CENTER FOR DISEASE CONTROL

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Epidemiologic Notes and Reports

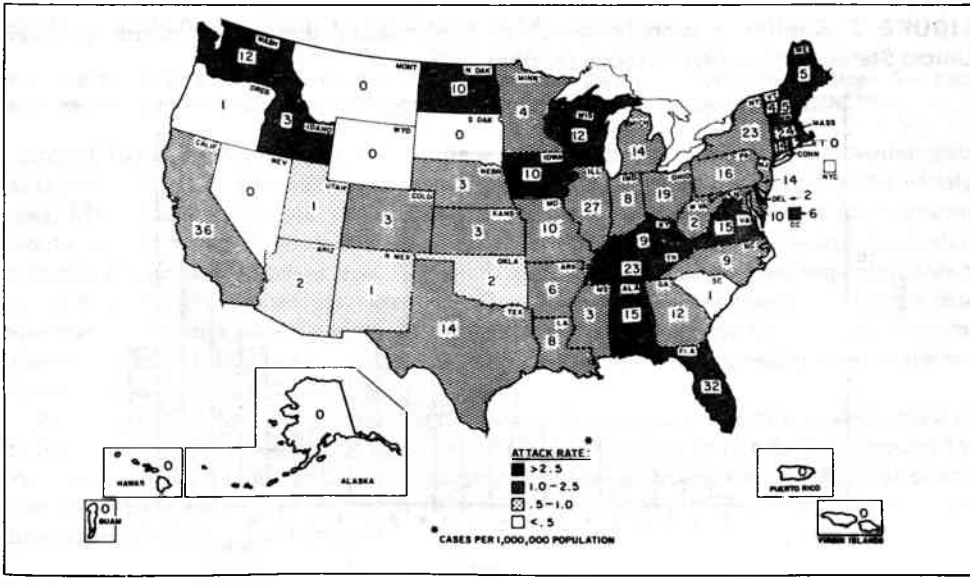
Legionnaires' Disease — United States

As of October 31, 1978, 453 sporadic cases of infection with the Legionnaires' disease bacterium (LDB) have been confirmed in the United States* by ≥4-fold rise in antibody titer to a reciprocal titer of ≥128, as measured by indirect immunofluorescence, demonstration of the organism in tissue by direct immunofluorescence, or culture of the organism. The earliest case had onset in May 1973.

These 453 cases, which are in addition to the confirmed outbreak-associated cases in Ohio, Vermont, Tennessee, California, Georgia, New York, Michigan, Indiana, Texas, Pennsylvania, and the District of Columbia, have occurred in 43 states and the District of Columbia. Outbreaks associated with apparent common exposure in Indiana and Texas each predominantly affected travelers from several states. The majority of sporadic cases have been in eastern and midwestern states (Figure 1). The geographic distribution of the 13 known outbreaks is similar.

*As of November 7, 43 more sporadic cases have been reported that are not included in these analyses—2 from Oregon, and 41 from Michigan. Dates of onset in most cases are since January 1, 1978.

FIGURE 1. Sporadic cases of Legionnaires' disease,† by state, United States, May 1973 through October 1978



†Numbers within states indicate total reported cases per state.

Legionnaires' Disease -- Continued

The number of sporadic cases by month of onset of symptoms peaked in September 1977 and has averaged approximately 20 cases per month over the past year (Figure 2). The rising number of cases with onset from August 1976 to September 1977 is partly due to increased numbers of specimens being submitted in late 1977, when LD testing became widely available. The progressive decrease from September 1977 to a low in February 1978, and the progressive increase since then may indicate a true seasonality paralleling that demonstrated by outbreak cases (Figure 3).

Where the sex of the patient was known, the sporadic cases included 309 men and 128 women. The youngest patient was a 2-year-old boy; the oldest patient was an 84-year-old man. The median age for males is 54 years, for females 56 years. Death directly attributable to Legionnaires' disease (LD) has occurred in 86 (19%) of the sporadic cases in which the outcome was known. Among 244 cases in which race was known, 210 occurred in whites and 34 occurred in blacks.

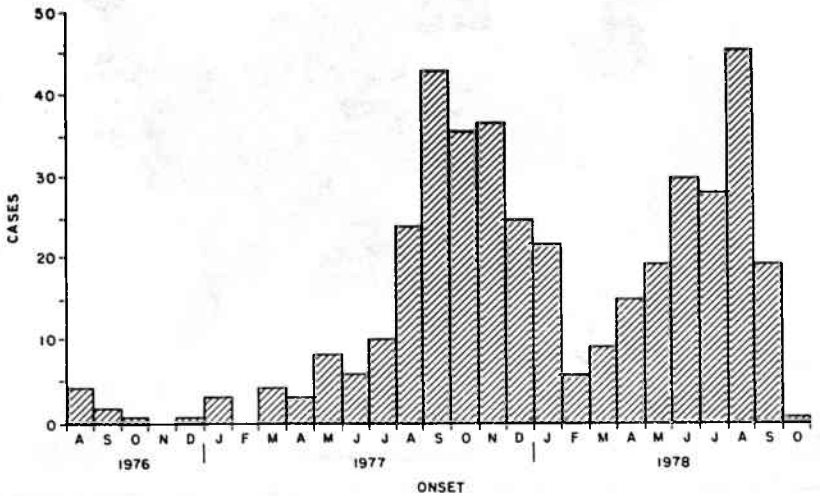
Among 558 cases of LD associated with 10 outbreaks,* 412 were male and 146 were female. There were 70 deaths among these 558 cases, representing 14% of cases presenting with pneumonia. The relatively large number of sporadic cases confirmed by direct immunofluorescence (a test that generally has been performed on autopsy material) may partly explain the higher case-fatality rate associated with sporadic cases.

Among sporadic cases in which death was directly attributable to LD, the median age was 56 years; among cases in which the sex was known, 59 were males and 19 were females. The case-fatality rate for men was 19%, for women 15%. There was no significant change in the case-fatality rate with increasing age.

As a result of investigations of outbreaks in Bloomington, Ind., Memphis, Tenn., and Atlanta, Ga., LDB has been isolated from water from 2 cooling towers, 2 evaporative condensers, and a creek.

