



# Morbidity and Mortality

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

EPIDEMIOLOGIC NOTES

INFLUENZA

Only limited, sporadic outbreaks of influenza have occurred in the United States thus far this season (MMWR Vol. 13, No. 49). None have been recorded in recent weeks. The four areas where influenza activity has been documented include: (1) **Puerto Rico** - a low level but widespread outbreak occurring from late summer throughout the fall from which A<sub>2</sub> viruses were isolated; (2) **Oregon** - focal outbreaks in the fall identified serologically as A<sub>2</sub> influenza; (3) **Hawaii** - relatively widespread outbreaks primarily on Oahu Island beginning in late September from which influenza B viruses were isolated; and, (4) **Maine** - limited numbers of cases among students at the University of Maine in mid-fall confirmed serologically as influenza B.

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Table 1. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
 (Cumulative totals include revised and delayed reports through previous weeks)

Disease	1st Week Ended		Median 1960 - 1964	Cumulative, First Week		
	January 9, 1965	January 4, 1964		1965	1964	Median 1960 - 1964
Aseptic meningitis . . . . .	38	19	19	38	19	19
Brucellosis . . . . .	8	3	4	8	3	4
Diphtheria . . . . .	3	8	15	3	8	15
Encephalitis, primary infectious . . . . .	31	18	---	31	18	---
Encephalitis, post-infectious . . . . .	5	8	---	5	8	---
Hepatitis, infectious including serum hepatitis . . . . .	685	625	691	685	625	691
Measles . . . . .	5,203	3,191	5,895	5,203	3,191	5,895
Meningococcal infections . . . . .	50	37	37	50	37	37
Poliomyelitis, Total . . . . .	-	-	7	-	-	7
Paralytic . . . . .	-	-	3	-	-	3
Nonparalytic . . . . .	-	-	---	-	-	---
Unspecified . . . . .	-	-	---	-	-	---
Streptococcal Sore Throat and Scarlet fever . . . . .	8,667	6,810	6,810	8,667	6,810	6,810
Tetanus . . . . .	3	3	---	3	3	---
Tularemia . . . . .	4	9	---	4	9	---
Typhoid fever . . . . .	1	2	5	1	2	5
Rabies in Animals . . . . .	92	49	49	92	49	49

Table 2. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	-	Rabies in Man:	-
Botulism:	-	Smallpox:	-
Leptospirosis:	-	Trichinosis: Maine-1	1
Malaria:	-	Typhus-	-
Plague:	-	Murine:	-
Psittacosis: Ariz.-1	1	Rky Mt. Spotted:	-

## TUBERCULOSIS SURVEILLANCE SUMMARY

During the last 10 years there has been a steady decline in the reported number of new "active cases" of tuberculosis and tuberculosis deaths.

Statistics for the nation as a whole show that the number of new active cases reported annually declined from 83,304 in 1953 to 54,042 in 1963, a decrease of 35 percent (see fig. 1). The new active case rate, which was 53.0 per 100,000 population in 1953, declined 46 percent to a rate of 28.7 in 1963. Tuberculosis death rates have fallen somewhat more rapidly from 12.4 per 100,000 population in 1953 to 5.1 in 1963.

## TREND IN NEW ACTIVE TUBERCULOSIS CASES AND DEATHS, UNITED STATES, 1953-1963

Year	New Active Cases		Tuberculosis deaths	
	Number	Rate per 100,000	Number	Rate per 100,000
1953	84,304	53.0	19,707	12.4
1954	79,775	49.3	16,527	10.2
1955	77,368	46.9	15,016	9.1
1956	69,895	41.6	14,137	8.4
1957	67,149	39.2	13,390	7.8
1958	63,534	36.5	12,417	7.1
1959	57,535	32.5	11,474	6.5
1960	55,494	30.8	10,866	6.0
1961	53,726	29.4	9,938	5.4
1962	53,315	28.7	9,506	5.1
1963	54,042	28.7	9,311	5.1

Except for the group 15 years of age and under, there has been a continuing decline in new cases in recent years. In the past 2 years, however, there has been an increase in cases in the under-age-15 group. In 1960, 4,388 new cases were reported in this age group; in 1963 the number had risen to 6,485. The increased number of new cases in children under 15 years of age was observed for both white and nonwhite males and females (see fig. 2). This increase undoubtedly reflects in part the less restrictive definition of an "active case," a change which was introduced in 1961 and increasingly widely applied. Where previously the only primary cases "to be reported" were those with demonstrated tubercle bacilli, the term now includes primary tuberculosis if there is either laboratory or X-ray evidence of active disease, but excludes tuberculin converters and infant reactors without laboratory or X-ray evidence.

Tuberculosis incidence rates among nonwhite persons of every age are much higher than for white persons. The rates among males are substantially higher than among females. In 1963, the new case rate for nonwhite males was over 3 times as high as for white males, and the rate for nonwhite females was 4 times as high as for white females. Although all race-sex groups have shown a marked decline in both new cases and rates since 1953, the rates for new active cases have declined faster in the white than in the nonwhite population. The greatest change occurred among white females. The rise in nonwhite female rates in 1961 and 1962 was due almost entirely to an increase in new cases reported among children (see fig. 3).

FIGURE 1

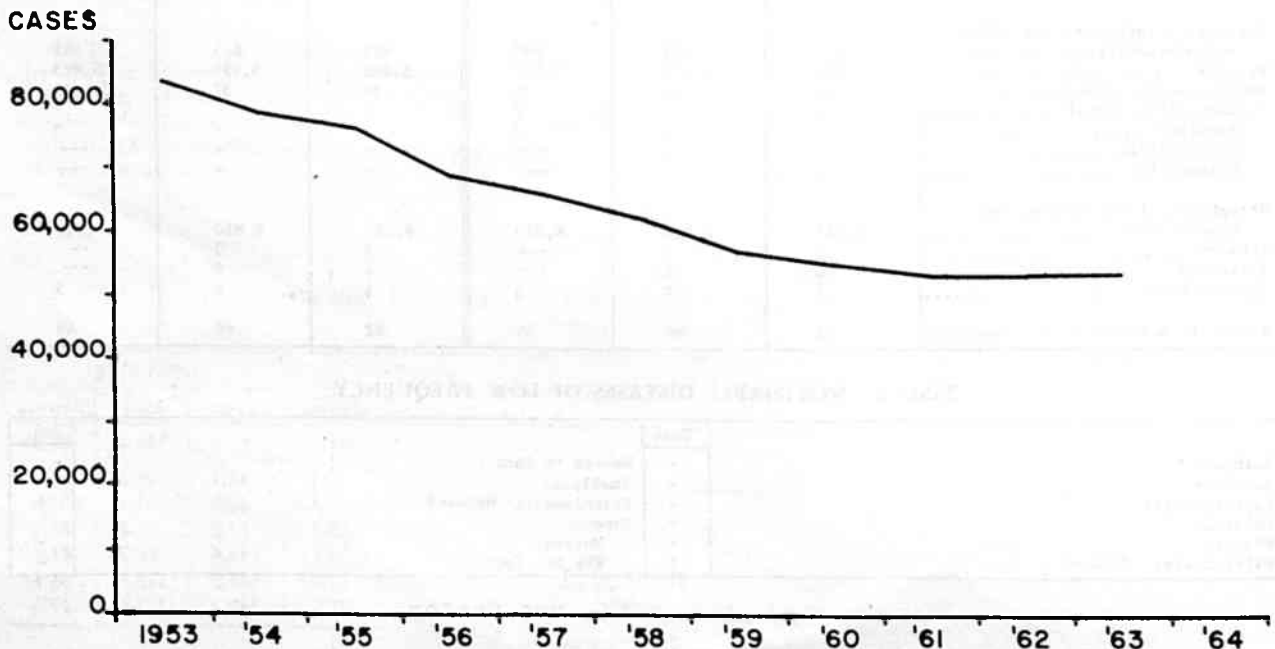
REPORTED TUBERCULOSIS—NEW ACTIVE CASES  
UNITED STATES, 1953—1963

