CENTER FOR DISEASE CONTROL

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MORBIDITY AND MORTALITY WEEKLY REPORT

Epidemiologic Notes and Reports

Tornado Mortality — Wichita Falls, Texas

In the late afternoon of April 10, 1979, a series of tornadoes touched down at the southwest edge of Wichita Falls, a city of 100,000, and proceeded northeast through a residential area, leaving a path of destruction 1 mile wide and over 7 miles long. The population was made aware of the tornado by sirens, which sounded 1 hour and again several minutes before the tornado struck, and by radio and television weather news. Within minutes, 44 people were killed, 171 received injuries requiring hospitalization, 1,700 received injuries requiring some medical attention, and more then 6,000 families were left homeless. President Carter declared the affected community a disaster area; estimates of damage are currently in excess of $300,000,000.

CDC, as part of an assessment of the health consequences of the disaster, conducted a survey, with volunteers from the American Red Cross and the U.S. Air Forces' School of Health Care Sciences, to determine the circumstances surrounding the death of each tornado victim. Forty-one of the 44 deaths were due to trauma, and 3 were due to myocardial infarction. Of the traumatic deaths, 25 were associated with passenger vehicles, 8 occurred outdoors, and 4 each occurred in private homes and in public buildings. In 16 of the vehicle-related deaths, the victims had gotten into their cars or trucks specifically to escape the tornado's path; the homes of 11 of these victims did not suffer major damage.

Families in the disaster zone were surveyed at random to provide an accurate census of the population at the time the tornado struck as well as information on the relative risk of different protective measures. Most people were at home when the tornado struck.* Even when houses were completely destroyed by a direct tornado hit, those who sought shelter indoors—usually in their cellars, interior hallways, basements, and closets—were at little risk of suffering a fatal injury. By contrast, people caught in the open or in their cars were at much greater risk. There were 4 major injuries but no deaths among residents of an 89-unit mobile home park which had no common tornado cellar; many of the residents sought shelter beneath a nearby underpass.

Reported by W Wilcox, J Winkle, Federal Disaster Assistance Administration, Dept of Housing and Urban Development; L Benson, MD, Wichita Falls Health Dept; R Donelson, MD, Texas State Dept of Health; N Horowitz, PhD, Capt, USAF, School of Health Care Sciences, Sheppard Air Force Base Texas; M Estes, RN, American Red Cross; J Schaefer, PhD, National Severe Storms Forecast Center, Kansas City, National Oceanic and Atmospheric Administration, Dept of Commerce; P Kerndt, University of Iowa School of Medicine; Viral Diseases Div, Chronic Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Since 1950, an average of 114 persons per year have been killed by tornadoes in the United States (*1*). These severe storms occur primarily in the Midwestern States during the months of April through June, between noon and dusk. Because the hazard posed by tornadoes can be great, weathermen at the National Severe Storms

*Data have not yet been analyzed.

Tornado-Related Mortality — Continued

Forecast Center in Kansas City monitor atmospheric conditions and issue watches for areas where a tornado might occur. Local offices of the National Weather Service—working with the Skywarn Spotter Network, law enforcement agents, and other trained observers—are used to spot tornadoes or clouds with tornado potential. A sighting leads to a tornado warning, indicating that all persons in the path of the storm should take immediate safety precautions (*2*).

In Wichita Falls, sirens and television/radio news coverage provided ample warning for most individuals. (For some, the warning may have occurred too far in advance, since many people decided to get in their cars and try to evacuate the area rather than to remain at home.) The validity of the recommendation that people stay indoors during a tornado was borne out by the low mortality among this group.

However, the recommendation of the National Weather Service that people driving cars in the open country should travel away from the tornado's path at right angles (*2*) may need to be reexamined for several reasons: (1) a tornado's path is not fixed, (2) people's judgment under stress is not predictable, and (3) cars are very vulnerable to tornado damage, as has been documented repeatedly. The National Weather Service's recommendation for travelers in urban areas—that they abandon their vehicles and seek shelter in nearby buildings, culverts, underpasses, or ravines—might be a more applicable recommendation for all travelers. Finally, people should be advised to remain in their homes or other substantial structures—away from windows—even if the home or structure is in the path of a tornado, rather than to evacuate the area in a vehicle.

Mobile homes are also vulnerable, even when they are securely anchored or tied down with cables in a concrete footing. There are also no uniform regulations for tornado shelters in trailer parks.

People in public buildings should seek shelter in basements, interior closets, and hallways, and under heavy furniture, if possible. They should avoid parking lots and large areas covered by wide, free-span roofs, such as gymnasiums or auditoriums.

Many injuries in tornadoes are caused by flying debris. Covering up with heavy blankets or a mattress, even in cellars, can provide considerable protection from lacerations, splinters, and trauma caused by broken glass, splintered wood, and flying bricks and boards. While cellars provide excellent protection from tornadoes, they may be difficult to construct in some soil. Reinforcement of an interior bathroom, hallway, or closet may make the area suitable as a shelter even if a house is directly hit.

References

1. Kelly DL, Schaefer JT, McNulty RP, Doswell CA, Abbey RF: An augmented tornado climatology. Monthly Weather Review 106:1172-1183, 1978
2. National Oceanic and Atmospheric Administration: Tornado Warning-Owlie Skywarn (#75012). Washington, D.C., US Dept of Commerce, 1976

International Notes

Dengue Type 4 — French Polynesia

During the first 3 months of 1979, an outbreak of dengue type 4 began in French Polynesia, the first recognized appearance of the type 4 virus outside Southeast Asia.

In January 1979, local physicians on Tahiti and Moorea reported an increased incidence of dengue and influenza. The same month, dengue virus type 4 was isolated, and influenza was identified serologically, thus confirming the presence of 2 concurrent outbreaks. Throughout February and March, surveillance was conducted; it consisted

Dengue — Continued

of daily telephone calls to all hospitals, physicians, and public health clinics on Tahiti and Moorea requesting the number of cases of dengue and influenza seen.