Three hundred seventy-four cases have been confirmed by serology alone, 59 by direct immunofluorescence alone, 4 by culture alone, 8 by serology and direct immunofluores-

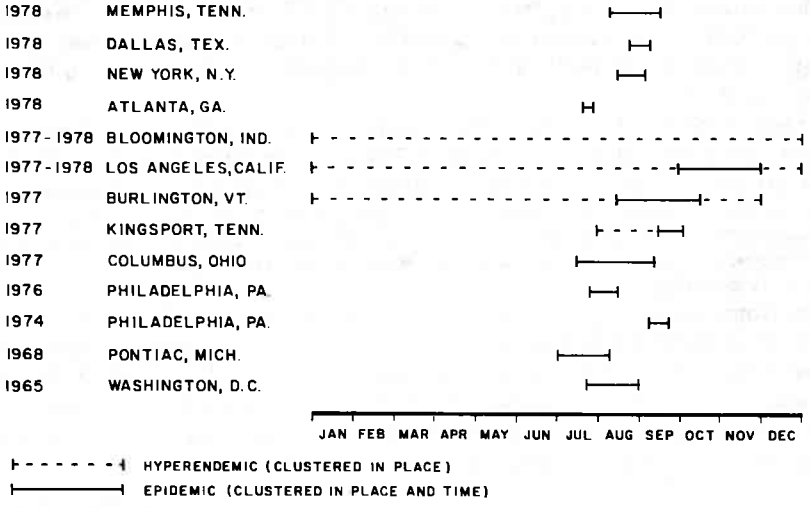
FIGURE 2. Confirmed sporadic cases* of Legionnaires' disease, by month of onset, United States, August 1976 through October 1978



*453 cases, as of October 31, 1978; excludes 51 cases in which the month of onset is not known

Legionnaires' Disease — Continued

FIGURE 3. Seasonal distribution of Legionnaires' disease outbreaks, by location, 1965 through 1978



cence, 4 by culture and direct immunofluorescence, 1 by serology and culture, and 1 by all 3 methods. In 2 cases the method of diagnosis is unknown. Among 59 cases confirmed by direct immunofluorescence in which the sources of the specimens are known, 52 have been confirmed from lung specimens obtained by biopsy or autopsy alone, 2 from lung aspirates, 1 from a bronchoscopy specimen, 1 from pleural fluid alone, 1 from a transtracheal aspirate, 1 from sputum, and 1 from lung and pleural fluid specimens. Among 3 culture-confirmed cases in which the sources of the specimens are known, 1 has been confirmed from pleural fluid, 1 from lung, and 1 from pleural fluid and lung.

Reported by State Epidemiologists from 43 states and the District of Columbia; Virology Div, Bacteriology Div, Bur of Laboratories, and Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: In April 1978, the Conference of State and Territorial Epidemiologists agreed to make LD a reportable disease for 3 years. As specific testing is more widely used, LD is being diagnosed with increasing frequency. Serum specimens for diagnosis should include an acute-phase specimen drawn in the first week of illness and a convalescent-phase specimen drawn at least 22 days after onset of illness; another specimen drawn up to 6 weeks after onset may permit recognition of late seroconversion. Lung tissue specimens providing greatest yield in establishing the diagnosis of LD include the combination of fresh refrigerated or frozen tissue for culture and wet formalin-fixed tissue for direct immunofluorescence testing.

While the CDC has no new or specific recommendations on routine maintenance of cooling towers in relation to the presence of LDB, adherence to standard procedures for the control of algae and bacteria that may interfere with satisfactory mechanical operation is advised. Laboratory work to determine procedures for decontamination of air-conditioning systems is underway.

*excluding 95 cases among 100 office workers in Pontiac, Michigan, and excluding outbreaks in Memphis, Tennessee; Texas; and California because data collection is ongoing.

Follow-up on Cholera — Louisiana

Vibrio cholerae O1 (serotype Inaba) has been isolated from a Moore swab (*1*) that had been in 1 of 2 main divisions of the sewerage system of Franklin, a town in the southern Louisiana parish of St. Mary, between October 20-23. State and local investigators are attempting to find the source of contamination through extensively surveying the sewerage system using Moore swabs and by culturing persons in Franklin who have recently had diarrheal illnesses.

No cases of cholera have been identified in Louisiana during the past month, despite extensive surveillance of diarrheal illnesses. The state has extended its surveillance of diarrheal illness and sewerage systems to include all of the coastal areas of Louisiana.

Reported by HB Bradford, PhD, Director, Bur of Laboratories, CT Caraway, DVM, State Epidemiologist, Louisiana Dept of Health and Human Resources; Food and Drug Administration; Enteric Diseases Br, Epidemiologic Investigations Laboratory Br, Bacterial Diseases Div, Quarantine Div, Field Services Div, Bur of Epidemiology, CDC.

Editorial Note: Moore swabs in sewerage systems have been an effective means of surveillance for *V. cholerae* O1 in Louisiana and thus far have been complimentary to and more sensitive than culturing persons seeking medical attention for diarrheal illnesses. Each surveillance method offers advantages. Culturing persons with diarrhea identifies infected persons even if their homes are not connected to municipal sewerage systems (6 of the 11 infected persons identified in Louisiana had septic tanks), and permits epidemiologic in-

(Continued on page 447)

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

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

DISEASE	44th WEEK ENDING		MEDIAN	CUMULATIVE, FIRST 44 WEEKS		
	November 4, 1978	November 5, 1977*	1973-1977**	November 4, 1978	November 5, 1977*	MEDIAN 1973-1977**
Aseptic meningitis	131	109	109	5,105	4,037	3,489
Brucellosis	3	3	3	130	188	188
Chickenpox	1,322	1,374	1,374	128,573	166,224	148,654
Diphtheria	–	2	4	64	76	157
Encephalitis: Primary (arthropod-borne & unspec.)	17	27	30	851	982	1,254
Post-infectious	3	3	3	175	179	236
Hepatitis, Viral: Type B	254	283	276	12,520	13,889	9,848
Type A	581	567	793	24,660	25,913	29,633
Type unspecified	178	138		7,563	7,405	
Malaria	18	6	6	619	463	359
Measles (rubeola)	167	99	179	24,774	53,646	24,955
Meningococcal infections: Total	39	29	26	1,997	1,473	1,222
Civilian	39	28	26	1,972	1,462	1,195
Military	–	1	1	25	11	26
Mumps	169	356	779	14,331	17,831	47,739
Pertussis	42	78	---	1,738	1,542	---
Rubella (German measles)	86	90	113	16,959	19,165	15,399
Tetanus	–	–	2	69	63	79
Tuberculosis	527	537	540	25,007	25,542	26,416
Tularemia	7	1	1	115	142	128
Typhoid fever	10	7	11	437	337	360
Typhus fever, tick-borne (Rky. Mt. spotted)	9	5	5	978	1,080	783
Venereal diseases:						
Gonorrhea: Civilian	22,103	20,510	20,322	859,213	847,356	847,356
Military	587	618	618	21,717	23,021	24,639
Syphilis, primary & secondary: Civilian	487	382	444	18,277	17,395	20,504
Military	2	3	3	253	257	295
Rabies in animals	56	51	42	2,665	2,651	2,568

