

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Epidemiologic Notes and Reports

Parainfluenza Outbreaks in Extended-Care Facilities — United States

Since October 1977, 4 outbreaks of respiratory illness caused by parainfluenza (PI) viruses in extended-care facilities have been reported to CDC.

Alabama: In October and November 1977, a 125-bed nursing home reported respiratory illness characterized by fever and cough in 28 residents and 21 employees. Eight residents were hospitalized with pneumonia; 3 of these died, but the role of infections in their deaths could not be ascertained. With fever and respiratory symptoms used as diagnostic criteria, the attack rates for residents and employees were 22.4% and 28.2%, respectively. Employees having direct patient contact had a 35% attack rate while those without patient contact had an 11% attack rate, suggesting person-to-person spread. Elevated titers to PI-type 3 virus were found in 8 out of 9 (89%) of the residents and 2 of 2 employees. No intrinsic host-susceptibility factors were found. The outbreak abated spontaneously.

California: Forty-six cases of a febrile illness occurred in residents of a state mental hospital from May 1 through July 19, 1978. The illness was marked by fever, cough, rhinorrhea, and pharyngitis. Eight cases developed pneumonia, and 1 case died after a complicated clinical course.

The majority of patients resided in 2 of the 34 housing units at the hospital. The median age was 28 (range 15-63 years); 17 were females, 29 males. The attack rate in these 2 units was 56% (36/64). PI-3 virus was isolated from 1 of 8 throat cultures. Paired serum specimens showed a diagnostic rise to PI-3 in 11/30 patients (37%) and to PI-1 in 5/30 (17%). Single high titers were present in 17 (57%) and 21 (70%), respectively. Diagnostic titers to *Mycoplasma pneumoniae* occurred in 7 of 31 patients (23%). Fifteen employees from the 2 housing units reported similar illness without complication. No serology was performed.

New York: In April 1978, a nursing home reported 11 hospitalized cases of a respiratory illness with 1 associated death. The illness was characterized by pneumonia or fever of ≥ 101 F. The patients ranged in age from 65 to 102 years; 72.7% were women. There was no increase in respiratory illness identified among the attending staff. Eight of 8 serum specimens had persistently high titers to PI-3 virus.

Oregon: A 240-resident retirement condominium was investigated for respiratory illness in February and March 1978. Twenty-three people reported 1 or more influenza-like symptoms, and 5 had illness marked by fever, cough, sputum production, coryza, and sore throat. PI-3 was isolated from a throat swab from the index patient; he and 4 other patients had elevated convalescent serologic titers to PI-3. In addition, 2 patients had elevated PI-1 titers, and 2 patients had elevated influenza A titers, suggesting multiple causes for the outbreak. All 5 patients knew each other, and nearly all residents ate in common dining rooms.

Parainfluenza – Continued

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Editorial Note: Parainfluenza types 1, 2, and 3 are the most frequent causes of upper and lower respiratory disease attributed to the 4 parainfluenza virus types. Serologic surveys have indicated that infection, usually mild, is common in children; 59%-100% have had infection by age 5 (1). However, immunity is not complete, reinfections commonly occur, and the illness has been recognized in adults (2,3). Attack rates are similar regardless of sex, race, and occupation. Disease distribution is worldwide. Transmission is from person to person. PI-1 and PI-2 viruses cause small outbreaks at regular or irregular intervals. PI-3 virus is endemic, causing illness in all seasons of the year, but most frequently during the winter (4,5). Vaccination and other control measures have not clearly shown benefit.

Diagnosis is made by isolation of the organism or by noting a 4-fold rise in the hemagglutination inhibition titer between acute and convalescent serum specimens. Since some cross-reactivity occurs between the antigens of PI types 1, 2, and 3, which can produce heterologous antibody responses, care must be exercised in interpreting serologic data.

Three of these 4 outbreaks are unusual in that they occurred in elderly patients in nursing homes and that pneumonia was prominent. Whether the pneumonia cases were bacterial or viral was not established. Except for several deaths, clinical manifestations were similar to those usually seen in parainfluenza infections. Case-clustering in living units and among contacts in common dining areas, and the illness in employees with patient-care responsibility suggest person-to-person spread. Isolation of individuals from the dining area may have played a role in interrupting one of the outbreaks. These 4 outbreaks suggest that parainfluenza infection should be considered in the differential diagnosis of febrile acute respiratory disease in chronic-care institutions.

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Dengue Hemorrhagic Fever with Shock in an American Traveler

While visiting in India, a 7-year-old girl from Ohio developed dengue hemorrhagic fever with shock; she recovered. This is the first report to CDC of a case of dengue hemorrhagic fever (DHF) with shock in a U.S. citizen.

The child, who is of Indian descent, became ill with fever to 103 F (39.4 C) on August 7, 1978, while staying with her grandparents in Madras State, India. Two days after the onset of fever, she was seen by a physician who prescribed symptomatic medication. At that time she was noted to be anorectic, but there were no other clinical findings;

Dengue Fever — Continued

her hemoglobin was 16.1 g/dl. Because of continuing fever, she was hospitalized on August 14 for observation and care. At that time she was noted to have hepatomegaly, but no jaundice or rash. Blood cultures were obtained, and intravenous fluids were started.

Twelve hours after admission she became restless, and no blood pressure was obtainable. She was noted to have petechiae on her arms and back. A single episode of hematemesis occurred, followed by several tarry stools. Her prothrombin time was 25 seconds (control, 18 seconds), and platelets were markedly reduced on smear. A transfusion of fresh whole blood (450 ml) and intensive supportive care, however, resulted in the gradual return of her blood pressure to normal values over the next 24 hours. The following day her hemoglobin was 17.1 g/dl, and no platelets were seen on smear. Her prothrombin time was 60 seconds (control, 20 seconds). Over the next 48 hours she improved markedly: the hepatomegaly disappeared, her hemoglobin count returned to normal, and platelets reappeared on smear. Her convalescence was uneventful except for 1 episode of hematemesis, which did not require a transfusion or additional supportive care. Serologic tests on the patient are summarized in Table 1.

Pertinent past medical history included a trip to India 3 years earlier during which time she had a 7-day history of febrile illness unaccompanied by rash or other abnormal physical findings.

Reported by M Rammohan, MD, Warren, Ohio; San Juan Laboratories, Bur of Laboratories, and Viral Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: The patient's clinical history is compatible with classic grade IV DHF; grades III and IV DHF are synonymous with dengue shock syndrome (DSS) (Table 2).

