



# Morbidity and Mortality

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

PUBLIC HEALTH SERVICE

BUREAU OF DISEASE PREVENTION AND ENVIRONMENTAL CONTROL

EPIDEMIOLOGIC NOTES AND REPORTS

LEUKEMIA - Missouri, Kansas, and Georgia

Since the inception of the NCDC leukemia case-reporting program in 1966, three instances of multiple cases of leukemia occurring among occupants of a single house have been reported from three different areas.

An 18-year-old man who moved into a second floor apartment in North Kansas City, Missouri, in April 1964 (see Table 3, page 168) developed acute lymphocytic leukemia in January 1966. A 28-year-old woman who lived on the first floor of the same building from June 1962 to June 1966 developed acute myelocytic leukemia in January 1967.

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A 41-year-old man developed chronic myelocytic leukemia in February 1961, 13 months after moving out of a house in Prairie Village, Kansas. Another family moved into that house in January 1960 and lived there until October 1966. A 15-year-old girl in this family developed acute myelocytic leukemia in January 1967.

(Continued on page 168)

CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	20th WEEK ENDED		MEDIAN 1962 - 1966	CUMULATIVE, FIRST 20 WEEKS		
	MAY 20, 1967	MAY 21, 1966		1967	1966	MEDIAN 1962 - 1966
Aseptic meningitis . . . . .	62	27	27	624	551	550
Brucellosis . . . . .	6	5	8	86	81	130
Diphtheria . . . . .	1	11	7	40	64	98
Encephalitis, primary:						
Arthropod-borne & unspecified . . . . .	29	22	---	493	482	---
Encephalitis, post-infectious . . . . .	25	23	---	335	341	---
Hepatitis, serum . . . . .	40	26	755	763	496	17,680
Hepatitis, infectious . . . . .	843	591		15,830	13,469	
Malaria . . . . .	37	5	4	758	107	34
Measles (rubeola) . . . . .	1,825	7,348	16,213	46,301	149,761	263,488
Meningococcal infections, total . . . . .	63	75	53	1,176	1,962	1,302
Civilian . . . . .	57	70	---	1,087	1,732	---
Military . . . . .	6	5	---	89	230	---
Poliomyelitis, total . . . . .	2	1	2	8	9	26
Paralytic . . . . .	2	1	2	7	8	21
Rubella (German measles) . . . . .	2,118	1,945	---	26,919	30,388	---
Streptococcal sore throat & scarlet fever . . . . .	9,564	7,989	7,884	234,868	223,959	209,913
Tetanus . . . . .	2	—	5	56	42	76
Tularemia . . . . .	1	2	3	55	54	75
Typhoid fever . . . . .	6	9	11	123	113	133
Typhus, tick-borne (Rky. Mt. spotted fever) . . . . .	5	5	5	31	16	16
Rabies in animals . . . . .	91	68	100	1,794	1,753	1,753

NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax: Tex.-1 . . . . .	2	Rabies in man . . . . .	—
Botulism . . . . .	—	Rubella, Congenital Syndrome: Colo.-1 . . . . .	3
Leptospirosis: Hawaii-2 . . . . .	14	Trichinosis . . . . .	32
Plague . . . . .	—	Typhus, murine: Tex.-1 . . . . .	13
Psittacosis:N.J.-1, Penn.-1, Wisc.-1 . . . . .	17	Polio, Unsp. . . . .	1

TYPHOID FEVER - Washington

A case of typhoid fever occurred in a 21-month-old child following exposure to a known typhoid carrier. The typhoid carrier was the child's great-grandmother who had a colostomy performed for a carcinoma of the colon three years previously. It had been customary to observe strict precautions when the boy made infrequent visits to his great-grandmother. However, on one visit 16 days prior to onset of his illness, the patient managed to enter a nor-

mally locked bathroom and was discovered chewing on the colostomy irrigation tube.