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1978		CUM. 1978
Anthrax	5	Poliomyelitis: Total	3
Botulism (NYC 1, Va. 1, Calif. 1)	65	Paralytic	1
Cholera	11	Psittacosis †	89
Congenital rubella syndrome	25	Rabies in man	–
Leprosy (N.J. 1, Calif. 1, Hawaii 2)	132	Trichinosis	47
Leptospirosis (Ark. 1)	56	Typhus fever, flea-borne (endemic, murine) (Hawaii 1)	36
Plague	7		

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

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

†The following delayed report will be reflected in next week's cumulative total: Psittacosis: Colo. +4

TABLE III. Cases of specified notifiable diseases, United States, weeks ending November 4, 1978, and November 5, 1977 (44th week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
						Primary		Post-infectious	B	A	Unspecified		
	1978	1978	1978	1978	CUM. 1978	1978	1977*	1978	1978	1978	1978	1978	CUM. 1978
UNITED STATES	131	3	1,322	–	64	17	27	3	254	581	178	18	619
NEW ENGLAND	6	–	219	–	–	1	–	–	7	9	6	1	29
Maine†	–	–	47	–	–	–	–	–	–	1	–	–	1
N.H.	2	–	2	–	–	–	–	–	2	–	–	–	4
Vt.	–	–	3	–	–	–	–	–	1	2	–	–	–
Mass.	1	–	101	–	–	–	–	–	2	1	6	–	7
R.I.	–	–	47	–	–	–	–	–	2	5	–	–	5
Conn.	3	–	19	–	–	1	–	–	–	–	–	1	12
MID. ATLANTIC	29	–	43	–	1	3	2	–	33	34	22	6	134
Upstate N.Y.	2	–	13	–	–	1	1	–	2	12	10	–	18
N.Y. City	12	–	14	–	1	1	1	–	15	13	4	3	61
N.J.	3	–	NN	–	–	–	–	–	15	9	8	2	26
Pa.	12	–	16	–	–	1	–	–	NA	NA	NA	1	29
E.N. CENTRAL	9	1	499	–	–	4	6	–	41	94	10	1	41
Ohio†	–	1	36	–	–	–	3	–	9	26	–	–	5
Ind. †	–	–	61	–	–	–	–	–	2	6	3	–	3
Ill.	1	–	47	–	–	–	–	–	12	27	2	–	14
Mich.	5	–	202	–	–	4	–	–	14	26	5	1	17
Wis.†	3	–	153	–	–	–	3	–	4	9	–	–	2
W.N. CENTRAL	13	–	158	–	2	1	1	–	8	61	5	–	22
Minn.	–	–	–	–	–	–	–	–	1	28	–	–	4
Iowa	3	–	121	–	–	1	–	–	1	1	1	–	–
Mo.	1	–	–	–	1	–	–	–	2	15	1	–	8
N. Dak.	–	–	1	–	–	–	–	–	–	10	–	–	–
S. Dak.	–	–	–	–	–	–	–	–	–	–	–	–	1
Nebr.	9	–	–	–	1	–	–	–	2	4	–	–	4
Kans.†	–	–	36	–	–	–	1	–	2	3	3	–	5
S. ATLANTIC	23	1	109	–	–	2	2	2	55	94	25	2	110
Del.	1	–	4	–	–	–	–	–	–	–	–	–	1
Md.	8	–	2	–	–	1	–	–	12	12	3	–	24
D.C.	–	–	–	–	–	–	–	–	–	–	–	–	6
Va.†	–	–	7	–	–	–	1	–	5	9	1	–	20
W. Va.†	–	–	67	–	–	–	–	–	–	4	1	–	1
N.C.	6	–	NN	–	–	1	–	–	4	7	1	–	10
S.C.†	–	–	2	–	–	–	–	–	2	3	2	–	4
Ga.	–	–	–	–	–	–	–	–	5	22	–	–	10
Fla.	8	1	27	–	–	–	1	2	27	37	17	2	34
E.S. CENTRAL	7	–	109	–	–	1	8	–	12	23	–	–	6
Ky.	1	–	106	–	–	–	–	–	2	6	–	–	2
Tenn.	5	–	NN	–	–	1	–	–	6	6	–	–	1
Ala.	–	–	2	–	–	–	3	–	3	6	–	–	1
Miss.	1	–	1	–	–	–	5	–	1	5	–	–	2
W.S. CENTRAL	5	1	16	–	1	1	2	–	14	59	37	2	29
Ark.	–	1	–	–	1	–	–	–	4	–	2	–	1
La.	–	–	NN	–	–	–	–	–	–	–	–	–	3
Okla.	–	–	–	–	–	–	–	–	2	6	3	2	2
Tex.†	5	–	16	–	–	1	2	–	8	53	32	–	23
MOUNTAIN	4	–	33	–	4	–	–	–	12	59	26	–	8
Mont.†	–	–	4	–	–	–	–	–	–	2	–	–	–
Idaho†	1	–	1	–	–	–	–	–	–	9	–	–	–
Wyo.	1	–	–	–	–	–	–	–	–	–	1	–	–
Colo.	1	–	18	–	2	–	–	–	3	4	1	–	4
N. Mex.	–	–	–	–	–	–	–	–	1	11	2	–	1
Ariz.	–	–	NN	–	1	–	–	–	6	24	15	–	2
Utah	1	–	10	–	–	–	–	–	1	8	6	–	–
Nev.	–	–	–	–	1	–	–	–	1	1	1	–	1
PACIFIC	35	–	136	–	56	4	6	1	72	148	47	6	240
Wash.	–	–	98	–	52	–	–	–	4	23	5	–	8
Oreg.	–	–	–	–	–	–	–	1	6	21	3	–	9
Calif.†	35	–	–	–	1	4	4	–	61	101	39	6	199
Alaska†	–	–	30	–	3	–	–	–	–	–	–	–	4
Hawaii	–	–	8	–	–	–	2	–	1	3	–	–	20
Guam†	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
Pac. Trust Terr.	NA	NA	NA	NA	–	NA	NA	NA	NA	NA	NA	NA	–
