61	49	5	6	1	-	2
Tampa, Fla.	179	126	40	7	4	2	7
Washington, D.C.	212	119	61	19	4	9	1
Wilmington, Del.	11	7	3	1	-	-	2
E.S. CENTRAL	703	471	140	52	18	20	47
Birmingham, Ala.	181	122	34	10	6	7	16
Chattanooga, Tenn.	73	49	17	7	-	-	3
Knoxville, Tenn.	127	81	27	11	4	4	5
Lexington, Ky.	50	35	11	4	-	-	6
Memphis, Tenn.	U	U	U	U	U	U	U
Mobile, Ala.	75	51	14	6	3	1	4
Montgomery, Ala.	46	32	5	6	2	1	2
Nashville, Tenn.	151	101	32	8	3	7	11
W.S. CENTRAL	1,386	898	264	133	55	35	91
Austin, Tex.	73	48	12	9	3	1	7
Baton Rouge, La.	64	38	15	11	-	-	-
Corpus Christi, Tex.	46	35	7	2	2	-	1
Dallas, Tex.	209	126	48	20	3	12	14
El Paso, Tex.	63	48	5	6	4	-	-
Ft. Worth, Tex.	101	66	23	6	3	3	7
Houston, Tex.	342	195	66	48	24	9	34
Little Rock, Ark.	69	48	15	3	3	-	4
New Orleans, La.	U	U	U	U	U	U	U
San Antonio, Tex.	194	135	34	14	8	2	11
Shreveport, La.	96	66	16	11	2	1	6
Tulsa, Okla.	129	93	23	3	3	7	7
MOUNTAIN	831	581	175	49	16	10	61
Albuquerque, N.M.	114	72	32	8	2	-	3
Boise, Idaho	30	22	8	-	-	-	3
Colo. Springs, Colo.	60	43	11	5	-	1	3
Denver, Colo.	93	60	21	5	5	2	7
Las Vegas, Nev.	178	129	31	13	4	1	15
Ogden, Utah	27	21	4	1	1	-	2
Phoenix, Ariz.	U	U	U	U	U	U	U
Pueblo, Colo.	22	16	5	1	-	-	2
Salt Lake City, Utah	146	102	29	10	1	4	16
Tucson, Ariz.	161	116	34	6	3	2	10
PACIFIC	1,950	1,393	337	137	47	36	141
Berkeley, Calif.	24	19	2	1	-	2	2
Fresno, Calif.	104	70	16	9	5	4	3
Glendale, Calif.	33	26	4	2	-	1	2
Honolulu, Hawaii	75	61	11	3	-	-	7
Long Beach, Calif.	68	47	11	7	3	-	7
Los Angeles, Calif.	684	468	124	57	21	14	41
Pasadena, Calif.	24	20	4	-	-	-	4
Portland, Oreg.	95	75	9	5	4	2	5
Sacramento, Calif.	213	154	37	15	4	3	14
San Diego, Calif.	175	133	26	10	-	6	17
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	157	118	25	8	4	2	16
Santa Cruz, Calif.	33	22	10	1	-	-	5
Seattle, Wash.	111	67	29	10	3	2	6
Spokane, Wash.	66	56	6	3	1	-	7
Tacoma, Wash.	88	57	23	6	2	-	5
TOTAL	11,173¶	7,608	2,218	826	295	215	749

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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