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Infection with *Mycobacterium abscessus* Associated with Intramuscular Injection of Adrenal Cortex Extract — Colorado and Wyoming, 1995–1996

During March–April 1996, a physician in the Denver area administered intramuscular injections of a preparation labeled "adrenal cortex injection" to 69 patients in Colorado as part of a weight-loss regimen. As of August 7, a total of 47 (68%) of these persons were reported to have developed abscesses (diameters ranging from 0.5 cm to 4.0 cm) at the site of injection (either gluteal or deltoid muscle). An investigation of these episodes by the physician and the Colorado Department of Public Health and Environment identified *Mycobacterium abscessus* as the cause of the infections. This report summarizes preliminary findings of the ongoing investigation, which indicate that injection-site abscesses were associated with contaminated injectable preparations.

The 47 case-patients ranged in age from 20 to 63 years (median: 40 years); 46 were female. The interval from injection to presentation for medical care ranged from 10 to 114 days (median: 33 days). Seventeen persons (36%) required one or more incision and drainage procedures; two persons required subcutaneous excision.

In addition to these 47 cases, the physician reported five similar cases among patients he had treated who resided in Wyoming; these patients developed abscesses during August 1995–May 1996 following injection of the preparation. In July 1996, a second physician in the Denver area also reported two cases (one culture-confirmed) of *M. abscessus* infection following administration of the preparation in September 1995.

Specimens of abscess material were obtained from 11 Colorado patients: culture-confirmed *M. abscessus* was isolated from one culture, rapid-growing *Mycobacterium* consistent with *M. abscessus* was isolated from three cultures, and results are pending for the other cultures. In addition, rapid-growing *Mycobacterium* consistent with *M. abscessus* was isolated from one unopened and three opened vials of purported adrenal cortex extract. The vials were labeled "distributed by Hallmark Labs, Inc.," and did not have lot numbers or expiration dates. The label stated the product could be administered intramuscularly, intravenously, or subcutaneously. This product has not been approved by the Food and Drug Administration (FDA).

As a result of these and other episodes, CDC, FDA, and several state health departments are collaborating on a comprehensive investigation of this product.

Reported by: L Miller, MD, E Mangione, MD, J Beebe, PhD, RE Hoffman, MD, State Epidemiologist, Colorado Dept of Public Health and Environment; P Levy, PhD, G Huitt, MD, National Jewish Center for Immunology and Respiratory Medicine, Denver. GL Miller, DVM, State Epidemiologist, Wyoming Dept of Health. Food and Drug Administration. Tuberculosis/ Mycobacteriology Br, Div of AIDS, STD, and TB Laboratory Research; Special Pathogens Section, Childhood and Respiratory Diseases Br, Div of Bacterial and Mycotic Diseases, National Center for Infectious Diseases, CDC.

Editorial Note: *M. abscessus* (formerly *M. chelonae* subspecies *abscessus*) is an acid-fast rod classified with *M. fortuitum* and *M. chelonae* as pathogenic "rapid growing" nontuberculous mycobacteria. Although these organisms are ubiquitous in the environment and have been found in municipal and well water, soil, and dust, they rarely cause disease in humans. *M. abscessus* has been associated with a variety of infections including skin and soft-tissue infections (following puncture wounds or inoculations), pulmonary infection, infections related to foreign material (e.g., porcine and prosthetic cardiac grafts, prosthetic joints, intravenous and dialysis catheters, tympanoplasty tubes, and augmentation mammoplasty), and postsurgical infections (e.g., sternal wound) (*1*). Bacteremia and disseminated infection, although rare, occur most commonly in immunocompromised hosts and result in high proportions of deaths (*2*).

Diagnosis of *M. abscessus* infection relies on culture and identification of the organism. Rapid-growing mycobacteria grow in common laboratory broths (e.g., Mueller-Hinton and tryptic soy broth) in 5–8 days without supplementation (*1*). However, more abundant growth occurs on broth and on agar-based media specific for the growth of mycobacteria. Isolates can be mistaken for "diphtheroids" unless acid-fast staining or further identification is performed. Species identification and susceptibility testing should be conducted in a reference laboratory. Treatment of *M. abscessus* infection involves removal of infected tissue or prosthetic material and antimicrobial therapy. Most isolates of *M. abscessus* are susceptible to clarithromycin, amikacin, and cefoxitin and demonstrate variable susceptibility to erythromycin (*3,4*). Combination chemotherapy with at least two antimicrobial agents to which the isolate is susceptible is advised because monotherapy has been shown to contribute to the development of resistance (*5*). Localized disease usually responds to 2–4 months of therapy in immunocompetent hosts, and disseminated infections can require >6 months of therapy (*5*).

This report illustrates the risks associated with use by patients and health-care providers of non-FDA approved products or products from unknown sources. Preliminary information suggests the product is distributed primarily to alternative-medicine providers. Adrenal cortex injections reportedly are used to enhance well-being in persons infected with human immunodeficiency virus. To identify infections secondary to injection of purported adrenal cortex extract, health-care providers should inquire about potential previous use in their patients who have cutaneous abscess and should obtain specimens for inoculation on culture media that will support the growth of *M. abscessus*. Cases of abscess following injection of purported adrenal cortex extract should be reported to local and state health departments.

Mycobacterium abscessus — *Continued*

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Economic Impact of Motor-Vehicle Crashes Involving Teenaged Drivers — Kentucky, 1994

Motor-vehicle crashes (MVCs) are the leading cause of death and disability for teenagers of driving age (16–19 years) in the United States (*1*). In addition, teenaged drivers account for a disproportionate number of MVCs compared with adult drivers (aged ≥20 years) (*1*). In Kentucky, teenagers are overrepresented in MVCs. To characterize the economic costs associated with MVCs involving teenaged drivers in Kentucky, the Kentucky Injury Prevention and Research Center conducted a cost analysis of data from MVCs involving such drivers for 1994. This report presents the findings of this analysis, which indicate that, during 1994, crashes involving at least one teenaged driver in Kentucky incurred costs of $410 million.

Data were analyzed for all fatal and nonfatal MVCs and for MVCs involving property (vehicle) damage only (PDO) identified in the 1994 Kentucky Accident Reporting System maintained by the Kentucky State Police, Information Services Branch. Injury costs were based on the maximum injury sustained using the Abbreviated Injury Scale—a standardized system for categorizing injury type and quantifying severity based on immediate threat to life (*2*). Costs were estimated using a National Highway Traffic Safety Administration (NHTSA) report (*3*) and the CrashCost software program (*4*) designed to calculate cost estimates of MVCs in state or local jurisdictions.

In 1994, teenaged drivers represented 5.6% of licensed drivers in Kentucky but accounted for 26,905 (22%) of the state's 124,037 MVCs. Teenaged drivers were involved in 120 (17%) of 706 fatal MVCs, 8490 (25%) of 34,643 nonfatal injury MVCs, and 18,295 (21%) of 88,688 PDO crashes (*5*). Of the 142 persons killed in crashes involving a teenaged driver, 62 (44%) were the teenaged driver (*5*). Based on information from Kentucky Uniform Police Traffic Accident Report forms, alcohol was not a major contributing factor to MVCs involving teenaged drivers: 17 (14%) of the 120 fatal crashes involving a teenaged driver were alcohol-related; in comparison, 242 (41%) of 586 fatal crashes involving an adult driver were alcohol-related (*5*).