P.R.	–	–	13	–	–	–	–	–	1	2	6	–	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.: Ohio +8, Ind. +7, Wis. –2, Kans. –1, S.C. –2, Mont. –1; Chickenpox: Maine +1, W.Va. –40, Calif. +14, Alaska –1, Guam +3, P.R. +1; Enceph.: Ind. +1, W.Va. +2; Hep. B: W.Va. +1, Idaho +1; Hep.A.: Wis. +6, W.Va. –5, Tex. +5, Idaho –1; Hep. unsp.: Va. –2, W.Va. +2, Tex. –5, Guam +3.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 4, 1978, and November 5, 1977 (44th 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	167	24,774	53,646	39	1,997	1,473	169	14,331	42	86	16,959	69
NEW ENGLAND	26	2,015	2,503	4	113	59	25	780	1	11	760	3
Maine	–	1,316	172	–	8	3	19	511	–	–	153	–
N.H.	6	58	511	–	9	3	–	15	–	2	104	–
Vt.	18	51	294	–	2	6	–	5	–	–	27	2
Mass.	2	254	629	1	42	17	–	90	–	9	230	–
R.I.	–	8	64	–	19	2	4	47	1	–	42	–
Conn.	–	328	833	3	34	28	2	112	–	–	204	1
MID. ATLANTIC	11	2,214	8,403	6	336	191	8	670	–	4	3,026	5
Upstate N.Y.	1	1,410	3,845	2	107	43	1	219	–	1	533	2
N.Y. City	10	372	745	2	77	51	–	157	–	1	140	–
N.J. †	–	74	197	1	61	46	1	142	–	–	1,609	–
Pa.	–	358	3,616	1	91	51	6	152	–	2	744	3
E.N. CENTRAL	45	11,113	11,457	4	214	169	67	5,813	4	32	8,495	3
Ohio	–	492	1,859	1	71	61	22	1,019	1	1	1,376	1
Ind. †	6	236	4,346	1	38	12	1	329	2	5	607	1
Ill.	12	1,172	1,789	–	30	37	12	1,906	1	15	1,737	1
Mich.	23	7,759	1,014	1	63	45	16	1,447	–	5	3,220	–
Wis. †	4	1,484	2,449	1	12	14	16	1,112	–	6	1,555	–
W.N. CENTRAL	–	401	9,510	2	72	63	19	1,981	3	3	688	7
Minn.	–	38	2,625	2	21	19	–	22	–	1	129	1
Iowa	–	55	4,310	–	5	9	14	153	3	1	62	–
Mo.	–	15	1,045	–	29	23	–	1,172	–	–	109	1
N. Dak.	–	199	27	–	3	1	1	16	–	–	82	–
S. Dak.	–	–	75	–	3	4	–	7	–	1	112	1
Nebr.	–	5	214	–	–	2	–	25	–	–	34	–
Kans.	–	90	1,214	–	11	5	4	586	–	–	160	4
S. ATLANTIC	31	5,198	4,666	14	500	328	12	869	7	3	1,047	17
Del.	–	7	22	–	16	22	–	56	–	1	36	–
Md.	–	51	372	1	35	22	1	71	–	–	7	2
D.C.	–	1	14	–	2	–	–	2	–	–	1	–
Va. †	–	2,830	2,745	–	59	30	–	176	–	–	247	1
W. Va. †	1	1,057	254	–	14	9	–	180	–	2	328	–
N.C.	–	121	65	–	95	70	2	73	–	–	190	3
S.C.	–	199	155	1	30	35	–	17	–	–	28	4
Ga.	–	34	768	3	56	47	1	70	4	–	27	–
Fla.	30	898	271	9	194	93	8	224	3	–	183	7
E.S. CENTRAL	4	1,428	2,034	1	157	155	4	1,180	7	6	514	3
Ky.	1	120	1,191	–	30	31	3	214	6	3	134	2
Tenn.	2	960	727	–	41	41	–	453	1	2	206	–
Ala.	–	101	78	–	47	53	1	429	–	–	22	–
Miss.	1	247	38	1	39	30	–	84	–	1	152	1
W.S. CENTRAL	24	1,178	2,141	3	285	285	20	1,769	4	6	949	14
Ark.	–	16	29	–	22	15	–	602	–	–	58	1
La.	1	344	75	2	119	130	–	65	–	–	486	1
Okla.	–	14	65	1	17	14	–	4	1	3	16	3
Tex.	23	804	1,972	–	127	126	20	1,098	3	3	389	9
MOUNTAIN	5	263	2,535	–	44	37	2	428	4	3	221	3
Mont.	–	105	1,162	–	3	4	–	145	–	–	18	–
Idaho	–	1	161	–	4	6	–	20	–	–	2	1
Wyo.	–	–	19	–	–	2	–	1	–	–	–	–
Colo.	–	37	504	–	3	1	1	101	–	–	49	1
N. Mex.	–	–	257	–	8	10	–	16	–	–	3	–
Ariz.	5	56	319	–	15	10	–	19	3	2	98	–
Utah	–	44	20	–	6	3	1	118	1	–	38	1
Nev.	–	20	93	–	5	1	–	8	–	1	13	–
PACIFIC	21	964	10,397	5	276	186	12	841	12	18	1,259	14
Wash. †	7	226	544	–	44	26	1	192	2	–	119	1
Oreg.	–	148	366	–	29	18	–	111	–	2	126	–
Calif.	14	577	9,392	2	189	110	10	530	10	16	994	13
Alaska	–	1	60	1	9	30	1	11	–	–	8	–
Hawaii	–	12	35	2	5	2	–	27	–	–	12	–
Guam	NA	24	5	–	1	1	NA	38	NA	NA	4	1
Pac. Trust Terr.	NA	27	NA	NA	1	NA	NA	8	NA	NA	2	–
P.R. †	9	276	995	–	7	1	49	1,399	–	1	17	9
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: Wis. +2, W.Va. +2, P.R. +3; Men inf.: Ind. +1, Va. +4 civ. –4 mil.; Mumps: P.R. +5; Pertussis: Wis. +1, Wash. +2; Rubella: N.J. +1, Wis. –2.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 4, 1978, and November 5, 1977 (44th week)