It is interesting to note that the great-grandmother was found to be a carrier in 1963, when another member of the same family contracted typhoid fever. The great-grandmother gave a history of having had typhoid fever in 1925.

(Reported by Byron J. Francis, M.D., Head, Communicable Disease Control Section, Washington State Department of Health.)

SURVEILLANCE SUMMARY  
INFLUENZA - United States, 1966-67

A review of the pneumonia-influenza mortality reports from 122 U.S. cities (Figure 3) for the 1966-67 influenza season reveals that, for the country as a whole, at no time have deaths exceeded the epidemic threshold. Furthermore, in none of the geographic regions, also shown in Figure 3, have deaths exceeded this threshold for 2 consecutive weeks.

This is consistent with information obtained from a 10 percent systematic sampling of all death certificates (Tables 1 and 2). In January and February 1967 (latest data available), there were fewer deaths due to all causes and fewer deaths due to pneumonia and influenza than in the same months in 1966.

Only 18 states (according to information available to the NCDC through May 10) have reported laboratory-confirmed cases of influenza in the past 6 months. The patterns of distribution of influenza virus types A2 and B are shown in Figures 1 and 2. Georgia was the only state that reported widespread influenza A2, that is, more than isolated cases or well defined isolated outbreaks. Only two states, Arizona and California, reported similar distribution of influenza B.

(Reported by Respiratory Diseases Unit, Epidemiology Program, NCDC.)

Table 1  
Deaths due to all causes by month September-February 1965-67 based on a 10 percent sample of death certificates by the National Center for Health Statistics, Washington, D.C.\*

Month	1965		1966	
	No. of deaths	Rates on an annual basis per 100,000	No. of deaths	Rates on an annual basis per 100,000
Sept.	14,400	885.9	14,053	872.7
Oct.	14,842	912.9	15,235	915.8
Nov.	15,036	964.0	15,010	922.0
Dec.	16,252	961.1	16,372	971.5
----- 1966 -----				
Jan.	16,584	1027.5	16,054	988.8
Feb.	15,400	1018.4	14,421	919.1

Table 2  
Pneumonia and influenza deaths for all ages by month September-February 1965-67 based on a 10 percent sample of death certificates by the National Center for Health Statistics, Washington, D.C.\*

Month	1965		1966	
	No. of deaths	Rates on an annual basis per 100,000	No. of deaths	Rates on an annual basis per 100,000
Sept.	374	23.0	325	20.2
Oct.	485	29.8	459	27.6
Nov.	490	31.4	450	27.6
Dec.	608	36.0	531	31.5
----- 1966 -----				
Jan.	646	40.0	602	37.1
Feb.	635	42.0	525	35.5

\*Source of data: Monthly Vital Statistics Report, National Vital Statistics Division, National Center for Health Statistics

