CENTER FOR DISEASE CONTROL

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Epidemiologic Notes and Reports

Plague — United States

Fifteen cases of bubonic plague in humans have been reported to CDC in 1977. Seven cases were acquired in New Mexico, 3 in Arizona, 3 in California, 1 in Colorado, and 1 in Oregon (Table 1). Four patients had secondary pneumonic involvement.

TABLE 1. Reported confirmed cases of plague, United States, 1977

Patient	Age	Sex	Onset	County	State
1*	39	M	Feb	Moffat	Colorado
2*	3	M	June	McKinley	New Mexico
3*	23	F	June	Coconino	Arizona
4*	43	M	June	Rio Arriba	New Mexico
5	5	M	July	Santa Fe	New Mexico
6†	3	F	July	Placer	California
7	36	M	July	Valencia	New Mexico
8	21	M	July	Klamath	Oregon
9	15	M	Aug	Apache	Arizona
10†	55	M	Aug	Santa Clara	California
11	44	F	Aug	McKinley	New Mexico
12	48	F	Sept	Kern	California
13	6	M	Sept	Valencia	New Mexico
14	56	F	Sept	Rio Arriba	New Mexico
15	16	M	Sept	Coconino	Arizona

*Reported in MMWR 26:215, 1977
†Died

The case history of one patient (#13) is of particular interest because he apparently acquired the infection from a pet cat. On September 6 the 6-year-old boy had onset of fever, chills, vomiting, and bilateral axillary pain. He was examined by a physician, who diagnosed possible viral syndrome and prescribed erythromycin. Later that day the child was admitted to a hospital with a temperature of 104-105 F and delirium. On September 7 he had not improved and diarrhea developed. He was transferred to a hospital in Albuquerque, where admission findings included a temperature of 104 F and a white blood count of 17,400. He had multiple abrasions, scratches, and insect bites (attributed to mosquitoes) on both arms and painful bilateral non-fluctuant axillary lymphadenophathy. Cefazolin therapy was instituted after blood, throat, and cerebrospinal fluid cultures had been obtained. On September 8 one of the axillary nodes was aspirated. Results with Gram, Wayson, and fluorescent antibody (FA) stains were consistent with *Yersinia pestis* infection; therapy was changed to chloramphenicol and streptomycin. By September 17 the patient had become afebrile, but the painful axillary lymphadenopathy persisted. The nodes were incised and drained on September 19; cultures of this material were positive for *Y. pestis*, as were the original node aspirate and blood culture. The patient was discharged from the hospital on September 22 and has since completely recovered.

Epidemiologic investigation revealed that the patient lived with his parents in a mobile home in Valencia County, New Mexico. Few rodents were found in the vicinity, and the patient had had no exposure to dead animals. On September 3 he and his family had visited his grandparents on their farm in Valencia County. The farm has many outbuildings known to be infested with rodents. The grandfather periodically shoots rabbits — most recently on August 31 — in the immediate area and feeds them to his 20-30 cats and 4 dogs. The patient had taken a pet cat home with him on September 3. The cat climbed a tree and bit and scratched the boy on both upper extremities when he tried to retrieve it. The cat subsequently appeared ill, staying in its box, and was returned to the grandparents on September 4. It disappeared on September 5 and was later found dead under a woodpile; tissue specimens were FA- and culture-positive for *Y. pestis*.

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Editorial Note: If this case represents transmission of *Y. pestis* from a domestic cat to a human, as the epidemiologic evidence suggests, it is the second such occurrence this year (*1*) and only the third ever reported (*1,2*).

References

1. MMWR 26:215, 1977
2. Isaacson M, Levy D, Te BJ, et al: Unusual cases of human plague in Southern Africa. S Afr Med J 4:2109-2113, 1973

Neonatal Tetanus — Iowa

A 7-day-old boy who had been fed only breast milk was observed by his mother to have difficulty in feeding on the evening of August 21, 1977. The next morning he refused to open his mouth and was seen by a pediatrician, who made a presumptive diagnosis of neonatal tetanus. Blood, cerebrospinal fluid, and umbilical stump cultures were obtained. Three hundred thousand units of penicillin (100,000 u/kg) and 2,000 units of tetanus human immune globulin were administered, and the baby was transferred to the University of Iowa Hospital.

The full-term baby had been born on August 14 at home in a small rural Iowa community to a 31-year-old gravida 7 para 7 Amish woman who gave no history of prior immunization. Six of the 7 previous deliveries were at home; all those births were uncomplicated by neonatal illness. The infant's grandmother, who often serves as a midwife in the community, assisted at the delivery. The umbilical cord was tied with string and cut with scissors presoaked in Lysol.[R]* The 3-4 cm stump was cleansed with alcohol, and the baby was bathed with olive oil.

On admission to the University of Iowa Hospital, the infant had trismus, was irritable, and had a foul smelling umbilical stump without erythema or discharge. He was afebrile and had 2- to 3-mm pustules on an erythematous base on the chest, back, upper arms, and thighs. Metabolic studies were normal. Gram stain of the umbilical stump revealed mixed flora. Gram stain of 1 pustule revealed many gram-positive rods consistent with *Corynebacteria* and a few with terminal spores compatible with *Clostridium tetani*. Aerobic and anaerobic cultures of the umbilicus and pustules grew mixed skin flora. Culture of the olive oil with which he had been bathed was sterile. The baby was scrubbed with hexachlorophene to debride the pustular lesions, the umbilicus was cleaned with alcohol, and diazepam, 10 mg/kg/day, was administered intravenously. Hydration was initially maintained with intravenous fluids and subsequently by a nasojejunal feeding tube.