CDC's serologic testing for dengue routinely includes measurement of hemagglutination-inhibition (HI) and sometimes complement-fixation (CF) antibodies to 3 or 4 dengue subtypes—D1, D2, D3, and D4—and to other non-dengue flaviviruses (Table 1). Usually, the HI antibodies rise early in the course of illness, and recent dengue infection is generally indicated by a ≥ 4 -fold rise in HI titer. However, in this patient the diagnosis was made on the basis of demonstrated rises of CF antibodies to all 4 dengue serotypes. These results suggest that her illness was due to the dengue virus, but they do not meet CDC laboratory criteria for a secondary-type serologic response (i.e., broadly reactive antibodies to all dengue serotypes and to at least 1 other flavivirus, with a titer of ≥ 640 to at least 1 dengue type). These results are also not those typically seen with a first dengue infection; there is usually a more type-specific ≥ 4 -fold titer rise with lesser titer rises to the other dengue serotypes and non-dengue flaviviruses. The documented rise is unlikely to be due to transfusion of antibody-containing blood early in the patient's

TABLE 1. Results of arboviral antibody screen in U.S. citizen with DSS, 1978

Serologic test	Agent (antigen)	Reciprocal antibody titers in serum samples		
		Mid-acute (day 15)	Convalescent (day 30)	Late convalescent (day 57)
Hemagglutination inhibition	dengue type 1	160	320	320
	dengue type 2	40	80	40
	dengue type 3	80	160	80
	yellow fever	80	160	80
	St. Louis encephalitis	10	20	20
	eastern equine encephalitis	<10	<10	<10
Complement fixation	dengue type 1	<8	32	64
	dengue type 2	<8	16	32
	dengue type 3	<8	128	256
	dengue type 4	<8	32	32

Dengue Fever — Continued

TABLE 2. The World Health Organization's clinical classification of dengue hemorrhagic fever (DHF) (7)

Grade	Clinical features	Laboratory findings
DHF	I	fever hemoconcentration thrombocytopenia
	II	constitutional symptoms positive tourniquet test grade I plus spontaneous bleeding (e.g., skin, gums, gastro-intestinal tract) hemoconcentration thrombocytopenia
	III	grade II plus circulatory failure thrombocytopenia
DSS*	IV	agitation hemoconcentration thrombocytopenia
	profound shock (blood pressure = 0)	hemoconcentration thrombocytopenia

*DSS = dengue shock syndrome

hospital course; such antibody would be expected to have declined significantly in the late convalescent serum.

Although this is the first case of DSS reported to CDC, 1 other case is known to have occurred in an American citizen—a 16-month-old Caucasian infant who developed fatal

(Continued on page 483)

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

DISEASE	47th WEEK ENDING		MEDIAN 1973-1977**	CUMULATIVE, FIRST 47 WEEKS		
	November 25, 1978	November 26, 1977*		November 25, 1978	November 26, 1977*	MEDIAN 1973-1977**
Aseptic meningitis	117	74	74	5,563	4,294	3,764
Brucellosis	2	10	8	139	206	206
Chickenpox	2,010	2,023	2,027	133,741	171,935	152,279
Diphtheria	1	4	7	66	80	174
Encephalitis: Primary (arthropod-borne & unsp.)	21	24	23	921	1,057	1,312
Post-infectious	4	4	4	185	191	246
Hepatitis, Viral: Type B	253	276	250	13,327	14,759	10,622
Type A	494	635	635	26,203	27,659	31,529
Type unspecified	201	185	185	8,137	7,974	7,974
Malaria	10	5	5	656	490	377
Measles (rubeola)	194	155	233	25,617	54,076	25,532
Meningococcal infections: Total	32	47	22	2,121	1,595	1,303
Civilian	32	47	21	2,098	1,584	1,276
Military	—	—	—	23	11	26
Mumps	207	349	1,046	14,998	19,082	50,872
Pertussis	18	37	—	1,842	1,746	—
Rubella (German measles)	118	74	100	17,262	19,481	15,673
Tetanus	1	5	1	73	74	82
Tuberculosis	410	471	482	26,547	27,104	28,153
Tularemia	4	4	3	127	149	132
Typhoid fever	11	—	6	474	352	378
Typhus fever, tick-borne (Rky. Mt. spotted)	1	14	6	987	1,104	797
Veneral diseases:						
Gonorrhea: Civilian	15,957	18,530	18,530	913,894	903,751	903,751
Military	320	357	390	23,162	24,134	26,437
Syphilis, primary & secondary: Civilian	363	351	351	19,560	18,442	21,669
Military	10	9	9	272	278	313
Rabies in animals	38	30	31	2,855	2,797	2,695

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1978		CUM. 1978
Anthrax	5	Poliomyelitis: Total	3
Botulism	46	Paralytic †	1
Cholera	11	Psittacosis (Mass. 1)	95
Congenital rubella syndrome	25	Rabies in man	1
Leprosy (Va. 1)	138	Trichinosis	47
Leptospirosis	59	Typhus fever, flea-borne (endemic, murine)	37
Plague	8		

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

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

†The following delayed report will be reflected in next week's cumulative total: Polio, para.: Wash. +1

TABLE III. Cases of specified notifiable diseases, United States, weeks ending November 25, 1978, and November 26, 1977 (47th week)

