CENTERS FOR DISEASE CONTROL

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MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

International Notes

Health Assessment of the Population Affected by Flood Conditions — Khartoum, Sudan

In early August 1988, severe floods struck Khartoum, the capital of the Democratic Republic of the Sudan. Khartoum, situated at the junction of the White Nile and Blue Nile rivers, has an estimated population of 4.5 million. Approximately 1.5 to 2 million of these persons have been displaced from the southern and western regions of Sudan.

On August 4, the Khartoum area received 8.4 inches (210 mm) of rain in 24 hours, more than twice the usual annual rainfall. Heavy rains also fell on August 11 and 13. The rains and subsequent ground flooding destroyed an estimated 127,000 dwellings that had housed approximately 750,000 inhabitants (most of whom were displaced persons). In addition, food and water supplies, sanitation, transportation, and communications were seriously disrupted. The Sudanese Ministry of Health (MOH), with the concurrence of the U.S. Agency for International Development (USAID), asked CDC to assist in assessing the health and nutritional status of the flood-affected Khartoum population. Beginning in August, this assessment was performed in collaboration with the Sudanese MOH, USAID, World Health Organization (WHO), and private volunteer agencies.

A disease surveillance system was established in the three urban districts by using 24 health facilities and three hospitals as sentinel sites. The sites, which were not chosen randomly, included many clinics that served displaced persons. A standardized reporting form was used to monitor the number of patients (by age group) with watery diarrhea, dysentery, jaundice, malaria, measles, acute respiratory infections, and "other diseases," as well as hospital and clinic mortality. Three mobile health teams collected these forms on alternate days from the sentinel sites and also assisted in evaluating case management and instituting oral rehydration units. As part of the surveillance for diarrheal disease, alkaline peptone water and Cary-Blair medium were distributed to the health facilities and three hospitals for use in obtaining stool specimens from persons suspected to have cholera and dysentery. Specimens were processed at the central public health laboratory. Disease trends were monitored by calculating daily proportional morbidity, i.e., the number of patients in each disease category/total number of patients seen that day. The MOH

Flood Conditions — Continued

received surveillance reports each day, and other health agencies were provided information on alternate days.

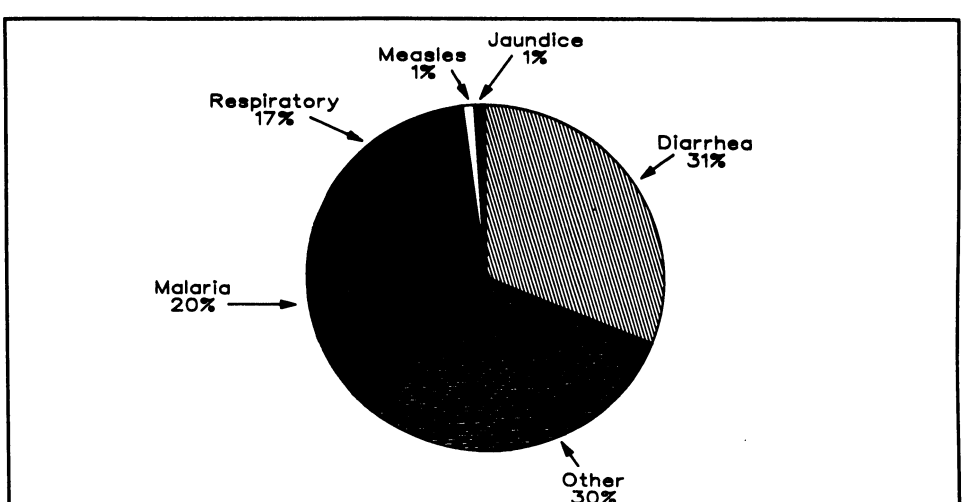
In the areas most severely affected by the flood, 16 mobile teams from the MOH Expanded Program on Immunization provided measles immunizations, vitamin A supplementation, and nutritional surveillance. Nutritional status was assessed by measuring the mid-upper-arm circumference (MUAC) of all children 1–5 years of age in these areas. To determine the prevalence of malaria, the MOH conducted fever surveys (with thick/thin blood smears) in three communities and two clinics.

Although 15 suspected outbreaks were investigated between August 21 and August 31, no outbreaks of typhoid, cholera, or measles were confirmed. Diarrhea was the most common specific cause of morbidity, accounting for 9217 (31%) of 29,526 reported visits (Figure 1). *Shigella boydii* was isolated from one of 38 stool cultures from a survey of diarrheal illness at a sentinel site; the patient had bloody diarrhea. None of the 48 stool specimens from patients with severe diarrhea yielded *Vibrio cholerae*. In the three hospitals surveyed, the case-fatality rate in August 1988 for hospitalized patients with diarrheal illness was 11% (68/623), compared with 9% (42/447) in August 1987.

Malaria accounted for 20% of morbidity reported by sentinel sites between August 18 and August 31 but rose to 30% of total morbidity in the first week of September. Surveys showed that malaria prevalence rates ranged from 11% to 19% (febrile and afebrile) in the community and from 21% to 46% in (febrile) clinic patients.

Nutritional assessment of 17,639 children aged 1–5 years indicated that 1682 (10%) were severely undernourished (MUAC <12.5 cm) and that 2391 (14%) were moderately undernourished (MUAC 12.5 cm–13.4 cm). The proportion of children severely and moderately undernourished in each of the three districts was approximately equal. In follow-up, between September 17 and October 8, 1988, the MOH performed random cluster sample surveys in 19 high-risk areas using weight-for-height meas-

FIGURE 1. Proportions of disease morbidity reported by sentinel sites — Khartoum, Sudan, August 21–31, 1988*



*N = 29,526.

Flood Conditions — Continued

urements. Of 5517 children <5 years of age measured, 270 (4.9%) were severely undernourished, and 767 (13.9%) were moderately undernourished, i.e., >3 standard deviations and 2–3 standard deviations, respectively, below the median of the WHO reference population.

In flood-affected areas, measles vaccine was administered to approximately 40,000 (73%) of an estimated 55,000 unimmunized children between the ages of 6 months and 5 years, raising overall measles vaccine coverage from 55% to 85%.

Recommendations emphasized: 1) increased distribution of basic rations in the most severely affected areas and supplementary feeding for vulnerable groups in all flood-affected areas, 2) ongoing nutritional surveillance through weight-for-height surveys in selected populations, 3) early diagnosis and presumptive chloroquine treatment for persons with fever to reduce malaria mortality, 4) increased distribution of measles vaccine and oral rehydration salts, and 5) establishment of a rapid response epidemiology unit within the MOH that would help coordinate future health emergency relief efforts.

Reported by: Div of Epidemiology, Div of Medical Statistics, National Program for the Control of Diarrheal Diseases, Expanded Program on Immunization, Malaria Control Program, Div of Nutrition, Sudanese Ministry of Health. US Agency for International Development, Khartoum, Sudan; Office of Foreign Disaster Assistance, US Agency for International Development, Washington, DC. Technical Support Div, International Health Program Office; Div of Immunization, Center for Prevention Svcs; Div of Field Svcs, Epidemiology Program Office; Enteric Diseases Br, Div of Bacterial Diseases, Center for Infectious Diseases, CDC.

Editorial Note: Poor nutritional status appeared to be the main health problem for displaced persons and others in Khartoum. The prevalence of moderate/severe undernutrition (24%) in children aged 1–5 years is substantially higher than that reported from developing countries in Africa during noncrisis periods (0.4%–4.4%) (*1*). Because MUAC is not an exact indicator of nutritional status (*2–4*), the MOH decided to monitor nutritional status by obtaining weight-for-height measurements on random samples of 300 children in each of 19 flood-affected areas. The results of the follow-up survey confirmed the high rates of undernutrition in these areas. The direct impact of the flood disaster on the nutritional status of the assessed children is difficult to evaluate without prior survey information; however, the extent of their current undernutrition is associated with an increased risk of mortality (*5,6*).

Despite the poor water supply and sanitation in the flood-affected areas, cholera and typhoid outbreaks did not occur. Relief efforts appropriately focused on disease surveillance and case detection, along with appropriate case management that included the use of oral rehydration for diarrheal disease (*7,8*). Recommendations did not include mass vaccination campaigns against cholera and typhoid for the following reasons: 1) no documented large-scale outbreaks have occurred following natural disasters elsewhere; 2) typhoid and cholera vaccines offer only low and short-term individual protection and little or no protection against spread of disease; the provision of clean drinking water is more appropriate to prevent transmission; 3) reported vaccine efficacies of 50% for cholera and 70%–90% for typhoid usually occur after the second dose, and two doses would have been difficult to administer to a large proportion of the population under emergency conditions; 4) a massive typhoid and cholera vaccination program would have diverted scarce resources from other high-priority activities; and 5) mass vaccination for cholera and typhoid may provide a false sense of security about the risk of disease, resulting in the neglect of effective control measures (*8*).

Flood Conditions — Continued

Measles is a serious threat to undernourished persons, especially to those living in refugee/displaced person camps and other densely populated settings with large numbers of young children (*9,10*). The absence of measles outbreaks after the Sudan floods may have resulted from the relatively high rates of vaccine coverage in Khartoum before the floods and the additional targeted coverage achieved by the mobile teams.

Given the environmental conditions, the increase in malaria prevalence may have been predicted (*11*). Case detection and prompt treatment is the preferred malaria control strategy in a disaster setting. When this control measure has been completed, additional strategies, such as larvicidal and insecticidal programs, might be considered.

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Current Trends

Update: Influenza Activity — Worldwide

Beginning in November, influenza virus activity shifts from the southern to the northern hemisphere. Thus, isolates of influenza viruses are increasing in Canada, Trinidad, the United States, Japan, and Europe and are declining in South America, Oceania, and southern Asia.

Europe. In France, an influenza type A(H1N1) epidemic has been reported. It began in the northern and central regions but spread in December to all regions and affected primarily children and young adults. Several influenza type A(H3N2) viruses also have been isolated in France. Type A(H1N1) virus has spread to Italy, Switzerland, United Kingdom, and West Germany, with large outbreaks in some of these countries.

Influenza — Continued

Sweden and the Netherlands have reported influenza type A(H3N2) isolation. Outbreaks have occurred in central Sweden among all age groups. In Norway, type A(H1N1) was isolated first in Oslo; type A(H3N2) virus has also been isolated from outbreaks in the southeast. Finland has reported influenza type A virus of unknown subtype.

Asia. Activity in much of southeast Asia has declined; only sporadic isolates of unknown type occurred during September and October in Thailand and Taiwan. However, in Japan, where influenza type B was first isolated in October, influenza type A(H1N1) outbreaks since have occurred among schoolchildren. Influenza activity has increased rapidly, as indicated by absenteeism in schools. Influenza B was also isolated in Hong Kong and Singapore in September and October. In the People's Republic of China, activity has been lower than last year. Of 17 isolates from sporadic cases, 11 were type A(H1N1), two were type A(H3N2), and four were type B.

