

CENTER FOR DISEASE CONTROL

Morbidity and Mortality



Vol. 25, No. 1

WEEKLY REPORT

For Week Ending January 10, 1976

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

DATE OF RELEASE: JANUARY 16, 1976 - ATLANTA, GEORGIA 30333

EPIDEMIOLOGIC NOTES AND REPORTS
FOLLOW-UP ON INCREASED LEAD ABSORPTION - Idaho

In August and October 1974, studies to evaluate the prevalence, sources, and health consequences of increased lead absorption* were conducted among a statistical sample of children living within 20 miles of a primary lead smelter near Kellogg, Idaho. The investigations were begun after 2 children, siblings ages 2 and 3, were hospitalized there with abdominal pain, diarrhea, otitis media, "lead lines" in their long bones, and elevated blood levels (2). While no confirmed

*Increased absorption of lead was considered present in a child with a blood lead level of 40-79µg/100ml; lead intoxication was considered to exist when a child had a level ≥80/100ml (1).

CONTENTS	
Epidemiologic Notes and Reports	30333
Follow-Up on Increased Lead Absorption - Idaho	1
Follow-Up on Dengue - Puerto Rico	7
Current Trends	
Shortage of Zoster Immune Globulin	8

cases of symptomatic lead intoxication were found, 389 (40.6%) of 958 children surveyed in 6 areas surrounding the smelter had blood lead levels of 40-79µg/100ml, and an additional 41 had levels ≥80µg/100ml, the highest (in the area closest to the smelter) being 164µg/100ml (Table 1). Within 1

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

DISEASE	1st WEEK ENDING		MEDIAN 1971-1975	CUMULATIVE, FIRST 1st WEEK		
	January 10, 1976	January 4, 1975		1976	1975	MEDIAN 1971-1975
Aseptic meningitis	45	52	44	45	52	44
Brucellosis	1	2	1	1	2	2
Chickenpox	3,188	2,143	---	3,188	2,143	---
Diphtheria	17	8	2	17	8	2
Encephalitis	Primary	14	11	24	14	11
	Post-Infectious	5	2	5	2	2
	Type B	220	160	156	220	160
Hepatitis, Viral	Type A	556	484	745	556	484
	Type unspecified	133	138	745	133	138
	Malaria	8	2	4	8	2
Measles (rubeola)	281	130	356	281	130	356
Meningococcal infections, total		18	24	31	18	24
	Civilian	31	18	24	31	18
	Military	---	---	1	---	---
Mumps	831	1,126	1,126	831	1,126	1,126
Pertussis	28	26	---	28	26	---
Rubella (German measles)	130	80	135	130	80	135
Tetanus	---	2	---	---	2	---
Tuberculosis	439	338	---	439	338	---
Tularemia	3	1	3	3	1	3
Typhoid fever	5	4	5	5	4	5
Typhus, tick-borne (Rky. Mt. spotted fever)	---	1	1	---	1	1
Veneral Diseases:						
Gonorrhea	Civilian	17,613	14,471	---	17,613	14,471
	Military	388	201	---	388	201
Syphilis, primary and secondary	Civilian	466	395	---	466	395
	Military	3	4	---	3	4
Rabies in animals	32	23	40	32	23	40

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	---	Poliomyelitis, total:	---
Botulism Wash. 2, Alaska 1	3	Paralytic:	---
Congenital rubella syndrome: Kansas 1, S.C. 1, La. 1	3	Psittacosis: Calif. 1	1
Leptosy: Calif. 1	1	Rabies in man:	---
Leptospirosis: *	---	Trichinosis: * Mass. 1, Conn. 1, Up. N.Y. 1, N.J. 1	4
Plague:	---	Typhus, murine: Texas 1	1

*Delayed reports: Leptospirosis: Ark. 4
Trichinosis: Iowa 51

LEAD ABSORPTION - Continued

mile of the smelter, 170 of 172 children (98.8%) had lead levels $\geq 40\mu\text{g}/100\text{ml}$; 1 (1.1%) of 89 children in a rural control area 45 miles distant had a lead level $\geq 40\mu\text{g}/100\text{ml}$.

To determine routes of lead intake, lead levels were measured in samples of soil, dust, pottery, and interior paint collected at each home surveyed and in air samples collected at 9 points in the study areas. Results indicated that lead levels in soil, dust, and air were all high close to the smelter and decreased with distance. Levels in paint were nearly identical in all areas. Pottery was used for food handling in only 5 (0.9%) of the 588 homes visited, and there was no dangerous lead release (3). Significant correlations were found between blood lead levels and exposure to lead in air (coefficient of correlation, $[r = 0.72]$), surface soil ($r = 0.59$), and interior dust ($r = 0.23$).

Seven (17.1%) of the 41 children with blood lead levels $\geq 80\mu\text{g}/100\text{ml}$ had hematocrits $\leq 33\%$, while 8 (2.1%) of 390 children with blood lead levels of $40\text{-}79\mu\text{g}/100\text{ml}$, and 8 (1.3%) of 616 with levels $\leq 40\mu\text{g}/100\text{ml}$ were anemic ($X^2 = 37.04$ for ≥ 80 vs. < 80 , $p < 0.00001$). Free erythrocyte protoporphyrin (FEP) levels increased logarithmically with blood lead levels.

