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MORBIDITY AND MORTALITY WEEKLY REPORT

Epidemiologic Notes and Reports

Leukemia Among Persons Present at an Atmospheric Nuclear Test (Smoky)

From 1945 through mid-1976, the United States detonated a total of 588 nuclear devices, 183 in the atmosphere. During the 1950s, many of these tests, conducted at the Nevada Test Site, involved military troop maneuvers. It is estimated that about 250,000 military personnel were present at 1 or more such tests.

In 1976, acute myelocytic leukemia (AML) developed in a man who had taken part in maneuvers on August 31, 1957, at an atmospheric nuclear test called Smoky. To assess the potential relationship between this exposure and such illness, CDC undertook an epidemiologic study of all military personnel present at Smoky. A list of 3,224 such persons was compiled. Most were identified from radiation-film-badge records through the Armed Forces Radiobiology Research Institute. Although follow-up of these persons is still in progress (60% have been located), the number of leukemia cases that has been observed is greater than would be expected.

Eight test participants have confirmed cases of leukemia; four of these were of AML; 3, chronic myelocytic leukemia (CML); and 1, hairy cell leukemia (HCL) (Table 1). This number of cases is significantly greater than the expected incidence (3.5 cases) calculated from Third National Cancer Survey rates (*1*). HCL is believed by some to be a variant of chronic lymphocytic leukemia, which is unlikely to be the result of radiation exposure (*2*). However, even if the HCL case is excluded, the observed incidence of leukemia still remains significantly increased. This is true whether one looks at AML alone, CML alone, or AML and CML combined. Ages at the time of diagnosis have ranged from 34 to 60 years (mean 45) and the interval from test to diagnosis, 11-19 years (mean 15.6).

At present, information concerning levels of radiation exposure is limited to measurements of external dose (gamma and beta radiation) as measured by film badges. No direct measurements of possible internal exposure through inhaled or ingested radioactive material are available. The mean 1957 cumulative gamma dose for the entire cohort, as meas-

TABLE 1. Cases of leukemia among Smoky participants

Type of leukemia	Month and year of diagnosis	Age at diagnosis	Years between Smoky detonation and diagnosis
chronic myelocytic	August 1968		11
acute myelocytic	October 1969		12
acute myelocytic	February 1972		14
chronic myelocytic	March 1973		15
acute myelocytic	August 1974		17
acute myelocytic*	February 1976	42	18
hairy cell	December 1976	44	19
chronic myelocytic	January 1977	40	19

*Index case

Leukemia — Continued

ured by film badges, was 493.4 millirem (mrem). Film-badge readings were available for 7 of the 8 cases and ranged from 0 to 2,997 mrem (mean 1,178 mrem).

Interpretation of these findings is not clear. Provided that the leukemia excess is not a chance event, the results may indicate that radiation received at Smoky, and perhaps at other nuclear tests, was greater than had originally been supposed or than film-badge readings indicate. If this is not so, however, the findings may suggest that low-dose radiation causes more cancer than would be predicted by extrapolation from high-dose exposures (*3*). Although several recent studies have suggested that cancer incidence may be increased in populations exposed to low-dose radiation—such as nuclear workers (*4,5*), persons receiving diagnostic radiation (*6*), and persons exposed to nuclear fallout (*7*)— the interpretation of such findings remains uncertain (*8-10*).

Further analysis of cancer incidence in the Smoky cohort will be made when follow-up of cohort members is complete. Additional studies of leukemia and cancer occurrence among participants in military maneuvers at this and other atmospheric nuclear tests are being planned through The National Academy of Sciences in cooperation with the Department of Defense.

Reported by the Cancer Br, Chronic Diseases Div, Bur of Epidemiology, CDC.

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Current Trends

Urban Rat Control — United States, January-March 1979

During the second quarter of fiscal year 1979, Urban Rat Control Programs in 68 communities reported that 719 blocks had been designated as being "in maintenance"— an indication that they had improved environmental conditions and, as a result, were essentially rat free (Table 2). An additional 2,051 blocks attained "environmentally improved" (or EIB) status. EIBs are contiguous maintenance blocks that, because improvement has been sustained for 12 months or more, have been placed under local surveillance.

Of the 26,481 blocks in federally supported target areas, 13,146 were in maintenance on March 31, 1979. As of the same date, programs had provided services to 51,909 blocks; 25,425 of these eventually became environmentally improved and began being sustained locally. As a result of program efforts, almost 6 million people now live in

areas that are environmentally improved and essentially rat free.

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

TABLE 2. Urban Rat Control Program target-area status report, second quarter fiscal year 1979 (January 1-March 31, 1979)

