



Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE

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CURRENT TRENDS

AMPICILLIN-RESISTANT *HAEMOPHILUS INFLUENZAE*

Since the last report in July 1974 which described 15 isolates (MMWR, Vol. 23, No. 23), 36 additional isolates of ampicillin-resistant *Haemophilus influenzae* from blood or cerebrospinal fluid (CSF) have been submitted to the Antimicrobics Investigations Section of CDC. Thirty-two (89%) of these were confirmed as type b. Seven additional type b strains were submitted from other sites. Thus, 43 pathogenic isolates of ampicillin-resistant *H. influenzae* have been received since the last report. The mean minimum inhibitory concentration (MIC) of ampicillin was 55 µg/ml. Disk sensitivity testing was done on 26 of the isolates, and in each case zones of inhibition were less than 20 mm, which indicates resistance. Of 30 isolates tested for the production of beta

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lactamase, all were positive. All of these ampicillin-resistant isolates were sensitive to chloramphenicol with MICs below 1.0 µg/ml.

The resistant isolates came from 16 states which had not previously submitted such isolates and from 4 states and the District of Columbia which had. At present a total of 23

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	24th WEEK ENDING		MEDIAN 1970-1974	CUMULATIVE, FIRST 24 WEEKS			
	June 14, 1975	June 15, 1974		1975	1974	MEDIAN 1970-1974	
Aseptic meningitis	64	42	52	916	866	886	
Brucellosis	7	6	4	90	68	70	
Chickenpox	3,828	2,696	---	104,971	89,300	---	
Diphtheria	3	1	1	189	140	96	
Encephalitis	{ Primary	23	10	24	318	379	484
	{ Post-Infectious	9	7	7	141	121	137
	{ Type B	272	176	168	5,138	4,215	3,952
Hepatitis, Viral	{ Type A	610	816	1,000	16,482	20,052	25,937
	{ Type unspecified	148	153		3,702	4,004	
	{ Malaria	4	3		9	132	
Measles (rubeola)	963	825	823	17,609	16,971	23,494	
Meningococcal infections, total	34	10	25	788	729	798	
	{ Civilian	34	9	24	771	707	779
	{ Military	---	1	1	17	22	33
Mumps	1,535	1,166	1,530	39,878	38,435	49,562	
Pertussis	38	25	---	567	583	---	
Rubella (German measles)	433	313	670	13,520	8,110	23,626	
Tetanus	2	1	3	30	28	42	
Tuberculosis	669	647	---	15,017	13,896	---	
Tularemia	5	8	3	48	48	48	
Typhoid fever	18	7	8	128	155	142	
Typhus, tick-borne (Rky. Mt. spotted fever)	37	40	29	215	223	118	
Venereal Diseases:							
	{ Gonorrhea (Civilian	19,573	16,755	---	432,874	393,055	---
	{ Military	453	574	---	13,709	13,066	---
Syphilis, primary and secondary	{ Civilian	487	487	---	11,810	11,411	---
	{ Military	4	9	---	159	208	---
Rabies in animals	64	62	76	1,085	1,393	1,764	

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	---	Poliomyelitis, total:	1
Botulism:	9	Paralytic:	1
Congenital rubella syndrome:	9	Psittacosis: Calif. 1	17
Leprosy: Calif. 1	92	Rabies in man:	1
Leptospirosis:	16	Trichinosis:	44
Plague: Ariz. 2	3	Typhus, murine:	7

HAEMOPHILUS INFLUENZAE – Continued

states and the District of Columbia have reported resistant pathogenic *H. influenzae* isolates to the CDC (Figure 1). Since February 1974, a total of 58 ampicillin resistant case isolates have been received.

The patients from whom the organism was recovered were all less than 5 years old. Only 3 were older than 3 years. Meningitis was the most common manifestation of disease, occurring in 41 patients (71%). The outcome of illness was reported for 29 children with meningitis or bacteremia; 4 (14%) died.

(Reported by Special Pathogens Laboratory Section, Epidemiology Investigations Laboratory Branch and Special Pathogens Branch, Bacterial Diseases Division, Bureau of Epidemiology and Antimicrobics Investigations Section, Clinical Bacteriology Branch, Bacteriology Division, Bureau of Laboratories, CDC.)

Editorial Note

The available evidence indicates that ampicillin-resistant *H. influenzae* are not confined to a limited geographic region in the United States. The proportion of *H. influenzae* disease and, specifically, meningitis due to ampicillin-resistant strains is unknown. However, the consequences of ineffective or delayed proper treatment are such that primary therapy for patients with confirmed or suspected infection due to *H. influenzae* should include chloramphenicol (1). The rare but serious problem of irreversible aplastic anemia following the use of this drug dictates that it be used only for clear indications such as the above.

The inclusion or exclusion of *H. influenzae* as the etiology of bacterial meningitis in young children can be expedited by the rapid performance of the gram stain and Quellung reaction with type B antiserum on CSF. In some hospitals counterimmunoelectrophoresis of blood or CSF may also serve to quickly establish the diagnosis.

An assessment of ampicillin-sensitivity of *H. influenzae* recovered from cases is important for clinicians who may wish to discontinue therapy with chloramphenicol and use ampicillin exclusively if results indicate that this will be successful.