To evaluate subclinical neurologic functioning, motor nerve conduction velocities (right peroneal nerve) were measured in blind fashion in 183 5-9 year-old children from the 6 areas near the smelter and in 39 from the control area (4). Data from 17 of these children (7 with blood lead levels $\geq 40\mu\text{g}/100\text{ml}$) were excluded from analysis because of pre-existing neurologic disease, and results from 3 were excluded because data were incomplete or unsatisfactory. The remaining 202 children were all apparently healthy, none had frankly pathologic conduction velocities, and all but 4 fell within 2 standard deviations of age-rated means. However, a statistically significant negative correlation was found in these 202 children between conduction velocity and blood lead level ($r = -0.38$, $t = -2.12$, $p < 0.02$ by 1-tailed t test). There was a similar correlation between conduction velocity and FEP ($r = -0.40$).[†] No significant relationships were noted in this group between conduction velocity and age, sex, or socioeconomic status.

Repeat blood testing in August 1975 by the State of Idaho, Department of Health and Welfare indicated that a significant reduction in lead levels had occurred since the preceding year; the mean blood lead level in 74 children living within 1 mile of the smelter who were tested in both years decreased from $63.5\mu\text{g}/100\text{ml}$ to $47.3\mu\text{g}/100\text{ml}$ ($p < 0.001$). No children were found in the repeat testing to have blood levels $\geq 80\mu\text{g}/100\text{ml}$; however, 108 (71%) of 153 children 1-10 years old living within 1 mile of the smelter and 210 (45%) of 471 children living from 1.0-2.5 miles, including several new residents in both areas, had lead levels $\geq 40\mu\text{g}/100\text{ml}$. FEP levels in 1975 among 69 children living within 1 mile of the smelter who were tested in both years averaged $293.1\mu\text{g}/100\text{ml}$ rbc. Extensive monitoring programs under the direction of the State of Idaho are underway and are designed to follow each child until his blood level falls below $40\mu\text{g}/100\text{ml}$.

(Reported by JT Ashley, MD, JA Bax, PhD, JA Mather, MD, State Epidemiologist, IH Von Lindern, MS, and AJ Yankel, MS, Idaho Dept of Health and Welfare; RG Feldman, MD, Dept of Neurology, Boston University School of Medicine, Boston; Toxicology Branch, Clinical Chemistry Div, Bur of Laboratories, and Environmental Hazards Activity, Cancer and Birth Defects Div, Bur of Epidemiology, CDC.)

References

1. Medical aspects of childhood lead poisoning. *Pediatrics* 48:464-468, 1971
2. *MMWR* 23(37):323, 1974
3. Klein M, Namer R, Harpur E, et al: Earthenware containers as a source of fatal lead poisoning: Case study and public health considerations. *New Engl J Med* 283:669-672, 1970
4. Feldman RG, Haddow J, Kopito L, et al: Altered peripheral nerve conduction velocity, chronic lead intoxication in children. *Am J Dis Child* 125:39-41, 1973

[†]Eight months after initial nerve conduction velocity measurements, all 6 children who tested below 45 m/sec were retested at the Department of Child Neurology, University of Washington School of Medicine. While the 6 children were found there to be within or above the normal range for their age, the procedures used in this repeat testing were not the same as those used in the original examinations.

Table 1
Distribution of Blood Lead Levels in Children 1-9 Years Old,
Shoshone County, Idaho, August 1974

Blood lead range ($\mu\text{g}/100\text{ml}$)	Distance in Miles from Smelter						
	Within 1 mile	1.00-2.50 miles	2.51-6.00 miles	6.01-15.00 miles	10.10 miles (side valley)	15.01-20.00 miles	Control area
<40	2 (1.2%)	48 (24.1%)	140 (73.3%)	128 (78.5%)	35 (89.8%)	175 (90.2%)	88 (98.9%)
40-79	132 (76.7%)	148 (74.4%)	51 (26.7%)	35 (21.5%)	4 (10.2%)	19 (9.8%)	1 (1.1%)
≥ 80	38 (22.1%)	3 (1.5%)	0	0	0	0	0
Total	172	199	191	163	39	194	89
Mean	68.1	49.1	34.7	33.4	30.6	28.9	21.9