FIGURE 2

NEW ACTIVE TUBERCULOSIS CASE RATES BY AGE  
UNITED STATES, 1953 - 1963

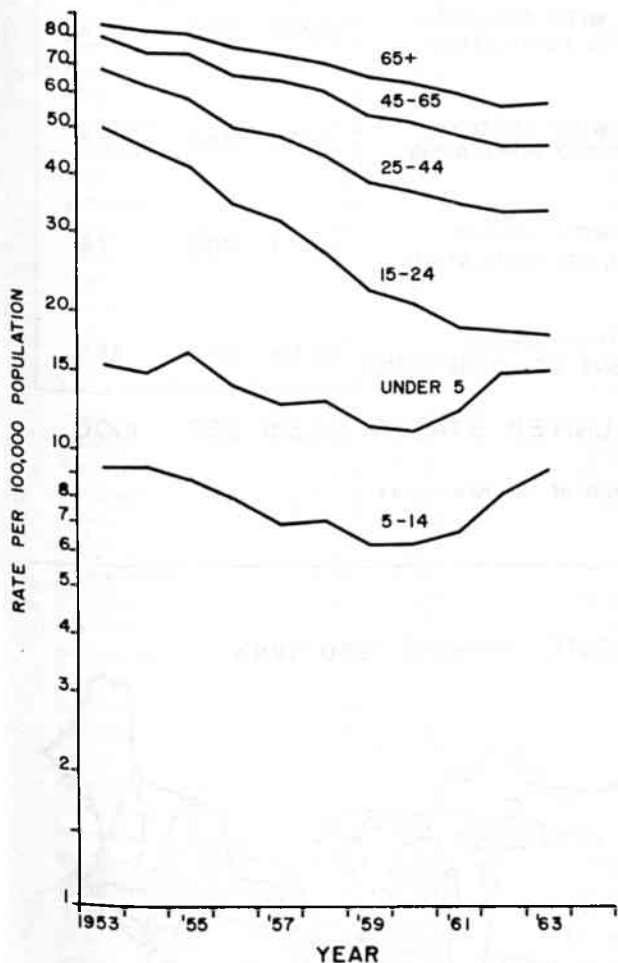
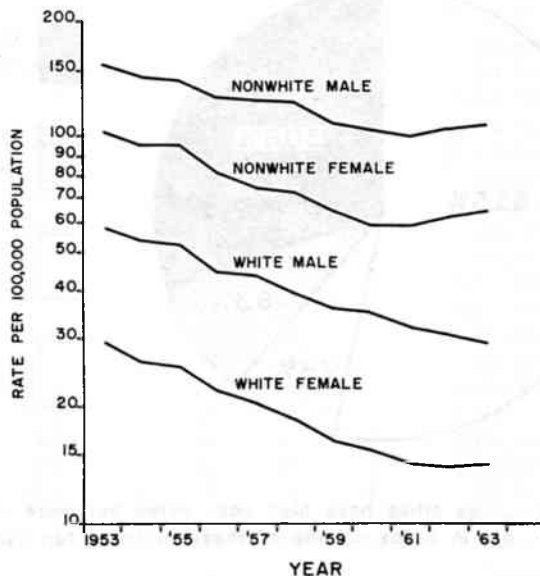


FIGURE 3

NEW ACTIVE TUBERCULOSIS CASE RATES BY RACE AND SEX  
UNITED STATES, 1953 - 1963



Geographic Distribution of Tuberculosis

The geographic distribution of tuberculosis varies greatly within the United States. In 1963, new case rates ranged from a high of 113.4 per 100,000 population in Alaska to a low of 6.8 in Iowa; the number of reported new active cases in the States varied from 6,756 in New York to 30 in Wyoming. In general, most tuberculosis is found in areas where there are large concentrations of population and where low economic circumstances prevail. In addition, since the new case rates are much higher in nonwhites, much of the tuberculosis can be further localized to certain urban communities where large numbers of nonwhites reside (see fig. 4 and 5).

Mortality

Tuberculosis deaths and death rates follow a pattern similar to cases and case rates in age-sex and geographic distribution. In 1962, 7.5 percent of all tuberculosis deaths were ascribed to nonpulmonary forms of the disease. The 1963 death rate of 5.1 per 100,000 population is identical with that of 1962.

NEW ACTIVE TUBERCULOSIS CASE RATES\*, BY AGE, RACE, AND SEX  
United States, 1963

Age Groups	Total	WHITE			NONWHITE		
		Total	Male	Female	Total	Male	Female
All Ages .....	28.7	21.7	29.4	14.1	81.5	103.4	60.8
0-4 .....	14.9	9.4	9.4	9.4	45.1	44.8	45.4
5-14 .....	9.0	5.2	5.1	5.4	31.8	31.4	32.1
15-24 .....	17.1	11.1	11.4	10.8	59.9	56.6	63.1
25-44 .....	32.4	21.9	27.0	16.9	114.6	146.2	87.0
45-64 .....	46.2	36.7	58.4	16.2	137.0	212.3	66.6
65 & Over .....	58.2	51.4	81.8	27.4	140.4	213.6	77.3

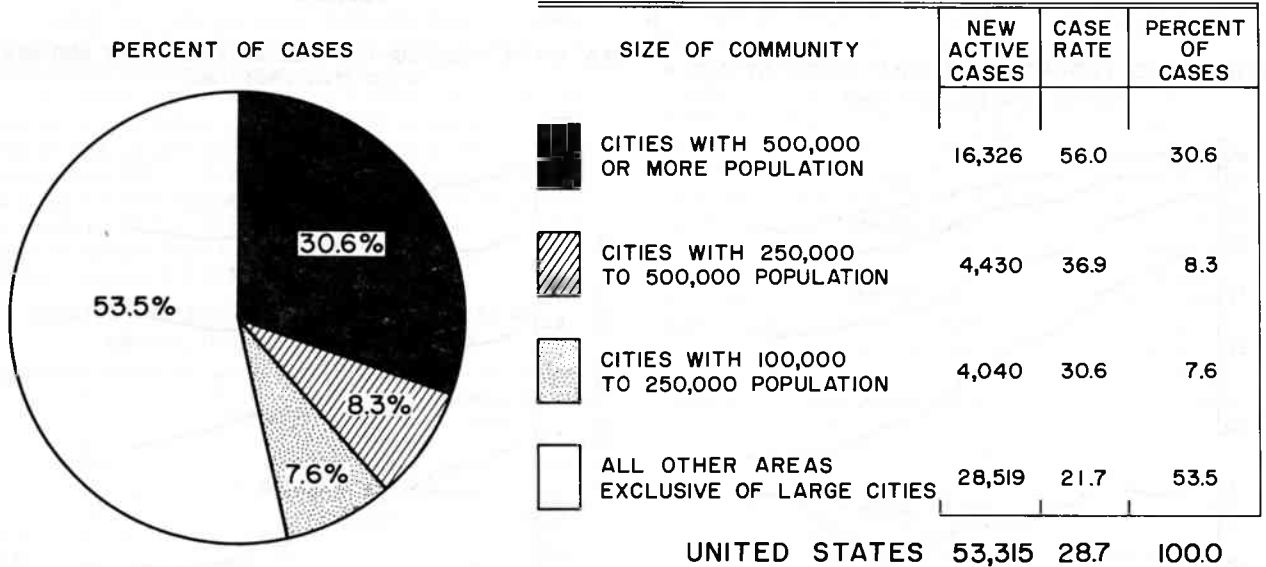
\* Rate per 100,000 population.

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(Reported by the Tuberculosis Branch, CDC, and abstracted from *Reported Tuberculosis Data, 1964 Edition, Public Health Service Publication No. 638. Additional 1963 data is included.*)