REPORTING AREA	ASEPTIC MENIN- GITIS	BRU- CEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
						Primary		Post-in- fectious	B	A	Unspecified		
						1978	1977*	1978	1978	1978	1978		
UNITED STATES	117	2	2,010	1	66	21	24	4	253	494	201	10	656
NEW ENGLAND	1	-	393	-	-	-	-	1	8	7	15	-	29
Maine	-	-	36	-	-	-	-	-	-	3	-	-	1
N.H.	-	-	-	-	-	-	-	-	-	-	-	-	4
Vt.†	-	-	1	-	-	-	-	-	-	1	-	-	7
Mass.	-	-	165	-	-	-	-	-	3	2	11	-	-
R.I.	-	-	83	-	-	-	-	-	2	-	4	-	5
Conn.	1	-	108	-	-	-	-	1	3	1	-	-	12
MID. ATLANTIC	17	-	81	-	1	3	4	-	39	34	15	5	143
Upstate N.Y.	7	-	17	-	-	1	-	-	12	8	4	1	19
N.Y. City†	5	-	37	-	1	1	-	-	9	9	4	4	65
N.J.	5	-	NN	-	-	-	2	-	-	6	7	-	28
Pa.	-	-	27	-	-	1	2	-	9	11	-	-	31
E.N. CENTRAL	11	-	884	-	-	5	6	-	46	64	9	2	47
Ohio†	-	-	104	-	-	3	1	-	17	21	-	-	7
Ind.†	-	-	55	-	-	-	2	-	5	3	-	-	4
Ill.	2	-	171	-	-	-	-	-	15	14	3	-	14
Mich.	9	-	373	-	-	2	2	-	9	23	4	2	20
Wis.†	-	-	181	-	-	-	1	-	-	3	2	-	2
W.N. CENTRAL	4	-	220	-	2	-	-	-	17	37	12	-	26
Minn.	-	-	2	-	-	-	-	-	9	14	-	-	4
Iowa†	-	-	48	-	-	-	-	-	1	4	1	-	-
Mo.	3	-	80	-	1	-	-	-	5	17	10	-	10
N. Dak.	-	-	6	-	-	-	-	-	-	-	-	-	-
S. Dak.	-	-	5	-	-	-	-	-	-	-	-	-	1
Nebr.	1	-	2	-	1	-	-	-	-	-	1	-	5
Kans.	-	-	77	-	-	-	-	-	2	2	-	-	6
S. ATLANTIC	29	1	157	-	-	2	1	3	59	81	41	1	112
Del.	1	-	-	-	-	-	-	-	-	1	1	-	1
Md.	2	-	30	-	-	-	-	-	20	6	26	-	25
D.C.	-	-	-	-	-	-	-	-	-	-	-	-	6
Va.	4	-	17	-	-	1	-	2	9	9	1	-	20
W. Va.	-	-	45	-	-	-	-	-	2	-	1	-	1
N.C.	6	-	NN	-	-	1	-	-	14	16	3	-	10
S.C.	-	-	6	-	-	-	-	-	-	-	1	-	4
Ga.†	-	-	-	-	-	-	-	-	2	4	-	-	10
Fla.	16	1	59	-	-	-	1	1	12	45	8	1	35
E.S. CENTRAL	6	-	10	-	-	5	9	-	15	28	5	-	6
Ky.	-	-	6	-	-	-	1	-	2	7	-	-	2
Tenn.	4	-	NN	-	-	3	-	-	11	13	2	-	1
Ala.†	2	-	4	-	-	2	1	-	2	2	3	-	1
Miss.	-	-	-	-	-	-	7	-	-	6	-	-	2
W.S. CENTRAL	18	-	47	-	1	-	-	-	17	85	26	-	32
Ark.	1	-	1	-	1	-	-	-	2	2	6	-	1
La.	-	-	NN	-	-	-	-	-	2	8	3	-	3
Okla.†	2	-	-	-	-	-	-	-	4	3	3	-	1
Tex.†	15	-	46	-	-	-	-	-	9	72	14	-	27
MOUNTAIN	3	1	32	-	4	-	-	-	18	85	57	1	9
Mont.	1	-	8	-	-	-	-	-	-	6	-	-	-
Idaho	1	1	-	-	-	-	-	-	-	2	1	-	-
Wyo.	-	-	-	-	-	-	-	-	-	6	3	-	-
Colo.	-	-	16	-	2	-	-	-	1	2	3	1	5
N. Mex.	-	-	-	-	-	-	-	-	-	2	5	-	1
Ariz.	-	-	NN	-	1	-	-	-	13	66	44	-	2
Utah	1	-	8	-	-	-	-	-	1	2	-	-	-
Nev.	-	-	-	-	1	-	-	-	3	1	4	-	1
PACIFIC	28	-	186	1	58	6	4	-	34	73	21	1	252
Wash.	5	-	148	1	54	5	-	-	4	22	6	-	8
Oreg.	7	-	-	-	-	-	-	-	3	8	6	-	9
Calif.†	9	-	-	-	1	1	2	-	24	37	8	1	209
Alaska	-	-	34	-	3	-	2	-	-	1	1	-	4
Hawaii	7	-	4	-	-	-	-	-	3	5	-	-	22
Guam†	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-
P.R.	-	-	-	-	-	-	-	-	4	3	7	-	4
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	1
Pac. Trust Terr.	-	-	9	-	-	-	-	-	-	-	10	-	-

NN: Not notifiable. NA: Not available.