Morbidity and Mortality Weekly Report

61026 3

**TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JANUARY 10, 1976 AND JANUARY 4, 1975 (1st WEEK)**

AREA	ASEPTIC MENINGITIS	BRUCellosIS	CHICKEN-POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod-borne and Unspecified		Post Infectious	Type B	Type A	Type Unspecified		
						1976	1975	1976	1976	1976	1976		
UNITED STATES	45	1	3,188	17	17	24	14	5	220	556	133	8	8
NEW ENGLAND	-	-	266	-	-	-	-	-	9	16	10	-	-
Maine *	-	-	4	-	-	-	-	-	2	1	-	-	-
New Hampshire *	-	-	64	-	-	-	-	-	1	-	-	-	-
Vermont	-	-	16	-	-	-	-	-	-	1	-	-	-
Massachusetts	-	-	66	-	-	-	-	-	-	2	9	-	-
Rhode Island	-	-	69	-	-	-	-	-	1	4	-	-	-
Connecticut	-	-	47	-	-	-	-	-	5	8	1	-	-
MIDDLE ATLANTIC	14	-	143	-	-	3	-	1	55	76	21	3	3
Upstate New York	2	-	5	-	-	1	-	-	8	25	6	1	1
New York City	5	-	47	-	-	-	-	-	18	32	-	2	2
New Jersey *	6	-	NN	-	-	-	-	-	24	14	13	-	-
Pennsylvania	1	-	91	-	-	2	-	1	5	5	2	-	-
EAST NORTH CENTRAL	4	-	1,261	-	-	9	2	1	17	109	8	-	-
Ohio *	-	-	254	-	-	7	-	1	1	50	-	-	-
Indiana	-	-	163	-	-	-	-	-	-	1	-	-	-
Illinois	-	-	109	-	-	-	-	-	11	14	4	-	-
Michigan *	4	-	303	-	-	-	2	-	3	33	4	-	-
Wisconsin	-	-	432	-	-	2	-	-	2	11	-	-	-
WEST NORTH CENTRAL	4	-	737	-	-	1	1	-	17	33	18	-	-
Minnesota	-	-	44	-	-	1	-	-	1	2	-	-	-
Iowa	3	-	517	-	-	-	1	-	2	1	-	-	-
Missouri *	-	-	-	-	-	-	-	-	6	3	12	-	-
North Dakota	-	-	24	-	-	-	-	-	2	6	-	-	-
South Dakota	1	-	5	-	-	-	-	-	-	-	-	-	-
Nebraska	-	-	17	-	-	-	-	-	1	1	1	-	-
Kansas	-	-	130	-	-	-	-	-	5	20	5	-	-
SOUTH ATLANTIC	3	-	435	-	-	3	1	-	21	54	19	-	-
Delaware	-	-	1	-	-	-	-	-	-	-	-	-	-
Maryland	2	-	31	-	-	1	-	-	5	8	7	-	-
District of Columbia	-	-	4	-	-	-	-	-	4	-	-	-	-
Virginia	-	-	37	-	-	-	1	-	4	4	4	-	-
West Virginia	-	-	262	-	-	-	-	-	-	7	-	-	-
North Carolina	1	-	-	-	-	-	-	-	2	7	3	-	-
South Carolina	-	-	6	-	-	-	-	-	1	4	4	-	-
Georgia	-	-	-	-	-	-	-	-	-	10	-	-	-
Florida	-	-	94	-	-	2	-	-	5	14	1	-	-
EAST SOUTH CENTRAL	6	-	29	-	-	4	2	-	9	54	-	-	-
Kentucky	2	-	23	-	-	3	-	-	1	23	-	-	-
Tennessee	-	-	-	-	-	-	-	-	2	24	-	-	-
Alabama	4	-	5	-	-	1	2	-	6	7	-	-	-
Mississippi	-	-	1	-	-	-	-	-	-	-	-	-	-
WEST SOUTH CENTRAL	4	1	210	-	-	2	1	-	20	77	25	-	-
Arkansas *	-	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	1	-	-	-	-	-	-	-	1	3	-	-	-
Oklahoma	-	-	33	-	-	-	-	-	3	6	6	-	-
Texas	3	1	177	-	-	2	1	-	16	68	19	-	-
MOUNTAIN	1	-	48	-	-	-	1	-	6	20	8	-	-
Montana	-	-	11	-	-	-	1	-	-	3	-	-	-
Idaho *	-	-	7	-	-	-	-	-	-	-	2	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	-	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	-	-	-	-	-	-	-	-	-	4	-	-	-
Arizona	-	-	-	-	-	-	-	-	4	9	2	-	-
Utah	1	-	30	-	-	-	-	-	2	3	4	-	-
Nevada *	-	-	-	-	-	-	-	-	-	1	-	-	-
PACIFIC	9	-	59	17	17	2	6	3	66	117	24	5	5
Washington	4	-	22	17	17	-	1	2	4	11	6	1	1
Oregon	1	-	-	-	-	-	-	-	11	22	1	-	-
California *	2	-	-	-	-	2	5	1	45	76	17	4	4
Alaska	1	-	15	-	-	-	-	-	1	4	-	-	-
Hawaii	1	-	22	-	-	-	-	-	5	4	-	-	-
Guam *	-	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico *	-	-	3	-	-	-	-	-	-	8	-	-	-
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-	-	-

*Delayed reports: Aseptic Meningitis: N.J. 1, Mo. 1, Ark. 1
 Chickenpox: Me. 3, N.H. 2, Calif. 18,
 Guam 3, P.R. 4
 Encephalitis, primary: Ohio 1, Mich. 3
 Hepatitis B: N.H. delete 1, Ark. 4, Nev. 1
 Hepatitis A: N.H. 1, Ga. 23, Ark. 11, Idaho 6, Nev. 4
 Hepatitis unspecified: N.H. 1, Ark. 3, Idaho 2,
 Guam 3

Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JANUARY 10, 1976 AND JANUARY 4, 1975 (1st WEEK) - Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1976	Cumulative		1976	Cumulative		1976	Cum. 1976	1976	1976	Cum. 1976	Cum. 1976
		1976	1975		1976	1975						
UNITED STATES	281	281	130	31	31	18	831	831	28	130	130	-
NEW ENGLAND	1	1	-	3	3	-	49	49	-	1	1	-
Maine	-	-	-	-	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts *	-	-	-	2	2	-	13	13	-	-	-	-
Rhode Island	-	-	-	-	-	-	25	25	-	-	-	-
Connecticut	1	1	-	1	1	-	11	11	-	1	1	-
MIDDLE ATLANTIC	16	16	4	5	5	-	58	58	2	55	55	-
Upstate New York	5	5	2	2	2	-	5	5	2	1	1	-
New York City	1	1	-	2	2	-	35	35	-	2	2	-
New Jersey	2	2	1	-	-	-	11	11	-	52	52	-
Pennsylvania	8	8	1	1	1	-	7	7	-	-	-	-
EAST NORTH CENTRAL	51	51	68	2	2	4	277	277	13	41	41	-
Ohio	1	1	2	1	1	1	101	101	7	2	2	-
Indiana	8	8	5	-	-	-	24	24	-	2	2	-
Illinois	5	5	13	-	-	-	42	42	-	11	11	-
Michigan	3	3	26	1	1	3	44	44	3	14	14	-
Wisconsin	34	34	22	-	-	-	66	66	3	12	12	-
WEST NORTH CENTRAL	3	3	25	3	3	3	109	109	-	6	6	-
Minnesota	-	-	-	1	1	-	18	18	-	1	1	-
Iowa *	2	2	-	-	-	-	21	21	-	-	-	-
Missouri	-	-	2	-	-	3	9	9	-	-	-	-
North Dakota	-	-	-	-	-	-	10	10	-	-	-	-
South Dakota	-	-	3	-	-	-	-	-	-	-	-	-
Nebraska	-	-	20	-	-	-	18	18	-	1	1	-
Kansas	1	1	-	2	2	-	33	33	-	4	4	-
SOUTH ATLANTIC	46	46	2	4	4	4	98	98	8	5	5	-
Delaware	-	-	-	-	-	-	1	1	-	-	-	-
Maryland	-	-	-	1	1	1	45	45	-	-	-	-
District of Columbia	-	-	-	-	-	-	-	-	-	-	-	-
Virginia	-	-	-	-	-	2	7	7	2	-	-	-
West Virginia	18	18	2	-	-	-	37	37	5	5	5	-
North Carolina	-	-	-	2	2	-	1	1	-	-	-	-
South Carolina	-	-	-	-	-	1	1	1	1	-	-	-
Georgia	-	-	-	-	-	-	-	-	-	-	-	-
Florida	28	28	-	1	1	-	6	6	-	-	-	-
EAST SOUTH CENTRAL	53	53	-	1	1	3	41	41	2	2	2	-
Kentucky	53	53	-	1	1	1	15	15	1	-	-	-
Tennessee	-	-	-	-	-	1	19	19	1	2	2	-
Alabama	-	-	-	-	-	1	6	6	-	-	-	-
Mississippi	-	-	-	-	-	-	1	1	-	-	-	-
WEST SOUTH CENTRAL	4	4	2	3	3	4	51	51	-	5	5	-
Arkansas	-	-	-	-	-	-	-	-	-	-	-	-
Louisiana	-	-	-	1	1	1	-	-	-	-	-	-
Oklahoma	3	3	-	1	1	1	2	2	-	1	1	-
Texas	1	1	2	1	1	2	49	49	-	4	4	-
MOUNTAIN	90	90	-	3	3	-	90	90	1	4	4	-
Montana	-	-	-	-	-	-	-	-	-	-	-	-
Idaho	14	14	-	-	-	-	77	77	-	1	1	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	-	-	-	-	-	-	-	-	-	-	-	-
New Mexico	-	-	-	-	-	-	2	2	-	2	2	-
Arizona	-	-	-	2	2	-	-	-	-	-	-	-
Utah	76	76	-	1	1	-	11	11	1	1	1	-
Nevada	-	-	-	-	-	-	-	-	-	-	-	-
PACIFIC	17	17	29	7	7	-	58	58	2	11	11	-
Washington *	-	-	1	2	2	-	12	12	-	-	-	-
Oregon	-	-	-	1	1	-	8	8	-	-	-	-
California	17	17	28	4	4	-	38	38	2	11	11	-
Alaska	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii	-	-	-	-	-	-	-	-	-	-	-	-
Guam *	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico *	1	1	-	-	-	-	6	6	-	-	-	-
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-	-

*Delayed Reports: Measles: Mass. delete 1, Guam 3, P.R. 2
Mumps: Iowa 25, Guam 2 P.R. 11Pertussis: Guam 1
Rubella: Wash. delete 5