Figure 1  
DISTRIBUTION OF INFLUENZA A, UNITED STATES  
1966 - 1967

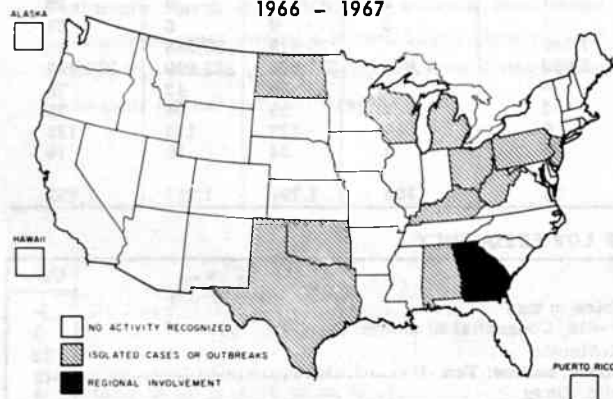


Figure 2  
DISTRIBUTION OF INFLUENZA B, UNITED STATES  
1966 - 1967

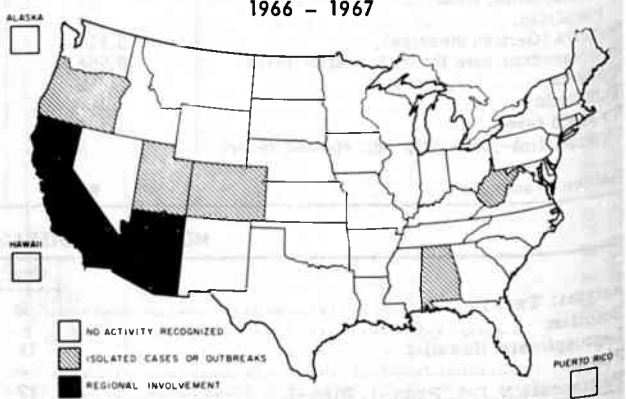
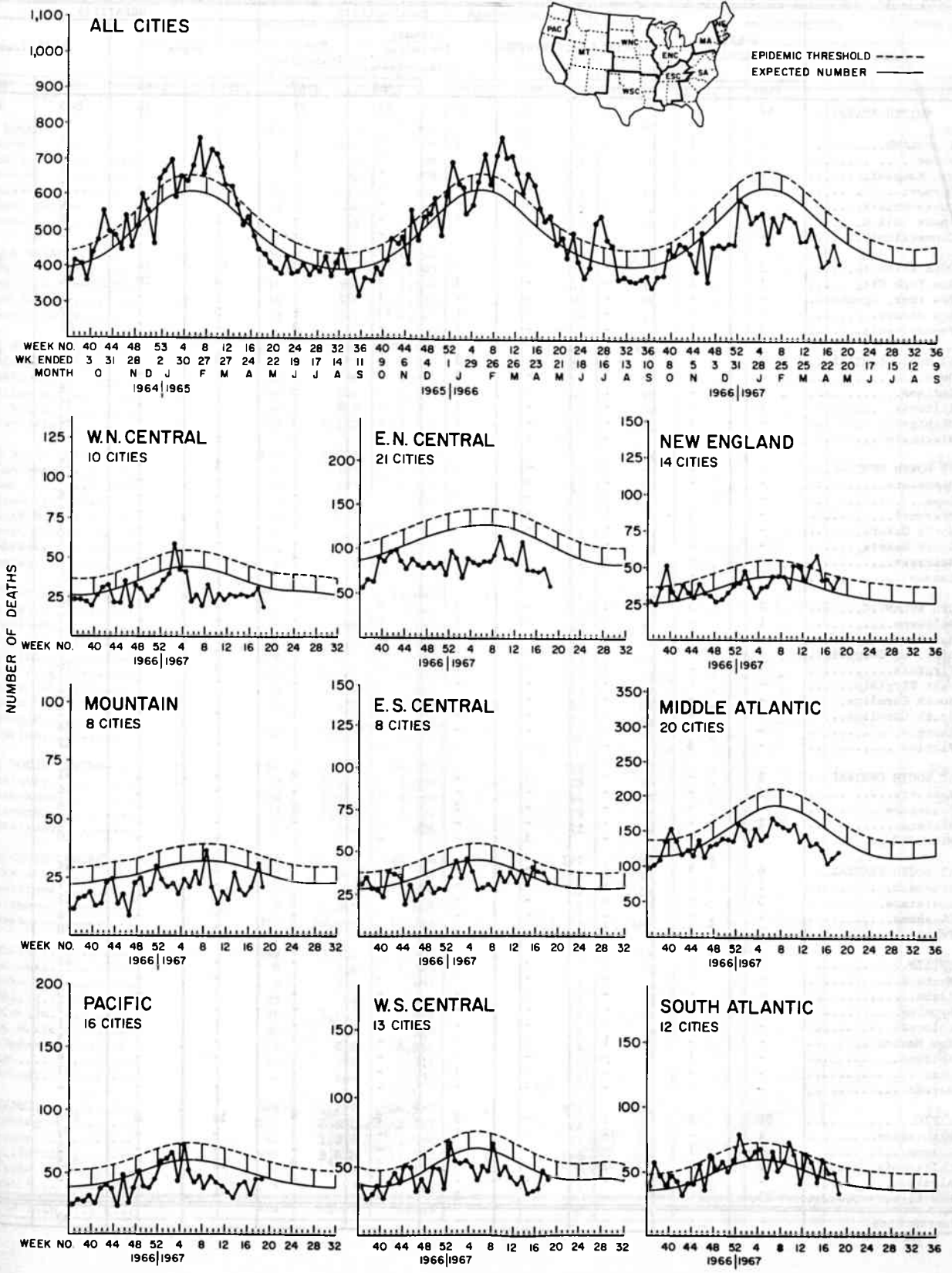