Over the first 2 days the baby's condition worsened, and he had frequent spontaneous tetanic spasms. He had 3 prolonged spasms, 1 of which was associated with peripheral cyanosis. The convulsion score (*1*), recorded every 4 hours, reached a maximum of 5-7 per 4-hour period (indicating moderately severe disease) on the third hospital day, while the infant was receiving diazepam. His prognosis appeared favorable, according to clinical criteria (*2*), the frequency and severity of spasms did not result in respiratory compromise, and assisted ventilation was not required. On the fourth hospital day the spasms began to

(Continued on page 343)

*Use of trade names is for identification only and does not constitute endorsement by the PHS, U.S. Dept. HEW

Table I. Summary—Cases of Specified Notifiable Diseases: United States

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

DISEASE	40th WEEK ENDING		MEDIAN 1972–1976	CUMULATIVE, FIRST 40 WEEKS		MEDIAN 1972–1976
	October 8, 1977	October 9, 1976		October 8, 1977	October 9, 1976	
Aseptic meningitis	94	110	127	3,361	2,399	2,922
Brucellosis	4	6	5	179	250	149
Chickenpox	468	608	---	159,723	151,799	---
Diphtheria	-	1	3	70	127	146
Encephalitis, Primary	23	43	43	723	1,112	1,112
Encephalitis, Post-Infectious	2	5	5	160	215	229
Hepatitis, Viral, Type B	241	297	184	12,448	11,571	7,447
Hepatitis, Viral, Type A	485	614	710	23,602	26,159	32,125
Hepatitis, Viral, Type unspecified	163	113		6,995	6,331	
Malaria	8	14	12	415	364	330
Measles (rubeola)	99	133	72	53,521	34,733	24,440
Meningococcal infections, total	14	21	18	1,377	1,235	1,099
Civilian	14	21	18	1,368	1,218	1,073
Military	-	-	-	9	17	25
Mumps	142	272	360	16,166	33,303	47,941
Pertussis	39	14	---	1,178	745	---
Rubella (German measles)	64	43	83	18,738	10,834	15,025
Tetanus	1	4	4	50	49	73
Tuberculosis	571	574	---	23,368	25,563	---
Tularemia	3	2	2	126	108	109
Typhoid fever	7	8	9	296	324	316
Typhus, tick-borne (Rky. Mt. spotted fever)	11	18	12	1,030	797	719
Venereal Diseases:						
Gonorrhea, Civilian	18,152	22,381	---	760,060	777,400	---
Gonorrhea, Military	383	575	---	20,682	23,029	---
Syphilis, primary and secondary, Civilian	323	497	---	15,859	18,641	---
Syphilis, primary and secondary, Military	2	1	---	234	266	---
Rabies in animals	34	76	62	2,340	2,328	2,328

Table II. Notifiable Diseases of Low Frequency: United States

	CUM.		CUM.
Anthrax:	-	Poliomyelitis, total:*	10
Botulism:	85	Paralytic:	8
Congenital rubella syndrome:	12	Psittacosis: Colo. 1	52
Leprosy: NYC 1	101	Rabies in man:	1
Leptospirosis: Tex. 1	32	Trichinosis:	69
Plague:	15	Typhus, murine: Md. 1	60

*Delayed reports: Polio, non-paralytic: Ups. NY –1

Table III
Cases of Specified Notifiable Diseases: United States
Weeks Ending October 8, 1977 and October 9, 1976 — 40th Week