Teenaged drivers were more likely than adult drivers to be killed or injured in an MVC. The death rate for teenaged drivers (44 per 100,000 teenaged licensed drivers) was more than twice that for adult drivers (19 per 100,000 adult licensed drivers). The rate of nonfatal injury for teenaged drivers was approximately three times greater

Motor-Vehicle Crashes — Continued

than that for adult drivers. The rate of nonfatal injury was highest for 16-year-olds and decreased with increasing age.

Odds ratios (ORs) were calculated to estimate the relative risk for involvement in an MVC, for fatal and incapacitating injury, and for fatal injury for teenaged compared with adult drivers (Table 1). For all three outcomes, the crude ORs and the Mantel-Haenszel age-adjusted ORs were statistically significant at each age from 16 to 19 years. The age-adjusted OR for involvement in an MVC was greater for teenaged drivers (OR=3.30, 95% confidence interval [CI]=3.26–3.34), and the risk for sustaining a fatal or incapacitating injury was almost as high (OR=2.91, 95% CI=2.72–3.11). The age-adjusted risk for a teenaged driver sustaining a fatal injury was more than twice that for adult drivers (OR=2.30, 95% CI=1.77–2.99).

The economic costs of MVCs involving teenaged drivers were calculated for injury- and noninjury-related costs on a "unit" (i.e., per injured person or per damaged vehicle) basis (Table 2). Using NHTSA's CrashCost software (*4*), the estimated cost of a single MVC-related fatality was $642,700. For fatal injuries, 80% of the cost was from lost productivity; insurance administration and legal/court costs accounted for 17%. The estimated cost of a single critical injury was $563,000. For critical injuries, medical expenses accounted for 45% and productivity losses accounted for 33% of the total unit costs. Unit costs for all other levels of injury severity ranged from approximately $5700 (minor injury) to approximately $151,000 (severe injury). In general, estimated unit costs increased with increasing levels of injury severity.

To calculate the estimated total costs of MVCs involving teenaged drivers in 1994, unit costs were multiplied by the number of fatal and nonfatal injuries and the number of vehicles involved in crashes with PDO (Table 3). The software adjusts the number of crashes to account for unreported crashes. The total estimated cost of all 142 fatal injuries sustained in a crash involving a teenaged driver was $91 million. For all MVCs in which at least one teenager was driving, the total estimated cost of all MVC-related injuries (regardless of severity level) and noninjury costs for all persons and for all crashes involving PDO was $410 million.

Reported by: LA Goldstein, PhD, CW Spurlock, PhD, PA Kidd, PhD, RH McCool, MS, Kentucky Injury Prevention and Research Center, Lexington; R Finger, MD, State Epidemiologist, Dept for Health Svcs, Kentucky Cabinet for Human Resources. Div of Unintentional Injuries Prevention, National Center for Injury Prevention and Control, CDC.

TABLE 1. Comparison of teenaged* drivers with all other licensed drivers in motor-vehicle crashes (MVCs) — Kentucky, 1994

Age (yrs)	Involvement in MVC		Fatal and incapacitating† injury		Fatal injury	
	Crude OR§	(95% CI¶)	Crude OR	(95% CI)	Crude OR	(95% CI)
16	5.2	(5.0–5.3)	4.4	(3.8–5.0)	2.4	(1.2–4.7)
17	3.6	(3.5–3.7)	2.8	(2.4–3.2)	2.6	(1.5–4.2)
18	2.9	(2.8–3.0)	2.7	(2.4–3.1)	1.9	(1.1–3.2)
19	2.6	(2.5–2.7)	2.4	(2.1–2.8)	2.5	(1.5–3.9)
Age-adjusted	3.30	(3.26–3.34)	2.91	(2.72–3.11)	2.30	(1.77–2.99)

*Aged 16–19 years.
†Any injury other than a fatal injury that prevents injured persons from walking, driving, or normally continuing the activities they were capable of before the injury occurred.
§Odds ratio. Referent group was drivers aged ≥20 years.
¶Confidence interval.

Motor-Vehicle Crashes — Continued

TABLE 2. Estimated cost of motor-vehicle crashes involving teenaged* drivers per injured person or per damaged vehicle, by type of expense and injury severity level† — Kentucky, 1994§

Expense	PDO¶	Minor	Moderate	Serious	Severe	Critical	Fatal
Injury							
Medical	—	$ 690	$ 5,558	$18,725	$ 57,459	$251,633	$ 3,733
Premature funeral	—	—	—	—	—	—	2,767
Emergency services	$ 22	124	275	413	940	957	861
Vocational rehabilitation	—	12	80	174	227	432	—
Market productivity	—	971	9,127	29,856	41,960	149,044	418,236
Household productivity	33	298	2,48	7,854	11,131	38,015	92,710
Insurance administration	117	390	1,592	5,206	10,669	41,056	44,769
Workplace costs	28	142	1,075	2,396	2,610	4,623	6,091
Legal/Court	—	274	1,981	9,364	18,622	70,438	65,700
Total**	**200**	**2,901**	**22,177**	**73,989**	**143,618**	**556,198**	**634,866**
Noninjury							
Travel delay	98	158	158	158	158	158	353
Property damage	1,072	2,665	2,741	4,715	6,823	6,549	7,464
Total**	**1,169**	**2,823**	**2,899**	**4,872**	**6,981**	**6,707**	7,816
Total**	**$1,369**	**$5,724**	**$25,076**	**$78,861**	**$150,599**	**$562,905**	**$642,683**

*Aged 16–19 years.
† Injury costs were computed based on the maximum injury sustained using the Abbreviated Injury Scale, a standardized system for categorizing injury type and quantifying severity based on immediate threat to life (*3*).
§ Estimates were derived by using the National Highway Traffic Safety Administration's CrashCost software and were adjusted for locality (Kentucky) and year (1994).
¶ Property damage only.
** Numbers may not add to totals because of rounding.

Editorial Note: Teenaged drivers are involved disproportionately in MVCs throughout the United States and other developed countries. Kentucky has ranked consistently among the 10 states with the highest death rate for teenagers in MVCs (*6*). Factors accounting for the high proportion of MVC costs associated with teenaged drivers when compared with adult drivers include 1) higher morbidity and death rates for teenagers; 2) greater risk among teenaged drivers for involvement in crashes resulting in serious injury or death; and 3) potentially greater lifetime productivity losses for younger drivers than some older age groups. Although teenagers may not provide financial support for their families, fatal or permanently disabling injuries from MVCs generate a substantial economic loss by removing these youth from society as potential producers and consumers.

Findings from the CrashCost software used to analyze the data for this report have at least four limitations. First, the software averages lost productivity costs across all age groups for each injury level, producing conservative estimates for costs associated with crashes involving teenaged drivers. Second, the software uses proportions derived from national estimates for the distribution of injury severity, driver age, crash-related costs, and crashes unreported to the police, then applies them to state

Motor-Vehicle Crashes — Continued

TABLE 3. Total costs of motor-vehicle crashes involving teenaged* drivers — Kentucky, 1994

Category	Unit cost§	Incidence¶	Total cost
Injury level			
Minor	$ 5,724	18,834	**$107,805,816**
Moderate	25,076	2,171	**54,439,996**
Serious	78,861	698	**55,044,978**
Severe	150,599	85	**12,800,915**
Critical	562,905	45	**25,330,725**
Fatal	642,683	142	**91,260,986**
PDO	1,369	46,031	**63,016,439**
Total			**$409,699,855**

*Aged 16–19 years.