FIGURE 4

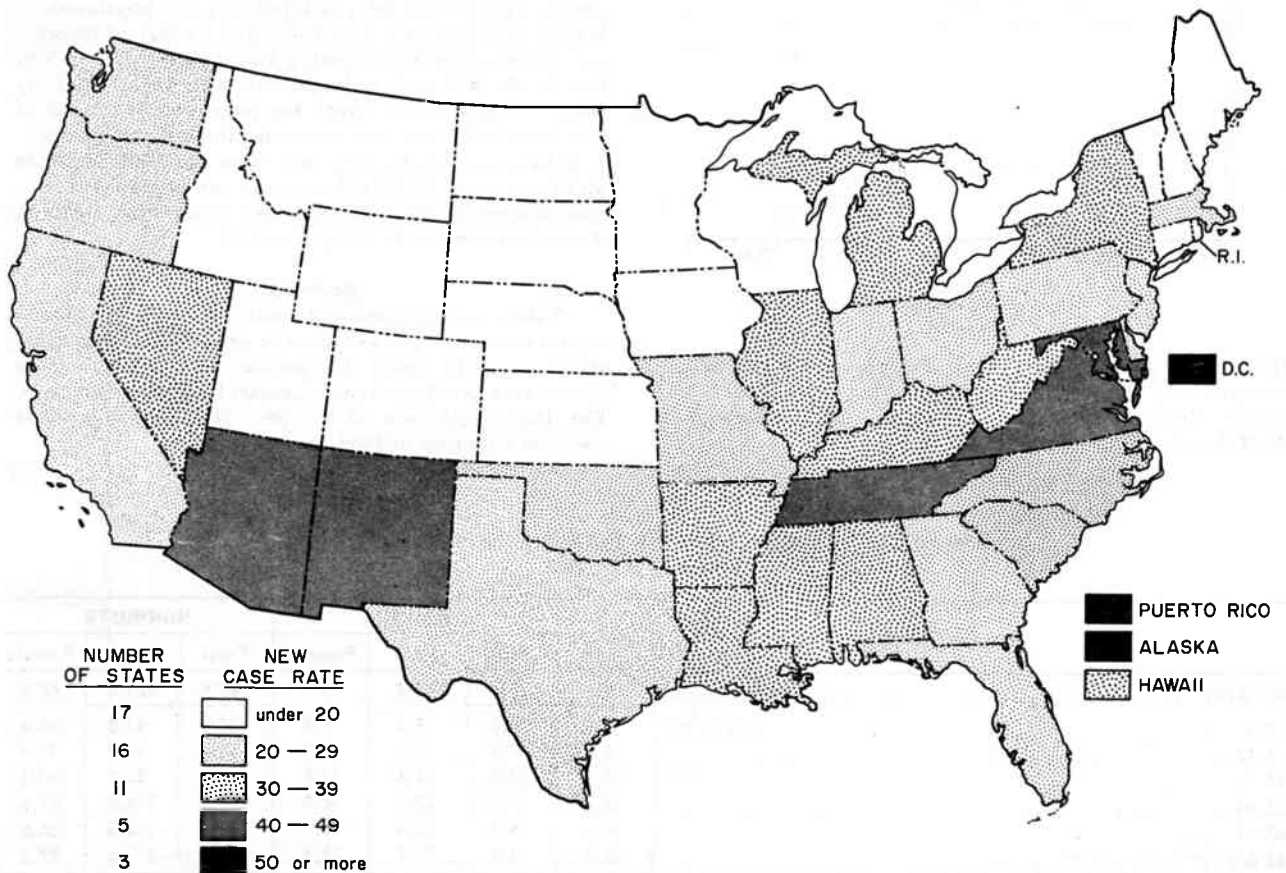
TUBERCULOSIS BY SIZE OF COMMUNITY, 1962



NOTE: Large cities have high case rates but more than half of the new cases are in areas outside of these metropolitan centers.

FIGURE 5

TUBERCULOSIS CASE RATES BY STATE, AVERAGE 1960-1963



# Morbidity and Mortality Weekly Report

## NEW ACTIVE TUBERCULOSIS CASES AND CASE RATES BY STATE, 1962 AND 1963

STATE	New Active Cases		Case Rate Per 100,000 Population		Rank According to Rate		Population July 1, 1963
	1962	1963	1962	1963	1962	1963	
UNITED STATES . . . .	53,315	54,042	28.7	28.7	..	..	188,616,000
CONTINENTAL U.S. . . .	52,698	53,526	28.5	28.5	..	..	187,686,000
Alabama . . . . .	1,164	1,326	35.1	39.3	12	7	3,376,000
Alaska . . . . .	323	279	133.4	113.4	1	1	246,000
Arizona . . . . .	703	631	47.3	41.6	3	3	1,516,000
Arkansas . . . . .	660	672	35.8	35.3	11	11	1,902,000
California . . . . .	5,032	5,034(a)	29.5	28.7	18	22	17,539,000
Colorado . . . . .	294	289	15.5	15.1	39	38	1,918,000
Connecticut . . . . .	337	301	12.8	11.1	42	45	2,715,000
Delaware . . . . .	179	143	38.3	29.8	9	19	480,000
District of Columbia . .	599	474	75.9	59.4	..	..	798,000
Florida . . . . .	1,439	1,563	26.4	28.3	25	25	5,531,000
Georgia . . . . .	1,189	1,261	29.1	29.9	20	18	4,217,000
Hawaii . . . . .	294	237	42.4	34.6	6	13	684,000
Idaho . . . . .	82	71	11.7	10.3	45	46	687,000
Illinois . . . . .	3,895	3,739	38.6	36.0	8	10	10,382,000
Indiana . . . . .	1,231	1,351	26.4	28.3	26	24	4,779,000
Iowa . . . . .	186	186	6.7	6.8	49	50	2,755,000
Kansas . . . . .	273	283	12.3	12.8	43	43	2,217,000
Kentucky . . . . .	1,316	1,190	42.7	38.1	5	9	3,126,000
Louisiana . . . . .	1,060	1,068	31.4	31.3	17	14	3,415,000
Maine . . . . .	164	156	16.8	15.8	36	37	986,000
Maryland . . . . .	1,350	1,361	41.8	40.6	7	5	3,352,000
Massachusetts . . . . .	1,182	1,097	22.8	20.7	31	33	5,296,000
Michigan . . . . .	2,288	2,433	28.4	30.3	24	16	8,031,000
Minnesota . . . . .	501	456	14.4	13.1	41	42	3,492,000
Mississippi . . . . .	654	687	28.9	30.1	22	17	2,286,000
Missouri . . . . .	1,252	1,245	29.0	28.4	21	23	4,384,000
Montana . . . . .	116	127	16.6	18.1	38	34	701,000
Nebraska . . . . .	168	146	11.6	9.9	46	47	1,468,000
Nevada . . . . .	176	135	50.3	34.7	2	12	389,000
New Hampshire . . . . .	70	73	11.3	11.3	47	44	644,000
New Jersey . . . . .	1,533	1,634	24.1	24.9	29	28	6,554,000
New Mexico . . . . .	330	395	33.1	40.1	13	6	986,000
New York . . . . .	6,442	6,756	36.8	38.2	10	8	17,696,000
North Carolina . . . . .	1,344	1,386	28.6	29.0	23	21	4,787,000
North Dakota . . . . .	77	88	12.2	13.6	44	39	645,000
Ohio . . . . .	2,447	2,439	24.4	24.4	27	29	10,000,000
Oklahoma . . . . .	513	584	21.0	23.9	33	30	2,441,000
Oregon . . . . .	417	395	23.1	21.3	30	32	1,852,000
Pennsylvania . . . . .	3,340	3,113	29.3	27.2	19	27	11,425,000
Rhode Island . . . . .	173	154	19.7	17.3	35	35	892,000
South Carolina . . . . .	799	740	32.6	29.6	16	20	2,504,000
South Dakota . . . . .	120	96	16.6	13.6	37	40	708,000
Tennessee . . . . .	1,585	1,541	43.4	41.1	4	4	3,747,000
Texas (b) . . . . .	2,444	2,858	24.1	27.9	28	26	10,228,000
Utah . . . . .	47	80	4.9	8.2	50	49	971,000
Vermont . . . . .	58	54	15.0	13.3	40	41	405,000
Virginia (c) . . . . .	1,391	1,806	32.7	42.2	15	2	4,282,000
Washington . . . . .	655	640	21.8	21.6	32	31	2,961,000
West Virginia . . . . .	593	563	33.0	31.1	14	15	1,813,000
Wisconsin . . . . .	801	676	19.9	16.6	34	36	4,066,000
Wyoming . . . . .	29	30	8.7	8.8	48	48	339,000
Puerto Rico (d) . . . . .	1,816	1,852	73.8	73.4	..	..	2,520,000

(a) Original PHS Report 1393 corrected August 1964.

(b) Increase in 1963 due to change in reporting procedures; now included are primary cases (424), and cases (256) from 86 counties without organized health units.

(c) Increase in 1963 due primarily to more complete reporting of primary cases (437).

(d) Not included in totals.

The District of Columbia is classed as a city, and is not ranked with the states.