AREA REPORTING	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		
	1977	1977	1977	1977	CUM. 1977	1977	1976	1977	1977	1977	1977	1977	CUM. 1977
UNITED STATES	94	4	468	–	70	23	43	2	241	485	163	8	415
NEW ENGLAND	12	–	51	–	–	2	–	–	10	22	11	–	22
Maine	–	–	5	–	–	–	–	–	–	2	2	–	–
New Hampshire*	–	–	14	–	–	–	–	–	–	1	–	–	3
Vermont	–	–	–	–	–	–	–	–	1	1	–	–	2
Massachusetts	2	–	29	–	–	1	–	–	–	5	9	–	4
Rhode Island	–	–	1	–	–	–	–	–	–	–	–	–	5
Connecticut	10	–	2	–	–	1	–	–	9	13	–	–	8
MIDDLE ATLANTIC	16	–	33	–	5	4	3	1	44	67	39	3	91
Upstate New York	7	–	22	–	–	2	–	–	2	13	7	–	21
New York City	4	–	11	–	5	1	1	–	14	15	7	–	42
New Jersey	–	–	NN	–	–	–	–	–	11	13	12	3	12
Pennsylvania	5	–	–	–	–	1	2	1	17	26	13	–	16
EAST NORTH CENTRAL	9	–	186	–	–	5	8	–	45	113	8	–	32
Ohio	4	–	10	–	–	2	5	–	10	34	–	–	11
Indiana	–	–	6	–	–	1	–	–	5	6	–	–	2
Illinois	–	–	24	–	–	–	–	–	1	14	5	–	2
Michigan	3	–	83	–	–	2	2	–	23	39	3	–	14
Wisconsin	2	–	63	–	–	–	1	–	6	20	–	–	3
WEST NORTH CENTRAL	1	–	82	–	1	3	6	–	13	26	7	1	34
Minnesota	–	–	1	–	–	–	–	–	2	8	–	1	11
Iowa	1	–	65	–	–	–	–	–	3	2	–	–	1
Missouri	–	–	3	–	1	1	5	–	6	8	5	–	16
North Dakota*	–	–	3	–	–	–	–	–	–	1	1	–	1
South Dakota	–	–	1	–	–	2	–	–	–	2	–	–	1
Nebraska	–	–	4	–	–	–	–	–	1	4	1	–	–
Kansas	–	–	5	–	–	–	1	–	1	1	–	–	4
SOUTH ATLANTIC	24	2	32	–	–	3	1	1	48	46	24	4	78
Delaware	–	–	–	–	–	–	–	–	–	1	–	–	–
Maryland	4	–	–	–	–	–	–	–	8	2	4	2	21
District of Columbia	–	–	–	–	–	–	–	–	–	–	–	–	4
Virginia	6	2	3	–	–	2	1	–	2	9	8	–	20
West Virginia	–	–	14	–	–	1	–	–	1	4	–	–	1
North Carolina	2	–	NN	–	–	–	–	–	1	4	2	–	7
South Carolina	–	–	–	–	–	–	–	–	1	4	1	–	–
Georgia	–	–	–	–	–	–	–	–	10	1	–	–	8
Florida	12	–	15	–	–	–	–	1	25	21	9	2	17
EAST SOUTH CENTRAL	13	–	5	–	–	3	13	–	20	49	2	–	10
Kentucky	1	–	1	–	–	2	2	–	2	16	–	–	4
Tennessee	3	–	NN	–	–	–	–	–	10	20	2	–	1
Alabama	9	–	1	–	–	–	3	–	3	7	–	–	4
Mississippi	–	–	3	–	–	1	8	–	5	6	–	–	1
WEST SOUTH CENTRAL	17	1	18	–	3	3	7	–	29	81	30	–	24
Arkansas	–	–	2	–	–	–	–	–	7	4	5	–	2
Louisiana	4	–	NN	–	–	1	–	–	8	12	–	–	2
Oklahoma	1	–	2	–	–	–	2	–	–	–	–	–	–
Texas*	12	1	14	–	3	2	5	–	14	65	25	–	20
MOUNTAIN	1	1	13	–	5	–	–	–	19	49	20	–	12
Montana	–	–	4	–	–	–	–	–	2	5	2	–	1
Idaho	1	1	–	–	–	–	–	–	–	3	–	–	–
Wyoming	–	–	–	–	–	–	–	–	–	–	–	–	2
Colorado	–	–	5	–	–	–	–	–	4	13	9	–	6
New Mexico	–	–	–	–	4	–	–	–	6	8	2	–	1
Arizona	–	–	NN	–	1	–	–	–	7	17	7	–	2
Utah	–	–	4	–	–	–	–	–	–	3	–	–	–
Nevada*	–	–	–	–	–	–	–	–	–	–	–	–	–
PACIFIC	1	–	48	–	56	–	5	–	13	32	22	–	112
Washington*	–	–	30	–	52	–	–	–	3	6	12	–	5
Oregon	–	–	4	–	–	–	1	–	7	17	8	–	1
California	NA	NA	NA	NA	2	NA	4	–	NA	NA	NA	NA	100
Alaska	1	–	5	–	2	–	–	–	–	2	2	–	2
Hawaii	–	–	9	–	–	–	–	–	3	7	–	–	4
Guam	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
Puerto Rico	–	–	8	–	–	–	–	–	–	–	5	–	2
Virgin Islands	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–

NN: Not notifiable
NA: Not available
*Delayed reports: Asep. meng.: N. Dak. +1, Wash. +1; Diph.: Wash. +1; Hep. B: N.H. −1; Hep. A: N.H. +3, Tex. −1, Hep. unsp.: Nev. +1.

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending October 8, 1977 and October 9, 1976 — 40th Week