†Injury costs were computed based on the maximum injury sustained using the Abbreviated Injury Scale, a standardized system for categorizing injury type and quantifying severity based on immediate threat to life (*3*).

§Cost per injured person or per damaged vehicle.

¶Many crashes are not reported to police and are missing in state records; however, these crashes constitute a large proportion of crash costs. The number of observed incident cases has been adjusted to account for the percentage of unreported crashes by applying the following national estimates for unreported crashes: minor, 23.7%; moderate, 16.5%; serious, 6.8%; severe, 0.7%; critical, 0; fatal, 0; and property (vehicle) damage only (PDO), 48.0%.

data. The national estimates may not reflect the actual distributions of these factors in Kentucky. Third, the software uses an assessment of injury severity made by the police, which is accurate for minor injury and fatal injury categories but accurate for less than half of those whose injuries were classified in other categories. Finally, the costs may be underestimated because they do not include intangible costs (e.g., "pain and suffering").

Strategies aimed at reducing the number of MVCs attributed to teenaged drivers should substantially decrease both the overall numbers of traffic-related injuries and deaths and the costs of these crashes. Use of graduated driver licensing (GDL) systems is an important approach for reducing the number and subsequent costs of crash-related deaths and injuries among teenagers, their passengers, and other drivers. The intent of GDL systems is to provide young, novice drivers an opportunity to gain driving experience in low-risk settings. The system consists of three licensing stages, named by the type of license possessed at each stage: learner's permit, intermediate or provisional license, and full or unrestricted license. The system is not intended to raise the age for drivers' licensing. GDL programs target the driving behaviors and crash characteristics of teenagers that increase their risk for crash involvement (e.g., inexperience; poor decision-making skills; and high risk-taking behavior such as speeding, alcohol use, and nonuse of safety belts [*7*]; and high-risk exposure such as nighttime driving and driving with young passengers). A recent evaluation of the GDL system implemented in New Zealand in 1987 indicated that, from 1987 to 1992, the number of serious motor-vehicle–related injuries among 15–19-year-olds declined 7%–23%. Because other types of injuries for this age group also declined during the same period, the reduction could not be attributed entirely to GDL (*8*). In the United States, states that have implemented components of GDL have reported small

Motor-Vehicle Crashes — Continued

but statistically significant decreases in the number of traffic-related injuries and deaths (*9,10*).

In March 1996, the Kentucky Legislature passed the Graduate Drivers' Licensing for Youth bill, one of the most comprehensive GDL programs in the United States. Under this new legislation, a young, novice driver begins with a learner's permit and driving restrictions, including a period of supervised driving, a 6-month waiting period before applying for a license, a nighttime driving restriction, and a reduced point threshold for suspension of the license as a result of traffic citations. This program is expected to reduce the number of deaths, injuries, and economic costs associated with MVCs among teenagers in Kentucky.

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Human Rabies — Florida, 1996

On February 8, 1996, a 26-year-old man died in a hospital in Naples, Florida, following progressive neurologic deterioration. Rabies had been clinically suspected on the day he was admitted (December 30, 1995) and was confirmed by CDC on January 10, 1996. This report summarizes the investigation of this case by the Florida Department of Health and Rehabilitative Services, Collier County Public Health Unit, which indicated a dog in Mexico as the probable source of exposure.

The patient was a citizen of Mexico who entered the United States on December 4, 1995. He sought care from a private physician in Immokalee, Florida, on December 29 because of anxiety, difficulty breathing while speaking, left lower-quadrant abdominal pain, left leg pain, lower back pain, and lethargy. Findings on physical examination included injected conjunctivae, a temperature of 96.3 F (35.7 C), pulse of

Human Rabies — Continued

112 beats per minute, and rebound tenderness to the abdomen. On referral from his physician, the patient was transported by ambulance to a regional hospital emergency department (ED). On arrival at the ED, bowel sounds were slightly increased, and a neurologic examination was within normal limits. Constipation was diagnosed, and he was treated with a tap water enema. Following a bowel movement, the patient reported that he felt better, and he was released.

On December 30, the patient was transported by ambulance to the ED after complaining of vague abdominal discomfort and an inability to eat during the preceding 3 days. Despite being hungry and thirsty, he had been unable to swallow. When offered water, he became anxious and hyperventilated.

Physical examination findings were normal except for an oral temperature of 100.3 F (37.9 C) and a rectal temperature of 102.0 F (38.9 C). Abnormal laboratory findings included a white blood cell count of 20,800/mm^3 (normal: 5000/mm^3–10,000/mm^3), blood gas pCO_2 of 25 mm Hg (normal: 35 mm Hg–45 mm Hg), blood glucose of 142 mg/dL (normal: <140 mg/dL), and a total serum bilirubin of 1.8 mg/dL (normal: 0.3 mg/dL–1.0 mg/dL). Chest and pelvic radiographs and a computerized tomography of the brain were normal.

During the following 2–3 hours in the ED, the patient became disoriented and agitated. During a lumbar puncture procedure, he jumped off the stretcher and became violent. After being restrained, he continued to scream and spit. He was intubated, admitted to the intensive-care unit (ICU), and treated with midazolam and haloperidol. Rabies was suspected, and therapies of ceftriaxone, vancomycin, acyclovir, and piperacillin/tazobactam also were initiated. He was administered rabies and tetanus immunoglobulins and tetanus and diphtheria toxoids. Diagnostic tests of blood were negative for arsenic, mercury, lead, mushroom, and other toxins, and of cerebrospinal fluid for herpes simplex virus and bacteria.