Figure 3  
PNEUMONIA-INFLUENZA DEATHS IN 122 UNITED STATES CITIES





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## CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES FOR WEEKS ENDED MAY 20, 1967 AND MAY 21, 1966 (20th WEEK) - CONTINUED

AREA	MALARIA		MEASLES (Rubeola)		MENINGOCOCCAL INFECTIONS, TOTAL			POLIOMYELITIS			RUBELLA
	1967	1967	Cumulative		1967	Cumulative		Total	Paralytic		
			1967	1966		1967	1966		1967	Cum. 1967	
UNITED STATES...	37	1,825	46,301	149,761	63	1,176	1,962	2	2	7	2,118
NEW ENGLAND.....	-	25	579	1,724	3	52	87	-	-	-	164
Maine.....	-	-	140	170	-	3	8	-	-	-	16
New Hampshire.....	-	-	71	39	-	2	8	-	-	-	-
Vermont.....	-	-	36	209	-	-	3	-	-	-	2
Massachusetts.....	-	14	223	644	2	25	35	-	-	-	38
Rhode Island.....	-	8	46	68	-	3	7	-	-	-	40
Connecticut.....	-	3	63	594	1	19	26	-	-	-	68
MIDDLE ATLANTIC.....	6	66	1,561	16,018	9	179	213	-	-	2	127
New York City.....	1	16	276	7,743	3	31	33	-	-	1	37
New York, Up-State.	-	16	360	1,874	1	43	59	-	-	-	55
New Jersey.....	2	16	378	1,674	2	69	58	-	-	-	-
Pennsylvania.....	3	18	547	4,727	3	36	63	-	-	1	35
EAST NORTH CENTRAL...	-	233	3,864	54,667	13	142	303	-	-	-	413
Ohio.....	-	56	695	5,215	4	54	83	-	-	-	20
Indiana.....	-	30	458	4,074	5	21	53	-	-	-	21
Illinois.....	-	56	644	10,237	3	30	58	-	-	-	139
Michigan.....	-	34	805	9,391	1	28	78	-	-	-	94
Wisconsin.....	-	57	1,262	25,750	-	9	31	-	-	-	140
WEST NORTH CENTRAL...	-	124	2,062	6,986	3	51	108	-	-	-	133
Minnesota.....	-	9	103	1,519	-	11	26	-	-	-	-
Iowa.....	-	74	575	4,120	1	11	16	-	-	-	71
Missouri.....	-	5	144	389	-	11	43	-	-	-	57
North Dakota.....	-	14	707	885	-	-	5	-	-	-	5
South Dakota.....	-	-	46	4	-	6	3	-	-	-	-
Nebraska.....	-	16	480	69	-	8	8	-	-	-	-
Kansas.....	-	6	7	NN	2	4	7	-	-	-	-
SOUTH ATLANTIC.....	4	238	5,380	11,482	11	226	313	-	-	1	157
