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MORBIDITY AND MORTALITY WEEKLY REPORT

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Surveillance Summary

Bacterial Meningitis and Meningococemia — United States, 1978

A provisional total of 4,081 cases of bacterial meningitis (excluding cases caused by *Mycobacterium*) and 289 cases of meningococemia were reported to CDC from 38 participating states* in the national bacterial meningitis and meningococemia surveillance system in 1978. This represents a national rate of reported bacterial meningitis and meningococemia of 2.69 cases and 0.19 cases per 100,000 population, respectively.

Table 1 shows the reported incidence and case-fatality ratio (CFR) associated with each pathogen responsible for bacterial meningitis, as well as the reported incidence and CFR of meningococemia. *Hemophilus influenzae*, *Neisseria meningitidis*, and *Streptococcus pneumoniae* accounted for 84% of all reported cases of bacterial meningitis. In 5% of the cases, the organism responsible for disease was unknown. The highest CFR (37%) was observed with the less common pathogens (predominantly gram-negative bacilli); the lowest CFR (7%) was associated with the most common pathogen, *H. influenzae*. The CFR was 14% for persons with meningococcal meningitis and 25% for persons with meningococemia.

*Represents 69.8% of the U.S. population. Areas not participating include Rhode Island, Michigan, Delaware, Georgia, New Jersey, Tennessee, Texas, Wyoming, Nevada, Alaska, Hawaii, California, and Washington, DC.

TABLE 1. Incidence rate and case-fatality ratio (CFR) of reported bacterial meningitis (by pathogen) and meningococemia, United States, 1978

Disease	Number of cases	Percent	Incidence*	CFR
Bacterial meningitis				
<i>Hemophilus influenzae</i>	1,885	46	1.24	7.1%
<i>Neisseria meningitidis</i> **	1,095	27	0.72	13.5%
<i>Streptococcus pneumoniae</i>	456	11	0.30	28.2%
Group B <i>Streptococcus</i>	130	3	0.09	22.4%
<i>Listeria monocytogenes</i>	68	2	0.04	29.5%
Other	235	6	0.15	36.6%
Unknown	212	5	0.14	16.7%
Total bacterial meningitis	4,081	100	2.69	14.0%
Meningococemia	289		0.19	25.1%

*Cases per 10⁵ population, estimated July 1978 for the 38 reporting states

**Excludes cases of meningococemia alone

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Bacterial Meningitis and Meningococemia — Continued

Age-specific incidence rates show that the peak incidence of reported disease occurred in neonates, with the secondary peak in infants 6 to 8 months of age (Table 2); rates were then successively lower in young children, the elderly, and persons between 10 and 59 years of age. Nearly 70% of all reported cases of bacterial meningitis and 55% of all reported cases of meningococemia occurred in children less than 5 years of age. However, slightly over 20% of cases of bacterial meningitis and 25% of cases of meningococemia occurred in adults (>20 years).

TABLE 2. Age-specific incidence* of bacterial meningitis and meningococemia, United States, 1978

AGE	ORGANISM							Total bacterial meningitis	Meningococemia
	<i>Neisseria meningitidis</i>	<i>Hemophilus influenzae</i>	<i>Streptococcus pneumoniae</i>	Group B <i>Streptococcus</i>	<i>Listeria monocytogenes</i>	Other	Unknown		
In months									
<1	4.0	6.0	3.0	42.0	12.0	23.0	6.0	96.0	2.0
1-2	8.0	17.0	5.0	8.0	0.3	5.0	3.0	45.0	1.4
3-5	13.0	46.0	8.0	2.0	0.4	2.0	3.0	73.0	3.6
6-8	13.0	59.0	4.0	0.4	0	0.5	0.9	79.0	5.0
9-11	12.0	41.0	3.0	0	0	0.5	0.9	58.0	2.4
In years									
1-2	5.0	16.0	1.0	0.1	0	0.1	0.5	23.0	1.3
3-4	2.0	3.0	0.3	0	0	0.1	0.4	6.0	0.6
5-9	0.7	0.6	0.2	0	0	0.1	0.3	2.0	0.2
10-19	0.6	0.1	0.1	0	<0.1	0.1	0.1	0.9	0.1
20-29	0.3	<0.1	0.1	<0.1	<0.1	0.1	0.1	0.6	<0.1
30-59	0.2	<0.1	0.2	<0.1	<0.1	0.1	<0.1	0.6	<0.1
≥60	0.2	0.1	0.4	0	0.1	0.2	0.1	1.2	0.1

*Per 10⁵ population; July 1978 estimate for 38 participating states.

The distribution of pathogens varied considerably in the different age groups. Neonates were more frequently infected with Group B *Streptococcus*, *Escherchia coli*, and *Listeria monocytogenes*. Meningitis in individuals in the age group 1 month to 10 years most commonly was caused by *H. influenzae*, *N. meningitidis*, and *S. pneumoniae*; in persons between 10 and 59 years of age, *N. meningitidis*, *S. pneumoniae*, and other less common organisms predominated. Individuals over 60 years of age frequently were affected by *S. pneumoniae*, *N. meningitidis*, and less common organisms. A higher attack rate was observed in males (1.25:1) and also in blacks and in American Indians or Alaskan natives.

Marked seasonal trends were observed. Reported cases of meningitis due to *N. meningitidis* and *S. pneumoniae* peaked in the winter months; cases due to *H. influenzae* peaked in the fall and spring months; and cases due to *L. monocytogenes* peaked in late fall-early winter and in the summer months. No seasonality was demonstrated for Group B *Streptococcus*.

The distribution of meningococcal serogroups reported are as follows: serogroup A, 3.9% (range by state, 1%-12%, with the highest percentage in the Mountain and Pacific States); serogroup B, 49.1% (range 30%-65%, highest in the Central States); serogroup C, 20.2% (range 11%-41%, highest in the New England and Mid-Atlantic States); serogroup Y, 8.6% (range 2%-16%, highest in the South Central States); and other serogroups (predominantly W135), 7.7% (range 0-27%, highest in the South Atlantic and East South Central States). Ten percent of isolates were reported to be ungroupable.