REPORTING AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1977	CUMULATIVE		1977	CUMULATIVE		1977	CUM. 1977	1977	1977	CUM. 1977	CUM. 1977
		1977	1976		1977	1976						
UNITED STATES	99	53,521	34,733	14	1,377	1,235	142	16,166	39	64	18,738	50
NEW ENGLAND	–	2,474	395	1	55	56	9	663	–	4	1,205	1
Maine	–	170	8	–	3	1	3	57	–	–	69	–
New Hampshire*	–	510	9	–	3	5	–	91	–	–	242	–
Vermont	–	293	49	–	6	3	–	8	–	–	64	–
Massachusetts	–	630	35	–	16	17	2	124	–	1	378	–
Rhode Island	–	64	15	–	1	6	2	60	–	–	134	–
Connecticut	–	807	279	1	26	24	2	323	–	3	318	1
MIDDLE ATLANTIC	7	8,353	7,019	2	194	175	5	1,312	5	6	6,019	4
Upstate New York	6	3,816	2,940	1	52	65	1	289	3	1	3,368	1
New York City	1	728	460	1	48	46	2	491	2	3	320	1
New Jersey	–	195	604	–	39	25	–	352	–	–	1,781	2
Pennsylvania	–	3,614	3,015	–	55	39	2	180	–	2	550	–
EAST NORTH CENTRAL	47	11,321	14,774	1	139	155	59	5,492	13	22	3,731	5
Ohio	–	1,852	573	–	56	64	5	667	5	4	1,120	1
Indiana*	4	4,331	3,335	–	9	8	–	311	–	6	948	1
Illinois	19	1,751	1,613	–	22	19	11	968	3	2	323	1
Michigan	13	961	5,853	–	38	53	27	1,861	3	5	934	2
Wisconsin	11	2,426	3,400	1	14	11	16	1,685	2	5	406	–
WEST NORTH CENTRAL	9	9,788	1,244	–	70	83	24	3,639	–	2	513	9
Minnesota	2	2,622	425	–	25	14	–	6	–	–	17	2
Iowa	6	4,282	43	–	6	9	6	1,284	–	1	166	1
Missouri	–	914	26	–	27	35	16	1,269	–	–	36	3
North Dakota	1	24	3	–	1	3	1	18	–	1	12	–
South Dakota	–	67	4	–	4	3	–	59	–	–	18	–
Nebraska	–	214	55	–	2	6	–	68	–	–	3	–
Kansas	–	1,665	688	–	5	13	1	935	–	–	261	3
SOUTH ATLANTIC	14	4,627	2,181	–	294	239	22	789	7	8	1,662	11
Delaware	–	22	130	–	6	8	1	129	–	–	26	–
Maryland	1	372	715	–	20	20	2	70	–	–	5	–
District of Columbia	–	14	13	–	–	2	1	6	–	–	–	–
Virginia	1	2,721	768	–	26	39	4	101	1	–	576	1
West Virginia	2	248	191	–	9	7	7	175	–	3	138	–
North Carolina	1	65	17	–	62	44	1	55	–	–	446	–
South Carolina	–	153	4	–	29	36	2	13	–	–	228	–
Georgia	–	768	2	–	52	23	–	26	–	–	55	1
Florida	9	264	341	–	90	60	4	214	6	5	188	9
EAST SOUTH CENTRAL	1	2,015	844	2	143	117	7	900	2	6	1,934	3
Kentucky	–	1,190	752	–	26	23	–	95	1	1	82	1
Tennessee	1	709	75	–	38	48	5	543	1	5	1,733	1
Alabama	–	78	–	1	52	33	2	224	–	–	110	1
Mississippi	–	38	17	1	27	13	–	38	–	–	9	–
WEST SOUTH CENTRAL	12	2,147	723	5	277	190	10	1,469	2	1	810	9
Arkansas	–	29	3	1	14	11	3	79	–	–	3	2
Louisiana	–	74	214	2	130	34	2	50	–	–	27	1
Oklahoma	–	58	291	–	11	21	–	492	–	–	31	–
Texas*	12	1,986	215	2	122	124	5	848	2	1	749	6
MOUNTAIN	8	2,529	5,038	2	33	35	–	602	3	7	372	2
Montana	–	1,162	204	–	2	4	–	11	–	–	14	1
Idaho	–	161	2,020	–	4	5	–	122	3	–	13	–
Wyoming	–	19	4	–	1	–	–	4	–	–	6	1
Colorado	–	503	269	–	1	5	–	266	–	3	237	–
New Mexico	–	256	15	2	11	4	–	105	–	–	11	–
Arizona	8	317	226	–	10	10	–	–	–	3	16	–
Utah	–	18	2,235	–	3	5	–	79	–	1	66	–
Nevada	–	93	65	–	1	2	–	15	–	–	9	–
PACIFIC	1	10,267	2,515	1	172	185	6	1,300	7	8	2,492	6
Washington*	1	542	343	–	20	31	1	280	5	–	444	–
Oregon	–	366	168	–	17	17	3	244	2	2	112	–
California	NA	9,264	1,997	–	104	115	NA	723	NA	NA	1,522	6
Alaska	–	60	4	1	29	19	2	29	–	–	1	–
Hawaii	–	35	3	–	2	3	–	24	–	6	413	–
Guam	NA	8	15	–	1	–	NA	6	NA	NA	10	–
Puerto Rico	8	929	421	–	1	3	9	712	–	1	34	10
Virgin Islands	NA	14	14	–	–	–	NA	189	NA	NA	2	–

NA: Not available
*Delayed reports: Measles: Ind. –1, Tex. –50; Men. inf.: Wash. +2; Pertussis: N.H. +1, Tex. –5.

Table III-Continued
Cases of Specified Notifiable Diseases: United States
Weeks Ending October 8, 1977 and October 9, 1976 — 40th Week