REPORTING AREA	TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)						RABIES (in Animals)
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1978	CUM. 1978	CUM. 1978	1978	CUM. 1978	1978	CUM. 1978	1978	CUM. 1978	CUM. 1977*	1978	CUM. 1978	CUM. 1977*	CUM. 1978
UNITED STATES	527	25,007	115	10	437	9	978	22,103	859,213	847,356	487	18,277	17,395	2,665
NEW ENGLAND	20	823	2	–	77	–	13	603	21,925	22,810	15	502	689	95
Maine	2	64	–	–	–	–	–	40	1,793	1,665	–	8	25	76
N.H.	–	15	–	–	5	–	–	23	1,006	933	–	5	4	3
Vt.	1	33	–	–	1	–	–	10	528	566	–	3	7	2
Mass.	12	482	–	–	59	–	5	223	9,527	9,684	8	309	482	7
R.I.	3	57	–	–	4	–	1	49	1,586	1,812	–	20	8	–
Conn.	2	172	2	–	8	–	7	258	7,485	8,150	7	157	163	7
MID. ATLANTIC	91	4,158	5	3	59	–	55	2,342	92,680	88,899	78	2,413	2,457	96
Upstate N.Y.	5	647	4	1	7	–	31	321	15,652	15,236	–	163	229	61
N.Y. City	31	1,523	1	1	38	–	4	929	35,120	34,332	60	1,680	1,548	–
N.J.	14	876	–	–	7	–	12	432	17,395	15,082	9	296	317	14
Pa.	41	1,112	–	1	7	–	8	660	24,513	23,249	9	274	363	21
E.N. CENTRAL	81	3,962	1	–	38	–	47	3,904	133,477	134,835	43	2,041	1,781	162
Ohio†	13	729	1	–	6	–	21	1,304	34,654	35,135	9	377	416	18
Ind.	11	468	–	–	2	–	1	538	13,925	12,462	10	145	134	13
Ill.†	30	1,484	–	–	17	–	25	961	42,246	43,503	22	1,282	921	54
Mich.	22	1,092	–	–	13	–	–	926	30,988	30,965	1	182	215	7
Wis.	5	189	–	–	–	–	–	205	11,664	11,790	1	55	95	70
W.N. CENTRAL	16	817	22	–	19	–	44	1,062	43,475	43,965	7	391	386	531
Minn.	1	139	–	–	7	–	–	77	7,286	7,952	2	137	122	155
Iowa	4	95	1	–	3	–	1	112	4,766	5,128	2	40	38	115
Mo.	9	362	18	–	4	–	20	569	19,305	18,070	2	127	149	71
N. Dak.	–	31	–	–	–	–	1	14	780	826	–	3	3	92
S. Dak.†	–	65	–	–	–	–	7	28	1,481	1,342	–	3	9	64
Nebr.	–	21	–	–	1	–	10	60	3,136	3,816	1	13	25	6
Kans.†	2	104	3	–	4	–	5	202	6,721	6,831	–	68	40	28
S. ATLANTIC	99	5,346	9	–	58	3	528	4,986	209,109	207,973	132	4,863	4,763	392
Del.†	3	49	–	–	3	–	5	72	2,933	2,868	–	10	19	3
Md.	15	807	5	–	11	–	105	539	26,826	25,438	6	369	294	–
D.C.†	–	259	–	–	1	–	1	403	14,036	13,677	10	376	478	–
Va.†	19	557	4	–	5	–	111	606	20,240	21,752	10	407	465	13
W. Va.	8	210	–	–	6	–	11	58	2,868	2,802	1	25	3	12
N.C.†	21	837	–	–	2	1	194	727	29,645	31,207	10	510	649	13
S.C.†	4	457	–	–	8	2	56	408	20,493	19,531	9	249	212	93
Ga.†	–	736	–	–	4	–	45	908	40,239	40,213	47	1,213	1,056	244
Fla.†	29	1,434	–	–	18	–	–	1,265	51,829	53,485	39	1,704	1,587	14
E.S. CENTRAL	54	2,376	7	1	9	2	180	1,556	72,623	75,431	37	975	670	130
Ky.	9	535	3	–	2	–	42	322	9,733	10,052	2	128	87	65
Tenn.	19	736	3	–	3	1	111	472	26,706	30,320	20	334	217	27
Ala.	8	573	1	1	3	–	13	523	20,784	20,834	4	166	144	38
Miss.	18	532	–	–	1	1	14	239	15,400	14,225	11	347	222	–
W.S. CENTRAL	78	2,944	56	6	43	3	96	2,627	115,415	106,081	83	2,937	2,523	803
Ark.†	9	346	38	2	9	1	15	264	8,688	8,181	1	62	63	134
La.	22	520	6	1	4	–	1	365	18,692	15,885	13	630	593	20
Okla.	7	286	9	2	5	–	54	162	10,826	10,366	–	81	69	164
Tex.†	40	1,792	3	1	25	2	26	1,836	77,209	71,649	69	2,164	1,798	485
MOUNTAIN	19	729	9	–	19	1	11	965	32,855	34,241	14	393	364	105
Mont.	2	53	–	–	3	–	2	57	1,853	1,813	–	8	5	19
Idaho	3	30	2	–	5	–	3	22	1,339	1,555	–	13	11	–
Wyo.	–	14	2	–	–	–	1	13	796	785	–	8	2	–
Colo.†	1	81	1	–	4	–	2	209	9,017	8,919	2	122	107	35
N. Mex.	1	119	–	–	2	–	–	216	4,829	5,048	2	76	76	23
Ariz.†	11	336	1	–	3	–	1	293	8,492	9,516	10	91	138	21
Utah	–	32	3	–	1	–	–	35	1,770	2,036	–	12	10	7
Nev.	1	64	–	–	1	1	2	120	4,759	4,569	–	63	15	–
PACIFIC	69	3,852	4	–	115	–	4	4,058	137,654	133,121	78	3,762	3,762	351
Wash.†	NA	244	–	–	7	–	1	232	11,336	10,305	NA	176	223	2
Oreg.	3	149	1	–	1	–	2	356	9,540	9,239	5	143	124	11
Calif.	60	2,940	3	–	96	–	1	3,348	110,134	105,464	71	3,393	3,358	330
Alaska	–	59	–	–	–	–	–	91	4,228	4,319	1	11	25	8
Hawaii	6	460	–	–	11	–	–	31	2,416	2,794	1	39	32	–
Guam†	NA	52	–	NA	–	NA	–	NA	183	192	NA	–	2	–
Pac. Trust Terr.	NA	6	–	NA	–	NA	–	NA	32	NA	NA	–	NA	–
P.R.	3	331	–	–	3	–	–	60	1,910	2,733	7	418	447	30
V.I.†	–	4	–	–	2	–	–	6	168	178	1	16	8	–