Program community	Target-area blocks				Environmentally improved blocks*	
			Maintenance			
	Total	Attack	<12 months	>12 months	New this quarter	Cumulative
REGION I	833	556	184	93	241	938
Hartford	251	135	43	73	174	277
Boston	424	343	61	20	0	0
Worcester	158	78	80	0	67	661
Previously funded programs						0
REGION II	4,301	2,029	1,056	1,186	228	3,156
Camden	270	211	59	0	16	81
Jersey City	258	102	53	103	17	67
Newark	272	213	43	16	0	0
Paterson	118	39	30	19	0	102
New York City	1,665	834	470	361	50	594
Newburgh	47	12	26	9	0	39
Rochester	177	52	60	65	119	285
Yonkers	121	51	49	21	0	28
Aquadilla, P.R.	196	82	51	63	26	69
Arecibo, P.R.	200	76	32	92	0	115
Mayaguez, P.R.	280	132	50	98	0	112
Ponce, P.R.	238	90	25	123	0	146
San Juan, P.R.	459	135	108	216	0	96
Previously funded programs						1,422
REGION III	4,688	1,632	1,822	817	353	5,323
"War on Rats," D.C.	1,069	251	445	373	62	690
Baltimore	511	246	75	78	0	165
Chester	133	30	73	30	42	42
Harrisburg	368	160	164	44	0	0
N.E. Pa. V.C. Assn.†	430	247	183	0	0	958
Philadelphia	1,398	370	545	178	73	1,095
Pittsburgh	410	208	197	5	95	1,121
Chesapeake	53	17	25	11	25	25
Norfolk	257	79	90	88	22	1,193
Portsmouth	59	24	25	10	34	34
Previously funded programs						0
REGION IV	4,926	1,670	1,890	496	948	4,453
Mobile	516	207	264	45	66	224
Ft. Lauderdale	583	169	230	184	0	294
Miami	709	144	470	95	448	448
Pensacola	476	286	53	0	0	0
Tampa	286	24	260	2	430	697
Atlanta‡	645	0	0	0	0	0
Dekalb County, Ga.	754	365	266	35	0	0
Louisville	532	193	261	78	4	400
Memphis	425	282	86	57	0	392
Previously funded programs						1,998
REGION V	5,051	2,272	1,567	297	144	2,486
Chicago	399	344	55	0	0	0
Ft. Wayne	249	141	83	25	6	106
Gary	381	247	100	34	0	0
Indianapolis	367	97	270	0	0	50
Benton Harbor	190	50	0	0	0	0
Detroit	635	296	168	171	0	87
Highland Park	220	91	17	0	0	0
Saginaw	333	97	0	0	0	0
Akron	272	114	131	0	77	260
Barberton	161	28	51	2	0	16
Cincinnati	161	51	75	9	2	44
Cleveland	544	177	265	2	59	496
Columbus	565	304	207	54	0	0
Toledo	440	111	135	0	0	18
Milwaukee	134	124	10	0	0	0
Previously funded programs						1,409
REGION VI	2,975	848	929	458	0	5,441
Little Rock	403	117	31	0	0	0
Pine Bluff	276	63	213	0	0	0
New Orleans	580	153	427	0	0	2,745
Houston	863	159	246	458	0	1,438
San Antonio	853	356	12	0	0	0
Previously funded programs						1,258
REGION VII	2,412	543	813	1,056	95	1,949
Kansas City, Kans.	793	108	87	598	0	448
Kansas City, Mo.	355	92	263	0	0	417
St. Louis	622	236	260	126	0	634
Omaha	501	107	196	198	36	195
Council Bluffs	141	0	7	134	59	255
Previously funded programs						0
REGION IX	1,295	475	384	98	42	852
Los Angeles	511	151	158	15	0	54
Oakland	343	103	89	0	42	142
San Bernardino	193	113	80	0	0	0
San Francisco	248	108	57	83	0	174
Previously funded programs						482
REGION X						830
Previously funded programs						830
TOTAL	26,481	10,025	8,645	4,501	2,051	25,428

* Contiguous blocks where maintenance has been achieved and sustained for a minimum of 12 months. These blocks are no longer part of the approved project target area.

† Northeastern Pennsylvania Vector Control Association. Serves Lackawanna and Luzerne counties and the cities of Nanticoke, Wilkes-Barre, and Hazleton.

‡ Target-area blocks are confined to public-housing projects.

Follow-up on Infant Metabolic Alkalosis — United States

Since the last report (*1*), additional cases of infant metabolic alkalosis with onset since January 1 have been reported to CDC by physicians, parents, and the Food and Drug Administration. All recently reported cases were in infants who had been taking Neo-Mull-Soy or Cho-Free—2 soy-based infant formulas. The former product was previously reported to be associated with this condition (*1*).

Analysis of these products by Syntex, the manufacturer, and by other independent laboratories has confirmed the low chloride content of the formulas. Syntex has voluntarily launched a consumer-level recall effort throughout the country. It has also sent mailgrams to pediatricians and family practitioners regarding the management of alkalosis in the affected children.

Reported by the Food and Drug Administration; and by Birth Defects Br, Chronic Diseases Div, Bur of Epidemiology, CDC,

Editorial Note: CDC's previously reported survey was conducted to determine the degree to which infant metabolic alkalosis was associated with a particular formula—not to obtain the actual incidence of this condition in the United States. Even though more cases have since been reported, the true extent of the problem remains unknown. Since this formula has a limited distribution in other countries, it is also possible that similar cases have occurred outside the United States.

Reference

1. MMWR 28:358, 1979

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

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

DISEASE	31st WEEK ENDING		MEDIAN	CUMULATIVE, FIRST 31 WEEKS		
	August 4, 1979	August 5, 1978*	1974-1978**	August 4, 1979	August 5, 1978*	MEDIAN 1974-1978**
Aseptic meningitis	224	206	115	2,405	1,984	1,522
Brucellosis	7	3	4	84	102	124
Chickenpox	505	591	417	169,189	122,257	122,257
Diphtheria	1	1	1	62	49	121
Encephalitis: Primary (arthropod-borne & unspec.)	31	34	34	374	433	443
Post-infectious	4	2	6	149	132	166
Hepatitis, Viral: Type B	302	268	268	8,376	8,979	8,850
Type A	542	486	588	17,151	16,972	20,658
Type unspecified	218	142	141	6,253	4,782	4,985
Malaria	15	21	14	376	414	252
Measles (rubeola)	143	195	195	11,462	22,845	22,845
Meningococcal infections: Total	30	36	20	1,765	1,594	1,050
Civilian	30	36	20	1,756	1,572	1,034
Military	–	–	–	9	22	21
Mumps	110	206	227	11,014	12,916	31,759
Pertussis	52	35	35	771	1,192	800
Rubella (German measles)	62	88	87	10,304	16,109	14,456
Tetanus	1	–	1	36	45	45
Tuberculosis	629	563	670	16,862	17,307	18,184
Tularemia	10	2	2	106	67	82
Typhoid fever	11	14	7	266	297	224
Typhus fever, tick-borne (Rky. Mt. spotted)	45	50	53	583	614	517
Venereal diseases:						
Gonorrhea: Civilian	20,294	23,625	21,386	574,173	574,305	574,305
Military	509	690	607	15,950	15,451	16,141
Syphilis, primary & secondary: Civilian	424	481	440	14,077	12,324	12,324
Military	5	6	6	176	175	182
Rabies in animals	100	70	60	2,831	1,859	1,752