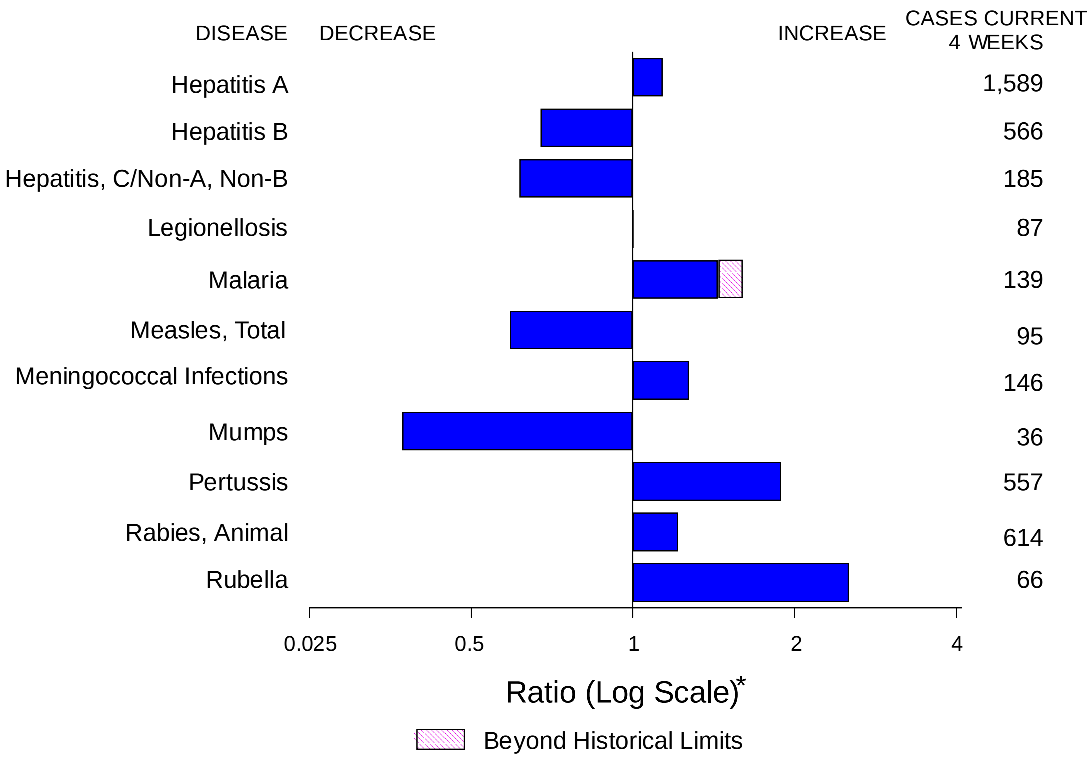
On January 3, the patient was unresponsive to stimulation but did exhibit gagging-type movements. On January 4, after midazolam therapy was discontinued, he could only open his eyes and respond to facial tactile stimulation. On January 5, the patient was transferred to another hospital and admitted to the ICU where results of a magnetic resonance imaging of the lumbar spine were normal. On January 6, a full-thickness nuchal skin biopsy and a saliva sample were obtained and sent to CDC for rabies testing and, on January 10, results for both were reported as positive. Nucleotide sequence analysis conducted at CDC on January 11 of the isolate from salivary samples implicated a variant of rabies virus associated with rabid dogs near the Mexico/Guatemala border.

The patient remained on a mechanical ventilator from January 6 to February 8; additional supportive therapy included intravenous fluids and tube feedings. He was stable but unresponsive to all stimuli and exhibited cardiac arrythmias (primarily sinus tachycardia) regularly. He died on February 8. Four hospital personnel who were exposed to the patient's saliva received postexposure prophylaxis.

Although the patient denied a history of animal bites, a friend reported the patient had been bitten by a puppy in Chiapas, Mexico, during October 1995. The puppy was apparently a stray given as a gift by a neighbor and was in the household only for a few days before the bite. The patient killed the puppy at the time of the bite, and it was not tested for rabies. Further investigation by Mexican authorities could not confirm the bite incident but revealed the patient may have sustained a dog bite on his left

(Continued on page 727)

FIGURE I. Selected notifiable disease reports, comparison of 4-week totals ending August 17, 1996, with historical data — United States



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

TABLE I. Summary — cases of selected notifiable diseases, United States, cumulative, week ending August 17, 1996 (33rd Week)

	Cum. 1996		Cum. 1996
Anthrax	-	HIV infection, pediatric*§	170
Brucellosis	56	Plague	-
Cholera	2	Poliomyelitis, paralytic¶	-
Congenital rubella syndrome	1	Psittacosis	23
Cryptosporidiosis*	1,120	Rabies, human	-
Diphtheria	1	Rocky Mountain spotted fever (RMSF)	401
Encephalitis: California*	19	Streptococcal toxic-shock syndrome*	10
eastern equine*	2	Syphilis, congenital**	157
St. Louis*	-	Tetanus	17
western equine*	-	Toxic-shock syndrome	89
Hansen Disease	68	Trichinosis	14
Hantavirus pulmonary syndrome*†	9	Typhoid fever	202

-: no reported cases
*Not notifiable in all states.
† Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Infectious Diseases (NCID).
§ Updated monthly to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention (NCHSTP), last update July 30, 1996.
¶ Three suspected cases of polio with onset in 1996 have been reported to date.
**Updated monthly from reports to the Division of STD Prevention, NCHSTP.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending August 17, 1996, and August 19, 1995 (33rd Week)

Reporting Area	AIDS*		Chlamydia	*Escherichia coli* O157:H7 NETSS†	*Escherichia coli* O157:H7 PHLIS§	Gonorrhea		Hepatitis C/NA,NB		Legionellosis	
	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1996	Cum. 1996	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995
UNITED STATES	39,982	45,285	209,685	1,321	643	178,933	246,654	2,161	2,498	503	761
NEW ENGLAND	1,589	2,205	10,943	193	45	4,637	4,737	73	82	27	18
Maine	29	75	547	16	-	29	58	-	-	1	5
N.H.	50	70	397	24	24	80	72	6	12	1	1
Vt.	14	21	-	13	11	37	34	27	7	3	-
Mass.	740	998	4,202	89	10	1,391	1,702	34	59	15	10
R.I.	113	165	1,272	8	-	325	310	6	4	7	2
Conn.	643	876	4,525	43	-	2,775	2,561	-	-	N	N
MID. ATLANTIC	11,159	12,250	26,917	118	34	19,546	27,768	189	285	110	124
Upstate N.Y.	1,378	1,457	N	78	12	3,707	6,003	154	142	43	32
N.Y. City	6,277	6,532	12,837	7	-	6,455	11,235	1	1	5	3
N.J.	2,130	2,869	2,482	33	5	2,853	2,226	-	116	8	19
Pa.	1,374	1,392	11,598	N	17	6,531	8,304	34	26	54	70
E.N. CENTRAL	3,225	3,397	27,011	317	145	26,554	49,763	298	201	137	222
Ohio	696	723	12,517	80	43	9,086	16,096	24	7	58	103
Ind.	433	336	6,285	42	26	4,088	5,703	7	1	31	52
Ill.	1,397	1,396	2,765	139	16	10,805	12,299	46	61	9	22
Mich.	528	712	U	56	41	U	11,457	221	132	30	21
Wis.	171	230	5,444	N	19	2,575	4,208	-	-	9	24
W.N. CENTRAL	935	1,070	14,890	284	175	7,399	12,717	84	50	26	50
Minn.	170	242	-	101	105	U	1,890	1	2	3	-
Iowa	63	54	2,631	74	50	668	868	40	9	6	17
Mo.	469	473	7,900	41	-	5,193	7,343	24	15	6	13
N. Dak.	10	4	2	9	7	1	17	-	4	-	3
S. Dak.	8	11	689	9	-	95	122	-	1	2	-
Nebr.	65	75	903	25	3	161	713	5	10	7	11
Kans.	150	211	2,765	25	10	1,281	1,764	14	9	2	6
S. ATLANTIC	9,735	11,400	34,648	76	40	61,992	68,551	159	158	91	121
Del.	193	219	1,148	-	1	913	1,363	1	-	8	2
Md.	1,149	1,614	4,026	N	6	8,583	7,846	1	6	17	22
D.C.	638	696	N	-	-	2,893	2,813	-	-	6	4
Va.	647	932	6,706	N	19	5,994	6,953	9	9	13	15
W. Va.	73	63	1	N	2	322	470	8	38	1	3
N.C.	539	588	-	21	9	11,785	15,553	30	38	6	25
S.C.	500	569	-	6	3	6,962	7,953	19	15	4	21
Ga.	1,421	1,459	7,626	22	-	12,708	12,626	U	15	3	14
Fla.	4,575	5,260	15,141	18	-	11,832	12,974	91	37	33	15
E.S. CENTRAL	1,311	1,449	18,904	35	29	20,328	25,641	400	710	33	45
Ky.	212	179	4,200	7	4	2,607	2,964	20	23	3	8
Tenn.	497	561	8,347	16	22	7,268	8,587	305	685	16	21
Ala.	365	409	5,459	8	3	8,846	10,667	4	2	3	6
Miss.	237	300	U	4	-	1,607	3,423	71	U	11	10
W.S. CENTRAL	3,970	4,011	29,443	35	9	21,580	34,294	305	172	15	15
Ark.	170	185	-	11	3	2,337	3,218	3	4	-	5
La.	923	602	4,466	5	3	4,846	7,564	135	107	1	2
Okla.	165	173	4,863	6	1	3,022	3,478	69	30	4	3
Tex.	2,712	3,051	20,114	13	2	11,375	20,034	98	31	10	5
MOUNTAIN	1,198	1,425	9,876	106	49	4,555	5,770	377	296	28	87
Mont.	22	16	-	13	-	24	43	12	10	1	4
Idaho	25	37	978	24	5	68	92	91	37	-	2
Wyo.	3	10	372	-	2	19	36	122	121	3	8
Colo.	335	492	-	41	21	1,077	1,837	35	43	7	33
N. Mex.	114	123	U	5	-	551	657	42	36	1	4
Ariz.	342	350	3,934	N	13	2,287	2,106	45	25	12	7
Utah	117	98	964	13	-	197	146	21	10	2	12
Nev.	240	299	1,087	10	8	332	853	9	14	2	17
PACIFIC	6,859	8,078	37,053	157	117	12,342	17,413	276	544	36	79
Wash.	447	659	5,989	34	42	1,307	1,627	37	143	3	17
Oreg.	311	275	U	50	31	344	480	4	33	-	-
Calif.	5,964	6,912	26,194	70	36	10,182	14,490	101	355	30	57
Alaska	16	50	715	3	2	271	438	2	1	1	-
Hawaii	121	182	817	N	6	238	378	132	12	2	5
Guam	4	-	168	N	-	31	77	1	5	2	1
P.R.	1,352	1,692	N	13	U	185	380	69	156	-	-
V.I.	16	27	N	N	U	-	-	-	-	-	-
Amer. Samoa	-	-	-	N	U	-	18	-	-	-	-
C.N.M.I.	1	-	N	N	U	11	36	-	5	-	-