Eighteen percent of *H. influenzae* isolates were reported to be resistant to ampicillin. Little geographical variation in resistance was observed.

Reported by State Epidemiologists from participating states; Special Pathogens Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Surveillance of bacterial meningitis was recommended by the Conference of State and Territorial Epidemiologists to provide baseline information against which the impact of vaccines against *H. influenzae*, *N. meningitidis*, and *S. pneumoniae* (should

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these be deployed on a large scale) could be measured and to provide information that would help control bacterial meningitis through chemoprophylaxis and treatment. The national incidence of reported bacterial meningitis observed in this surveillance program in 1978 represents about 30% of the national incidence of culture-proven bacterial meningitis estimated from data collected several years ago (1). The degree of reporting for 1978, the second year of this system, is encouraging and represents an increase of 176% over the reports submitted in 1977. To date, vaccines against *H. influenzae*, *N. meningitidis*, and *S. pneumoniae* have not been used on a large scale in the highest-risk age groups because of their limited immunogenicity in the young, but attempts continue to develop more immunogenic vaccines.

The wide variation of meningococcal serogroups observed in the different geographic regions may have important implications from the standpoint of sulfonamide chemoprophylaxis. Most serogroup B, Y, and W135 isolates are sensitive to sulfonamides, while a considerable proportion of serogroup C isolates are resistant (2). CDC is currently in the process of reviewing antibiotic susceptibility information for all isolates submitted for serogrouping.

The percentage of *H. influenzae* isolates resistant to ampicillin observed in this survey is considerably higher than that in most other reports. In 1976-1977, a survey of 45 of the largest pediatric medical centers in the United States found that 5% of *H. influenzae* strains causing meningitis or bacteremia were resistant to ampicillin (3). The 18% rate of resistance in reported cases in 1978, an unexpectedly high figure, may be inflated by preferential reporting of cases caused by ampicillin-resistant strains.

Through states participating in the national surveillance program, CDC has recently prospectively examined the risk of acquiring severe *H. influenzae* illness in household contacts of a patient with *H. influenzae* meningitis (4). It was found that the risk for this group (0.2%) in the month after exposure was similar to the risk of acquiring secondary meningococcal disease and was especially high in contacts under 6 years of age (0.5%). These results have prompted a nationwide prospective study to examine the efficacy of chemoprophylaxis in preventing secondary cases of *H. influenzae* disease.

References

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*International Notes***Yellow Fever — Trinidad**

According to the Ministry of Health, Trinidad and Tobago, as of June 5, 1979, the island of Trinidad was no longer officially classified as infected with yellow fever. The date of onset of the last case on Trinidad was March 6, 1979.

The Ministry of Health has maintained an intensive surveillance program of yellow fever in humans and monkeys since November 1978, when a yellow fever outbreak was detected in forest monkeys. Eight persons with febrile illness were found to have had

Yellow Fever - Continued

yellow fever infections; the infections were confirmed by isolation of yellow fever virus in 7 cases and by characteristic histopathologic changes in autopsy specimens in the remaining case. Six of the 8 persons with confirmed yellow fever recovered. None of the 8 patients had been immunized before onset of illness.

A mass immunization program has been conducted throughout the entire country. As of April 20, a total of 832,000 persons were immunized—75% of the entire population. Additionally, 200,000 persons in high-risk groups had already been immunized from 1972 to November 1978, when the mass immunization program began.

Surveillance of Trinidad's monkey population has shown no evidence of spread of the epizootic beyond the original focus of activity in forested areas of southern Trinidad. Measures to control *Aedes aegypti* and surveillance for suspected human yellow fever cases are continuing in all populated areas.

Reported by the Caribbean Epidemiology Centre in the CAREC Surveillance Report 5(4), April 1979; the Pan American Health Organization; Quarantine Div, and the Enteric and Neurotropic Viral Diseases Br, Viral Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Because of the apparent cessation of yellow fever activity in humans and monkeys, the high level of yellow fever immunization in the population, and the official removal of "yellow fever infected" status, the Public Health Service no longer recommends yellow fever vaccination for all U.S. travelers to Trinidad. Such vaccination continues to be recommended, however, for U.S. travelers who will visit the forested areas of Trinidad, where jungle yellow fever may remain endemic.

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

DISEASE	24th WEEK ENDING		MEDIAN 1974-1978**	CUMULATIVE, FIRST 24 WEEKS		
	June 16, 1979	June 17, 1978*		June 16, 1979	June 17, 1978*	MEDIAN 1974-1978**
Asaptic meningitis	110	86	58	1,286	1,014	935
Bruceellosis	2	2	4	45	72	87
Chickenpox	4,622	4,847	4,167	156,646	110,949	110,949
Diphtheria	—	—	1	58	35	107
Encephalitis: Primary (arthropod-borne & unspec.)	14	10	14	231	269	315
Post-infectious	6	7	7	111	97	121
Hepatitis, Viral: Type B	288	258	272	6,378	6,945	6,842
Type A	511	505	614	13,255	13,175	16,357
Type unspecified	176	185	184	4,805	3,774	3,969
Malaria	12	18	11	238	258	167
Measles (rubeola)	475	1,321	1,120	10,330	19,755	19,755
Meningococcal infections: Total	57	40	33	1,479	1,317	869
Civilian	57	40	33	1,472	1,299	857
Military	—	—	—	7	18	17
Mumps	378	493	766	9,726	11,276	29,217
Pertussis	14	29	29	537	901	569
Rubella (German measles)	367	815	359	9,131	13,945	13,436
Tetanus	2	2	2	25	32	28
Tuberculosis	643	629	647	12,822	13,076	13,896
Tularemia	6	3	4	57	41	51
Typhoid fever	8	9	8	194	227	153
Typhus fever, tick-borne (Rky. Mt. spotted)	35	52	41	230	237	223
Veneral diseases:						
Gonorrhea: Civilian	18,338	19,451	19,451	434,955	428,673	430,926
Military	429	430	430	12,420	11,502	12,349
Syphilis, primary & secondary: Civilian	425	428	428	11,022	9,493	9,493
Military	2	3	3	137	140	140
Rabies in animals	85	75	62	2,153	1,436	1,353

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1979		CUM. 1979
Anthrax	—	Poliomyelitis: Total	17
Botulism (Tex. 2)	9	Paralytic	14
Congenital rubella syndrome (Ky. 1)	28	Psittacosis	58
Leprosy (Tex. 2)	80	Rabies in man	1
Leptospirosis	14	Trichinosis	65
Plague † (Ariz. 1)	5	Typhus fever, flea-borne (endemic, murine) (Tex. 3)	17

* 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 report will be reflected in next week's cumulative totals: Plague: N.Mex. 1.

