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PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

March 24–April 20, 1940

The accompanying table summarizes the prevalence of eight important communicable diseases, based on weekly telegraphic reports from State health departments. The reports from each State are published in the Public Health Reports under the section "Prevalence of disease." The table gives the number of cases of these diseases for the 4-week period ended April 20, 1940, the number reported for the corresponding period in 1939, and the median number for the years 1935–39.

As during the preceding 4-week period, the incidence during the 4 weeks ended April 20 of all of the eight communicable diseases under consideration was again below the median expectancy for the period.

Diphtheria.—The diphtheria incidence continued at a comparatively low level, 1,055 cases, as compared with 1,322 for the corresponding period in 1939, and a median figure of 1,724 for the years 1935–39. In the Mountain region the number of cases stood at about the average seasonal level, but in all other regions the incidence was relatively low.

Influenza.—The number of reported cases of influenza (approximately 13,000) was about 35 percent of the number reported for the corresponding period in 1939 and slightly less than 10 percent of the 1935–39 median figure for this period. In the South Atlantic, West South Central, and Mountain regions, where the disease has been most prevalent during the recent rise, the incidence still continued considerably above the normal expectancy. The incidence was very satisfactory in all other sections of the country, a significantly low incidence being reported in the East South Central and Pacific regions.

Measles.—The incidence of measles continued at a relatively low level. During the 4 weeks ended April 20 the reported cases totaled 38,323, as compared with approximately 59,000 cases for the corresponding period in 1939, which figure also represents the 1935–39 median incidence for this period. The West South Central and

Pacific regions reported a higher incidence than might normally be expected, but in all other regions the incidence was considerably below the average incidence for recent years.

Number of reported cases of 8 communicable diseases in the United States during the 4-week period Mar. 24–Apr. 20, 1940, the number for the corresponding period in 1939, and the median number of cases for the corresponding period 1935–39 [1]

Division	Current period	1939	5-year median	Current period	1939	5-year median	Current period	1939	5-year median	Current period	1939	5-year median
	Diphtheria			Influenza [2]			Measles			Meningococcus meningitis		
United States [1]	1,055	1,322	1,724	12,584	34,334	14,019	38,323	59,402	59,402	157	176	659
New England	24	24	45	30	340	64	5,463	7,754	7,754	4	8	15
Middle Atlantic	175	229	370	92	147	125	5,670	7,321	18,818	45	48	104
East North Central	142	292	320	1,074	2,212	1,176	4,069	4,456	4,753	16	28	77
West North Central	83	122	171	169	1,142	577	4,354	5,220	5,220	8	9	28
South Atlantic	235	225	278	4,240	11,129	3,740	2,469	9,332	7,725	27	27	108
East South Central	86	103	111	1,262	6,809	2,400	1,280	1,021	1,484	24	24	62
West South Central	152	168	268	4,543	9,278	4,360	3,936	3,459	3,305	22	14	41
Mountain	66	82	64	663	2,045	436	3,291	3,930	3,777	2	6	11
Pacific	92	77	119	511	1,232	1,232	7,791	16,909	7,272	9	12	23
	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
United States [1]	64	80	77	20,480	18,008	29,478	277	1,267	1,267	339	434	457
New England	0	0	1	1,304	1,315	1,829	0	0	0	14	24	20
Middle Atlantic	4	11	8	7,377	4,574	8,162	0	4	0	61	64	59
East North Central	9	15	10	7,429	7,335	9,638	37	355	321	50	38	61
West North Central	5	3	5	1,158	1,736	2,823	129	451	558	24	19	19
South Atlantic	10	27	9	846	718	946	6	6	6	43	83	83
East South Central	6	7	7	813	562	415	18	46	20	48	42	56
West South Central	11	8	9	281	336	619	33	236	146	51	120	117
Mountain	7	4	4	494	426	677	39	55	91	25	14	15
Pacific	12	5	15	778	1,006	1,139	15	114	114	23	30	30

[1] 48 States. Nevada is excluded and the District of Columbia is counted as a State in these reports.
[2] 44 States and New York City.
[3] 47 States. Mississippi is not included.

Meningococcus meningitis.—The recorded incidence of meningococcus meningitis (157 cases) was about 90 percent of that for the corresponding period of 1939 and less than 25 percent of the median figure (690) for this period. In all regions the numbers of cases reported were low in relation to the seasonal expectancy. For the country as a whole the current incidence is the lowest on record for this period.

Poliomyelitis.—For the 4 weeks ended April 20 there were 64 cases of poliomyelitis reported, as compared with 80, 71, and 96 for the corresponding period in 1939, 1938, and 1937, respectively. The situation was favorable in all sections of the country. In 7 of the 12 years for which these data are available the lowest incidence for the year has been reached during the 4-week period corresponding to the current one, while during 5 of the years the incidence reached its lowest level during the preceding 4-week period and rather sharp

rises occurred during the period corresponding to the one under consideration.

Scarlet fever.—The number of cases of scarlet fever (20,480) was about 10 percent above the number reported for the corresponding period in 1939, but it was only about 70 percent of the average seasonal incidence of recent years. In the East South Central region the number of cases was more than twice the median figure for this period; of the total cases (813), Kentucky reported 362 and Tennessee 364. The numbers of cases reported in all other regions were low in relation to the preceding 5-year median figure.

Smallpox.—For the country as a whole the current incidence of smallpox is the lowest on record for this period. For the 4 weeks ended April 20 there were 277 cases reported, as compared with 1,267, 1,882, and 1,443 cases for the corresponding period in 1939, 1938, and 1937, respectively.

Typhoid fever.—Typhoid fever also continued at the lowest level on record in relation to the seasonal expectancy. There were 339 cases reported for the current period, approximately 75 percent of last year's figure for this period, and also of the median figure (457 cases). In all regions except the Middle Atlantic, West North Central, and Mountain, reported cases were low in relation to the preceding 5-year median.

MORTALITY, ALL CAUSES

The average death rate for large cities for the 4 weeks ended April 20, based on data received from the Bureau of the Census, was 12.0 per 1,000 inhabitants (annual basis), as compared with 12.2 for the corresponding period in 1939, and an average rate of 12.4 for the 5 preceding years.

TREND OF MORBIDITY AND MORTALITY DURING 1939 AND RECENT PRECEDING YEARS

MORBIDITY

The following data concerning the prevalence of eight communicable diseases are based on reports submitted by the health officers of the several States and the District of Columbia. Although cases of each of these diseases are reportable by law, there is considerable variability in the completeness of the reports. The number of cases reported is somewhat smaller than the number of cases which occur during any given year, but it is believed that the reports are sufficiently accurate to reveal any unusual prevalence arising from an epidemic.

DISEASES ABOVE THE MEDIAN PREVALENCE

The number of reported cases of influenza was more than twice as large as that reported in 1938 and about 40 percent above the median number for the period 1934–1938 (table 1). The number of reported cases of smallpox was one-third less than in 1938 but more than 20 percent greater than the previous 5-year median.

The outbreak of influenza started later in the winter than usual; an increased number of cases was first reported about the middle of February, after which the epidemic spread rapidly until it reached its peak about a month later. The decline from this peak was slower than usual so that an excess of cases was reported until June. Another minor outbreak of influenza started during the latter part of November.

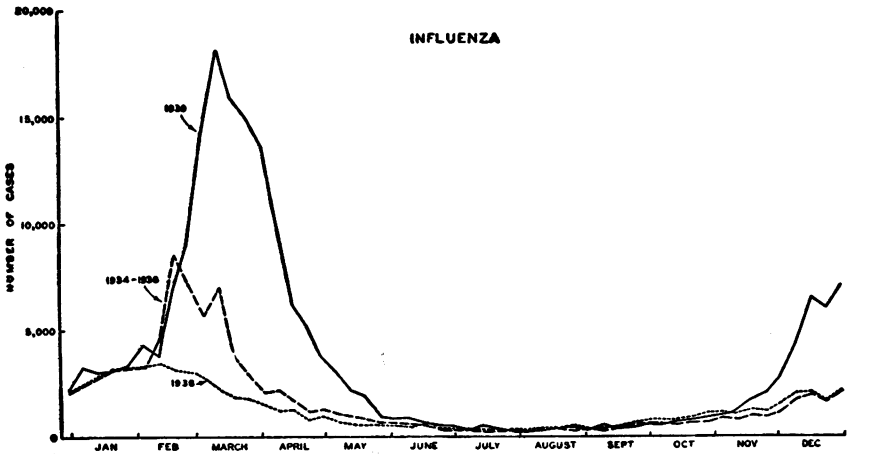

FIGURE 1.—Number of reported cases of influenza by weeks for 1939, 1938, and the median number for 1934–38.

This outbreak was confined principally to the South and to the Mountain States; it rose slowly to a peak around February 1, 1940, and has since subsided.

TABLE 1.—*Number of reported cases of certain communicable diseases in the United States in 1938 and 1939 and the median number of cases reported, 1934–38*

Disease	1939		1938		Median 1934-38	
	Cases	Number of States reporting	Cases	Number of States reporting	Cases	Number of States reporting
Diphtheria	23,894	48	30,508	48	30,508	48
Influenza [1]	272,569	42	129,834	42	196,917	42
Measles	402,673	48	822,811	48	743,856	48
Meningococcus meningitis [2]	1,884	44	2,909	44	5,484	44
Poliomyelitis	7,324	48	1,705	48	7,517	48
Scarlet fever	162,750	48	189,631	48	228,887	48
Smallpox	9,765	48	14,939	48	7,957	48
Typhoid and paratyphoid fever	12,967	48	14,903	48	16,033	48

[1] New Hampshire, Massachusetts, New York, Pennsylvania, Michigan, and Colorado are omitted.
[2] New Hampshire, Vermont, South Carolina, and Nevada are omitted.

