



MORBIDITY AND MORTALITY WEEKLY REPORT

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Epidemiologic Notes and Reports

Primary Amebic Meningoencephalitis — California, Florida, New York

Seven cases of primary amebic meningoencephalitis (PAM), a rare disease that affects the central nervous system, have recently been reported to CDC. Details of 3 of these cases follow. One, acquired in California, is the first non-fatal case described in the United States.

California: A previously healthy 9-year-old girl was hospitalized May 27, 1978, after a 3-day history of headache, nausea, vomiting, lethargy, and stupor. Examination of cerebrospinal fluid (CSF) revealed ameboid organisms. She developed papilledema, seizures, and left focal neurologic signs and became comatose. She was treated with intravenous and intrathecal amphotericin B, miconazole—an investigational drug effective *in vitro* against *Naegleria*, the most common cause of PAM—and oral rifampin. Her condition improved after 48 hours, and within a month she had recovered completely with no significant neurologic sequelae. Culture of her initial CSF specimens yielded *N. fowleri*.

One week before onset she had bathed in a hot spring near San Bernardino. This same hot spring was implicated as the source of infection in a fatal case of PAM in 1971 (7).

Florida: On July 2, a 14-year-old boy began to complain of a progressive, severe, frontal and bitemporal headache. He had been swimming and diving in a fresh water lake for the past 3 weeks. He developed a low grade fever and malaise, and on July 4 was admitted to the hospital with mild nuchal rigidity, lethargy, and fever of 40 C. Examination of the CSF revealed a cell count of 3900/mm³, a glucose of 13 mg/dl, and a protein of 490 mg/dl. Motile amebae (*N. fowleri*) were seen on the initial wet mounts. The patient deteriorated rapidly, becoming disoriented, agitated, and then comatose. Despite therapy with amphotericin B, neurogenic pulmonary edema ensued. Just before receiving miconazole the patient developed cerebral edema and herniation. He died 3 days later.

New York: An 11-year-old girl who had not recently traveled or gone swimming was admitted to a hospital May 27 with a 2-day history of headache, vomiting, fever, and nuchal rigidity. Spinal fluid revealed many neutrophils, and routine cultures were negative. Her condition deteriorated, and she died 8 days after onset. Autopsy revealed a vasculitis and meningoencephalitis. Amebae identified as *Acanthamoeba* species were found on fixed sections.

Reported by JS Powers, MD, Victor Valley Community Hospital; R Abbott, MD, L Boyle, M Lee, MD, R Rudas, MD, San Bernardino County Hospital; K Mackey, MPH, L Mahoney, MD, DrPH, San Bernardino County Health Dept; A Cohen, MD, J Edwards, MD, P Harmatz, MD, J Seidel, MD, PhD,

Meningoencephalitis — Continued

J Turner, MD, Harbor General Hospital, Los Angeles; J Chin, MD, State Epidemiologist, C Powers, C Taclindo, MPH, California Dept of Health; CG Culbertson, Eli Lilly Company, Indianapolis, Indiana; S Lee, MD, RM Prudente, MD, New York City; E Galaid, MPH, C Wang, MD, MPH, New York City; JS Marr, MD, City Epidemiologist, Bur of Preventable Diseases; M Cichon, MD, Tampa, Florida; RM Yeller, MD, Acting State Epidemiologist, Florida State Dept of Health and Rehabilitative Services; Field Services Div, Parasitic Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: PAM is usually caused by *N. fowleri*—a ubiquitous, free-living amoeba found in fresh water ponds and lakes. Most cases occur during the summer within 8 days after swimming in warm, fresh or brackish water. The portal of entry is probably the nasal mucosa overlying the cribriform plate. Since PAM was first described in 1965 (2), over 80 cases have been reported including about 35 in the United States.

Prompt diagnosis, early treatment with miconazole, amphotericin B, and rifampin, and careful fluid management were probably responsible for the survival of the California patient. Intrathecal therapy appears critical since amphotericin and miconazole otherwise do not reach therapeutic levels in the CSF. The CDC Parasitic Disease Drug Service does not distribute miconazole but can help physicians obtain the drug for patients.

The risk of infection from water containing *Naegleria* organisms is unknown but probably small, since thousands of people swim in lakes known to contain these organisms, yet cases of PAM are rare. No U.S. case has been associated with man-made swimming pools.

Acanthamoeba, another free-living amoeba, generally causes subacute or chronic infections, rather than the fulminant meningoencephalitis reported here. Its mode of transmission is unknown.

References

1. Hecht RH, Cohen AH, Stoner J, et al: Primary amoebic meningoencephalitis in California. *California Medicine* 117:69-73, 1972
2. Fowler M, Carter RF: Acute pyogenic meningitis probably due to *Acanthamoeba* sp: A preliminary report. *Br Med J* 2:740-742, 1965

Measles — Utah

An outbreak of measles involving a total of 36 cases occurred in Utah from March 23-May 29, 1978.

Nineteen cases occurred in a junior high school, 8 cases in a high school, 1 case in an elementary school, and 8 cases in pre-schoolers. An index case was not identified. Twenty cases (55.5%) had no history of measles immunization, 2 (5.6%) were first immunized within 14 days of onset of measles, 9 (25.9%) had questionable histories, and 5 (13.9%) had valid evidence of previous measles immunization.

In the junior high school, 18 cases occurred among 232 unimmunized pupils (attack rate = 7.8%), while 1 case occurred among 432 pupils who had received measles vaccine (attack rate = 0.2%). Measles vaccine efficacy was 97.0%. Secondary cases occurred in 5 of 18 unimmunized siblings of school cases and in none of 32 immunized siblings.

Survey data indicated that 78.1% of students in the affected junior high and 49.4% in the high school had valid evidence of measles immunization, whereas surveys of immunization levels in the elementary schools for the entire county were estimated to have been 91.7%. Of the county's 19- to 21-month-olds, 85% had been immunized.

Control measures included school-based immunization clinics, identification and immunization of susceptibles in the affected populations, active case-contact identification using school absentee lists and calls to physicians, and dispersal of information through the mass media.