TABLE III. Cases of specified notifiable diseases, United States, weeks ending June 16, 1979, and June 17, 1978 (24th week)

REPORTING AREA	ASEPTIC MENINGITIS		BRUCELLOSIS	CHICKEN POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
	1979	1978			1979	1979	CUM. 1979	Primary	Post-infectious	B	A	Unspecified	1979	CUM. 1979
	1979	1978	1979	1979	CUM. 1979	1979	1978*	1979	1979	1979	1979	1979	1979	
UNITED STATES	110	2	4,622	-	58	14	10	6	288	511	176	12	238	
NEW ENGLAND	4	-	1,016	-	-	2	-	-	8	9	10	1	15	
Maine†	1	-	185	-	-	-	-	-	-	-	-	-	1	
N.H.†	-	-	5	-	-	-	-	-	-	-	-	-	-	
Vt.	-	-	30	-	-	-	-	-	1	1	-	-	-	
Mass.	2	-	316	-	-	1	-	-	5	1	10	-	4	
R.I.	1	-	72	-	-	-	-	-	-	2	-	-	4	
Conn.	-	-	408	-	-	1	-	-	2	5	-	1	6	
MID. ATLANTIC	8	-	278	-	-	2	1	2	32	37	11	-	30	
Upstate N.Y.	4	-	107	-	-	-	-	1	4	10	-	-	6	
N.Y. City	-	-	108	-	-	-	-	-	10	6	1	-	15	
N.J.†	3	-	NN	-	-	1	-	1	14	17	9	-	4	
Pa.	1	-	63	-	-	1	1	-	4	4	1	-	5	
E.N. CENTRAL	1	-	2,124	-	1	1	1	1	54	65	8	-	13	
Ohio†	-	-	287	-	-	-	-	1	7	9	-	-	3	
Ind.†	-	-	236	-	-	-	-	1	7	5	2	-	1	
Ill.	-	-	616	-	-	-	-	-	20	35	2	-	4	
Mich.	1	-	575	-	-	1	-	-	14	11	3	-	5	
Wis.†	-	-	410	-	1	-	-	-	6	5	1	-	-	
W.N. CENTRAL	2	-	173	-	-	-	-	-	20	27	2	-	10	
Minn.†	-	-	1	-	-	-	-	-	7	4	-	-	3	
Iowa	-	-	10	-	-	-	-	-	3	1	-	-	-	
Mo.	-	-	7	-	-	-	-	-	1	4	1	-	3	
N. Dak.	-	-	1	-	-	-	-	-	-	-	-	-	-	
S. Dak.	-	-	4	-	-	-	-	-	-	-	-	-	-	
Nebr.	1	-	3	-	-	-	-	-	3	11	1	-	2	
Kans.	1	-	147	-	-	-	-	-	6	7	-	-	2	
S. ATLANTIC	35	1	236	-	-	4	1	2	50	63	18	2	35	
Del.	-	-	8	-	-	-	-	-	-	1	-	-	1	
Md.	-	-	37	-	-	-	-	-	-	-	-	-	5	
D.C.	-	-	-	-	-	-	-	-	-	-	-	-	5	
Va.†	-	-	-	-	-	-	-	-	-	-	-	-	-	
W. Va.	28	-	13	-	-	1	-	-	4	5	3	1	10	
N.C.	-	-	102	-	-	1	-	-	2	2	-	-	1	
N.C.†	3	-	NN	-	-	2	-	-	8	11	1	1	2	
S.C.†	-	-	12	-	-	-	1	-	5	3	2	-	1	
Ga.	-	-	-	-	-	-	-	-	16	19	-	-	2	
Fla.	4	1	64	-	-	-	-	2	15	22	12	-	8	
E.S. CENTRAL	11	1	35	-	-	-	3	-	29	32	3	1	5	
Ky.	5	-	26	-	-	-	-	-	8	10	2	-	-	
Tenn.	-	-	NN	-	-	-	2	-	13	6	1	-	1	
Ala.	5	-	8	-	-	-	-	-	6	7	-	-	2	
Miss.	1	1	1	-	-	-	1	-	2	9	-	1	3	
W.S. CENTRAL	29	-	345	-	-	3	2	1	29	106	60	1	15	
Ark.	-	-	5	-	-	2	-	-	3	9	4	-	-	
La.	9	-	NN	-	-	-	-	-	11	10	2	-	2	
Okla.	1	-	-	-	-	1	-	-	2	1	1	-	2	
Tex.	19	-	340	-	-	-	2	1	13	86	53	1	11	
MOUNTAIN	6	-	49	-	-	1	-	-	14	102	42	1	7	
Mont.	1	-	6	-	-	-	-	-	-	2	-	-	-	
Idaho†	-	-	6	-	-	-	-	-	-	12	-	-	-	
Wyo.†	-	-	-	-	-	-	-	-	-	-	-	-	-	
Colo.	-	-	-	-	-	-	-	-	5	-	-	-	1	
N. Mex.	-	-	28	-	-	-	-	-	5	12	1	1	3	
Ariz.†	5	-	3	-	-	-	-	-	2	19	1	-	-	
Utah†	-	-	NN	-	1	-	-	-	2	44	18	-	3	
Nev.	-	-	4	-	-	-	-	-	5	13	22	-	-	
PACIFIC	-	-	2	-	-	-	-	-	-	-	-	-	-	
Wash.†	14	-	366	-	56	2	2	-	52	70	22	6	108	
Oreg.	-	-	336	-	55	-	-	-	9	20	3	-	4	
Calif.†	-	-	2	-	-	-	-	-	8	12	1	-	4	
Alaska	14	-	-	-	1	2	2	-	35	35	18	6	59	
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-	-	
Guam	-	-	28	-	-	-	-	-	-	3	-	-	1	
P.R.	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-	
V.I.	1	-	54	-	-	-	-	-	1	1	3	-	1	
Pac. Trust Terr.	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-	

†Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.
 *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: Aseptic meningitis: Ohio +1, Ind. +1; Chickenpox: N.H. +32, Idaho +147, Calif. +12; Encephalitis: Ohio +3, Ind. +1, Wash. +1; Hep. B: N.J. -2, Wis. +3, Minn. -1, Va. -1, S.C. +3; Hep. A: Wis. -3, S.C. +2, Idaho -1, Wyo. +8, Ariz. +40, Utah +10, Wash. -1; Hep. unsp.: Maine +1, N.J. -1, S.C. +2, Ariz. +18; Malaria: Ohio +2.

TABLE III (Cont'd). Cases of specified notifiable diseases, United States, weeks ending June 16, 1979, and June 17, 1978 (24th 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	475	10,030	19,755	57	1,479	1,317	378	9,726	14	367	9,131	25
NEW ENGLAND	15	270	1,857	5	68	71	7	351	2	62	1,283	3
Maine	-	11	1,286	1	3	5	4	128	-	-	61	-
N.H.†	3	38	43	-	5	6	-	4	-	2	95	-
Vt.	12	105	24	1	5	2	-	6	-	14	385	-
Mass.†	-	11	181	1	18	26	-	27	2	14	430	2
R.I.	-	103	7	-	5	12	-	23	-	6	76	-
Conn.	-	2	316	2	32	20	3	163	-	26	236	1
MID. ATLANTIC	62	1,106	1,646	8	211	211	54	852	2	50	1,611	5
Upstate N.Y.	5	518	1,052	1	74	66	30	122	-	32	840	1
N.Y. City	50	517	190	3	57	51	5	90	2	13	208	3
N.J.	3	50	61	2	53	44	15	442	-	5	301	-
Pa.	-	21	303	2	27	50	4	198	-	-	262	1
E.N. CENTRAL	201	2,634	8,763	6	139	127	236	4,262	1	118	2,111	1
Ohio†	38	172	393	5	50	25	156	1,525	-	2	85	-
Ind.	4	195	148	1	32	22	15	236	1	16	671	-
Ill.	47	1,263	952	-	3	26	16	782	-	1	145	-
Mich.†	89	685	5,973	-	41	43	13	822	-	92	1,008	1
Wis.†	23	415	1,297	-	13	11	36	897	-	7	202	-
W.N. CENTRAL	107	1,345	340	-	38	50	2	599	-	25	357	-
Minn.	66	876	30	-	9	8	-	6	-	-	34	-
Iowa	1	15	50	-	5	9	-	216	-	-	50	-
Mo.	36	396	7	-	17	22	-	167	-	-	28	-
N. Dak.†	-	10	180	-	-	3	-	1	-	-	8	-
S. Dak.	-	1	-	-	2	2	-	3	-	-	2	-
Nebr.†	-	-	5	-	-	-	-	5	-	24	157	-
Kans.	4	47	68	-	5	6	2	201	-	1	78	-
S. ATLANTIC	22	1,448	4,310	12	378	329	21	367	7	35	1,039	6
Dal.	-	1	5	-	3	1	3	21	-	-	2	-
Md.	-	7	28	5	32	15	1	60	-	1	22	-
D.C.	5	-	47	-	2	1	-	1	-	-	1	-
Va.	5	204	2,561	2	54	42	-	69	1	2	161	1
W. Va.	1	49	947	1	7	7	6	80	1	3	98	-
N.C.	2	104	88	-	52	69	6	54	4	23	463	3
S.C.†	3	119	183	-	47	21	-	2	-	-	55	-
Ga.	6	343	12	2	59	41	-	3	1	1	6	-
Fla.	5	621	439	2	122	132	5	77	-	5	231	2
E.S. CENTRAL	5	138	1,174	5	115	110	22	1,002	-	4	235	4
Ky.	1	23	99	3	22	19	20	793	-	-	55	-
Tenn.	1	47	822	-	35	28	-	79	-	3	77	-
Ala.	3	45	94	1	27	35	2	16	-	1	33	4
Miss.	-	15	159	1	31	28	-	114	-	-	70	-
W.S. CENTRAL	20	858	850	14	259	195	20	1,506	-	8	185	6
Ark.	-	6	13	-	23	16	1	750	-	-	5	1
La.	6	230	305	11	109	71	-	34	-	-	25	1
Okla.	-	22	11	-	20	16	-	-	-	-	22	-
Tex.	14	600	521	3	107	92	19	722	-	8	133	4
MOUNTAIN	4	216	207	2	64	31	6	227	-	26	426	-
Mont.	2	55	103	-	5	2	-	5	-	6	62	-
Idaho†	-	4	1	1	5	2	-	3	-	13	185	-
Wyo.	-	-	-	-	1	-	-	-	-	-	-	-
Colo.	1	32	27	-	4	2	1	66	-	2	27	-
N. Mex.	-	30	-	-	4	7	-	7	-	-	6	-
Ariz.	1	66	18	-	30	11	-	47	-	2	119	-
Utah	-	15	44	1	7	4	4	88	-	2	26	-
Nev.	-	11	14	-	8	3	1	11	-	1	1	-
PACIFIC	39	2,015	608	5	207	193	10	560	2	39	1,884	-
Wash.†	19	1,067	61	-	31	34	3	176	1	3	161	-
Oreg.	-	52	136	-	12	12	-	54	-	2	70	-
Calif.	20	820	408	4	151	139	4	253	1	34	1,640	-
Alaska	-	16	-	1	5	5	-	8	-	-	2	-
Hawaii	-	60	3	-	8	3	3	72	-	-	11	-
Guam	NA	2	25	-	-	-	NA	6	NA	NA	3	-
P.R.	1	250	160	-	-	2	34	448	-	-	30	-
V.I.	-	4	6	-	2	1	-	4	-	-	-	-
Pac. Trust Terr.	NA	5	519	-	1	2	NA	16	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: Mich. -2, Wis. -9, S.C. +16, Wash. +14; Men. Inf.: N.H. +3, N. Dak. +1; Mumps: Idaho +5; Rubella: N.H. +15, Mass. -11, Wis. +1, Nebr. +10, S.C. +4; Tetanus: Ohio +1.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending June 16, 1979, and June 17, 1978 (24th week)