Figures for 1939 are preliminary.

The smallpox incidence during 1939 was a continuation of the high prevalence which prevailed throughout 1938. The number of cases has been slowly increasing since 1930, when slightly more than 5,000 cases were reported. This trend apparently reached its highest point during 1938, for since that time the number of cases, although still above the median, has been slowly declining.

DISEASES BELOW THE MEDIAN PREVALENCE

The numbers of cases of diphtheria, measles, meningococcus meningitis, poliomyelitis, scarlet fever, and typhoid and paratyphoid fever reported in 1939 were well below the median numbers reported during the previous 5 years, 1934–1938. Moreover, each of these dis-

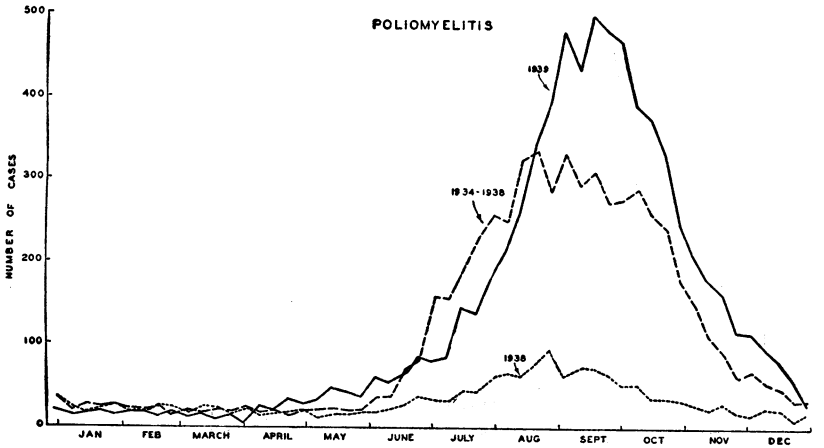

FIGURE 2.—Number of reported cases of poliomyelitis by weeks for 1939, 1938, and the median number for 1934–38.

eases except poliomyelitis was less prevalent than in 1938. Although the number of cases of poliomyelitis was below the median it was about four times greater than that reported during 1938. The outbreak started early in the summer in the South Atlantic States and later spread to all sections of the country.

MORTALITY

(Based on Provisional Data for All Years)

The mortality rates in this report are based on preliminary data for 45 States, the District of Columbia, Hawaii, and Alaska for the calendar year 1939. Data are presented for each State except Arizona, Arkansas, and New Hampshire. In addition, mortality rates by quarters are presented for 1937, 1938, and 1939 for 43 States and the District of Columbia (all except Arizona, Arkansas, Mississippi, New Hampshire, and Texas).

This report is made possible through a cooperative arrangement with the respective States which voluntarily furnish provisional

tabulations of current birth and death records to the United States Public Health Service which provides for the publication of the data received. Because of (*a*) lack of uniformity in the method of classifying deaths according to cause, (*b*) insufficient time to obtain additional information to aid in the classification of doubtful cases, and (*c*) the impossibility of including a certain number of certificates that had not been filed when the records were tabulated, these data are preliminary and may differ in some instances from the final figures subsequently published by the Bureau of the Census.

Preliminary data for preceding years from the same source, collected and tabulated in the same way as the current data, are included for comparative purposes. These figures are used in preference to the final figures published by the Bureau of the Census because it is believed that they are more comparable with current provisional information.

In the past these preliminary reports have provided an early and accurate index of the trend in mortality for the country as a whole. Some deviation from the final figures for individual States may be expected because of the provisional nature of the reports. It is believed, however, that the trend of mortality within each State is correctly represented. Comparisons of specific causes of death among the States are subject to some error because of differences in tabulation procedure and completeness of reporting. Comparisons of this nature should be made only from the final figures published by the Bureau of the Census.

Preliminary tabulations indicate that 1939 will rank with 1938 as a year with the lowest mortality rate on record. As shown by the data for 45 States and the District of Columbia in table 1 the provisional rate for 1939, 10.5 per 1,000 population, is identical with the corresponding rate for 1938. The data in table 2, based upon reports from 43 States and the District of Columbia, show a slightly higher rate for 1939 than for 1938. It seems safe to conclude that the two rates will differ only slightly, if at all.

The record for 1939 would have been even more favorable than that for 1938 if there had not been a mild outbreak of influenza which resulted in a higher death rate during the first quarter of the year (fig. 3). The death rate from May to December was lower in 1939 than in 1938. This favorable condition with respect to mortality was fairly widespread, only 19 of the 46 States reporting a higher rate in 1939 than in 1938.

DISEASES WITH LOWER DEATH RATES

The mortality rate from the following diseases was the lowest reported during the past 5 years: Typhoid and paratyphoid fever, measles, scarlet fever, diphtheria, encephalitis, meningitis, tuberculosis, malaria, pellagra, pneumonia, digestive diseases, diarrhea and

enteritis (under 2 years), nephritis, and accidents, including automobile accidents. In addition, the death rate from whooping cough was lower than in 1938 although it was slightly higher than the rate for 1936.

The maternal mortality rate declined for the tenth consecutive year. The provisional rate is 10 percent less than in 1938 and more than 40 percent less than in 1930. The rate is below 4 per 1,000 live births for the first time since such data have been available.

The death rate from pneumonia was especially low and represents a decline of more than one-third since 1936. It is quite possible that the marked decrease in the past 2 years in the mortality from pneu-

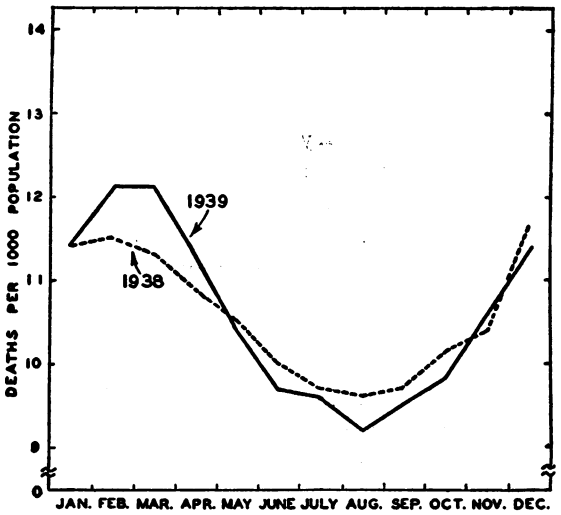

FIGURE 3.—Number of deaths per 1,000 estimated population for 44 States and the District of Columbia, by months for 1938 and 1939 (does not include data for Arizona, Arkansas, New Hampshire, and Texas).

monia reflects an increasing use of recently discovered methods of treatment. Only 2 States reported a higher death rate than in 1938.

The widespread safety campaign against automobile accidents has resulted in a decreased death rate for the second consecutive year. The provisional rate for 1939, 23.7 per 100,000 population, is 20 percent less than the corresponding rate for 1937. One-half of the States reported a lower rate than in 1938 and the other half reported a higher rate.

The four principal communicable diseases of childhood, measles, whooping cough, scarlet fever, and diphtheria, were each less prevalent than in the preceding year. For diphtheria, the death rate has declined nearly 50 percent during the past 5 years.

DISEASES WITH INCREASED DEATH RATES

The principal diseases for which a higher mortality rate was reported in 1939 than in 1938 are influenza, cancer, diabetes, cerebral hemorrhage, and heart disease. In addition there was a minor

epidemic of poliomyelitis which increased the rate slightly over that reported in 1938.

The epidemic of influenza in the late winter of 1939 has already been mentioned. The increase in mortality occurred in all parts of the country, 42 of the 46 States reporting a higher rate in 1939 than in 1938.

The remaining diseases with a higher death rate in 1939, cancer, diabetes, cerebral hemorrhage, and heart disease, are primarily disorders of late adult life and old age, and part of the increase in deaths from these causes results from the aging of the population. With the exception of diabetes, the rates for these causes increased less than 4 percent.

BIRTH RATE AND INFANT MORTALITY

The infant mortality rate, 47 per 1,000 live births, is the lowest on record and represents a decline of 15 percent during the past 5 years. Only 5 States reported a higher rate in 1939 than in 1938.

After a temporary rise in 1937 and 1938, the birth rate decreased about 2 percent during 1939. A decrease was reported by 28 of the 46 States. The crude rate of natural increase, 6.6 per 1,000 population, was slightly less than that for 1938, 7.0 per 1,000 population.