Reported by R Johns, MD, MSCM, Davis County Health Dept; T Fukushima, MD, MPH, State Epidemiologist, Utah State Div of Health; Immunization Div, Bur of State Services, Field Services Div, Bur of Epidemiology, CDC.

Measles – Continued

Editorial Note: Results of the school survey associated with this outbreak indicated low levels of protection against measles in junior and senior high-school-age students. From the national perspective it appears that 15- to 19-year-olds have had an increasing incidence of reported measles in the United States in recent years (1,2). Many of these persons never received measles vaccine (3); others were vaccinated with an inactivated (killed) vaccine series or with a combination of further attenuated vaccine (Moraten, Schwartz) plus gamma globulin. Still others were vaccinated before 12 months of age, when residual maternal antibodies to measles might interfere with vaccination. Persons in these latter 3 groups should be assumed susceptible to measles and immunized with measles vaccine in accordance with recent recommendations (4).

References

1. MMWR 26:109-111, 1977
2. MMWR 27:235-237, 1978
3. CDC: Preliminary Report, U.S. Immunization Survey, CDC, 1977 (in press)
4. MMWR 25:359-360, 365-366, 1976

Vibrio parahaemolyticus Foodborne Outbreak – Louisiana

An outbreak of *Vibrio parahaemolyticus* food poisoning occurred the last week of June affecting approximately two-thirds of 1,700 persons from a 4-parish area who attended a dinner at Port Allen, Louisiana, on June 21, 1978.

A questionnaire survey to obtain information concerning the illness was administered to a sample of 122 people. Of this sample 82 (67.2%) reported illness. The mean incubation period was 16.7 hours, with a range of 3 to 76 hours. The duration of illness ranged from less than 1 day to over 8 days, with a mean of approximately 4.6 days. Physicians were seen for treatment by 32 patients (26.2%), and 9 (7.4%) required hospitalization.

Symptoms of the illness included diarrhea (95.1%), cramps (91.5%), weakness (90.2%), nausea (71.9%), chills (54.9%), headache (47.7%), fever (47.5%), and vomiting (12.2%). Both sexes were equally affected; ages ranged from 13 to 78 years.

Foods served included boiled shrimp, hogshead cheese, boiled potatoes, boiled corn, boiled salt meat, bread, butter, and watermelon. Eighty-one (68.1%) of the 119 individuals consuming shrimp became ill while only 1 of 3 who did not eat shrimp became ill. Although this difference in attack rates is not statistically significant, 99% of the ill people ate shrimp while no other food was consumed by more than two-thirds of those ill.

Laboratory analysis yielded positive cultures for *V. parahaemolyticus* from the leftover boiled shrimp, boiled potatoes, boiled corn, and hogshead cheese and from 7 of 15 stool specimens from patients. All stool isolates were Kanagawa-positive. Since the person who gathered the food for storage after the dinner placed all leftover food in 1 container, cross-contamination probably occurred.

The raw shrimp was purchased at 1 location and shipped to a second location in standard, wooden, seafood boxes. It was boiled on the morning of June 21 and placed back into the same boxes in which it had been shipped. After being covered with aluminum foil to keep the contents warm for serving, it was transported 40 miles in an unrefrigerated truck to the location of the dinner. It was held unrefrigerated a minimum of 7-8 hours until serving time at 7:30 PM.

An inspection of the wholesale seafood establishment where the shrimp was purchased was undertaken on June 27. Unsanitary conditions were noted. The investigation revealed that the shrimp had been boiled in 300-pound batches in the following manner. A batch was placed in a container until the water came to a "rolling boil." At this time

Foodborne Outbreak — Continued

the gas was turned off, and the shrimp allowed to soak in the hot water for 15 minutes. Boiled shrimp collected from the seafood establishment during the inspection 6 days after the outbreak was cultured and found to be positive for *V. parahaemolyticus*.

For preparation of boiled seafood Louisiana law requires a minimum of 7 minutes boiling to insure destruction of pathogens.

Reported by East and West Baton Rouge, East and West Feliciana, Point Coupee, and Iberville Parish Health Units; Louisiana Bur of Laboratory Services; CT Caraway, DVM, State Epidemiologist, J Gregg, BS, L McFarland, MPH, Louisiana State Dept of Health and Human Resources.

*International Notes***Follow-up on Smallpox — England**

The English medical photographer who contracted smallpox in August (1) died on September 11 of renal failure and bacteremia. One close contact, the mother of the deceased patient, has had a pox virus visualized on electron microscopy. She was vaccinated on August 14; culture results to differentiate between variola and vaccinia viruses are pending. Over 250 persons are still under surveillance.

Reported by International Health Div, Dept of Health and Social Services, London; Bur of Smallpox, CDC.

Reference

1. MMWR 27:319, 1978

TABLE I. Summary — cases of specified notifiable diseases, United States
(Cumulative totals include revised and delayed reports through previous weeks.)

DISEASE	3rd WEEK ENDING		MEDIAN 1973-1977**	CUMULATIVE, FIRST 36 WEEKS		
	September 8, 1978	September 10, 1977*		September 9, 1978	September 10, 1977*	MEDIAN 1973-1977**
Aseptic meningitis	205	167	135	3,178	2,840	2,193
Bruceellosis	6	5	3	106	156	156
Chickenpox	202	217	210	122,334	160,541	144,896
Diphtheria	—	—	—	57	66	126
Encephalitis: Primary (arthropod-borne & unsp.)	11	37	44	553	627	828
Post-infectious	5	4	5	142	153	204
Hepatitis, Viral: Type B	269	244	201	10,056	11,346	7,946
Type A	623	516	516	19,581	21,252	24,048
Type unspecified	214	151	—	6,217	6,063	
Malaria	11	13	9	474	378	286
Measles (rubella)	155	53	71	22,904	52,750	24,143
Meningococcal infections: Total	24	8	12	1,756	1,262	1,065
Civilian	24	8	12	1,736	1,253	1,040
Military	—	—	—	20	9	24
Mumps	72	92	189	13,167	15,948	44,280
Pertussis	49	105	—	1,338	1,040	—
Rubella (German measles)	50	57	57	15,099	18,548	14,748
Tetanus	1	—	2	58	50	60
Tuberculosis	463	477	481	20,708	20,846	21,693
Tularemia	10	1	2	81	112	107
Typhoid fever	6	10	10	305	246	273
Typhus fever, tick-borne (Rky. Mt. spotted)	34	27	27	818	939	666
Veneral diseases:						
Gonorrhoea: Civilian	20,763	19,384	18,769	679,100	675,927	675,927
Military	311	562	562	17,149	18,740	20,678
Syphilis, primary & secondary: Civilian	349	362	364	14,290	14,190	16,686
Military	4	5	6	200	200	245
Rabies in animals	69	51	50	2,122	2,125	2,040