Americas and Oceania. No new influenza cases have been reported from Oceania and South America since September. However, an island-wide outbreak of influenza A(H1N1) virus occurred in Trinidad during September, and one isolate of influenza type B was also recovered. Canada reported the first isolates of the 1988–89 influenza season from type A(H1N1) virus activity in late November and early December. Most isolates were from Alberta, but others were reported from Manitoba and British Columbia. Influenza type B has been isolated from 14 states in the United States; several outbreaks have occurred in schools. Type A(H3N2) virus and type A(H1N1) virus have also been reported from a few locations in the United States.

Reported by: National Influenza Centers, Communicable Diseases Div, World Health Organization, Geneva. WHO Collaborating Center for Influenza, Epidemiology Office and Influenza Br, Div of Viral Diseases, Center for Infectious Diseases, CDC.

Compendium of Animal Rabies Control, 1989

Prepared by: The National Association of State Public Health Veterinarians, Inc.*

The purpose of these recommendations is to provide information on rabies vaccines to practicing veterinarians, public health officials, and others concerned with rabies control. This document serves as the basis for animal rabies vaccination programs throughout the United States. Its adoption should result in standardization of procedures among jurisdictions, which is necessary for an effective national rabies control program. These recommendations are reviewed and revised as necessary before each calendar year. All animal rabies vaccines licensed by the U.S. Department of Agriculture and marketed in the United States are listed in Part II of the compendium, and Part III describes the principles of rabies control.

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Rabies — Continued

Part I: Recommendations for Immunization Procedures

A. Vaccine Administration

All animal rabies vaccines should be restricted to use by or under the supervision of a veterinarian.

B. Vaccine Selection

In comprehensive rabies control programs, only vaccines with a 3-year duration of immunity should be used. This eliminates the need for annual vaccination and constitutes the most effective method of increasing the proportion of immunized dogs and cats. (See Part II.)

C. Route of Inoculation

Unless otherwise specified by the product label or package insert, all vaccines must be administered intramuscularly at one site in the thigh.

D. Wildlife Vaccination

Vaccination of wildlife is not recommended since no rabies vaccine is licensed for use in wild animals. Neither wild nor exotic animals should be kept as pets. Offspring born to wild animals bred with domestic dogs or cats are considered wild animals.

E. Unintended Human Exposure to Vaccine

Unintended inoculation of humans may occur during administration of animal rabies vaccine. Such exposure to inactivated vaccines constitutes no rabies hazard. No human cases of rabies have resulted from needle or other exposure to a licensed modified live-virus vaccine in the United States.

F. Identification of Vaccinated Dogs

All agencies and veterinarians should adopt the standard tag system. This practice will aid the administration of local, state, national, and international procedures. Dog license tags should be distinguishable in shape and color from rabies tags. Anodized aluminum rabies tags should be no less than 0.064 inches in thickness.

1. Rabies Tags.

Calendar Year	Color	Shape
1989	Blue	Rosette
1990	Orange	Fireplug
1991	Green	Bell
1992	Red	Heart

2. Rabies Certificate. All agencies and veterinarians should use the National Association of State Public Health Veterinarians (NASPHV) form #50, "Rabies Vaccination Certificate," which can be obtained from vaccine manufacturers.

Rabies — Continued

Part II: Vaccines Marketed in the United States and NASPHV Recommendations

Product name	Produced by	Marketed by	For use in*	Dosage†	Age at primary vaccination§	Booster recommended
A. MODIFIED LIVE VIRUS						
ENDURALL-R	Norden		Dogs	1 mL	3 mos. & 1 yr. later	Triennially
	License No. 189	Norden	Cats	1 mL	3 months	Annually
B. INACTIVATED						
TRIMUNE	Fort Dodge		Dogs	1 mL	3 mos. & 1 yr. later	Triennially
	License No. 112	Ft. Dodge	Cats	1 mL	3 mos. & 1 yr. later	Triennially
ANNUMUNE	Fort Dodge		Dogs	1 mL	3 mos.	Annually
	License No. 112	Ft. Dodge	Cats	1 mL	3 mos.	Annually
BIORAB-1	Schering	Biologics	Dogs	1 mL	3 mos.	Annually
	License No. 165-A	Corp.	Cats	1 mL	3 mos.	Annually
BIORAB-3	Schering	Biologics	Dogs	1 mL	3 mos. & 1 yr. later	Triennially
	License No. 165-A	Corp.	Cats	1 mL	3 mos.	Annually
RABMUNE 3	Schering		Dogs	1 mL	3 mos. & 1 yr. later	Triennially
	License No. 165-A	Beecham	Cats	1 mL	3 mos.	Annually
DURA-RAB 1	ImmunoVet	ImmunoVet &	Dogs	1 mL	3 mos.	Annually
	License No. 302-A	Vedco, Inc. Fermenta Animal Health	Cats	1 mL	3 mos.	Annually
DURA-RAB 3	ImmunoVet	ImmunoVet &	Dogs	1 mL	3 mos. & 1 yr. later	Triennially
	License No. 302-A	Vedco, Inc. Fermenta Animal Health	Cats	1 mL	3 mos. & 1 yr. later	Triennially
RABCINE 3	ImmunoVet		Dogs	1 mL	3 mos. & 1 yr. later	Triennially
	License No. 302-A	Beecham	Cats	1 mL	3 mos. & 1 yr. later	Triennially
RABCINE	Beecham		Dogs	1 mL	3 mos.	Annually
	License No. 225	Beecham	Cats	1 mL	3 mos.	Annually
ENDURALL-K	Norden		Dogs	1 mL	3 mos.	Annually
	License No. 189	Norden	Cats	1 mL	3 mos.	Annually

*Refers only to domestic species of this class of animals.
†All vaccines must be administered intramuscularly at one site in the thigh unless otherwise specified by the label.
§Three months of age (or older) and revaccinated 1 year later.

Rabies — Continued

Product name	Produced by	Marketed by	For use in*	Dosage†	Age at primary vaccination§	Booster recommended
RABGUARD-TC	Norden License No. 189	Norden	Dogs	1 mL	3 mos. & 1 yr. later	Triennially
			Cats	1 mL	3 mos. & 1 yr. later	Triennially
			Sheep	1 mL	3 mos.	Annually
			Cattle	1 mL	3 mos.	Annually
			Horses	1 mL	3 mos.	Annually
CYTORAB	Coopers Animal Health, Inc. License No. 107	Coopers	Dogs	1 mL	3 mos.	Annually
			Cats	1 mL	3 mos.	Annually
TRIRAB	Coopers Animal Health, Inc. License No. 107	Coopers	Dogs	1 mL	3 mos. & 1 yr. later	Triennially
			Cats	1 mL	3 mos.	Annually
RABVAC 1	Salsbury License No. 195-A	Solvay Veterinary	Dogs	1 mL	3 mos.	Annually
			Cats	1 mL	3 mos.	Annually
RABVAC 3	Salsbury License No. 195-A	Solvay Veterinary	Dogs	1 mL	3 mos. & 1 yr. later	Triennially
			Cats	1 mL	3 mos. & 1 yr. later	Triennially
			Horses	2 mL	3 mos.	Annually
IMRAB	Rhone Merieux Inc. License No. 298	Pitman-Moore	Dogs	1 mL	3 mos. & 1 yr. later	Triennially
			Cats	1 mL		Triennially
			Sheep	2 mL		Triennially
			Cattle	2 mL	3 mos.	Annually
			Horses	2 mL	3 mos.	Annually
IMRAB-1	Rhone Merieux Inc. License No. 298	Pitman-Moore	Dogs	1 mL	3 mos.	Annually
			Cats	1 mL	3 mos.	Annually
EPIRAB	Coopers Animal Health Inc. License No. 107	Coopers	Dogs	1 mL	3 mos. & 1 yr. later	Triennially
			Cats	1 mL	3 mos. & 1 yr. later	Triennially
C. COMBINATION						
ECLIPSE 3 KP-R	Salsbury License No. 195-A	Solvay Veterinary	Cats	1 mL	3 mos.	Annually
ECLIPSE 4 KP-R	Salsbury License No. 195-A	Solvay Veterinary	Cats	1 mL	3 mos.	Annually
CYTORAB RCP	Coopers Animal Health, Inc. License No. 107	Coopers	Cats	1 mL	3 mos.	Annually
FEL-O-VAX PCT-R	Fort Dodge License No. 112	Ft. Dodge	Cats	1 mL	3 mos. & 1 yr. later	Triennially
ECLIPSE 4-R	Salsbury License No. 195-A	Solvay Veterinary	Cats	1 mL	3 mos.	Annually

*Refers only to domestic species of this class of animals.
†All vaccines must be administered intramuscularly at one site in the thigh unless otherwise specified by the label.
§Three months of age (or older) and revaccinated 1 year later.

Rabies — Continued

Part III: Rabies Control

A. Principles of Rabies Control

1. **Human Rabies Prevention.** Rabies in humans can be prevented either by eliminating exposures to rabid animals or by providing exposed persons with prompt local treatment of wounds combined with appropriate passive and active immunization. The rationale for recommending preexposure and postexposure rabies prophylaxis and details of their administration can be found in the current recommendations of the Immunization Practices Advisory Committee (ACIP) of the Public Health Service (PHS) (*1,2*). These recommendations, along with information concerning the current local and regional status of animal rabies and the availability of human rabies biologics, are available from state health departments.
2. **Domestic Animals.** Local governments should initiate and maintain effective programs to remove strays and unwanted animals and to ensure vaccination of all dogs and cats. Since more rabies cases are usually reported annually among cats than among dogs, immunization of cats should be required. Such procedures in the United States have reduced laboratory-confirmed rabies cases in dogs from 6949 in 1947 to 170 in 1987. The recommended vaccination procedures and the licensed animal vaccines are specified in Parts I and II of the compendium.
3. **Rabies in Wildlife.** The control of rabies among foxes, skunks, raccoons, and other terrestrial animals is difficult. Selective reduction of these populations when indicated may be useful, but the usefulness of this procedure depends heavily on the circumstances surrounding each rabies outbreak. (See C. Control Methods in Wild Animals.)

B. Control Methods in Domestic and Confined Animals

1. **Preexposure Vaccination and Management.** Animal rabies vaccines should be administered only by or under the direct supervision of a veterinarian. Such administration is the only way to assure the public that the animal has been properly immunized. Within 1 month after vaccination, a peak rabies antibody titer is reached, and the animal can be considered immunized. (See Parts I and II for recommended vaccines and procedures.)
   a. **Dogs and Cats.** All dogs and cats should be vaccinated against rabies beginning at 3 months of age and should be revaccinated in accordance with Part II of this compendium.
   b. **Livestock.** It is neither economically feasible nor justified from a public health standpoint to vaccinate all livestock against rabies. Veterinary clinicians and owners of valuable animals may consider immunizing certain livestock, especially those that are valuable and/or have frequent contact with humans, located in areas where wildlife rabies is epizootic.
   c. **Other Animals.**
      (1) **Animals Maintained in Exhibits and in Zoological Parks.** Captive animals not completely excluded from all contact with local vectors of rabies can become infected with rabies. Moreover, such animals may be incubating rabies when captured. Exhibit animals susceptible to rabies should be quarantined for a minimum of 180 days. Since no rabies vaccine is licensed for use in wild animals, such animals should not be vaccinated,

Rabies — Continued

even with inactivated vaccine. Animal workers at such facilities should receive preexposure rabies immunization. This practice may reduce the need for euthanasia of valuable animals for rabies testing after they have bitten a handler.