## Morbidity and Mortality Weekly Report

## TUBERCULOSIS DEATHS AND DEATH RATES BY STATE, 1962 AND 1963

STATE	Tuberculosis Deaths		Death Rate Per 100,000 Population		Rank According to Rate		Population July 1, 1963
	1962	1963	1962	1963	1962	1963	
UNITED STATES ..	9,506	9,311	5.1	4.9	..	..	188,616,000
CONTINENTAL U.S.	9,464	9,271	5.1	4.9	..	..	187,686,000
Alabama .....	281	282	8.4	8.4	4	5	3,376,000
Alaska .....	19	21	7.9	8.5	7	3	246,000
Arizona .....	146	152	9.8	10.0	1	1	1,516,000
Arkansas .....	177	141	9.6	7.4	3	7	1,902,000
California .....	646	599	3.8	3.4	33	35	17,539,000
Colorado .....	70	63	3.7	3.3	34	36	1,918,000
Connecticut .....	103	86	3.9	3.2	32	38	2,715,000
Delaware .....	23	28	4.9	5.8	22	15	480,000
District of Columbia .	93	98	11.8	12.3	..	..	798,000
Florida .....	224	249	4.1	4.5	30	26	5,531,000
Georgia .....	178	152	4.4	3.6	28	34	4,217,000
Hawaii .....	23	19	3.3	2.8	37	40	684,000
Idaho .....	13	18	1.9	2.6	46	43	687,000
Illinois .....	535	528	5.3	5.1	19	19	10,382,000
Indiana .....	229	223	4.9	4.7	23	25	4,779,000
Iowa .....	62	51	2.2	1.9	45	47	2,755,000
Kansas .....	53	41	2.4	1.8	44	48	2,217,000
Kentucky .....	302	269	9.8	8.6	2	2	3,126,000
Louisiana .....	243	222	7.2	6.5	8	11	3,415,000
Maine .....	43	36	4.4	3.7	27	33	986,000
Maryland .....	232	245	7.2	7.3	9	8	3,352,000
Massachusetts .....	263	251	5.1	4.7	20	23	5,296,000
Michigan .....	334	312	4.2	3.9	29	28	8,031,000
Minnesota .....	89	94	2.6	2.7	41	42	3,492,000
Mississippi .....	125	113	5.5	4.9	17	21	2,286,000
Missouri .....	272	266	6.3	6.1	12	13	4,384,000
Montana .....	32	27	4.6	3.9	26	30	701,000
Nebraska .....	26	15	1.8	1.0	47	50	1,468,000
Nevada .....	20	20	5.7	5.1	15	17	389,000
New Hampshire .....	17	14	2.7	2.2	40	45	644,000
New Jersey .....	347	363	5.4	5.5	18	16	6,554,000
New Mexico .....	70	70	7.0	7.1	10	9	986,000
New York .....	1,094	1,049	6.3	5.9	13	14	17,696,000
North Carolina .....	173	185	3.7	3.9	35	29	4,787,000
North Dakota .....	10	12	1.6	1.9	49	46	645,000
Ohio .....	409	441	4.1	4.4	31	27	10,000,000
Oklahoma .....	153	152	6.3	6.2	14	12	2,441,000
Oregon .....	44	59	2.4	3.2	43	37	1,852,000
Pennsylvania .....	784	744	6.9	6.5	11	10	11,425,000
Rhode Island .....	30	34	3.4	3.8	36	32	892,000
South Carolina .....	113	122	4.6	4.9	25	22	2,504,000
South Dakota .....	21	27	2.9	3.8	38	31	708,000
Tennessee .....	305	297	8.4	7.9	5	6	3,747,000
Texas .....	506	506	5.0	4.9	21	20	10,228,000
Utah .....	16	25	1.7	2.6	48	44	971,000
Vermont .....	22	19	5.7	4.7	16	24	405,000
Virginia .....	197	219	4.6	5.1	24	18	4,282,000
Washington .....	87	84	2.9	2.8	39	39	2,961,000
West Virginia .....	145	153	8.1	8.4	6	4	1,813,000
Wisconsin .....	103	111	2.6	2.7	42	41	4,066,000
Wyoming .....	4	4	1.2	1.2	50	49	339,000

NOTE: The District of Columbia is classed as a city, hence is not ranked with the states.

REPORTED CASES OF POST-INFECTIOUS AND POST-IMMUNIZATION  
ENCEPHALITIS FOR NOVEMBER AND DECEMBER  
NINE WEEKS FROM 11-7-64 - 1-2-65

State	Mumps	Chickenpox	Measles	Rubella	Influenza	Herpes Simplex	Respiratory Syncytial	Post-Immunization	
								Post-Vaccinal	Post-Pertussis
Arkansas	.....	.....	1	.....	1	.....	.....	.....	.....
California	26	.....	2	.....	.....	.....	.....	.....	.....
Georgia	.....	.....	2	.....	.....	.....	.....	.....	.....
Illinois	3	1	1	.....	.....	.....	.....	.....	.....
Iowa	1	.....	.....	.....	.....	.....	.....	.....	.....
Nebraska	1	.....	.....	.....	.....	.....	.....	.....	.....
New York, Upstate	1	2	.....	.....	.....	.....	.....	1	.....
Pennsylvania	4	1	.....	.....	1	.....	.....	1	.....
Rhode Island	5	.....	1	.....	.....	.....	.....	.....	.....
Virginia	1	.....	.....	.....	.....	.....	.....	.....	.....
Washington	2	.....	.....	.....	.....	.....	.....	.....	.....
U.S. Total	44	4	7	.....	2	.....	.....	2	.....
U.S. Cumulative Total* Through 1/2/65	480	64	182	34	12	10	1	3	1

\* Includes revised and delayed reports.

(States not reporting a case not listed)

SALMONELLA REPORT

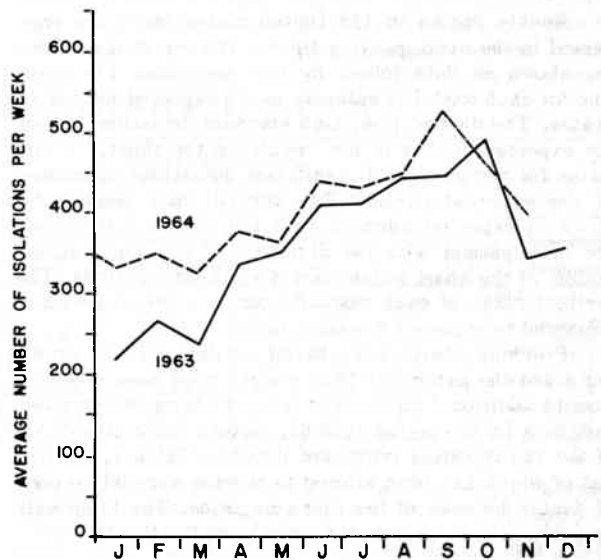
During November 1964, 1,595 human isolations of salmonella were reported to the Salmonella Surveillance Unit for an average number of isolations per week of 339. This represents a decrease of 63 from the figure for October 1964 but an increase of 144 isolations over the figure for November 1963. The decrease from October to November in 1964, parallels that seen during the same period in 1963 and is felt to be related to seasonal variations.

The 7 most frequently reported serotypes accounted for 62 percent of all isolations although representing only 10 percent of the 70 different serotypes reported during the month. The 7 commonest serotypes isolated and their respective frequency calculated as a percentage of total isolates is shown below.

- Salmonella typhi-murium* and *S. typhi-murium* var. *copenhagen* 27.0 percent
- S. infantis* 7.7 percent
- S. heidelberg* 7.3 percent
- S. newport* 6.7 percent
- S. enteritidis* 4.9 percent
- S. derby* 4.3 percent
- S. oranienburg* 3.8 percent

There were 479 nonhuman isolates reported in November, representing a decrease of 73 from the previous month. The commonest nonhuman isolate was *S. typhi-murium* and *S. typhi-murium* var. *copenhagen* which accounted for 19.6 percent of all nonhuman isolates.

REPORTED HUMAN ISOLATIONS OF SALMONELLAE IN THE UNITED STATES 1963 - 1964



## Morbidity and Mortality Weekly Report

## SUMMARY OF REPORTED CASES OF INFECTIOUS SYPHILIS

CASES OF PRIMARY AND SECONDARY SYPHILIS: BY REPORTING AREA DECEMBER 1964 AND DECEMBER 1963 - PROVISIONAL DATA

Reporting Area	DECEMBER		Cumulative JAN. - DEC.		Reporting Area	DECEMBER		Cumulative JAN. - DEC.	
	1964	1963	1964	1963		1964	1963	1964	1963
NEW ENGLAND.....	42	39	484	465	EAST SOUTH CENTRAL.....	171	109	1,921	1,537
Maine.....	2	1	8	12	Kentucky.....	20	10	178	149
New Hampshire.....	1	-	10	5	Tennessee.....	38	34	479	400
Vermont.....	-	-	3	7	Alabama.....	78	56	902	695
Massachusetts.....	21	27	284	300	Mississippi.....	35	9	362	293
Rhode Island.....	1	1	18	14	WEST SOUTH CENTRAL.....	182	195	2,596	2,694
Connecticut.....	17	10	161	127	Arkansas.....	22	17	227	201
MIDDLE ATLANTIC.....	470	518	5,454	6,171	Louisiana.....	55	44	737	560
Upstate New York.....	42	70	635	711	Oklahoma.....	16	23	151	198
New York City.....	299	288	3,180	3,489	Texas.....	89	111	1,481	1,735
Pa. (Excl. Phila.).....	16	13	182	173	MOUNTAIN.....	35	43	532	491
Philadelphia.....	22	30	309	611	Montana.....	1	1	32	14
New Jersey.....	91	117	1,148	1,187	Idaho.....	1	1	8	8
EAST NORTH CENTRAL.....	249	157	2,487	1,964	Wyoming.....	-	1	8	16
Ohio.....	58	52	584	433	Colorado.....	2	4	35	37
Indiana.....	5	5	70	56	New Mexico.....	10	21	180	148
Downstate Illinois.....	22	7	160	119	Arizona.....	14	10	219	194
Chicago.....	103	47	979	849	Utah.....	1	-	10	17
Michigan.....	58	41	622	453	Nevada.....	6	5	40	57
Wisconsin.....	3	5	72	54	PACIFIC.....	178	223	2,308	2,251
WEST NORTH CENTRAL.....	44	41	552	490	Washington.....	2	6	73	124
Minnesota.....	9	4	124	75	Oregon.....	5	15	76	71
Iowa.....	4	3	37	29	California.....	167	200	2,131	2,028
Missouri.....	19	15	253	224	Alaska.....	-	1	9	8
North Dakota.....	-	-	-	4	Hawaii.....	4	1	19	20
South Dakota.....	5	9	53	39	U. S. TOTAL.....	1,875	1,724	23,171	22,251
Nebraska.....	4	6	56	60	TERRITORIES.....	73	39	874	841
Kansas.....	3	4	29	59	Puerto Rico.....	71	31	845	825
SOUTH ATLANTIC.....	504	399	6,837	6,188	Virgin Islands.....	2	8	29	16
Delaware.....	3	4	84	53					
Maryland.....	38	29	513	542					
District of Columbia.....	36	40	698	676					
Virginia.....	20	24	307	329					
West Virginia.....	8	8	59	47					
North Carolina.....	138	49	1,176	874					
South Carolina.....	58	46	860	721					
Georgia.....	83	64	1,137	1,063					
Florida.....	120	135	2,003	1,883					

Note: Cumulative Totals include revised and delayed reports through previous months.