TABLE 1.—*Summary of mortality trends from certain causes in a group of 46 States, 1935–39* [1] *(estimated population July 1, 1939, 128,153,000)* [2]

RATES PROVISIONAL FOR ALL YEARS

Diseases (numbers in parentheses are from the International List of Causes of Death, fourth revision, 1929)	1939	1938	1937	1936	1935
	Rate per 1,000 population				
Deaths, all causes	10.5	10.5	11.1	11.4	10.9
Births, exclusive of stillbirths	17.1	17.5	16.9	16.5	16.8
	Rate per 1,000 live births				
Infant mortality (live births, 1939, 2,186,462)	47	50	54	57	55
Maternal mortality	3.8	4.2	4.7	5.5	5.7
	Death rate per 100,000 population				
Typhoid and paratyphoid fever (1, 2)	1.5	1.7	2.0	2.4	2.6
Measles (7)	.9	2.4	1.0	.9	3.0
Scarlet fever (8)	.6	.9	1.4	1.9	2.1
Whooping cough (9)	2.2	3.5	3.7	2.0	3.7
Diphtheria (10)	1.5	1.9	2.0	2.3	2.9
Influenza (11)	16.1	12.3	29.1	25.4	22.0
Poliomyelitis and polioencephalitis (16)	.6	.4	1.0	.6	.8
Encephalitis, epidemic or lethargic (17)	.4	.6	.7	.6	.6
Epidemic cerebrospinal meningitis (18)	.5	.8	1.6	2.2	2.1
Tuberculosis, all forms (23–32)	45.5	47.8	52.2	54.4	54.1
Malaria (38)	1.1	1.5	1.8	2.8	3.1
Cancer, all forms (45–53)	115.5	113.9	110.4	110.5	107.8
Diabetes (59)	25.0	23.4	23.3	23.5	22.1
Pellagra (62)	1.7	2.3	2.4	2.8	2.7
Cerebral hemorrhage, apoplexy (82a, b)	85.9	83.6	84.3	88.0	83.6
Diseases of the heart (90–95)	277.1	267.6	261.3	261.9	241.4
Pneumonia, all forms (107–109)	58.2	66.4	84.4	91.6	82.0
Diseases of the digestive system (115–129)	59.3	62.5	65.2	69.5	68.0
Diarrhea and enteritis under 2 years (119)	8.1	10.3	10.6	11.4	10.0
Nephritis, all forms (130–132)	73.3	76.0	78.4	82.5	80.8
All accidents (176–195, 201–214)	70.1	71.0	80.2	85.3	78.7
Automobile accidents (206, 208, 210)	23.7	24.1	29.4	29.3	28.4

[1] The States included are those listed in table 3. The District of Columbia is counted as a State.

[2] Populations used for the years 1935 to 1937, inclusive, are the official estimates as of July 1 of each year made by the Bureau of the Census. Estimates for 1938 and 1939 are made by assuming the same actual increment between 1937 and 1938, and 1938 and 1939 as between 1936 and 1937 as given in the official estimates for those years. No official estimates for States are available for 1938 and 1939.

TABLE 2.—*Trends of mortality from certain causes in each quarter of 1939, 1938, and 1937 in the 44[1] States with available data (estimated population July 1, 1939, 119,832,000)*

RATES PROVISIONAL FOR ALL YEARS

State and period	All causes, rate per 1,000 population (annual basis)	Births (exclusive of stillbirths) per 1,000 population (annual basis)	Rate per 1,000 live births		Death rate per 100,000 population (annual basis)																		
			Total infant mortality	Maternal mortality	Typhoid and paratyphoid fever (1, 2)	Measles (7)	Scarlet fever (8)	Whooping cough (9)	Diphtheria (10)	Influenza (11)	Acute poliomyelitis and polioencephalitis (16)	Encephalitis, epidemic or lethargic (17)	Epidemic cerebrospinal meningitis (18)	Tuberculosis, all forms (23–32)	Cancer, all forms (45–53)	Diabetes (59)	Cerebral hemorrhage, apoplexy (82a, b)	Diseases of the heart (90–95)	Pneumonia, all forms (107–108)	Diseases of the digestive system (115–129)	Diarrhea and enteritis (under 2 years (119))	Nephritis (130–132)	All accidents (176–194, 201–214)	Automobile accidents (206, 208, 210)
January–December:																							
1939	10.6	16.9	46	3.7	1.3	0.8	0.7	2.0	1.4	15.4	0.5	0.5	0.5	44.9	118.8	25.8	87.3	284.7	58.4	59.0	7.0	73.9	70.7	23.8
1938	10.5	17.2	49	4.1	1.5	2.4	1.0	3.3	1.8	11.3	.3	.6	.8	46.6	116.7	24.2	84.5	270.8	66.2	62.3	9.3	76.5	71.0	24.0
1937	11.1	16.7	52	4.6	1.7	.8	1.4	3.6	1.8	27.4	1.0	.7	1.6	51.1	113.2	24.1	85.6	268.1	84.1	64.5	9.3	78.9	79.9	29.2
January–March:																							
1939	11.0	16.3	54	4.1	.8	1.4	1.2	2.4	1.6	32.1	.2	.5	.7	46.9	119.1	29.7	96.5	323.5	104.1	55.7	4.1	84.6	64.1	19.4
1938	11.4	16.6	52	4.4	.8	4.0	1.6	3.4	1.9	21.6	.3	.6	1.2	48.7	115.3	26.5	90.3	292.9	103.4	55.9	4.2	83.0	64.8	20.8
1937	12.9	15.6	64	5.6	.9	.8	2.5	3.3	2.1	74.1	.3	.7	2.7	55.9	112.0	28.7	95.3	309.0	149.4	59.8	4.5	87.8	73.3	25.6
April–June:																							
1939	10.4	16.4	45	4.0	.8	1.3	.7	2.3	.8	16.4	.3	.4	.5	48.0	117.9	25.5	86.2	281.0	51.8	57.9	5.9	75.1	67.0	20.2
1938	10.5	16.8	50	4.3	1.1	4.4	1.0	4.1	1.0	8.6	.3	.6	.8	49.8	116.4	23.8	83.8	268.2	60.0	64.7	10.0	78.6	65.1	20.3
1937	10.9	16.3	51	4.8	1.1	1.3	1.7	3.3	1.1	19.4	.3	.6	1.9	54.2	112.3	23.0	84.1	263.2	75.8	64.1	7.7	81.2	76.1	25.8
July–September:																							
1939	9.4	17.7	41	3.5	2.3	.3	.3	1.9	.9	3.3	1.0	.5	.4	42.2	117.3	22.1	77.1	242.8	27.2	65.6	11.2	64.5	74.0	24.8
1938	9.6	18.0	46	4.0	2.5	.8	.4	3.4	1.2	3.9	4.3	.7	.5	44.7	116.1	21.4	76.1	237.6	33.6	70.2	15.4	68.7	76.9	25.3
1937	9.8	17.6	47	4.2	3.2	.5	.5	4.7	1.2	4.3	2.3	.6	.8	47.9	113.1	20.7	75.1	227.8	35.3	73.9	16.8	69.1	86.4	31.0
October–December:																							
1939	10.6	17.1	45	3.4	1.2	.2	.6	1.6	2.4	10.2	.7	.4	.4	42.7	120.9	26.1	89.7	292.5	51.5	56.8	6.8	71.7	77.3	30.7
1938	10.7	17.3	49	3.7	1.5	.4	.8	2.4	2.9	11.1	.3	.5	.6	43.4	119.1	25.2	88.0	285.0	68.5	58.3	7.6	76.0	73.7	29.3
1937	10.9	17.2	49	3.9	1.8	.6	1.1	3.0	2.9	12.5	.9	.9	1.0	46.7	115.2	24.0	88.2	273.0	77.4	59.9	8.2	77.7	83.7	34.5
Metropolitan Life Insurance Co., industrial policyholders (January–December):[2]																							
1939	7.6	------	------	------	.7	.6	.7	1.6	1.3	9.8	------	------	------	44.9	101.1	27.5	59.7	[3] 160.5	42.9	------	3.7	[4] 51.4	46.3	17.1
1938	7.7	------	------	------	1.0	1.6	1.1	2.0	1.7	7.5	------	------	------	47.2	98.8	24.8	58.5	[3] 154.0	50.6	------	5.3	[4] 53.8	48.4	17.6
1937	8.2	------	------	------	.9	1.0	1.6	3.0	1.9	18.2	------	------	------	52.1	96.0	25.6	59.7	[3] 159.7	66.9	------	6.6	[4] 55.7	53.9	21.0

[1] States included are those listed in table 3 with the exception of Mississippi and Texas. The District of Columbia is counted as a State.

[2] These data are taken from the Monthly Statistical Bulletin published by the Metropolitan Life Insurance Co. The figures are subject to correction, since they are based on provisional estimates of lives exposed to risk. Data does not include all diseases reported to the Public Health Service.

[3] Excludes pericarditis, acute endocarditis, acute myocarditis, coronary artery diseases, and angina pectoris.

[4] Chronic nephritis (Bright's disease) only.

TABLE 3.—*Trend of death rates from all causes, of birth rates, and of infant and maternal mortality rates, 1935–39*