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1979		CUM. 1979
Anthrax	–	Poliomyelitis: Total	23
Botulism †	13	Paralytic † (Mass. 1)	20
Congenital rubella syndrome	33	Psittacosis (Calif. 1)	68
Leprosy (Ill. 1, Tex. 1, Hawaii 3)	103	Rabies in man †	2
Leptospirosis	21	Trichinosis (Md. 2)	78
Plague	9	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	30

*Delayed reports received for calendar year 1978 are used to update last year's weekly and cumulative totals.

**Medians for gonorrhea and syphilis are based on data for 1976-1978.

†The following delayed reports will be reflected in next week's cumulative totals: Botulism: Del. +1; Polio, para.: Pa. −1, Ohio +1 (1978), N.C. −1 (1979) +1 (1978); Rabies in man: W. Va. −1 (1979) +1 (1978).

TABLE III. Cases of specified notifiable diseases, United States, weeks ending August 4, 1979, and August 5, 1978 (31st week)

REPORTING AREA	ASEPTIC MENINGITIS	BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
						Primary		Post-infectious	B	A	Unspecified		
	1979	1979	1979	1979	CUM. 1979	1979	1978*	1979	1979	1979	1979	1979	CUM. 1979
UNITED STATES	224	7	505	1	62	31	34	4	302	542	218	15	376
NEW ENGLAND	18	1	82	–	–	2	–	1	4	8	9	–	22
Maine	–	–	5	–	–	–	–	–	–	–	–	–	1
N.H.†	–	–	2	–	–	–	–	–	–	1	1	–	–
Vt.	–	–	4	–	–	–	–	–	–	–	–	–	–
Mass.	2	–	34	–	–	–	–	–	1	1	8	–	4
R.I.	14	–	10	–	–	–	–	–	1	3	–	–	6
Conn.	2	1	27	–	–	2	–	1	2	3	–	–	11
MID. ATLANTIC	36	–	76	–	–	3	5	–	34	29	18	3	48
Upstate N.Y.	3	–	47	–	–	–	4	–	9	7	4	–	9
N.Y. City	6	–	25	–	–	–	–	–	11	3	4	–	25
N.J.†	23	–	NN	–	–	–	–	–	14	19	10	2	6
Pa.†	4	–	4	–	–	3	1	–	–	–	–	1	8
E.N. CENTRAL	14	–	150	–	2	3	14	–	27	72	8	–	27
Ohio†	–	–	24	–	–	–	9	–	8	27	–	–	6
Ind.	4	–	23	–	1	3	1	–	2	10	3	–	1
Ill.	–	–	44	–	–	–	–	–	4	18	1	–	10
Mich.	8	–	9	–	–	–	3	–	6	13	3	–	8
Wis.†	2	–	50	–	1	–	1	–	7	4	1	–	2
W.N. CENTRAL	9	2	47	–	1	7	3	–	24	41	12	–	12
Minn.	–	–	–	–	–	–	2	–	2	15	–	–	3
Iowa	3	–	22	–	–	7	1	–	1	2	2	–	2
Mo.	3	1	1	–	1	–	–	–	18	16	6	–	3
N. Dak.	–	–	1	–	–	–	–	–	1	–	–	–	–
S. Dak.	–	–	–	–	–	–	–	–	–	4	–	–	–
Nebr.	–	–	22	–	–	–	–	–	2	3	–	–	2
Kans.	3	1	1	–	–	–	–	–	–	1	4	–	2
S. ATLANTIC	21	3	51	1	1	–	4	2	65	59	27	2	50
Del.†	–	–	3	–	–	–	–	–	1	–	–	–	1
Md.	–	–	9	–	–	–	–	–	5	8	1	–	8
D.C.	–	–	–	–	–	–	–	–	–	–	–	–	5
Va.†	5	–	4	1	1	–	1	1	23	13	7	–	16
W. Va.	–	–	7	–	–	–	1	–	2	7	–	–	2
N.C.	6	–	NN	–	–	–	1	–	14	6	3	–	3
S.C.†	1	–	–	–	–	–	–	–	5	2	2	–	1
Ga.†	–	3	2	–	–	–	–	–	6	3	–	–	2
Fla.†	9	–	26	–	–	–	1	1	9	20	14	2	12
E.S. CENTRAL	21	–	6	–	–	3	1	–	13	23	–	1	7
Ky.	1	–	5	–	–	–	–	–	1	4	–	–	–
Tenn.	4	–	NN	–	–	–	–	–	10	6	–	–	–
Ala.	15	–	1	–	–	3	1	–	1	5	–	1	3
Miss.	1	–	–	–	–	–	–	–	1	8	–	–	4
W.S. CENTRAL	32	1	27	–	–	7	2	1	21	87	46	–	22
Ark.	1	–	–	–	–	–	–	–	–	6	3	–	–
La.	4	–	NN	–	–	2	2	–	4	4	5	–	2
Okla.	5	1	–	–	–	1	–	–	5	9	9	–	3
Tex.	22	–	27	–	–	4	–	1	12	68	29	–	17
MOUNTAIN	31	–	25	–	1	2	–	–	12	103	51	–	11
Mont.	2	–	13	–	–	–	–	–	–	5	–	–	1
Idaho	–	–	–	–	–	–	–	–	–	2	–	–	–
Wyo.	1	–	–	–	–	1	–	–	–	–	2	–	1
Colo.	23	–	11	–	–	1	–	–	7	11	6	–	5
N. Mex.	4	–	–	–	–	–	–	–	3	21	–	–	–
Ariz.	–	–	NN	–	1	–	–	–	2	52	38	–	4
Utah	–	–	–	–	–	–	–	–	–	5	4	–	–
Nev.	1	–	1	–	–	–	–	–	–	7	1	–	–
PACIFIC	42	–	41	–	57	4	5	–	102	120	47	9	177
Wash.	1	–	21	–	55	1	–	–	1	21	3	2	9
Oreg.	5	–	–	–	–	–	–	–	3	16	2	1	9
Calif.†	33	–	–	–	2	3	4	–	92	79	41	6	157
Alaska	3	–	6	–	–	–	1	–	1	1	–	–	–
Hawaii	–	–	14	–	–	–	–	–	5	3	1	–	2
Guam	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–
P.R.†	–	–	35	–	–	–	–	–	3	1	8	–	1
V.I.	–	–	–	–	–	–	–	–	–	–	–	–	–
Pac. Trust Terr.	NA	NA	NA	NA	–	NA	–	–	NA	NA	NA	NA	–