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1978		CUM. 1978
Anthrax	5	Poliomyelitis: Total	1
Botulism (Utah 1)	58	Paralytic	1
Congenital rubella syndrome	22	Psittacosis (Texas 1, Calif. 2)	79
Leprosy † (Texas 1)	109	Rabies in man	—
Leptospirosis (Calif. 1)	41	Trichinosis (N.H. 1)	41
Plague	6	Typhus fever, flea-borne (endemic, murine) (Texas 1)	30

* Delayed reports received for calendar year 1977 are used to update last year's weekly and cumulative totals.

** Medians for gonorrhoea and syphilis are based on data for 1975-1977.

† The following delayed report will be reflected in next week's cumulative total: Leprosy: Calif. +1.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending September 9, 1978, and September 10, 1977 (36th week)

REPORTING AREA	ASEPTIC MENIN- GITIS	BRU- CEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS		HEPATITIS (VIRAL), BY TYPE				MALARIA	
						Primary	Post-in- fectious	B	A	Unspecified			
											1978		
UNITED STATES	205	6	202	-	57	11	37	5	269	623	214	11	474
NEW ENGLAND	18	1	12	-	-	1	-	-	6	18	4	2	18
Maine	5	-	3	-	-	-	-	-	-	10	2	-	1
N.H. †	-	-	-	-	-	-	-	-	-	-	-	1	4
Vt.	-	-	-	-	-	-	-	-	1	2	-	-	-
Mass.	-	1	7	-	-	-	-	-	1	3	2	-	3
R.I.	-	-	-	-	-	-	-	-	1	2	-	1	2
Conn.	13	-	2	-	-	-	-	-	3	1	-	-	8
MID. ATLANTIC	55	1	15	-	1	2	2	-	45	26	16	2	103
Upstate N.Y. †	18	1	10	-	-	1	-	-	13	10	1	1	15
N.Y. City	3	-	5	-	1	1	-	-	6	3	9	1	46
N.J.	33	-	NN	-	-	-	-	-	24	10	6	-	18
Pa. †	1	-	-	-	-	-	2	-	2	3	-	-	24
E.N. CENTRAL	14	-	63	-	-	3	9	-	22	72	5	-	26
Ohio †	2	-	5	-	-	1	4	-	6	21	-	-	4
Ind. †	5	-	18	-	-	-	1	-	3	7	3	-	3
Ill.	-	-	13	-	-	-	-	-	6	25	2	-	4
Mich.	5	-	6	-	-	2	2	-	5	16	-	-	13
Wis.	2	-	21	-	-	-	2	-	2	3	-	-	2
W.N. CENTRAL	5	-	30	-	2	-	5	-	13	130	7	1	20
Minn.	-	-	-	-	-	-	-	-	5	114	-	-	4
Iowa	-	-	21	-	-	-	2	-	4	3	1	-	-
Mo.	1	-	-	-	1	-	1	-	3	10	6	-	7
N. Dak.	-	-	1	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	2	-	-	-	1	-	-	-	-	-	1
Nebr.	-	-	4	-	1	-	-	-	1	1	-	1	4
Kans. †	4	-	2	-	-	-	1	-	-	2	-	-	4
S. ATLANTIC	30	-	21	-	-	1	5	5	53	57	25	-	89
Del.	-	-	-	-	-	-	-	-	1	3	-	-	1
Md.	8	-	1	-	-	-	-	-	6	5	6	-	21
D.C.	-	-	-	-	-	-	-	-	-	-	-	-	2
Va. †	9	-	1	-	-	-	3	-	7	3	3	-	19
W. Va.	2	-	6	-	-	1	-	-	7	1	-	-	1
N.C.	8	-	NN	-	-	-	1	-	2	2	1	-	7
S.C.	-	-	-	-	-	-	-	-	13	-	-	-	4
Ga.	-	-	-	-	-	-	-	-	4	5	-	-	6
Fla.	3	-	13	-	-	-	1	5	20	32	14	-	28
E.S. CENTRAL	23	1	-	-	-	-	9	-	23	27	7	-	4
Ky.	14	-	-	-	-	-	-	-	12	10	5	-	1
Tenn.	7	-	NN	-	-	-	7	-	9	6	1	-	1
Ala.	-	-	-	-	-	-	-	-	2	3	1	-	1
Miss.	2	1	-	-	-	-	2	-	-	8	-	-	1
W.S. CENTRAL	12	1	7	-	1	1	6	-	29	82	61	1	24
Ark.	2	-	-	-	1	-	1	-	6	2	9	-	1
La.	1	-	NN	-	-	1	-	-	8	10	15	-	3
Okla.	3	1	-	-	-	-	-	-	6	14	4	-	3
Tex.	6	-	7	-	-	-	5	-	9	56	33	1	20
MOUNTAIN	20	1	31	-	3	1	-	-	19	61	40	-	4
Mont.	1	-	3	-	-	-	-	-	-	7	1	-	4
Idaho	6	1	-	-	-	-	-	-	-	4	-	-	-
Wyo.	-	-	-	-	-	-	-	-	-	4	1	-	-
Colo.	3	-	9	-	2	-	-	-	9	5	1	-	1
N. Mex.	7	-	-	-	-	-	-	-	-	7	2	-	1
Ariz.	-	-	NN	-	-	1	-	-	7	17	15	-	1
Utah	3	-	18	-	1	-	-	-	3	15	18	-	1
Nev.	-	-	1	-	1	-	-	-	-	2	2	-	1
PACIFIC	28	1	23	-	50	2	1	-	59	150	49	5	186
Wash. †	2	-	9	-	46	1	-	-	5	16	5	-	7
Oreg.	3	-	2	-	-	-	-	-	9	40	13	-	5
Calif. †	21	1	-	-	1	1	1	-	45	90	31	4	153
Alaska	-	-	-	-	3	-	-	-	-	1	-	-	4
Hawaii	2	-	12	-	-	-	-	-	-	3	-	1	17
Guam †	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-
P.R.	-	-	8	-	-	2	-	-	3	3	2	-	4
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	1

NN: Not notifiable.