RATES PROVISIONAL FOR ALL YEARS

State	Deaths, all causes (rate per 1,000 population)					Births, exclusive of stillbirths (rate per 1,000 population)					Infant mortality (rate per 1,000 live births)					Maternal mortality (rate per 1,000 live births)				
	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935
Alabama	9.8	10.3	10.7	10.9	10.1	21.3	21.6	21.4	21.3	22.0	60	61	63	66	63	5.8	6.2	5.9	6.7	6.2
Alaska [1]	18.3	20.0	19.3	------	------	23.5	29.1	22.1	------	------	121	(2)	131	------	------	3.3	1.6	11.3	------	------
California	12.2	12.2	13.0	12.5	12.1	16.4	15.5	15.3	13.9	13.3	42	46	54	53	50	3.0	3.5	4.2	4.7	4.7
Colorado	11.6	11.7	13.0	12.8	12.4	19.0	18.9	18.8	17.1	17.7	53	59	70	74	73	5.1	4.3	5.5	7.1	7.3
Connecticut	9.8	10.0	10.1	10.1	10.1	12.2	13.4	12.8	12.4	12.4	38	36	41	42	43	2.9	2.7	2.9	4.5	4.3
Delaware	11.9	12.0	13.8	12.8	12.5	16.3	16.7	16.4	15.1	15.8	44	51	66	64	66	4.7	5.7	4.4	7.1	6.4
District of Columbia	12.9	12.5	13.9	14.7	14.3	21.7	20.3	19.5	19.0	18.3	47	48	61	72	59	4.7	5.4	5.3	6.9	6.7
Florida	12.3	12.3	12.6	12.8	12.4	18.4	17.9	17.7	17.1	17.4	57	58	60	59	62	6.4	7.3	6.8	8.1	8.7
Georgia	9.7	10.5	10.8	11.9	11.0	19.8	20.1	19.9	19.4	19.9	59	68	62	70	69	5.5	6.6	7.4	7.9	7.2
Hawaii	6.7	7.0	7.9	7.8	7.8	19.3	19.7	20.0	19.7	21.7	54	59	69	73	67	3.5	3.8	4.7	4.5	4.3
Idaho	9.5	9.1	9.7	10.8	10.1	22.4	22.7	21.6	21.4	20.4	45	45	45	50	51	2.5	3.7	3.9	3.2	6.2
Illinois	11.0	10.7	11.1	11.8	10.9	14.9	15.4	14.6	14.3	14.3	38	41	43	47	46	3.0	3.3	3.8	4.2	4.7
Indiana	10.8	10.6	11.2	11.7	11.0	15.2	15.8	14.5	14.2	14.0	41	45	53	53	54	3.9	3.8	3.7	4.7	5.2
Iowa	9.7	9.4	9.7	9.9	10.3	16.8	16.9	16.5	16.7	15.8	38	38	44	42	47	2.5	3.1	4.0	4.1	5.4
Kansas	9.9	10.0	10.3	11.5	10.8	15.4	16.0	15.6	16.2	16.8	39	43	45	51	49	3.4	4.0	4.1	5.1	5.3
Kentucky	9.8	9.3	10.2	11.2	10.3	19.7	23.3	21.0	19.3	20.3	54	49	50	67	59	4.4	3.8	3.8	5.6	5.3
Louisiana	11.4	11.5	11.7	12.2	11.2	22.4	22.3	20.9	19.5	19.4	61	66	64	73	68	6.0	6.0	7.5	8.7	7.9
Maine	12.5	12.0	13.2	13.3	13.0	17.3	17.8	18.1	17.9	18.6	51	49	61	64	63	4.2	4.2	5.4	5.1	5.7
Maryland	12.3	12.4	13.2	13.1	12.7	16.7	17.4	16.4	16.0	16.4	50	55	62	68	62	3.3	3.4	4.1	4.3	5.0
Massachusetts	10.6	11.0	11.3	11.8	11.5	(2)	13.8	13.9	13.9	14.4	(2)	40	44	47	48	(2)	3.9	4.6	4.9	5.7
Michigan	10.6	10.4	11.1	11.4	10.8	19.3	19.9	19.0	18.5	18.5	42	45	48	50	47	2.9	3.5	3.6	4.7	4.9
Minnesota	9.9	9.7	10.0	10.7	9.9	18.2	17.6	17.6	16.9	16.4	36	40	42	46	46	2.5	2.8	3.1	4.4	4.9
Mississippi	10.5	11.3	11.8	12.0	10.6	(2)	26.5	25.8	24.6	24.1	(2)	57	59	58	54	(2)	5.9	7.1	6.9	6.7
Missouri	10.7	10.6	11.4	12.3	11.0	16.1	15.7	14.3	14.1	14.6	43	48	58	58	57	3.4	3.6	5.2	6.1	5.7
Montana	10.7	10.4	11.2	11.7	11.8	19.7	19.6	19.0	19.5	19.0	50	43	49	53	56	3.2	3.7	3.4	5.5	4.6
Nebraska	8.8	8.7	9.6	10.0	9.7	15.9	16.0	15.9	17.0	16.6	34	36	42	44	42	3.4	3.4	3.9	5.6	5.7
Nevada	11.9	12.3	12.6	14.4	13.3	18.3	18.0	15.8	14.2	14.4	44	45	49	70	71	4.2	3.0	6.9	5.6	7.7
New Jersey	10.0	10.0	10.1	10.3	10.1	12.9	13.0	12.6	12.3	12.7	38	39	39	44	47	2.9	3.5	3.4	3.8	4.5
New Mexico	13.4	13.4	13.2	14.8	14.9	36.8	35.2	32.8	30.6	31.3	96	100	124	122	129	4.3	4.6	5.0	7.4	6.9
New York	11.3	11.2	11.9	11.8	11.5	14.2	14.5	14.3	13.9	14.2	39	40	45	47	48	3.0	3.8	3.9	4.9	5.1
North Carolina	9.0	9.6	9.8	10.4	9.9	22.6	22.9	23.1	22.2	23.3	58	68	65	67	67	4.8	5.6	5.4	6.5	6.6
North Dakota	7.7	7.3	7.9	8.0	8.4	18.9	18.5	18.4	19.3	19.5	48	48	53	50	59	2.3	2.2	4.8	4.3	5.3
Ohio	11.4	11.0	11.8	12.1	11.5	15.8	16.7	15.8	15.4	15.1	42	42	50	51	50	3.6	3.8	4.6	4.9	6.2
Oklahoma	8.1	7.8	8.5	9.2	8.4	17.0	17.5	16.2	16.5	17.4	52	43	59	60	55	4.2	4.0	6.9	6.2	5.9
Oregon	11.2	11.3	12.0	12.2	11.3	15.6	15.7	15.1	13.7	13.1	35	38	42	44	41	2.4	3.1	3.5	5.4	5.4
Pennsylvania	10.3	10.4	11.1	11.0	10.6	15.7	16.2	15.8	15.7	15.8	44	46	50	50	50	3.2	3.5	4.0	4.6	4.9
Rhode Island	11.4	12.2	12.2	12.2	11.5	15.2	15.4	14.9	14.9	14.9	40	44	50	49	47	3.2	2.5	3.4	4.1	4.3
South Carolina	10.0	10.8	10.7	11.2	10.9	21.6	21.1	20.3	21.0	22.1	68	81	81	80	79	5.9	7.7	7.8	7.9	9.5
South Dakota	8.3	7.0	8.9	8.9	9.1	16.8	17.0	16.8	18.6	19.0	41	45	52	48	50	3.0	3.5	4.2	4.1	5.5

Tennessee	9.5	9.8	10.2	11.2	10.4	17.2	17.6	17.6	17.0	18.1	54	64	60	68	64	5.5	5.6	6.2	7.0	6.9
Texas	8.8	9.8	10.6	10.8	10.1	18.2	19.6	18.8	18.2	18.9	62	65	74	71	72	4.7	5.6	5.7	6.9	7.3
Utah	8.9	9.2	9.4	9.9	9.8	24.3	25.4	24.0	24.3	24.7	37	45	41	53	49	2.8	3.2	3.3	4.4	4.0
Vermont	10.8	10.8	11.4	13.0	12.7	14.7	14.6	14.2	17.0	17.5	36	43	45	58	49	3.3	3.0	8.1	5.0	6.8
Virginia	10.3	10.5	10.7	11.3	10.8	18.6	19.1	18.7	19.0	19.3	62	69	64	67	64	4.9	5.1	5.0	5.1	5.3
Washington	11.1	11.0	11.5	11.7	11.2	15.2	15.7	14.8	13.9	13.7	38	39	40	46	45	3.8	3.6	4.8	5.2	5.2
West Virginia	9.1	9.4	10.3	10.8	10.1	21.6	22.4	22.6	22.3	23.0	55	62	62	71	61	3.5	3.6	4.9	5.3	5.2
Wisconsin	10.5	10.3	10.9	11.3	10.5	18.1	18.3	17.9	17.7	17.6	40	42	44	47	47	2.8	2.9	3.5	4.0	3.7
Wyoming	9.3	9.4	10.6	10.3	9.8	20.5	20.2	19.6	20.4	18.8	45	53	53	58	51	3.5	3.5	3.5	5.0	4.1

[1] Data not available prior to 1937.
[2] Data not available.