(2) **Wild Animals.** Because of the existing risk of rabies in wild animals (especially raccoons, skunks, and foxes), the American Veterinary Medical Association, NASPHV, and the Conference of State and Territorial Epidemiologists (CSTE) strongly recommend the enactment of state laws prohibiting the importation, distribution, and relocation of wild animals and offspring of wild animals crossbred with domestic dogs and cats. These same organizations continue to recommend the enactment of laws prohibiting the distribution or keeping of wild animals as pets. Moreover, NASPHV and CSTE recommend that ferrets not be kept as pets since they have severely bitten many persons and their bites have mutilated infants. Ferrets are susceptible to rabies and could transmit rabies. Because the period of rabies virus shedding in infected ferrets is unknown, confinement and observation of ferrets that bite humans are not appropriate.

2. **Control of Stray Animals.** Stray dogs or cats should be removed from the community, especially in areas where rabies is epizootic. Local health department and animal control officials can enforce the pickup of strays more efficiently if owned animals are confined or kept on leash. Strays should be impounded for at least 3 days to give owners sufficient time to reclaim animals apprehended as strays and to determine if human exposure has occurred.
3. **Quarantine.**
   a. **International.** Present PHS regulations (42 CFR No. 71.51) governing the importation of dogs and cats are limited for preventing the introduction of rabid animals into the United States. All dogs and cats imported from countries with endemic rabies should be vaccinated against rabies at least 30 days before entry into the United States.[†] CDC regulates the importation of these animals into the United States. CDC requirements should be consistent with interstate shipment requirements. The public health official of the state of destination should be notified within 72 hours of any animal conditionally admitted into its jurisdiction. The conditional admission into the United States of such animals is subject to state and local laws governing rabies. Failure to comply with these laws should be promptly reported to the respective quarantine center.
   b. **Interstate.** Before interstate movement, dogs and cats should be vaccinated against rabies according to the compendium's recommendations at least 30 days before movement. While in transit, they should be accompanied by a currently valid NASPHV Form #50, Rabies Vaccination Certificate. One copy of the certificate should be mailed to the appropriate Public Health Veterinarian or State Veterinarian of the state of destination.
   c. **Health Certificates.** Certificates required for dogs and cats in transit do not replace the NASPHV rabies vaccination certificate.
4. **Adjunct Procedures.** Methods or procedures enhancing rabies control include:
   a. **Licensure.** Registration or licensure of all dogs and cats may be used to

[†]Foreign quarantine regulations do not require rabies vaccinations for imported cats.

Rabies — Continued

control rabies by controlling the stray animal population. Frequently, a fee is charged for such licensure, and revenues collected are used to maintain rabies or animal control programs. Vaccination is an essential prerequisite to licensure.

b. **Canvassing of Area.** Canvassing includes house-to-house calls by members of the animal control program to enforce vaccination and licensure requirements.

c. **Citations.** Citations are legal summonses issued to owners for violations, including the failure to vaccinate or license their animals. The authority for officers to issue citations should be an integral part of each animal control program.

d. **Leash Laws.** All communities should adopt leash laws that can be incorporated into their animal control ordinances.

5. **Postexposure Management.** ANY DOMESTIC ANIMAL THAT IS BITTEN OR SCRATCHED BY A BAT OR BY A WILD, CARNIVOROUS MAMMAL THAT IS NOT AVAILABLE FOR TESTING SHOULD BE REGARDED AS HAVING BEEN EXPOSED TO A RABID ANIMAL.

a. **Dogs and Cats.** When bitten by a rabid animal, unvaccinated dogs and cats should be destroyed immediately. If the owner is unwilling to have this done, the animal should be placed in strict isolation for 6 months and vaccinated 1 month before being released. Dogs and cats that are currently vaccinated should be revaccinated immediately and observed by the owner for 90 days.

b. **Livestock.** All species of livestock are susceptible to rabies; cattle are among the most susceptible of all domestic animals. Livestock bitten by rabid animals should be destroyed (slaughtered) immediately. If the owner is unwilling to have this done, the animal should be kept under very close observation for 6 months.

Following are recommendations for owners of livestock exposed to rabid animals:

(1) If the animal is slaughtered within 7 days of being bitten, its tissues may be eaten without risk of infection, provided liberal portions of the exposed area are discarded. Federal meat inspectors will reject for slaughter any animal known to have been exposed to rabies within 8 months.

(2) No tissues or milk from a rabid animal should be used for human or animal consumption. However, since pasteurization temperatures will inactivate rabies virus, drinking pasteurized milk or eating completely cooked meat does not constitute a rabies exposure.

6. **Management of Animals that Bite Humans.** A healthy dog or cat that bites a person should be confined and observed for 10 days and evaluated by a veterinarian at the first sign of illness during confinement or before release. Any illness in the animal should be reported immediately to the local health department. If signs suggestive of rabies develop, the animal should be humanely killed, and its head should be removed and shipped under refrigeration for examination by a qualified laboratory designated by the local or state health department. Any stray or unwanted dog or cat that bites a person can be killed immediately and the head submitted as described above for rabies examination.

Rabies — Continued

C. Control Methods in Wild Animals

The public should be warned not to handle wild animals. Bats and wild carnivorous mammals (as well as offspring of wild animals crossbred with domestic dogs and cats) that bite humans should be killed, and appropriate tissues should be sent to the laboratory for examination for rabies. A person bitten by any wild animal should immediately report the incident to a physician who can evaluate the need for antirabies treatment. (See current rabies prophylaxis recommendations of the ACIP [*1,2*].)

1. **Terrestrial Mammals.** Continuous and persistent government-funded programs for trapping or poisoning wildlife as a means of rabies control are not cost-effective in reducing wildlife reservoirs or rabies incidence on a statewide basis. However, limited control in high-contact areas (picnic grounds, camps, suburban areas) may be indicated for the removal of selected high-risk species of wild animals. The state wildlife agency should be consulted early to manage any elimination programs in coordination with the state health department.
2. **Bats.**
   a. Rabid bats have been reported from every state except Hawaii and have caused human rabies in the United States. It is neither feasible nor desirable, however, to control rabies in bats by areawide programs to reduce bat populations.
   b. Bats should be excluded from houses and surrounding structures to prevent direct association with humans. Such structures should then be made batproof by sealing entrances.

References

1. ACIP. Rabies prevention—United States, 1984. MMWR 1984;33:393–402,407–8.
2. ACIP. Rabies prevention: supplementary statement on the preexposure use of human diploid cell rabies vaccine by the intradermal route. MMWR 1986;35:767–8.

TABLE I. Summary — cases of specified notifiable diseases, United States

Disease	51st Week Ending			Cumulative, 51st Week Ending		
	Dec. 24, 1988	Dec. 26, 1987	Median 1983-1987	Dec. 24, 1988	Dec. 26, 1987	Median 1983-1987
Acquired Immunodeficiency Syndrome (AIDS)	1,251	U*	175	30,537	20,630	7,828
Aseptic meningitis	122	123	132	6,764	10,927	10,748
Encephalitis: Primary (arthropod-borne & unspec)	13	18	21	766	1,272	1,272
Post-infectious	6	3	2	120	105	105
Gonorrhea: Civilian	10,258	9,770	16,281	678,191	745,139	870,180
Military	95	184	380	11,340	15,786	20,144
Hepatitis: Type A	500	527	472	26,194	24,392	22,515
Type B	312	420	524	22,233	24,962	25,319
Non A, Non B	38	56	63	2,455	2,897	3,427
Unspecified	47	47	79	2,359	3,019	5,052
Legionellosis	17	20	18	973	932	752
Leprosy	3	1	4	176	206	237
Malaria	23	12	12	974	906	968
Measles: Total†	41	40	9	2,906	3,615	2,735
Indigenous	40	40	9	2,583	3,193	2,299
Imported	1	-	1	323	422	310
Meningococcal infections	39	60	50	2,704	2,849	2,614
Mumps	120	134	58	4,630	12,367	3,295
Pertussis	68	71	58	2,925	2,496	2,496
Rubella (German measles)	4	1	8	217	334	613
Syphilis (Primary & Secondary): Civilian	590	586	663	39,554	34,550	27,559
Military	3	1	2	154	160	163
Toxic Shock syndrome	9	11	6	338	331	358
Tuberculosis	257	430	494	20,733	21,310	21,310
Tularemia	2	1	3	177	190	190
Typhoid Fever	7	2	5	391	348	374
Typhus fever, tick-borne (RMSF)	6	5	3	615	600	743
Rabies, animal	49	50	69	4,172	4,511	5,258

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1988		Cum. 1988
Anthrax	-	Leptospirosis	51
Botulism: Foodborne	26	Plague	14
Infant	36	Poliomyelitis, Paralytic	2
Other	6	Psittacosis (R.I. 1)	94
Brucellosis (Ark. 1, La. 1, Calif. 1)	77	Rabies, human	-
Cholera	7	Tetanus	48
Congenital rubella syndrome	4	Trichinosis (Mass. 2)	46
Congenital syphilis, ages < 1 year	426		
Diphtheria	1		