Morbidity and Mortality Weekly Report

**TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JANUARY 10, 1976 AND JANUARY 4, 1975 (1st WEEK) - Continued**

AREA	TUBERCULOSIS		TULA- REMIA	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES (Civilian Cases Only)						RABIES IN ANIMALS
	1976	Cum. 1976	Cum. 1976	1976	Cum. 1976	1976	Cum. 1976	GONORRHEA			SYPHILIS (Pri. & Sec.)			Cum. 1976
								1976	Cumulative		1976	Cumulative		
									1976	1975		1976	1976	
UNITED STATES	439	439	3	5	5	-	-	17,613	17,613	14,471	466	466	395	32
NEW ENGLAND	13	13	-	-	-	-	-	620	620	320	16	16	11	1
Maine	2	2	-	-	-	-	-	58	58	51	-	-	1	1
New Hampshire *	-	-	-	-	-	-	-	13	13	18	-	-	-	-
Vermont	-	-	-	-	-	-	-	8	8	10	1	1	1	-
Massachusetts	8	8	-	-	-	-	-	312	312	158	8	8	7	-
Rhode Island	-	-	-	-	-	-	-	36	36	30	1	1	-	-
Connecticut	3	3	-	-	-	-	-	193	193	53	6	6	2	-
MIDDLE ATLANTIC	55	55	-	2	2	-	-	1,573	1,573	1,114	90	90	83	-
Upstate New York *	NA	NA	-	1	1	-	-	NA	NA	256	NA	NA	18	-
New York City	43	43	-	1	1	-	-	666	666	576	71	71	58	-
New Jersey	12	12	-	-	-	-	-	430	430	62	11	11	4	-
Pennsylvania *	-	-	-	-	-	-	-	477	477	220	8	8	3	-
EAST NORTH CENTRAL	44	44	-	-	-	-	-	2,537	2,537	2,220	64	64	31	1
Ohio *	32	32	-	-	-	-	-	807	807	1,072	17	17	4	-
Indiana	10	10	-	-	-	-	-	123	123	300	-	-	1	-
Illinois	2	2	-	-	-	-	-	844	844	364	34	34	23	-
Michigan *	-	-	-	-	-	-	-	611	611	296	12	12	3	-
Wisconsin	-	-	-	-	-	-	-	152	152	188	1	1	-	1
WEST NORTH CENTRAL	7	7	1	-	-	-	-	957	957	532	13	13	9	9
Minnesota	6	6	-	-	-	-	-	179	179	172	2	2	2	3
Iowa	-	-	-	-	-	-	-	178	178	-	3	3	-	3
Missouri *	1	1	-	-	-	-	-	379	379	259	7	7	5	1
North Dakota	-	-	-	-	-	-	-	19	19	13	-	-	-	-
South Dakota *	-	-	-	-	-	-	-	15	15	25	-	-	-	-
Nebraska	-	-	-	-	-	-	-	70	70	30	1	1	2	-
Kansas	-	-	1	-	-	-	-	117	117	33	-	-	-	2
SOUTH ATLANTIC	104	104	-	-	-	-	-	4,292	4,292	4,038	111	111	97	6
Delaware *	-	-	-	-	-	-	-	58	58	53	4	4	1	-
Maryland	10	10	-	-	-	-	-	567	567	483	11	11	8	-
District of Columbia	5	5	-	-	-	-	-	338	338	304	14	14	10	-
Virginia	37	37	-	-	-	-	-	697	697	418	20	20	22	2
West Virginia *	4	4	-	-	-	-	-	81	81	24	-	-	-	-
North Carolina	11	11	-	-	-	-	-	548	548	517	13	13	2	-
South Carolina	7	7	-	-	-	-	-	423	423	497	7	7	6	1
Georgia	11	11	-	-	-	-	-	911	911	873	8	8	14	3
Florida *	19	19	-	-	-	-	-	669	669	869	34	34	34	-
EAST SOUTH CENTRAL	39	39	2	-	-	-	-	1,626	1,626	1,029	23	23	7	1
Kentucky	10	10	-	-	-	-	-	258	258	180	1	1	-	1
Tennessee	12	12	2	-	-	-	-	628	628	551	7	7	6	-
Alabama	11	11	-	-	-	-	-	328	328	-	10	10	-	-
Mississippi	6	6	-	-	-	-	-	412	412	298	5	5	1	-
WEST SOUTH CENTRAL	51	51	-	-	-	-	-	3,063	3,063	2,284	77	77	47	5
Arkansas	23	23	-	-	-	-	-	168	168	43	-	-	-	1
Louisiana	8	8	-	-	-	-	-	533	533	516	5	5	12	-
Oklahoma	3	3	-	-	-	-	-	273	273	103	2	2	2	4
Texas	17	17	-	-	-	-	-	2,089	2,089	1,622	70	70	33	-
MOUNTAIN	12	12	-	1	1	-	-	595	595	381	3	3	6	2
Montana	-	-	-	-	-	-	-	26	26	34	-	-	-	2
Idaho	-	-	-	-	-	-	-	29	29	34	-	-	-	-
Wyoming	-	-	-	-	-	-	-	15	15	-	-	-	-	-
Colorado	4	4	-	-	-	-	-	105	105	57	-	-	-	-
New Mexico	2	2	-	-	-	-	-	125	125	50	1	1	-	-
Arizona	6	6	-	1	1	-	-	201	201	152	1	1	5	-
Utah *	-	-	-	-	-	-	-	79	79	-	-	-	-	-
Nevada *	-	-	-	-	-	-	-	15	15	54	1	1	1	-
PACIFIC	114	114	-	2	2	-	-	2,350	2,350	2,553	69	69	104	7
Washington	16	16	-	-	-	-	-	242	242	210	-	-	17	-
Oregon	1	1	-	-	-	-	-	165	165	220	4	4	1	-
California	83	83	-	2	2	-	-	1,780	1,780	2,020	64	64	83	7
Alaska	-	-	-	-	-	-	-	87	87	44	1	1	-	-
Hawaii	14	14	-	-	-	-	-	76	76	59	-	-	3	-
Guam *	-	-	-	-	-	-	-	-	-	9	-	-	-	-
Puerto Rico *	-	-	-	-	-	-	-	19	19	-	2	2	-	-
Virgin Islands	-	-	-	-	-	-	-	6	6	2	6	6	-	-

*Delayed reports: Tuberculosis: N.H. 1, Ups. N.Y. 6, Ohio delete 2, Mo. 4, Del. 3, Fla. 31, Utah 3
RMSF: Pa. delete 4