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

*Updated monthly to the Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention, last update July 30, 1996.

†National Electronic Telecommunications System for Surveillance.

§Public Health Laboratory Information System.

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending August 17, 1996, and August 19, 1995 (33rd Week)

Reporting Area	Lyme Disease		Malaria		Meningococcal Disease		Syphilis (Primary & Secondary)		Tuberculosis		Rabies, Animal	
	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995
UNITED STATES	6,028	6,624	834	742	2,266	2,101	6,869	10,366	11,669	12,875	3,741	5,000
NEW ENGLAND	2,157	1,304	34	30	96	98	109	241	248	313	446	1,017
Maine	17	14	6	3	12	6	-	2	4	11	61	21
N.H.	21	19	1	1	3	16	1	1	8	9	44	113
Vt.	9	7	2	1	3	6	-	-	1	2	108	125
Mass.	135	77	12	10	36	35	50	41	116	175	67	322
R.I.	272	208	5	3	10	4	1	2	24	28	31	201
Conn.	1,703	979	8	12	32	31	57	195	95	88	135	235
MID. ATLANTIC	3,271	4,351	186	196	198	273	278	540	2,090	2,730	448	1,299
Upstate N.Y.	2,180	2,153	53	39	59	74	47	54	253	302	241	762
N.Y. City	184	297	95	98	30	38	88	233	1,113	1,582	-	-
N.J.	211	1,190	28	45	53	68	77	114	433	462	84	239
Pa.	696	711	10	14	56	93	66	139	291	384	123	298
E.N. CENTRAL	43	273	87	106	305	301	866	1,787	1,251	1,247	45	56
Ohio	29	21	9	6	117	87	313	570	194	178	8	5
Ind.	13	11	9	13	48	43	146	209	115	112	1	10
Ill.	1	13	35	57	79	80	289	693	699	640	9	9
Mich.	-	5	24	13	31	55	U	179	175	264	16	22
Wis.	U	223	10	17	30	36	118	136	68	53	11	10
W.N. CENTRAL	85	68	28	18	184	124	225	510	305	384	356	245
Minn.	18	5	9	3	23	21	27	29	70	95	18	11
Iowa	16	7	2	2	36	23	13	31	43	44	173	88
Mo.	22	35	8	6	78	46	162	431	131	144	16	24
N. Dak.	-	-	1	1	3	1	-	-	3	3	46	22
S. Dak.	-	-	-	1	9	5	-	-	14	15	81	68
Nebr.	2	4	3	3	16	11	6	10	13	17	3	4
Kans.	27	17	5	2	19	17	17	9	31	66	19	28
S. ATLANTIC	295	434	193	144	497	343	2,403	2,609	2,161	2,264	1,739	1,355
Del.	36	31	3	1	2	5	23	8	20	37	45	72
Md.	147	291	45	40	49	29	398	278	193	253	408	273
D.C.	2	2	7	11	9	4	99	74	86	67	8	10
Va.	27	33	25	32	36	45	283	404	178	146	367	259
W. Va.	9	18	3	1	11	8	1	8	41	52	69	78
N.C.	49	38	17	13	59	58	652	733	309	271	442	316
S.C.	3	9	9	-	44	44	265	380	230	212	57	96
Ga.	1	9	16	16	114	66	428	489	417	417	197	182
Fla.	21	3	68	30	173	84	254	235	687	809	146	69
E.S. CENTRAL	44	42	20	12	128	138	1,519	2,094	872	874	135	188
Ky.	9	10	3	1	20	36	87	117	155	191	32	20
Tenn.	16	18	10	4	16	48	541	540	285	291	45	66
Ala.	6	6	3	5	52	29	381	409	280	255	56	97
Miss.	13	8	4	2	40	25	510	1,028	152	137	2	5
W.S. CENTRAL	73	74	21	17	255	253	1,068	2,057	1,497	1,692	261	496
Ark.	20	6	-	2	28	26	113	317	121	146	14	33
La.	1	3	3	2	46	39	351	668	59	158	13	22
Okla.	7	30	-	1	23	26	127	122	121	129	17	27
Tex.	45	35	18	12	158	162	477	950	1,196	1,259	U	414
MOUNTAIN	6	6	35	41	127	155	92	151	383	411	87	91
Mont.	-	-	5	3	4	2	-	4	14	10	15	30
Idaho	-	-	-	1	19	7	4	-	6	8	-	-
Wyo.	2	3	3	-	3	6	2	-	3	1	20	21
Colo.	-	-	16	18	25	40	23	86	53	38	25	-
N. Mex.	1	1	1	4	21	29	1	5	52	56	3	3
Ariz.	-	-	4	7	33	45	56	24	158	206	18	27
Utah	2	-	4	5	12	13	2	4	39	19	3	7
Nev.	1	2	2	3	10	13	4	28	58	73	3	3
PACIFIC	54	72	230	178	476	416	309	377	2,862	2,960	224	253
Wash.	5	4	14	14	69	69	4	10	149	173	-	6
Oreg.	9	11	15	11	82	74	10	18	58	80	-	1
Calif.	39	57	191	142	317	263	294	348	2,508	2,545	216	239
Alaska	-	-	3	1	5	6	-	1	43	48	8	7
Hawaii	1	-	7	10	3	4	1	-	104	114	-	-
Guam	-	-	-	1	1	2	3	8	35	73	-	-
P.R.	-	-	-	1	4	18	91	177	63	120	31	33
V.I.	-	-	-	2	-	-	-	-	-	-	-	-
Amer. Samoa	-	-	-	-	-	-	-	-	-	3	-	-
C.N.M.I.	-	-	-	1	-	-	1	1	-	24	-	-