*Because AIDS cases are not received weekly from all reporting areas, comparison of weekly figures may be misleading.
†None of the 41 reported cases for this week was imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending December 24, 1988 and December 26, 1987 (51st Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988
UNITED STATES	30,537	6,764	766	120	678,191	745,139	26,194	22,233	2,455	2,359	973	176
NEW ENGLAND	1,286	404	31	4	21,636	23,176	847	1,205	114	94	54	15
Maine	27	22	3	-	394	690	18	57	5	2	4	-
N.H.	39	40	1	3	267	394	46	69	11	4	6	-
Vt.	10	29	9	-	113	212	17	55	8	5	5	-
Mass.	711	161	9	1	7,465	8,094	385	706	71	64	36	14
R.I.	83	94	-	-	1,965	2,090	84	82	11	4	3	1
Conn.	416	58	9	-	11,432	11,696	297	236	8	15	-	-
MID. ATLANTIC	10,125	742	56	4	106,125	117,732	2,105	3,177	191	325	215	8
Upstate N.Y.	1,315	394	37	1	16,085	17,176	754	770	75	20	81	-
N.Y. City	5,619	143	8	3	42,750	62,681	375	1,309	19	242	46	7
N.J.	2,379	61	11	-	15,882	16,585	455	705	63	46	40	1
Pa.	812	144	-	-	31,408	21,290	521	393	34	17	48	-
E.N. CENTRAL	2,152	1,130	205	13	115,806	114,577	1,727	2,312	222	128	246	8
Ohio	499	436	64	3	26,191	25,590	324	549	41	20	96	-
Ind.	80	99	28	-	8,782	9,026	157	349	19	31	27	-
Ill.	1,005	140	48	10	34,983	33,137	621	496	76	35	21	7
Mich.	457	402	47	-	36,754	36,878	397	644	57	39	61	-
Wis.	111	53	18	-	9,096	9,946	228	274	29	3	41	1
W.N. CENTRAL	737	267	62	13	29,051	30,124	1,424	1,039	102	38	75	1
Minn.	156	32	19	4	3,880	4,424	108	145	25	4	4	-
Iowa	43	37	9	4	2,216	2,925	50	84	13	3	18	-
Mo.	383	111	1	-	16,925	16,121	811	598	44	20	24	-
N. Dak.	4	7	4	-	183	281	9	14	3	6	1	-
S. Dak.	7	18	6	2	468	611	29	6	3	-	14	-
Nebr.	50	13	13	2	1,416	1,977	49	47	2	-	5	-
Kans.	94	49	10	1	3,963	3,785	368	145	12	5	9	1
S. ATLANTIC	5,430	1,453	108	42	191,424	194,888	2,404	4,620	373	349	146	2
Del.	63	45	3	-	3,057	3,328	48	137	8	4	16	-
Md.	552	204	11	3	20,196	22,545	296	699	40	28	23	1
D.C.	490	21	1	1	14,311	13,041	18	47	4	1	1	-
Va.	345	208	35	4	14,127	14,353	357	326	75	232	11	-
W. Va.	21	37	22	-	1,308	1,432	15	70	5	4	-	-
N.C.	274	172	21	-	27,254	29,541	382	821	91	-	31	-
S.C.	172	21	-	1	15,064	14,192	40	524	12	6	27	-
Ga.	800	175	1	2	36,278	34,835	599	666	15	7	24	-
Fla.	2,713	570	14	31	59,829	61,621	649	1,330	123	67	13	1
E.S. CENTRAL	763	467	63	8	53,361	55,818	735	1,418	180	14	50	2
Ky.	94	166	22	1	5,439	5,618	471	271	64	2	20	-
Tenn.	336	53	16	-	18,750	19,746	170	662	41	-	8	-
Ala.	209	188	25	2	15,840	17,276	57	346	64	10	16	2
Miss.	124	60	-	5	13,332	13,178	37	139	11	2	6	-
W.S. CENTRAL	2,805	843	90	7	72,447	83,350	3,277	2,086	210	572	42	42
Ark.	81	19	6	-	7,105	9,365	349	115	10	19	8	-
La.	358	126	26	1	14,603	13,247	164	382	25	17	7	9
Okla.	127	79	8	4	6,915	9,066	493	187	42	37	19	-
Tex.	2,239	619	50	2	43,824	51,672	2,271	1,402	133	499	8	33
MOUNTAIN	887	238	30	4	14,554	19,274	3,465	1,571	248	177	51	1
Mont.	16	5	-	-	397	555	46	54	10	4	3	-
Idaho	11	3	-	-	316	655	130	110	9	4	2	-
Wyo.	6	2	-	-	198	415	5	12	3	-	3	-
Colo.	328	76	4	-	3,218	4,408	241	193	64	81	8	1
N. Mex.	59	26	3	1	1,441	2,100	551	228	21	1	5	-
Ariz.	274	84	14	1	5,329	6,496	1,964	604	80	58	20	-
Utah	73	25	4	2	530	653	300	133	39	20	4	-
Nev.	120	17	5	-	3,125	3,992	228	237	22	9	6	-
PACIFIC	6,352	1,220	121	25	73,787	106,200	10,210	4,805	815	662	94	97
Wash.	362	-	7	4	6,897	8,756	2,338	879	201	77	25	7
Oreg.	178	-	-	-	3,178	3,907	1,381	575	94	22	5	1
Calif.	5,689	1,084	108	21	62,114	91,071	5,879	3,244	507	546	61	73
Alaska	19	25	4	-	1,029	1,661	600	56	8	12	-	1
Hawaii	104	111	2	-	569	805	12	51	5	5	3	15
Guam	1	-	-	-	143	182	9	13	-	2	1	5
P.R.	1,228	79	4	1	1,288	1,873	53	252	41	41	-	3
V.I.	32	-	-	-	440	288	1	8	2	-	-	-
Amer. Samoa	-	-	-	-	77	82	7	2	-	5	-	2
C.N.M.I.	-	-	-	-	52	-	1	3	-	5	-	1

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of the Northern Mariana Islands

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending December 24, 1988 and December 26, 1987 (51st Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1988	1988	Cum. 1988	1988	Cum. 1988	Cum. 1987	Cum. 1988	1988	Cum. 1988	1988	Cum. 1988	Cum. 1987	1988	Cum. 1988	Cum. 1987
UNITED STATES	974	40	2,583	1	323	3,615	2,704	120	4,630	68	2,925	2,496	4	217	334
NEW ENGLAND	75	-	83	-	54	282	233	6	135	-	176	184	1	10	2
Maine	3	-	7	-	-	3	10	-	-	-	24	34	-	-	1
N.H.	3	-	67	-	44	163	24	-	106	-	47	56	-	5	-
Vt.	5	-	-	-	-	26	18	-	6	-	5	4	-	-	-
Mass.	36	-	2	-	2	66	102	6	13	-	60	54	1	4	1
R.I.	7	-	-	-	-	2	21	-	-	-	17	5	-	1	-
Conn.	21	-	7	-	8	22	58	-	10	-	23	31	-	-	-
MID. ATLANTIC	169	2	914	-	50	590	300	7	367	10	312	308	-	15	12
Upstate N.Y.	44	2	22	-	18	43	143	4	103	8	215	169	-	2	10
N.Y. City	90	-	46	-	6	467	70	-	104	-	9	19	-	7	1
N.J.	11	-	317	-	12	39	63	-	57	1	18	25	-	4	1
Pa.	24	-	529	-	14	41	24	3	103	1	70	95	-	2	-
E.N. CENTRAL	51	23	164	1	109	390	377	6	904	1	259	286	1	32	42
Ohio	11	23	25	1§	84	5	142	-	130	-	49	89	-	1	-
Ind.	4	-	57	-	-	-	30	-	82	-	74	23	-	-	-
Ill.	3	-	56	-	16	210	75	3	326	-	46	18	1	27	31
Mich.	24	-	26	-	5	29	89	3	228	1	39	51	-	4	9
Wis.	9	-	-	-	4	146	41	-	138	-	51	105	-	-	2
W.N. CENTRAL	18	-	11	-	3	230	99	8	261	-	142	148	-	2	2
Minn.	6	-	10	-	1	39	22	-	-	-	63	14	-	-	-
Iowa	2	-	-	-	1	-	-	2	38	-	34	58	-	-	1
Mo.	6	-	1	-	1	189	37	1	43	-	22	40	-	-	-
N. Dak.	-	-	-	-	-	1	1	-	-	-	11	16	-	-	-
S. Dak.	-	-	-	-	-	-	5	-	1	-	5	3	-	-	-
Nebr.	1	-	-	-	-	-	13	-	11	-	-	1	-	-	-
Kans.	3	-	-	-	-	1	21	5	168	-	7	16	-	2	1
S. ATLANTIC	125	-	415	-	22	177	464	8	756	7	260	316	-	18	19
Del.	1	-	-	-	-	32	2	-	1	-	7	5	-	-	2
Md.	23	-	12	-	5	10	55	-	175	-	48	23	-	1	3
D.C.	12	-	-	-	-	1	10	4	289	-	1	-	-	-	1
Va.	20	-	237	-	2	1	58	-	139	5	29	55	-	11	1
W. Va.	3	-	6	-	-	-	10	-	19	-	10	39	-	-	-
N.C.	16	-	-	-	5	6	70	1	52	-	67	123	-	1	1
S.C.	10	-	-	-	-	2	37	1	9	-	1	-	-	-	-
Ga.	6	-	-	-	-	10	73	2	34	2	39	23	-	2	2
Fla.	34	-	160	-	10	115	149	-	38	-	58	48	-	3	9
E.S. CENTRAL	21	-	69	-	-	8	246	2	451	-	105	48	-	2	3
Ky.	1	-	35	-	-	-	58	-	213	-	13	2	-	-	2
Tenn.	-	-	-	-	-	-	131	2	219	-	30	15	-	2	1
Ala.	10	-	-	-	-	4	41	-	16	-	58	24	-	-	-
Miss.	10	-	34	-	-	4	16	N	N	-	4	7	-	-	-
W.S. CENTRAL	84	1	21	-	4	448	188	71	942	-	239	312	-	24	12
Ark.	4	-	-	-	1	-	23	5	143	-	38	13	-	4	2
La.	13	-	-	-	-	-	52	-	315	-	20	50	-	-	-
Okla.	10	-	8	-	-	4	23	-	197	-	62	171	-	1	6
Tex.	57	1	13	-	3	444	90	66	287	-	119	78	-	19	4
MOUNTAIN	46	8	168	-	34	497	81	3	223	45	915	226	-	6	26
Mont.	5	5	53	-	31	128	2	-	2	-	4	7	-	-	8
Idaho	2	-	-	-	1	-	8	3	10	12	347	80	-	-	1
Wyo.	-	-	-	-	-	2	-	-	7	-	2	5	-	-	1
Colo.	15	-	112	-	1	9	20	-	33	4	39	71	-	2	-
N. Mex.	3	-	-	-	-	318	13	N	N	-	53	13	-	-	-
Ariz.	13	3	3	-	-	36	21	-	143	27	440	38	-	-	5
Utah	6	-	-	-	1	1	15	-	7	2	29	12	-	3	11
Nev.	2	-	-	-	-	3	2	-	21	-	1	-	-	1	-
PACIFIC	385	6	738	-	47	993	716	9	591	5	517	668	2	108	216
Wash.	26	-	7	-	-	47	69	1	63	1	116	106	-	-	2
Oreg.	17	-	6	-	2	132	45	N	N	-	50	84	-	-	2
Calif.	328	6	721	-	37	809	577	8	486	4	284	234	2	80	140
Alaska	3	-	1	-	-	1	8	-	13	-	7	6	-	-	2
Hawaii	11	-	3	-	8	4	17	-	18	-	60	238	-	28	70
Guam	-	-	-	-	1	2	-	-	3	-	-	-	-	1	1
P.R.	2	-	231	-	-	771	12	-	10	-	15	20	-	3	3
V.I.	-	-	-	-	-	-	-	-	35	-	-	-	-	-	1
Amer. Samoa	-	-	-	-	-	1	3	-	4	-	-	-	-	-	-
C.N.M.I.	1	-	-	-	-	-	1	-	2	-	-	-	-	-	-

*For measles only, imported cases includes both out-of-state and international importations.
N: Not notifiable U: Unavailable †International §Out-of-state