*Delayed reports received for 1977 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: Aseptic Meningitis: Ohio +7, Ind. +1, Wis. +2, Tex. -1; Chickenpox: Ind. +171, Wis. +15, Calif. +32, Guam +6; Encephalitis: NYC -1, Wis. -1; Hepatitis: NYC -4, Wis. -1, Ga. +2, Okla. +1, Guam +1; Hepatitis: Vt. +2, NYC -11, Iowa +1, Ga. +47, Ala. -1, Okla. -1; Hepatitis: NYC -9; Malaria: Ga. +2.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending
November 25, 1978, and November 26, 1977 (47th week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1978	CUM. 1978	CUM. 1977*	1978	CUM. 1978	CUM. 1977*	1978	CUM. 1978	1978	1978	CUM. 1978	CUM. 1978
UNITED STATES	194	25,617	54,076	32	2,121	1,595	207	14,998	18	118	17,262	73
NEW ENGLAND	3	2,042	2,514	2	118	67	10	838	-	5	778	3
Maine	1	1,319	173	-	10	3	4	543	-	-	154	-
N.H. †	2	76	511	-	8	3	-	17	-	-	105	-
Vt.	-	52	294	-	2	6	-	6	-	-	27	2
Mass. †	-	259	639	1	43	21	1	94	-	5	246	-
R.I.	-	8	64	-	20	2	1	51	-	-	42	-
Conn.	-	328	834	1	35	32	4	127	-	-	204	1
MID. ATLANTIC	3	2,229	8,479	2	357	211	8	693	2	15	3,060	5
Upstate N.Y.	-	1,417	3,857	1	114	46	2	230	1	2	547	2
N.Y. City †	3	380	796	1	82	57	-	158	1	3	145	-
N.J. †	-	74	197	-	70	51	4	146	-	-	1,613	-
Pa.	-	358	3,629	-	91	57	2	159	-	10	755	3
E.N. CENTRAL	79	11,268	11,643	6	231	185	106	6,120	11	65	8,620	3
Ohio	-	494	1,861	1	73	66	29	1,168	3	-	1,382	1
Ind. †	1	214	4,362	-	39	15	6	345	1	5	617	1
Ill.	43	1,235	1,848	-	30	40	35	1,958	4	32	1,793	1
Mich.	26	7,826	1,111	5	74	48	11	1,487	3	19	3,256	-
Wis. †	9	1,499	2,461	-	15	16	25	1,162	-	9	1,572	-
W.N. CENTRAL	22	431	9,529	-	76	68	14	2,004	-	2	695	8
Minn.	-	38	2,634	-	23	19	-	22	-	-	130	2
Iowa	-	57	4,316	-	5	10	3	160	-	1	66	-
Mo.	17	34	1,047	-	30	26	1	1,174	-	1	111	1
N. Dak.	5	207	29	-	3	1	-	17	-	-	82	-
S. Dak.	-	-	75	-	3	5	-	7	-	-	112	1
Nebr.	-	5	214	-	-	2	-	25	-	-	34	-
Kans.	-	90	1,214	-	12	5	10	599	-	-	160	4
S. ATLANTIC	16	5,358	4,689	12	534	361	10	924	-	3	1,067	17
Del.	-	7	22	3	19	22	-	56	-	-	38	-
Md.	-	51	372	-	37	23	-	80	-	-	7	2
D.C.	-	1	14	-	2	1	-	2	-	-	1	-
Va.	4	2,834	2,751	3	66	35	1	184	-	-	247	1
W. Va.	2	1,065	262	-	16	9	-	184	-	1	335	-
N.C.	-	122	65	1	99	76	-	76	-	2	198	3
S.C.	-	199	157	-	37	36	-	17	-	-	29	4
Ga. †	-	34	768	2	60	50	-	70	-	-	27	-
Fla.	10	1,045	278	3	198	109	9	255	-	-	185	7
E.S. CENTRAL	1	1,432	2,038	3	168	163	22	1,215	-	5	533	5
Ky.	-	122	1,191	-	30	32	21	244	-	-	146	2
Tenn.	1	962	731	2	44	42	1	455	-	-	207	-
Ala.	-	101	78	-	49	55	-	430	-	-	22	-
Miss.	-	247	38	1	45	34	-	86	-	5	158	3
W.S. CENTRAL	16	1,264	2,182	4	299	299	21	1,873	3	4	962	15
Ark.	-	16	33	-	23	18	4	610	-	-	58	1
La.	7	351	80	2	122	134	-	65	-	-	486	2
Okla.	3	18	67	1	18	15	-	4	-	-	17	3
Tex.	6	879	2,002	1	136	132	17	1,194	3	4	401	9
MOUNTAIN	-	263	2,545	1	50	39	4	437	-	1	223	3
Mont.	-	105	1,163	1	4	5	1	147	-	-	18	-
Idaho	-	1	163	-	5	7	-	20	-	-	2	1
Wyo.	-	-	19	-	-	2	-	1	-	-	-	-
Colo.	-	37	504	-	3	1	2	104	-	-	49	1
N. Mex.	-	-	257	-	11	10	-	17	-	-	3	-
Ariz.	-	56	323	-	15	10	1	21	-	1	100	-
Utah	-	44	23	-	6	3	-	119	-	-	38	1
Nev.	-	20	93	-	6	1	-	8	-	-	13	-
PACIFIC	54	1,330	10,457	2	288	202	12	894	2	18	1,324	14
Wash.	33	342	558	1	45	30	2	200	1	4	128	1
Oreg.	18	382	367	-	29	18	4	123	-	2	141	-
Calif.	3	593	9,437	-	199	119	5	531	1	12	1,035	13
Alaska	-	1	60	1	10	32	-	12	-	-	8	-
Hawaii	-	12	35	-	5	3	1	28	-	-	12	-
Guam	NA	25	9	-	1	1	NA	38	NA	NA	4	1
P.R. †	1	286	1,026	2	10	1	49	1,485	-	-	17	9
V.I.	-	6	14	-	1	-	-	1	-	-	1	-
Pac. Trust Terr.	22	49	-	-	1	-	2	10	-	-	2	-

NA: Not available.

*Delayed reports received for 1977 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: Measles: N.H. +3, Mass. -1, Ind. +3, Wis. -1, Ga. +2; Men. inf.: N.H. +1, NYC -3, Ga. +2; Mumps: N.J. +4, Ind. +4, P.R. +43; Pertussis: Ind. +5, Ga. +2; Rubella: N.H. +2, NYC -1, Ind. +2, Wis. +3.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending November 25, 1978, and November 26, 1977 (47th week)