NA: Not available.

* Delayed reports received for 1977 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.: N.H. +1, Kans. -1, Wash. +4, Calif. +20; Chickenpox: N.H. +3, Ups. NY +2, Ind. +17, Wash. +43, Calif. +3, Guam +7; Diph.: Wash. +3; Enceph., prim.: Ind. +3, Wash. +1; Enceph., post: Wash. +1; Hep. B: Pa. +14, Wash. +2, Calif. +55; Hep. A: Pa. +15, Ohio -1, Wash. +11, Calif. +76; Hep. unsp.: Pa. +2, Va. -1, Wash. +4, Calif. +32, Guam +2; Malaria: Calif. +8.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending September 9, 1978, and September 10, 1977 (36th week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1978	CUM. 1978	CUM. 1977*	1978	CUM. 1978	CUM. 1977*	1978	CUM. 1978	1978	1978	CUM. 1978	CUM. 1978
UNITED STATES	155	22,904	52,750	24	1,756	1,262	72	13,167	49	50	15,099	58
NEW ENGLAND	-	1,968	2,484	3	90	52	2	722	2	6	738	1
Maine	-	1,314	170	2	8	3	1	486	-	1	149	-
N.H.	-	46	510	-	8	3	1	15	-	-	101	-
Vt.	-	25	293	-	2	5	-	5	-	-	27	1
Mass. †	-	251	623	1	28	17	-	86	1	1	218	-
R.I.	-	8	64	-	17	1	-	32	1	-	42	-
Conn.	-	324	824	-	27	23	-	98	-	4	201	-
MID. ATLANTIC	6	2,170	8,320	3	307	168	7	609	4	5	2,981	4
Upstate N. Y.	6	1,399	3,789	-	103	40	2	203	2	3	519	1
N. Y. City	-	342	72	-	71	46	4	144	1	1	124	-
N.J.	-	74	195	2	54	37	-	132	-	-	1,600	-
Pa.	-	355	3,614	1	79	45	1	130	1	1	738	3
E.N. CENTRAL	55	9,958	11,195	2	162	144	25	5,278	9	16	6,968	2
Ohio	-	479	1,847	2	64	52	2	927	7	-	1,358	1
Ind. †	1	188	4,320	-	31	9	5	306	-	7	573	1
Ill.	2	631	1,687	-	7	35	4	1,656	1	-	423	-
Mich.	48	7,196	931	-	49	35	1	1,348	-	7	3,086	-
Wis. †	4	1,464	2,410	-	11	13	13	1,041	1	2	1,528	-
W.N. CENTRAL	2	381	9,439	-	56	56	7	1,901	2	-	656	6
Minn.	-	34	2,620	-	14	19	-	20	-	-	129	1
Iowa	1	53	4,267	-	5	8	1	121	1	-	53	-
Mo.	-	11	1,040	-	23	18	1	1,155	-	-	97	-
N. Dak.	-	191	23	-	3	1	1	14	1	-	81	-
S. Dak.	-	-	67	-	2	4	-	6	-	-	111	1
Nebr.	-	5	214	-	-	1	2	23	-	-	34	-
Kans.	1	87	1,208	-	9	5	2	562	-	-	152	4
S. ATLANTIC	60	4,913	4,532	5	441	294	7	755	11	9	1,016	14
Del. †	-	8	22	-	15	19	1	55	-	-	35	-
Md.	-	51	371	-	28	18	-	66	-	-	7	2
D.C.	-	-	14	-	1	-	-	2	-	-	1	-
Va.	1	2,820	2,709	-	53	24	-	134	-	2	242	1
W. Va.	1	1,034	226	-	9	9	-	166	-	2	338	-
N.C.	-	116	63	-	88	62	-	66	-	1	179	3
S.C.	-	197	147	-	24	28	1	17	1	-	28	1
Ga.	-	17	766	-	47	46	2	67	2	-	5	-
Fla.	58	670	214	5	176	88	3	182	8	4	181	7
E.S. CENTRAL	15	1,395	1,976	4	141	134	4	1,118	1	3	499	3
Ky.	-	118	1,188	-	28	26	-	182	-	-	129	2
Tenn.	6	963	672	2	34	33	2	448	1	1	200	-
Ala.	-	89	78	1	43	50	-	411	-	1	22	-
Miss.	9	225	38	1	36	25	2	77	-	1	148	1
W.S. CENTRAL	5	1,042	2,076	3	275	218	8	1,662	4	2	915	15
Ark.	2	18	29	-	22	13	4	586	-	-	58	1
La.	2	343	74	3	118	81	-	63	-	-	483	1
Okla.	-	13	56	-	16	10	-	4	-	-	11	4
Tex.	1	668	1,917	-	119	114	4	1,009	4	2	363	9
MOUNTAIN	-	247	2,509	1	38	31	3	399	1	-	199	1
Mont.	-	105	1,162	-	2	2	-	141	-	-	17	-
Idaho	-	1	161	1	4	4	-	20	-	-	2	-
Wyo.	-	-	10	-	-	2	1	1	-	-	1	-
Calo.	-	29	499	-	3	1	1	88	-	-	47	-
N. Mex.	-	-	256	-	7	8	-	16	-	-	3	-
Ariz.	-	49	301	-	13	10	-	12	1	-	92	-
Utah	-	44	18	-	5	3	1	116	-	-	27	1
Nev.	-	19	93	-	4	1	-	5	-	-	11	-
PACIFIC	12	830	10,219	3	246	165	9	723	15	9	1,127	12
Wash. †	-	157	532	1	40	18	2	168	3	-	98	-
Oreg.	1	148	366	-	27	17	2	86	2	5	113	-
Calif. †	11	516	9,226	2	169	100	4	435	8	4	902	12
Alaska	-	-	60	-	6	28	-	8	2	-	4	-
Hawaii	-	9	35	-	4	2	1	26	-	-	10	-
Guam	NA	26	8	-	-	1	NA	37	NA	NA	4	1
P.R. †	3	239	928	-	6	1	11	1,172	1	-	15	5
V.I.	-	6	14	-	1	-	-	1	-	-	1	-

NA: Not available.