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending December 24, 1988 and December 26, 1987 (51st Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988
UNITED STATES	39,554	34,550	338	20,733	21,310	177	391	615	4,172
NEW ENGLAND	1,193	640	24	545	646	4	37	12	15
Maine	12	1	4	30	28	-	-	-	1
N.H.	7	5	5	11	18	-	-	-	5
Vt.	3	4	2	6	16	-	1	-	-
Mass.	434	303	10	319	361	3	21	7	-
R.I.	33	12	-	39	61	-	7	2	-
Conn.	704	315	3	140	162	1	8	3	9
MID. ATLANTIC	9,316	6,364	49	4,241	3,991	2	74	19	499
Upstate N.Y.	810	256	23	541	508	1	15	11	44
N.Y. City	6,312	4,732	6	2,306	2,001	-	46	6	-
N.J.	1,001	707	3	726	719	-	11	-	15
Pa.	1,393	669	17	668	763	1	2	2	440
E.N. CENTRAL	1,163	839	49	2,318	2,340	1	44	34	145
Ohio	112	105	33	433	437	-	7	22	5
Ind.	51	57	1	249	254	-	2	2	29
Ill.	533	421	2	1,047	1,037	-	29	7	31
Mich.	433	197	13	490	516	1	4	2	35
Wis.	34	59	-	99	96	-	2	1	45
W.N. CENTRAL	263	180	47	505	595	78	6	93	462
Minn.	18	23	7	85	118	3	4	2	134
Iowa	27	27	7	57	39	-	-	-	13
Mo.	156	79	11	241	319	48	2	57	22
N. Dak.	1	1	3	15	13	1	-	-	105
S. Dak.	-	11	5	33	24	16	-	7	129
Nebr.	28	19	5	16	25	3	-	1	21
Kans.	33	20	9	58	57	7	-	26	38
S. ATLANTIC	14,240	11,800	21	4,453	4,590	7	45	200	1,436
Del.	102	70	2	42	45	2	-	1	58
Md.	701	624	3	434	418	2	3	22	319
D.C.	712	411	-	174	154	-	2	-	13
Va.	428	319	-	401	458	2	12	17	359
W. Va.	37	13	-	70	99	-	1	2	101
N.C.	828	711	9	525	600	-	3	108	8
S.C.	714	668	4	477	460	-	-	23	124
Ga.	2,542	1,650	-	731	812	1	8	24	290
Fla.	8,176	7,334	3	1,599	1,544	-	16	3	164
E.S. CENTRAL	2,037	1,846	24	1,731	1,931	11	3	92	287
Ky.	66	29	10	364	413	5	1	30	118
Tenn.	895	730	11	513	631	5	-	39	69
Ala.	567	484	2	518	541	-	1	11	93
Miss.	509	603	1	336	346	1	1	12	7
W.S. CENTRAL	4,330	4,315	36	2,628	2,432	54	8	149	528
Ark.	247	252	3	307	289	35	-	32	86
La.	857	799	-	335	316	-	4	2	11
Okla.	142	181	11	236	236	16	-	97	35
Tex.	3,084	3,083	22	1,750	1,591	3	4	18	396
MOUNTAIN	812	712	35	567	627	12	12	12	363
Mont.	3	9	-	31	18	-	1	6	206
Idaho	4	6	5	22	30	-	-	2	11
Wyo.	1	3	-	5	2	2	-	3	38
Colo.	108	126	3	74	151	6	3	1	28
N. Mex.	47	58	2	91	98	2	1	-	11
Ariz.	169	295	16	250	269	1	6	-	44
Utah	19	27	9	33	25	1	-	-	9
Nev.	461	188	-	61	34	-	1	-	16
PACIFIC	6,200	7,854	53	3,745	4,158	8	162	4	437
Wash.	228	171	9	226	243	1	13	1	-
Oreg.	312	303	1	154	128	1	7	1	-
Calif.	5,617	7,358	42	3,154	3,534	4	136	2	407
Alaska	15	4	-	49	61	2	1	-	30
Hawaii	28	18	1	162	192	-	5	-	-
Guam	3	2	-	31	26	-	-	-	-
P.R.	661	879	-	275	323	-	5	-	72
V.I.	2	10	-	6	2	-	-	-	-
Amer. Samoa	-	-	-	5	11	-	1	-	-
C.N.M.I.	1	-	-	25	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending December 24, 1988 (51st Week)

Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	745	504	143	44	28	26	45
Boston, Mass.	221	128	51	17	12	13	18
Bridgeport, Conn.	54	35	10	6	2	1	4
Cambridge, Mass.	28	26	1	-	1	-	2
Fall River, Mass.	26	21	4	1	-	-	-
Hartford, Conn.	58	34	17	4	1	2	3
Lowell, Mass.	19	14	2	1	1	1	1
Lynn, Mass.	17	13	2	2	-	-	1
New Bedford, Mass.	43	35	5	-	2	1	-
New Haven, Conn.	51	30	13	3	1	4	6
Providence, R.I.	58	44	7	3	3	1	-
Somerville, Mass.	9	8	-	1	-	-	1
Springfield, Mass.	58	39	9	4	3	3	7
Waterbury, Conn.	38	28	7	2	1	-	2
Worcester, Mass.	65	49	15	-	1	-	-
MID. ATLANTIC	2,553	1,666	480	277	67	62	131
Albany, N.Y.	60	48	4	2	4	2	1
Allentown, Pa.	24	17	5	1	1	-	-
Buffalo, N.Y.	100	72	18	6	2	2	6
Camden, N.J.	50	31	10	1	3	5	2
Elizabeth, N.J.	26	18	3	5	-	-	4
Erie, Pa.†	35	32	2	-	1	-	3
Jersey City, N.J.	71	45	18	4	-	4	-
N.Y. City, N.Y.	1,430	888	287	186	41	28	64
Newark, N.J.	74	37	7	18	7	5	1
Paterson, N.J.	24	12	5	3	1	3	1
Philadelphia, Pa.	213	124	48	32	2	6	14
Pittsburgh, Pa.†	86	58	20	3	1	4	6
Reading, Pa.	31	29	2	-	-	-	3
Rochester, N.Y.	109	86	15	6	1	1	9
Schenectady, N.Y.	29	24	5	-	-	-	1
Scranton, Pa.†	30	24	6	-	-	-	2
Syracuse, N.Y.	75	55	12	4	2	2	6
Trenton, N.J.	40	29	7	3	1	-	2
Utica, N.Y.	24	19	3	2	-	-	3
Yonkers, N.Y.	22	18	3	1	-	-	3
E.N. CENTRAL	2,290	1,501	492	161	59	77	93
Akron, Ohio	87	61	16	4	3	3	-
Canton, Ohio	35	27	5	1	2	-	3
Chicago, Ill§	564	362	125	45	10	22	16
Cincinnati, Ohio	100	65	24	7	1	3	6
Cleveland, Ohio	162	93	44	15	4	6	2
Columbus, Ohio	134	74	35	14	4	7	-
Dayton, Ohio	102	68	24	1	6	3	5
Detroit, Mich.§	255	152	59	27	10	7	5
Evansville, Ind.	37	27	4	2	2	2	4
Fort Wayne, Ind.	66	53	6	6	-	1	1
Gary, Ind.	16	7	6	3	-	-	-
Grand Rapids, Mich.	98	69	16	5	2	6	13
Indianapolis, Ind.	180	118	42	10	2	8	7
Madison, Wis.	48	33	9	3	3	-	2
Milwaukee, Wis.	116	82	20	7	3	4	8
Peoria, Ill.	49	37	9	1	-	2	3
Rockford, Ill.	36	23	7	4	1	1	2
South Bend, Ind.	21	18	3	-	-	-	2
Toledo, Ohio	125	92	24	3	4	2	12
Youngstown, Ohio	59	40	14	3	2	-	2
W.N. CENTRAL	842	596	158	42	25	21	36
Des Moines, Iowa	50	34	9	2	2	3	1
Duluth, Minn.	30	22	7	-	-	1	2
Kansas City, Kans.	42	25	12	3	2	-	7
Kansas City, Mo.	134	87	35	7	3	2	7
Lincoln, Nebr.	30	23	4	1	1	1	2
Minneapolis, Minn.	235	161	47	13	8	6	8
Omaha, Nebr.	90	65	16	3	2	4	6
St. Louis, Mo.	130	104	14	8	2	2	-
St. Paul, Minn.	54	40	8	3	1	2	2
Wichita, Kans.	47	35	6	2	4	-	1

Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	≥65	45-64	25-44	1-24	<1	Total
S. ATLANTIC	1,361	845	273	157	42	42	56
Atlanta, Ga.	156	88	33	27	4	4	3
Baltimore, Md.	248	166	42	29	7	4	14
Charlotte, N.C.	86	54	17	11	1	3	4
Jacksonville, Fla.	155	96	27	19	8	5	6
Miami, Fla.	155	78	44	22	8	3	-
Norfolk, Va.	61	37	13	7	1	3	4
Richmond, Va.	98	57	21	12	1	7	8
Savannah, Ga.	39	27	9	2	1	-	4
St. Petersburg, Fla.	122	95	14	4	2	7	4
Tampa, Fla.	68	44	14	4	1	5	5
Washington, D.C.	142	76	37	18	8	1	4
Wilmington, Del.	31	27	2	2	-	-	-
E.S. CENTRAL	699	482	132	46	14	25	53
Birmingham, Ala.	115	77	25	4	-	9	2
Chattanooga, Tenn.	66	50	11	3	1	1	14
Knoxville, Tenn.	81	63	10	3	4	1	8
Louisville, Ky.	76	58	10	5	-	3	7
Memphis, Tenn.	203	126	44	17	7	9	14
Mobile, Ala.	34	25	8	1	-	-	3
Montgomery, Ala.	28	21	6	1	-	-	-
Nashville, Tenn.	96	62	18	12	2	2	5
W.S. CENTRAL	1,779	1,085	400	176	65	53	77
Austin, Tex.	76	41	22	8	3	2	5
Baton Rouge, La.	44	27	11	2	2	2	1
Corpus Christi, Tex.§	48	37	10	1	-	-	1
Dallas, Tex.§	189	112	44	20	8	5	6
El Paso, Tex.	67	48	11	4	2	2	2
Fort Worth, Tex	106	62	27	7	2	8	5
Houston, Tex.§	734	436	169	89	24	16	18
Little Rock, Ark.	65	34	18	2	2	9	3
New Orleans, La.	134	67	25	24	17	1	-
San Antonio, Tex.	189	133	38	9	4	5	19
Shreveport, La.	41	31	4	3	1	2	7
Tulsa, Okla.	86	57	21	7	-	1	10
MOUNTAIN	782	504	148	72	31	25	30
Albuquerque, N. Mex.	75	44	12	7	10	1	1
Colo. Springs, Colo.	46	27	11	4	4	-	3
Denver, Colo.	142	84	31	15	5	6	5
Las Vegas, Nev.	109	68	27	12	2	-	9
Ogden, Utah	18	13	4	1	-	-	2
Phoenix, Ariz.	191	126	28	20	5	12	4
Pueblo, Colo.	28	23	4	-	1	-	4
Salt Lake City, Utah	56	37	8	5	3	3	-
Tucson, Ariz.	117	82	23	8	1	3	2
PACIFIC	2,058	1,340	405	186	69	50	144
Berkeley, Calif.	25	16	7	1	1	-	2
Fresno, Calif.	104	72	21	7	1	3	12
Glendale, Calif.	21	18	1	2	-	-	1
Honolulu, Hawaii	81	48	24	8	-	1	7
Long Beach, Calif.§	82	58	14	8	1	1	10
Los Angeles Calif.	506	321	92	48	31	8	21
Oakland, Calif.	61	34	19	4	3	1	6
Pasadena, Calif.	31	21	4	2	1	3	3
Portland, Oreg.	163	104	32	16	7	4	6
Sacramento, Calif.	187	134	29	9	6	7	20
San Diego, Calif.	141	87	29	17	4	4	18
San Francisco, Calif.	197	110	39	39	3	6	4
San Jose, Calif.	201	133	43	10	7	8	19
Seattle, Wash.§	162	111	31	12	4	4	2
Spokane, Wash.	47	38	9	-	-	-	8
Tacoma, Wash.	49	35	11	3	-	-	5
TOTAL	13,109††	8,523	2,631	1,161	400	381	665

*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.