Delaware.....	-	1	36	189	-	5	3	-	-	-	1
Maryland.....	-	10	98	1,690	-	27	31	-	-	1	15
Dist. of Columbia..	-	-	12	351	1	8	7	-	-	-	-
Virginia.....	1	58	1,673	1,329	3	21	42	-	-	-	28
West Virginia.....	-	48	1,020	4,070	1	17	10	-	-	-	56
North Carolina.....	3	24	792	225	1	46	77	-	-	-	-
South Carolina.....	-	5	423	503	3	23	41	-	-	-	-
Georgia.....	-	-	23	218	-	33	44	-	-	-	-
Florida.....	-	92	1,303	2,907	2	46	58	-	-	-	57
EAST SOUTH CENTRAL...	16	68	4,351	16,398	-	104	173	-	-	-	206
Kentucky.....	16	9	1,101	4,236	-	29	70	-	-	-	162
Tennessee.....	-	44	1,503	9,962	-	44	53	-	-	-	44
Alabama.....	-	11	1,124	1,372	-	19	38	-	-	-	-
Mississippi.....	-	4	623	828	-	12	12	-	-	-	-
WEST SOUTH CENTRAL...	2	373	15,183	18,604	6	171	288	2	2	4	22
Arkansas.....	-	9	1,368	730	1	20	17	-	-	-	-
Louisiana.....	-	3	120	76	3	66	111	-	-	-	-
Oklahoma.....	2	6	3,285	402	1	11	16	-	-	1	-
Texas.....	-	355	10,410	17,396	1	74	144	2	2	3	22
MOUNTAIN.....	1	149	3,522	8,902	3	24	69	-	-	-	142
Montana.....	-	8	246	1,385	-	-	4	-	-	-	6
Idaho.....	-	6	334	897	-	1	5	-	-	-	-
Wyoming.....	-	25	46	103	1	1	3	-	-	-	-
Colorado.....	1	36	1,003	884	-	10	37	-	-	-	93
New Mexico.....	-	32	522	919	-	3	9	-	-	-	-
Arizona.....	-	32	818	4,364	2	4	8	-	-	-	38
Utah.....	-	10	289	317	-	3	-	-	-	-	5
Nevada.....	-	-	264	33	-	2	3	-	-	-	-
PACIFIC.....	8	549	9,799	14,980	15	227	408	-	-	-	754
Washington.....	4	241	4,636	2,587	1	22	31	-	-	-	179
Oregon.....	-	44	1,276	1,044	3	21	27	-	-	-	26
California.....	3	259	3,678	11,162	11	175	332	-	-	-	535
Alaska.....	-	-	112	101	-	8	15	-	-	-	-
Hawaii.....	1	5	97	86	-	1	3	-	-	-	14
Puerto Rico.....	1	135	1,661	1,883	-	8	5	-	-	-	2

## Morbidity and Mortality Weekly Report

CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDED  
MAY 20, 1967 AND MAY 21, 1966 (20th WEEK) - CONTINUED