*Delayed reports received for 1977 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: Mass. -1, Wis. +2, Del. -2, Calif. +2; Men. inf.: Calif. +1; Mumps: Ind. +2, Wash. +2, Calif. +4, P.R. +6; Pertussis: Ind. +2, Wash. +3, Calif. +3; Rubella: Mass. -2, Ind. +5, Wash. +6, Calif. +3; Tetanus: Wash. +1.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending September 9, 1978, and September 10, 1977 (36th week)

REPORTING AREA	TUBERCULOSIS		TULA- REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)						RABIES (in Animals)
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1978	CUM. 1978		1978	CUM. 1978	1978	CUM. 1978	1978	CUM. 1978	CUM. 1977*	1978	CUM. 1978	CUM. 1977*	
UNITED STATES	463	20,708	81	6	305	34	818	20,763	679,100	675,927	349	14,290	14,190	2,122
NEW ENGLAND	15	680	-	-	40	-	13	580	17,759	17,993	16	408	574	79
Maine	-	49	-	-	-	-	-	40	1,362	1,309	-	7	16	64
N.H.	-	13	-	-	5	-	-	19	822	714	-	5	3	2
Vt.	-	29	-	-	1	-	-	19	419	462	-	3	6	2
Mass.	7	396	-	-	23	-	4	233	7,782	7,687	8	248	408	6
R.I.	3	48	-	-	4	-	1	40	1,274	1,470	-	16	8	-
Conn.†	5	145	-	-	7	-	8	229	6,100	6,351	8	129	133	5
MID. ATLANTIC	99	3,561	5	-	41	2	47	2,029	73,442	69,746	43	1,861	1,967	74
Upstate N.Y.	26	534	4	-	7	2	27	290	12,451	12,015	-	142	183	51
N.Y. City†	36	1,288	1	-	27	-	2	576	27,824	27,326	26	1,280	1,238	-
N.J.	17	858	-	-	4	-	10	639	13,787	12,307	10	225	262	11
Pa.	20	881	-	-	3	-	8	524	19,380	18,098	7	214	284	12
E.N. CENTRAL	60	3,212	1	1	22	1	28	4,339	103,410	107,117	61	1,585	1,517	125
Ohio	9	584	1	-	6	1	18	1,161	26,917	28,247	-	291	348	11
Ind.	4	358	-	-	-	-	1	930	10,817	9,877	14	108	124	9
Ill.	21	1,217	-	1	6	-	9	1,056	32,397	34,784	46	993	789	41
Mich.	23	909	-	-	10	-	-	796	23,932	24,544	-	146	177	7
Wis.	3	144	-	-	-	-	-	396	9,347	9,665	1	47	79	57
W.N. CENTRAL	15	675	17	1	13	4	29	1,074	34,333	35,469	4	342	314	442
Minn.	2	124	-	1	5	-	-	130	5,823	6,320	-	130	95	137
Iowa†	1	75	-	-	2	-	-	53	3,737	4,079	-	53	28	93
Mo.†	8	284	15	-	4	4	17	480	15,005	14,815	4	95	119	52
N. Dak.	1	31	-	-	-	1	24	638	682	-	2	3	76	-
S. Dak.†	-	57	-	-	-	-	2	39	1,210	1,044	-	2	6	56
Nebr.†	1	16	-	-	-	-	5	86	2,538	3,059	-	11	25	5
Kans.†	2	88	2	-	2	-	4	262	5,382	5,470	-	49	38	23
S. ATLANTIC	115	4,473	8	1	45	18	448	4,512	166,194	167,237	87	3,808	3,958	307
Dal.	-	37	-	-	3	-	5	106	2,366	2,326	-	6	18	3
Md.†	15	674	5	-	9	-	102	591	21,023	20,876	6	283	253	-
D.C.†	4	233	-	-	1	-	-	287	10,939	10,869	2	291	415	-
Va.†	9	474	3	-	5	3	95	308	15,848	17,541	6	319	390	8
W. Va.	8	163	-	-	3	1	10	44	2,288	2,244	2	15	3	8
N.C.†	17	688	-	-	2	9	151	893	24,052	24,655	18	396	543	8
S.C.	5	397	-	-	4	5	50	515	16,366	15,805	5	193	169	75
Ge.†	20	624	-	-	3	-	35	771	32,134	32,203	29	944	858	194
Fla.†	37	1,183	-	1	15	-	-	997	41,178	40,718	19	1,361	1,309	11
E.S. CENTRAL	48	1,946	6	-	7	2	154	1,599	58,614	60,234	13	737	517	106
Ky.	6	438	2	-	2	1	39	259	7,496	8,125	-	95	65	56
Tenn.	13	602	3	-	3	1	96	696	21,829	24,394	1	247	158	22
Ala.	13	472	1	-	1	-	11	282	16,690	16,431	1	125	110	78
Miss.	16	434	-	-	1	-	8	362	12,599	11,284	11	270	184	-
W.S. CENTRAL	42	2,412	37	-	34	6	87	3,204	93,132	84,408	71	2,303	2,013	663
Ark.	4	268	24	-	5	1	14	336	6,836	6,687	2	50	50	104
La.	12	415	6	-	3	-	1	535	15,194	12,013	19	504	487	12
Okla.	3	239	4	-	2	5	51	275	8,754	8,108	-	66	54	144
Tex.	23	1,490	3	-	24	-	21	2,058	62,348	57,600	50	1,683	1,422	403
MOUNTAIN	6	603	5	-	18	-	8	739	25,751	27,367	3	299	306	61
Mont.	-	43	-	-	2	-	2	52	1,444	1,413	-	8	4	11
Idaho	-	24	2	-	5	-	2	30	1,016	1,272	-	9	8	-
Wyo.	1	14	2	-	-	-	1	27	609	675	-	10	2	-
Colo.	2	67	-	-	4	-	2	222	7,180	7,168	1	92	96	22
N. Mex.	1	91	-	-	2	-	-	165	3,642	3,997	1	66	67	13
Ariz.	-	281	-	-	3	-	-	59	6,668	7,676	1	71	111	12
Utah	1	30	1	-	1	-	-	57	1,411	1,607	-	11	6	3
Nev.	1	53	-	-	1	-	1	129	3,781	3,556	-	32	12	-
PACIFIC	63	3,146	2	3	85	1	4	2,687	106,465	106,356	51	2,947	3,024	265
Wash.†	-	189	-	-	6	1	1	296	8,773	8,073	-	118	171	1
Oreg.	3	132	-	-	1	-	2	209	7,572	7,295	2	102	91	6
Calif.†	51	2,400	2	3	71	-	1	2,091	84,776	85,243	49	2,691	2,715	250
Alaska†	-	46	-	-	-	-	-	57	3,374	3,493	-	8	19	8
Hawaii	9	380	-	-	7	-	-	34	1,970	2,252	-	28	28	-
Guam†	NA	39	-	NA	-	NA	-	NA	132	153	NA	-	1	-
P.R.	7	273	-	-	2	-	-	24	1,559	2,212	4	333	387	29
V.I.†	-	4	-	-	2	-	-	2	142	145	1	13	7	-