NN: Not notifiable. NA: Not available.

*Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: Asep. meng.: Ohio –2, Fla. +10; Chickenpox: Wis. +1, Fla. +216, Calif. +8, P.R. +1; Enceph., post: Fla. +3; Hep. B: N.J. –2, Pa. +13, Ga. +13, Fla. +15; Hep. A: N.H. +1, N.J. –2, Pa. +8, S.C. +2, Ga. +22, Fla. +59; Hep. unsp: N.J. +3, Pa. +4, Del. +1, Va. –1, Fla. +31.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending August 4, 1979, and August 5, 1978 (31st week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1979	CUM. 1979	CUM. 1978*	1979	CUM. 1979	CUM. 1978*	1979	CUM. 1979	1979	1979	CUM. 1979	CUM. 1979
UNITED STATES	143	11,462	22,845	30	1,765	1,594	110	11,014	52	62	10,304	36
NEW ENGLAND	3	292	1,941	4	89	93	2	373	1	9	1,412	4
Maine†	–	17	1,309	–	5	5	–	131	–	–	61	–
N.H.†	2	39	45	–	9	7	–	4	–	–	119	–
Vt.	–	116	25	1	6	2	–	7	–	–	396	–
Mass.	–	13	236	1	25	40	2	33	–	5	496	3
R.I.	–	103	7	1	8	15	–	25	1	–	88	–
Conn.	1	4	319	1	36	24	–	173	–	4	252	1
MID. ATLANTIC	17	1,419	2,092	3	257	262	15	1,049	1	–	1,856	7
Upstate N.Y.	4	631	1,341	–	90	82	3	153	–	–	1,025	2
N.Y. City	13	692	329	1	64	63	4	109	–	–	250	3
N.J.	–	53	73	2	63	51	2	517	–	–	318	1
Pa.†	–	43	349	–	40	66	6	270	1	–	263	1
E.N. CENTRAL	53	3,023	10,240	4	169	172	39	4,679	24	15	2,415	3
Ohio†	–	243	468	–	63	53	16	1,686	22	5	133	2
Ind.	2	194	175	–	38	33	–	259	1	1	702	–
Ill.	38	1,350	1,112	3	7	28	6	835	–	2	170	–
Mich.	13	797	7,058	1	47	47	3	873	1	3	1,180	1
Wis.	–	439	1,427	–	14	11	14	1,026	–	4	230	–
W.N. CENTRAL	39	1,539	380	–	50	58	4	638	1	1	402	–
Minn.	37	1,031	36	–	10	12	1	9	–	–	35	–
Iowa	–	16	54	–	9	9	2	225	–	–	51	–
Mo.	–	413	9	–	23	23	1	189	1	–	41	–
N. Dak.	2	18	191	–	1	3	–	2	–	–	8	–
S. Dak.	–	1	–	–	2	2	–	5	–	–	4	–
Nebr.†	–	–	5	–	–	–	–	7	–	–	179	–
Kans.	–	60	85	–	5	9	–	201	–	1	84	–
S. ATLANTIC	12	1,652	4,838	8	434	381	24	492	10	10	1,168	7
Del.	–	1	5	–	3	1	1	33	–	–	4	–
Md.	–	13	47	2	40	21	13	137	1	–	28	–
D.C.	–	1	47	–	2	1	–	1	–	–	1	–
Va.	–	250	2,795	2	64	50	2	80	–	2	194	1
W. Va.†	1	51	1,022	–	8	9	–	87	–	–	101	–
N.C.	–	108	116	2	63	78	4	62	4	6	520	3
S.C.	2	151	194	–	54	23	1	3	–	–	59	–
Ga.†	4	361	17	2	66	46	–	3	4	1	9	–
Fla.†	5	716	595	–	134	152	3	86	1	1	252	3
E.S. CENTRAL	3	183	1,379	4	135	132	8	1,304	1	–	257	6
Ky.	–	37	115	2	29	27	6	1,077	1	–	64	–
Tenn.	–	48	930	–	38	32	2	93	–	–	82	–
Ala.	3	79	101	1	33	40	–	20	–	–	41	4
Miss.	–	19	233	1	35	33	–	114	–	–	70	2
W.S. CENTRAL	–	893	963	3	303	236	5	1,595	9	4	210	9
Ark.	–	7	14	1	28	20	–	755	2	–	6	2
La.	–	245	320	1	123	88	–	37	2	–	26	2
Okla.	–	22	12	–	23	16	–	–	2	–	22	–
Tex.	–	619	617	1	129	112	5	803	3	4	156	5
MOUNTAIN	4	296	245	1	69	35	2	249	5	2	498	–
Mont.	–	57	103	–	6	2	–	10	–	–	65	–
Idaho	–	18	1	–	5	3	–	8	–	–	199	–
Wyo.	–	36	–	–	1	–	–	–	–	–	–	–
Colo.	2	56	30	1	5	2	1	70	2	–	64	–
N. Mex.†	–	31	–	–	4	7	–	12	–	1	10	–
Ariz.	2	72	50	–	31	13	1	48	1	–	126	–
Utah	–	15	44	–	8	4	–	90	2	–	32	–
Nev.	–	11	17	–	9	4	–	11	–	1	2	–
PACIFIC	12	2,165	767	3	259	225	11	635	–	21	2,086	–
Wash.†	–	1,119	140	–	43	39	2	184	–	1	170	–
Oreg.	–	63	142	–	15	22	1	65	–	2	90	–
Calif.	11	901	478	3	188	155	4	290	–	18	1,806	–
Alaska	1	18	–	–	5	6	–	9	–	–	2	–
Hawaii	–	64	7	–	8	3	4	87	–	–	18	–
Guam	NA	3	25	–	1	–	NA	8	NA	NA	3	–
P.R.†	5	316	205	–	2	3	2	507	–	–	33	6
V.I.	–	4	6	–	3	1	–	15	–	–	–	–
Pac. Trust Terr.	NA	6	560	–	1	2	NA	26	NA	NA	1	–