REPORTING AREA	TUBERCULOSIS		TULA-REMI A		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. 1978		
UNITED STATES	643	12,822	57	8	194	35	250	18,338	434,955	428,673	429	11,022	9,492	2,153		
NEW ENGLAND	29	355	1	-	14	2	2	533	11,218	11,109	11	207	293	23		
Maine	2	25	-	-	1	-	-	30	762	844	-	5	7	17		
N.H.	-	8	-	-	-	-	-	20	394	502	1	12	4	1		
Vt.	3	18	-	-	-	-	-	21	257	274	1	1	3	-		
Mass.	15	195	1	-	9	2	2	189	4,522	4,859	3	124	184	4		
R.I.	3	33	-	-	2	-	-	39	908	802	-	6	11	-		
Conn.	6	76	-	-	2	-	-	234	4,375	3,828	6	59	84	1		
MID. ATLANTIC	120	2,064	1	-	28	1	12	1,694	46,616	46,687	85	1,656	1,300	20		
Upstate N.Y.	22	361	1	-	6	1	10	296	7,453	7,520	6	121	94	16		
N.Y. City†	49	760	-	-	14	-	-	800	18,297	18,269	67	1,154	927	-		
N.J.	9	379	-	-	6	-	1	138	8,589	8,672	3	225	140	4		
Pa.	20	564	-	-	2	-	-	460	12,277	12,226	9	196	135	-		
E.N. CENTRAL	106	1,793	-	3	13	5	6	2,799	67,763	62,344	64	1,525	1,028	178		
Ohio†	23	355	-	-	1	2	2	909	18,719	16,092	10	284	207	13		
Ind.†	11	235	-	-	-	-	-	419	6,066	6,464	18	98	55	44		
Ill.	28	662	-	1	5	3	3	517	21,308	19,349	32	927	634	91		
Mich.	29	458	-	1	6	-	1	637	15,556	14,632	4	170	95	-		
Wis.	5	79	-	1	1	-	-	317	6,114	5,807	-	46	33	30		
W.N. CENTRAL	14	411	5	-	6	2	16	730	20,872	21,363	9	153	215	447		
Minn.	5	62	-	-	2	-	-	204	3,634	3,755	1	44	99	89		
Iowa	-	37	-	-	2	-	9	42	2,542	2,440	-	21	22	86		
Mo.	8	217	7	-	1	1	3	206	8,789	8,905	5	63	51	144		
N. Dak.	-	12	-	-	-	-	-	10	350	407	-	1	2	19		
S. Dak.	-	28	1	-	-	-	-	25	720	794	-	1	1	41		
Nebr.	-	3	1	-	-	-	-	112	1,459	1,592	-	1	7	-		
Kans.	1	52	-	-	1	1	4	131	3,378	3,470	3	22	33	68		
S. ATLANTIC	149	2,964	2	2	24	12	113	4,790	104,320	104,096	127	2,651	2,543	280		
Del.	2	29	-	-	-	-	2	74	1,700	1,439	-	16	4	-		
Md.†	18	354	-	-	6	-	13	546	12,510	13,340	8	184	198	9		
D.C.	4	152	-	-	1	-	1	332	6,721	6,914	9	202	199	-		
Va.†	13	335	-	-	2	4	32	429	10,044	9,649	7	247	228	5		
W. Va.	6	117	-	1	2	1	2	62	1,491	1,543	-	38	8	-		
N.C.†	22	464	-	-	4	39	573	15,297	14,142	9	217	230	2			
S.C.†	23	192	1	-	3	3	10	499	9,684	10,227	7	122	125	90		
Ge.	22	445	1	-	-	-	14	742	20,112	20,204	35	717	626	154		
Fla.†	29	836	-	1	10	-	-	1,533	26,761	26,638	52	908	925	20		
E.S. CENTRAL	73	1,213	10	-	10	4	38	2,038	37,719	37,396	25	706	470	129		
Ky.†	28	334	2	-	4	1	6	155	4,825	4,483	5	73	58	54		
Tenn.	21	329	8	-	1	3	24	878	13,502	13,579	12	295	166	46		
Ala.	14	270	-	-	5	-	7	566	11,339	11,043	2	141	70	28		
Miss.	10	280	-	-	-	-	1	399	8,053	8,291	6	193	176	1		
W.S. CENTRAL	71	1,554	22	1	24	9	41	2,930	56,905	59,762	63	1,933	1,446	886		
Ark.	13	114	12	-	1	15	120	4,315	4,274	4	61	37	203			
La.†	22	354	2	-	3	1	1	695	10,206	9,818	9	460	290	16		
Okl.	4	161	4	-	-	6	17	228	5,178	5,559	1	35	42	137		
Tex.	32	925	4	1	21	1	8	1,887	37,206	39,811	49	1,377	1,077	530		
MOUNTAIN	18	386	8	-	20	-	2	730	17,175	15,397	2	199	177	37		
Mont.	2	15	1	-	-	-	1	40	807	946	-	6	7	-		
Idaho	-	3	-	-	1	-	-	24	719	582	1	15	4	-		
Wyo.	-	3	-	-	1	-	-	32	400	355	-	5	4	-		
Colo.	4	63	1	-	12	-	-	176	4,570	4,440	1	48	53	6		
N. Mex.†	2	68	1	-	1	-	-	61	2,196	2,255	-	33	48	21		
Ariz.	9	184	-	-	3	-	-	203	4,791	3,636	-	60	34	9		
Utah	-	13	5	-	-	-	-	58	919	878	-	3	9	1		
Nev.	1	35	-	-	2	-	1	136	2,773	2,305	-	29	18	-		
PACIFIC	62	2,082	4	2	55	-	-	2,094	72,367	70,519	43	1,952	2,021	153		
Wash.	12	114	3	-	1	-	-	479	6,415	5,312	NA	111	97	-		
Oreg.	6	101	-	-	-	-	-	196	4,770	4,941	3	86	71	-		
Calif.	40	1,676	1	2	46	-	-	1,275	57,583	56,680	40	1,658	1,827	151		
Alaska	-	44	-	-	1	-	-	109	2,401	2,230	-	12	7	2		
Hawaii	5	147	-	-	7	-	-	35	1,198	1,356	-	45	19	-		
Guam	NA	18	-	NA	-	NA	-	NA	30	57	NA	-	-	-		
P.R.	7	122	-	-	3	-	-	21	944	1,138	7	222	212	7		
V.I.	-	3	-	-	1	-	-	2	86	103	1	5	8	-		
Pac. Trust Terr.	NA	10	-	NA	-	NA	-	NA	112	226	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 -11, Md. -5, N.C. -2, Fla. -2, Ky. -1; Typhoid Fev.: Ohio +1; RMSF: Ind. +2, Va. -1, S.C. +4; Syphilis: La. -1 civ., +1 mil.; An. Rabies: S.C. +1, N.Mex. +2.