REPORTING AREA	TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (RMSF)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1977	CUM. 1977	CUM. 1977	1977	CUM. 1977	1977	CUM. 1977	1977	CUMULATIVE 1977	CUMULATIVE 1976	1977	CUMULATIVE 1977	CUMULATIVE 1976	CUM. 1977
UNITED STATES	571	23,368	126	7	296	11	1,030	18,152	760,060	777,400	323	15,859	18,641	2,340
NEW ENGLAND	28	867	1	–	16	1	10	614	20,558	21,728	11	636	620	41
Maine	4	70	–	–	–	–	–	79	1,538	1,832	1	20	18	29
New Hampshire*	–	21	–	–	1	–	–	35	834	639	1	4	9	1
Vermont	2	29	–	–	–	–	–	16	510	531	–	6	9	–
Massachusetts	11	491	1	–	11	1	5	227	8,782	10,331	6	449	437	8
Rhode Island*	5	73	–	–	2	–	3	23	1,632	1,477	–	8	17	–
Connecticut	6	183	–	–	2	–	2	234	7,262	6,918	3	149	130	3
MIDDLE ATLANTIC	125	3,780	2	1	61	1	61	3,309	79,669	89,439	66	2,207	3,116	78
Upstate New York	15	651	2	–	8	1	31	410	13,384	14,809	12	212	184	46
New York City	41	1,187	–	–	24	–	–	1,211	31,156	39,383	42	1,389	1,983	–
New Jersey	29	965	–	–	18	–	10	1,070	14,378	13,943	5	282	438	27
Pennsylvania	40	977	–	1	11	–	20	618	20,751	21,304	7	324	511	5
EAST NORTH CENTRAL	94	3,673	3	–	25	1	29	2,871	120,291	122,292	48	1,673	1,589	101
Ohio	14	631	1	–	9	1	12	500	31,642	29,966	8	386	387	–
Indiana	10	419	–	–	1	–	2	752	11,330	12,338	4	132	86	8
Illinois	36	1,446	–	–	5	–	14	663	38,873	42,660	27	874	837	29
Michigan*	28	1,022	–	–	10	–	1	698	27,759	26,428	6	194	198	5
Wisconsin	6	155	2	–	–	–	–	258	10,687	10,900	3	87	81	59
WEST NORTH CENTRAL	14	769	24	2	21	1	30	1,022	40,099	40,723	13	360	347	591
Minnesota	1	166	–	–	4	–	–	347	7,321	7,065	6	115	76	212
Iowa	2	70	–	–	–	–	1	95	4,664	5,163	2	35	36	99
Missouri	10	326	22	2	12	1	15	278	16,570	16,401	5	137	141	40
North Dakota	–	20	–	–	1	–	–	6	748	626	–	–	–	90
South Dakota*	–	39	2	–	–	–	2	52	1,176	1,179	–	10	4	109
Nebraska	–	30	–	–	1	–	1	66	3,496	3,459	–	25	26	2
Kansas	1	118	–	–	3	–	11	178	6,124	6,830	–	38	64	39
SOUTH ATLANTIC	149	5,165	10	2	51	5	559	4,594	187,929	191,302	88	4,372	5,632	267
Delaware	–	52	–	–	–	–	3	48	2,576	2,628	1	19	54	2
Maryland*	21	729	2	1	4	2	74	781	23,438	25,031	5	275	455	–
District of Columbia	8	263	–	–	1	–	–	265	12,320	13,046	15	456	433	–
Virginia	36	616	1	–	9	1	151	517	19,784	20,469	10	431	526	5
West Virginia	4	196	–	–	4	–	5	68	2,491	2,371	–	3	20	9
North Carolina*	14	834	2	–	3	1	212	630	28,081	27,331	3	596	1,040	11
South Carolina	21	476	2	–	2	–	52	519	17,644	18,149	5	194	293	22
Georgia	–	647	3	–	13	1	61	452	36,113	36,464	26	975	836	161
Florida*	45	1,352	–	1	15	–	1	1,314	45,482	45,813	23	1,423	1,975	57
EAST SOUTH CENTRAL	66	2,161	8	1	7	1	165	2,053	67,305	68,775	30	603	729	62
Kentucky*	13	563	2	–	1	–	40	257	9,283	8,986	4	80	102	21
Tennessee	27	654	5	–	2	1	99	764	26,915	27,455	14	190	245	31
Alabama	6	562	1	–	1	–	19	561	18,064	19,217	12	131	153	10
Mississippi	20	382	–	1	3	–	7	471	13,043	13,117	–	202	229	–
WEST SOUTH CENTRAL	58	2,734	62	1	25	1	158	2,101	95,433	98,370	56	2,348	2,199	650
Arkansas	4	302	42	–	5	–	52	168	7,358	9,061	2	54	80	98
Louisiana	8	509	1	–	1	–	6	376	14,092	14,555	8	548	449	21
Oklahoma	13	250	10	–	1	–	71	245	9,180	9,524	1	63	79	207
Texas	33	1,673	9	1	18	1	29	1,312	64,803	65,230	45	1,683	1,591	324
MOUNTAIN	21	682	10	–	25	–	13	935	30,937	31,572	7	377	476	170
Montana	3	42	1	–	–	–	6	49	1,621	1,603	–	4	7	45
Idaho*	–	25	–	–	–	–	4	39	1,432	1,690	–	15	19	–
Wyoming	2	16	1	–	–	–	2	17	742	606	–	4	3	1
Colorado	9	94	3	–	8	–	1	183	8,123	7,981	–	103	105	56
New Mexico	–	133	–	–	–	–	–	175	4,531	5,854	–	106	119	18
Arizona*	4	294	2	–	11	–	–	239	8,576	9,280	7	123	174	40
Utah	–	32	3	–	5	–	–	55	1,826	1,636	–	8	19	10
Nevada	3	46	–	–	1	–	–	178	4,086	2,922	–	14	30	–
PACIFIC	16	3,537	6	–	65	–	5	653	117,839	113,199	4	3,283	3,933	380
Washington*	NA	227	–	–	2	–	–	282	9,143	9,655	NA	158	125	2
Oregon	3	145	1	–	3	–	1	249	8,325	8,590	2	111	87	6
California	NA	2,650	5	NA	59	NA	4	NA	94,077	89,565	NA	2,959	3,627	335
Alaska*	2	57	–	–	–	–	–	69	3,804	3,288	–	23	21	37
Hawaii	11	458	–	–	1	–	–	53	2,490	2,101	2	32	73	–
Guam	NA	47	–	NA	1	NA	–	NA	159	254	NA	2	2	–
Puerto Rico	10	304	–	–	6	–	–	65	2,460	2,138	5	424	466	46
Virgin Islands	NA	1	–	NA	–	NA	–	NA	164	197	NA	8	48	–

NA: Not available
*Delayed reports: TB: Mich. –2, Md. –2, N.C. –1, Fla. –26, Ky. –1, Wash. +19, Alaska +7; GC: N.H. +6 mil., R.I. –4 civ. +4 mil., Wash +72 mil; Syphilis: Idaho –4, Wash. +29; An rabies: S. Dak. +11, Ariz. +1.