NA: Not available.

*Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: Measles: N.H. +1, Ohio +2, Ga. +2, Fla. +26, N.Mex. +4; Men. inf.: Pa. −1, Ga. +1, Fla. +7, Wash. −1; Mumps: Maine +1, W.Va. +5, Fla. +13, Wash. +1, P.R. +1; Pertussis: Ga. +1, Fla. +5; Rubella: Nebr. +20, W.Va. +1, Fla. +17.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending August 4, 1979, and August 5, 1978 (31st week)

REPORTING AREA	TUBERCULOSIS		TULAREMIA	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)						RABIES (in Animals)
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1979	CUM. 1979	CUM. 1979	1979	CUM. 1979	1979	CUM. 1979	1979	CUM. 1979	CUM. 1978*	1979	CUM. 1979	CUM. 1978*	CUM. 1979
UNITED STATES	629	16,862	106	11	266	45	583	20,294	574,173	574,305	424	14,077	12,324	2,831
NEW ENGLAND	19	456	1	–	17	–	6	481	14,502	14,837	10	269	350	33
Maine	1	34	–	–	1	–	–	36	1,005	1,124	–	7	7	21
N.H.	–	8	–	–	–	–	–	16	534	684	2	14	5	3
Vt.	–	21	–	–	–	–	–	15	346	338	–	1	3	–
Mass.	12	248	1	–	10	–	3	183	5,752	6,560	6	158	215	8
R.I.	3	41	–	–	2	–	–	48	1,202	1,078	–	9	16	–
Conn.	3	104	–	–	4	–	3	183	5,663	5,053	2	80	104	1
MID. ATLANTIC	64	2,651	1	1	42	2	22	1,968	62,037	61,273	68	2,179	1,644	28
Upstate N.Y.	9	472	1	–	7	–	17	437	10,143	10,282	3	155	126	24
N.Y. City	21	976	–	1	18	–	1	772	24,363	23,868	43	1,480	1,157	–
N.J.	18	487	–	–	11	2	4	200	11,338	11,265	7	288	182	4
Pa.	16	716	–	–	6	–	–	559	16,193	15,858	15	256	179	–
E.N. CENTRAL	105	2,456	–	–	21	2	30	2,438	87,801	86,345	75	1,913	1,350	246
Ohio†	14	446	–	–	3	–	9	611	24,244	22,324	20	359	249	18
Ind.	11	324	–	–	–	–	2	263	8,045	8,857	2	128	85	52
Ill.	48	963	–	–	6	1	15	860	26,709	27,443	26	1,083	846	121
Mich.†	22	620	–	–	10	1	3	704	20,935	19,896	27	289	127	5
Wis.	10	103	–	–	2	–	1	NA	7,868	7,825	NA	54	43	50
W.N. CENTRAL	17	566	17	–	10	2	32	1,317	28,031	29,044	6	185	274	559
Minn.†	–	85	–	–	2	–	–	243	4,715	5,047	1	49	119	105
Iowa	–	47	–	–	2	–	13	237	3,431	3,236	1	25	27	109
Mo.	8	309	14	–	4	1	11	522	12,113	12,467	4	82	74	177
N. Dak.	–	14	–	–	–	–	–	10	479	535	–	2	2	39
S. Dak.†	1	37	2	–	–	–	–	40	940	1,033	–	1	2	50
Nebr.	–	3	1	–	1	1	1	59	1,950	2,165	–	2	8	–
Kans.	8	71	–	–	1	–	7	206	4,403	4,561	–	24	42	79
S. ATLANTIC	154	3,859	5	–	29	29	322	5,279	139,979	140,190	106	3,411	3,246	372
Del.†	–	34	–	–	–	–	3	106	2,271	1,841	1	18	6	–
Md.	28	513	–	–	7	–	31	572	17,039	17,827	3	222	250	9
D.C.	8	202	–	–	1	–	2	303	8,975	8,974	17	268	248	–
Va.	23	441	–	–	4	1	60	608	13,382	13,253	8	296	266	9
W. Va.	6	148	–	–	2	–	8	84	1,953	1,978	–	41	9	–
N.C.†	25	596	–	–	–	14	121	773	19,951	19,993	7	281	318	5
S.C.†	6	290	1	–	3	5	50	672	13,179	13,741	9	167	166	117
Ga.†	24	594	4	–	–	9	46	936	26,768	26,837	35	941	798	204
Fla.†	34	1,041	–	–	12	–	1	1,225	36,461	35,746	26	1,177	1,185	28
E.S. CENTRAL	66	1,572	12	–	12	6	84	2,055	49,714	49,569	22	930	624	200
Ky.	10	401	2	–	5	–	10	218	6,549	6,127	5	101	83	85
Tenn.	29	453	10	–	2	4	53	1,007	17,878	18,326	–	389	211	70
Ala.	18	358	–	–	5	–	13	466	14,681	14,211	5	173	101	44
Miss.	9	360	–	–	–	2	8	364	10,606	10,905	12	267	229	1
W.S. CENTRAL	80	2,039	41	9	41	3	73	2,808	74,458	78,743	81	2,539	1,937	1,121
Ark.	22	175	26	–	1	2	22	216	5,816	5,992	1	92	47	237
La.	9	437	4	–	3	–	1	490	13,169	12,877	29	596	401	18
Okla.	10	220	6	–	–	–	38	215	6,939	7,430	1	55	58	180
Tex.	39	1,207	5	9	37	1	12	1,887	48,534	52,444	50	1,796	1,431	686
MOUNTAIN	14	502	25	–	21	–	12	806	22,319	21,470	4	274	247	67
Mont.	1	22	7	–	–	–	3	32	1,048	1,284	–	6	7	5
Idaho	–	6	–	–	1	–	2	80	965	796	–	19	7	3
Wyo.†	–	3	–	–	1	–	–	60	591	508	–	5	5	–
Colo.	–	69	10	–	12	–	4	222	5,999	5,953	2	60	68	17
N. Mex.†	–	89	1	–	2	–	1	48	2,845	3,136	–	49	60	26
Ariz.	11	255	–	–	3	–	–	213	6,171	5,496	–	84	58	15
Utah	1	19	5	–	–	–	–	71	1,166	1,152	–	3	11	1
Nev.	1	39	2	–	2	–	2	80	3,534	3,145	2	48	31	–
PACIFIC	110	2,761	4	1	73	1	2	3,142	95,332	92,834	52	2,377	2,652	205
Wash.†	10	157	3	–	2	–	–	213	8,206	7,306	NA	118	129	–
Oreg.	6	121	–	–	1	–	–	286	6,173	6,417	2	107	88	3
Calif.	90	2,243	1	1	62	1	2	2,470	76,127	74,451	47	2,071	2,402	200
Alaska†	–	52	–	–	1	–	–	110	3,088	2,946	1	17	7	2
Hawaii	4	188	–	–	7	–	–	63	1,738	1,714	2	64	26	–
Guam	NA	36	–	NA	–	NA	–	NA	50	74	NA	–	–	–
P.R.	10	189	–	–	3	–	–	30	1,187	1,351	9	293	263	15
V.I.	–	3	–	–	1	–	–	6	105	133	–	6	12	–
Pac. Trust Terr.	NA	18	–	NA	–	NA	–	NA	242	291	NA	1	–	–