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

TABLE III. Cases of selected notifiable diseases preventable by vaccination, United States, weeks ending August 17, 1996, and August 19, 1995 (33rd Week)

Reporting Area	*H. influenzae*, invasive		Hepatitis (viral), by type				Measles (Rubeola)			
			A		B		Indigenous		Imported†	
	Cum. 1996*	Cum. 1995	Cum. 1996	Cum. 1995	Cum. 1996	Cum. 1995	1996	Cum. 1996	1996	Cum. 1996
UNITED STATES	771	761	16,845	17,809	5,934	6,320	8	375	1	30
NEW ENGLAND	20	31	207	169	111	153	-	8	-	4
Maine	-	3	13	17	2	6	-	-	-	-
N.H.	8	7	10	8	9	16	-	-	-	-
Vt.	1	2	4	4	10	2	-	1	-	1
Mass.	10	10	109	71	36	56	-	6	-	3
R.I.	1	3	9	20	7	8	-	-	-	-
Conn.	-	6	62	49	47	65	-	1	-	-
MID. ATLANTIC	120	108	997	1,103	878	894	1	20	-	5
Upstate N.Y.	37	27	273	262	232	239	-	-	-	-
N.Y. City	22	26	384	538	407	288	-	9	-	3
N.J.	36	13	205	150	155	227	U	-	U	-
Pa.	25	42	135	153	84	140	1	11	-	2
E.N. CENTRAL	119	133	1,410	2,108	626	724	-	6	-	3
Ohio	72	68	547	1,193	86	79	-	2	-	-
Ind.	7	17	209	108	105	141	-	-	-	-
Ill.	28	30	280	432	149	192	-	2	-	1
Mich.	7	16	273	240	246	262	-	1	-	2
Wis.	5	2	101	135	40	50	-	1	-	-
W.N. CENTRAL	33	55	1,371	1,236	270	430	-	17	-	2
Minn.	20	28	77	126	35	36	-	14	-	2
Iowa	5	3	241	61	61	33	-	-	-	-
Mo.	5	17	657	879	130	310	-	2	-	-
N. Dak.	-	-	28	19	-	4	-	-	-	-
S. Dak.	1	1	39	36	2	2	-	-	-	-
Nebr.	1	3	148	31	18	20	-	-	-	-
Kans.	1	3	181	84	24	25	-	1	-	-
S. ATLANTIC	181	151	805	716	939	829	-	6	1	6
Del.	2	-	10	8	6	6	-	1	-	-
Md.	43	53	131	134	196	165	-	2	-	1
D.C.	5	-	20	16	27	14	-	-	-	-
Va.	6	20	99	122	91	67	-	-	-	2
W. Va.	6	6	12	12	16	34	-	-	-	-
N.C.	20	24	92	74	231	193	-	3	-	1
S.C.	4	1	40	31	50	33	-	-	-	-
Ga.	73	43	86	50	8	62	-	-	1	2
Fla.	22	4	315	269	314	255	-	-	-	-
E.S. CENTRAL	21	8	944	1,046	516	576	-	-	-	-
Ky.	4	2	20	33	36	51	-	-	-	-
Tenn.	8	-	639	853	293	451	-	-	-	-
Ala.	8	5	130	57	41	74	-	-	-	-
Miss.	1	1	155	103	146	-	-	-	-	-
W.S. CENTRAL	31	39	3,523	2,209	802	758	1	24	-	2
Ark.	-	5	319	291	51	37	-	-	-	-
La.	3	1	106	66	77	125	-	-	-	-
Okla.	25	20	1,459	559	59	100	-	-	-	-
Tex.	3	13	1,639	1,293	615	496	1	24	-	2
MOUNTAIN	78	85	2,690	2,694	685	547	3	148	-	5
Mont.	-	-	81	71	6	19	-	-	-	-
Idaho	1	2	149	232	67	66	-	1	-	-
Wyo.	35	5	26	83	29	17	-	-	-	-
Colo.	11	10	285	336	85	80	-	4	-	3
N. Mex.	9	12	272	554	227	200	3	13	-	-
Ariz.	9	21	1,099	782	171	85	-	8	-	-
Utah	7	9	619	496	69	46	-	117	-	2
Nev.	6	26	159	140	31	34	-	5	-	-
PACIFIC	168	151	4,898	6,528	1,107	1,409	3	146	-	3
Wash.	2	8	323	511	60	119	-	45	-	-
Oreg.	22	20	573	1,676	42	86	-	4	-	-
Calif.	141	119	3,921	4,201	988	1,182	3	33	-	2
Alaska	1	-	31	27	9	10	-	63	-	-
Hawaii	2	4	50	113	8	12	-	1	-	1
Guam	-	-	2	6	-	4	U	-	U	-
P.R.	1	3	62	61	239	398	-	7	-	-
V.I.	-	-	-	6	-	12	U	-	U	-
Amer. Samoa	-	-	-	5	-	-	U	-	U	-
C.N.M.I.	10	11	1	21	5	10	U	-	U	-

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

*Of 179 cases among children aged <5 years, serotype was reported for 38 and of those, 10 were type b.

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

TABLE III. (Cont'd.) Cases of selected notifiable diseases preventable by vaccination, United States, weeks ending August 17, 1996, and August 19, 1995 (33rd Week)