Tests for beta lactamase production can be performed as soon as growth of *H. influenzae* is evident on agar. This provides a rapid method for screening for ampicillin-resistance, but if this test is negative, sensitivity to ampicillin should be established by standard disk or tube dilution methods before chloramphenicol is dropped from therapy.

The microdilution procedure for determining MICs previously reported (2) can be improved by using Schaedler broth supplemented with 5% peptic digest of blood (Fildes reagent) which yields better growth.

Contrary to many reports, the disk agar diffusion test can also be used to reliably separate ampicillin-sensitive and resistant strains of *H. influenzae*. The test should be performed as described for the Kirby-Bauer test with the following modifications:

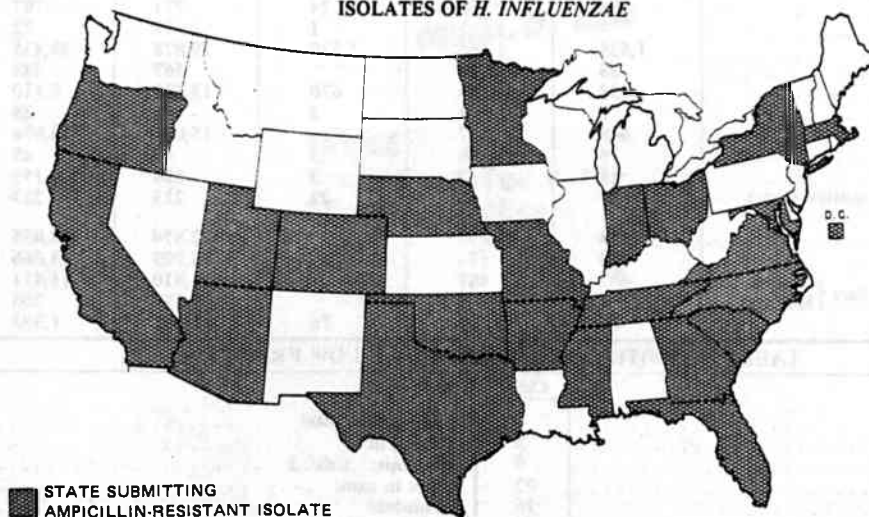
- 1) It is very important that the inoculum contain very close to 10^8 colony forming units (cfu) per ml. This can be achieved by removing the growth from an overnight chocolate agar plate, suspending it in Mueller-Hinton broth, and adjusting it to match the turbidity of a 0.5 McFarland standard, or by use of a nephelometer or similar device. Do not increase the inoculum because the organisms are fastidious.
- 2) Mueller-Hinton agar supplemented with 1% Isovitalex (or equivalent) and 5% chocolitized rabbit blood or 5% horse blood or 1% hemoglobin is recommended for the test. Chocolitized sheep blood agar is not recommended.
- 3) Ampicillin-resistant strains will usually have a zone of inhibition around the disk, since the resistance is due to a β -lactamase. However, the diameter of zones for these strains will be less than 20 mm and often will have colonies within the zone. Zone diameters for ampicillin-sensitive strains are most often 28-32 mm.

It is suggested that control strains of *H. influenzae* with known ampicillin sensitivity be included with these tests.

References

1. Katz SL: Ampicillin-resistant *Haemophilus influenzae* type b: A status report. *Pediatrics* 55:6-8, 1975
2. Thornsberry C and Kirven LA: Antimicrobial susceptibility of *Haemophilus influenzae* antimicrob. *Ag Chemother* 6:620-624, 1974