TABLE 4.—*Trend of death rates for various causes per 100,000 population*

RATES PROVISIONAL FOR ALL YEARS

State	Typhoid and paratyphoid fever (1, 2)					Measles (7)					Scarlet fever (8)					Whooping cough (9)				
	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935
Alabama	1.6	2.0	1.9	2.7	2.9	2.0	5.8	0.1	0.7	5.2	0.5	0.6	0.4	0.4	0.5	5.7	5.8	6.5	2.6	4.8
Alaska [1]	(3)	1.6	1.7			60.0	1.6	5.0			9.2	1.6	1.7			29.2	60.3	36.7		
California	.7	1.0	1.0	1.2	1.4	1.0	1.0	.5	2.4	1.1	.5	.4	.8	1.6	1.1	.7	2.2	.8	2.1	1.0
Colorado	1.9	2.1	3.0	3.1	3.5	1.3	2.8	.5	.7	9.9	1.0	1.1	2.0	7.1	11.8	4.7	4.3	4.7	4.1	4.1
Connecticut	.3	.4	.3	.5	.8	.5	.1	.7	.4	1.9	.2	.2	.6	.6	1.3	1.3	.7	1.4	1.8	1.2
Delaware	2.7	1.5	2.2	2.7	2.3	(3)	.8	1.5	3.1	1.2	.4	.8	.4	1.9	.4	3.0	5.3	6.5	5.0	2.0
District of Columbia	.8	.9	1.9	1.6	2.7	.3	.3	2.1	1.3	(3)	.2	.5	.8	.3	1.3	2.3	.9	2.7	8.4	.5
Florida	1.6	2.7	2.9	2.5	3.8	.8	1.6	.3	.4	1.9	.3	.2	.1	.1	.1	3.4	3.8	3.5	1.5	3.7
Georgia	2.6	3.8	4.3	6.2	8.3	1.6	4.8	.3	.2	.9	.4	.4	.4	.5	.7	4.0	7.2	4.6	2.0	4.9
Hawaii	1.7	2.2	1.6	2.0	2.4	(3)	.2	41.7	6.2	(3)	(3)	.2	(3)	(3)	(3)	6.4	4.8	2.2	.4	2.6
Idaho	3.2	3.0	1.8	2.5	2.5	.8	.8	2.8	2.3	2.1	.4	1.0	1.8	10.3	6.1	2.0	2.8	3.2	1.6	6.9
Illinois	1.4	.7	.6	.9	1.2	(4)	2.6	.4	.1	3.7	.9	1.7	2.0	3.0	5.2	2.0	2.1	1.9	1.9	2.7
Indiana	1.1	.7	1.1	1.7	1.5	.2	3.0	.4	.1	2.6	1.4	1.9	2.7	3.3	3.4	1.7	1.3	4.6	1.6	3.9
Iowa	.6	.7	.9	1.2	1.3	1.1	1.0	.2	.1	6.0	.9	1.8	3.8	3.1	2.8	1.6	2.6	3.3	1.4	1.7
Kansas	.7	.7	.9	1.7	1.6	.2	1.2	.2	.2	12.0	.7	1.4	3.5	4.1	2.4	.4	2.7	2.4	.9	2.8
Kentucky	4.1	4.7	5.4	7.4	8.9	1.0	3.6	2.9	2.7	8.2	1.0	1.5	1.7	1.6	2.6	2.3	6.3	8.2	2.6	9.7
Louisiana	6.3	5.4	6.3	7.0	9.2	4.4	1.0	.8	2.4	6.0	.2	.3	.6	.2	.4	5.3	4.3	6.8	4.7	3.2
Maine	1.0	1.9	1.6	.8	2.0	.6	2.1	.4	2.5	7.0	.3	(3)	.5	.8	1.2	3.5	2.9	3.0	2.7	3.6
Maryland	1.0	1.9	1.8	1.7	2.7	.9	.5	2.3	1.6	1.4	.3	.5	.9	.7	1.7	1.2	3.0	5.8	5.1	2.6
Massachusetts	.3	.3	.2	.2	.3	.4	.3	.6	.8	.8	.3	.5	.8	1.0	1.4	1.0	.8	2.1	1.2	1.6
Michigan	.6	.6	.6	.8	.7	.6	2.1	.2	.3	3.9	1.4	1.8	3.0	2.4	2.0	1.6	2.3	2.7	2.2	2.8
Minnesota	.1	.3	.3	.5	.6	2.4	.9	.3	.9	2.4	.6	1.0	1.5	4.1	3.0	.7	1.8	2.8	1.2	2.4
Mississippi	2.1	3.4	3.8	4.9	3.2	3.9	3.8	3.0	1.1	1.0	(4)	.4	.2	.3	.6	7.2	7.2	5.3	2.5	5.7
Missouri	2.4	2.8	4.2	5.2	3.7	.2	4.9	.5	.4	3.8	.8	1.8	2.6	2.2	1.7	1.7	4.3	4.7	1.7	4.4
Montana	2.2	.9	2.0	1.9	2.4	2.9	2.0	.7	.6	9.2	1.6	1.8	2.0	8.7	4.0	2.9	8.8	2.6	3.0	4.3
Nebraska	.4	.5	1.0	.9	.4	1.0	.8	.3	.7	6.2	1.0	1.1	2.6	4.8	2.9	1.0	2.6	2.0	1.7	1.2
Nevada	1.0	2.9	(3)	2.0	3.0	1.9	(3)	(3)	(3)	3.0	(3)	(3)	2.0	8.0	1.0	(3)	2.9	2.0	4.0	3.0
New Jersey	.4	.4	.6	.7	.6	.1	.7	1.2	.3	1.3	.5	.3	.3	.7	.6	1.1	1.3	1.1	1.3	2.3
New Mexico	4.0	5.0	6.6	8.5	11.6	.9	12.1	10.2	2.8	9.0	.5	1.2	1.7	4.7	1.4	8.7	14.9	11.4	7.6	24.9
New York	.3	.5	.5	.6	.5	.4	.7	.4	1.0	1.5	.4	.5	.8	1.4	1.5	1.0	1.4	1.3	1.1	2.5
North Carolina	1.3	2.0	2.3	2.2	2.3	1.8	7.0	1.1	.3	2.0	.4	.6	.5	.7	.6	6.3	7.5	4.9	1.1	8.8
North Dakota	.6	.3	.4	.6	1.3	3.1	2.7	(3)	.4	7.6	1.0	2.5	1.7	4.7	4.3	1.8	8.9	1.4	.6	6.1
Ohio	.8	.8	1.5	1.8	1.5	.1	2.6	1.5	.6	2.3	1.1	1.2	1.9	2.4	3.6	1.2	1.8	4.3	2.8	2.7
Oklahoma	3.5	3.8	5.3	5.2	7.5	2.9	2.2	.9	.6	1.8	.6	.9	1.3	1.7	.9	.9	7.2	3.3	1.6	6.2
Oregon	1.5	.5	.8	1.7	1.5	.8	.5	.1	4.1	1.5	.5	1.0	1.0	1.8	2.1	.8	2.0	2.1	2.0	1.7
Pennsylvania	.6	.9	1.1	1.0	.8	1.1	2.3	.8	.3	2.2	.6	1.2	1.5	1.6	1.9	1.4	1.6	2.6	1.5	2.0
Rhode Island	.1	.4	.1	.4	.3	.4	(3)	.4	.7	1.0	(3)	.4	1.6	1.9	.4	2.1	1.2	3.1	1.0	1.2
South Carolina	5.1	6.4	6.4	10.0	10.3	.5	7.6	.9	.4	1.3	.2	.5	.3	.6	.4	6.4	14.2	4.5	3.5	9.5
South Dakota	1.2	1.2	1.0	1.0	1.4	4.0	.7	(3)	.3	4.0	1.2	1.0	2.9	3.6	2.7	.9	7.4	3.0	.6	4.0
Tennessee	3.2	3.7	4.8	5.0	6.4	1.4	6.8	1.1	.8	1.3	.6	.7	.7	.8	1.0	3.3	6.9	4.7	2.5	13.4

Texas	4.5	6.3	6.4	6.5	8.9	1.3	1.8	3.5	2.7	2.6	.3	.5	.8	1.0	1.0	3.4	6.0	5.9	2.2	3.4
Utah	.4	.4	.8	1.6	.8	.4	2.1	.8	1.2	6.2	.4	1.0	1.7	8.5	12.0	1.2	2.9	2.7	4.3	7.8
Vermont	.3	.3	1.0	1.6	1.1	1.5	3.1	[3]	5.8	1.6	1.0	.3	.3	.8	2.1	6.2	2.8	.8	2.6	3.4
Virginia	1.7	2.0	1.9	2.7	2.8	.8	3.3	2.4	1.1	5.1	.3	.3	.2	.5	.9	5.5	6.8	7.8	4.4	7.5
Washington	1.1	.8	.7	1.1	1.0	.9	.2	.8	2.0	1.5	.7	.5	1.0	1.5	1.5	.2	2.0	1.9	.8	1.9
West Virginia	2.9	3.5	4.4	4.2	5.3	.3	6.1	2.1	1.6	6.4	1.1	2.0	1.9	2.2	4.5	2.1	7.1	13.1	3.9	6.9
Wisconsin	.2	.2	.4	.4	.3	.7	1.2	.2	.4	2.5	1.2	1.3	2.3	4.4	3.8	1.5	1.9	2.2	1.4	1.8
Wyoming	2.9	2.1	1.3	.4	2.6	.4	[3]	.4	[3]	13.4	.4	2.5	3.8	9.4	11.2	.4	13.9	5.1	1.3	6.9

[1] Data not available prior to 1937.

[3] No deaths reported.

[4] Less than 1/10 of 1 per 100,000 population.

TABLE 4.—*Trend of death rates for various causes per 100,000 population*—Continued