REPORTING AREA	TUBERCULOSIS		TULA-REMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)					RABIES (in Animals)	
	1978	CUM. 1978	CUM. 1978	1978	CUM. 1978	1978	CUM. 1978	GONORRHEA		SYPHILIS (Pri. & Sec.)			CUM. 1978	
								1978	CUM. 1978	CUM. 1977*	CUM. 1978	CUM. 1977*		
UNITED STATES	410	26,547	127	11	474	1	987	15,957	913,894	903,751	363	19,560	18,442	2,855
NEW ENGLAND	18	876	2	-	78	-	13	343	23,206	24,363	9	529	740	96
Maine	-	65	-	-	-	-	-	20	1,926	1,837	-	5	27	76
N.H.	-	15	-	-	5	-	-	31	1,073	1,016	-	9	4	3
Vt.	1	37	-	-	1	-	-	18	573	606	-	3	7	2
Mass.	12	516	-	-	60	-	5	175	10,143	10,327	7	323	516	7
R.I.	3	64	-	-	4	-	1	41	1,701	1,902	1	24	8	-
Conn.	2	179	2	-	8	-	7	58	7,790	8,675	1	165	178	8
MID. ATLANTIC	61	4,403	5	1	65	-	55	1,932	98,799	94,849	61	2,605	2,627	99
Upstate N.Y.	8	704	4	-	10	-	31	354	16,822	15,390	8	183	243	64
N.Y. City†	18	1,606	1	1	41	-	4	551	37,164	36,778	40	1,807	1,650	-
N.J.	19	922	-	-	7	-	12	588	18,576	15,930	8	323	347	14
Pa.	16	1,171	-	-	7	-	8	439	26,237	24,751	5	292	387	21
E.N. CENTRAL	100	4,272	1	-	38	1	49	3,028	142,635	143,510	50	2,242	1,895	174
Ohio†	33	793	1	-	6	1	23	740	37,211	37,909	20	417	435	19
Ind.	1	493	-	-	2	-	1	115	14,349	13,431	5	160	143	13
Ill.	46	1,616	-	-	17	-	25	914	45,253	46,460	22	1,409	988	60
Mich.†	15	1,148	-	-	13	-	-	771	33,139	33,238	2	199	227	7
Wis.	5	222	-	-	-	-	-	488	12,683	12,502	1	57	102	75
W.N. CENTRAL	14	850	27	-	20	-	48	648	45,936	46,765	1	409	398	568
Minn.	-	142	-	-	7	-	-	118	7,698	8,327	-	145	129	170
Iowa	1	97	1	-	3	-	1	68	5,076	5,462	1	43	39	121
Mo.	9	380	22	-	5	-	23	299	20,289	19,444	-	133	153	75
N. Dak.	1	32	-	-	-	-	1	9	831	881	-	3	3	95
S. Dak.	2	67	-	-	-	-	7	23	1,565	1,423	-	3	9	69
Nebr.	-	23	-	-	1	-	11	65	3,329	4,035	-	13	25	7
Kans.	1	109	4	-	4	-	5	66	7,148	7,193	-	69	40	31
S. ATLANTIC	106	5,698	9	1	62	-	530	3,620	222,014	221,690	103	5,176	4,992	453
Del.	1	51	-	-	3	-	5	52	3,150	3,023	-	10	19	3
Md.	18	862	5	-	11	-	105	513	28,555	27,570	12	397	300	-
D.C.	-	276	-	-	1	-	1	222	14,945	14,547	9	395	505	-
Va.	18	600	4	-	5	-	110	359	21,599	23,102	6	432	488	14
W. Va.	1	213	-	-	7	-	11	55	3,042	3,062	-	28	4	12
N.C.†	17	881	-	-	2	-	197	722	31,721	33,545	17	554	663	14
S.C.†	20	494	-	-	10	-	56	412	21,794	20,897	8	266	224	112
Ga.	-	799	-	-	4	-	45	656	42,784	42,491	16	1,290	1,121	263
Fla.†	31	1,522	-	1	19	-	-	629	54,424	53,453	35	1,804	1,668	35
E.S. CENTRAL	34	2,508	7	-	9	-	180	1,346	77,539	79,846	13	1,019	717	143
Ky.†	4	578	3	-	2	-	42	247	10,355	10,842	1	134	102	71
Tenn.	18	771	3	-	3	-	111	684	28,406	31,964	-	341	228	29
Ala.	12	611	1	-	3	-	13	309	22,232	21,718	8	180	152	43
Miss.†	-	548	-	-	1	-	14	106	16,546	15,322	4	364	235	-
W.S. CENTRAL	31	3,109	62	9	56	-	97	2,189	122,065	114,168	90	3,138	2,647	842
Ark.	2	362	40	-	9	-	15	96	9,372	8,661	-	68	63	137
La.	6	550	6	-	4	-	1	398	19,826	17,197	24	662	602	21
Okla.	3	312	11	-	5	-	54	187	11,498	11,041	1	87	72	172
Tex.†	20	1,885	5	9	38	-	27	1,508	81,669	77,269	65	2,321	1,910	512
MOUNTAIN	7	781	10	-	20	-	11	717	35,115	36,596	13	426	387	112
Mont.	1	58	-	-	3	-	2	25	1,974	1,938	-	8	5	19
Idaho	-	30	3	-	5	-	3	41	1,446	1,658	-	13	12	-
Wyo.	-	14	2	-	-	-	1	23	872	876	-	9	3	-
Calo.	2	95	1	-	4	-	2	232	9,728	9,500	6	137	114	38
N. Mex.	3	129	-	-	2	-	-	66	5,034	5,405	4	80	82	25
Ariz.	1	355	1	-	4	-	1	259	9,081	10,042	-	91	145	23
Utah	-	35	3	-	1	-	-	31	1,895	2,205	-	13	10	7
Nev.	-	65	-	-	1	-	2	60	5,085	4,892	3	75	16	-
PACIFIC	39	4,050	4	-	126	-	4	2,134	146,615	141,964	23	4,016	4,039	368
Wash.	NA	273	-	-	7	-	1	283	12,172	11,068	NA	213	240	2
Oreg.	14	170	1	-	1	-	2	108	9,981	9,660	5	157	129	12
Calif.	16	3,068	3	-	107	-	1	1,582	117,362	113,633	18	3,595	3,609	346
Alaska	-	66	-	-	-	-	-	123	4,535	4,681	-	11	25	8
Hawaii	9	473	-	-	11	-	-	41	2,565	2,922	-	40	36	-
Guam †	NA	53	-	NA	-	NA	-	NA	93	231	NA	-	2	-
P.R.	9	358	-	-	3	-	-	17	2,010	2,872	2	449	491	36
V.I.	-	4	-	-	2	-	-	5	188	198	-	16	9	-
Pac. Trust Terr.	-	6	-	-	-	-	-	16	48	-	-	-	-	-

NA: Not available.

*Delayed reports received for 1977 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: TB: NYC -316, Mich. -3, N.C. -1, Fla. -2, Ky. -1, Guam +1; Typhoid fever: NYC -3, S.C. -1, Miss. +1, Tex. -1; GC: Guam +23; An. rabies: Ohio +2.