Gonorrhea: Ups. N.Y. 13, Del. delete 4 civil.; 4 Mil., Nev. 43, Guam 11, P.R. 4, V.I. 4
Syphilis: Ups. N.Y. 5, Mo. delete 4, P.R. 10
Rabies: Mich. 1, S.D. 16, W. Va. 2

Morbidity and Mortality Weekly Report

TABLE IV. DEATHS IN 121 UNITED STATES CITIES FOR WEEK ENDING JANUARY 10, 1976

Week No.
01

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

Area	All Causes					Pneumonia and Influenza All Ages	Area	All Causes					Pneumonia and Influenza All Ages
	All Ages	65 years and over	45-64 years	25-44 years	Under 1 year			All Ages	65 years and over	45-64 years	25-44 years	Under 1 year	
NEW ENGLAND	813	536	208	32	22	35	SOUTH ATLANTIC	1,544	861	460	104	62	56
Boston, Mass.	230	135	66	11	10	6	Atlanta, Ga.	122	64	39	10	5	3
Bridgeport, Conn.	39	24	13	1	—	1	Baltimore, Md.	311	163	93	21	13	6
Cambridge, Mass.	27	21	4	2	—	5	Charlotte, N. C.	84	41	28	9	4	5
Fall River, Mass.	31	27	4	—	—	2	Jacksonville, Fla.	120	71	32	3	9	3
Hartford, Conn.	47	26	17	2	1	3	Miami, Fla.	142	85	40	9	3	1
Lowell, Mass.	33	26	6	1	—	2	Norfolk, Va.	79	37	32	2	4	5
Lynn, Mass.	35	20	13	—	2	3	Richmond, Va.	133	77	42	11	2	9
New Bedford, Mass.	27	19	4	2	1	1	Savannah, Ga.	39	21	17	1	—	5
New Haven, Conn.	51	31	14	5	—	—	St. Petersburg, Fla.	95	74	15	1	4	2
Providence, R. I.	89	57	24	3	3	10	Tampa, Fla.	80	48	20	4	3	5
Somerville, Mass.	17	14	3	—	—	—	Washington, D. C.	262	135	82	26	10	11
Springfield, Mass.	69	48	16	2	2	1	Wilmington, Del.	77	45	20	7	5	1
Waterbury, Conn.	44	33	9	—	2	—	EAST SOUTH CENTRAL	809	455	237	52	38	43
Worcester, Mass.	74	55	15	3	1	1	Birmingham, Ala.	137	75	42	5	7	6
MIDDLE ATLANTIC	3,209	1,979	865	205	70	152	Chattanooga, Tenn.	83	45	28	8	1	7
Albany, N. Y.	48	33	9	2	—	1	Knoxville, Tenn.	64	37	20	—	4	2
Allentown, Pa.	26	17	7	1	1	3	Louisville, Ky.	151	79	47	9	10	12
Buffalo, N. Y.	120	75	32	8	3	8	Memphis, Tenn.	121	74	28	10	7	—
Camden, N. J.	42	25	14	2	—	1	Mobile, Ala.	74	41	24	3	3	3
Elizabeth, N. J.	34	21	10	3	—	1	Montgomery, Ala.	59	35	15	8	—	5
Erie, Pa.	56	35	18	1	—	3	Nashville, Tenn.	120	69	33	9	6	8
Jersey City, N. J.	71	32	34	4	1	1	WEST SOUTH CENTRAL	1,444	821	375	110	70	50
Newark, N. J.	89	50	26	3	3	8	Austin, Tex.	38	21	10	1	4	2
New York City, N. Y. †	1,568	999	363	130	25	64	Baton Rouge, La.	44	26	9	2	3	3
Paterson, N. J.	57	32	17	3	4	10	Corpus Christi, Tex.	50	24	17	3	3	1
Philadelphia, Pa.	396	222	135	19	11	15	Dallas, Tex.	220	125	63	18	7	6
Pittsburgh, Pa.	256	134	84	16	17	21	El Paso, Tex.	80	54	16	1	6	4
Reading, Pa.	50	40	9	1	—	2	Fort Worth, Tex.	90	53	24	6	6	2
Rochester, N. Y.	133	89	37	3	1	6	Houston, Tex.	266	122	75	38	12	9
Schenectady, N. Y.	25	16	9	—	—	1	Little Rock, Ark.	68	40	16	5	5	5
Scranton, Pa.	55	38	13	3	—	3	New Orleans, La.	182	116	41	9	11	—
Syracuse, N. Y.	98	60	28	3	4	1	San Antonio, Tex.	187	114	44	13	8	5
Trenton, N. J.	32	20	8	3	—	—	Shreveport, La.	106	58	36	6	3	6
Utica, N. Y.	22	16	6	—	—	1	Tulsa, Okla.	113	68	24	8	2	7
Yonkers, N. Y.	31	25	6	—	—	2	MOUNTAIN	586	351	145	44	24	19
EAST NORTH CENTRAL	2,863	1,739	774	143	95	99	Albuquerque, N. Mex.	75	45	19	6	2	2
Akron, Ohio	93	51	35	2	—	—	Colorado Springs, Colo.	33	23	7	—	—	6
Canton, Ohio	44	30	12	1	—	—	Denver, Colo.	118	81	29	5	2	4
Chicago, Ill.	690	398	200	50	20	17	Las Vegas, Nev.	36	19	8	8	1	1
Cincinnati, Ohio	194	124	54	9	3	6	Ogden, Utah	24	17	5	2	—	2
Cleveland, Ohio	210	123	56	7	14	2	Phoenix, Ariz.	115	72	34	2	4	1
Columbus, Ohio	133	78	34	9	7	6	Pueblo, Colo.	29	19	6	3	—	1
Dayton, Ohio	137	83	41	3	8	6	Salt Lake City, Utah	67	28	19	8	9	1
Detroit, Mich.	339	202	90	22	11	11	Tucson, Ariz.	89	47	18	10	6	1
Evansville, Ind.	54	36	13	1	1	6	PACIFIC	1,987	1,319	440	108	67	73
Fort Wayne, Ind.	102	65	24	3	3	9	Berkeley, Calif.	25	20	2	1	1	1
Gary, Ind.	37	13	12	6	1	4	Fresno, Calif.	72	46	16	5	4	1
Grand Rapids, Mich.	74	52	21	1	—	7	Glendale, Calif.	37	26	8	1	1	1
Indianapolis, Ind.	163	100	43	6	7	3	Honolulu, Hawaii	73	41	17	9	3	2
Madison, Wis.	65	40	12	3	4	3	Long Beach, Calif.	84	50	25	7	—	5
Milwaukee, Wis.	184	116	48	9	6	6	Los Angeles, Calif.	670	454	149	36	19	20
Peoria, Ill.	34	21	8	1	2	2	Oakland, Calif.	91	56	25	2	3	1
Rockford, Ill.	56	32	15	2	3	1	Pasadena, Calif.	29	21	2	—	5	1
South Bend, Ind.	63	50	13	—	—	8	Portland, Ore.	159	108	32	8	7	14
Toledo, Ohio	125	86	24	6	2	—	Sacramento, Calif.	71	44	13	4	6	3
Youngstown, Ohio	66	39	19	2	3	2	San Diego, Calif.	153	102	34	9	4	2
WEST NORTH CENTRAL	794	508	181	45	30	29	San Francisco, Calif.	207	152	44	12	4	6
Des Moines, Iowa	54	36	14	2	2	2	San Jose, Calif.	75	53	9	8	3	2
Duluth, Minn.	31	20	7	1	2	1	Seattle, Wash.	138	82	44	4	4	6
Kansas City, Kans.	42	22	10	4	3	2	Spokane, Wash.	54	36	11	1	3	4
Kansas City, Mo.	146	88	34	9	10	5	Tacoma, Wash.	49	38	9	1	—	4
Lincoln, Nebr.	32	25	5	—	1	3	Total	14,049	8,569	3,685	843	478	556
Minneapolis, Minn.	116	69	27	9	6	4	Expected Number	12,830	7,857	3,336	790	406	484
Omaha, Nebr.	84	55	21	4	2	1							
St. Louis, Mo.	134	88	30	7	1	2							
St. Paul, Minn.	87	61	17	4	2	1							
Wichita, Kans.	68	44	16	5	1	8							