§Data not available. Figures are estimates based on average of past available 4 weeks.

TABLE I. Summary — cases of specified notifiable diseases, United States

Disease	52nd Week Ending			Cumulative, 52nd Week Ending		
	Dec. 31, 1988	Jan. 2, 1988	Median 1983-1987	Dec. 31, 1988	Jan. 2, 1988	Median 1983-1987
Acquired Immunodeficiency Syndrome (AIDS)	304	U*	309	30,847	21,303	8,011
Aseptic meningitis	74	160	186	6,927	11,087	10,934
Encephalitis: Primary (arthropod-borne & unspec)	11	28	28	799	1,300	1,300
Post-infectious	1	6	6	121	111	111
Gonorrhea: Civilian	8,941	10,852	13,646	688,087	755,991	883,826
Military	154	140	257	11,500	15,926	20,488
Hepatitis: Type A	396	662	654	26,603	25,054	23,043
Type B	296	765	765	22,528	25,727	25,842
Non A, Non B	41	76	94	2,499	2,973	3,494
Unspecified	24	67	114	2,381	3,086	5,208
Legionellosis	14	26	26	987	958	821
Leprosy	2	7	7	178	213	251
Malaria	10	28	28	985	934	998
Measles: Total†	25	28	28	2,933	3,643	2,812
Indigenous	25	28	20	2,610	3,221	2,373
Imported	-	-	3	323	422	347
Meningococcal infections	37	83	75	2,747	2,932	2,689
Mumps	100	267	84	4,730	12,634	3,348
Pertussis	83	255	101	3,008	2,751	2,751
Rubella (German measles)	4	2	6	221	336	618
Syphilis (Primary & Secondary): Civilian	638	512	467	40,275	35,062	27,947
Military	-	9	8	155	169	169
Toxic Shock syndrome	13	5	9	351	336	367
Tuberculosis	455	1,092	941	21,244	22,402	22,212
Tularemia	2	7	4	179	197	197
Typhoid Fever	6	12	12	397	360	379
Typhus fever, tick-borne (RMSF)	-	6	6	615	606	744
Rabies, animal	42	57	60	4,220	4,568	5,329

TABLE II. Notifiable diseases of low frequency, United States

	Cum. 1988		Cum. 1988
Anthrax	-	Leptospirosis	51
Botulism: Foodborne	26	Plague	14
Infant (Utah 1)	37	Poliomyelitis, Paralytic	2
Other	6	Psittacosis (Wis. 1, Md. 1, Oreg. 1)	97
Brucellosis (Mass. 1)	78	Rabies, human	-
Cholera	7	Tetanus (Minn. 1)	49
Congenital rubella syndrome	4	Trichinosis	46
Congenital syphilis, ages < 1 year	426		
Diphtheria	1		

*Because AIDS cases are not received weekly from all reporting areas, comparison of weekly figures may be misleading.
†None of the 25 reported cases for this week was imported from a foreign country or can be directly traceable to a known internationally imported case within two generations.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending December 31, 1988 and January 2, 1988 (52nd Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea (Civilian)		Hepatitis (Viral), by type				Legionellosis	Leprosy
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988
UNITED STATES	30,847	6,927	799	121	688,087	755,991	26,603	22,528	2,499	2,381	987	178
NEW ENGLAND	1,288	407	33	4	21,932	23,540	858	1,225	114	95	54	15
Maine	27	22	3	-	394	690	18	58	5	2	4	-
N.H.	39	40	1	3	274	398	48	71	11	4	6	-
Vt.	10	30	9	-	114	218	17	55	8	5	5	-
Mass.	711	162	11	1	7,549	8,228	387	719	71	65	36	14
R.I.	85	94	-	-	1,998	2,118	85	86	11	4	3	1
Conn.	416	59	9	-	11,603	11,888	303	236	8	15	-	-
MID. ATLANTIC	10,221	745	57	4	106,761	120,032	2,119	3,203	193	325	215	8
Upstate N.Y.	1,341	397	38	1	16,381	17,710	763	781	77	20	81	-
N.Y. City	5,620	143	8	3	42,750	63,644	375	1,309	19	242	46	7
N.J.	2,408	61	11	-	16,222	16,836	460	720	63	46	40	1
Pa.	852	144	-	-	31,408	21,842	521	393	34	17	48	-
E.N. CENTRAL	2,153	1,228	230	13	117,514	117,014	1,752	2,333	226	129	252	8
Ohio	499	444	66	3	26,650	26,460	335	557	44	20	99	-
Ind.	80	99	28	-	8,857	9,310	157	349	19	31	27	-
Ill.	1,005	226	70	10	35,412	33,773	621	496	76	35	21	7
Mich.	457	406	48	-	37,435	37,381	410	658	58	40	64	-
Wis.	112	53	18	-	9,160	10,090	229	273	29	3	41	1
W.N. CENTRAL	751	276	63	13	29,926	30,687	1,436	1,051	103	38	77	1
Minn.	167	34	19	4	3,950	4,468	108	145	25	4	4	-
Iowa	43	37	9	4	2,332	2,990	50	84	13	3	19	-
Mo.	386	111	1	-	17,366	16,332	811	598	44	20	24	-
N. Dak.	4	7	4	-	186	283	9	16	3	6	1	-
S. Dak.	7	19	7	2	474	622	30	8	3	-	14	-
Nebr.	50	13	13	2	1,416	2,025	49	47	2	-	5	-
Kans.	94	55	10	1	4,202	3,967	379	153	13	5	10	1
S. ATLANTIC	5,475	1,474	110	43	194,742	197,972	2,476	4,708	378	352	146	2
Del.	63	45	3	-	3,142	3,374	50	138	8	4	16	-
Md.	552	207	11	3	20,481	23,078	305	704	40	28	23	1
D.C.	506	21	1	1	14,490	13,228	18	47	4	1	1	-
Va.	345	207	37	4	14,463	14,353	361	341	77	233	11	-
W. Va.	21	37	22	-	1,329	1,446	16	72	5	4	-	-
N.C.	274	175	21	-	28,132	30,003	413	838	94	-	31	-
S.C.	172	22	-	1	15,067	14,192	40	536	12	6	27	-
Ga.	828	177	1	3	36,907	35,354	613	679	15	7	24	-
Fla.	2,714	583	14	31	60,731	62,944	660	1,353	123	69	13	1
E.S. CENTRAL	769	469	64	8	53,907	56,282	738	1,433	184	16	51	2
Ky.	94	166	22	1	5,510	5,679	471	273	66	3	21	-
Tenn.	336	53	16	-	19,075	19,961	172	669	42	-	8	-
Ala.	214	189	26	2	15,840	17,276	58	348	63	11	16	2
Miss.	125	61	-	5	13,482	13,366	37	143	13	2	6	-
W.S. CENTRAL	2,856	856	90	7	73,659	83,592	3,341	2,108	213	581	42	42
Ark.	81	21	6	-	7,299	9,432	353	114	10	19	8	-
La.	379	127	26	1	14,939	13,315	166	385	25	18	7	9
Okla.	153	79	8	4	7,037	9,173	505	191	43	37	19	-
Tex.	2,243	629	50	2	44,384	51,672	2,317	1,418	135	507	8	33
MOUNTAIN	902	239	30	4	14,879	19,568	3,502	1,595	255	179	54	1
Mont.	17	5	-	-	400	566	47	56	10	4	3	-
Idaho	11	3	-	-	318	657	130	114	11	4	2	-
Wyo.	6	2	-	-	202	421	8	12	4	-	3	-
Colo.	329	76	4	-	3,218	4,474	248	197	68	83	9	1
N. Mex.	59	26	3	1	1,479	2,106	561	238	21	1	5	-
Ariz.	281	84	14	1	5,544	6,662	1,964	604	80	58	20	-
Utah	79	26	4	2	531	668	311	136	39	20	6	-
Nev.	120	17	5	-	3,187	4,014	233	238	22	9	6	-
PACIFIC	6,432	1,233	122	25	74,767	107,304	10,381	4,872	833	666	96	99
Wash.	362	-	8	4	7,080	8,909	2,370	891	206	77	25	7
Oreg.	178	-	-	-	3,239	3,962	1,415	578	94	22	7	2
Calif.	5,769	1,097	108	21	62,810	91,928	5,975	3,296	520	550	61	73
Alaska	19	25	4	-	1,048	1,696	609	56	8	12	-	1
Hawaii	104	111	2	-	590	809	12	51	5	5	3	16
Guam	1	-	-	-	143	187	9	13	-	2	1	5
P.R.	1,276	79	4	1	1,288	1,897	53	252	41	41	-	3
V.I.	32	-	-	-	440	298	1	8	2	-	-	-
Amer. Samoa	-	-	-	-	77	84	7	2	-	5	-	2
C.N.M.I.	-	-	-	-	52	-	1	3	-	5	-	1

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of the Northern Mariana Islands

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending December 31, 1988 and January 2, 1988 (52nd Week)