Reporting Area	Measles (Rubeola), cont'd. Total		Mumps			Pertussis			Rubella		
	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995	1996	Cum. 1996	Cum. 1995
UNITED STATES	405	261	11	413	565	149	2,444	2,284	2	188	103
NEW ENGLAND	12	8	-	-	10	18	490	313	-	24	44
Maine	-	-	-	-	4	-	18	19	-	-	-
N.H.	-	-	-	-	1	4	44	23	-	-	1
Vt.	2	-	-	-	-	2	15	45	-	2	-
Mass.	9	2	-	-	2	12	408	212	-	20	7
R.I.	-	5	-	-	-	-	-	1	-	-	-
Conn.	1	1	-	-	3	-	5	13	-	2	36
MID. ATLANTIC	25	12	-	57	84	19	189	174	-	8	12
Upstate N.Y.	-	1	-	18	21	11	100	82	-	4	3
N.Y. City	12	5	-	13	9	-	22	27	-	2	7
N.J.	-	6	U	2	13	U	5	13	U	2	2
Pa.	13	-	-	24	41	8	62	52	-	-	-
E.N. CENTRAL	9	14	1	75	95	25	250	273	-	3	3
Ohio	2	1	1	33	29	14	124	82	-	-	-
Ind.	-	-	-	5	7	2	21	18	-	-	-
Ill.	3	2	-	18	28	9	78	47	-	1	-
Mich.	3	5	-	18	31	-	22	49	-	2	3
Wis.	1	6	-	1	-	-	5	77	-	-	-
W.N. CENTRAL	19	2	-	9	33	9	136	126	-	1	-
Minn.	16	-	-	3	2	9	98	42	-	-	-
Iowa	-	-	-	1	8	-	4	6	-	1	-
Mo.	2	1	-	2	19	-	20	37	-	-	-
N. Dak.	-	-	-	2	-	-	1	6	-	-	-
S. Dak.	-	-	-	-	-	-	3	8	-	-	-
Nebr.	-	-	-	-	4	-	6	8	-	-	-
Kans.	1	1	-	1	-	-	4	19	-	-	-
S. ATLANTIC	12	11	6	71	85	48	327	177	2	91	8
Del.	1	-	-	-	-	-	11	9	-	-	-
Md.	3	1	1	20	27	15	121	24	-	-	1
D.C.	-	-	-	-	-	-	-	4	-	1	-
Va.	2	-	-	10	16	-	26	10	-	2	-
W. Va.	-	-	-	-	-	-	2	-	-	-	-
N.C.	4	-	3	17	16	6	55	81	2	77	1
S.C.	-	-	-	5	7	1	23	16	-	1	-
Ga.	2	2	-	2	6	3	16	13	-	-	-
Fla.	-	8	2	17	13	23	73	20	-	10	6
E.S. CENTRAL	-	-	1	19	7	1	63	193	-	2	1
Ky.	-	-	-	-	-	-	26	13	-	-	-
Tenn.	-	-	-	1	-	-	17	148	-	-	1
Ala.	-	-	-	3	4	-	12	31	-	2	-
Miss.	-	-	1	15	3	1	8	1	N	N	N
W.S. CENTRAL	26	20	2	18	38	4	63	173	-	2	7
Ark.	-	2	-	-	5	-	4	28	-	-	-
La.	-	18	-	11	8	-	6	11	-	1	-
Okla.	-	-	-	-	-	-	8	17	-	-	-
Tex.	26	-	2	7	25	4	45	117	-	1	7
MOUNTAIN	153	68	-	22	25	7	254	427	-	6	4
Mont.	-	-	-	-	1	-	12	3	-	-	-
Idaho	1	-	-	-	2	6	90	85	-	2	-
Wyo.	-	-	-	-	-	-	3	1	-	-	-
Colo.	7	26	-	2	-	-	64	64	-	2	-
N. Mex.	13	31	N	N	N	-	37	66	-	-	-
Ariz.	8	10	-	1	2	1	15	146	-	1	3
Utah	119	-	-	2	11	-	11	18	-	-	1
Nev.	5	1	-	17	9	-	22	44	-	1	-
PACIFIC	149	126	1	142	188	18	672	428	-	51	24
Wash.	45	19	-	18	10	2	237	99	-	1	1
Oreg.	4	1	-	-	-	-	29	28	-	1	-
Calif.	35	104	1	102	160	15	389	263	-	46	18
Alaska	63	-	-	2	12	-	2	-	-	-	-
Hawaii	2	2	-	20	6	1	15	38	-	3	5
Guam	-	-	U	5	3	U	1	2	U	-	1
P.R.	7	3	-	1	2	-	1	1	-	-	-
V.I.	-	-	U	-	3	U	-	-	U	-	-
Amer. Samoa	-	-	U	-	-	U	-	-	U	-	-
C.N.M.I.	-	-	U	-	-	U	-	-	U	-	-