Figure 1
GEOGRAPHIC DISTRIBUTION OF AMPICILLIN-RESISTANT
ISOLATES OF *H. INFLUENZAE*



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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JUNE 14, 1975 AND JUNE 15, 1974 (24th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHThERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod- borne and Unspecified		Post In- fectious	Type B	Type A	Type Unspecified		
						1975	1974	1975	1975	1975	1975		
UNITED STATES	64	7	3,828	3	189	23	10	9	272	610	148	4	132
NEW ENGLAND	-	2	573	-	-	-	1	-	10	32	8	-	5
Maine *	-	-	-	-	-	-	-	-	-	1	-	-	1
New Hampshire	-	-	10	-	-	-	-	-	1	-	-	-	-
Vermont	-	2	-	-	-	-	-	-	-	-	-	-	-
Massachusetts	-	-	225	-	-	-	-	-	1	6	8	-	2
Rhode Island	-	-	81	-	-	-	1	-	2	9	-	-	-
Connecticut	-	-	257	-	-	-	-	-	6	16	-	-	2
MIDDLE ATLANTIC	3	-	452	-	-	1	1	1	58	63	20	-	19
Upstate New York	-	-	326	-	-	-	1	-	7	11	1	-	5
New York City	3	-	126	-	-	-	-	-	6	23	-	-	8
New Jersey	-	-	-	-	-	1	-	1	37	11	13	-	3
Pennsylvania	-	-	-	-	-	-	-	-	8	18	6	-	3
EAST NORTH CENTRAL	3	-	1,781	-	2	7	3	2	31	106	7	-	2
Ohio *	-	-	280	-	-	3	1	-	4	34	-	-	-
Indiana	-	-	22	-	-	1	-	-	-	13	-	-	-
Illinois	-	-	381	-	1	-	1	2	9	8	2	-	2
Michigan	3	-	671	-	1	3	1	-	13	32	5	-	-
Wisconsin	-	-	427	-	-	-	-	-	5	19	-	-	-
WEST NORTH CENTRAL	2	-	189	-	6	1	1	-	24	35	4	1	5
Minnesota	2	-	3	-	-	-	-	-	19	10	-	1	3
Iowa	-	-	71	-	-	1	-	-	1	2	-	-	-
Missouri *	-	-	60	-	-	-	1	-	3	8	3	-	2
North Dakota	-	-	1	-	6	-	-	-	-	2	-	-	-
South Dakota	-	-	-	-	-	-	-	-	-	1	-	-	-
Nebraska	-	-	14	-	-	-	-	-	1	4	1	-	-
Kansas	-	-	40	-	-	-	-	-	-	8	-	-	-
SOUTH ATLANTIC	11	1	267	-	-	2	1	1	38	103	27	1	22
Delaware	-	-	1	-	-	-	-	-	-	1	1	-	-
Maryland	-	-	14	-	-	-	1	1	13	7	-	-	1
District of Columbia	-	-	7	-	-	-	-	-	4	-	-	1	4
Virginia	1	1	46	-	-	-	-	-	4	10	2	-	5
West Virginia *	-	-	91	-	-	-	-	-	-	3	1	-	1
North Carolina	1	-	-	-	-	1	-	-	2	15	2	-	3
South Carolina *	3	-	9	-	-	-	-	-	4	3	4	-	-
Georgia	-	-	5	-	-	-	-	-	-	27	-	-	5
Florida	6	-	94	-	-	1	-	-	11	37	17	-	3
EAST SOUTH CENTRAL	8	2	127	-	-	4	-	3	22	60	3	-	10
Kentucky	-	-	93	-	-	-	-	-	4	16	-	-	6
Tennessee	4	1	-	-	-	1	-	-	2	24	-	-	-
Alabama	3	-	23	-	-	2	-	1	16	10	3	-	3
Mississippi	1	1	11	-	-	1	-	2	-	10	-	-	1
WEST SOUTH CENTRAL	16	2	127	-	2	3	1	1	18	62	7	-	13
Arkansas	-	2	-	-	-	-	-	-	-	5	-	-	1
Louisiana	4	-	-	-	-	2	-	-	2	6	-	-	-
Oklahoma *	-	-	21	-	-	-	1	1	10	6	2	-	1
Texas	12	-	106	-	2	1	-	-	6	45	5	-	11
MOUNTAIN	-	-	80	-	14	-	-	-	11	28	25	1	11
Montana	-	-	10	-	-	-	-	-	-	4	-	-	-
Idaho	-	-	14	-	-	-	-	-	-	-	-	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	-	-	52	-	-	-	-	-	10	4	16	-	8
New Mexico	-	-	-	-	1	-	-	-	-	-	-	-	-
Arizona	-	-	-	-	13	-	-	-	1	13	1	-	2
Utah	-	-	2	-	-	-	-	-	-	4	8	1	1
Nevada	-	-	2	-	-	-	-	-	-	3	-	-	-
PACIFIC	21	-	232	3	165	5	2	1	60	121	47	1	45
Washington	-	-	190	2	158	2	-	-	4	19	9	-	2
Oregon	-	-	-	-	-	-	-	-	7	11	12	-	-
California *	9	-	-	-	2	3	2	1	47	83	26	1	40
Alaska	-	-	1	1	5	-	-	-	2	8	-	-	-
Hawaii	12	-	41	-	-	-	-	-	-	-	-	-	3
Guam *	-	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	27	-	-	-	-	-	1	7	-	-	1
Virgin Islands	1	-	1	-	-	-	-	-	-	-	-	-	-

*Delayed reports: Chickenpox: Me. 18, Mo. 175, S.C. 10, Okla. 4, Calif. 27, Guam 6
Hepatitis B: Ohio 8, Mo. 1, Guam 1