TABLE IV. Deaths in 121 U.S. cities,* week ending
June 16, 1979 (24th 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	606	400	141	35	15	31	S. ATLANTIC	1,082	621	269	103	55	33
Boston, Mass.	155	66	44	13	7	12	Atlanta, Ga.	143	77	36	22	3	3
Bridgport, Conn.	33	19	10	3	-	1	Baltimore, Md.	166	87	45	17	9	1
Cambridge, Mass.	25	19	5	1	-	-	Charlotte, N.C.	50	12	16	6	13	1
Fall River, Mass.	24	18	6	-	-	2	Jacksonville, Fla.	86	57	24	5	-	4
Hartford, Conn.	54	31	11	6	3	-	Miami, Fla.	112	73	25	11	-	2
Lowell, Mass.	25	19	3	3	-	1	Norfolk, Va.	58	28	10	5	4	-
Lynn, Mass.	21	16	4	-	-	2	Richmond, Va.	61	30	25	3	2	4
New Bedford, Mass.	19	16	3	-	-	-	Savannah, Ga.	23	16	7	-	-	5
New Haven, Conn.	47	25	12	2	2	1	St. Petersburg, Fla.	92	74	11	3	1	6
Providence, R.I.	72	52	16	1	2	5	Tampa, Fla.	76	43	23	2	4	1
Somerville, Mass.	9	7	1	1	-	-	Washington, D.C.	177	92	39	24	17	4
Springfield, Mass.	53	37	13	2	-	1	Wilmington, Del.	39	22	8	5	2	2
Waterbury, Conn.	26	18	7	-	-	1							
Worcester, Mass.	45	33	6	2	1	5							
							E.S. CENTRAL	710	422	194	41	37	50
MID. ATLANTIC	2,388	1,529	582	145	63	80	Birmingham, Ala.	103	50	40	7	5	3
Albany, N.Y.	58	31	11	5	6	-	Chattanooga, Tenn.	38	26	6	2	3	8
Allentown, Pa.	15	12	7	-	-	-	Knoxville, Tenn.	38	26	9	3	-	-
Buffalo, N.Y.	151	65	34	5	6	9	Louisville, Ky.	123	79	31	5	3	14
Camden, N.J.	58	23	10	1	2	-	Memphis, Tenn.	178	98	49	8	17	9
Elizabeth, N.J.	29	15	6	6	-	-	Mobile, Ala.	69	42	20	4	1	4
Erie, Pa.	33	20	12	-	-	3	Montgomery, Ala.	41	25	9	5	2	4
Jersey City, N.J.	55	41	10	1	-	-	Nashville, Tenn.	120	76	30	7	6	8
Newark, N.J.	60	26	21	5	5	5							
N.Y. City, N.Y.	1,235	808	282	86	24	34	W.S. CENTRAL	1,167	652	297	83	50	37
Paterson, N.J.	25	17	4	2	1	-	Austin, Tex.	45	29	9	2	2	4
Philadelphia, Pa.	273	164	75	16	10	9	Baton Rouge, La.	43	18	14	3	2	1
Pittsburgh, Pa.	68	36	26	4	-	4	Corpus Christi, Tex.	47	26	12	5	3	2
Reading, Pa.	57	22	9	6	-	1	Dallas, Tex.	174	100	42	15	3	1
Rochester, N.Y.	108	72	27	2	5	9	El Paso, Tex.	56	30	12	4	3	3
Schenectady, N.Y.	25	20	8	1	-	-	Fort Worth, Tex.	87	45	26	5	5	8
Scranton, Pa.	28	22	5	-	-	-	Houston, Tex.	225	113	63	16	8	4
Syracuse, N.Y.	79	57	17	1	2	4	Little Rock, Ark.	59	35	14	1	7	3
Trenton, N.J.	33	21	9	-	2	2	New Orleans, La.	163	102	38	10	7	3
Utica, N.Y.	15	12	5	-	-	-	San Antonio, Tex.	128	68	35	8	8	3
Yonkers, N.Y.	35	25	6	4	-	-	Shreveport, La.	56	31	15	5	2	8
							Tulsa, Okla.	84	55	13	5	-	-
E.N. CENTRAL	2,332	1,364	630	163	90	53	MOUNTAIN	558	338	150	39	12	10
Akron, Ohio	88	56	17	7	4	-	Albuquerque, N. Mex.	56	27	11	6	-	1
Canton, Ohio	53	37	12	1	2	3	Colorado Springs, Colo.	24	19	4	-	-	3
Chicago, Ill.	579	332	162	42	24	10	Denver, Colo.	117	75	28	7	2	4
Cincinnati, Ohio	162	101	40	10	5	2	Las Vegas, Nev.	74	36	22	9	3	-
Cleveland, Ohio	187	111	55	11	5	3	Ogden, Utah	25	18	7	-	-	-
Columbus, Ohio	135	76	33	13	4	7	Phoenix, Ariz.	113	69	27	9	2	2
Dayton, Ohio	57	53	32	8	2	-	Pueblo, Colo.	22	15	6	1	-	-
Detroit, Mich.	291	147	89	29	16	3	Salt Lake City, Utah	60	34	19	3	4	-
Evansville, Ind.	37	24	12	-	1	2	Tucson, Ariz.	67	35	26	4	1	-
Fort Wayne, Ind.	44	27	12	2	-	1							
Gary, Ind.	11	5	4	1*	1	-							
Grand Rapids, Mich.	45	26	5	2	2	4	PACIFIC	1,836	1,159	421	128	46	49
Indianapolis, Ind.	147	88	35	11	6	1	Berkeley, Calif.	19	13	4	1	-	2
Madison, Wis.	46	20	16	3	4	2	Fresno, Calif.	61	36	8	5	1	2
Milwaukee, Wis.	129	52	24	7	2	2	Glendale, Calif.	45	31	11	1	-	2
Peoria, Ill.	41	25	7	3	4	7	Honolulu, Hawaii	45	23	15	2	2	3
Rockford, Ill.	41	25	10	2	1	2	Long Beach, Calif.	87	52	25	6	2	16
South Bend, Ind.	46	28	13	2	1	3	Los Angeles, Calif.	619	391	136	50	11	8
Toledo, Ohio	101	48	40	8	2	1	Oakland, Calif.	96	56	21	7	6	4
Youngstown, Ohio	52	33	12	1	4	-	Pasadena, Calif.	27	20	4	2	1	1
							Portland, Oreg.	118	73	31	7	4	3
W.N. CENTRAL	759	466	172	37	34	23	Sacramento, Calif.	60	38	12	7	1	-
Des Moines, Iowa	59	46	7	1	2	-	San Diego, Calif.	113	65	33	6	8	-
Duluth, Minn.	28	25	1	1	-	3	San Francisco, Calif.	139	93	29	6	8	2
Kansas City, Kans.	32	15	13	1	-	3	San Jose, Calif.	172	103	48	10	2	2
Kansas City, Mo.	124	67	28	9	14	-	Seattle, Wash.	142	103	24	10	1	3
Lincoln, Nebr.	30	17	10	3	-	2	Spokane, Wash.	56	37	11	5	1	-
Minneapolis, Minn.	52	62	21	4	7	3	Tacoma, Wash.	37	25	7	5	1	-
Omaha, Nebr.	64	42	18	-	1	1							
St. Louis, Mo.	165	101	40	12	7	6	TOTAL	11,439	6,971	2,856	774	402	366
St. Paul, Minn.	68	49	14	1	1	1							
Wichita, Kans.	57	44	20	5	2	4							