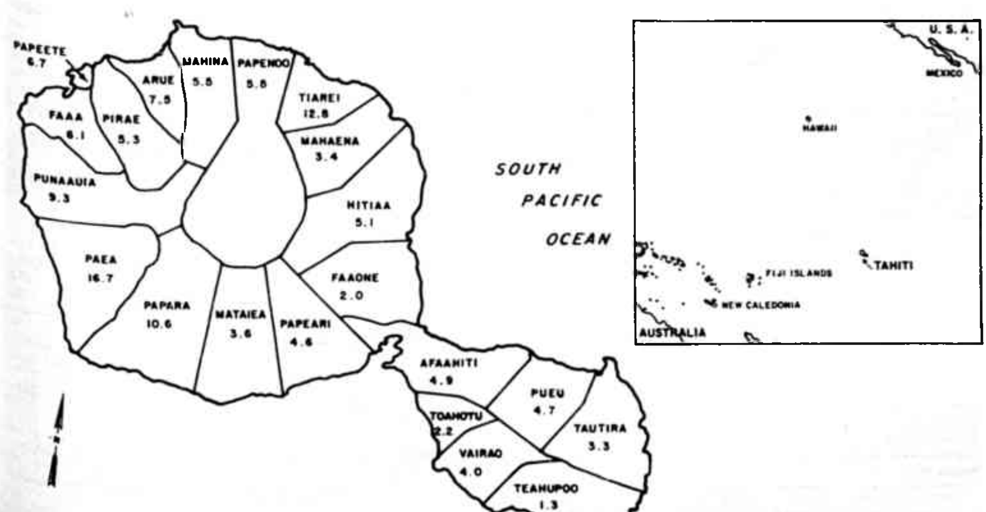
Reported cases peaked first on the western coast of Tahiti, south of Papeete, and then spread eastward along the northern coast. There were 6,778 reported cases of dengue on Tahiti (population, 97,100) and at least 471 cases on Moorea (population, 6,600) from January 1 through March 31, 1979. Although the overall incidence in this 3-month period was 6.98 per 100 persons on Tahiti, 2 areas had unusually high rates: Paea and Papara on the west coast (average cumulative incidence, 14.40 per 100) and Tiarei on the northeast coast, (12.81 per 100) (Figure 1). On Moorea the reported incidence was slightly over 7%. On Bora Bora the rate was 9.68 per 100 from mid-February through April 5.

There were less reported cases of influenza than of dengue. With the exception of a few reporting units (communes), the dates of onset and peaks in incidence for the 2 diseases were different. In another small group of communes, the incidence of 1 disease dropped as the other peaked, suggesting that the presence of 1 virus may have delayed the appearance of the other.

In this outbreak clinical dengue was characterized by fever, severe headache, retro-orbital pain, myalgia, polyarthralgia, rash, and altered taste sensation. In addition, many patients reported nausea or cough. The illness was generally mild, and 77% of those questioned reported that the acute illness lasted 7 days or less. Approximately 35 persons were hospitalized in Papeete with suspected dengue. The majority of these were children, admitted because of fever, dehydration, or hemorrhage. One 3-year-old female, who had a single dengue titer of 1:640, died of a shock syndrome (without hemorrhage). Her illness was complicated by the possibility that she may have been treated before hospitalization with toxic local herbs; thus, the actual cause of death is not known.

Results of hemagglutination-inhibition tests in Papeete of 504 paired serum samples from patients suspected by their physicians to have dengue revealed 311 (62%) with

FIGURE 1. Reported incidence* of dengue per 100 inhabitants, by commune, Tahiti, January 1-March 31, 1979



*Overall incidence: 6.98/100

Dengue — Continued

confirmed dengue; 148 (29%) with probable dengue; 38 (8%) with confirmed influenza A; 2 (0.4%) with confirmed influenza B; and 5 (1%) with adenovirus infection.

As of May 2, the peak of the dengue epidemic has passed in Tahiti and Moorea; outbreaks continue to be reported in neighboring French Polynesian islands.

Reported by J Laigret, MD, F Parc, MD, Institut de Recherches Medicales, Louis Malarde, Papeete, Tahiti, French Polynesia; L Rosen, MD, DrPH, Pacific Research Unit, Research Corporation of University of Hawaii, Honolulu; Viral Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Dengue has caused sizeable outbreaks in the Western Hemisphere in recent years. On Tahiti, outbreaks were recorded in 1852, 1870, 1902, 1944 (type 1), 1964-1965 (type 3), 1969 (type 3), 1971 (type 2), and 1975 (type 1). The great majority of the island population probably has had at least 1 dengue infection before dengue 4 appeared this year, and dengue 1 is still endemic in the area. (There has been 1 confirmed isolate of dengue type 1 on Tahiti in 1979).

On Tahiti there are 2 species of *Aedes* of the subgenus *Stegomyia*; both (*A. aegypti* and *A. polynesiensis*) are known to transmit at least some types of dengue virus. Although the former is the most common vector worldwide, on Tahiti both species are considered capable of transmitting dengue virus to humans. *A. aegypti* breeds most commonly in artificial water containers, such as flower vases, old tires, and empty cans. This species was found only in the city of Papeete until recent years, but it has spread throughout Tahiti as the island population has expanded. *A. polynesiensis* breeds primarily in natural

(Continued on page 201)

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

[Cumulative totals include revised and delayed reports through previous weeks.]

DISEASE	17th WEEK ENDING		MEDIAN 1974-1978**	CUMULATIVE, FIRST 17 WEEKS		
	April 28, 1979	April 29, 1978*		April 28, 1979	April 29, 1978*	MEDIAN 1974-1978**
Aseptic meningitis	42	29	38	799	605	605
Brucellosis	2	6	5	22	48	49
Chickenpox	7,567	5,285	5,641	110,956	72,538	72,538
Diphtheria	–	1	6	53	27	89
Encephalitis: Primary (arthropod-borne & unspec.)	7	9	15	148	182	210
Post-infectious	8	2	7	65	49	69
Hepatitis, Viral: Type B	303	338	241	4,483	4,950	4,743
Type A	536	621	661	9,392	9,227	11,751
Type unspecified	180	177	156	3,554	2,632	2,747
Malaria	15	14	9	128	155	107
Measles (rubeola)	575	1,353	1,353	5,761	11,266	11,266
Meningococcal infections: Total	58	47	35	1,086	943	668
Civilian	58	47	35	1,083	934	662
Military	–	–	–	3	9	9
Mumps	355	485	1,276	6,829	7,544	21,796
Pertussis	18	33	15	424	700	399
Rubella (German measles)	465	1,189	724	5,351	6,635	6,635
Tetanus	2	–	–	12	17	15
Tuberculosis	529	662	677	8,922	8,902	9,634
Tularemia	2	2	3	35	24	29
Typhoid fever	6	9	7	119	165	110
Typhus fever, tick-borne (Rky. Mt. spotted)	14	9	8	48	29	29
Venereal diseases:						
Gonorrhea: Civilian	16,623	16,336	16,696	308,109	297,952	299,838
Military	424	290	381	8,885	7,618	8,746
Syphilis, primary & secondary: Civilian	467	435	413	7,748	6,708	6,926
Military	6	6	5	100	98	98
Rabies in animals	143	85	85	1,356	917	893