Hepatitis A: Ohio delete 8, Mo. 2, W. Va. 1, Okla. 20, Guam 6

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JUNE 14, 1975 AND JUNE 15, 1974 (24th WEEK) - Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1975	Cumulative		1975	Cumulative		1975	Cum. 1975	1975	1975	Cum. 1975	Cum. 1975
		1975	1974		1975	1974						
UNITED STATES	963	17,609	16,971	34	788	729	1,535	39,878	38	433	13,520	30
NEW ENGLAND	21	231	768	1	42	40	39	1,331	-	33	1,889	1
Maine *	-	10	33	-	5	2	-	67	-	-	27	-
New Hampshire	-	19	206	-	1	7	2	65	-	-	301	-
Vermont	-	38	56	-	-	1	-	6	-	-	64	-
Massachusetts *	6	75	299	1	14	11	5	159	-	20	1,126	1
Rhode Island	-	1	57	-	3	7	12	499	-	-	23	-
Connecticut	15	88	117	-	19	12	20	535	-	13	348	-
MIDDLE ATLANTIC	83	1,164	6,796	4	84	94	108	1,928	1	25	1,535	4
Upstate New York	22	338	494	1	26	41	32	793	1	7	215	-
New York City	2	95	407	2	21	14	43	461	-	4	135	1
New Jersey *	26	419	5,155	-	12	27	5	306	-	13	931	3
Pennsylvania	33	312	740	1	25	12	28	368	-	1	254	-
EAST NORTH CENTRAL	372	5,274	6,702	5	115	89	751	16,851	6	146	3,710	2
Ohio	1	92	2,940	3	24	31	88	1,758	1	40	557	-
Indiana	1	328	194	-	5	8	10	1,846	-	12	862	-
Illinois	104	1,266	1,526	-	18	10	182	1,924	4	7	239	2
Michigan	199	2,697	1,679	1	53	28	291	7,372	1	62	1,313	-
Wisconsin *	67	891	363	1	15	12	180	3,951	-	25	739	-
WEST NORTH CENTRAL	76	4,511	601	4	41	53	43	3,071	6	19	1,499	1
Minnesota	-	2	77	1	9	17	-	32	-	-	32	-
Iowa	21	433	90	-	5	10	22	952	-	1	20	-
Missouri *	3	207	230	-	19	14	12	862	6	6	724	1
North Dakota	13	1,011	25	-	-	2	3	429	-	-	59	-
South Dakota	-	351	27	-	1	2	-	5	-	-	18	-
Nebraska	11	373	2	-	1	1	-	31	-	-	13	-
Kansas	28	2,134	150	3	6	7	6	760	-	12	633	-
SOUTH ATLANTIC	11	209	403	9	160	140	81	2,532	4	24	1,429	8
Delaware	4	27	6	-	5	3	-	7	-	-	16	-
Maryland	-	17	21	-	16	15	6	110	-	-	36	-
District of Columbia	-	-	3	1	5	-	-	85	-	-	-	-
Virginia *	2	22	21	-	15	27	26	616	-	3	304	-
West Virginia	1	116	104	-	5	6	14	929	-	2	166	-
North Carolina	-	-	4	1	31	30	8	65	1	5	35	3
South Carolina	-	-	37	2	26	12	-	32	-	13	702	1
Georgia	1	3	4	-	8	6	-	8	-	-	-	-
Florida	3	24	203	5	49	41	27	680	3	1	170	4
EAST SOUTH CENTRAL	37	253	128	8	116	84	181	3,548	7	45	799	2
Kentucky	3	80	101	2	50	36	96	1,381	2	4	210	1
Tennessee	34	163	9	1	39	36	72	1,608	4	41	563	-
Alabama	-	3	6	4	18	9	7	332	-	-	19	-
Mississippi	-	7	12	1	9	3	6	227	1	-	7	1
WEST SOUTH CENTRAL	14	226	152	2	122	128	69	3,635	6	13	654	6
Arkansas *	-	-	5	1	7	9	-	165	1	-	19	-
Louisiana *	-	-	13	-	24	23	-	311	4	1	268	3
Oklahoma	12	102	22	-	8	12	4	136	-	2	82	-
Texas	2	124	112	1	83	84	65	3,023	1	10	285	3
MOUNTAIN	50	1,127	685	1	31	20	39	713	-	51	473	-
Montana	9	35	359	1	5	1	1	11	-	3	249	-
Idaho	1	5	50	-	4	2	1	12	-	32	72	-
Wyoming	-	-	1	-	-	3	2	2	-	-	-	-
Colorado	27	1,000	29	-	9	2	32	489	-	16	114	-
New Mexico	-	7	49	-	4	2	-	19	-	-	14	-
Arizona	9	51	11	-	1	4	-	-	-	-	2	-
Utah	-	9	3	-	7	3	-	104	-	-	15	-
Nevada	4	20	183	-	1	3	3	76	-	-	7	-
PACIFIC	299	4,614	736	-	77	81	224	6,269	8	77	1,532	6
Washington	75	222	55	-	13	8	117	3,414	-	6	254	-
Oregon	1	187	-	-	4	9	14	472	5	-	118	-
California	222	4,155	624	-	59	59	93	2,322	3	71	1,150	6
Alaska	-	-	-	-	-	2	-	40	-	-	-	-
Hawaii	1	50	57	-	1	3	-	21	-	-	10	-
Guam *	-	15	7	-	1	1	-	17	-	-	6	-
Puerto Rico	20	476	468	-	1	2	14	575	3	-	16	10
Virgin Islands	-	6	22	-	-	-	-	183	-	-	3	2

*Delayed reports: Measles: Mass. delete 6, N.J. 1, Wisc. delete 9, Mo. 2, La. delete 1, Guam 5
Meningococcal infections: Ark. 1

Mumps: Me. 2, Mo. 18
Rubella: Me. 1, Wisc. 15, Va. delete 1, Ark. 19, Guam 2

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**TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JUNE 14, 1975 AND JUNE 15, 1974 (24th WEEK) - Continued**