## THE CURRENT MORTALITY CHART

Weekly deaths in 122 United States cities are presented in the accompanying figure. The reported numbers are shown as dots joined by line segments. The solid line for each mortality category is the expected number of deaths. The dashed line, 1.65 standard deviations above the expected number is the "epidemic threshold," a criterion for recognition of significant deviations in excess of the expected number. The vertical bars joining the curve of expected numbers with the epidemic threshold are in alignment with the divisions of the scale at the bottom of the chart which mark 4-week time periods. The vertical scale of each mortality curve is the same when measured in standard deviation units.

Previous charts were based on data for 108 cities but since the autumn of 1957 reports have been received from 14 additional cities. The present charts, constructed from data for the period 1959-63, include these cities. All of the 122 reporting cities are listed in Table 4, the format of which has been altered to provide a weekly record of deaths by each of the four categories. The table will be published each week, the chart periodically.

## The Data

The deaths reported are those recorded each week in the Vital Statistics Offices of the 122 cities. They are by place of occurrence of death, thus including deaths of persons whose residence may be elsewhere and not including deaths of residents which occur in other vital

statistics jurisdictions. The report is a count of deaths certificates filed; so that each week the deaths recorded include some which happened during the preceding week. The number of delayed certificates usually increases during holiday periods, causing a negative deviation during the holiday week, followed by a positive deviation when the delayed certificates are included in the report for the succeeding week.

The population of the central cities of the 122 reporting cities was 49,566,346 in 1960 but inclusion of the urban fringe population increases this total to 82,304,118. Since the central cities frequently include hospital facilities and nursing homes which provide services to surrounding areas, the principal population in which the reported deaths occur is in the range of 50-80 million persons. Because of this great range the charts show the number of deaths rather than the death rate. In order to compensate for secular change in number of deaths as a result of changes in population, hospital facilities and death rates, a linear secular trend component, described in the table (p. 9), is included in the estimation of the expected number of deaths.

## Excess Mortality

During influenza epidemics marked excess pneumonia-influenza mortality extending over a period of several weeks is characteristic. This is evident on the chart for



the period early in 1963. For a full account see Collins (1957) and Langmuir *et al.*, (1964). Associated increases in deaths from all causes also may be observed. These are primarily deaths assigned to heart diseases and other chronic conditions. The relationship to influenza epidemics has been discussed by Eickhoff *et al.*, (1961) and by Collins and Lehman (1953).

Excess mortality in the 122 cities during influenza epidemics since the pandemic of 1957-58 is given in Table 1. Influenza A<sub>2</sub> first appeared in the United States in the summer of 1957. Excess mortality became noticeable in October, rose to a maximum during the week ending November 2nd and then decreased to near the expected numbers in late December. This was the first early autumn episode of this kind since the 1918 pandemic. In early 1958 excess mortality rose again, reaching a peak during the week ending March 1. This "second wave" appeared at the usual time of excess epidemic mortality. Outbreaks of Influenza A<sub>2</sub> accompanied by marked excess mortality occurred again in early 1960 and in early 1963. During these epidemics excess mortality was of the same order of magnitude as during the second wave of 1957-58.

Minor influenza Type B epidemics were observed in 1952 and 1955 but the first major recurrence since 1944 took place in 1962. In this epidemic excess mortality recorded for both pneumonia-influenza and deaths from all causes was lower than in the Type A<sub>2</sub> epidemics of the 1958-63 period. Excess mortality among persons under 65 years of age was negligible.

Brief periods of excess mortality may be observed in summer months during severe heat waves. An account of two recent episodes in the East North Central States has been given by Schuman *et al.*, (1964). One of these occurring in the 7th period of 1963, is reflected in the data for the 122 cities.

Martin and Bradley (1960) report increased mortality in London immediately following days of heavy fog and atmospheric pollution but it seems unlikely in this country that such occurrences would happen simultaneously in

a sufficiently large number of cities to cause marked upward deviations in the combined reports of the 122 cities.

### Construction of the Mortality Curves

The curves of expected mortality are of the form

$$\text{Expected Deaths} = \mu + rt + \sum_{i=1}^2 A_i \cos(\theta_t + \phi_i). \quad (1)$$

In this equation  $r$  is a linear trend coefficient, positive except in the curve for deaths under one year of age; the cosine function describes the seasonal variation. The procedures employed, using data for the period September 1959 through August 1963 differ from those previously described, (Serfling, 1964) by inclusion of a second cosine term. In the earlier studies, using data for the period 1954-1960, only a single cosine term was required. Least squares estimates of the parameters of equation (1) were obtained by an analytical inversion of the coefficient matrix of the normal equations, a modification of the method given in the paper cited.

As described in that paper the epidemic threshold (dashed line in the figure) was calculated from the differences between observed and expected values after exclusion of epidemic periods and other weeks with extreme deviations. It is placed at a distance (1.65 standard deviations above the expected level) such that the random occurrence of two successive deviations which exceed the epidemic threshold is unlikely. If the deviations were successive independent events the odds would be 9 to 1 against the occurrence of one or more runs of two such events in a series of 26 trials. The "epidemic threshold" thus serves as a device for screening random fluctuations which may occur because of temporary variations in mortality, artifacts such as delayed reporting and other variations of a random character. In practice the stated odds are approximate since successive deviations are not independent but exhibit a small negative serial correlation. Use of this criterion for several years has indicated that the discrepancy between theory and practice is not serious.

### EXCESS MORTALITY IN THE 122 CITIES DURING RECENT INFLUENZA EPIDEMICS

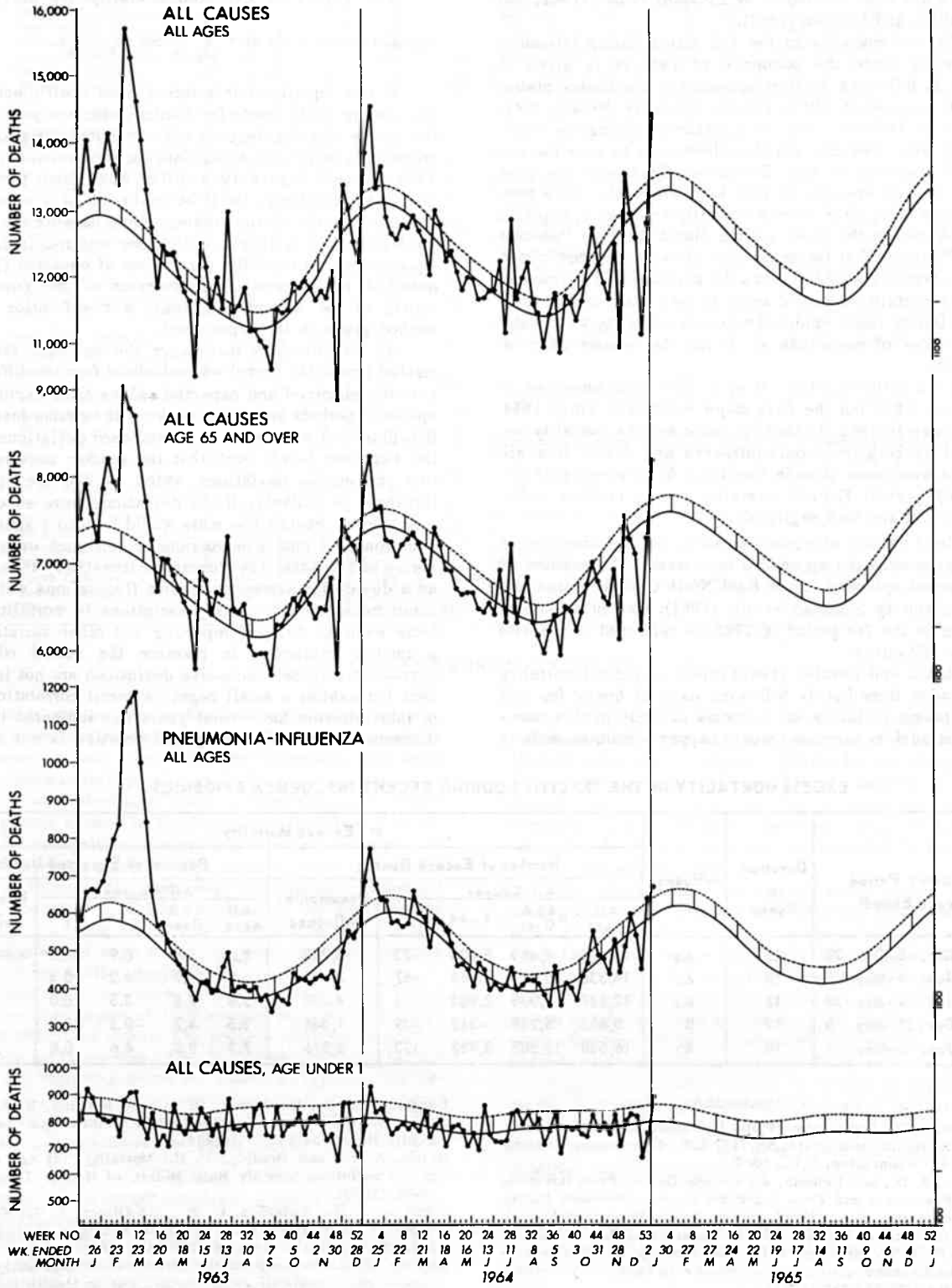
Epidemic Period (Weeks Ended)	Duration in Weeks	Influenza Type	Excess Mortality									
			Number of Excess Deaths					Percent of Expected Deaths				
			All Causes				Pneumonia- Influenza	All Causes				
			All Ages	65 & Over	1-64	Under 1		All Ages	65 & Over	1-64	Under 1	Pneumonia- Influenza
1957, Oct. 5-Dec. 28	13	A <sub>2</sub>	12,426	7,469	5,030	-73	3,753	8.6	9.8	8.9	-0.6	77.7
1958, Jan. 4-May 3	18	A <sub>2</sub>	14,330	10,911	3,486	-67	3,416	6.8	9.7	4.2	-0.4	41.5
1960, Jan. 2-Apr. 30	18	A <sub>2</sub>	12,237	9,333	2,903	1	4,400	5.6	7.8	3.5	0.0	49.1
1962, Dec. 30-May 5	19	B	5,855	6,216	-312	-49	1,446	2.5	4.7	-0.3	-0.3	14.4
1963, Jan. 5-May 4	18	A <sub>2</sub>	16,550	12,505	3,922	123	3,816	7.3	9.8	4.6	0.8	38.7