State	Diphtheria (10)					Acute poliomyelitis and polioencephalitis (16)					Encephalitis, epidemic or lethargic (17)					Epidemic cerebrospinal meningitis (18)				
	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935
Alabama	2.7	3.6	3.4	4.0	4.5	0.5	0.6	0.6	1.3	0.5	0.3	0.5	0.4	0.3	0.7	0.8	2.1	3.9	0.9	0.8
Alaska [1]	1.5	3.2	(3)			(3)	1.6	3.3			1.5	(3)	1.7			(3)	(3)	15.0		
California	.9	1.6	1.7	2.1	2.2	1.2	.3	1.3	.6	1.1	.5	.6	.8	.6	.4	.5	.8	1.6	2.1	2.1
Colorado	3.0	3.3	3.2	3.4	4.0	1.1	.7	4.5	1.4	1.1	.6	1.6	1.0	1.0	.7	.7	.6	3.1	2.8	2.2
Connecticut	.3	.7	1.4	.4	1.0	.1	(3)	.4	.1	1.3	.1	.1	.4	.2	.3	.2	.2	.7	.7	1.0
Delaware	.8	.8	.4	1.2	2.0	.4	.4	.4	.4	.4	1.1	(3)	.4	.4	.4	1.5	.4	1.5	1.2	.8
District of Columbia	.8	1.1	2.2	4.5	4.7	.2	.5	.6	.3	1.7	.2	.5	.8	.6	.8	.6	1.4	4.8	10.5	15.8
Florida	2.0	2.0	3.2	3.5	3.7	.3	.6	.3	.4	.4	.4	.5	(3)	.5	.1	.6	.9	4.0	3.7	.8
Georgia	2.8	3.3	3.4	3.8	5.2	.5	.6	.6	.9	.5	.1	.3	.2	.3	.1	.4	.6	1.2	2.1	1.0
Hawaii	.9	.4	2.4	1.6	.7	1.3	.4	.4	.2	(3)	.2	.4	.2	.7	.2	.4	.4	.4	1.6	.7
Idaho	.8	.6	1.2	.6	.6	1.6	.2	.4	1.0	.8	1.6	1.2	.8	1.2	2.5	1.8	1.8	1.0	6.0	4.6
Illinois	1.5	1.5	1.9	2.2	2.6	.3	.2	1.1	.9	.5	.2	.4	.4	.4	.5	.2	.3	1.2	2.2	2.6
Indiana	1.5	2.4	1.5	2.9	4.0	.1	.3	.8	.4	.3	.5	.7	.5	.6	.7	.3	.7	1.5	2.1	2.5
Iowa	.5	.9	.4	.9	2.1	1.1	.4	1.5	.5	.4	.7	1.0	.6	.5	.7	.4	.6	1.0	2.0	2.0
Kansas	.4	1.0	1.3	2.3	2.1	.3	(3)	1.9	.6	.5	1.5	1.2	1.2	1.1	1.4	.4	.3	1.3	1.1	2.2
Kentucky	3.0	3.8	4.6	5.1	8.3	1.2	.9	1.1	1.2	1.6	.7	.3	.7	.8	.5	1.1	2.1	2.9	6.2	2.6
Louisiana	3.2	3.5	3.3	4.4	5.2	.4	.5	.9	.4	.6	.3	.4	.3	.2	.4	.6	.9	1.3	1.8	1.0
Maine	2.1	2.0	.6	.8	1.1	.7	.5	1.8	.4	1.7	.6	.1	.2	.2	.5	.3	.1	1.1	.9	.5
Maryland	1.2	1.1	1.3	1.6	1.3	.1	.1	1.0	.1	.2	.4	1.0	1.5	1.1	.8	.6	.8	2.7	7.1	5.2
Massachusetts	.3	.4	.4	.6	.7	.1	.2	.5	.2	1.4	.1	.2	.3	.3	.5	.4	.6	1.5	2.3	1.2
Michigan	.5	.9	1.5	1.1	1.2	.8	.2	1.0	.4	.7	.1	.2	.2	.4	.3	.3	.4	.8	1.2	.9
Minnesota	.4	.5	.5	.6	.6	1.9	.3	1.9	.2	.4	.3	.7	.9	.6	.9	.2	.4	.9	1.9	1.7
Mississippi	2.7	4.1	2.8	3.6	4.6	.6	.9	2.9	1.0	.5	.3	.4	.6	.3	.2	1.1	.6	1.2	1.3	1.3
Missouri	1.9	3.0	2.3	2.0	4.6	.5	.4	1.9	.6	.4	.4	.5	3.1	.8	1.0	.4	.5	1.2	2.0	2.9
Montana	1.6	1.7	1.5	2.1	2.8	(3)	.4	1.3	.6	.2	1.5	5.5	.9	.4	.9	.9	1.8	1.3	4.3	2.6
Nebraska	1.0	1.2	1.1	1.5	1.2	.6	.5	3.2	.7	.7	.4	.8	.9	.4	.5	.2	.4	1.1	1.4	2.8
Nevada	(3)	2.9	(3)	1.0	(4)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	1.0	1.0	1.0	(3)	1.0	4.0	2.0
New Jersey	.6	.7	.7	.5	1.1	.6	.2	.5	.2	.8	.5	.7	.6	.8	.6	.4	.5	1.1	1.8	.7
New Mexico	3.5	4.0	4.3	3.8	5.7	1.9	.9	1.7	1.7	.9	.5	(3)	(2)	.7	.2	1.2	.9	1.2	3.3	5.5
New York	.2	.3	.6	.5	.8	.4	.2	.4	.1	1.1	.4	.7	.7	.5	.6	.5	.8	1.2	2.2	2.2
North Carolina	4.9	5.1	4.8	5.5	4.6	.3	.3	.6	.3	2.0	.2	.4	.4	.4	.4	.4	.9	1.2	1.6	.8
North Dakota	1.8	.8	1.6	1.6	3.0	.3	(3)	(3)	.4	.4	1.5	3.8	.6	.7	1.1	.4	1.3	1.8	1.0	1.0
Ohio	.9	1.4	1.6	1.6	2.7	.2	.3	.8	.8	.5	.6	.4	1.0	.8	1.0	.2	.7	1.4	2.4	3.3
Oklahoma	3.0	4.8	3.8	3.5	5.7	.4	.9	2.3	1.4	.4	.5	.3	.3	.7	.3	.5	.9	1.9	3.7	2.7
Oregon	.2	1.0	.8	.9	.5	.4	.6	.7	.9	1.6	.8	1.4	1.2	1.9	1.7	.7	1.3	.7	1.5	2.8
Pennsylvania	.7	1.0	1.0	1.3	1.5	.4	.1	.4	.2	.3	.6	.7	.6	.6	.7	.6	.6	1.3	1.2	1.2
Rhode Island	.1	.1	.4	.1	.7	(3)	.1	(3)	(3)	3.5	(3)	.6	.3	.3	.1	.6	.9	2.2	3.1	2.3
South Carolina	4.3	2.8	3.5	4.0	3.7	2.2	.5	.7	.9	.7	.2	.4	.3	.2	.4	.4	.8	1.0	2.5	1.3
South Dakota	.6	1.4	.7	.7	1.7	.4	.3	1.2	.1	1.0	.6	1.0	1.2	.3	.6	.7	.3	1.0	.6	.4

Tennessee	3.0	3.6	4.7	5.3	6.4	.5	.7	1.2	1.5	.8	.6	.4	.8	.9	.5	.7	1.7	2.4	3.6	3.8
Texas	2.7	3.9	3.9	5.6	7.7	1.1	.7	2.1	.6	.8	.3	[2]	[3]	[3]	[3]	.3	.6	1.5	2.1	1.4
Utah	1.0	1.2	1.2	1.0	1.4	1.3	[3]	1.3	.2	.2	1.0	.2	1.0	.6	.6	1.0	1.3	1.7	3.5	1.9
Vermont	.8	3.4	.5	[3]	1.1	1.3	1.0	.5	[3]	1.9	.3	.3	[3]	.5	.5	.5	[3]	2.3	1.6	2.1
Virginia	3.5	4.2	3.1	3.8	4.3	.3	.3	.5	.4	1.6	.3	.2	.6	.4	.5	.9	1.5	4.0	5.2	3.8
Washington	.7	.6	.9	.4	.7	.4	.2	.5	1.0	.6	1.5	1.3	1.9	2.4	1.6	.5	.7	1.3	1.5	2.1
West Virginia	3.1	3.5	4.8	7.1	8.7	.5	.8	1.1	1.2	.6	.6	.5	.2	.5	.6	1.9	1.7	4.4	5.8	3.6
Wisconsin	.1	.5	.8	.5	.4	.4	.2	1.3	.1	.2	.3	.3	.5	.8	.8	.2	.3	.7	1.0	1.2
Wyoming	1.3	3.0	[3]	3.9	.9	1.3	1.3	3.0	.4	.9	[3]	.8	1.7	.8	1.3	.8	.8	2.6	2.1	2.6

[1] Data not available prior to 1937.

[3] No deaths reported.

TABLE 4.—*Trend of death rates for various causes per 100,000 population*—Continued