AREA	STREPTOCOCCAL SORE THROAT & SCARLET FEVER	TETANUS		TULAREMIA		TYPHOID		TYPHUS FEVER TICK-BORNE (Rky. Mc. Spotted)		RABIES IN ANIMALS	
	1967	1967	Cum. 1967	1967	Cum. 1967	1967	Cum. 1967	1967	Cum. 1967	1967	Cum. 1967
UNITED STATES...	9,564	2	56	1	55	6	123	5	31	91	1,794
NEW ENGLAND.....	1,502	-	-	-	-	-	1	-	-	-	42
Maine.....	75	-	-	-	-	-	-	-	-	-	10
New Hampshire.....	13	-	-	-	-	-	-	-	-	-	25
Vermont.....	23	-	-	-	-	-	-	-	-	-	7
Massachusetts.....	239	-	-	-	-	-	1	-	-	-	-
Rhode Island.....	83	-	-	-	-	-	-	-	-	-	-
Connecticut.....	1,069	-	-	-	-	-	-	-	-	-	-
MIDDLE ATLANTIC.....	670	-	5	-	-	1	15	-	-	-	32
New York City.....	36	-	3	-	-	-	9	-	-	-	-
New York, Up-State.	587	-	1	-	-	1	4	-	-	-	23
New Jersey.....	NN	-	-	-	-	-	1	-	-	-	-
Pennsylvania.....	47	-	1	-	-	-	1	-	-	-	9
EAST NORTH CENTRAL...	988	1	3	-	8	-	10	1	5	14	162
Ohio.....	209	-	-	-	-	-	4	1	4	2	73
Indiana.....	101	-	-	-	1	-	-	-	1	1	23
Illinois.....	221	1	3	-	7	-	1	-	-	4	29
Michigan.....	299	-	-	-	-	-	4	-	-	7	12
Wisconsin.....	158	-	-	-	-	-	1	-	-	-	25
WEST NORTH CENTRAL...	449	-	1	-	10	-	2	-	-	23	392
Minnesota.....	13	-	1	-	-	-	-	-	-	2	73
Iowa.....	210	-	-	-	1	-	2	-	-	2	43
Missouri.....	36	-	-	-	3	-	-	-	-	4	85
North Dakota.....	65	-	-	-	-	-	-	-	-	2	65
South Dakota.....	26	-	-	-	-	-	-	-	-	7	57
Nebraska.....	35	-	-	-	-	-	-	-	-	1	27
Kansas.....	64	-	-	-	6	-	-	-	-	5	42
SOUTH ATLANTIC.....	905	-	13	-	7	-	16	2	12	10	242
Delaware.....	12	-	-	-	-	-	-	-	-	-	-
Maryland.....	167	-	-	-	-	-	2	-	-	-	-
Dist. of Columbia..	-	-	-	-	-	-	1	-	-	-	-
Virginia.....	267	-	4	-	-	-	2	-	2	4	127
West Virginia.....	251	-	-	-	1	-	1	-	-	2	41
North Carolina.....	45	-	4	-	-	-	2	2	9	1	2
South Carolina.....	8	-	-	-	2	-	3	-	-	-	-
Georgia.....	1	-	1	-	3	-	1	-	1	1	47
Florida.....	154	-	4	-	1	-	4	-	-	2	25
EAST SOUTH CENTRAL...	1,036	1	15	-	7	5	17	-	4	13	410
Kentucky.....	7	-	-	-	1	4	8	-	2	4	79
Tennessee.....	925	1	8	-	4	1	5	-	2	9	300
Alabama.....	83	-	5	-	-	-	4	-	-	-	29
Mississippi.....	21	-	2	-	2	-	-	-	-	-	2
WEST SOUTH CENTRAL...	789	-	11	1	13	-	17	2	4	23	355
Arkansas.....	-	-	3	1	2	-	3	-	-	1	54
Louisiana.....	-	-	1	-	2	-	11	-	-	-	30
Oklahoma.....	101	-	-	-	6	-	-	1	3	14	101
Texas.....	688	-	7	-	3	-	3	1	1	8	170
MOUNTAIN.....	1,496	-	-	-	7	-	15	-	3	3	53
Montana.....	53	-	-	-	1	-	1	-	-	-	-
Idaho.....	89	-	-	-	-	-	-	-	-	-	-
Wyoming.....	49	-	-	-	2	-	-	-	-	-	4
Colorado.....	791	-	-	-	1	-	11	-	3	-	5
New Mexico.....	191	-	-	-	-	-	-	-	-	3	15
Arizona.....	133	-	-	-	-	-	3	-	-	-	29
Utah.....	190	-	-	-	3	-	-	-	-	-	-
Nevada.....	-	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	1,729	-	8	-	3	-	30	-	3	5	106
Washington.....	493	-	-	-	2	-	-	-	-	-	-
Oregon.....	70	-	-	-	-	-	-	-	-	-	1
California.....	992	-	6	-	1	-	27	-	3	5	105
Alaska.....	33	-	-	-	-	-	-	-	-	-	-
Hawaii.....	141	-	2	-	-	-	3	-	-	-	-
Puerto Rico.....	10	-	4	-	-	-	4	-	-	-	16