NA: Not available.

* Delayed reports received for 1977 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: Md. -1, N.C. -1, Fla. -3, Wash. +33, Calif. +70, Alaska +11, Guam +2; T. fever: Calif. +4; RMSF: Conn. -1, Mo. +1, Md. -2, Va. -1; GC: Conn. +16 mil., Kans. +60 mil., D.C. +248 civ., Ga. +75 mil., Wash. +94 mil., Calif. +3154 civ. +56 mil., Guam +9 civ., V.I. +2 civ.; Syphilis: NYC +40, Iowa -18, D.C. +4, Wash. +33, Calif. +27; An. rabies: S. Dak. +2, Nebr. +1, Calif. +7.

TABLE IV. Deaths in 121 U.S. cities,* week ending
September 9, 1978 (36th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL	REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	>65	45-64	25-44	<1			ALL AGES	>65	45-64	25-44	<1	
NEW ENGLAND	631	356	160	35	21	27	S. ATLANTIC	1,041	576	303	82	39	39
Boston, Mass.	194	107	56	14	10	8	Atlanta, Ga.	103	40	39	18	3	3
Bridgeport, Conn.	39	24	13	1	1	2	Baltimore, Md.	214	117	61	18	12	3
Cambridge, Mass.	23	18	3	2	-	-	Charlotte, N.C.	53	32	13	2	4	3
Fall River, Mass.	27	23	4	-	-	-	Jacksonville, Fla.	91	56	22	6	1	5
Hartford, Conn.	60	35	18	5	-	-	Miami, Fla.	108	64	31	10	2	4
Lowell, Mass.	19	12	4	2	1	-	Norfolk, Va.	43	25	13	1	3	2
Lynn, Mass.	15	12	3	-	-	-	Richmond, Va.	64	32	23	5	-	4
New Bedford, Mass.	17	11	6	-	-	-	Savannah, Ga.	24	13	6	2	2	4
New Haven, Conn.	51	29	13	4	3	1	St. Petersburg, Fla.	66	52	10	-	-	3
Providence, R.I.	49	31	13	2	1	5	Tampa, Fla.	69	43	16	7	-	5
Somerville, Mass.	5	5	-	-	-	-	Washington, D.C.	154	78	49	11	10	2
Springfield, Mass.	37	24	10	1	1	3	Wilmington, Del.	52	24	20	2	2	1
Waterbury, Conn.	39	28	6	-	1	4							
Worcester, Mass.	56	37	11	4	3	4							
							E.S. CENTRAL	545	298	153	38	20	20
MID. ATLANTIC	2,490	1,534	648	160	68	119	Birmingham, Ala.	90	43	30	6	3	2
Albany, N.Y.	51	32	14	2	1	-	Chattanooga, Tenn.	45	26	12	5	1	3
Allentown, Pa.	19	11	8	-	-	-	Knoxville, Tenn.	37	23	6	5	-	1
Buffalo, N.Y.	99	58	32	4	1	10	Louisville, Ky.	87	43	31	4	6	2
Camden, N.J.	40	24	10	4	-	6	Memphis, Tenn.	112	60	33	7	4	6
Elizabeth, N.J.	23	15	8	-	-	-	Mobile, Ala.	51	37	9	3	-	3
Erie, Pa.	29	20	6	1	1	2	Montgomery, Ala.	37	19	7	5	4	1
Jersey City, N.J.	30	17	9	3	1	2	Nashville, Tenn.	86	47	25	3	7	2
Newark, N.J.	49	22	16	6	3	4							
N.Y. City, N.Y.	1,268	806	317	84	29	41	W.S. CENTRAL	1,126	607	300	90	49	20
Paterson, N.J.	42	24	11	4	2	5	Austin, Tex.	49	38	3	5	-	3
Philadelphia, Pa.	419	239	109	36	19	22	Baton Rouge, La.	32	19	9	-	1	-
Pittsburgh, Pa.	67	43	19	3	-	5	Corpus Christi, Tex.	31	19	7	1	1	-
Reading, Pa.	34	23	9	-	-	1	Dallas, Tex.	181	83	53	14	9	1
Rochester, N.Y.	120	76	22	7	8	8	El Paso, Tex.	37	19	11	3	-	-
Schenectady, N.Y.	21	9	6	2	-	3	Fort Worth, Tex.	52	34	8	7	1	2
Scranton, Pa.	22	15	5	1	-	2	Houston, Tex.	283	143	76	27	13	6
Syracuse, N.Y.	74	42	25	2	2	3	Little Rock, Ark.	57	30	18	1	5	1
Trenton, N.J.	33	22	10	1	-	-	New Orleans, La.	141	69	52	16	4	-
Utica, N.Y.	25	18	6	-	-	5	San Antonio, Tex.	169	92	44	12	8	3
Yonkers, N.Y.	25	18	6	-	1	2	Shreveport, La.	23	17	4	1	1	1
							Tulsa, Okla.	71	44	15	3	6	3
E.N. CENTRAL	2,128	1,269	536	143	95	51	MOUNTAIN	430	244	103	37	19	18
Akron, Ohio	71	50	11	5	4	-	Albuquerque, N. Mex.	48	27	12	5	1	5
Canton, Ohio	31	25	4	-	1	-	Colo. Springs, Colo.	32	18	7	4	1	3
Chicago, Ill.	541	308	140	32	42	13	Denver, Colo.	69	45	9	6	6	1
Cincinnati, Ohio	145	93	30	9	7	1	Las Vegas, Nev.	48	25	19	-	1	2
Cleveland, Ohio	133	75	42	9	3	7	Ogden, Utah	17	9	4	2	-	2
Columbus, Ohio	134	78	32	9	5	3	Phoenix, Ariz.	99	50	23	10	8	2
Dayton, Ohio	87	51	25	7	2	-	Pueblo, Colo.	14	9	3	2	-	2
Detroit, Mich.	246	134	77	16	6	1	Salt Lake City, Utah	45	28	10	5	2	1
Evansville, Ind.	43	27	12	1	2	3	Tucson, Ariz.	58	33	16	3	-	-
Fort Wayne, Ind.	53	32	15	1	1	-							
Gary, Ind.	36	17	8	5	3	-							
Grand Rapids, Mich.	52	33	11	3	1	5	PACIFIC	1,255	782	310	94	26	26
Indianapolis, Ind.	135	77	33	14	6	1	Berkeley, Calif.	19	12	3	3	-	-
Madison, Wis.	28	12	7	7	1	2	Fresno, Calif.	35	19	6	7	2	6
Milwaukee, Wis.	109	72	27	7	1	2	Glendale, Calif.	19	13	4	-	-	-
Peoria, Ill.	50	30	9	5	3	6	Honolulu, Hawaii	52	39	10	1	-	1
Rockford, Ill.	37	21	9	2	5	5	Long Beach, Calif.	60	34	15	5	3	1
South Bend, Ind.	36	26	3	2	2	1	Los Angeles, Calif.	374	232	97	26	5	11
Toledo, Ohio	90	49	31	8	-	1	Oakland, Calif.	86	54	23	6	2	1
Youngstown, Ohio	71	59	10	1	1	-	Pasadena, Calif.	17	11	3	2	1	1
							Portland, Ore.	101	62	19	5	8	-
W.N. CENTRAL	632	382	160	29	34	18	Sacramento, Calif.	56	34	17	4	-	1
Des Moines, Iowa	71	41	24	3	1	-	San Diego, Calif.	121	74	34	8	3	1
Duluth, Minn.	23	18	2	-	-	4	San Francisco, Calif.	109	67	29	11	-	-
Kansas City, Kans.	28	16	5	2	4	1	San Jose, Calif.	50	33	11	3	-	2
Kansas City, Mo.	113	70	28	4	6	1	Seattle, Wash.	84	50	24	7	-	-
Lincoln, Nebr.	29	21	6	2	-	5	Spokane, Wash.	37	24	5	4	1	1
Minneapolis, Minn.	65	42	14	3	8	3	Tacoma, Wash.	36	24	7	2	1	-
Omaha, Nebr.	63	31	18	3	6	-							
St. Louis, Mo.	134	82	35	8	2	3							
St. Paul, Minn.	46	30	12	3	1	-							
Wichita, Kans.	56	31	16	1	6	1							
							TOTAL	10,278	5,088	2,673	708	371	338
							Expected Number	10,815	6,520	2,778	705	428	371