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1979		CUM. 1979
Anthrax	–	Poliomyelitis: Total	3
Botulism (Utah 2, Wash. 1)	7	Paralytic	3
Congenital rubella syndrome (Ups. N.Y. 1, Calif. 1)	18	Psittacosis (Ups. N.Y. 1, Colo. 1, Calif. 2)	42
Leprosy (Colo. 1)	52	Rabies in man	1
Leptospirosis (Minn. 1, Fla. 1, Ore. 1)	21	Trichinosis†	26
Plague (Ariz. 2)	4	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	5

*Delayed reports received for calendar year 1978 are used to update last year's weekly and cumulative totals.

**Medians for gonorrhea and syphilis are based on data for 1976-1978.

†The following delayed reports will be reflected in next week's cumulative totals: Trichinosis: N.J. +1, Alaska +22

TABLE III. Cases of specified notifiable diseases, United States, weeks ending April 28, 1979, and April 29, 1978 (17th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
						Primary		Post-infectious	B	A	Unspecified		
	1979	1979	1979	1979	CUM. 1979	1979	1978*	1979	1979	1979	1979	1979	CUM. 1979
UNITED STATES	42	2	7,567	–	53	7	9	8	303	536	180	15	128
NEW ENGLAND	–	–	984	–	–	1	1	–	11	18	7	1	7
Maine	–	–	238	–	–	–	–	–	–	7	–	–	–
N.H.†	–	–	25	–	–	1	–	–	–	–	–	–	–
Vt.	–	–	12	–	–	–	–	–	–	2	–	–	–
Mass.	–	–	182	–	–	–	1	–	6	4	7	1	3
R.I.	–	–	76	–	–	–	–	–	3	–	–	–	3
Conn.	–	–	451	–	–	–	–	–	2	5	–	–	1
MID. ATLANTIC	8	–	1,605	–	–	–	1	–	34	42	12	1	18
Upstate N.Y.	4	–	1,447	–	–	–	–	–	10	22	1	–	2
N.Y. City	1	–	120	–	–	–	–	–	4	5	5	–	12
N.J.†	1	–	NN	–	–	–	1	–	20	15	6	–	1
Pa.	2	–	38	–	–	–	–	–	NA	NA	NA	1	3
E.N. CENTRAL	–	–	2,861	–	–	–	3	2	45	90	11	–	5
Ohio	–	–	464	–	–	–	–	–	18	36	–	–	2
Ind.	–	–	–	–	–	–	2	1	6	4	8	–	–
Ill.	–	–	617	–	–	–	–	–	1	13	–	–	1
Mich.	–	–	1,208	–	–	–	1	1	17	31	3	–	2
Wis.†	–	–	572	–	–	–	–	–	3	6	–	–	–
W.N. CENTRAL	–	–	665	–	–	–	–	1	14	52	6	2	5
Minn.	–	–	1	–	–	–	–	1	3	13	–	1	3
Iowa †	–	–	318	–	–	–	–	–	1	5	–	–	–
Mo.	–	–	167	–	–	–	–	–	7	20	4	–	1
N. Dak.	–	–	11	–	–	–	–	–	–	–	–	–	–
S. Dak.	–	–	22	–	–	–	–	–	1	4	–	–	–
Nebr.	–	–	17	–	–	–	–	–	2	7	2	1	1
Kans.†	–	–	129	–	–	–	–	–	–	3	–	–	–
S. ATLANTIC	6	–	520	–	–	–	3	2	47	73	33	1	28
Del.	–	–	9	–	–	–	–	–	5	–	–	–	1
Md.	2	–	4	–	–	–	–	–	9	12	8	1	4
D.C.	–	–	2	–	–	–	–	–	1	–	–	–	4
Va.†	2	–	57	–	–	–	2	2	6	13	6	–	7
W. Va.†	–	–	126	–	–	–	–	–	–	3	–	–	1
N.C.	–	–	NN	–	–	–	1	–	5	4	3	–	1
S.C.	–	–	8	–	–	–	–	–	5	4	1	–	1
Ga.†	–	–	–	–	–	–	–	–	2	2	–	–	2
Fla.	2	–	314	–	–	–	–	–	14	35	15	–	7
E.S. CENTRAL	5	1	102	–	–	–	–	–	17	13	3	2	2
Ky.	–	–	66	–	–	–	–	–	–	–	–	–	–
Tenn.	4	1	NN	–	–	–	–	–	8	5	3	–	–
Ala.	1	–	31	–	–	–	–	–	5	6	–	1	1
Miss.	–	–	5	–	–	–	–	–	4	2	–	1	1
W.S. CENTRAL	8	–	227	–	–	1	–	1	26	82	30	2	12
Ark.	–	–	5	–	–	–	–	–	2	6	4	–	1
La.	–	–	NN	–	–	1	–	–	11	23	10	–	2
Okla.	1	–	–	–	–	–	–	1	4	3	1	–	–
Tex.	7	–	222	–	–	–	–	–	9	50	15	2	9
MOUNTAIN	1	–	195	–	1	1	–	1	15	47	31	1	4
Mont.†	–	–	29	–	–	1	–	–	–	3	–	–	–
Idaho	–	–	1	–	–	–	–	–	–	2	1	–	–
Wyo.	–	–	–	–	–	–	–	–	–	1	–	–	1
Colo.	–	–	144	–	–	–	–	–	2	2	9	–	2
N. Mex.	1	–	1	–	–	–	–	1	3	8	1	–	–
Ariz.	–	–	NN	–	1	–	–	–	–	18	19	1	1
Utah	–	–	18	–	–	–	–	–	7	6	–	–	–
Nev.	–	–	2	–	–	–	–	–	3	7	1	–	–
PACIFIC	14	1	408	–	52	4	1	1	94	119	47	5	47
Wash.	3	–	379	–	51	2	–	–	8	9	6	1	3
Oreg.	–	–	3	–	–	–	–	–	10	19	3	2	4
Calif.†	11	1	–	–	1	2	1	1	71	86	33	2	39
Alaska†	–	–	7	–	–	–	–	–	2	1	3	–	–
Hawaii	–	–	19	–	–	–	–	–	3	4	2	–	1
Guam	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
P.R.	–	–	16	–	–	–	–	–	3	1	10	–	–
V.I.	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
Pac. Trust Terr.	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–