### REFERENCES

- Collins, S. D.: Long Term Trends in Illness and Medical Care. Public Health Monograph No. 48, U.S. Government Printing Office, Washington, D.C., 1957.
- Collins, S. D., and Lehman, J.: Excess Deaths From Influenza and Pneumonia and From Important Chronic Diseases During Epidemic Periods, 1918-51. Public Health Monograph No. 10, U.S. Government Printing Office, Washington, D.C., 1953.
- Eickhoff, T. C., Sherman, I. L., and Serfling, R. E.: Observations on excess mortality associated with epidemic influenza. J.A.M.A. 176:776-782 (1961).

- Langmuir, A. D., Henderson, D. A., and Serfling, R. E.: The epidemiological basis for the control of influenza. Amer. J. Public Health 54:563-571 (1964).
- Martin, A. E., and Bradley, V. H.: Mortality, fog and atmospheric pollution. Monthly Bull. Minist. of Health (Lond.) 19: 56-72 (1960).
- Schuman, S. H., Anderson, C. P., and Oliver, J. T.: Epidemiology of successive heat waves in Michigan in 1962 and 1963. Public Health Rep. 189:131-136 (1964).
- Serfling, R. E.: Methods for the current statistical analysis of excess pneumonia-influenza deaths. Public Health Rep. 78: 494-506 (1963).

DEATHS IN 122 UNITED STATES CITIES THROUGH THE WEEK ENDING JANUARY 9, 1965



PNEUMONIA-INFLUENZA DEATHS IN 122 UNITED STATES CITIES

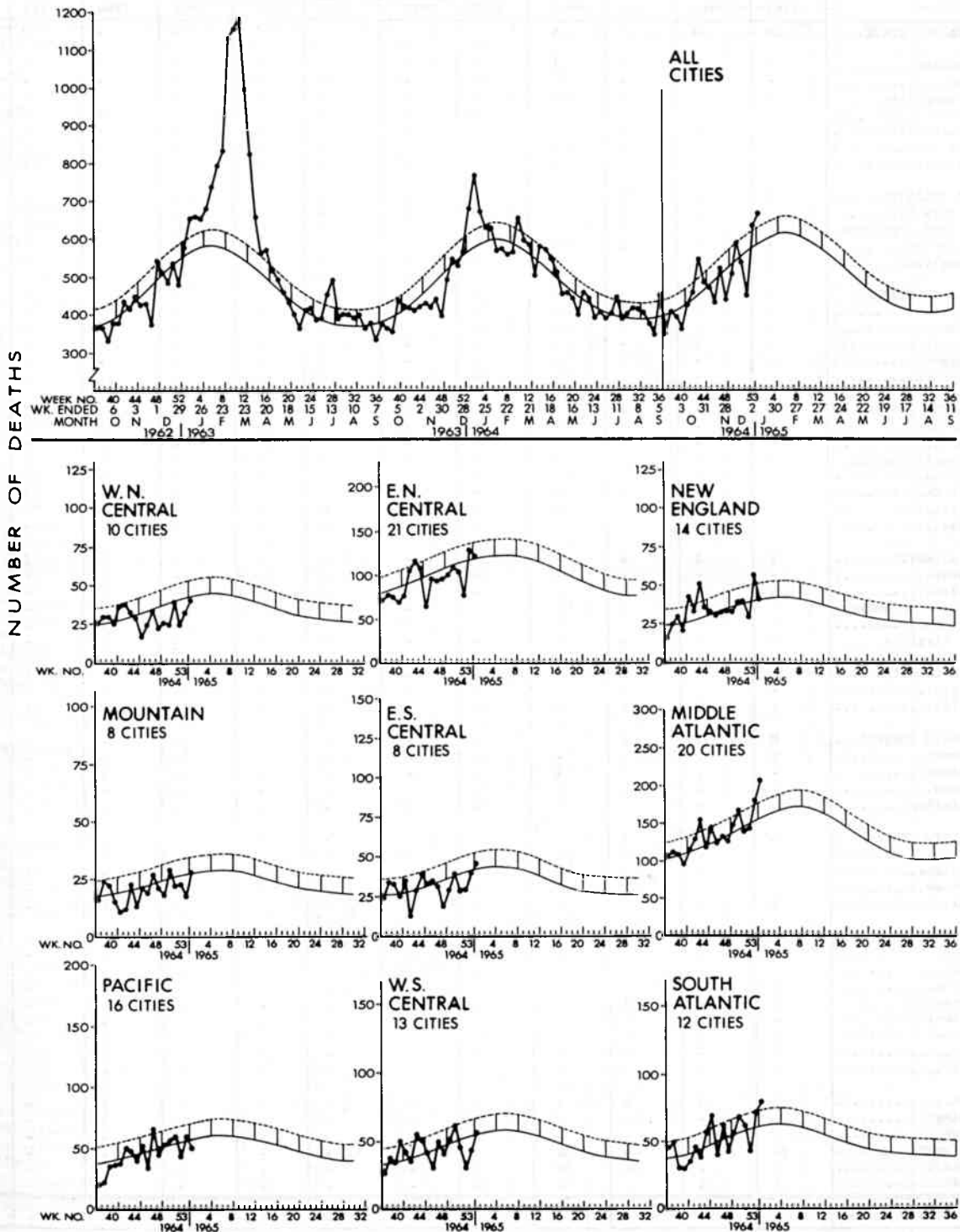




Table 3. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDED  
JANUARY 9, 1965 AND JANUARY 4, 1964 (1st WEEK) - Continued