NA: Not available.
*Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.
†The following delayed reports will be reflected in next week's cumulative totals: TB: Ohio +1, Mich. –2, Del. –2, N.C. –1, S.C. +1, Fla. –2, Wyo. +1; Tularemia: N.Mex. +1; T.fever: Fla. +1; RMSF: Minn. +2, Ga. +6, Fla. +1; GC: Del. +20 civ., Wash. +101 mil.; Syphilis: N.Mex. +3, Wash. +15, Alaska –1; An. rabies: S.Dak. +16, S.C. +3, Fla. +12.

TABLE IV. Deaths in 121 U.S. cities,* week ending August 4, 1979 (31st week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	<1	
NEW ENGLAND	613	388	149	36	25	37
Boston, Mass.	168	88	52	15	10	8
Bridgeport, Conn.	40	24	8	3	4	2
Cambridge, Mass.	20	16	2	2	–	4
Fall River, Mass.	27	20	5	1	–	–
Hartford, Conn.	45	31	7	2	1	–
Lowell, Mass.	16	11	2	1	1	1
Lynn, Mass.	23	17	5	–	–	1
New Bedford, Mass.	17	9	7	1	–	–
New Haven, Conn.	52	26	17	6	2	2
Providence, R.I.	65	45	14	2	2	4
Somerville, Mass.	5	4	1	–	–	–
Springfield, Mass.	46	26	13	1	5	4
Waterbury, Conn.	39	32	5	2	–	6
Worcester, Mass.	50	39	11	–	–	5
MID. ATLANTIC	2,366	1,536	533	149	81	93
Albany, N.Y.	37	27	8	–	1	–
Allentown, Pa.	20	12	8	–	–	–
Buffalo, N.Y.	140	89	39	4	4	13
Camden, N.J.	30	20	8	1	–	–
Elizabeth, N.J.	22	14	5	2	1	1
Erie, Pa.†	30	18	10	2	–	2
Jersey City, N.J.	55	44	9	1	–	–
Newark, N.J.	68	40	14	7	3	1
N.Y. City, N.Y.	1,360	878	292	104	45	46
Paterson, N.J.	17	9	6	1	1	3
Philadelphia, Pa.†	191	116	51	8	13	4
Pittsburgh, Pa.†	59	38	17	2	2	3
Reading, Pa.	29	19	7	1	–	3
Rochester, N.Y.	101	63	23	7	4	9
Schenectady, N.Y.	25	20	4	–	–	–
Scranton, Pa.†	15	9	3	2	–	1
Syracuse, N.Y.	71	47	15	4	2	2
Trenton, N.J.	33	20	11	1	1	1
Utica, N.Y.	24	21	1	1	–	1
Yonkers, N.Y.	39	32	2	1	4	3
E.N. CENTRAL	2,131	1,257	534	153	105	39
Akron, Ohio	65	42	14	3	4	–
Canton, Ohio	34	20	9	4	–	1
Chicago, Ill.	504	276	135	40	35	7
Cincinnati, Ohio	168	95	50	14	1	–
Cleveland, Ohio	184	101	52	16	7	3
Columbus, Ohio	137	94	21	9	7	3
Dayton, Ohio	73	42	20	4	3	2
Detroit, Mich.	247	138	72	17	15	6
Evansville, Ind.	39	24	8	5	2	1
Fort Wayne, Ind.	44	26	7	3	4	1
Gary, Ind.	17	9	3	2	–	–
Grand Rapids, Mich.	53	32	12	2	4	6
Indianapolis, Ind.	163	97	40	10	8	2
Madison, Wis.	29	17	9	2	1	1
Milwaukee, Wis.	112	82	24	3	3	1
Peoria, Ill.	39	30	5	3	–	2
Rockford, Ill.	39	18	9	6	2	–
South Bend, Ind.	45	28	11	2	3	–
Toledo, Ohio	90	57	22	5	1	2
Youngstown, Ohio	49	29	11	3	5	1
W.N. CENTRAL	664	435	142	40	18	8
Des Moines, Iowa	52	40	6	3	2	–
Duluth, Minn.	22	13	8	1	–	–
Kansas City, Kans.	38	21	7	6	2	–
Kansas City, Mo.	112	70	28	3	3	1
Lincoln, Nebr.	36	28	5	–	1	–
Minneapolis, Minn.	88	55	17	6	3	–
Omaha, Nebr.	81	53	11	7	6	1
St. Louis, Mo.	131	82	34	9	1	2
St. Paul, Minn.	65	52	12	1	–	2
Wichita, Kans.	39	21	14	4	–	2