NN: Not notifiable. NA: Not available.
*Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.
†The following delayed reports will be reflected in next week's cumulative totals: Asep. meng.: Mont. +1; Chickenpox: N.H. +4, W. Va. +146, Calif. +79; Hep. B: N.J. +2, Iowa –3, Ga. +2; Hep. A: N.H. +2, N.J. +1, Wis. –1, Iowa +3, Kans. –1, Va. –1, W. Va. +1, Ga. +17, Alaska +1; Hep. unsp.: N.J. –5, W.Va. +1, Alaska –1.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending April 28, 1979, and April 29, 1978 (17th week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1979	CUM. 1979	CUM. 1978*	1979	CUM. 1979	CUM. 1978*	1979	CUM. 1979	1979	1979	CUM. 1979	CUM. 1979
UNITED STATES	575	5,761	11,266	58	1,086	943	355	6,829	18	465	5,351	12
NEW ENGLAND	13	168	1,261	7	45	54	9	276	2	68	787	-
Maine	-	4	842	-	1	3	4	105	2	4	52	-
N.H.†	1	5	15	-	5	5	-	2	-	2	63	-
Vt.	12	55	16	1	3	2	-	4	-	11	279	-
Mass.†	-	-	124	-	9	22	-	23	-	34	251	-
R.I.	-	100	4	2	3	10	1	14	-	6	24	-
Conn.†	-	-	260	4	24	12	4	128	-	11	118	-
MID. ATLANTIC	92	623	871	11	159	132	27	600	3	104	842	3
Upstate N.Y.	45	354	583	3	54	43	4	76	3	74	387	1
N.Y. City	45	232	100	1	44	31	2	61	-	4	95	1
N.J.†	1	25	12	5	41	27	6	302	-	11	193	-
Pa.	1	12	176	2	20	31	15	161	-	15	167	1
E.N. CENTRAL	181	1,373	4,305	3	96	92	166	2,809	6	86	1,202	1
Ohio†	12	25	219	-	28	21	78	969	-	4	28	-
Ind.	-	94	67	-	24	15	-	157	-	-	365	-
Ill.	127	554	519	-	3	17	17	418	6	44	121	-
Mich.	19	408	2,771	2	31	31	46	614	-	35	571	1
Wis.†	23	252	729	1	10	8	25	651	-	3	117	-
W.N. CENTRAL	76	636	180	1	36	35	35	477	-	8	217	-
Minn.	56	313	18	1	7	5	-	5	-	1	22	-
Iowa	-	7	29	-	5	6	18	177	-	1	43	-
Mo.	19	298	6	-	17	16	9	129	-	1	20	-
N. Dak.	-	6	88	-	-	1	-	1	-	-	8	-
S. Dak.	-	1	-	-	2	2	-	3	-	-	-	-
Nebr.	-	-	3	-	-	-	-	4	-	-	67	-
Kans.	1	11	36	-	5	5	8	158	-	5	57	-
S. ATLANTIC	51	740	2,719	16	251	253	14	243	3	66	512	3
Del.	-	-	5	1	3	-	1	9	-	1	2	-
Md.	-	5	3	2	21	11	2	32	1	-	15	-
D.C.	-	-	47	-	1	1	-	1	-	-	-	-
Va.	13	85	1,809	2	40	34	4	57	1	9	56	1
W. Va.†	5	43	523	-	3	5	4	59	-	4	68	-
N.C.	2	96	50	3	42	51	2	35	-	42	187	2
S.C.	-	38	149	3	38	17	-	2	1	2	44	-
Ga.†	5	95	6	1	41	32	-	3	-	-	2	-
Fla.	26	378	127	4	62	102	1	45	-	8	138	-
E.S. CENTRAL	6	79	744	4	89	77	71	702	-	1	144	2
Ky.	-	15	62	-	13	15	68	610	-	-	41	-
Tenn.	1	16	541	1	28	23	3	62	-	-	67	-
Ala.	5	40	31	1	22	21	-	9	-	1	19	2
Miss.	-	8	110	2	26	18	-	21	-	-	17	-
W.S. CENTRAL	63	628	680	4	197	134	14	1,136	1	12	139	3
Ark.†	-	7	13	-	15	13	-	574	-	-	-	2
La.	27	170	279	-	86	43	-	30	1	5	21	-
Okla.†	21	24	8	-	16	13	-	-	-	1	18	-
Tex.†	15	427	380	4	80	65	14	532	-	6	100	1
MOUNTAIN	12	132	111	4	50	18	7	177	3	12	220	-
Mont.	3	48	78	2	4	2	-	5	1	5	40	-
Idaho	-	2	1	-	4	1	-	3	-	3	127	-
Wyo.	-	-	-	-	-	-	-	-	-	-	-	-
Colo.	4	12	13	-	2	2	2	53	1	3	20	-
N. Mex.	2	26	-	1	3	2	-	7	-	-	1	-
Ariz.†	-	26	8	-	29	6	-	20	1	1	27	-
Utah	1	14	4	-	3	4	3	79	-	-	5	-
Nev.	2	4	7	1	5	1	2	10	-	-	-	-
PACIFIC	81	1,382	395	8	163	148	12	409	-	108	1,288	-
Wash.	50	630	37	1	25	22	2	146	-	7	115	-
Oreg.	-	52	114	1	10	4	2	38	-	3	49	-
Calif.	30	630	243	4	118	116	6	172	-	96	1,114	-
Alaska	-	15	-	-	3	5	-	5	-	-	1	-
Hawaii	1	55	1	2	7	1	2	48	-	2	9	-
Guam	NA	-	18	-	-	-	NA	-	NA	NA	3	-
P.R.	11	158	87	-	-	1	11	306	-	1	19	3
V.I.	NA	2	6	-	1	-	NA	2	NA	NA	-	-
Pac. Trust Terr.	NA	5	324	-	1	2	NA	11	NA	NA	-	-

NA: Not available.

*Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: Measles: N.J. +3, Wis. +1, W.Va. +2, Ga. +16, Tex. −3; Men. inf.: Conn. N.J. −2 civ. +2 mil., Ohio +7, Ga. +3, Ark. −1; Mumps: Mass. −1, W.Va. +3; Pertussis: Okla. −1; Rubella: N.H. +6, N.J. +13, Wis. +2, W.Va. +2, Ariz. +3

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending April 28, 1979, and April 29, 1978 (17th week)

REPORTING AREA	TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)						RABIES (in Animals)
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1979	CUM. 1979	CUM. 1979	1979	CUM. 1979	1979	CUM. 1979	1979	CUM. 1979	CUM. 1978*	1979	CUM. 1979	CUM. 1978*	CUM. 1979
UNITED STATES	529	8,922	35	6	119	14	48	16,623	308,109	297,952	467	7,748	6,708	1,356
NEW ENGLAND	24	265	1	-	9	-	-	400	8,160	7,519	5	133	210	15
Maine	4	21	-	-	1	-	-	43	558	584	-	2	3	14
N.H.	-	4	-	-	-	-	-	16	277	349	-	2	1	1
Vt.	3	9	-	-	-	-	-	10	153	193	-	-	1	-
Mass.	11	161	1	-	5	-	-	151	3,352	3,296	4	86	141	-
R.I.	1	19	-	-	1	-	-	37	669	533	-	4	7	-
Conn.	5	51	-	-	2	-	-	143	3,151	2,564	1	39	57	-
MID. ATLANTIC	89	1,466	1	3	20	2	7	1,615	33,653	33,033	60	1,233	932	9
Upstate N.Y.	6	251	1	2	5	2	6	296	6,151	5,198	7	103	66	8
N.Y. City †	36	559	-	-	7	-	1	645	12,782	13,100	39	823	652	-
N.J.	25	255	-	1	6	-	-	124	5,941	6,069	9	170	107	1
Pa.	22	401	-	-	2	-	-	550	8,779	8,666	5	137	107	-
E.N. CENTRAL	58	1,218	-	-	9	-	2	2,187	47,426	41,715	58	1,004	646	111
Ohio†	12	229	-	-	1	-	2	192	12,661	10,921	-	201	142	7
Ind.	13	175	-	-	-	-	-	515	4,143	4,510	14	68	39	35
Ill.	17	438	-	-	4	-	-	610	15,252	12,440	36	583	386	51
Mich.†	15	320	-	-	4	-	-	627	11,077	10,012	8	119	58	-
Wis.	1	56	-	-	-	-	-	243	4,293	3,832	-	33	21	18
W.N. CENTRAL	22	298	9	-	3	-	1	918	14,854	14,793	9	116	166	268
Minn.†	5	37	-	-	2	-	-	156	2,591	2,705	2	33	79	63
Iowa	2	30	-	-	-	-	-	128	1,933	1,698	4	18	14	58
Mo.	7	159	7	-	1	-	-	410	6,293	5,829	3	48	37	85
N. Dak.	-	10	-	-	-	-	-	17	251	317	-	-	2	12
S. Dak.	-	18	1	-	-	-	-	22	494	576	-	-	1	13
Nebr.	-	3	1	-	-	-	-	37	971	1,157	-	1	4	-
Kans.	8	41	-	-	-	-	1	148	2,321	2,511	-	16	29	37
S. ATLANTIC	116	2,039	2	-	17	7	18	4,458	73,475	72,578	98	1,908	1,796	159
Del.	1	21	-	-	-	-	-	99	1,163	1,097	-	11	3	-
Md.	8	276	-	-	6	-	4	420	8,819	9,663	5	131	139	-
D.C.	2	96	-	-	1	-	-	212	4,525	4,812	10	140	139	-
Va.	6	241	-	-	2	3	4	342	6,995	6,615	13	191	162	3
W. Va.†	6	69	-	-	1	-	-	60	1,003	1,122	1	26	5	-
N.C.	21	331	-	-	-	3	7	594	11,128	10,291	10	169	154	-
S.C.	4	90	1	-	2	1	2	403	6,438	6,775	5	97	82	55
Ga.	23	303	1	-	-	-	1	726	14,151	13,638	21	509	439	99
Fla.	45	612	-	-	5	-	-	1,602	19,253	18,565	33	634	673	2
E.S. CENTRAL	50	808	5	-	6	2	9	1,247	25,719	25,704	18	512	313	75
Ky.†	15	191	2	-	2	-	-	199	3,437	2,872	7	57	38	35
Tenn.	9	226	3	-	1	2	5	486	8,910	9,470	6	205	112	19
Ala.	16	184	-	-	3	-	4	221	7,610	7,624	-	102	44	21
Miss.	10	207	-	-	-	-	-	341	5,762	5,738	5	148	119	-
W.S. CENTRAL	68	1,079	7	-	7	3	10	1,937	40,412	41,434	63	1,328	1,023	586
Ark.	9	76	5	-	-	3	9	312	3,331	3,041	-	39	35	139
La.	8	252	1	-	-	-	-	368	7,097	6,886	41	310	203	5
Okla.	2	127	-	-	-	-	-	207	3,662	3,735	1	26	36	84
Tex.	49	624	1	-	7	-	1	1,050	26,322	27,772	21	953	749	358
MOUNTAIN	17	273	7	2	8	-	1	712	11,861	11,099	38	143	136	17
Mont.	-	10	1	-	-	-	-	36	578	718	-	6	6	-
Idaho	-	4	-	-	1	-	-	30	521	388	2	9	1	-
Wyo.	1	4	-	-	-	-	-	16	298	260	-	3	3	-
Colo.	-	37	1	1	2	-	-	170	3,260	3,030	4	38	44	-
N. Mex.	5	49	1	-	1	-	-	75	1,488	1,562	4	21	41	12
Ariz.	9	135	-	1	3	-	-	165	3,297	2,760	23	42	25	5
Utah	2	8	4	-	-	-	-	56	621	669	1	3	4	-
Nev.	-	26	-	-	1	-	1	164	1,798	1,712	4	21	12	-
PACIFIC	85	1,476	3	1	40	-	-	3,149	52,549	50,077	118	1,371	1,486	116
Wash.	8	61	2	-	1	-	-	237	4,704	3,643	NA	64	59	-
Oreg.	4	71	-	-	-	-	-	221	3,407	3,521	2	66	49	-
Calif.	63	1,218	1	1	32	-	-	2,547	41,859	40,277	108	1,198	1,357	114
Alaska†	5	29	-	-	-	-	-	82	1,710	1,626	-	7	5	2
Hawaii	5	97	-	-	7	-	-	62	869	1,010	8	36	16	-
Guam	NA	14	-	NA	-	NA	-	NA	20	38	NA	-	-	-
P.R.	-	97	-	-	2	-	-	48	616	871	9	168	142	7
V.I.	NA	2	-	NA	-	NA	-	NA	51	64	NA	-	5	-
Pac. Trust Terr.	NA	8	-	NA	-	NA	-	NA	47	161	NA	-	-	-

NA: Not available.

*Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: TB: NYC –5, Mich. –2, W.Va. +8, Ky. –1, Alaska +5; GC: W.Va. +60; Syphilis: W.Va. +1; An. rabies: Ohio +1, Minn. +10.

TABLE IV. Deaths in 121 U.S. cities,* week ending April 28, 1979 (17th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	≥65	45-64	25-44	<1	
NEW ENGLAND	701	457	167	36	26	42
Boston, Mass.	183	104	48	10	14	16
Bridgeport, Conn.	41	27	9	3	1	7
Cambridge, Mass.	44	33	9	2	–	2
Fall River, Mass.	25	21	3	1	–	1
Hartford, Conn.	66	43	18	5	–	2
Lowell, Mass.	30	22	2	4	2	2
Lynn, Mass.	31	22	6	1	–	–
New Bedford, Mass.	28	17	8	2	1	1
New Haven, Conn.††	52	33	12	3	3	1
Providence, R.I.	70	46	17	3	2	2
Somerville, Mass.	10	8	2	–	–	1
Springfield, Mass.	41	22	16	–	2	–
Waterbury, Conn.	34	25	8	1	–	4
Worcester, Mass.	46	34	9	1	1	3
MID. ATLANTIC	2,143	1,432	478	134	44	96
Albany, N.Y.	44	33	7	–	1	1
Allentown, Pa.	20	17	3	–	–	–
Buffalo, N.Y.	109	70	25	6	3	11
Camden, N.J.	41	28	8	4	–	2
Elizabeth, N.J.	32	21	11	–	–	1
Erie, Pa.†	28	20	5	1	1	2
Jersey City, N.J.	33	23	8	1	–	–
Newark, N.J.	71	37	20	6	4	6
N.Y. City, N.Y.	1,373	904	310	96	27	56
Paterson, N.J.	26	15	5	1	3	–
Philadelphia, Pa.†	365	239	77	28	11	12
Pittsburgh, Pa.†	64	33	22	6	–	4
Reading, Pa.	50	40	8	1	–	5
Rochester, N.Y.	117	82	25	5	3	6
Schenectady, N.Y.	39	33	5	1	–	2
Scranton, Pa.†	28	19	6	1	–	1
Syracuse, N.Y.	89	61	21	4	2	4
Trenton, N.J.	47	33	11	2	–	1
Utica, N.Y.	26	15	7	4	–	1
Yonkers, N.Y.	26	20	4	1	1	–
E.N. CENTRAL	2,308	1,393	575	143	94	76
Akron, Ohio	56	36	14	2	3	–
Canton, Ohio	48	34	10	3	–	5
Chicago, Ill.	562	312	142	47	31	16
Cincinnati, Ohio	130	87	27	6	4	3
Cleveland, Ohio	187	114	49	10	11	3
Columbus, Ohio	93	54	31	5	2	8
Dayton, Ohio	113	70	30	5	1	4
Detroit, Mich.	274	156	65	22	18	5
Evansville, Ind.	56	36	15	1	–	2
Fort Wayne, Ind.	56	32	19	1	3	4
Gary, Ind.	20	12	6	1	–	–
Grand Rapids, Mich.	55	46	6	1	1	4
Indianapolis, Ind.	165	86	49	13	10	4
Madison, Wis.	42	26	8	1	1	1
Milwaukee, Wis.	142	102	30	7	–	5
Peoria, Ill.	45	25	12	4	2	5
Rockford, Ill.	40	24	4	3	5	3
South Bend, Ind.	49	30	13	3	–	2
Toledo, Ohio	117	71	30	7	2	2
Youngstown, Ohio	58	40	15	1	–	–
W.N. CENTRAL	748	486	175	31	31	24
Des Moines, Iowa	54	34	18	1	–	2
Duluth, Minn.	26	16	7	3	–	4
Kansas City, Kans.	49	22	16	4	5	1
Kansas City, Mo.	133	86	31	4	6	2
Lincoln, Nebr.	42	30	11	1	–	4
Minneapolis, Minn.	66	48	16	–	2	–
Omaha, Nebr.	79	53	16	4	4	–
St. Louis, Mo.	164	108	31	9	8	5
St. Paul, Minn.	66	43	14	3	2	2
Wichita, Kans.	69	46	15	2	4	4