AREA	TUBERCULOSIS		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS
	1975	Cum. 1975	Cum. 1975	1975	Cum. 1975	1975	Cum. 1975	GONORRHEA			SYPHILIS (Pri. & Sec.)		Cum. 1975	
								1975	Cumulative		1975	Cumulative		
									1974	1975		1974		1975
UNITED STATES	669	15,017	48	18	128	37	215	19,573	432,874	393,055	487	11,810	11,411	1,085
NEW ENGLAND	34	609	-	-	8	2	2	711	11,791	9,869	16	413	414	31
Maine	3	43	-	-	-	-	-	33	781	763	-	9	15	21
New Hampshire *	-	16	-	-	-	-	-	17	327	291	-	10	6	1
Vermont	-	9	-	-	-	-	-	14	271	278	-	4	1	-
Massachusetts	17	345	-	-	4	-	-	391	5,635	4,719	9	272	299	5
Rhode Island	8	62	-	-	-	2	2	62	922	811	-	5	7	1
Connecticut	6	134	-	-	4	-	-	194	3,855	3,007	7	113	86	3
MIDDLE ATLANTIC	161	2,724	2	-	20	2	7	2,206	50,764	47,881	80	2,152	2,518	30
Upstate New York	12	420	1	-	3	2	5	644	9,070	8,958	7	209	252	22
New York City	93	1,151	-	-	9	-	-	945	22,089	20,718	37	1,223	1,449	-
New Jersey	27	526	1	-	3	-	-	146	6,880	6,852	13	343	412	-
Pennsylvania	29	627	-	-	5	-	2	471	12,725	11,353	23	377	405	8
EAST NORTH CENTRAL	78	2,084	4	1	13	2	6	3,227	71,247	62,254	58	992	947	40
Ohio *	-	628	-	1	4	2	5	626	19,148	16,665	8	233	129	4
Indiana	9	271	-	-	-	-	-	148	6,426	5,780	6	65	87	2
Illinois	19	502	-	-	8	-	1	1,551	24,749	20,063	36	482	491	10
Michigan *	44	624	1	-	1	-	-	603	13,931	14,294	6	160	195	2
Wisconsin	6	59	3	-	-	-	-	299	6,993	5,452	2	52	45	22
WEST NORTH CENTRAL	15	550	11	-	6	-	3	846	21,133	20,110	10	266	279	237
Minnesota	-	60	-	-	2	-	-	220	4,421	4,283	-	53	38	62
Iowa *	-	61	1	-	-	-	-	99	2,932	2,761	-	11	17	54
Missouri	9	273	7	-	4	-	3	234	7,583	6,709	9	151	186	16
North Dakota	1	6	-	-	-	-	-	13	325	316	-	4	4	58
South Dakota	1	33	-	-	-	-	-	37	816	897	-	3	2	14
Nebraska	1	22	1	-	-	-	-	77	1,865	1,662	-	4	4	4
Kansas	3	95	2	-	-	-	-	166	3,191	3,482	1	40	28	29
SOUTH ATLANTIC	175	3,419	11	9	20	20	121	4,636	106,835	99,710	155	3,699	3,562	154
Delaware	5	78	-	-	-	-	-	60	1,486	1,384	4	45	36	-
Maryland	16	536	-	2	3	-	4	562	11,992	9,574	13	276	357	1
District of Columbia	14	174	-	-	-	-	-	257	6,526	9,143	16	308	296	-
Virginia	19	406	5	-	2	9	37	506	10,593	8,960	-	265	380	72
West Virginia	6	122	-	2	2	-	1	41	1,257	1,110	-	12	9	2
North Carolina *	22	543	-	-	2	8	39	619	15,264	13,557	20	488	424	1
South Carolina	18	213	2	-	2	2	30	471	9,807	10,253	13	250	314	7
Georgia	31	506	4	-	-	1	10	779	19,635	18,651	29	501	545	61
Florida	44	841	-	5	9	-	-	1,341	30,275	27,078	60	1,554	1,201	10
EAST SOUTH CENTRAL	68	1,293	4	1	10	4	17	1,584	35,754	33,718	19	510	571	101
Kentucky *	17	227	1	-	6	-	1	200	4,521	4,188	2	79	130	73
Tennessee	25	496	3	1	2	3	13	655	14,284	13,147	7	185	223	13
Alabama	19	379	-	-	1	-	2	313	9,645	9,373	4	125	111	15
Mississippi	7	191	-	-	1	1	1	416	7,304	7,010	6	121	107	-
WEST SOUTH CENTRAL	22	1,653	13	2	5	6	57	2,772	54,698	51,623	53	1,014	1,021	267
Arkansas	9	222	6	-	-	-	5	133	5,507	5,480	-	27	56	32
Louisiana *	4	229	-	-	1	-	-	583	10,472	11,075	14	244	302	4
Oklahoma *	9	157	6	-	-	3	42	198	4,979	4,204	2	44	64	60
Texas	-	1,045	1	2	4	3	10	1,858	33,740	30,864	37	699	599	171
MOUNTAIN	12	439	1	-	4	1	1	714	16,725	14,626	8	300	258	108
Montana	1	16	-	-	-	-	-	17	934	816	-	4	1	81
Idaho	-	13	-	-	-	-	-	-	803	836	-	9	5	-
Wyoming	-	12	1	-	1	-	-	12	415	331	2	6	2	4
Colorado	-	88	-	-	-	1	1	236	4,325	4,008	3	56	62	-
New Mexico	5	61	-	-	1	-	-	145	2,944	2,006	1	84	39	14
Arizona	6	194	-	-	2	-	-	165	4,470	4,244	1	103	111	9
Utah	-	23	-	-	-	-	-	48	1,039	770	-	9	6	-
Nevada	-	32	-	-	-	-	-	91	1,795	1,615	1	29	32	-
PACIFIC	104	2,246	2	5	42	-	1	2,877	63,927	53,264	88	2,464	1,841	117
Washington	3	161	1	-	3	-	1	232	5,796	5,200	-	92	57	-
Oregon	6	93	-	-	-	-	-	204	4,745	4,681	1	55	40	2
California	87	1,729	1	5	38	-	-	2,328	50,808	41,247	87	2,291	1,724	112
Alaska *	-	16	-	-	-	-	-	74	1,574	1,118	-	1	1	3
Hawaii	8	247	-	-	1	-	-	39	1,004	1,018	-	25	19	-
Guam *	-	28	-	-	-	-	-	-	193	---	-	3	---	-
Puerto Rico	18	263	-	1	1	-	-	38	1,371	1,483	12	349	412	30
Virgin Islands	-	3	-	1	1	-	-	1	74	356	-	16	32	-