**LEUKEMIA - Missouri, Kansas, and Georgia**

*(Continued from front page)*

Finally, one member of each of the last three families that have lived in a small house in Douglas, Georgia, has developed acute leukemia. A 7-year-old boy became ill in July 1958, 13 months after his family moved out. A 36-year-old woman developed leukemia in March 1963 after living in the house for 6 years. In October 1964 another family moved into this house, and in December 1966 the 5-year-old boy in this family had the onset of leukemia.

Radiation levels in the apartment house in North Kansas City were studied and found to be normal. The house in Douglas will be investigated in a similar manner; also, prior occupants of the house will be traced in a search for other cases of neoplastic disease.

**Table 3**

**Three Houses with Multiple Leukemia Cases among Occupants**

House Location	Age*	Sex	Period Occupied the House	Date of Onset	Type of Leukemia
North Kansas City, Missouri	18	M	4/64- 6/66	1/66	acute lymphocytic
	28	F	6/62- 6/66	1/67	acute myelocytic
Prairie Village, Kansas	41	M	? - 1/60	2/61	chronic myelocytic
	15	F	1/60-10/66	1/67	acute myelocytic
Douglas, Georgia	7	M	4/57- 6/57	7/58	acute lymphocytic
	36	F	6/57- 4/63	3/63	acute lymphocytic
	5	M	10/64-present	12/66	chronic myelocytic

\*Age at diagnosis.

*(Reported by the Leukemia Section, Epidemiology Program, NCDC.)*

**INTERNATIONAL NOTES  
QUARANTINE MEASURES**

*Immunization Information for International Travel  
1965-66 edition—Public Health Service Publication No. 384*

The following information should be added to the list of Yellow Fever Vaccination Centers in Section 6:

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City: New Orleans, Louisiana  
 Center: Immunization Clinic  
 Tulane University School of Medicine  
 Clinic Hours: Tuesday, p.m.  
 Fee: Yes

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DIRECTOR, NATIONAL COMMUNICABLE DISEASE CENTER  
 DAVID J. SENCER, M.D.  
 CHIEF, EPIDEMIOLOGY PROGRAM  
 A.D. LANGMUIR, M.D.  
 ACTING CHIEF, STATISTICS SECTION  
 IDA L. SHERMAN, M.S.

IN ADDITION TO THE ESTABLISHED PROCEDURES FOR REPORTING MORBIDITY AND MORTALITY, THE NATIONAL COMMUNICABLE DISEASE CENTER WELCOMES ACCOUNTS OF INTERESTING OUTBREAKS OR CASE INVESTIGATIONS WHICH ARE OF CURRENT INTEREST TO HEALTH OFFICIALS AND WHICH ARE DIRECTLY RELATED TO THE CONTROL OF COMMUNICABLE DISEASES. SUCH COMMUNICATIONS SHOULD BE ADDRESSED TO:

THE EDITOR  
 MORBIDITY AND MORTALITY WEEKLY REPORT  
 NATIONAL COMMUNICABLE DISEASE CENTER  
 ATLANTA, GEORGIA 30333

NOTE: THE DATA IN THIS REPORT ARE PROVISIONAL AND ARE BASED ON WEEKLY TELEGRAMS TO THE NCDC BY THE INDIVIDUAL STATE HEALTH DEPARTMENTS. THE REPORTING WEEK CONCLUDES ON SATURDAY; COMPILED DATA ON A NATIONAL BASIS ARE RELEASED ON THE SUCCEEDING FRIDAY.

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