*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, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

Epidemiologic Notes and Reports

Human Plague — California

California's first case of human plague in 1979 was confirmed the week ending May 18 in a 55-year-old man who lives in Diamond Bar, a suburban community in southeast Los Angeles County. Although wild rodent plague was documented as recently as last year in Los Angeles County, this is the first human case acquired in the county since 1936.

The patient developed fever and pain in the right groin on May 9. The next day, he saw a physician who noted fever of 40.5 C, pyuria, and hematuria. The patient was treated with intramuscular penicillin and was given a prescription for oral ampicillin for presumed urinary tract infection. On May 11, he appeared flushed, toxic, and tremulous and was admitted to a hospital. His temperature at that time was 39.4 C, and his pulse, 100. He had a tender, rubbery, nonpulsatile, nonfluctuant mass in his right groin. Laboratory data included a white blood count (WBC) of 16,000/mm³ with a marked shift to the left. Urinalysis revealed gross hematuria, 4+ proteinuria, and many granular and red blood casts. Admitting diagnosis was fever of undetermined origin with septicemia. After 3 blood cultures were drawn, parenteral treatment with ampicillin and gentamicin was started.

Massive diarrhea began on May 11, and by May 13 abdominal films suggested possible bowel obstruction. A laparotomy was performed showing only lymphadenitis near the right groin. Positive blood cultures were flown on May 16 to the state's Microbial Diseases Laboratory, where *Yersinia pestis* was identified by fluorescent-antibody and bacteriophage tests. Antibiotic treatment was switched from ampicillin to tetracycline; gentamicin was retained. The patient has been recovering satisfactorily. There have been no signs of pneumonic involvement.

The patient had not traveled or camped recently. He played golf each weekend at the Diamond Bar golf course and jogged 2 miles daily (always with long pants) around his home. He has a cat and small house dog; both animals have been well. The patient had no known insect bites or direct contact with rodents.

The patient's home is about 2½ miles from Sycamore Canyon County Park. The park was closed and treated with insecticide in late 1978 because of a plague epizootic among ground squirrels. The patient had not been in the park recently, but the above-mentioned golf course is adjacent to that park. His home site abuts on grassy, hilly, undeveloped land with chaparral. Ecologic studies in the vicinity of the house revealed abandoned rodent burrows with fleas and blowflies, suggesting a recent rodent die-off. A ground squirrel carcass found approximately 100 feet from the property was culture positive for *Y. pestis*.