State	Influenza (11)					Pneumonia, all forms (107-109)					Malaria (38)*					Pellagra (62)*				
	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935
Alabama	32.9	25.6	49.9	48.5	44.3	65.8	75.6	90.2	97.8	85.7	6.9	7.6	7.9	12.2	11.4	9.6	11.8	10.7	10.7	9.1
Alaska [1]	24.6	41.3	40.0	------	------	187.7	209.5	185.0	------	------	------	------	------	------	------	------	------	------	------	------
California	3.7	4.1	30.4	11.8	8.9	48.4	58.4	81.9	72.3	63.7	------	.1	.2	.1	.1	.7	1.1	1.2	1.4	1.5
Colorado	23.5	13.8	49.2	32.5	32.5	91.4	104.5	167.3	131.3	113.2	------	------	------	------	.1	.1	------	.2	.5	.5
Connecticut	4.6	4.4	11.7	8.0	8.6	41.2	49.3	67.0	70.3	65.1	------	------	------	------	.1	.1	.1	.3	.3	.1
Delaware	12.9	10.7	22.6	10.8	15.6	70.7	68.7	96.2	84.6	91.8	------	------	------	------	------	------	.4	------	------	.4
District of Columbia	9.3	5.2	15.6	7.6	11.4	73.1	86.1	121.4	138.9	127.3	.2	------	------	------	.7	.2	.6	.8	.5	1.3
Florida	29.8	21.9	39.5	53.5	39.2	60.6	72.6	73.4	85.5	67.7	6.6	9.4	12.2	21.0	20.2	4.4	6.0	6.2	8.1	11.1
Georgia	28.9	24.7	44.6	58.9	43.0	68.4	84.4	93.7	120.3	95.8	3.0	4.8	6.9	20.0	12.6	8.4	11.5	11.7	12.6	12.1
Hawaii	3.4	4.8	8.2	11.9	13.2	48.2	67.2	83.5	68.0	69.4	------	------	------	------	------	------	------	.4	.3	------
Idaho	18.0	16.6	39.6	19.0	17.1	58.2	77.8	77.3	110.5	95.6	.2	------	------	------	.4	.4	------	------	.2	------
Illinois	12.2	5.6	16.9	14.5	15.7	53.7	58.2	70.0	80.4	77.9	.4	.4	.5	.7	.8	.3	.2	.2	.2	.2
Indiana	25.4	12.3	32.3	28.1	24.7	67.1	68.7	91.7	97.0	86.4	.2	.3	.6	.1	.3	.1	.1	.5	.5	.2
Iowa	23.4	12.5	32.2	19.9	21.0	49.6	60.4	64.4	71.2	76.2	------	(4)	.1	.1	(4)	.2	------	.2	(4)	(4)
Kansas	18.2	15.4	34.0	47.3	31.2	42.2	50.2	59.5	84.3	79.4	------	.2	.2	------	.3	.3	.3	.4	.7	.3
Kentucky	32.0	24.2	48.2	43.3	28.8	69.2	72.3	89.2	104.4	83.9	1.0	1.1	1.3	1.8	2.5	2.7	2.1	2.6	3.1	2.6
Louisiana	25.2	25.1	53.6	49.5	24.2	87.5	98.3	105.7	120.0	87.2	5.4	8.6	8.4	11.7	17.0	3.8	6.9	4.6	5.5	6.3
Maine	19.8	14.9	37.5	24.9	20.2	72.7	73.9	93.5	96.4	84.3	------	------	------	------	.1	.5	.2	.1	.1	.5
Maryland	10.3	7.9	17.3	11.7	14.7	72.0	80.0	108.8	111.0	100.7	------	.2	.1	.1	.2	.5	.3	.4	.5	.8
Massachusetts	4.9	3.5	9.5	6.3	7.3	65.2	71.9	92.6	88.1	89.5	(4)	(4)	(4)	------	(4)	.1	.2	.3	.3	.4
Michigan	15.3	6.5	17.7	12.0	15.1	57.1	58.9	84.9	85.4	80.4	(4)	(4)	------	.1	.2	(4)	.1	(4)	.1	.2
Minnesota	12.1	9.0	23.8	14.2	15.8	60.6	68.3	74.8	85.0	76.5	------	------	------	(4)	.1	------	.1	.1	.1	.2
Mississippi	39.7	31.8	59.0	71.3	42.4	59.2	70.9	91.4	92.0	70.4	10.2	13.5	15.4	18.0	26.4	9.3	13.2	11.6	13.4	11.2
Missouri	18.7	14.1	34.4	38.7	24.0	72.5	82.7	110.1	116.7	98.8	1.6	1.9	2.3	2.6	4.2	.7	.6	.5	.9	.4
Montana	23.6	19.4	55.5	24.3	42.0	67.1	76.0	104.1	121.5	122.8	------	------	------	.2	------	.2	------	.2	.2	------
Nebraska	16.5	11.0	41.1	21.3	22.7	49.9	53.2	60.8	72.0	78.2	------	------	------	------	.2	------	.1	.2	.1	.1
Nevada	6.8	1.0	8.9	26.0	21.2	86.4	107.8	124.8	148.0	108.1	------	------	------	------	------	1.0	------	1.0	------	------
New Jersey	5.5	4.6	10.0	7.9	9.2	42.0	54.9	66.4	67.7	63.2	(4)	------	------	(4)	.2	.1	.2	.2	.2	.1
New Mexico	24.4	13.0	38.9	34.8	41.5	103.1	96.0	128.2	144.8	132.2	.9	.2	(4)	.5	.9	3.5	4.3	4.3	5.0	2.4
New York	4.2	3.6	10.1	6.5	6.8	55.9	63.0	87.6	88.9	85.4	.2	.3	.2	.1	.1	.2	.2	.2	.2	.2
North Carolina	17.8	14.0	25.1	32.2	28.3	61.0	77.6	84.3	100.7	90.4	1.7	2.2	2.7	4.3	2.7	5.8	7.3	9.4	10.2	11.2
North Dakota	15.9	10.7	27.5	12.7	23.9	49.7	49.9	67.1	55.6	93.3	------	------	------	------	.1	------	------	------	------	------
Ohio	19.0	11.3	30.1	20.0	24.5	61.0	61.7	86.0	87.1	79.0	(4)	(4)	------	.1	.1	.1	------	(4)	.4	.4
Oklahoma	19.9	15.8	40.1	46.1	30.8	55.5	56.8	72.4	91.5	79.3	2.0	3.2	3.3	3.7	5.5	3.8	4.1	4.0	6.9	5.1
Oregon	9.5	8.7	28.7	19.8	16.8	41.9	52.9	62.8	93.3	60.9	.1	------	.2	.1	------	.3	------	.1	.2	.1
Pennsylvania	11.8	9.7	26.6	16.1	18.1	48.3	58.2	76.5	82.5	80.0	(4)	(4)	.1	.1	(4)	.1	.1	.1	.1	.1
Rhode Island	5.3	4.8	11.0	9.1	8.5	59.5	81.4	94.7	95.9	79.4	------	------	------	------	------	.3	------	.1	.1	.3
South Carolina	29.4	28.4	42.5	49.8	44.2	63.7	85.2	91.9	87.4	89.7	9.0	11.8	14.0	23.4	23.4	7.8	12.1	14.4	14.8	16.2
South Dakota	19.8	13.9	38.7	20.2	31.6	51.2	52.5	70.1	66.2	96.1	------	------	------	------	------	------	------	------	.1	------

Tennessee	31.3	25.4	44.9	54.4	39.9	69.3	78.9	93.3	117.3	95.4	3.3	3.5	3.6	5.4	7.8	5.0	7.0	6.9	8.5	7.6
Texas	21.1	24.8	52.9	53.2	39.2	53.8	70.4	86.5	100.8	83.8	2.2	4.1	5.8	8.1	10.6	5.8	8.8	9.4	11.7	10.6
Utah	13.4	9.8	24.1	21.5	22.7	47.4	65.8	63.8	95.7	92.9	------	------	------	------	.2	.2	------	.2	------	.2
Vermont	23.9	13.2	30.0	31.1	35.0	73.0	73.6	97.1	111.8	99.4	------	------	------	------	------	------	------	.3	------	.8
Virginia	21.4	18.3	38.7	38.0	35.2	64.6	69.0	94.6	94.0	78.7	.3	.1	.3	.6	.6	2.1	4.1	3.8	4.9	5.3
Washington	8.7	10.4	24.2	26.0	16.2	52.0	66.9	69.7	76.9	56.8	------	------	------	------	------	------	------	.2	.3	.1
West Virginia	19.2	18.8	42.1	33.8	31.1	60.6	69.2	92.1	109.3	84.1	------	.1	.1	.1	.2	.3	.3	------	.5	.7
Wisconsin	18.3	8.1	39.4	15.9	19.3	50.5	57.5	67.7	77.0	65.5	------	------	------	.1	(4)	.1	.2	.1	.1	------
Wyoming	11.7	13.1	46.0	24.0	26.7	51.9	65.0	115.3	113.3	91.8	------	------	------	------	.4	.4	------	------	------	------

[1] Data not available prior to 1937. [3] No deaths reported. [4] Less than 1/10 of 1 per 100,000 population. *Leaders indicate no deaths reported.

TABLE 4.—*Trend of death rates for various causes per 100,000 population*—Continued