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P&I** TOTAL
	ALL AGES	≥65	45-64	25-44	<1	
S. ATLANTIC	977	567	269	70	39	44
Atlanta, Ga.	119	52	45	16	2	4
Baltimore, Md.	115	65	28	9	7	2
Charlotte, N.C.	52	31	10	4	5	4
Jacksonville, Fla.	101	53	32	6	7	3
Miami, Fla.	131	81	35	10	3	6
Norfolk, Va.	56	34	14	4	2	4
Richmond, Va.	77	45	25	2	3	4
Savannah, Ga.	28	16	11	–	–	2
St. Petersburg, Fla.	92	73	12	3	2	4
Tampa, Fla.	60	34	15	4	3	8
Washington, D.C.	105	61	34	6	4	3
Wilmington, Del.	41	22	8	6	1	–
E.S. CENTRAL	653	364	179	46	35	24
Birmingham, Ala.	103	59	21	6	10	–
Chattanooga, Tenn.	70	40	24	4	2	8
Knoxville, Tenn.	36	18	10	6	–	–
Louisville, Ky.	93	52	28	4	7	7
Memphis, Tenn.	153	87	43	13	2	3
Mobile, Ala.	45	25	7	3	9	1
Montgomery, Ala.	48	29	11	3	3	1
Nashville, Tenn.	105	54	35	7	2	4
W.S. CENTRAL	1,248	684	355	101	51	26
Austin, Tex.	62	45	7	4	2	2
Baton Rouge, La.	36	24	8	3	1	–
Corpus Christi, Tex.	43	22	8	5	2	2
Dallas, Tex.	176	99	46	18	5	1
El Paso, Tex.	59	26	20	3	7	3
Fort Worth, Tex.	92	50	31	4	1	4
Houston, Tex.	314	157	104	27	11	4
Little Rock, Ark.	53	26	13	7	7	–
New Orleans, La.	131	65	46	11	6	–
San Antonio, Tex.	156	98	39	9	4	3
Shreveport, La.	50	27	11	4	4	2
Tulsa, Okla.	76	45	22	6	1	5
MOUNTAIN	488	264	133	28	31	17
Albuquerque, N. Mex.	68	38	13	6	4	3
Colo. Springs, Colo.	23	16	4	2	–	–
Denver, Colo.	97	51	27	5	11	4
Las Vegas, Nev.	63	28	25	7	1	2
Ogden, Utah	22	17	3	–	2	1
Phoenix, Ariz.	94	45	35	4	5	3
Pueblo, Colo.	15	8	3	–	–	2
Salt Lake City, Utah	44	20	12	–	7	2
Tucson, Ariz.	62	41	11	4	1	–
PACIFIC	1,620	996	369	125	44	39
Berkeley, Calif.	15	15	–	–	–	–
Fresno, Calif.	58	43	4	5	3	3
Glendale, Calif.	20	14	3	–	2	1
Honolulu, Hawaii	67	39	20	5	1	2
Long Beach, Calif.	96	61	28	4	–	4
Los Angeles, Calif.	472	264	103	58	9	14
Oakland, Calif.	30	14	11	–	1	–
Pasadena, Calif.	30	21	4	1	1	–
Portland, Oreg.	132	80	34	5	7	–
Sacramento, Calif.	84	57	19	3	3	4
San Diego, Calif.	112	68	28	8	4	1
San Francisco, Calif.	126	81	31	7	3	4
San Jose, Calif.	151	91	38	9	3	2
Seattle, Wash.	138	88	30	15	3	2
Spokane, Wash.	44	28	9	3	2	1
Tacoma, Wash.	45	32	7	2	2	1
TOTAL	10,760	6,491	2,663	748	429	327

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

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

Parainfluenza Virus Isolations — Alabama

Investigations of outbreaks of influenza-like illness in Alabama during the first 2 months of 1979 indicated that some of the illnesses were associated with infection by parainfluenza, type 3 virus. The illnesses for the most part were confined to school and university students and resulted in a marked increase in absenteeism.