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: Kans. –1, Del. –1, Va. +6, N.C. –2, Fla. –1, Ark. –1, Wash. +29, Guam +1; GC: D.C. +50 civ., S.C. –2, civ., Ga. +70 mil., Wash. +75 mil., Guam +3 civ., V.I. +4 civ.; Syphilis: Ill. +59 civ., Tex. +1 civ., Wash, +38 civ.;An rabies: Ohio +1, Wis. +2, S. Dak. +5, S.C. +2, Colo. +3, Ariz. +2.

TABLE IV. Deaths in 121 U.S. cities,* week ending November 4, 1978 (44th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	>65	45-64	25-44	<1	
NEW ENGLAND	652	432	155	26	16	39
Boston, Mass.	182	108	45	12	6	7
Bridgeport, Conn.	37	26	7	–	3	4
Cambridge, Mass.	20	15	5	–	–	3
Fall River, Mass.	35	24	9	2	–	3
Hartford, Conn.	47	36	8	1	1	1
Lowell, Mass.	27	18	8	1	–	1
Lynn, Mass.	23	15	6	–	1	1
New Bedford, Mass.	22	15	5	1	–	–
New Haven, Conn.	43	24	10	4	2	–
Providence, R.I.	68	47	16	1	3	7
Somerville, Mass.	11	8	2	–	–	1
Springfield, Mass.	45	30	12	2	–	4
Waterbury, Conn.	30	23	7	–	–	4
Worcester, Mass.	62	43	15	2	–	3
MID. ATLANTIC	2,260	1,451	547	133	63	121
Albany, N.Y.	49	30	12	2	1	1
Allentown, Pa.	23	15	6	1	–	–
Buffalo, N.Y.	160	98	41	9	4	15
Camden, N.J.	42	25	13	2	2	2
Elizabeth, N.J.	36	25	9	2	–	1
Erie, Pa.† §	34	22	9	1	1	2
Jersey City, N.J.	74	40	31	1	2	–
Newark, N.J.	56	21	18	12	2	7
N.Y. City, N.Y.	1,449	937	346	86	39	70
Paterson, N.J.§	38	23	9	3	2	3
Philadelphia, Pa.†	490	302	133	31	14	27
Pittsburgh, Pa.†	52	31	19	1	1	1
Reading, Pa.	39	31	4	2	2	2
Rochester, N.Y.	125	92	20	2	6	10
Schenectady, N.Y.	22	12	7	3	–	–
Scranton, Pa.†	19	11	7	1	–	2
Syracuse, N.Y.	60	42	11	3	3	1
Trenton, N.J.	28	18	7	3	–	5
Utica, N.Y.	25	20	5	–	–	1
Yonkers, N.Y.	34	22	8	2	–	8
E.N. CENTRAL	2,287	1,372	612	133	78	67
Akron, Ohio	77	52	14	6	1	–
Canton, Ohio	47	30	15	1	–	2
Chicago, Ill.	536	311	148	39	18	11
Cincinnati, Ohio	196	126	49	10	6	4
Cleveland, Ohio§	176	100	53	11	5	3
Columbus, Ohio	127	73	35	13	4	6
Dayton, Ohio	104	64	32	4	3	3
Detroit, Mich.	271	135	85	21	16	4
Evansville, Ind.	42	34	5	2	–	2
Fort Wayne, Ind.	55	34	8	3	4	3
Gary, Ind.	22	11	8	–	–	–
Grand Rapids, Mich.	38	33	2	–	2	2
Indianapolis, Ind.	145	88	40	10	3	4
Madison, Wis.	44	20	17	3	1	4
Milwaukee, Wis.	135	88	35	4	4	2
Peoria, Ill.	30	18	6	3	3	9
Rockford, Ill.	33	21	6	1	3	3
South Bend, Ind.	40	26	6	2	1	2
Toledo, Ohio	105	67	26	2	4	3
Youngstown, Ohio	64	41	22	1	–	–
W.N. CENTRAL	790	531	154	42	30	26
Des Moines, Iowa	70	55	9	3	1	1
Duluth, Minn.	26	19	5	2	–	–
Kansas City, Kans.	46	28	9	6	1	1
Kansas City, Mo.	137	91	34	7	1	7
Lincoln, Nebr.	33	21	4	2	1	4
Minneapolis, Minn.	117	85	16	4	9	2
Omaha, Nebr.	87	48	28	5	4	1
St. Louis, Mo.	155	105	24	7	11	5
St. Paul, Minn.	65	44	15	4	1	2
Wichita, Kans.	54	35	10	2	1	3