Area	Brucel- losis	Infectious Hepatitis including Serum Hepatitis					Meningococcal Infections			Tetanus	
		Total incl. unk.	Under 20 years	20 years and over	Cumulative Totals		1965	Cumulative		1965	Cum. 1965
					1965	1964		1965	1964		
UNITED STATES...	8	685	343	283	685	625	50	50	37	3	3
NEW ENGLAND.....	-	46	20	19	46	91	1	1	2	1	1
Maine.....	-	15	9	4	15	40	-	-	-	-	-
New Hampshire.....	-	5	-	4	5	13	-	-	-	1	1
Vermont.....	-	3	1	1	3	8	-	-	-	-	-
Massachusetts.....	-	11	6	5	11	17	1	1	1	-	-
Rhode Island.....	-	3	1	2	3	3	-	-	-	-	-
Connecticut.....	-	9	3	3	9	10	-	-	1	-	-
MIDDLE ATLANTIC.....	-	114	56	58	114	183	7	7	4	-	-
New York City.....	-	28	11	17	28	27	2	2	1	-	-
New York, Up-State.....	-	31	23	8	31	109	3	3	2	-	-
New Jersey.....	-	21	6	15	21	13	1	1	-	-	-
Pennsylvania.....	-	34	16	18	34	34	1	1	1	-	-
EAST NORTH CENTRAL...	-	137	83	37	137	34	4	4	1	-	-
Ohio.....	-	55	30	10	55	20	2	2	-	-	-
Indiana.....	-	5	2	3	5	-	-	-	-	-	-
Illinois.....	-	23	19	4	23	2	2	2	1	-	-
Michigan.....	-	41	25	16	41	3	-	-	-	-	-
Wisconsin.....	-	13	7	4	13	9	-	-	-	-	-
WEST NORTH CENTRAL...	7	46	27	18	46	36	4	4	-	2	2
Minnesota.....	-	2	1	1	2	-	-	-	-	1	1
Iowa.....	7	30	18	11	30	9	-	-	-	-	-
Missouri.....	-	3	2	1	3	4	1	1	-	1	1
North Dakota.....	-	-	-	-	-	-	3	3	-	-	-
South Dakota.....	-	1	1	-	1	7	-	-	-	-	-
Nebraska.....	-	-	-	-	-	6	-	-	-	-	-
Kansas.....	-	10	5	5	10	10	-	-	-	-	-
SOUTH ATLANTIC.....	-	65	24	36	65	43	11	11	7	-	-
Delaware.....	-	-	-	-	-	-	-	-	-	-	-
Maryland.....	-	13	7	5	13	13	-	-	1	-	-
Dist. of Columbia..	-	-	-	-	-	1	-	-	-	-	-
Virginia.....	-	12	5	3	12	4	1	1	-	-	-
West Virginia.....	-	3	3	-	3	-	1	1	-	-	-
North Carolina.....	-	7	2	5	7	5	-	-	1	-	-
South Carolina.....	-	3	2	1	3	-	-	-	2	-	-
Georgia.....	-	9	2	7	9	-	4	4	-	-	-
Florida.....	-	18	3	15	18	20	5	5	3	-	-
EAST SOUTH CENTRAL...	1	31	18	13	31	43	3	3	3	-	-
Kentucky.....	-	10	9	1	10	21	1	1	2	-	-
Tennessee.....	1	9	5	4	9	14	2	2	1	-	-
Alabama.....	-	10	4	6	10	7	-	-	-	-	-
Mississippi.....	-	2	-	2	2	1	-	-	-	-	-
WEST SOUTH CENTRAL...	-	89	52	36	89	32	9	9	7	-	-
Arkansas.....	-	14	8	6	14	5	2	2	1	-	-
Louisiana.....	-	10	8	2	10	3	1	1	1	-	-
Oklahoma.....	-	3	-	3	3	2	3	3	2	-	-
Texas.....	-	62	36	25	62	22	3	3	3	-	-
MOUNTAIN.....	-	42	9	5	42	37	-	-	5	-	-
Montana.....	-	4	3	1	4	1	-	-	-	-	-
Idaho.....	-	9	-	-	9	2	-	-	1	-	-
Wyoming.....	-	2	2	-	2	-	-	-	-	-	-
Colorado.....	-	1	-	-	1	8	-	-	2	-	-
New Mexico.....	-	6	3	2	6	3	-	-	2	-	-
Arizona.....	-	17	-	-	17	15	-	-	-	-	-
Utah.....	-	3	1	2	3	7	-	-	-	-	-
Nevada.....	-	-	-	-	-	1	-	-	-	-	-
PACIFIC.....	-	115	54	61	115	126	11	11	8	-	-
Washington.....	-	3	1	2	3	27	-	-	1	-	-
Oregon.....	-	17	13	4	17	8	-	-	-	-	-
California.....	-	79	26	53	79	78	10	10	7	-	-
Alaska.....	-	16	14	2	16	9	1	1	-	-	-
Hawaii.....	-	-	-	-	-	4	-	-	-	-	-
Puerto Rico	-	-	-	-	-	2	-	-	-	-	-

Table 3. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDED  
JANUARY 9, 1965 AND JANUARY 4, 1964 (1st WEEK) - Continued

Area	Measles			Strept. Sore Th. & Scarlet Fev.	Tularemia		Typhoid Fever		Rabies in Animals	
	1965	Cumulative			1965	Cum. 1965	1965	Cum. 1965	1965	Cum. 1965
		1965	1964							
UNITED STATES...	5,203	5,203	3,191	8,667	4	4	1	1	92	92
NEW ENGLAND.....	1,876	1,876	149	1,044	-	-	-	-	1	1
Maine.....	257	257	6	162	-	-	-	-	-	-
New Hampshire.....	58	58	3	6	-	-	-	-	-	-
Vermont.....	5	5	22	7	-	-	-	-	-	-
Massachusetts.....	896	896	57	82	-	-	-	-	-	-
Rhode Island.....	84	84	6	47	-	-	-	-	-	-
Connecticut.....	576	576	55	740	-	-	-	-	1	1
MIDDLE ATLANTIC.....	115	115	815	396	-	-	-	-	4	4
New York City.....	28	28	316	22	-	-	-	-	-	-
New York, up-State.	32	32	169	300	-	-	-	-	2	2
New Jersey.....	-	-	181	35	-	-	-	-	-	-
Pennsylvania.....	55	55	149	39	-	-	-	-	2	2
EAST NORTH CENTRAL...	502	502	322	886	-	-	-	-	3	3
Ohio.....	69	69	94	94	-	-	-	-	-	-
Indiana.....	32	32	120	148	-	-	-	-	2	2
Illinois.....	25	25	23	89	-	-	-	-	-	-
Michigan.....	248	248	21	366	-	-	-	-	-	-
Wisconsin.....	128	128	64	189	-	-	-	-	1	1
WEST NORTH CENTRAL...	350	350	59	392	-	-	-	-	12	12
Minnesota.....	3	3	-	8	-	-	-	-	3	3
Iowa.....	158	158	17	79	-	-	-	-	4	4
Missouri.....	49	49	-	12	-	-	-	-	1	1
North Dakota.....	124	124	41	226	-	-	-	-	3	3
South Dakota.....	12	12	1	44	-	-	-	-	-	-
Nebraska.....	4	4	-	3	-	-	-	-	-	-
Kansas.....	NN	NN	NN	20	-	-	-	-	1	1
SOUTH ATLANTIC.....	783	783	436	1,134	2	2	-	-	12	12
Delaware.....	12	12	-	15	-	-	-	-	-	-
Maryland.....	10	10	71	53	-	-	-	-	-	-
Dist. of Columbia..	-	-	17	1	-	-	-	-	-	-
Virginia.....	40	40	100	212	-	-	-	-	12	12
West Virginia.....	653	653	174	500	-	-	-	-	-	-
North Carolina.....	27	27	12	27	-	-	-	-	-	-
South Carolina.....	13	13	53	111	1	1	-	-	-	-
Georgia.....	5	5	-	34	1	1	-	-	-	-
Florida.....	23	23	9	181	-	-	-	-	-	-
EAST SOUTH CENTRAL...	233	233	592	1,303	-	-	-	-	41	41
Kentucky.....	6	6	426	87	-	-	-	-	2	2
Tennessee.....	165	165	146	1,114	-	-	-	-	37	37
Alabama.....	26	26	13	71	-	-	-	-	2	2
Mississippi.....	36	36	7	31	-	-	-	-	-	-
WEST SOUTH CENTRAL...	491	491	207	794	1	1	1	1	15	15
Arkansas.....	-	-	25	1	-	-	1	1	-	-
Louisiana.....	1	1	-	-	-	-	-	-	2	2
Oklahoma.....	5	5	1	15	1	1	-	-	4	4
Texas.....	485	485	181	778	-	-	-	-	9	9
MOUNTAIN.....	521	521	191	1,414	1	1	-	-	1	1
Montana.....	232	232	55	37	-	-	-	-	-	-
Idaho.....	76	76	52	122	-	-	-	-	-	-
Wyoming.....	15	15	-	38	-	-	-	-	-	-
Colorado.....	76	76	16	598	-	-	-	-	-	-
New Mexico.....	14	14	5	324	-	-	-	-	-	-
Arizona.....	22	22	45	179	-	-	-	-	1	1
Utah.....	86	86	7	116	1	1	-	-	-	-
Nevada.....	-	-	11	-	-	-	-	-	-	-
PACIFIC.....	332	332	420	1,304	-	-	-	-	3	3
Washington.....	5	5	99	109	-	-	-	-	-	-
Oregon.....	132	132	33	21	-	-	-	-	-	-
California.....	152	152	167	1,064	-	-	-	-	3	3
Alaska.....	2	2	119	32	-	-	-	-	-	-
Hawaii.....	41	41	2	78	-	-	-	-	-	-
Puerto Rico	40	40	11	-	-	-	-	-	-	-

# Morbidity and Mortality Weekly Report

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Week No. **1**      **Table 4. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED JANUARY 9, 1965**