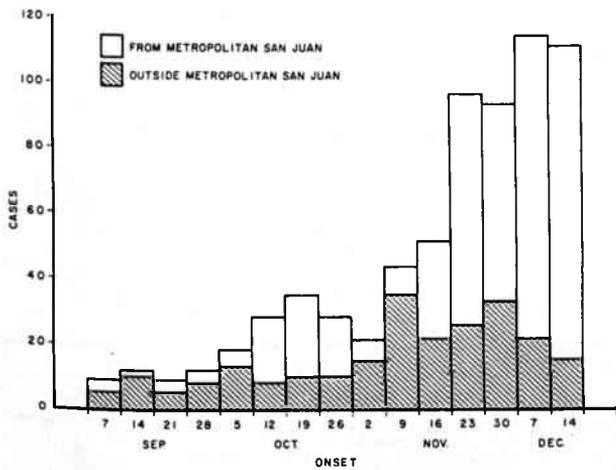
†Delayed report for week ending January 3, 1976

EPIDEMIOLOGIC NOTES AND REPORTS
FOLLOW-UP ON DENGUE - Puerto Rico

The sporadic dengue-2 activity which persisted in south-western Puerto Rico after the 1969 epidemic has become widespread on the island since September 1975.

Between September 1-December 14, 679 cases of dengue-like illness were detected by the dengue surveillance system; 45 of these were confirmed serologically and/or by virus isolation (Figure 1). The majority of reported cases (445 or 65%) have occurred in the San Juan metropolitan area.

Figure 1
CASES OF DENGUE-LIKE ILLNESS* IN PUERTO RICO,
SEPTEMBER 1-DECEMBER 14, 1975



*DENGUE-LIKE ILLNESS IS DEFINED AS AN ACUTE FEBRILE ILLNESS ASSOCIATED WITH ONE OR MORE OF THE FOLLOWING SYMPTOMS OR SIGNS: SEVERE HEADACHE, OCULAR PAIN, BODY ACHES, AND A RASH

The distribution of reported dengue-like illness (Figure 2) demonstrates that activity is widespread. Thirty of the 79 municipalities on the island have reported dengue-like illness through the surveillance system; dengue has been confirmed in 9 of these 30. A few dengue-like illnesses have been reported from 10 additional municipalities (Figure 2), but no clinical data or serological specimens were collected from these cases.

A total of 8 presumptive dengue viruses have been isolated from sera of acute cases. Four of these were shown to

be dengue-2 by the complement fixation (CF) test; definitive identification is pending on the other 4.