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I** TOTAL
	ALL AGES	>65	45-64	25-44	<1	
S. ATLANTIC	1,018	580	270	66	76	37
Atlanta, Ga.	148	72	42	15	11	4
Baltimore, Md.	157	92	44	9	8	1
Charlotte, N.C.	56	31	15	3	6	2
Jacksonville, Fla.	85	57	20	6	–	6
Miami, Fla.	106	58	29	8	8	6
Norfolk, Va.	41	21	11	5	2	2
Richmond, Va.	93	44	25	4	19	5
Savannah, Ga.	35	21	10	1	3	2
St. Petersburg, Fla.	80	69	10	–	1	4
Tampa, Fla.	47	31	11	2	2	4
Washington, D.C.	129	57	42	12	16	–
Wilmington, Del.	41	27	11	1	–	1
E.S. CENTRAL	674	401	181	35	25	29
Birmingham, Ala.	96	58	28	5	3	–
Chattanooga, Tenn.	56	31	15	2	–	3
Knoxville, Tenn.§	42	30	10	1	–	1
Louisville, Ky.	133	86	29	4	9	12
Memphis, Tenn.	145	85	46	9	1	–
Mobile, Ala.	47	21	12	5	5	5
Montgomery, Ala.	40	21	10	4	2	2
Nashville, Tenn.	115	69	31	5	5	6
W.S. CENTRAL	1,136	620	297	80	68	32
Austin, Tex.	43	30	6	4	–	1
Baton Rouge, La.	36	26	7	–	–	–
Corpus Christi, Tex.	33	14	9	3	4	2
Dallas, Tex.	164	88	44	8	11	8
El Paso, Tex.	33	24	6	2	1	2
Fort Worth, Tex.	83	45	24	4	4	4
Houston, Tex.	307	156	86	24	19	1
Little Rock, Ark.	55	27	12	7	4	4
New Orleans, La.	112	54	35	7	10	–
San Antonio, Tex.	134	69	39	13	5	2
Shreveport, La.	50	33	8	4	5	2
Tulsa, Okla.	86	54	21	4	5	6
MOUNTAIN	552	330	134	36	23	20
Albuquerque, N. Mex.	55	30	16	6	–	3
Colo. Springs, Colo.	31	17	8	2	1	2
Denver, Colo.	129	80	34	8	3	5
Las Vegas, Nev.	57	28	18	4	3	2
Ogden, Utah	20	15	2	–	1	1
Phoenix, Ariz.	114	75	18	8	9	4
Pueblo, Colo.	18	15	2	–	–	2
Salt Lake City, Utah	49	22	18	3	4	–
Tucson, Ariz.	79	48	18	5	2	1
PACIFIC	1,667	1,084	387	93	51	48
Berkeley, Calif.	19	14	4	1	–	2
Fresno, Calif.	64	34	17	7	3	7
Glendale, Calif.	28	25	3	–	–	1
Honolulu, Hawaii	51	34	14	1	1	–
Long Beach, Calif.	77	53	20	3	–	5
Los Angeles, Calif.	487	321	124	20	9	13
Oakland, Calif.	68	43	16	5	3	–
Pasadena, Calif.	23	17	4	1	1	–
Portland, Oreg.	98	60	23	10	–	–
Sacramento, Calif.	77	50	13	6	3	1
San Diego, Calif.	115	66	25	9	7	1
San Francisco, Calif.	132	87	30	8	7	3
San Jose, Calif.	164	108	29	14	5	2
Seattle, Wash.	142	95	35	4	3	4
Spokane, Wash.	52	36	9	2	3	6
Tacoma, Wash.	70	41	21	2	6	3
TOTAL	11,036	6,801	2,737	644	430	419
Expected Number	10,533	6,469	2,656	661	408	349

*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. Figures are estimates based on average percent of regional totals.

Cholera – Continued

vestigation to determine the mode of transmission. Moore swabs in sewage can indicate that there are infected persons in a community who may not have sought medical assistance; in Louisiana, 3 sewage isolates of *V. cholerae* O1 have not been linked with known cases. Because the 2 surveillance methods are complementary, CDC recommends that other states initiating surveillance for cholera use both methods.

Reference

1. Moore B: Detection of paratyphoid carriers in towns by means of sewage examination. Monthly Bulletin Ministry of Health (Great Britain) 7:241-248, 1948

Human Exposure to a Rabid Flying Squirrel – Alabama

Alabama recently reported a laboratory-confirmed case of rabies in a flying squirrel. This is only the second naturally-occurring case of rabies in a rodent in 10 years that has been confirmed by CDC.

On September 22, 1978, a 10-year-old girl was bitten on the finger by this squirrel; it was apparently ill at the time. The animal died 2 hours later and was presented to the School of Veterinary Medicine at Auburn University. A specimen from the animal was delivered to the Alabama Department of Public Health Laboratory on September 25. Examination by fluorescent antibody technique demonstrated the presence of rabies antigen; CDC confirmed the presenece of rabies virus in the brain tissue on September 29.

The patient was seen by her local physician on September 26 and immediately started on duck embryo rabies vaccine. On September 28 she began receiving human diploid cell rabies vaccine and human rabies immune globulin.

Reported by WE Birch, DVM, JL Holston, DrPH, FS Wolf, MD, State Epidemiologist, Alabama Dept of Public Health; Viral Zoonoses Br, Virology Div, Bur of Laboratories, Respiratory and Special Pathogens Br, Viral Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: In unusual cases of rabies CDC continues to request original material for confirmation of the diagnosis. Except for laboratory infections or cases resulting from inappropriate vaccination with live virus vaccines, no cases of rodent rabies have been confirmed by CDC since a case in a squirrel in California in 1972 (*1*).

Reference

1. Cappucci DT Jr, Emmons RW, Sampson WW: Rabies in an eastern fox squirrel. J Wildl Dis 8:340-342, 1972

Current Trends

Influenza Vaccine for High-Risk Children

The PHS Advisory Committee on Immunization Practices (ACIP) has published its recommendations for the use of influenza vaccine for high-risk individuals (*1*). These recommendations indicated that adults and youths 13-25 years of age could receive either whole or subvirion ("split virus") vaccines, but that children under the age of 13 should receive only the subvirion vaccine.

However, recent experience has indicated that some areas of the country have inadequate numbers of doses of the subvirion youth formulation. In view of this, the Committee on Infectious Diseases of the American Academy of Pediatrics has recommended that, where subvirion youth formulation is not available, the subvirion adult formulation be used in high-risk children under the age of 13 using the same volume and dosage timing as recommended for the subvirion youth formulation. The dosage schedule for high-risk children 3-12 years of age is 0.25 cc given intramuscularly or subcutaneously on each of 2 occasions 1 month apart; for high-risk children 6-35 months old, it is 0.15 cc on each of 2 occasions 1 month apart.