In the period January 11-February 16, 151 oropharyngeal, nasopharyngeal, or throat gargle specimens from 123 patients with an influenza-like illness were forwarded for virus isolation to the Public Health Laboratory, Virology Section, in Birmingham, Alabama, or to CDC. Viruses were recovered from 36 patients and included parainfluenza, type 3; influenza A/Brazil/78; parainfluenza, type 2; and adenovirus, type 4 (Table 3). Parainfluenza, type 3 isolates were from patients widely distributed throughout the state, whereas the influenza A/Brazil/78 isolations were confined to patients in 2 counties. Six of the isolates—3 influenza A/Brazil/78; 2 parainfluenza, type 3; and 1 adenovirus, type 4—were from a group of 23 students from 1 school that had had approximately 30% absenteeism. Seven other isolates—including 5 parainfluenza, type 3, and 2 influenza A/Brazil/78 viruses—were associated with an influenza-like outbreak among recruits at a U.S. Army training facility in Alabama.

Symptoms of illness associated with parainfluenza, type 3 infections were reported to the laboratory for 27 of the 123 patients for whom specimens were submitted. These symptoms included fever (in 14 cases), upper respiratory infection (8), sore throat (7), neurological symptoms (6), pneumonia (5), and gastrointestinal illness (4). The patients, 10 males and 17 females, ranged in age from 4 days old to 70 years; the majority (56%) were between 10 and 23 years old. In 6 instances, the virus was recovered from infants, ages 3 months or less. The age of 2 patients was not known. One fatality was reported, a female infant, age 2 months.

Convalescent serum was obtained from 1 person from whom parainfluenza, type 3 virus had been isolated, and the neutralization test performed was compatible with the virus isolation (titer of 1:32).

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Editorial Note: Although parainfluenza infections of young children are usually associated with symptoms of croup, such symptoms were not reported in this outbreak—a finding that demonstrates the value of obtaining viral cultures to establish the etiology of febrile acute respiratory illness. Parainfluenza type 3 is an endemic virus that can produce disease ranging from asymptomatic infection to pneumonia. Types 1 and 2 parainfluenza occur sporadically in sharper outbreaks (*1*).

As would be expected, the majority of isolates in this outbreak came from the population less than 23 years old. Isolates were obtained, however, from young adults and from

TABLE 3. Virus isolation from specimens submitted on 123 patients with influenza-like illness, Alabama, January 11-February 16, 1979

Virus	Patients	Percent
Parainfluenza, type 3	27	22.0
Influenza A/Brazil/78	7	5.7
Parainfluenza, type 2	1	0.8
Adenovirus, type 4	1	0.8
TOTAL	36	29.3

Parainfluenza – Continued

2 elderly persons age 64 and 70. Parainfluenza reinfection with illness in persons over 20 years of age has been recognized (*2,3*), and sharp outbreaks of illness occasionally associated with increased mortality have been described in elderly nursing-home residents (*4-6*). The possible availability in the future of an effective vaccine for parainfluenza infections underscores the importance of studying the epidemiology of these illnesses, particularly in the elderly, among whom their impact may be unappreciated.

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International Notes

Malaria Surveillance – Federal Republic of Germany

Until 1970, the increase in imported malaria cases in the Federal Republic of Germany paralleled the trend of increased air travel among tourists. Since then, however—and especially since 1975—there has been a disproportionate increase in this disease, reaching a peak in 1977 of 318 cases (Table 4).

During the 5-year period 1973-1977, the increase was due not only to tourists but also to malaria-infected foreign workers and refugees. Tourists still continue to account for the largest number of cases—55% of all cases in the 5-year period 1973-1977. Professionals accounted for 34%, and immigrants for 11% of cases. Seventy seamen and employees of airlines acquired the disease during this period.

Most of the reported infections originated in West Africa (Nigeria, 64; Senegal, 42; Ghana, 41; the United Republic of Cameroon, 32; Ivory Coast, 20; Togo, 18; origin unknown, 32) and from East Africa (Kenya, 159; the United Republic of Tanzania, 22; origin unknown, 13). During the same period, 82 cases had their origin in India, 37 in Pakistan, and 14 in Indonesia. Eighty-four cases were imported from Turkey.

During this 5-year period, *Plasmodium vivax* and *P. falciparum* infections were evenly distributed (42% and 43%, respectively). Forty-one deaths due to malaria were reported. Thirty-three of these fatalities were tourists.

Among the people who took chloroquine for prophylaxis, no clinical attacks of malaria were reported. Some of the patients had taken incomplete prophylaxis; all others had not taken any antimalarial agents.

Reported by the World Health Organization in the Weekly Epidemiological Record 54:223-225, 1979.

TABLE 4. Imported malaria cases, Federal Republic of Germany, 1963-1977

Year	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Cases	28	20	27	40	49	54	59	54	88	114	135	100	162	203	318
Relapses	8	20	21	12	12	14	8	11	12	20	11	5	13	15	19
Deaths	1	1	0	1	4	5	7	3	2	5	14	3	6	8	10

International Notes

Yellow Fever Outbreak — Colombia

Local health authorities have reported an outbreak of yellow fever in the area of Valledupar, Colombia, a city located in the Department of Cesar, about 100 miles east of Barranquilla near the Northwest border of Venezuela. Fifteen deaths have been recorded, and plans to inoculate 160,000 residents of the area are underway. Although it has not been determined that *Aedes aegypti*, the vector for urban yellow fever, is involved in the outbreak, *A. aegypti* is known to be prevalent in the Valledupar area.

Reported by the Pan American Health Organization; U.S. Department of State; Viral Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Cesar Department, Colombia, should be considered an area infected with yellow fever, and travelers to that department should be vaccinated against yellow fever.

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The editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials. Send reports to: Center for Disease Control, Attn: Editor, Morbidity and Mortality Weekly Report, Atlanta, Georgia 30333.

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