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

TABLE IV. Deaths in 121 U.S. cities,* week ending August 17, 1996 (33rd Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	>65	45-64	25-44	1-24	<1	
NEW ENGLAND	494	347	90	32	14	11	32
Boston, Mass.	166	97	41	16	6	6	7
Bridgeport, Conn.	25	15	7	2	-	1	1
Cambridge, Mass.	17	16	1	-	-	-	3
Fall River, Mass.	36	28	5	3	-	-	2
Hartford, Conn.	U	U	U	U	U	U	U
Lowell, Mass.	12	10	2	-	-	-	-
Lynn, Mass.	14	11	3	-	-	-	1
New Bedford, Mass.	26	21	4	1	-	-	-
New Haven, Conn.	28	18	3	2	4	1	5
Providence, R.I.	55	45	6	2	-	2	1
Somerville, Mass.	5	4	-	1	-	-	-
Springfield, Mass.	43	27	9	3	3	1	-
Waterbury, Conn.	26	21	2	2	1	-	5
Worcester, Mass.	41	34	7	-	-	-	7
MID. ATLANTIC	2,380	1,587	470	222	57	40	108
Albany, N.Y.	49	32	9	1	5	2	2
Allentown, Pa.	13	11	1	1	-	-	-
Buffalo, N.Y.	81	54	16	8	2	1	3
Camden, N.J.	35	22	6	1	4	2	1
Elizabeth, N.J.	14	6	4	2	-	2	-
Erie, Pa.§	41	30	9	1	1	-	-
Jersey City, N.J.	34	24	7	2	-	1	3
New York City, N.Y.	1,135	745	233	117	24	16	35
Newark, N.J.	63	30	16	13	1	3	7
Paterson, N.J.	37	16	11	9	-	1	-
Philadelphia, Pa.	500	346	91	42	14	7	26
Pittsburgh, Pa.§	74	53	10	5	3	3	3
Reading, Pa.	5	3	2	-	-	-	1
Rochester, N.Y.	112	75	22	8	2	1	9
Schenectady, N.Y.	25	19	5	1	-	-	2
Scranton, Pa.§	18	16	2	-	-	-	-
Syracuse, N.Y.	70	55	8	5	1	1	9
Trenton, N.J.	29	15	9	5	-	-	2
Utica, N.Y.	16	13	3	-	-	-	-
Yonkers, N.Y.	29	22	6	1	-	-	5
E.N. CENTRAL	1,906	1,289	355	150	53	57	106
Akron, Ohio	47	36	3	5	2	1	-
Canton, Ohio	34	26	7	-	-	1	3
Chicago, Ill.	415	259	78	47	21	8	27
Cincinnati, Ohio	108	72	26	6	-	4	10
Cleveland, Ohio	126	82	27	8	2	7	2
Columbus, Ohio	177	125	28	14	5	5	11
Dayton, Ohio	132	90	26	9	2	5	3
Detroit, Mich.	208	124	46	20	10	8	5
Evansville, Ind.	37	26	8	2	-	1	2
Fort Wayne, Ind.	48	42	4	2	-	-	6
Gary, Ind.	U	U	U	U	U	U	U
Grand Rapids, Mich.	45	37	5	2	-	1	-
Indianapolis, Ind.	99	62	18	9	4	6	6
Madison, Wis.	U	U	U	U	U	U	U
Milwaukee, Wis.	115	65	32	14	1	3	6
Peoria, Ill.	37	24	9	1	1	2	1
Rockford, Ill.	41	32	6	2	1	-	2
South Bend, Ind.	48	40	4	1	2	1	7
Toledo, Ohio	117	91	18	4	1	3	13
Youngstown, Ohio	72	56	10	4	1	1	2
W.N. CENTRAL	748	518	133	47	25	16	46
Des Moines, Iowa	73	52	13	5	1	2	9
Duluth, Minn.	29	23	5	1	-	-	2
Kansas City, Kans.	26	17	4	1	3	1	1
Kansas City, Mo.	114	68	26	6	3	2	9
Lincoln, Nebr.	31	23	6	2	-	-	-
Minneapolis, Minn.	170	120	28	13	6	3	10
Omaha, Nebr.	73	51	13	6	2	1	5
St. Louis, Mo.	93	70	12	4	4	3	2
St. Paul, Minn.	56	40	10	2	2	2	2
Wichita, Kans.	83	54	16	7	4	2	6
S. ATLANTIC	1,257	764	274	161	38	20	67
Atlanta, Ga.	163	93	28	29	7	6	5
Baltimore, Md.	188	107	38	36	6	1	14
Charlotte, N.C.	84	63	16	3	2	-	-
Jacksonville, Fla.	122	81	19	19	2	1	-
Miami, Fla.	110	65	27	14	4	-	1
Norfolk, Va.	49	34	10	1	2	2	3
Richmond, Va.	83	53	17	8	4	1	9
Savannah, Ga.	37	22	8	6	1	-	5
St. Petersburg, Fla.	58	41	9	3	1	4	4
Tampa, Fla.	157	97	48	10	1	1	21
Washington, D.C.	190	100	49	29	8	4	5
Wilmington, Del.	16	8	5	3	-	-	-
E.S. CENTRAL	692	459	140	45	22	12	34
Birmingham, Ala.	107	62	27	9	4	4	3
Chattanooga, Tenn.	47	36	8	2	-	1	5
Knoxville, Tenn.	76	51	15	5	4	1	4
Lexington, Ky.	69	50	5	1	-	-	5
Memphis, Tenn.	127	86	26	10	5	-	11
Mobile, Ala.	97	68	17	5	3	4	-
Montgomery, Ala.	50	31	14	3	2	-	-
Nashville, Tenn.	119	75	28	10	4	2	6
W.S. CENTRAL	1,403	852	300	168	45	38	61
Austin, Tex.	77	43	16	13	3	2	2
Baton Rouge, La.	38	24	8	4	2	-	2
Corpus Christi, Tex.	53	35	9	3	-	6	1
Dallas, Tex.	187	101	48	23	10	5	2
El Paso, Tex.	70	45	15	7	1	2	4
Ft. Worth, Tex.	91	65	12	10	2	2	4
Houston, Tex.	356	188	94	55	12	7	26
Little Rock, Ark.	89	55	16	8	2	8	1
New Orleans, La.	106	64	17	17	8	-	-
San Antonio, Tex.	196	127	42	17	5	5	9
Shreveport, La.	53	37	12	4	-	-	3
Tulsa, Okla.	87	68	11	7	-	1	7
MOUNTAIN	841	569	167	70	22	13	48
Albuquerque, N.M.	94	71	11	9	2	1	3
Colo. Springs, Colo.	38	19	10	5	2	2	2
Denver, Colo.	104	66	22	14	-	2	6
Las Vegas, Nev.	185	121	56	6	2	-	6
Ogden, Utah	25	16	3	3	1	2	3
Phoenix, Ariz.	152	104	22	15	8	3	12
Pueblo, Colo.	31	24	3	2	2	-	5
Salt Lake City, Utah	97	64	19	8	4	2	6
Tucson, Ariz.	115	84	21	8	1	1	5
PACIFIC	1,599	1,043	306	151	58	41	114
Berkeley, Calif.	17	13	3	1	-	-	1
Fresno, Calif.	66	42	10	5	5	4	6
Glendale, Calif.	29	25	2	1	-	1	2
Honolulu, Hawaii	70	56	6	3	3	2	7
Long Beach, Calif.	82	60	12	7	1	2	11
Los Angeles, Calif.	468	280	100	49	24	15	16
Pasadena, Calif.	29	17	6	5	1	-	1
Portland, Oreg.	126	81	26	14	3	2	6
Sacramento, Calif.	U	U	U	U	U	U	U
San Diego, Calif.	142	82	36	15	6	3	20
San Francisco, Calif.	135	77	28	23	4	3	17
San Jose, Calif.	164	118	29	8	6	3	11
Santa Cruz, Calif.	28	19	6	3	-	-	3
Seattle, Wash.	127	89	23	9	3	3	5
Spokane, Wash.	45	36	5	1	1	2	3
Tacoma, Wash.	71	48	14	7	1	1	5
TOTAL	11,320¶	7,428	2,235	1,046	334	248	616

U: Unavailable -: no reported cases

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

†Pneumonia and influenza.

§Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶Total includes unknown ages.

Human Rabies — Continued

hand in January 1995. Because canine rabies is endemic in this region of Mexico, a dog bite was considered the most likely source of exposure.

Reported by: CS Forszpaniak, MD, KS Harbourne, MD, JF Nolan, MD, J Puerto, MD, AM De La Rivaherrerra, MD, M Rubin, MD, K Taylor, MD, CW Liebert, MD, M Neumann, PhD, Naples Community Hospital, Naples; M Crowley, MS, M Laliberte, M Burton, J Polkowski, MD, Collier County Public Health Unit; G Hlady, MD, R Hopkins, MD, State Epidemiologist, Florida Dept of Health and Rehabilitative Svcs. Pan American Health Organization, Washington, DC. Director General of Preventive Medicine, Secretary of Health, Mexico. Viral and Rickettsial Zoonoses Br, Div of Viral and Rickettsial Diseases, National Center for Infectious Diseases; Div of Applied Public Health Training (proposed), Epidemiology Program Office, CDC.

Editorial Note: This report describes the 29th case of human rabies reported in the United States, and the second from Florida, since 1980. Eleven (38%) of the 29 cases, including this case, are presumed to have been acquired outside the United States; all were associated with exposure to dogs.

In this case, the length of time between initial presentation and death (42 days) was substantially longer than other human rabies cases since 1980 (mean=16.2 days, standard deviation [SD]=6.8). It is unclear whether the prolonged clinical course was influenced by supportive therapies or exposure factors. Antiviral and immunoglobulin therapies have not proved efficacious in treating clinical rabies (*1,2*), and data do not suggest longer clinical courses in canine-associated infections.

The epidemiologic investigation of this case included the extensive use of bilingual public health investigators and medical personnel and coordination between local, state, and federal authorities. Information regarding the probable exposure history was elicited from friends and health authorities in Mexico and the Pan American Health Organization.

The number of persons receiving postexposure prophylaxis as a result of this case was substantially lower than for most other cases since 1980 (mean=64.6 treatments per case, SD=40.8), probably reflecting the patient's small number of social contacts and family members in the United States, the early suspicion of rabies as a diagnosis, and the prompt initiation and maintenance of protective barrier techniques during presentation and hospitalization.

Canine rabies remains a prevalent public health threat in many developing nations, and most human cases resulting from exposures outside the United States are associated with dog variant rabies viruses. Persons who are bitten or scratched by any animal should thoroughly wash all wounds with soap and water and seek immediate medical attention to evaluate the need for postexposure prophylaxis.

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