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	≥65	45-64	25-44	<1	
S. ATLANTIC	1,299	728	389	93	54	50
Atlanta, Ga.	146	79	35	16	7	5
Baltimore, Md.	251	125	100	15	8	11
Charlotte, N.C.	64	25	21	8	7	3
Jacksonville, Fla.	94	54	22	10	6	–
Miami, Fla.	101	60	31	6	3	1
Norfolk, Va.	72	43	19	4	3	1
Richmond, Va.	70	40	23	3	3	4
Savannah, Ga.	42	17	20	2	3	3
St. Petersburg, Fla.	116	94	15	1	2	8
Tampa, Fla.	59	45	10	3	1	5
Washington, D.C.	219	110	74	23	6	3
Wilmington, Del.	65	36	19	2	5	6
E.S. CENTRAL	647	387	179	37	21	22
Birmingham, Ala.	88	49	32	4	1	–
Chattanooga, Tenn.	59	32	17	4	4	4
Knoxville, Tenn.	50	36	11	1	–	1
Louisville, Ky.	98	62	28	7	–	5
Memphis, Tenn.	147	87	42	8	4	2
Mobile, Ala.	43	29	8	–	2	3
Montgomery, Ala.	58	39	10	4	3	1
Nashville, Tenn.	104	53	31	9	7	6
W.S. CENTRAL	1,111	633	284	76	47	28
Austin, Tex.	34	21	7	2	2	1
Baton Rouge, La.	33	20	9	3	–	1
Corpus Christi, Tex.	50	34	6	2	4	2
Dallas, Tex.	213	114	56	11	17	1
El Paso, Tex.	66	33	16	5	2	2
Fort Worth, Tex.	88	51	20	11	2	3
Houston, Tex.	152	67	56	16	–	3
Little Rock, Ark.	67	41	19	2	4	4
New Orleans, La.	152	98	36	6	5	–
San Antonio, Tex.	144	82	36	9	5	7
Shreveport, La.	43	26	12	3	2	2
Tulsa, Okla.	69	46	11	6	4	2
MOUNTAIN	607	365	141	45	31	19
Albuquerque, N.Mex.	87	45	25	11	3	3
Colo. Springs, Colo.	34	22	8	2	1	1
Denver, Colo.	133	84	27	7	10	2
Las Vegas, Nev.	67	36	24	1	3	4
Ogden, Utah	15	12	1	1	–	1
Phoenix, Ariz.	129	81	25	15	5	2
Pueblo, Colo.	29	14	11	2	1	1
Salt Lake City, Utah	35	20	8	1	3	–
Tucson, Ariz.	78	51	12	5	5	5
PACIFIC	1,778	1,167	395	121	50	56
Berkeley, Calif.	18	13	2	3	–	–
Fresno, Calif.	57	35	15	3	2	4
Glendale, Calif.	27	21	6	–	–	–
Honolulu, Hawaii	45	24	14	2	2	3
Long Beach, Calif.	101	64	28	6	1	1
Los Angeles, Calif.	502	318	110	42	18	17
Oakland, Calif.	66	47	13	5	1	3
Pasadena, Calif.	42	28	10	3	–	3
Portland, Oreg.	151	105	32	8	4	4
Sacramento, Calif.	72	47	14	5	3	1
San Diego, Calif.	159	102	36	9	7	–
San Francisco, Calif.	146	103	29	9	4	5
San Jose, Calif.	150	93	36	13	5	2
Seattle, Wash.	149	103	33	6	1	7
Spokane, Wash.	45	28	9	6	1	4
Tacoma, Wash.	48	36	8	1	1	2
TOTAL	11,342	7,048	2,783	716	398	413
Expected Number	10,571	6,579	2,661	648	396	384

*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 4 Pennsylvania cities, there will now be 117 cities involved in the generation of the expected values used to monitor pneumonia and influenza activity in the United States. Data from these 4 cities will appear in the tables but will not be included in the totals for the United States and the Middle Atlantic Region.

††Data not available this week. Figures are estimates based on average percent of regional totals.

Dengue — Continued

water reservoirs such as crabholes and tree trunks. It is found primarily in more rural areas, and until recently was, with few exceptions, the only 1 of the 2 species on Tahiti found outside Papeete.

The illness caused by the dengue 4 virus appears to be relatively mild. Perhaps the dengue 4 virus in Polynesia is inherently less virulent, or perhaps the population is partially protected against more severe disease because the 3 other dengue types have circulated there in the recent past.

It is not yet known which of the 2 *Aedes* species is the primary vector for dengue on Tahiti. Studies are underway to answer this question.

Travelers to Tahiti or other areas of French Polynesia are at increased risk of acquiring dengue both during and after an island outbreak (when the virus is almost certainly still circulating). The risk should be no higher than last year, however, when dengue 1 was circulating at low levels. All travelers to French Polynesia are advised to use commercially available mosquito repellant, whenever possible, and to report to their physicians any illness with fever and headache beginning within 2 weeks of leaving Polynesia.

Epidemiologic Notes and Reports

Typhoid Fever — New York

In the last week of July 1978, the New York City Department of Health was notified that severe febrile illnesses requiring hospitalization had occurred among members of a religious group in Brooklyn. An epidemiologic investigation revealed that 9 of approximately 40 people who had attended a party on June 30 were hospitalized for typhoid fever, diagnosed by blood culture.

The illness occurred 7 to 23 days following that party. The patients ranged in age from 4-49 years (mean age, 29.2 years; median age, 32 years). Six patients were male; 3 were female. None gave a history of foreign travel in the preceding month. Symptoms included fever (100%), chills or sweats (67%), fatigue and weakness (44%), headache (33%), vomiting (33%), cough (33%), anorexia (33%), and diarrhea (22%). Blood isolates were positive for *Salmonella typhi,* phage-type F3, and were sensitive to ampicillin. All 9 patients were treated with either ampicillin or chloramphenicol and recovered without sequellae.

In early August a food questionnaire was distributed to the party guests. A cake served at the party was statistically associated with illness ($p<.03$, Fisher's exact test). Stool culturing of the bakery employees failed to uncover a carrier.

In November 1978, 2 more hospitalized cases of typhoid fever from this community were reported. One patient had *S. typhi*, phage type F3, isolated from his blood, and the other was diagnosed by a typical clinical course of typhoid fever and by elevated antibody titers to H antigen (1:320 initially and 1:160 1 week later). The latter patient had no history of typhoid immunization. The patients had onset of symptoms 21 and 27 days, respectively, after attending a second party with approximately 70 guests in late September. Neither patient had a recent history of foreign travel.

A questionnaire was distributed to the guests at the second party. No single food or beverage was statistically incriminated.

No guest had attended both parties, but the second party was held in the home of one of the food handlers from the first party. Although no *S. typhi* organisms were found in 4 stool samples from this person, stools from 1 member of his family, a 72-year-old man, grew *S. typhi*, phage type F3. This person denied any history of typhoid fever or prolonged febrile illness, but he did have mild diarrhea that had begun approximately

Typhoid Fever — Continued

4 weeks after the second party. He denied eating, preparing, or serving any food at the second party. He also denied helping prepare food for the first party. The most recent stool culture from this man, taken in mid-March 1979, remained positive; thus, he has been culture positive for at least 3½ months and may be a chronic carrier. However, repeated cultures over the course of a year will be needed to verify chronic-carrier status. This presumptive carrier has agreed not to serve food to individuals outside his immediate family.