*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

*Recommendation of the Public Health Service
Advisory Committee on Immunization Practices*

Influenza Vaccine

Recommendations on the use of influenza vaccine for high-risk persons 13 years of age and older have been published previously (1). Results of clinical trials with children aged 6 months to 13 years have now been reviewed and are summarized in Table 1. Single copies of the recommendation including the completed table will be available on request.

Reference

1. MMWR 27:285, 1978

TABLE 1. Influenza vaccine dosage, by age, 1978-79

Vaccine formulation	Age	Product type	Dosage (ml)	Number of doses
Adult*	>26 years	whole virion or subvirion (split virus)	0.5	1
Youth**	13-25 years	whole virion or subvirion (split virus)	0.5	2†
	3-12 years	subvirion (split virus)	0.25	2†
	6-35 months††	subvirion (split virus)	0.15	2†

* Contains 7 µg each of A/USSR/77, A/Texas/77, B/Hong Kong/72 hemagglutinin antigens.

** Contains 20 µg A/USSR/77 and 7 µg each of A/Texas/77 and B/Hong Kong/72 hemagglutinin antigens.

† 4 weeks or more between doses; both doses essential for good protection.

†† Based on limited data. Since the likelihood of febrile convulsions is greater in this age group, special care should be taken in weighing relative risks and benefits.

Epidemiologic Notes and Reports

Follow-up on *Vibrio cholerae* Infection — Louisiana

There have been no further cases of cholera in Louisiana since the report of a single case with onset of illness on August 10 (1). The isolate from this case was found to be enterotoxigenic in the Y-1 adrenal cell assay.

Investigation has not yet revealed how the patient became infected. *Vibrio cholerae* El Tor Inaba was found in sewage from the patient's town. However, it was not found in 3 recent cultures of feces from the patient or in stool cultures from his relatives or close associates; frozen shrimp and crab from the same lots he had eaten 2 and 3 days before onset of illness; ice from the bag he had used the day before onset of illness; or water samples, shrimp, and crabs obtained on September 8 from the site where the patient had gone fishing 3 days before onset of illness.

Stool cultures from persons currently hospitalized with diarrheal illnesses in the town have been negative for *V. cholerae*. A review of emergency room records found no recent increase in diarrheal illnesses in the town where the patient lives. The local bacteriology laboratory and the regional state laboratory have begun using TCBS (thio-sulfate citrate bile salts sucrose) agar routinely in stool cultures, as this medium greatly assists isolation of *V. cholerae* and other *Vibrio* organisms (2). Environmental investigations are continuing.