Reported by J Pickleseimer, MD, T Davis, RN, Presbyterian Intercommunity Hospital, Whittier, California, and S Fannin, MD, Los Angeles County Dept of Health Services, in the California Morbidity Weekly Report, No. 20, May 25, 1979; Plague Br, Vector-Borne Diseases Div, Bur of Laboratories, and Bacterial Zoonoses Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Seven cases of human plague with onset in 1979 have been reported to CDC since January 1. For the past 5 years, the average number of cases reported during the corresponding time period was 5. In addition to 2 cases reported from California, Arizona has reported 3 cases, and New Mexico has reported 2 cases. Plague infection has been bacteriologically confirmed in 3 of the cases; confirmation is pending for the other 4.

Plague infection in the patient reported here was presumably acquired in the vicinity of his home or, possibly, the golf course. Ecologic studies suggesting a recent wild rodent die-off support the impression that this case was sylvatic in origin, even though it occurred in a suburban area.

Rabies in Skunks — Arkansas

An outbreak of rabies in skunks is occurring in Arkansas. In the first 4 months of 1979, there were 143 laboratory-confirmed rabid skunks, compared to yearly totals of 99 in 1977, and 144 in 1978. By the end of April 1979, 172 skunk heads had been examined; 143 of these were positive (83.1%). By the end of April 1978, 73 skunk heads had been examined; 48 were positive (65.7%).

The public is being made aware of the outbreak by frequent news articles, broadcast notices, and letters to the Arkansas Veterinary Medical Association and to the state parks and tourism directors. There is the possibility that this increased publicity may be a contributing factor in the increase in skunks being submitted for laboratory testing.

Although Arkansas state law requires annual rabies vaccination of all dogs and cats, it is estimated that no more than 50% of the dogs and 20% of the cats in the state are vaccinated. Comparison of those vaccinated for January through March of 1978 (dogs, 13,158; cats, 3,189) and 1979 (dogs, 20,471; cats, 4,580) reveals a marked increase in vaccinations, however. Dogs and cats, important potential sources of human exposure, are usually infected with rabies as a result of exposure from wildlife.

In addition to the increased incidence of animal rabies, there has been a corresponding increase in reports to the health department of human exposures that required post-exposure rabies treatment. In the first 4 months of 1979, 44 persons required such treatment, whereas only 24 did for the corresponding period of last year.

Reported by TC McChesney, DVM, Arkansas State Dept of Health; Respiratory and Special Pathogens Br, Viral Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Although the total incidence of animal rabies is greater in Texas, when area difference is considered, Arkansas has the highest incidence of animal rabies in the United States this year. Oklahoma and Missouri are also showing considerable increases.

Wildlife management officials and biologists postulate that the increased rate is due to an increase in the skunk population this year. This increase may be due to the prohibition on fox hunting and trapping in effect for the last few years. The fox and skunk share a similar habitat. When foxes were trapped, many skunks were inadvertently caught, thus controlling the skunk population. In subsequent years, if historic patterns continue, there should be a decrease in skunk populations—because of diseases, food shortages, and competition for denning sites, among other factors—with, hopefully, a proportional decrease in skunk rabies.

Current Trends

Preliminary Studies on Environmental Decontamination of *Legionella pneumophila*

Nine months ago, CDC, after consultation with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) and the Environmental Protection Agency (EPA), initiated studies to test the ability of chemicals in commercially available, EPA-registered biocides to inhibit growth of *Legionella pneumophila* in tap water. Such studies were indicated because of the isolation of *L. pneumophila* from water taken from cooling towers and evaporative condensers at the sites of outbreaks of legionellosis (Legionnaires' disease; Pontiac fever) and the implication of such air-conditioning units in the dissemination of the organism (1-3).

Legionella pneumophila — Continued

Preliminary data from the testing of 6 compounds—including a chlorinated phenol, a quaternary ammonium; an isothiazolin; a dithiocarbamate; 2, 2-dibromo-3-nitrilopropionamide; and calcium hypochlorite—are now available. Fixed concentrations of *L. pneumophila* were exposed in hypochlorite-free, sterile tap water to several concentrations of each compound; aliquots of the tap water were then inoculated at various time periods on artificial media and in yolk sacs of embryonated eggs for growth of *L. pneumophila*. A compound with 50% didecyl dimethyl ammonium chloride (a quaternary ammonium compound), 20% isopropanol, and 30% inert ingredients was effective at concentrations of 70, 140, and 630 ppm in preventing recovery of *L. pneumophila* from aliquots of water taken 3, 6, 24, and 168 hours after initial exposure. Calcium hypochlorite and 2, 2-dibromo-3-nitrilopropionamide also appeared effective, but testing is not complete. The other 3 compounds appeared to be less rapidly effective in inhibiting recovery of *L. pneumophila* in laboratory testing.

Reported by Epidemiologic Investigations Laboratory Br and Special Pathogens Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: These studies identify certain commercially available water disinfectants that might be tested for their ability to decontaminate evaporative condensers and cooling towers implicated in the transmission of *L. pneumophila*. However, the efficacy of any such decontamination procedures in actually inhibiting growth of *L. pneumophila* in cooling tower or evaporative condenser water and preventing transmission of the organism remains to be demonstrated. Protocols are being designed to test the use of chemical disinfectants in decontaminating evaporative condensers and cooling towers implicated in dissemination of *L. pneumophila* in outbreaks.

These findings also do not address the problem of long-term preventive maintenance of evaporative condensers and cooling towers. Although CDC and ASHRAE advise that routine preventive maintenance measures may be effective in controlling slime, scale, algae, and bacterial growth in such air-conditioning units, they have no information about the utility of such procedures in preventing legionellosis.

References

1. MMWR 27:283, 1978
2. MMWR 27:368, 1978
3. Glick TH, Gregg MB, Berman B, Mallison G, Rhodes WW, Kassanoff I: Pontiac fever: An epidemic of unknown etiology in a health department. I. Clinical and epidemiologic aspects. Am J Epidemiol 107:149-160, 1978

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p 249 In the article, "Nosocomial Meningitis Caused by *Citrobacter diversus* — Connecticut, Florida," in the first paragraph describing the Florida case, a phrase was inadvertently omitted from the fifth sentence. The corrected sentence reads: "On December 22, however, he was admitted to another hospital with jaundice and lethargy."

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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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