Investigation, including a dye study, of the plumbing at this family's home showed no back siphonage. Water samples were negative for *S. typhi*. The mechanism of contamination of food at the parties is unknown.

Another person with typhoid fever was identified in this community in January 1979. The patient was a 26-year-old female cousin of the presumptive carrier. She had eaten food at his home in November and had onset of symptoms approximately 5 weeks later. She gave no history of foreign travel. The organism from her stool has not been phage typed.

Over the past 10 years, there have been 17 confirmed cases of typhoid fever in addition to those described above, in members of this same community in Brooklyn. The presumptive carrier was related by marriage to a 1976 patient. No direct association between the earlier patient and the infection of the presumptive carrier could be made since the isolate from the earlier patient was not phage typed.

Reported by WF McKinley, ET Melvin, MD, D Mildvan, MD, JW Winter, PhD, S Yancovitz, MD, Beth Israel Medical Center; EJ Bottone, PhD, Mt. Sinai Hospital; G Schlanger, PhD, Maimonides Hospital; J DeZuane, PhD, S Friedman, MD, M Gellman, MPH, EB Harvey, RN, JS Marr, MD, New York City Epidemiologist, W Mansdorf, MPH, B Neal, RN, J Payne, RN, H Vogel, PhD, JC Welton, MPH, New York City Dept of Health; Enteric Diseases Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Typhoid fever is now uncommon in the United States. In 1942, there were 5,595 reported cases (*1*); in 1976, the number of reported isolations (cases and carriers) was only 529 (*2*).

Most cases of typhoid fever in the United States are not associated with known outbreaks. In 1975 and 1976, 87% of typhoid cases acquired in the United States were reported as single cases; the remaining 13% of cases occurred in connection with the only 3 outbreaks reported to CDC on surveillance questionnaires (*3*).

The F3 phage type found in this outbreak is uncommon. In New York City from 1974 through 1978, none of approximately 200 reported isolations of *S. typhi* were of the F3 phage type. Similarly, in the United States in 1975 and 1976, none of the *S. typhi* isolates reported to the CDC from cases were of the F3 phage type (*3*).

References

1. Rubin RH, Weinstein L: Salmonellosis. Microbiologic, Pathologic and Clinical Features. New York, Stratton Intercontinental Medical Book Corp, 1977, p 13
2. CDC: Salmonella Surveillance Report (No. 127). Atlanta, CDC, 1976
3. Ryder RW, Blake PA: Typhoid fever in the United States, 1975 and 1976. J Infect Dis 139: 124-126, 1979

Measles Importations into Montana — 1977-1979

In the period December 1977-March 1979, 24 measles outbreaks,* accounting for 120 cases, were investigated in Montana. In 11 of the outbreaks at least 1 case was serologically confirmed as being measles. A definite or epidemiologically probable index case could be identified in 20 of the outbreaks, which had a total of 63 cases (Table 1). The mean age of the index patients was 14 years.

*An outbreak is defined as 1 or more related cases in a town.

Measles Importation — Continued

TABLE 1. Source of infection of index cases of measles,* Montana, December 1977-March 1979

Source	Measles outbreaks		Measles cases	
	Number	Percent	Number	Percent
Montana	8	40.0	23	36.5
Texas	1	5.0	1	1.6
North Dakota	2	10.0	4	6.3
Canada	5	25.0	8	12.7
Military†	4	20.0	27	42.9
Total	20	100.0	63	100.0

*In 4 outbreaks (57 cases) the index case could not be identified.
†Military personnel or their dependents who were the index patients for these outbreaks had arrived during their incubation period from Georgia (18 subsequent cases), Korea (2 subsequent cases), Germany (6 subsequent cases), and Puerto Rico (1 subsequent case).

In only 8 of these 20 outbreaks—accounting for 23 cases—was the index patient infected in Montana. The remaining 40 (63.5%) cases were associated with index patients whose infection occurred in another country or state. Although only 4 of the 20 outbreaks involved military personnel or dependents as index patients, these 4 outbreaks accounted for more than 40% of the 63 cases with an identified index case.

Including the military, there were 7 foreign importations and 5 introductions from another state or Puerto Rico. Five of the 7 foreign importations were from Alberta, Canada, which reported approximately 3,000 cases of measles from November 3, 1978, through February 24, 1979 (*1*). The 5 outbreaks with sources infected in other states and Puerto Rico accounted for 24 cases or 38.1% of the 63 cases with a known index case. However, military personnel or dependents were responsible for 19 (79.2%) of these 24 cases.

Reported by MD Skinner, State Epidemiologist, and staff, Montana State Dept of Health and Environmental Sciences; Field Services Div, Bur of Epidemiology, Immunization Div, Bur of State Services, CDC.

Editorial Note: Montana is a predominantly rural state (approximately 5 persons per square mile), and the epidemiology of measles in the state reflects this. While measles outbreaks are frequently small, transmission may occur over long distances.

Surveillance for measles includes telephone follow-up of all patients reported to have measles or rubella and of persons whose serum is sent to the State Laboratory for diagnosis of measles, rubella, or febrile illness associated with rash. On the average, 2 to 3 suspected cases are investigated for every measles case that is found.

Montana's experience indicates the role of importations from high-prevalence areas in perpetuating measles activity in rural and low prevalence areas. It also illustrates that in some circumstances a significant proportion of measles cases may be attributable to infections in military personnel or their dependents (*2,3*). As measles becomes less

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The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Center for Disease Control, Attn: Editor, Morbidity and Mortality Weekly Report, Atlanta, Georgia 30333.

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Measles Importation — Continued

common, sources of outbreaks should become easier to identify and are more likely to represent long-distance importations.

References
1. Alberta Epidemiologic Notes and Reports 3(3):1-3, 1979
2. MMWR 28:58-59, 1979
3. MMWR 27:489-490, 1978

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p 184 In the article "Rash Associated with Use of Whirlpools — Maine," first paragraph, fourth line, delete the word "no," so that the sentence reads "and nearly one-third of the affected individuals had other systemic manifestations including painful lymphadenopathy."

p 189 In the article "Endotoxic Reactions Associated with the Reuse of Cardiac Catheters," fourth paragraph, delete the first sentence and insert: "When the sterilized catheters were cultured, they were found to be negative for bacteria, but washes contained endotoxin by Limulus Amebocyte Lysate (LAL) assay."

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