Table IV
Deaths in 121 United States Cities*
Week Ending October 8, 1977 — 40th Week

REPORTING AREA	ALL CAUSES					Pneumonia and Influenza
	ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year	ALL AGES
NEW ENGLAND	632	425	144	42	8	22
Boston, Mass.	182	107	49	21	3	4
Bridgeport, Conn.	46	34	8	3	1	1
Cambridge, Mass.	29	21	7	1	-	3
Fall River, Mass.	28	24	4	-	-	-
Hartford, Conn.	39	27	7	3	-	2
Lowell, Mass.	24	15	7	2	-	1
Lynn, Mass.	26	19	7	-	-	2
New Bedford, Mass.	25	23	1	1	-	-
New Haven, Conn.	37	23	6	6	1	-
Providence, R.I.	55	36	16	-	1	3
Somerville, Mass.	9	6	2	1	-	1
Springfield, Mass.	36	20	13	1	-	3
Waterbury, Conn.	38	29	8	1	-	1
Worcester, Mass.	58	41	9	2	2	1
MIDDLE ATLANTIC	2,796	1,696	792	153	82	130
Albany, N. Y.	53	29	20	-	3	1
Allentown, Pa.	18	9	7	1	-	-
Buffalo, N. Y.	129	78	38	6	4	7
Camden, N. J.	41	19	18	-	1	2
Elizabeth, N. J.	24	14	9	1	-	1
Erie, Pa.	36	22	13	-	-	-
Jersey City, N. J.	43	33	7	1	-	-
Newark, N. J.	57	25	23	7	-	2
New York City, N. Y.	1,272	805	318	82	32	55
Paterson, N. J.	19	10	6	2	1	3
Philadelphia, Pa.	525	288	162	36	23	31
Pittsburgh, Pa.	193	104	72	3	9	6
Reading, Pa.	30	22	7	1	-	-
Rochester, N. Y.	137	91	33	7	5	12
Schenectady, N. Y.	30	21	8	1	-	1
Scranton, Pa.	43	25	17	1	-	3
Syracuse, N. Y.	72	48	18	-	4	3
Trenton, N. J.	35	23	9	3	-	2
Utica, N. Y.	13	10	2	1	-	1
Yonkers, N. Y.	26	20	5	-	-	-
EAST NORTH CENTRAL	2,210	1,327	541	145	96	49
Akron, Ohio	73	42	23	3	3	-
Canton, Ohio	49	33	12	2	1	-
Chicago, Ill.	580	337	145	53	25	18
Cincinnati, Ohio	101	65	20	8	5	4
Cleveland, Ohio	158	83	50	10	10	-
Columbus, Ohio	137	78	24	11	12	3
Dayton, Ohio	100	62	30	2	2	5
Detroit, Mich.	270	156	64	22	5	2
Evansville, Ind.	53	33	13	-	5	-
Fort Wayne, Ind.	42	24	11	3	2	2
Gary, Ind.	20	10	4	3	2	1
Grand Rapids, Mich.	45	31	9	1	3	2
Indianapolis, Ind.	144	86	41	4	7	1
Madison, Wis.	30	18	5	3	-	2
Milwaukee, Wis.	128	87	24	6	5	2
Peoria, Ill.	29	19	4	2	2	-
Rockford, Ill.	44	32	8	1	1	4
South Bend, Ind.	30	19	7	3	-	1
Toledo, Ohio	117	78	28	5	3	1
Youngstown, Ohio	60	34	19	3	2	1
WEST NORTH CENTRAL	703	422	176	39	40	18
Des Moines, Iowa	58	35	11	8	2	2
Duluth, Minn.	20	13	6	1	-	-
Kansas City, Kans.	34	20	9	3	-	1
Kansas City, Mo.	116	66	28	4	13	3
Lincoln, Nebr.	31	23	5	2	-	3
Minneapolis, Minn.	99	59	27	4	8	1
Omaha, Nebr.	85	53	15	5	8	1
St. Louis, Mo.	167	99	46	7	7	4
St. Paul, Minn.	60	37	15	3	2	1
Wichita, Kans.	33	17	14	2	-	2
SOUTH ATLANTIC	1,125	629	334	77	48	41
Atlanta, Ga.	133	74	38	13	3	5
Baltimore, Md.	231	129	77	8	8	7
Charlotte, N. C.	64	31	24	3	6	1
Jacksonville, Fla.	77	42	20	6	4	2
Miami, Fla.	58	28	18	4	5	-
Norfolk, Va.	37	19	11	1	4	3
Richmond, Va.	73	42	20	5	5	5
Savannah, Ga.	39	20	15	1	1	5
St. Petersburg, Fla.	87	73	9	4	1	5
Tampa, Fla.	69	42	13	7	5	2
Washington, D. C.	201	101	71	18	5	2
Wilmington, Del.	56	28	18	7	1	4
EAST SOUTH CENTRAL	624	371	150	40	32	25
Birmingham, Ala.	87	49	26	5	4	2
Chattanooga, Tenn.	28	18	6	1	3	2
Knoxville, Tenn.	38	21	10	3	1	1
Louisville, Ky.	118	70	29	7	6	9
Memphis, Tenn.	144	89	30	9	6	1
Mobile, Ala.	64	36	15	6	3	4
Montgomery, Ala.	39	21	11	1	5	1
Nashville, Tenn.	106	67	23	8	4	5
WEST SOUTH CENTRAL	963	510	276	85	45	27
Austin, Tex.	39	24	8	4	-	5
Baton Rouge, La.	45	22	10	5	6	4
Corpus Christi, Tex.	34	26	3	2	3	2
Dallas, Tex.	152	77	52	12	4	1
El Paso, Tex.	51	30	9	6	4	3
Fort Worth, Tex.	71	49	17	4	-	1
Houston, Tex.	244	118	77	21	10	5
Little Rock, Ark.	40	18	12	5	3	-
New Orleans, La.	92	44	30	9	7	-
San Antonio, Tex.	107	55	30	9	7	4
Shreveport, La.	38	22	12	3	1	-
Tulsa, Okla.	50	25	16	5	-	2
MOUNTAIN	484	281	128	38	15	16
Albuquerque, N. Mex.	55	27	11	6	5	2
Colorado Springs, Colo.	32	18	8	6	-	2
Denver, Colo.	114	67	38	5	4	6
Las Vegas, Nev.	18	13	3	-	-	1
Ogden, Utah	14	10	2	1	-	1
Phoenix, Ariz.	123	74	36	8	1	1
Pueblo, Colo.	19	12	3	3	-	2
Salt Lake City, Utah	38	19	8	3	2	1
Tucson, Ariz.	71	41	19	6	3	-
PACIFIC	1,623	1,043	374	96	52	38
Berkeley, Calif.	21	12	7	2	-	1
Fresno, Calif.	61	35	14	1	6	1
Glendale, Calif.	25	21	4	-	-	-
Honolulu, Hawaii	54	37	12	2	1	-
Long Beach, Calif.	108	62	34	5	4	4
Los Angeles, Calif.	500	313	110	42	15	10
Oakland, Calif.	74	51	13	2	4	-
Pasadena, Calif.	29	20	7	-	2	-
Portland, Oreg.	111	72	26	4	3	3
Sacramento, Calif.	60	42	12	2	4	2
San Diego, Calif.	107	73	23	6	1	2
San Francisco, Calif.	166	115	25	17	7	-
San Jose, Calif.	69	41	21	2	-	2
Seattle, Wash.	159	91	51	9	2	7
Spokane, Wash.	55	40	10	2	3	3
Tacoma, Wash.	24	18	5	-	-	3
TOTAL	11,160	6,704	2,915	715	418	366
Expected Number	11,094	6,708	2,864	732	378	369