Reporting Area	Malaria	Measles (Rubeola)					Meningococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1988	1988	Cum. 1988	1988	Cum. 1988	Cum. 1987	Cum. 1988	1988	Cum. 1988	1988	Cum. 1988	Cum. 1987	1988	Cum. 1988	Cum. 1987
UNITED STATES	985	25	2,610	-	323	3,643	2,747	100	4,730	83	3,008	2,751	4	221	336
NEW ENGLAND	75	1	84	-	54	282	238	-	135	-	176	325	-	10	3
Maine	3	-	7	-	-	3	10	-	-	-	24	34	-	-	1
N.H.	3	-	67	-	44	163	24	-	106	-	47	99	-	5	-
Vt.	5	-	-	-	-	26	18	-	6	-	5	4	-	-	-
Mass.	36	1	3	-	2	66	105	-	13	-	60	152	-	4	2
R.I.	7	-	-	-	-	2	21	-	-	-	17	5	-	1	-
Conn.	21	-	7	-	8	22	60	-	10	-	23	31	-	-	-
MID. ATLANTIC	169	-	914	-	50	603	301	2	369	2	314	324	-	15	12
Upstate N.Y.	44	-	22	-	18	43	144	1	104	2	217	176	-	2	10
N.Y. City	90	-	46	-	6	470	70	-	104	-	9	25	-	7	1
N.J.	11	-	317	-	12	39	63	1	58	-	18	25	-	4	1
Pa.	24	-	529	-	14	51	24	-	103	-	70	98	-	2	-
E.N. CENTRAL	52	-	164	-	109	393	385	15	920	11	270	322	-	32	42
Ohio	11	-	25	-	84	5	146	14	144	11	60	124	-	1	-
Ind.	4	-	57	-	-	-	30	-	82	-	74	23	-	-	-
Ill.	3	-	56	-	16	210	78	-	326	-	46	18	-	27	31
Mich.	25	-	26	-	5	32	89	1	229	-	39	52	-	4	9
Wis.	9	-	-	-	4	146	42	-	139	-	51	105	-	-	2
W.N. CENTRAL	18	20	33	-	3	230	103	39	300	40	182	159	-	2	2
Minn.	6	-	10	-	1	39	22	1	1	40	103	17	-	-	-
Iowa	2	-	1	-	1	-	-	1	39	-	34	58	-	-	1
Mo.	6	20	22	-	1	189	37	-	43	-	22	46	-	-	-
N. Dak.	-	-	-	-	-	1	1	-	-	-	11	17	-	-	-
S. Dak.	-	-	-	-	-	-	5	-	1	-	5	4	-	-	-
Nebr.	1	-	-	-	-	-	13	-	11	-	-	1	-	-	-
Kans.	3	-	-	-	-	1	25	37	205	-	7	16	-	2	1
S. ATLANTIC	132	-	415	-	22	187	477	6	762	1	261	332	-	18	20
Del.	1	-	-	-	-	32	2	-	1	-	7	5	-	-	2
Md.	23	-	12	-	5	10	56	-	175	-	48	23	-	1	3
D.C.	16	-	-	-	-	1	10	2	291	-	1	-	-	-	1
Va.	21	-	237	-	2	1	59	-	139	-	29	58	-	11	1
W. Va.	3	-	6	-	-	-	10	-	19	-	10	39	-	-	-
N.C.	17	-	-	-	5	6	73	-	52	-	67	123	-	1	1
S.C.	10	-	-	-	-	2	37	-	9	-	1	8	-	-	-
Ga.	6	-	-	-	-	10	76	3	37	1	40	23	-	2	2
Fla.	35	-	160	-	10	125	154	1	39	-	58	53	-	3	10
E.S. CENTRAL	21	-	69	-	-	8	250	-	451	4	109	49	-	2	3
Ky.	1	-	35	-	-	-	58	-	213	-	13	2	-	-	2
Tenn.	-	-	-	-	-	-	133	-	219	-	30	15	-	2	1
Ala.	10	-	-	-	-	4	41	-	16	4	62	25	-	-	-
Miss.	10	-	34	-	-	4	18	N	N	-	4	7	-	-	-
W.S. CENTRAL	84	-	21	-	4	448	191	34	975	7	246	322	-	24	12
Ark.	4	-	-	-	1	-	23	-	142	-	38	16	-	4	2
La.	13	-	-	-	-	-	54	16	331	-	20	57	-	-	-
Okla.	10	-	8	-	-	4	23	11	208	7	69	171	-	1	6
Tex.	57	-	13	-	3	444	91	7	294	-	119	78	-	19	4
MOUNTAIN	48	4	172	-	34	497	82	-	223	16	931	242	-	6	26
Mont.	5	4	57	-	31	128	2	-	2	-	4	8	-	-	8
Idaho	2	-	-	-	1	-	8	-	10	11	358	92	-	-	1
Wyo.	-	-	-	-	-	2	-	-	7	-	2	5	-	-	1
Colo.	17	-	112	-	1	9	21	-	33	-	39	71	-	2	-
N. Mex.	3	-	-	-	-	318	13	N	N	-	53	13	-	-	-
Ariz.	13	-	3	-	-	36	21	-	143	-	440	41	-	-	5
Utah	6	-	-	-	1	1	15	-	7	5	34	12	-	3	11
Nev.	2	-	-	-	-	3	2	-	21	-	1	-	-	1	-
PACIFIC	386	-	738	-	47	995	720	4	595	2	519	676	4	112	216
Wash.	26	-	7	-	-	47	69	-	63	-	116	112	-	-	2
Oreg.	18	-	6	-	2	132	45	N	N	-	50	84	-	-	2
Calif.	328	-	721	-	37	811	581	4	490	1	285	236	4	84	140
Alaska	3	-	1	-	-	1	8	-	13	-	7	6	-	-	2
Hawaii	11	-	3	-	8	4	17	-	18	1	61	238	-	28	70
Guam	-	-	-	-	1	2	-	-	3	-	-	-	-	1	1
P.R.	2	-	231	-	-	771	12	-	10	-	15	20	-	3	4
V.I.	-	-	-	-	-	-	-	-	35	-	-	-	-	-	1
Amer. Samoa	-	-	-	-	-	1	3	-	4	-	-	-	-	-	-
C.N.M.I.	1	-	-	-	-	-	1	-	2	-	-	-	-	-	-

*For measles only, imported cases includes both out-of-state and international importations.

N: Not notifiable U: Unavailable †International §Out-of-state

TABLE III. (Cont'd.) Cases of specified notifiable diseases, United States, weeks ending December 31, 1988 and January 2, 1988 (52nd Week)

Reporting Area	Syphilis (Civilian) (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988	Cum. 1987	Cum. 1988	Cum. 1988	Cum. 1988	Cum. 1988
UNITED STATES	40,275	35,062	351	21,244	22,402	179	397	615	4,220
NEW ENGLAND	1,207	658	24	607	686	5	37	12	15
Maine	12	1	4	30	28	-	-	-	1
N.H.	7	5	5	11	18	-	-	-	5
Vt.	3	4	2	6	17	-	1	-	-
Mass.	441	312	10	380	398	4	21	7	-
R.I.	35	13	-	39	61	-	7	2	-
Conn.	709	323	3	141	164	1	8	3	9
MID. ATLANTIC	9,344	6,470	51	4,273	4,388	2	74	19	499
Upstate N.Y.	610	270	25	546	526	1	15	11	44
N.Y. City	6,312	4,802	6	2,306	2,347	-	46	6	-
N.J.	1,029	721	3	747	750	-	11	-	15
Pa.	1,393	677	17	674	765	1	2	2	440
E.N. CENTRAL	1,180	873	50	2,384	2,410	1	44	34	147
Ohio	114	110	33	435	437	-	7	22	5
Ind.	51	57	1	259	268	-	2	2	29
Ill.	544	437	2	1,077	1,086	-	29	7	32
Mich.	436	210	14	510	523	1	4	2	35
Wis.	35	59	-	103	96	-	2	1	46
W.N. CENTRAL	267	182	47	522	631	78	6	93	471
Minn.	18	23	7	89	122	3	4	2	138
Iowa	28	27	7	56	42	-	-	-	13
Mo.	159	81	11	255	339	48	2	57	22
N. Dak.	1	1	3	15	14	1	-	-	108
S. Dak.	-	11	5	33	29	16	-	7	129
Nebr.	28	19	5	16	25	3	-	1	21
Kans.	33	20	9	58	60	7	-	26	40
S. ATLANTIC	14,629	11,986	21	4,616	4,821	7	45	200	1,449
Del.	104	70	2	45	47	2	-	1	58
Md.	701	627	3	434	432	2	3	22	324
D.C.	726	423	-	179	156	-	2	-	13
Va.	449	319	-	406	458	2	12	17	359
W. Va.	37	13	-	70	99	-	1	2	102
N.C.	840	730	9	622	664	-	3	108	8
S.C.	741	668	4	484	469	-	-	23	124
Ga.	2,593	1,680	-	731	898	1	8	24	297
Fla.	8,438	7,456	3	1,645	1,598	-	16	3	164
E.S. CENTRAL	2,076	1,861	24	1,750	1,997	11	3	92	288
Ky.	68	32	10	364	421	5	1	30	118
Tenn.	922	730	11	513	642	5	-	39	69
Ala.	567	484	2	524	541	-	1	11	94
Miss.	519	615	1	349	393	1	1	12	7
W.S. CENTRAL	4,443	4,343	37	2,674	2,533	54	8	149	542
Ark.	267	252	3	311	340	35	-	32	87
La.	881	822	-	349	338	-	4	2	13
Okla.	145	186	11	236	237	16	-	97	35
Tex.	3,150	3,083	23	1,778	1,618	3	4	18	407
MOUNTAIN	855	724	35	600	673	13	12	12	368
Mont.	3	9	-	31	22	-	1	6	209
Idaho	4	6	5	22	33	-	-	2	11
Wyo.	1	3	-	5	3	2	-	3	38
Colo.	108	133	3	96	175	7	3	1	28
N. Mex.	50	58	2	102	98	2	1	-	11
Ariz.	169	300	16	250	278	1	6	-	44
Utah	20	27	9	33	29	1	-	-	9
Nev.	500	188	-	61	35	-	1	-	18
PACIFIC	6,274	7,965	62	3,818	4,263	8	168	4	441
Wash.	228	176	9	226	253	1	13	1	-
Oreg.	325	311	1	154	141	1	7	1	-
Calif.	5,678	7,456	51	3,218	3,607	4	141	2	408
Alaska	15	4	-	50	67	2	1	-	33
Hawaii	28	18	1	170	195	-	6	-	-
Guam	3	2	-	31	26	-	-	-	-
P.R.	661	879	-	275	323	-	5	-	72
V.I.	2	12	-	6	2	-	-	-	-
Amer. Samoa	-	-	-	5	11	-	1	-	-
C.N.M.I.	1	-	-	25	-	-	-	-	-

U: Unavailable

TABLE IV. Deaths in 121 U.S. cities,* week ending December 31, 1988 (52nd Week)

Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	>65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	671	477	114	53	16	11	57
Boston, Mass.	203	128	33	28	7	7	16
Bridgeport, Conn.§	52	37	9	5	1	-	3
Cambridge, Mass.	30	23	6	1	-	-	1
Fall River, Mass.	36	31	3	2	-	-	1
Hartford, Conn.	45	34	6	3	2	-	3
Lowell, Mass.	40	27	11	2	-	-	7
Lynn, Mass.	18	15	2	1	-	-	-
New Bedford, Mass.	28	25	3	-	-	-	1
New Haven, Conn.	61	44	9	4	3	1	6
Providence, R.I.	36	28	5	1	1	1	1
Somerville, Mass.	2	2	-	-	-	-	-
Springfield, Mass.	38	25	10	2	1	-	7
Waterbury, Conn.	27	21	5	1	-	-	2
Worcester, Mass.	55	37	12	3	1	2	9
MID. ATLANTIC	2,933	1,908	567	299	78	80	158
Albany, N.Y.	52	34	8	5	3	2	3
Allentown, Pa.	23	21	1	1	-	-	-
Buffalo, N.Y.§	111	81	22	6	1	1	6
Camden, N.J.	36	22	7	5	1	1	1
Elizabeth, N.J.	33	22	6	5	-	-	2
Erie, Pa.†	46	40	3	2	1	-	3
Jersey City, N.J.	63	36	12	11	1	3	2
N.Y. City, N.Y.	1,724	1,111	333	196	43	41	84
Newark, N.J.	77	37	14	15	2	9	7
Paterson, N.J.	21	13	5	2	-	1	1
Philadelphia, Pa.	292	181	68	18	11	13	18
Pittsburgh, Pa.†	65	43	11	3	3	5	4
Reading, Pa.	43	20	10	11	2	-	6
Rochester, N.Y.	122	87	20	8	4	3	7
Schenectady, N.Y.	38	30	8	-	-	-	4
Scranton, Pa.†	20	13	5	1	-	1	1
Syracuse, N.Y.	85	59	17	4	5	-	4
Trenton, N.J.	35	22	8	4	1	-	2
Utica, N.Y.	25	18	6	1	-	-	-
Yonkers, N.Y.	22	18	3	1	-	-	3
E.N. CENTRAL	2,200	1,457	448	169	47	79	106
Akron, Ohio	60	41	11	3	2	3	3
Canton, Ohio	38	25	8	5	-	-	2
Chicago, Ill.§	564	362	125	45	10	22	16
Cincinnati, Ohio	152	105	33	9	2	3	10
Cleveland, Ohio	160	101	36	14	3	6	4
Columbus, Ohio	130	75	28	17	5	5	-
Dayton, Ohio	82	54	17	9	1	1	-
Detroit, Mich.	204	119	47	19	9	10	7
Evansville, Ind.	46	36	8	-	1	1	9
Fort Wayne, Ind.	50	39	5	4	1	1	2
Gary, Ind.	20	11	5	4	-	-	1
Grand Rapids, Mich.	68	41	15	3	1	8	10
Indianapolis, Ind.	130	82	29	11	2	6	4
Madison, Wis.	41	32	5	2	1	1	7
Milwaukee, Wis.	120	94	17	3	2	4	4
Peoria, Ill.§	49	37	8	2	-	2	4
Rockford, Ill.	44	35	6	1	1	1	6
South Bend, Ind.	54	37	15	1	1	-	4
Toledo, Ohio	126	89	20	9	4	4	12
Youngstown, Ohio	62	42	10	8	1	1	1
W.N. CENTRAL	738	533	121	40	23	21	30
Des Moines, Iowa	69	58	9	-	1	1	5
Duluth, Minn.	26	19	5	1	1	-	-
Kansas City, Kans.	28	19	6	1	1	1	-
Kansas City, Mo.	128	84	25	10	4	5	8
Lincoln, Nebr.	26	16	8	1	-	1	4
Minneapolis, Minn.	141	105	17	10	2	7	4
Omaha, Nebr.	71	51	11	5	2	2	8
St. Louis, Mo.	143	103	20	8	9	3	-
St. Paul, Minn.	51	37	11	2	1	-	-
Wichita, Kans.§	55	41	9	2	2	1	1
S. ATLANTIC	842	525	189	76	23	29	35
Atlanta, Ga.	92	56	19	13	2	2	4
Baltimore, Md.	91	60	19	7	1	4	5
Charlotte, N.C.	52	37	8	5	1	1	3
Jacksonville, Fla.	103	65	24	6	7	1	1
Miami, Fla.	70	38	19	9	1	3	1
Norfolk, Va.	47	33	10	2	-	2	1
Richmond, Va.§	90	59	17	9	2	3	7
Savannah, Ga.	28	19	6	1	2	-	3
St. Petersburg, Fla.	42	33	5	1	1	2	3
Tampa, Fla.	60	41	9	8	-	2	3
Washington, D.C.	140	66	47	12	6	9	4
Wilmington, Del.	27	18	6	3	-	-	-
E.S. CENTRAL	673	440	138	51	20	23	48
Birmingham, Ala.	74	47	9	12	4	2	1
Chattanooga, Tenn.	39	26	10	3	-	-	3
Knoxville, Tenn.	66	45	14	5	1	1	7
Louisville, Ky.	66	40	14	4	1	6	8
Memphis, Tenn.§	180	122	37	12	6	3	16
Mobile, Ala.	101	68	24	4	2	3	6
Montgomery, Ala.	25	14	5	-	2	4	1
Nashville, Tenn.	122	78	25	11	4	4	6
W.S. CENTRAL	1,761	1,112	382	169	52	46	73
Austin, Tex.	51	33	11	6	-	1	5
Baton Rouge, La.	26	20	5	-	-	1	1
Corpus Christi, Tex.§	48	37	10	1	-	-	1
Dallas, Tex.	168	93	38	23	7	7	6
El Paso, Tex.	77	51	18	5	1	2	5
Fort Worth, Tex	84	53	26	4	1	-	6
Houston, Tex.§	734	436	169	89	24	16	18
Little Rock, Ark.	57	39	8	2	6	2	6
New Orleans, La.	235	149	44	25	7	10	2
San Antonio, Tex.	152	107	31	7	3	4	10
Shreveport, La.	49	36	9	1	2	1	6
Tulsa, Okla.	80	58	13	6	1	2	7
MOUNTAIN	697	471	120	43	25	37	56
Albuquerque, N. Mex.	105	74	15	4	10	2	6
Colo. Springs, Colo.	39	33	4	1	1	-	9
Denver, Colo.	122	59	28	6	3	26	8
Las Vegas, Nev.	105	74	24	7	-	-	10
Ogden, Utah	20	14	4	1	1	-	3
Phoenix, Ariz.	145	90	26	17	5	6	7
Pueblo, Colo.	21	19	1	1	-	-	3
Salt Lake City, Utah	39	29	5	1	1	3	3
Tucson, Ariz.	101	79	13	5	4	-	7
PACIFIC	1,800	1,219	326	152	48	39	125
Berkeley, Calif.	25	17	4	3	-	1	1
Fresno, Calif.	88	59	19	7	1	2	5
Glendale, Calif.	28	23	2	1	1	-	4
Honolulu, Hawaii	72	51	10	6	2	3	9
Long Beach, Calif.	73	54	10	6	1	2	13
Los Angeles Calif.	479	304	93	50	17	-	19
Oakland, Calif.	59	41	12	2	2	2	2
Pasadena, Calif.	37	30	5	1	-	1	2
Portland, Oreg.	121	83	27	5	4	2	8
Sacramento, Calif.	149	97	27	14	6	5	23
San Diego, Calif.	110	73	14	18	2	3	10
San Francisco, Calif.	151	91	35	19	2	4	9
San Jose, Calif.	144	102	26	7	4	5	7
Seattle, Wash.	159	116	25	7	3	8	1
Spokane, Wash.	64	50	10	3	1	-	8
Tacoma, Wash.	41	28	7	3	2	1	4
TOTAL	12,315††	8,142	2,405	1,052	332	365	688

*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.

§Data not available. Figures are estimates based on average of past available 4 weeks.

FIGURE I. Reported measles cases – United States, Weeks 47–50, 1988

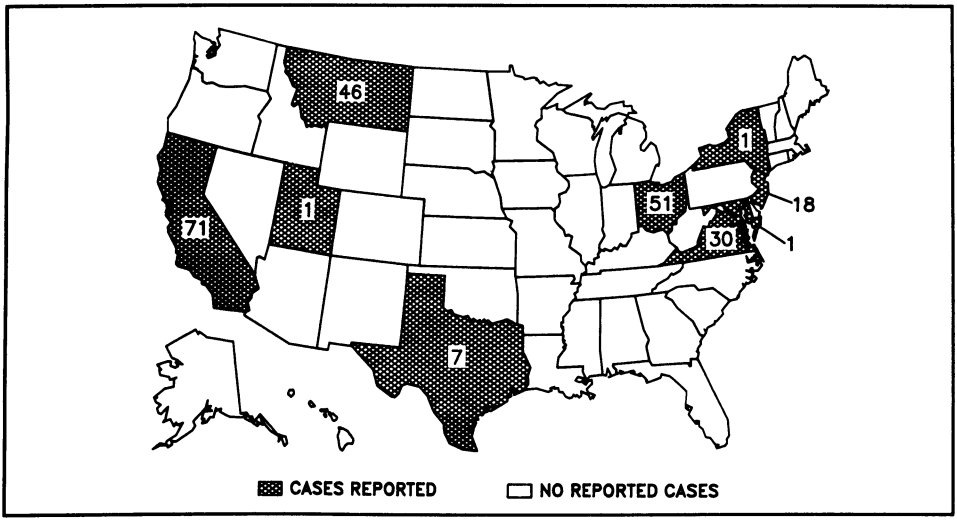
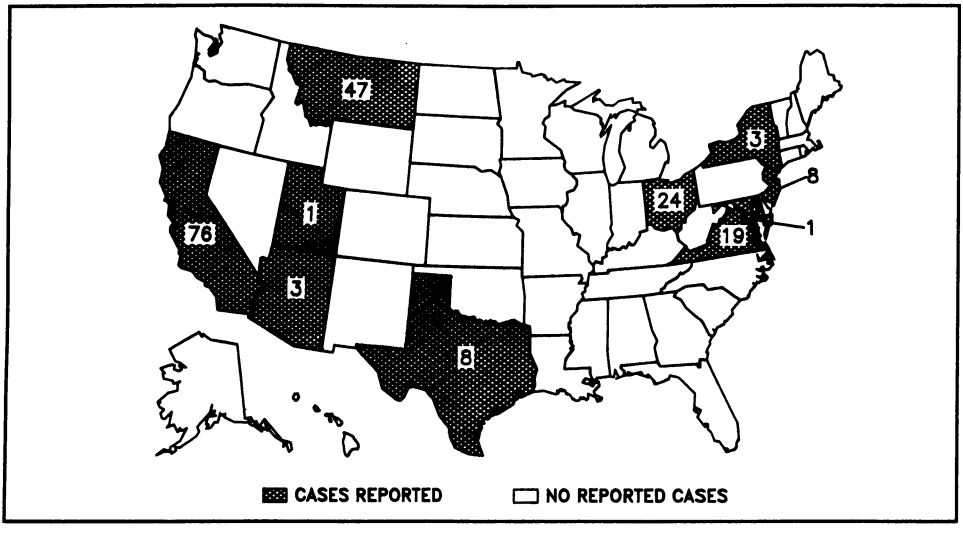


FIGURE I. Reported measles cases – United States, Weeks 48–51, 1988



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The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday. The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Such reports and any other matters pertaining to editorial or other textual considerations should be addressed to: Editor, *Morbidity and Mortality Weekly Report*, Centers for Disease Control, Atlanta, Georgia 30333.

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