Influenza Vaccine for High-Risk Children — Continued

The ACIP-recommended adult formulation contains 7 μg of hemagglutinin of each of 3 antigens: A/USSR, A/Texas, and B/Hong Kong. The youth formulation contains 20 μg of A/USSR hemagglutinin and 7 μg each of A/Texas and B/Hong Kong. Data from the 1978 influenza vaccine field trials indicate that administration of the amount of A/USSR antigen contained in the adult formulation will result in the formation of hemagglutination inhibition antibodies at a titer ⩾1:40 in 60%-67% of recipients age 3-12 years. Too few children less than 3 years of age received this dosage to make firm estimates about its effectiveness in that age group. It should be stressed that this recommendation definitely represents a second choice and is proffered only because there are apparent shortages of subvirion youth formulation vaccine in some parts of the country.

Reported by the Committee on Infectious Diseases, American Academy of Pediatrics; Immunization Div, Bur of State Service, CDC.

Reference

1. MMWR 27:285, 1978

Results of Screening for Gonorrhea — United States 6-Month Period Ending June 30, 1978

In the 6-month period ending June 30, 1978, a total of 4,294,044 specimens were taken from women as part of gonorrhea screening programs; 188,200 (4.4%) were found to be positive. Table 1 reflects the results of such screening by types of health-care facilities securing the specimen. Although the positivity rates were highest (18.9%) in venereal disease clinics, 89% of all tests were performed in other settings. In these settings culture-positivity rates in women ranged from 1.6% in student health center groups to 4.3% for women in correctional or detention centers and in public/private hospital outpatient clinics. Among 925,069 women tested by private physicians, cultures from 16,498 (1.8%) were positive.

Provisional data indicate that an additional 1,453,034 women were tested at all types of facilities in July and August 1978, or about 726,517 per month. For this period, the overall positivity rate of cultures from all sources was 5.0%.

Reported by Venereal Disease Control Div, Bur of State Services, CDC.

TABLE 1. Results of gonorrhea culture tests on females — United States,* *January 1978-June 1978*

Reporting Source	Number Tested	Number Positive	Percent Positive
Health Care Providers (Excluding VD Clinics)	3,834,973	101,525	2.6
Health Department Non-VD Clinic	931,500	28,788	3.1
Family Planning	667,379	20,443	3.1
Prenatal, Ob-Gyn	100,482	2,910	2.9
Cancer Detection	8,527	125	1.5
Combinations or Other	155,112	5,310	3.4
Public/Private Hospital—Outpatient	689,092	29,560	4.3
Family Planning	119,830	3,490	2.9
Prenatal, Ob-Gyn	158,284	4,837	3.1
Cancer Detection	1,771	26	1.5
Combinations or Other	409,207	21,207	5.2
Public/Private Hospital—Inpatient	32,720	774	2.4
Obstetric	1,866	20	1.1
Gynecologic	1,447	61	4.2
Combinations or Other	29,407	693	2.4
Community Health Centers	385,637	10,288	2.7
Family Planning	114,500	2,086	1.8
Prenatal, Ob-Gyn	37,858	953	2.5
Cancer Detection	5,505	65	1.2
Combinations or Other	227,774	7,184	3.2
Health Care Providers (Excluding VD Clinics) Continued			
Private Physicians	925,069	16,498	1.8
Private Family Planning Groups	543,119	8,136	1.5
Group Health Clinics	93,079	1,802	1.9
Student Health Centers	107,244	1,342	1.3
Manpower Training Agencies	14,793	580	3.9
Industrial Screening	727	28	3.9
Military/Dependents	41,978	1,337	3.2
Correctional or Detention Centers	29,812	1,286	4.3
Not Specified	40,203	1,106	2.8
Venereal Disease Clinics	459,071	86,675	18.9
TOTAL (All Clinics)	4,294,044	188,200	4.4

Source: Form CDC 9.124, HEW, PHS, CDC, BSS, VD Control Division, Evaluation and Statistical Services Section.

International Notes

Encephalitis Outbreak — India

According to releases from Air India Radio, an outbreak of viral encephalitis has resulted in 448 deaths in Uttar Pradesh, India's most populous state. Most of the cases have been reported from the eastern districts of that state, although some have also been reported from New Delhi, the nation's capital, and 27 deaths have been reported from Bihar State, east of Uttar Pradesh.

Japanese B encephalitis infection has been shown to be the cause of the outbreak by serologic testing and viral isolation performed at the Calcutta School of Tropical Medicine and the Indian National Institute of Virology on serum and tissue specimens from a small number of cases.

Reported by Viral Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Japanese B encephalitis is a mosquito-borne disease that is endemic in much of Asia. Studies have shown that hundreds of inapparent or mild infections may occur for each case of clinical encephalitis, but that the fatality rate for encephalitic patients may exceed 20% (*1*). It is typically a rural disease, and the vector mosquitoes, such as those of the *Culex vishnui* group, breed abundantly in rice paddies found in agricultural areas. Inactivated vaccine is commercially produced in Japan, but it is not licensed for use in the United States.

Because of the paucity of accurate, official information regarding the outbreak, it is difficult to assess the severity or the geographic extent of the Japanese B virus activity. Nevertheless, based on the prevalence of the mosquito vector and pattern of past outbreaks, travelers to urban areas, even in northeastern India, are probably at very low risk of infection.

Reference

1. Horsfall FL, Tamm I (eds): Viral and Rickettsial Infections of Man. 4th ed. Philadelphia, Lippincott, 1965, pp 626-631

Notice Regarding Vaccines for International Travel

A collection of recommendations by the Public Health Service Advisory Committee on Immunization Practices (ACIP) on vaccines that may be useful in international travel is available upon request. This publication (ID #99-101, dated September 1978) contains the ACIP's most current statements on vaccines against cholera, plague, smallpox, typhoid, typhus, and yellow fever. Copies of the collection may be ordered by writing the Public Inquiries Office (1/B2), Center for Disease Control, Atlanta, Ga. 30333.

The Morbidity and Mortality Weekly Report, circulation 78,750, is published by the Center for Disease Control, Atlanta, Georgia. The data in this report are provisional, based on weekly telegraphs 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. Send reports to: Center for Disease Control, Attn: Editor, Morbidity and Mortality Weekly Report, Atlanta, Georgia 30333.

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p 404 In the article "Viral Gastroenteritis — Pennsylvania" add the Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, to the credits. Also, in the fourth line of the Editorial Note, reference 3 refers to a transmissible, 27-nm agent that is not serologically related to the Norwalk virus.

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