TABLE IV. Deaths in 121 U.S. cities,* week ending
November 25, 1978 (47th 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	590	378	141	34	12	23	S. ATLANTIC	878	494	230	73	43	34
Boston, Mass.	157	97	37	7	5	8	Atlanta, Ga.	126	65	32	12	9	3
Bridgeport, Conn.	32	21	3	7	1	-	Baltimore, Md.	106	57	31	8	4	3
Cambridge, Mass.	23	15	7	1	-	7	Charlotte, N.C.	53	21	17	5	4	1
Fall River, Mass.	25	19	6	-	-	-	Jacksonville, Fla.	68	41	15	5	5	3
Hartford, Conn.	54	35	11	3	2	3	Miami, Fla.	64	40	18	2	3	3
Lowell, Mass.	23	14	6	3	-	1	Norfolk, Va.	34	20	8	2	2	2
Lynn, Mass.	19	9	6	1	-	-	Richmond, Va.	59	32	16	7	2	4
New Bedford, Mass.	29	24	4	1	-	1	Savannah, Ga.	27	16	6	2	2	3
New Haven, Conn.	47	30	9	2	1	2	St. Petersburg, Fla.	66	57	5	2	1	6
Providence, R.I.	67	40	22	3	2	-	Tampa, Fla.	38	26	8	3	1	2
Somerville, Mass.	12	9	3	-	-	-	Washington, D.C.	195	98	62	20	8	4
Springfield, Mass.	35	21	9	4	-	1	Wilmington, Del.	42	21	12	5	2	-
Waterbury, Conn.	27	18	6	2	-	3							
Worcester, Mass.	41	26	12	-	1	2							
							E.S. CENTRAL	457	272	110	32	24	19
MID. ATLANTIC	1,962	1,257	463	113	60	76	Birmingham, Ala.	93	55	19	7	10	4
Albany, N.Y.	51	33	10	1	5	1	Chattanooga, Tenn.	32	23	-	3	4	3
Allentown, Pa.	20	12	8	-	-	2	Knoxville, Tenn.	34	21	10	1	-	-
Buffalo, N.Y.	75	39	26	4	2	2	Louisville, Ky.	75	44	21	5	3	1
Camden, N.J.	31	18	10	3	-	1	Memphis, Tenn.	91	52	29	6	1	2
Elizabeth, N.J.	17	13	4	-	-	1	Mobile, Ala.	51	31	11	4	2	2
Erie, Pa.†	22	15	7	-	-	3	Montgomery, Ala.	12	8	3	1	-	2
Jersey City, N.J.	59	46	11	-	-	-	Nashville, Tenn.	69	38	17	5	4	5
Newark, N.J.	38	17	9	4	4	2							
N.Y. City, N.Y.	1,329	834	316	89	42	44	W.S. CENTRAL	1,016	576	267	77	49	36
Paterson, N.J.	28	12	12	2	1	1	Austin, Tex.	42	28	9	2	2	2
Philadelphia, Pa.†	402	235	115	31	10	19	Baton Rouge, La.	20	11	6	1	1	3
Pittsburgh, Pa.†	37	19	12	3	3	2	Corpus Christi, Tex.	44	21	12	4	4	-
Reading, Pa.	35	29	2	1	1	1	Dallas, Tex.	146	86	39	7	5	2
Rochester, N.Y.	123	93	21	5	1	15	El Paso, Tex.	41	22	9	7	2	2
Schenectady, N.Y.	18	13	4	1	-	-	Fort Worth, Tex.	73	40	21	5	4	6
Scranton, Pa.†	17	13	3	-	-	1	Houston, Tex.	287	155	73	32	10	7
Syracuse, N.Y.	71	49	14	3	2	-	Little Rock, Ark.	60	32	19	2	6	2
Trenton, N.J.	19	13	5	-	1	1	New Orleans, La.	85	51	18	4	6	-
Utica, N.Y.	24	17	7	-	-	3	San Antonio, Tex.	92	56	22	6	5	3
Yonkers, N.Y.	24	19	4	-	1	2	Shreveport, La.	74	44	23	3	2	2
							Tulsa, Okla.	52	30	16	4	2	7
E.N. CENTRAL	1,967	1,192	502	113	82	51	MOUNTAIN	499	289	129	40	22	18
Akron, Ohio	63	40	20	1	1	-	Albuquerque, N. Mex.	63	35	19	6	2	5
Canton, Ohio	27	12	8	1	3	-	Colo. Springs, Colo.	19	14	4	1	-	-
Chicago, Ill.	551	307	152	46	26	7	Denver, Colo.	105	56	20	10	11	1
Cincinnati, Ohio	118	74	31	4	3	1	Las Vegas, Nev.	48	21	18	4	2	-
Cleveland, Ohio	145	86	44	11	2	2	Ogden, Utah	20	11	6	1	2	3
Columbus, Ohio	87	52	21	8	4	6	Phoenix, Ariz.	128	74	35	12	1	1
Dayton, Ohio	79	50	21	4	1	1	Pueblo, Colo.	18	13	2	2	1	5
Detroit, Mich.	255	149	59	14	21	7	Salt Lake City, Utah	45	29	10	2	3	2
Evansville, Ind.	45	28	8	1	2	3	Tucson, Ariz.	53	36	15	2	-	1
Fort Wayne, Ind.	38	29	7	-	-	1							
Gary, Ind.	16	9	4	1	1	1	PACIFIC	1,570	999	372	105	39	33
Grand Rapids, Mich.	42	32	8	-	2	3	Berkeley, Calif.	11	7	3	-	-	1
Indianapolis, Ind.	145	91	31	5	10	6	Fresno, Calif.	37	21	10	2	3	9
Madison, Wis.	20	13	5	-	-	2	Glendale, Calif.	30	24	4	1	1	-
Milwaukee, Wis.	78	51	25	1	-	4	Honolulu, Hawaii	52	29	13	6	2	-
Peoria, Ill.	30	16	8	4	1	-	Long Beach, Calif.	97	67	22	3	1	1
Rockford, Ill.	43	27	10	1	2	1	Los Angeles, Calif.	442	275	114	32	6	9
South Bend, Ind.	34	20	9	1	1	3	Oakland, Calif.	53	31	16	5	-	2
Toledo, Ohio	89	66	17	4	1	3	Pasadena, Calif.	16	11	3	-	2	-
Youngstown, Ohio	62	40	14	6	1	-	Portland, Oreg.	120	80	21	9	5	-
							Sacramento, Calif.	76	43	21	7	2	1
W.N. CENTRAL	610	402	116	39	26	17	San Diego, Calif.	120	82	26	6	3	1
Des Moines, Iowa	52	34	7	7	1	1	San Francisco, Calif.	126	81	22	10	4	3
Duluth, Minn.	14	6	5	2	1	-	San Jose, Calif.	149	90	40	10	4	-
Kansas City, Kans.	26	14	7	2	2	1	Seattle, Wash.	154	96	36	12	5	3
Kansas City, Mo.	119	74	21	10	10	3	Spokane, Wash.	45	29	14	-	1	2
Lincoln, Nebr.	23	17	5	-	-	1	Tacoma, Wash.	42	33	7	2	-	1
Minneapolis, Minn.	80	52	10	5	7	3							
Omaha, Nebr.	41	30	10	-	-	5							
St. Louis, Mo.	139	99	23	10	3	5	TOTAL	9,549	5,859	2,330	626	357	307
St. Paul, Minn.	33	38	13	2	-	1	Expected Number	10,852	6,671	2,731	666	410	368
Wichita, Kans.	63	38	15	1	2	2							

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, there will now be 117 cities involved in the generation of the expected values used to monitor pneumonia and influenza activity in the United States. Data from these 4 cities will appear in the tables but will not be included in the totals for the United States and the Middle Atlantic Region.