*Delayed reports: Tuberculosis: Ohio delete 1, Mich. delete 2, Iowa: delete 1, N.C. delete 2, Okla. 10, Alaska 6
 Gonorrhea: N.H. 6 Mil., La. delete 2, Okla. 254 Civil., 7 Mil., Guam 23
 Syphilis: Ky. delete 1, Okla. 2
 Rabies: Okla. 1
 Tularemia: Okla. 1
 RMSF: W. Va. 1, Okla. 14

Morbidity and Mortality Weekly Report

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TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING JUNE 14, 1975

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes					Pneumonia and Influenza All Ages	Area	All Causes					Pneumonia and Influenza All Ages
	All Ages	65 years and over	45-64 years	25-44 years	Under 1 year			All Ages	65 years and over	45-64 years	25-44 years	Under 1 year	
NEW ENGLAND	634	399	164	27	22	27	SOUTH ATLANTIC	1,250	663	372	106	56	32
Boston, Mass.	150	73	49	11	10	7	Atlanta, Ga.	145	66	49	15	7	1
Bridgeport, Conn.	46	25	13	3	1	4	Baltimore, Md.	246	135	77	19	9	1
Cambridge, Mass.	38	28	7	-	1	5	Charlotte, N. C.	52	32	12	3	3	1
Fall River, Mass.	25	16	9	-	-	-	Jacksonville, Fla.	78	40	19	9	3	-
Hartford, Conn.	42	27	11	2	1	1	Miami, Fla.	115	57	39	10	5	4
Lowell, Mass.	31	19	9	1	-	1	Norfolk, Va.	69	33	24	6	5	1
Lynn, Mass.	12	7	3	1	1	-	Richmond, Va.	83	47	25	7	1	4
New Bedford, Mass.	18	12	4	-	2	2	Savannah, Ga.	32	19	8	2	-	4
New Haven, Conn.	56	39	14	1	1	-	St. Petersburg, Fla.	67	56	8	-	2	1
Providence, R. I.	75	49	20	2	3	3	Tampa, Fla.	106	57	29	13	3	8
Somerville, Mass.	8	6	2	-	-	-	Washington, D. C.	219	106	68	22	12	7
Springfield, Mass.	55	40	10	4	1	3	Wilmington, Del.	38	15	14	-	6	-
Waterbury, Conn.	42	29	9	2	-	1	EAST SOUTH CENTRAL	693	366	212	41	33	21
Worcester, Mass.	36	29	4	-	1	-	Birmingham, Ala.	85	45	30	5	1	-
MIDDLE ATLANTIC	2,577	1,551	686	148	99	102	Birmingham, Ala.	85	45	30	5	1	2
Albany, N. Y.	53	28	19	2	3	1	Chattanooga, Tenn.	45	23	14	4	4	1
Allentown, Pa.	23	10	10	-	3	1	Knoxville, Tenn.	47	29	10	5	1	1
Buffalo, N. Y.	110	62	36	3	3	9	Louisville, Ky.	110	59	36	6	5	7
Camden, N. J.	33	20	8	-	3	1	Memphis, Tenn.	187	101	54	9	11	5
Elizabeth, N. J.	24	16	6	1	1	2	Mobile, Ala.	51	31	15	4	1	1
Erie, Pa.	33	17	12	1	1	2	Montgomery, Ala.	39	18	14	2	1	-
Jersey City, N. J.	48	32	10	2	1	1	Nashville, Tenn.	129	60	39	6	9	5
Newark, N. J.	68	24	25	11	2	5	WEST SOUTH CENTRAL	1,243	650	356	101	51	36
New York City, N. Y. †	1,261	776	305	96	38	46	Austin, Tex.	43	25	9	1	7	2
Paterson, N. J.	29	21	6	-	2	3	Baton Rouge, La.	42	16	19	3	2	3
Philadelphia, Pa.	384	204	119	18	28	5	Corpus Christi, Tex.	37	15	15	3	1	-
Pittsburgh, Pa.	141	88	34	7	8	12	Dallas, Tex.	175	84	55	17	6	4
Reading, Pa.	32	26	5	1	-	1	El Paso, Tex.	47	26	10	6	2	3
Rochester, N. Y.	107	70	31	2	-	5	Fort Worth, Tex.	88	45	25	4	7	2
Schenectady, N. Y.	23	15	6	1	-	-	Houston, Tex.	345	164	103	33	13	8
Scranton, Pa.	21	16	4	-	-	-	Little Rock, Ark.	63	35	18	6	-	6
Syracuse, N. Y.	80	55	17	1	5	5	New Orleans, La.	138	84	40	9	2	5
Trenton, N. J.	59	38	20	1	-	1	San Antonio, Tex.	134	77	36	8	5	-
Utica, N. Y.	23	15	8	-	-	1	Shreveport, La.	56	33	12	5	3	-
Yonkers, N. Y.	25	18	5	1	1	2	Tulsa, Okla.	75	46	14	6	3	3
EAST NORTH CENTRAL	2,293	1,299	660	138	93	55	MOUNTAIN	474	250	139	37	24	19
Akron, Ohio	44	28	15	1	-	-	Albuquerque, N. Mex.	36	16	13	5	-	3
Canton, Ohio	34	22	6	1	2	-	Colorado Springs, Colo.	34	22	7	4	-	3