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

The Morbidity and Mortality Weekly Report, circulation 67,500, 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.

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

Tetanus – continued

decrease in severity and frequency. One week after admission the baby was having only fleeting spasms (convulsion score of 1-2). Pneumonia in the upper lobe of the right lung noted on the fifth hospital day resolved with antibiotic therapy. On the 15th hospital day, the baby was still irritable but was no longer having spontaneous spasms.

Reported by DD Nishida, MD, Waterloo, Iowa; A Agha, MD, J Kahn, MD, MG Myers, MD, Dept of Pediatrics, University of Iowa; LA Wintermeyer, MD, State Epidemiologist, Iowa State Dept of Health; Special Pathogens Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Neonatal tetanus is a disease of low frequency in the United States. Since 1973 there have been 8 reported cases with 4 deaths. The mothers of 6 affected infants had no known history of tetanus immunization. In all but 1 case, delivery was at home with a midwife or family member in attendance; in 1 case delivery was at a midwife clinic.

Neonatal tetanus is preventable with adequate maternal immunization *(3,4)*. An immunization history should be obtained early in pregnancy, and tetanus toxoid shouid be given if necessary. For infants born to women with inadequate tetanus immunization, prophylactic treatment at birth with human tetanus immune globulin should be considered, and active immunization with DTP should be initiated at 4-6 weeks of age.

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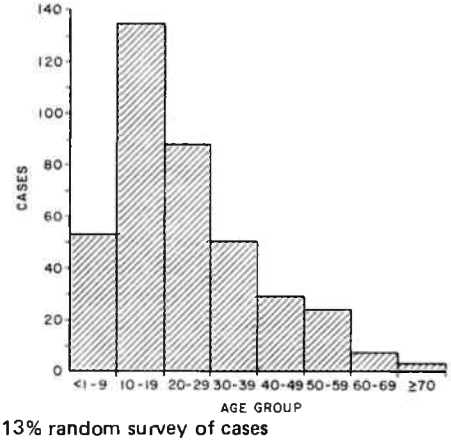
Follow-up on Dengue – United States

Puerto Rico: The number of reported cases of suspected dengue occurring in Puerto Rico appears to be declining *(1)*. For the past 4 weeks 1,088, 1,221, 1,633, and 1,143 cases were reported for the weeks ending September 14, 21, and 28 and October 5, respectively. Cases have been reported from 72 of the 78 municipios of Puerto Rico.

A random sample consisting of 13% of 2,600 dengue report forms received by the San Juan Laboratories between August 1 and September 24 was analyzed to characterize the outbreak (Figure 1). A similar analysis was made of the 232 cases with hemorrhagic signs. Of the survey cases, the largest number occurred in persons 10-19 years of age; the highest attack rate was in the 15- through 19-year age group. However, in the cases with hemorrhagic signs the highest attack rate occurred in the 20- to 29-year age group. Cases were reported in females more frequently than in males: the ratio was 3 to 2 for both survey cases and hemorrhagic cases. Preliminary analysis indicates that the onset of hemorrhagic cases was 1 or 2 weeks later in the outbreak than the onset of cases with no hemorrhagic signs.

FIGURE 1. Dengue cases, by age group, Puerto Rico, August-September, 1977*



*Based on 13% random survey of cases

Ten isolates of dengue type 1 and 10 of type 2 have been made, all from patients in the metropolitan San Juan area. Thirty-two more isolates from all parts of the island are pending laboratory identification. In another confirmed case, dengue type 1 virus was isolated from a Puerto Rican student who became ill the day after his return to Puerto Rico from the Dominican Republic.