Dengue Fever – Continued

DSS while living in Thailand (2). Since 1967 the only cases of DHF documented in the literature that occurred in the Western Hemisphere were in outbreaks in Curacao (3) and Jamaica (4).

DHF is a serious problem in Southeast Asian children. Although classic dengue fever (a milder viral syndrome) has been documented in hundreds of Caucasian Americans and Europeans in Thailand (2), DHF is notably rare among these groups. There is no substantial evidence to support a genetic or nutritional explanation for this difference. Current theories explaining the cause of DHF/DSS include the following: 1) in a second dengue infection, the heterotypic antibody response predisposes one to have more severe disease; 2) with a first or second dengue infection, activation of complement is responsible for subsequent severe disease; and 3) virulence among dengue virus strains differs (a theory not currently well-accepted).

This patient is of Indian descent and had DSS without evidence of a prior infection. This may be a case of DSS with primary dengue infection, or it may represent a serologically unrecognizable secondary infection with primary exposure 3 years before in India.

References

1. World Health Organization: Technical Guides for Diagnosis, Treatment, Surveillance, Prevention and Control of Dengue Hemorrhagic Fever. Geneva, 1975
2. Russell PK, Chumdermpadetsuk S, Piyaratn P: A fatal case of dengue hemorrhagic fever in an American child. *Pediatrics* 40:804-807, 1967
3. van Der Sar A: An outbreak of dengue hemorrhagic fever on Curacao. *Trop Geogr Med* 25:119-129, 1973
4. Fraser HS, Wilson WA, Thomas EJ, et al: Dengue shock syndrome in Jamaica. *Br Med J* 1:893-894, 1978

Follow-up on Botulism – Colorado

Four more suspected cases of botulism associated with a Denver restaurant occurred from November 13-18, bringing the total to 7 cases. Two of the 7 have been laboratory-confirmed. Six patients are from the Denver area; 1 is a California resident.

Serum specimens from the suspected cases were negative for botulinal toxin; evaluation of their stool specimens continues. Four patients have been treated with trivalent (ABE) botulism antitoxin, and only 1 patient has required mechanical ventilatory support. All patients are currently clinically stable or improving.

Epidemiologic investigation revealed that the only food known to have been consumed by all 7 patients was potato salad served at the Country Broker Restaurant in Denver on November 12, 13, 15, or 16. A telephone survey of 72 controls who had dined at the restaurant on the above dates determined that only 2 had eaten potato salad ($p < .001$). Although no symptoms or signs of cranial nerve dysfunction have occurred in these 2 persons, both experienced gastrointestinal illness after eating at the restaurant. Serum and stool specimens from these 2 persons are being analyzed. The implicated batch of potato salad was made at the restaurant on November 6 and was available for serving through November 17, when it was discarded. Numerous food samples, including items used to make potato salad, tested by the Food and Drug Administration were negative for preformed botulinal toxin. Additional studies are in progress to determine the mechanism or source of botulinal toxin contamination of the potato salad.

Botulism — Continued

Reported by G Lasater, MD, Denver; C Johnson, MD, Jefferson County Health Dept; T Edell, MD, Acting State Epidemiologist, J Emerson, DVM, Colorado Dept of Health; S Fannin, MD, Los Angeles County Health Dept; B Werner, California State Health Dept; FDA, Enterobacteriology Br, Bacteriology Div, Bur of Laboratories, Enteric Diseases Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: The presenting symptoms of Type A botulism were mild in 5 of the 7 cases in this outbreak. Such mild illness is more often reported in outbreaks due to type B botulism (1). Extensive surveillance, state and nationwide, was instrumental in detecting cases in whom presenting illness did not suggest botulism to the attending physician.

Reference

1. Terranova W, Breman JG, Locey RP, et al: Botulism type B: Epidemiologic aspects of an extensive outbreak. *Am J Epidemiol* 108:150, 1978

Influenza — Puerto Rico

Influenza A (H1N1) virus has been isolated from 2 throat-swab specimens from recent sporadic cases of influenza-like illness in U.S. Coast Guard members in Puerto Rico. The cases occurred in mid-November; only persons less than 25 years of age were affected. Paired serum specimens collected from other sources in Puerto Rico have not shown evidence of influenza infection by complement-fixation (CF) testing, and there is no increased incidence of febrile respiratory illness on the island.

Reported by H Negron, MD, State Epidemiologist, Puerto Rico Dept of Health; J Frye, MD, U.S. Public Health Service Outpatient Clinic—San Juan; WHO Collaborating Center for Influenza, San Juan Laboratories, Virology Div, Bur of Laboratories, Immunization Div, Bur of State Services, Field Services Div, Bur of Epidemiology, CDC.

Current Trends

Surveillance of Childhood Lead Poisoning — United States

During the third quarter of fiscal year 1978, 58 Childhood Lead Poisoning Prevention Programs reported the screening of 109,783 children; this is a 25% increase over the preceding quarter. Of the children screened this quarter, 6,264 required pediatric management for undue lead absorption. An additional 4,468 children were referred for medical care because of an abnormal erythrocyte protoporphyrin level due to iron deficiency. The ratio of the number of children receiving chelation treatment (674) to the number of children requiring pediatric management for undue lead absorption was less than previous quarters.

During the quarter 5,325 dwellings were inspected for lead hazards—an 11.4% increase over the previous quarter. For the second consecutive quarter there was an increase in the percentage of lead hazards reduced. Of the 3,792 lead hazards identified, 93% (3,526) were reduced—the highest level since the October-December quarter of 1975.

In December 1977, CDC convened an ad hoc advisory committee to revise recommendations for the prevention of childhood lead poisoning. These recommendations have been published (1). A copy of them may be obtained, upon request, from CDC, Attention: Technical Information Services, BSS, 1600 Clifton Road, Atlanta, Ga. 30333.

Reported by the Environmental Health Services Div, Bur of State Services, CDC.