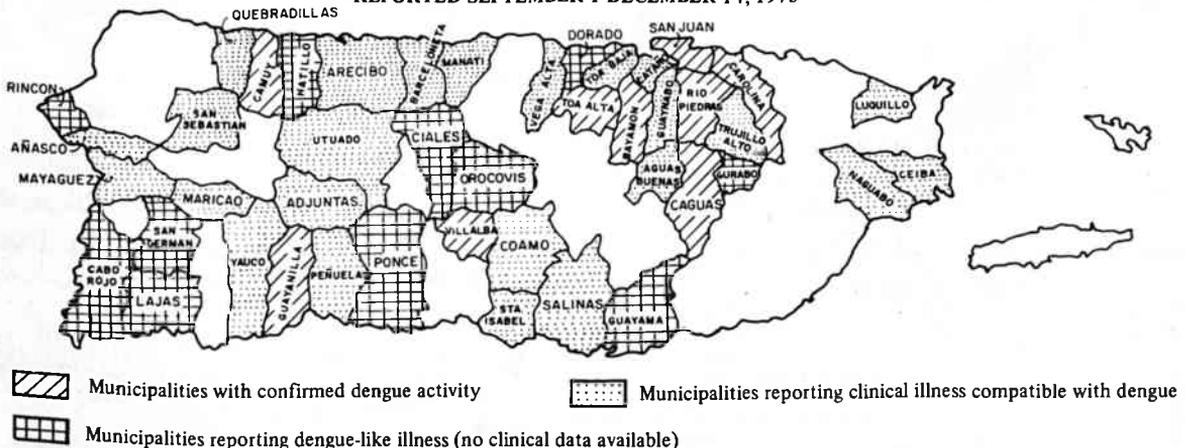
To date, 3 cases of dengue hemorrhagic fever (DHF) have been documented; all 3 patients recovered. The 2 cases of suspect dengue shock syndrome previously reported (MMWR 24:[49]) were not confirmed by laboratory tests.

The first patient with DHF was a 35-year-old man who experienced gross hematuria a week after the onset of dengue-like illness. The second patient, a 45-year-old man, developed severe bleeding from the gums 5 days after the onset of a dengue-like illness, followed by widespread petechiae, ecchymoses, profound thrombocytopenia (4,000 platelets/mm³), and a positive tourniquet test. In the third and most recent case, a 14-year-old male developed, several days after the onset of a dengue-like illness, petechiae on the palate, epistaxis, a positive tourniquet test, and thrombocytopenia (88,000/mm³). Serological studies by hemagglutination inhibition (HI) and/or CF tests have shown typical secondary type serological responses for cases 1 and 3. In case 2, HI, CF, and plaque reduction neutralization antibody titers were all exceedingly high to dengue-2, but titers to the other 3 dengue types were relatively low, and therefore not typical of a broad secondary serologic response.

Aerial spraying with ultra low volume (ULV) Malathion (3 oz per acre) began in the San Juan metropolitan area on December 11 and has been repeated twice at approximately 1-week intervals. The spraying activities, as measured by adult mosquito collections and by mortality of caged mosquitoes, have reduced adult *Aedes aegypti* populations. Evaluation of mosquito control activities is also in progress with ovitraps. Although it is too early to assess the impact of aerial spraying on dengue transmission in the San Juan metropolitan area, early data suggest a considerable decline in new cases.

(Reported by H Morales, MD, Hospital Maestro; JE Madera, MD, Bayamón Subregional Hospital; CH Ramirez-Ronda, MD, R Bermudez, MD, Veterans Admin Hospital; V Gonzales, MD, State Epidemiologist, H Romney, State Dept of Health, Puerto Rico; San Juan Laboratories, Bur of Laboratories, Vector Biology and Control Div, Bur of Tropical Diseases, and Field Services Div, Bur of Epidemiology, CDC.)

Figure 2
DENGUE-LIKE ILLNESS IN PUERTO RICO
REPORTED SEPTEMBER 1-DECEMBER 14, 1975



CURRENT TRENDS
SHORTAGE OF ZOSTER IMMUNE GLOBULIN

Since January 1971, the Center for Disease Control has provided Zoster Immune Globulin (ZIG) as an investigational drug to high risk, susceptible children who have been exposed to varicella zoster within the previous 72 hours. ZIG is prepared from the plasma of healthy donors convalescing from herpes zoster. The current supply of ZIG will soon be exhausted.

Almost certainly, ZIG will not be available during February and March. These are the peak months of varicella activity. CDC urgently needs donors. If requested, CDC will provide financial reimbursement for plasmapheresis of ac-

ceptible donors. Anyone with knowledge of potential donors should contact:

Center for Disease Control
ATTN: Dr. Robert Ellis
Building 1, Room B-237
Atlanta, Georgia 30333
(404) 633-3311 Ext. 3356

(Reported by Immunization Div, Bur of State Services, and Immunobiologics, Biological Products Div, Bur of Laboratories, CDC.)

The Morbidity and Mortality Weekly Report, circulation 52,000, is published by the Center for Disease Control, Atlanta, Ga.

Director, Center for Disease Control
Director, Bureau of Epidemiology, CDC
Editor, MMWR
Managing Editor

David J. Sencer, M.D.
Philip S. Brachman, M.D.
Michael B. Gregg, M.D.
Anne D. Mather, M.A.

The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

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

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DHEW Publication No. (CDC) 76-8017

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