Reported by CT Caraway, DVM, State Epidemiologist, Louisiana Dept of Health and Human Resources; Enteric Diseases Br and Epidemiologic Investigations Laboratory Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Cholera Follow-up — Continued

References

1. MMWR 27:341, 1978
2. Lennette EH, Spaulding EH, Truant JP (eds): Manual of Clinical Microbiology. Second Ed. American Society for Microbiology, Washington, D.C. 1974

Tularemia — Massachusetts

In August 1978, all 7 members of a household on Martha's Vineyard developed a febrile illness. The patients, all adults, were at their cottage on August 2-4; some had been there at various other times throughout the summer. Seven other persons present in the last week of July and one present on August 6-11 have remained well. The patients were seen by physicians on Martha's Vineyard and in Boston, Connecticut, and Colorado.

Onset of illness was between August 6 and 11 for 6 of the individuals. Illness was characterized by fever to 104 F (40 C), myalgia, headache, and non-productive cough. Chest X rays on 5 of the 7 showed pulmonary infiltrates. One patient required respiratory support. Erythromycin and tetracycline appeared to hasten recovery. All are recovering. Four of the 5 persons tested to date show seroconversion to *Francisella tularensis*.

Review of hospital records, chest X rays, and emergency room records for July and August 1978 did not show a significant increase compared with 1977 in the number of cases of pneumonia or febrile illness on the island; no respiratory illness in neighbors was found. Environmental studies are in progress.

Reported by R Hoxsie, MD, AD Langmuir, MD, MPH, Martha's Vineyard, Chilmark Board of Health; N Fiumara, MD, State Epidemiologist, Kenlock, Massachusetts, Dept of Health; J Lewis, MD, State Epidemiologist, Connecticut Dept of Health; P Moran, MD, Grand Junction, Colorado; TM Vernon, MD, State Epidemiologist, Colorado Dept of Health; Parasitic Diseases, Viral Diseases, and Field Services Divisions, Bur of Epidemiology, CDC.

Legionnaires' Disease — New York, Tennessee

New York: Six confirmed and 118 suspected cases of Legionnaires' disease have recently been reported in workers in the garment district in New York City—an area from W. 34th Street to W. 39th Street between 5th and 9th Avenues.

Cases are defined as follows: *confirmed*: a 4-fold rise in reciprocal antibody titer to ≥ 128 or positive direct fluorescent antibody test on lung tissue; and *suspected*: fever of 38.8 C (102 F) or pneumonia since August 1 in a person who works or lives in the garment district.

Two of the confirmed cases and 1 of the suspected cases were fatal. Dates of onset for confirmed cases range from August 11 to August 24, and for suspected cases from August 1 to September 9.

In an effort to evaluate whether this represents an outbreak, and if so, where it is localized, 4 populations are being surveyed for illness that meets the definition of a suspected case and for seroreactivity to the Legionnaires' disease bacterium. These include: 1) all 27 workers at Establishment A, where 1 of the patients with confirmed disease and 4 of those with suspected Legionnaires' disease were employed; 2) all workers in selected establishments throughout the garment district (approximately 500 workers); 3) a control group of approximately 300 garment workers outside the garment district; and 4) a control group of approximately 300 non-garment workers outside the garment district.

Legionnaires' disease — Continued

Preliminary results from the first population show that 4 out of 4 persons with illness meeting the case definition and 4 out of 13 completely well individuals at Establishment A had reciprocal titers ≥ 256 . This suggests that acute illness in that building is statistically associated with antibody titers to Legionnaires' disease ($p=.03$, Fisher's exact test). However, no association between antibody titer and illness that matches the definition of a suspected case has yet been found in the survey of other areas of the garment district. The overall prevalence of elevated titers (29% ≥ 128) appears high in comparison to other populations which have been studied. The remaining survey results are pending.

Establishment A, where illness in workers is associated with elevated titers to Legionnaires' disease, occupies 2 stories within a much larger structure situated on the northern side of 35th Street. There is no evidence of increased illness or seroreactivity in other workers at the larger building. The ventilation systems are apparently separate; further environmental investigation of the site is underway.

Hospitals in New York City are being surveyed to determine if there has also been an increased number of cases of Legionnaires' disease outside the garment district.

Tennessee: Five confirmed cases of Legionnaires' disease, 1 of them fatal, have been diagnosed by the laboratory at Baptist Hospital, Memphis. Two occurred in hospital employees and 3 in patients with previous contact with the hospital. The dates of onset of cases were between August 14 and August 25. Inspection of infection-control surveillance records suggests an increased number of pneumonia cases from August 12 through September 7.

A flood occurred in portions of Memphis, including the hospital, on August 8; it inactivated several portions of the hospital's air-conditioning system for several weeks. Testing of environmental samples for the Legionnaires' disease bacterium is in progress. Investigations are currently underway by the hospital, local and state health departments, and CDC to evaluate cases of pneumonia at Baptist Hospital and at other hospitals in the Memphis area to define the situation.

Reported by Health and Hospitals Corporation of New York; JS Marr, MD, New York City Epidemiologist, New York City Dept of Health; RP Kelly, MD, R Rendtorff, MD, Baptist Memorial Hospital, Memphis; J Levy, MD, G Lovejoy, MD, Memphis-Shelby County Health Dept; RH Hutcheson Jr, MD, State Epidemiologist, Tennessee Dept of Public Health; Field Services Div, Epidemic Investigations Laboratory Br, Hospital Infections Br, Special Pathogens Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

International Notes

Quarantine Measures

The following changes should be made in the *Supplement — Health Information for International Travel*, MMWR, Vol. 26, August 1977:

TRINIDAD AND TOBAGO

Smallpox — Insert: Effective 9-1-78, and until further notice, smallpox certificate will be

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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.

Send mailing list additions, deletions, and address changes to: Center for Disease Control, Attn: Distribution Services, GSO, 1-SB-36, Atlanta, Georgia 30333. When requesting changes be sure to give your former address, including zip code and mailing list code number, or send an old address label.

Quarantine Measures – Continued

required of all travelers who have been in the Birmingham, England, area in the preceding 14 days.

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