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

Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes	Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes
	All Ages	65 years and over				All Ages	65 years and over		
<b>NEW ENGLAND:</b>	859	511	41	66	<b>SOUTH ATLANTIC:</b>	1,347	681	79	99
Boston, Mass.-----	260	147	13	21	Atlanta, Ga.-----	154	65	9	12
Bridgeport, Conn.-----	49	24	3	4	Baltimore, Md.-----	275	132	11	22
Cambridge, Mass.-----	35	22	-	2	Charlotte, N. C.-----	56	22	8	6
Fall River, Mass.-----	58	40	2	3	Jacksonville, Fla.-----	93	47	-	8
Hartford, Conn.-----	53	31	-	5	Miami, Fla.-----	102	55	-	5
Lowell, Mass.-----	31	24	2	3	Norfolk, Va.-----	78	42	6	9
Lynn, Mass.-----	25	19	3	-	Richmond, Va.-----	113	55	7	11
New Bedford, Mass.-----	31	20	2	2	Savannah, Ga.-----	42	21	3	4
New Haven, Conn.-----	64	22	2	12	St. Petersburg, Fla.-----	89	68	11	2
Providence, R. I.-----	60	36	4	6	Tampa, Fla.-----	82	48	6	4
Somerville, Mass.-----	16	12	1	-	Washington, D. C.-----	205	108	14	10
Springfield, Mass.-----	66	41	4	3	Wilmington, Del.-----	58	18	4	6
Waterbury, Conn.-----	45	33	-	-	<b>EAST SOUTH CENTRAL:</b>	733	399	45	39
Worcester, Mass.-----	66	40	5	5	Birmingham, Ala.-----	94	48	3	9
<b>MIDDLE ATLANTIC:</b>	4,087	2,416	206	216	Chattanooga, Tenn.-----	46	27	8	2
Albany, N. Y.-----	46	28	2	4	Knoxville, Tenn.-----	60	35	1	4
Allentown, Pa.-----	44	26	2	3	Louisville, Ky.-----	107	64	14	5
Buffalo, N. Y.-----	188	119	6	9	Memphis, Tenn.-----	186	99	4	5
Camden, N. J.-----	62	33	3	8	Mobile, Ala.-----	56	28	3	5
Elizabeth, N. J.-----	39	19	1	3	Montgomery, Ala.-----	58	28	4	3
Erie, Pa.-----	57	34	1	4	Nashville, Tenn.-----	126	70	8	6
Jersey City, N. J.-----	103	61	8	5	<b>WEST SOUTH CENTRAL:</b>	1,243	640	56	87
Newark, N. J.-----	149	70	6	29	Austin, Tex.-----	39	23	3	1
New York City, N. Y.-----	2,129	1,254	104	99	Baton Rouge, La.-----	52	35	1	-
Paterson, N. J.-----	48	31	5	5	Corpus Christi, Tex.-----	25	10	2	3
Philadelphia, Pa.-----	497	289	12	12	Dallas, Tex.-----	144	71	6	5
Pittsburgh, Pa.-----	267	152	12	13	El Paso, Tex.-----	44	18	4	5
Reading, Pa.-----	59	37	4	6	Fort Worth, Tex.-----	102	57	3	10
Rochester, N. Y.-----	130	84	18	5	Houston, Tex.-----	256	105	9	24
Schenectady, N. Y.-----	31	22	-	-	Little Rock, Ark.-----	70	43	9	3
Scranton, Pa.-----	55	39	2	1	New Orleans, La.-----	153	83	4	7
Syracuse, N. Y.-----	69	43	-	4	Oklahoma City, Okla.-----	129	67	4	9
Trenton, N. J.-----	26	14	5	5	San Antonio, Tex.-----	119	64	2	15
Utica, N. Y.-----	36	27	8	-	Shreveport, La.-----	59	37	6	4
Yonkers, N. Y.-----	52	34	7	1	Tulsa, Okla.-----	51	27	3	1
<b>EAST NORTH CENTRAL:</b>	2,910	1,586	121	195	<b>MOUNTAIN:</b>	485	292	28	33
Akron, Ohio-----	95	56	1	2	Albuquerque, N. Mex.-----	43	22	3	4
Canton, Ohio-----	51	31	4	1	Colorado Springs, Colo.-----	25	17	2	1
Chicago, Ill.-----	904	472	46	74	Denver, Colo.-----	118	69	6	7
Cincinnati, Ohio-----	189	118	3	8	Ogden, Utah-----	25	19	3	2
Cleveland, Ohio-----	266	139	4	23	Phoenix, Ariz.-----	128	70	10	11
Columbus, Ohio-----	125	57	1	10	Pueblo, Colo.-----	20	14	-	1
Dayton, Ohio-----	82	51	4	5	Salt Lake City, Utah-----	59	44	2	3
Detroit, Mich.-----	327	176	17	17	Tucson, Ariz.-----	67	37	2	4
Evansville, Ind.-----	35	23	2	2	<b>PACIFIC:*</b>	1,706	1,049	50	92
Flint, Mich.-----	56	24	4	7	Berkeley, Calif.-----	27	18	-	1
Fort Wayne, Ind.-----	48	30	4	1	Fresno, Calif.-----	49	30	1	2
Gary, Ind.-----	27	8	3	1	Glendale, Calif.-----	27	20	-	-
Grand Rapids, Mich.-----	42	32	5	1	Honolulu, Hawaii-----	57	21	1	8
Indianapolis, Ind.-----	141	67	7	16	Long Beach, Calif.-----	76	47	-	5
Madison, Wis.-----	34	20	-	3	Los Angeles, Calif.-----	475	277	23	36
Milwaukee, Wis.-----	172	95	3	6	Oakland, Calif.-----	102	66	1	8
Peoria, Ill.-----	35	21	-	1	Pasadena, Calif.*-----	36	27	-	1
Rockford, Ill.-----	42	22	4	5	Portland, Oreg.-----	182	108	3	7
South Bend, Ind.-----	47	30	2	1	Sacramento, Calif.-----	76	48	2	1
Toledo, Ohio-----	130	78	6	7	San Diego, Calif.-----	114	65	5	9
Youngstown, Ohio-----	62	36	1	4	San Francisco, Calif.-----	201	126	3	3
<b>WEST NORTH CENTRAL:</b>	1,056	598	40	66	San Jose, Calif.*-----	41	26	4	2
Des Moines, Iowa-----	82	48	6	5	Seattle, Wash.-----	140	97	3	7
Duluth, Minn.-----	44	28	-	2	Spokane, Wash.-----	61	43	3	-
Kansas City, Kans.-----	41	14	2	5	Tacoma, Wash.*-----	42	30	1	2
Kansas City, Mo.-----	182	102	5	11	<b>Total</b>	<b>14,426</b>	<b>8,172</b>	<b>666</b>	<b>893</b>
Lincoln, Nebr.-----	43	26	1	1	<b>Cumulative Totals</b>				
Minneapolis, Minn.-----	146	86	5	12	including reported corrections for previous weeks				
Omaha, Nebr.-----	84	45	2	9	All Causes, All Ages-----	14,426			
St. Louis, Mo.-----	310	178	13	14	All Causes, Age 65 and over-----	8,172			
St. Paul, Minn.-----	74	42	2	4	Pneumonia and Influenza, All Ages-----	666			
Wichita, Kans.-----	50	29	4	3	All Causes, Under 1 Year of Age-----	893			

\*Estimate - based on average percent of divisional total.

INTERNATIONAL NOTES - QUARANTINE MEASURES

Immunization Information for International Travel  
1963-64 edition - Public Health Service Publication No. 384

The following change should be made in the list of  
Yellow Fever Vaccination Centers in Section 6:

Page 77 - Delete

City: Nashville, Tennessee  
Center: Davidson County Department of  
Public Health  
Clinic Hours: Wednesday, by appointment only  
Fee: Yes

Page 77 - Add

City: Nashville, Tennessee  
Center: Metropolitan Health Department  
311 - 23rd Avenue, North  
Tele: 291-5100  
Clinic Hours: Wednesday - 2 p.m.  
Fee: Yes

THE MORBIDITY AND MORTALITY WEEKLY REPORT, WITH A CIRCULATION OF 13,000 IS PUBLISHED BY THE COMMUNICABLE DISEASE CENTER, ATLANTA, GEORGIA 30333.

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IN ADDITION TO THE ESTABLISHED PROCEDURES FOR REPORTING MORBIDITY AND MORTALITY, THE COMMUNICABLE DISEASE CENTER WELCOMES ACCOUNTS OF INTERESTING OUTBREAKS OR CASES, SUCH ACCOUNTS SHOULD BE ADDRESSED TO:

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

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

SYMBOLS:---DATA NOT AVAILABLE  
- QUANTITY ZERO

THE CONSTRUCTION OF THE MORTALITY CURVES IS DESCRIBED IN VOL. 14, NO. 1, JANUARY 15, 1965.

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