Chicago, Ill.	587	307	176	46	26	15	Denver, Colo.	76	37	26	7	5	3
Cincinnati, Ohio	164	109	39	9	6	5	Las Vegas, Nev.	35	14	16	4	1	-
Cleveland, Ohio	171	96	43	18	11	2	Ogden, Utah	28	17	4	2	1	1
Columbus, Ohio	138	74	45	4	7	-	Phoenix, Ariz.	120	66	26	9	9	3
Dayton, Ohio	111	59	35	8	4	1	Pueblo, Colo.	25	12	10	-	2	4
Detroit, Mich.	265	139	84	18	7	7	Salt Lake City, Utah	59	35	17	1	4	2
Evansville, Ind.	45	25	17	1	1	3	Tucson, Ariz.	61	31	20	5	2	-
Fort Wayne, Ind.	42	25	13	2	1	6	PACIFIC	1,572	969	391	105	49	54
Gary, Ind.	21	10	8	1	-	1	Berkeley, Calif.	21	17	3	1	-	2
Grand Rapids, Mich.	47	28	15	2	2	7	Fresno, Calif.	64	35	12	8	5	1
Indianapolis, Ind.	163	98	45	8	6	-	Glendale, Calif.	22	16	4	-	2	2
Madison, Wis.	24	12	5	1	5	1	Honolulu, Hawaii	50	26	15	4	4	5
Milwaukee, Wis.	117	72	35	3	2	-	Long Beach, Calif.	76	40	30	2	-	5
Peoria, Ill.	36	20	13	1	2	1	Los Angeles, Calif.	444	270	116	39	7	13
Rockford, Ill.	33	20	6	3	1	2	Oakland, Calif.	83	52	11	9	5	2
South Bend, Ind.	56	38	11	2	-	3	Pasadena, Calif.	38	32	4	-	2	1
Toledo, Ohio	132	79	33	6	7	1	Portland, Oreg.	141	90	32	8	6	4
Youngstown, Ohio	63	38	16	3	3	-	Sacramento, Calif.	43	28	11	1	1	1
WEST NORTH CENTRAL	769	471	178	46	47	18	San Diego, Calif.	131	75	33	8	5	3
Des Moines, Iowa	45	31	9	2	3	1	San Francisco, Calif.	155	85	50	10	6	5
Duluth, Minn.	23	18	4	-	-	1	San Jose, Calif.	52	32	13	5	2	1
Kansas City, Kans.	43	22	14	4	1	-	Seattle, Wash.	141	94	32	7	4	5
Kansas City, Mo.	151	90	35	5	13	4	Spokane, Wash.	68	51	11	2	-	8
Lincoln, Nebr.	30	16	9	4	-	2	Tacoma, Wash.	43	26	14	1	-	1
Minneapolis, Minn.	96	66	19	3	5	-	Total	11,505	6,618	3,158	749	474	364
Omaha, Nebr.	84	51	18	5	8	1	Expected Number	11,918	7,055	3,176	798	369	348
St. Louis, Mo.	196	118	46	14	12	4							
St. Paul, Minn.	62	32	15	7	5	-							
Wichita, Kans.	39	27	9	2	-	5							

†Delayed report for week ending June 7, 1975

EPIDEMIOLOGIC NOTES AND REPORTS
FATAL BUBONIC PLAGUE – California

On May 14, 1975, a 17-month-old girl from Ventura County developed a fever. The next day the girl's throat was mildly inflamed, and her physician obtained a throat culture which subsequently revealed normal flora. Because the fever persisted, a urinalysis, urine culture, and chest X-ray were performed on May 16; all were within normal limits. An examination on May 17 revealed unilateral inguinal adenopathy and a temperature of 38.3°C; there were no other remarkable findings. A blood culture was obtained and a WBC count was 41,000 with 12% stabs. Oral ampicillin was prescribed and promptly administered, but the child died on May 17, 3 hours after her first dose. Gross findings at autopsy included atelectasis, bilateral pleural effusions, and generalized lymphadenopathy. Microscopic examination revealed perivenous and subpleural pulmonary hemorrhages, alveolar edema, fibrin thrombosis throughout internal organs, generalized acute lymphadenitis, and multifocal areas of necrosis in the spleen. Cultures of heart blood and lung grew *Yersinia pestis*. Organisms from the blood culture obtained on May 17 were initially thought to be *Streptobacillus moniliformis*, but were later identified as *Y. pestis* and confirmed by the California State Microbial Diseases Laboratory and CDC.