Reference

1. Center for Disease Control: Preventing lead poisoning in young children. *J Pediatr* 93:709-720, 1978

TABLE 1. Results of screening in childhood lead poisoning control projects—United States, third quarter fiscal year 1978 (April 1, 1978 - June 30, 1978)

Programs	Number of children						Number of dwellings		
	Screened	With confirmed undue lead adsorption ¹				Inspected	Found with lead	Reduced	
		Requiring pediatric management		Receiving pediatric management					
		Total	Class II	Classes III & IV	Total				Chelation Therapy
Bridgeport, Conn.	22	1	0	1	1	1	0	0	
Waterbury, Conn.	837	35	22	13	283	1	201	160	
Boston, Mass.	8,691	373	312	61	701	34	375	372	
Chelsea, Mass.	227	9	6	3	15	0	15	15	
Fall River, Mass.	443	14	10	4	29	0	19	15	
Lawrence, Mass.	1,178	84	63	21	236	4	90	90	
Lynn, Mass.	913	33	25	8	215	4	26	17	
Worcester, Mass.	679	22	18	4	248	6	61	59	
Rhode Island State	1,072	59	46	13	259	52	60	50	
REGION I TOTAL	14,063	630	502	128	1,987	102	847	778	
Cumulative FY 78	38,217	2,567	2,026	541	6,754	302	2,413	2,142	
Camden, N.J.	597	35	26	9	218	1	74	48	
Jersey City, N.J.	424	40	26	14	176	6	28	19	
Newark, N.J.	1,775	258	162	96	505	43	105	41	
Paterson, N.J.	540	65	48	17	775	12	43	37	
Plainfield, N.J.	263	15	14	1	115	0	4	3	
Erie Co., N.Y.	527	82	58	24	202	14	60	42	
Monroe Co., N.Y.	1,331	89	81	8	273	6	50	49	
New York City	25,385 ²	844 ³	597	247	1,893 ²	28	210	134	
Onondaga Co., N.Y.	1,067	42	33	9	125	0	45	19	
Rensselaer Co., N.Y.	250	12	9	3	58	0	24	12	
Westchester, N.Y.	634	32	20	12	189	4	19	7	
REGION II TOTAL	32,783	1,514	1,074	440	4,529	114	662	411	
Cumulative FY 78	75,299	4,160	2,956	1,204	13,034	291	2,028	1,319	
Delaware State	883	50	33	17	130	3	69	45	
Washington, D.C.	3,082	54	34	20	425	11	129	33	
Baltimore, Md.	2,880	99	68	31	465	22	118	82	
Chester, Pa.	968	32	22	10	449	0	40	36	
Philadelphia, Pa.	3,285	460	316	144	546	40	545	364	
Wilkes-Barre, Pa.	579	25	18	7	154	2	41	29	
York, Pa.	304	34	24	10	40	0	0	0	
Norfolk, Va.	1,394	78	49	29	284	12	52	33	
Richmond, Va.	1,280	59	51	8	342	3	63	53	
REGION III TOTAL	14,655	891	615	278	2,836	93	1,067	703	
Cumulative FY 78	41,885	2,355	1,550	805	8,911	300	3,243	2,024	
Augusta, Ga.	939	33	23	10	217	2	39	23	
Louisville, Ky.	1,232	39	26	13	473	12	63	58	
Wilmington, N.C.	100	1	0	1	24	0	1	0	
Memphis, Tenn.	1,627	47	35	12	159	0	46	32	
South Carolina State	955	42	34	8	291	1	131	130	
REGION IV TOTAL	4,853	162	118	44	1,164	15	280	243	
Cumulative FY 78	14,131	399	287	102	4,419	46	765	629	
Chicago, Ill.	14,069	1,498	892	606	2,750	201	666	383	
Peoria, Ill.	472	4	3	1	107	1	16	10	
Rockford, Ill.	531	37	28	9	546	2	58	49	
Detroit, Mich.	4,593	158	107	51	660	3	197	185	
Wayne Co., Mich.	68	11	9	2	115	1	14	27	
St. Paul, Minn. ³	673	5	2	3	4	2	2	0	
Akron, Ohio	571	24	23	1	27	1	17	16	
Cincinnati, Ohio	1,010	62	47	15	627	2	105	90	
Cleveland, Ohio	3,154	234	194	40	667	6	41	17	
Columbus, Ohio	1,758	33	27	6	91	8	159	45	
Kenosha, Wisc.	97	3	2	1	17	1	1	6	
Milwaukee, Wisc.	472	132	102	30	261	10	181	128	
Racine, Wisc.	197	10	5	5	37	0	10	7	
REGION V TOTAL	27,665	2,211	1,441	770	5,928	238	1,467	947	
Cumulative FY 78	74,772	5,364	3,459	1,905	17,922	813	18,757	5,416	
Arkansas State	1,416	40	22	18	117	0	36	24	
New Orleans, La.	3,597	124	87	37	522	20	113	84	
Houston, Texas	2,033	104	77	27	103	2	81	21	
REGION VI TOTAL	7,046	268	186	82	742	22	230	128	
Cumulative FY 78	18,757	722	497	225	1,930	80	670	341	
Davenport-Scott Co., Iowa	915	29	15	6	116	3	40	34	
Kansas City, Kansas	1,702	16	10	6	86	0	42	28	
Kansas City, Mo.	320	5	5	0	53	0	0	1	
St. Louis, Mo.	2,236	448	278	170	2,692	82	562	433	
Springfield, Mo. ³	94	6	4	2	9	0	60	35	
Omaha-Douglas Co., Neb.	843	32	20	12	107	4	16	7	
REGION VII TOTAL	6,110	536	332	204	3,063	89	720	536	
Cumulative FY 78	20,203	1,912	1,241	671	8,334	244	1,988	1,810	
Alameda Co., Calif.	791	20	12	8	64	0	23	16	
Los Angeles, Calif.	1,807	32	11	21	61	1	29	20	
REGION IX TOTAL	2,598	52	23	29	125	1	52	45	
Cumulative FY 78	6,285	131	74	57	360	7	152	120	
U.S. TOTALS	109,783	6,264	4,291	1,973	20,375	674	5,325	3,792	
Cumulative FY 78	289,549	17,600	12,090	5,510	61,664	2,083	30,016	13,801	

¹ Class II and Classes III & IV defined in CDC Statement, Increased Lead Absorption and Lead Poisoning in Young Children, March 1975.

² Estimated.

³ Reporting programs not supported by new Federal funds during FY 1978.

**U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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