Aerial ultra low volume (ULV) malathion application over San Juan and 59 other towns in Puerto Rico continues. Three of the 4 planned aerial application cycles were completed on October 9, and the final cycle is scheduled for completion on about October 15. Sampling of spray patterns with dye cards at ground check points has shown adequate coverage, and test groups of caged *Aedes aegypti* mosquitoes have consistently been killed by the spraying. Extensive malathion application by truck-mounted ULV sprayers has been coordinated with the aerial spraying. Programs to eliminate breeding sites for *A. aegypti* are underway in all regions of Puerto Rico.

Elsewhere in the United States: More than 100 cases of suspected dengue have been reported in travelers returning to the United States from Jamaica; 21 of these have been confirmed. Suspected cases have been reported from all but 2 (Arkansas and South Carolina) of the 10 southeastern states with known *A. aegypti* populations.

Only 1 case of suspected dengue has been reported in a visitor returning to the continental United States from Puerto Rico. In that case a 37-year-old member of a cruise ship staff developed signs of dengue approximately 5 days after visiting San Juan, where he attended a beach party. No other persons at the party or guests or crew members of the cruise ship developed similar illness.

Two other sporadic cases of dengue – 1 suspected, 1 confirmed – that apparently were acquired from other locations have been reported. The first involved a man who returned to New York City with a dengue-like illness after visiting St. Martin and St. Ustatius in the Dutch West Indies. The second case involved a 10-year-old girl returning to Hawaii from a 2-week trip to Thailand who developed signs of dengue after departing from Bangkok. The symptoms were high fever, headache, body aches, and a rash that developed after her fever subsided. The case was subsequently serologically confirmed. Because *A. aegypti* mosquitoes are not prevalent on Oahu, there is no possibility of secondary transmission.

Dengue — continued

Reported by J Chiriboga, MD, Environmental Health, Puerto Rico State Dept of Health; S Halstead, MD, University of Hawaii; H Wiebanga, MD, State Epidemiologist, Hawaii State Dept of Health; San Juan Laboratories, Bur of Laboratories, Bur of Tropical Diseases, Field Services Div, Quarantine Div, and Viral Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: This is the first confirmed report of transmission of indigenous dengue type 1 in Puerto Rico. Previous isolations have been identified as type 2.

Despite continued importation from outbreaks in the Caribbean and elsewhere, the possiblity of secondary outbreaks in the United States should continue to diminish with declining *A. aegypti* populations during the cooler fall season. However, some southern areas of the United States with sub-tropical climates may have continued *A. aegypti* activity throughout the winter.

Reference

1. MMWR 26: 327, 1977

International Notes

Legionnaires' Disease — Scotland, Spain, United States

Scotland, Spain: A high antibody titer to the bacterium associated with Legionnaires' disease has been detected in the serum of a patient who died in Glasgow, Scotland, in June, 1977. The patient had recently returned from a holiday in Benidorm, Spain. Investigations are now in progress to determine if Legionnaires' disease was also the respiratory disease reported among Scottish travelers to Benidorm in 1973.

In the outbreak in 1973, 164 (65%) of 252 tourists, mostly from western and central Scotland, who stayed at one hotel in Benidorm reported illness; 86 (52%) of these had respiratory symptoms. Three persons died, all with pneumonia. Antibody titers to the Legionnaires' disease agent considered to be significant have been found in serum specimens from a patient who had severe pneumonia while on that tour.

Reported in the Communicable Disease Scotland 77:33, 1977.

Tennessee: To date, there have been 8 confirmed cases of Legionnaires' disease in Kingsport, Tennessee; 3 cases were fatal. Seven of the patients had 4-fold or greater titer rises, and 1 had tissues which, at autopsy, were fluorescent antibody-positive. Four additional cases had single convalescent serum samples with presumptively high titers.

At present, 64 cases of pneumonia characterized by a temperature ≥103 F, X-ray evidence of pneumonia, and negative bacterial culture have been identified in 4 hospitals and private medical practices in the area. Additional cases of milder pneumonia are also being examined serologically. Despite intensive surveillance, no additional cases of such pneumonia have been found with dates of onset after September 28, 1977.

Sentinel guinea pigs located in the neighborhoods previously associated with these pneumonias and at a local hospital remain healthy. Rats and other small mammals are being trapped in the previously implicated area in an attempt to determine if there is a rodent reservoir of the bacillus.

Serologic surveys and epidemiologic studies have been conducted in the implicated area of Kingsport and in a control area in Bristol, Tennessee. Similar studies are being conducted on hospital employees in a search for milder clinical manifestations of Legionnaires' disease.

Reported by E Duncan, RN, W Jesse, MD, J Smiddy, MD, J Strickler, RN, Holston Valley Community Hospital, Kingsport; C Chapman, MD, Sullivan County (Tenn) Health Dept; M Weeks, MPH, RH Hutcheson Jr, MD, State Epidemiologist, Tennessee State Dept of Public Health; Leprosy and Rickettsia Br, Virology Div, Immunofluorescence Sect, Analytical Bacteriology Br, Bacteriology Div, Bur of Laboratories; Field Services Div, Epidemiologic Investigations Laboratory Br, Hospital Infections Br, and Special Pathogens Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Erratum, Vol. 26, No. 40

p 334 In Table IV, "Deaths in 121 United States Cities," the data printed for Tulsa, Oklahoma, was incorrect — an error which also affected the West South Central and U.S. totals. The correct numbers are as follows:

REPORTING AREA	ALL CAUSES					Pneumonia and Influenza
	ALL AGES	65 Years and Over	45-64 Years	25-44 Years	Under 1 Year	ALL AGES
Tulsa, Okla.	72	43	18	6	3	7
West South Central	1,154	644	306	92	50	30
Total, United States	11,547	7,026	2,920	753	415	385

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