The child lived with a younger sibling and her parents at a citrus orchard where her father works. The family owns cats, dogs, chickens, and rabbits; roof rats have been seen in the orchard, but none in the home. Rat droppings were noted in the rabbit hutch. No animal die-off has been observed. The

child had no known bites by any animals or their fleas and had remained in the vicinity of her home in the week prior to the onset of her illness. Family members and other close contacts have remained well. Fleas and rodents collected near the child's home are being examined for evidence of plague infection.

Ventura County has previously reported plague activity. The last reported human case occurred in 1956 at a location 25 miles northwest of the residence of the present case. The last recognized animal die-off occurred in wood rats near the Kern County/Tulare County border in 1966.

(Reported by Paul Feldheim, MD, private pediatrician, Craig E Duncan, MD, Assistant Medical Examiner-Coroner, Ventura County, Stephen A Coray, MD, Health Officer, Ventura County Health Department; Genevieve Nygaard, MS, Microbiologist, Microbial Diseases Laboratory, and S Benson Werner, MD, Medical Epidemiologist, Infectious Disease Section, California State Department of Health; and the Plague Branch, Vector-Borne Diseases Division, Bureau of Laboratories, CDC.)

Editorial Note

Although the source of the girl's infection is unclear, this case would presumably be classified as sylvatic bubonic plague. This is the fourth bacteriologically confirmed human plague case in the United States in 1975. It is the only fatal plague case reported this year. Two additional suspect plague cases occurred in Arizona in May (MMWR, Vol. 24, No. 22), but confirmation of these 2 cases must await further serologic studies.

COMMON SOURCE OUTBREAK OF PROBABLE HEPATITIS A – Massachusetts

In February 1975 a common source outbreak of probable hepatitis A involving 17 male ice skaters 6-17 years old occurred in Boston. A pediatrician at an out-patient clinic reported the first 4 cases of hepatitis, all in boys who had been skating at the same playground. The 4 boys had either drunk water from holes punched in the thin ice or had eaten some of the ice. In the next 2 weeks, 13 additional cases of hepatitis with identical histories were reported. The period of exposure was limited to approximately 2 weeks during the Christmas school vacation; unsuitable weather conditions made skating unlikely before and after this brief period.

The skating area was created by diverting a small brook from its usual course and flooding 9 acres of lowland in a large park playground. Tracing the brook backwards, investigators found that a surface water drain pipe which emptied into the stream contained 800,000 coliforms and 120,000 fecal coliforms per 100 ml. Further investigation revealed that a sanitary sewer drain which was parallel to the surface water drain had become clogged and was overflowing, per-

mitting raw sewage to enter the surface water drain. This situation was immediately corrected, and the public was warned not to eat the ice or drink the contaminated water. Announcement of the hazards was made by press, radio, television, and through local churches and schools. Large signs warning of the contamination were also posted in all sections of the skating area. No further cases occurred.

(Reported by Diane Kittredge, MD, Pediatrician, Children's Medical Center, Boston; Alfred Ferullo, Paul DiPietro, Division of Environmental Quality, George O'Malley, Parks Division, Boston Metropolitan District Commission; James Bray, Albert Carta, Anthony Cataldo, Daniel Milano, Division of Environmental Health, Frederic Maloof, MD, Oliver Redden, MD, Medical Division, Boston Department of Health and Hospitals; Sabin Lord, Division of Water Pollution Control, Massachusetts Department of Natural Resources; Paul Wilson, Division of Environmental Health, George Waterman, MD, Nicholas J Fiumara, MD, Division of Communicable and Venereal Diseases, Massachusetts Department of Public Health.)

**INTERNATIONAL NOTES
QUARANTINE MEASURES**

The following changes should be made in the listing of U.S. Designated Yellow Fever Vaccination Centers included in the "Supplement—Health Information for International Travel," MMWR, Vol. 23, September 1974:

INDIANA — Crown Point

Lake County Health Department
New address: Lake County Government Center
2293 North Main St. 46307
Additional phone: 738-2020

The following Center has been closed:

ILLINOIS — Chicago

International Health Center
Rush-Presbyterian-St. Luke's Medical Center 60612

The following new Centers have been designated:

NEW YORK — New York

Life Extension Institute
1185 Avenue of the Americas 10036
Phone: 212-575-8300
Hours: Mon-Fri, 2:30-3:30 pm
Fee

WASHINGTON — Yakima

County Health District
104 North First St. 98902
Phone: 509-452-6611
Hours: Mon-Fri, 8:30 am-5 pm—Sat, 9 am-1 pm
Fee

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Director, Center for Disease Control
Director, Bureau of Epidemiology, CDC
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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.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials.

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