State	Tuberculosis, all forms (23-32)					Cancer, all forms (45-53)					Diabetes mellitus (59)					Cerebral hemorrhage, apoplexy (82a, b)				
	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935
Alabama	52.7	54.9	60.4	63.9	61.2	57.6	56.9	57.2	59.2	60.3	11.7	12.0	10.4	12.3	9.1	67.0	68.8	67.0	69.2	66.2
Alaska [1]	401.5	460.3	423.3			87.7	74.6	71.7			4.6	1.6	6.7			66.2	141.3	71.7		
California	61.7	65.4	72.0	76.2	75.3	152.5	147.7	140.9	144.9	140.6	25.9	25.0	25.5	24.0	25.0	91.5	89.2	85.1	85.1	84.7
Colorado	57.4	59.3	65.9	76.2	76.8	116.5	116.6	113.9	116.7	112.2	18.8	17.6	16.5	18.4	16.1	89.5	88.4	85.6	84.5	80.6
Connecticut	33.4	35.6	36.5	38.6	41.9	134.8	138.5	125.8	125.1	126.4	28.4	29.2	30.6	28.3	29.8	79.9	85.3	85.4	83.3	84.3
Delaware	57.4	50.0	55.6	49.4	62.5	109.9	117.2	118.8	122.0	114.1	33.8	33.6	29.9	29.3	30.5	116.0	97.7	113.8	113.9	109.4
District of Columbia	66.7	71.3	88.5	106.6	102.2	158.0	136.9	139.1	136.7	131.0	27.1	25.8	28.7	26.7	26.1	84.6	83.3	95.2	100.6	99.5
Florida	53.3	57.7	57.5	54.6	55.5	99.8	89.3	97.3	88.4	87.9	22.2	19.2	17.7	18.6	19.5	106.2	101.7	113.7	112.5	104.8
Georgia	46.1	50.0	49.3	55.1	55.7	61.0	60.2	57.1	56.0	54.8	11.3	13.0	12.0	12.5	12.3	92.5	84.6	83.1	82.7	76.7
Hawaii	59.5	58.3	70.8	78.0	68.5	63.4	60.0	66.5	62.9	62.1	14.8	15.1	15.6	16.9	15.1	42.4	49.1	40.6	43.7	39.8
Idaho	19.2	19.8	20.7	24.5	24.6	91.5	84.8	83.4	79.6	66.8	20.6	11.0	12.6	13.6	14.2	62.6	62.6	70.0	73.6	66.2
Illinois	45.5	46.6	50.7	51.6	52.1	141.1	136.1	131.2	131.1	128.4	29.8	27.5	27.1	29.2	25.3	74.7	73.1	71.6	79.1	72.8
Indiana	40.4	38.3	45.4	47.0	46.2	109.5	110.7	106.7	108.0	109.9	16.2	15.6	14.5	16.4	15.5	129.1	119.9	118.7	127.4	121.8
Iowa	17.2	18.1	20.2	22.2	25.7	122.7	125.7	124.3	120.8	126.2	24.2	21.6	21.4	23.2	21.5	101.6	98.3	103.4	105.2	105.7
Kansas	22.7	23.1	26.6	29.0	28.8	119.9	121.4	115.6	117.2	111.2	25.7	24.1	23.3	22.9	22.2	97.4	100.2	97.8	102.7	98.9
Kentucky	66.5	66.1	68.8	71.6	69.7	76.9	70.0	68.1	74.6	71.0	12.3	12.6	10.5	15.1	14.5	100.9	94.9	87.3	83.9	78.4
Louisiana	64.2	66.7	71.0	72.6	72.2	83.6	87.6	81.9	80.7	80.3	17.8	17.6	18.0	17.4	15.8	74.4	69.7	68.2	71.3	63.9
Maine	34.4	29.5	31.5	39.8	35.4	148.7	147.4	143.3	151.3	148.5	26.7	26.8	23.4	28.1	27.7	124.2	112.8	127.2	126.2	123.6
Maryland	76.9	78.9	83.4	82.9	81.1	140.6	136.4	134.4	128.7	130.3	31.1	28.7	26.3	27.5	26.8	102.7	102.4	108.1	110.6	112.3
Massachusetts	33.9	37.2	41.2	43.8	46.3	146.6	156.8	147.9	153.0	147.7	32.1	32.6	33.4	31.4	29.7	94.6	95.8	95.1	96.2	95.3
Michigan	38.5	38.4	43.9	43.9	43.2	123.1	118.6	114.4	115.7	109.6	27.7	26.3	25.9	26.5	26.0	87.2	89.8	86.9	94.8	89.1
Minnesota	29.8	29.1	33.9	35.6	34.6	138.9	140.0	140.6	133.5	131.1	26.8	25.6	23.8	25.8	22.1	95.0	86.0	86.4	86.5	82.7
Mississippi	51.4	57.5	63.7	63.4	58.0	65.4	69.1	65.9	64.6	59.8	12.9	12.9	12.6	12.4	11.9	75.8	73.7	75.9	79.3	67.3
Missouri	44.2	48.0	54.5	58.2	55.2	124.6	123.6	117.8	118.0	117.5	23.3	21.6	21.4	22.6	20.7	87.2	84.8	90.6	91.2	78.2
Montana	43.3	43.3	43.6	41.2	46.9	116.4	100.0	107.2	106.0	97.4	17.5	18.0	20.2	22.4	19.8	90.9	93.8	85.7	92.1	93.6
Nebraska	16.0	15.9	19.1	18.0	22.4	113.9	118.8	112.2	113.0	108.5	24.2	24.7	26.0	24.8	20.5	88.3	82.9	88.3	89.4	99.3
Nevada	55.3	60.8	85.1	88.0	108.1	118.4	106.9	70.3	95.0	89.9	9.7	12.7	13.9	13.1	17.3	70.9	80.4	74.2	69.0	80.8
New Jersey	41.1	43.8	46.4	50.2	50.1	133.4	127.5	124.8	127.4	123.8	32.0	29.2	30.3	30.6	28.6	82.4	80.3	76.3	80.8	75.9
New Mexico	89.2	93.1	126.3	122.6	121.1	65.0	64.0	57.1	55.7	54.0	10.6	8.8	8.1	8.8	8.5	47.7	52.1	51.4	49.8	48.1
New York	48.5	50.0	57.1	58.4	57.3	156.0	155.4	150.5	147.3	143.3	39.5	36.4	37.0	36.3	32.7	67.6	64.9	74.6	78.7	77.3
North Carolina	50.7	53.2	54.1	60.6	56.6	55.8	54.1	54.1	51.8	50.6	13.7	10.8	10.9	11.6	10.1	79.7	81.2	79.2	91.2	80.7
North Dakota	19.9	19.8	25.9	24.9	25.1	89.0	86.7	80.7	83.5	79.7	19.9	19.2	17.6	18.8	18.6	70.6	63.1	67.4	67.6	58.3
Ohio	43.3	45.8	49.4	52.9	53.8	134.4	129.5	121.3	126.4	123.3	29.7	27.4	26.4	27.4	25.9	109.8	105.7	107.8	113.8	109.2
Oklahoma	41.4	44.7	48.3	51.2	46.1	71.3	68.8	71.8	67.6	60.5	13.3	12.6	12.8	14.6	12.3	77.8	62.1	62.2	63.9	60.3
Oregon	30.2	29.0	33.9	36.5	34.5	132.8	137.2	121.5	135.1	122.9	26.2	24.0	25.0	23.3	25.0	110.8	102.3	101.9	108.4	108.0
Pennsylvania	38.7	40.7	45.3	44.4	44.4	118.7	116.5	115.0	112.0	107.0	32.5	30.0	30.8	27.4	27.2	80.2	80.1	79.4	86.5	81.9
Rhode Island	38.9	40.7	46.8	47.9	51.0	156.7	159.2	156.2	145.2	147.3	38.3	41.6	42.1	33.8	33.3	90.9	96.9	98.4	98.4	96.2
South Carolina	44.0	48.5	50.4	53.2	54.3	54.2	53.8	50.3	49.4	49.1	13.4	12.0	11.5	11.0	12.2	95.3	92.6	93.5	106.2	84.3
South Dakota	27.3	34.4	37.3	34.4	39.2	97.5	86.1	84.0	88.4	89.7	25.0	18.5	19.6	21.4	19.6	71.1	67.2	69.4	81.9	78.9

Tennessee	77.0	74.7	83.0	87.5	84.3	69.5	71.5	67.3	65.8	64.6	13.2	10.9	11.2	11.3	11.5	79.2	79.5	78.8	80.3	77.4
Texas	57.9	66.9	69.5	71.5	69.1	68.7	74.4	72.8	73.6	68.5	12.0	12.2	12.6	12.7	11.7	61.4	70.8	69.3	62.2	64.8
Utah	17.1	19.0	20.4	21.5	17.5	96.4	88.5	91.3	81.2	85.2	19.2	20.8	19.1	20.3	17.9	56.8	54.3	60.3	50.0	52.8
Vermont	36.0	34.5	47.2	42.6	42.6	129.6	123.6	137.6	137.6	139.5	30.1	28.5	18.8	25.5	30.8	106.9	103.1	96.9	115.2	120.1
Virginia	57.7	63.9	60.5	66.6	69.1	77.1	77.4	70.9	71.1	72.1	16.8	15.9	16.0	15.4	15.2	100.0	93.4	88.8	95.7	95.1
Washington	42.6	42.8	46.3	49.8	51.6	142.0	135.4	132.0	133.3	132.2	25.9	24.7	23.5	25.3	23.3	108.3	108.1	102.2	103.8	98.7
West Virginia	45.5	49.1	52.5	54.4	57.3	73.5	73.6	73.6	70.6	70.9	17.3	16.0	15.1	14.6	13.4	76.1	71.7	74.0	78.6	71.2
Wisconsin	28.8	31.1	34.8	36.2	36.5	134.4	133.2	132.8	128.7	126.2	28.5	29.6	26.5	29.7	25.8	90.7	89.0	91.1	98.0	88.4
Wyoming	23.8	24.1	18.7	18.0	25.0	78.2	86.5	76.6	73.8	67.2	17.2	14.3	11.1	15.4	17.2	59.8	59.5	84.2	74.2	65.9

[1] Data not available prior to 1937.

TABLE 4.—*Trend of death rates for various causes per 100,000 population*—Continued

State	Diseases of the heart (90-95)					Diseases of the digestive system (115-129)					Diarrhea and enteritis under 2 years (119)					Nephritis, all forms (130-132)				
	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935
Alabama	163.0	166.1	161.9	147.4	135.8	56.2	66.1	64.1	68.0	61.8	13.3	17.8	15.5	17.5	15.2	66.5	76.4	78.0	79.3	79.9
Alaska [1]	252.3	273.0	323.3			46.2	42.9	65.0			(3)	(3)	10.0			30.8	19.0	18.3		
California	365.4	353.3	363.2	333.6	320.5	79.0	77.2	84.8	84.2	77.8	9.6	8.3	12.5	10.4	7.4	74.3	80.0	82.6	83.4	82.6
Colorado	263.3	243.2	210.0	250.0	240.1	67.2	73.3	83.1	101.7	100.5	12.5	14.2	26.6	23.6	17.2	75.5	86.0	79.5	84.3	78.8
Connecticut	287.9	246.5	234.6	238.4	221.7	47.2	48.1	47.6	51.3	56.1	2.0	3.3	3.0	2.6	1.7	74.3	78.2	77.5	84.8	86.8
Delaware	365.0	364.9	363.6	346.3	331.3	52.9	65.3	72.0	68.3	69.9	5.3	12.2	9.6	15.4	19.1	107.2	105.0	136.0	119.3	111.4
District of Columbia	347.6	339.8	327.1	338.4	330.6	82.1	76.2	79.9	84.2	90.2	11.7	11.3	11.6	15.0	9.9	106.2	101.4	98.2	96.9	100.7
Florida	262.6	256.2	241.3	238.4	214.7	82.8	87.7	98.5	85.4	93.2	11.3	12.9	11.0	9.5	12.8	98.3	96.0	100.3	104.4	104.8
Georgia	166.1	164.6	167.3	180.1	163.7	57.2	69.2	67.2	72.6	72.5	13.0	21.8	15.2	17.5	15.8	91.1	109.3	107.7	108.3	100.8
Hawaii	112.4	113.3	107.1	119.4	100.5	47.3	49.1	59.2	64.8	64.2	9.9	11.1	17.0	20.1	18.6	58.0	56.1	64.5	62.2	67.3
Idaho	248.3	207.4	150.7	186.4	159.1	57.6	55.6	71.8	64.7	60.5	5.9	5.0	9.1	7.2	4.4	54.7	56.0	64.2	61.9	62.6
Illinois	336.6	314.0	301.5	317.6	276.7	61.6	64.5	68.9	72.6	69.1	3.1	5.5	4.5	6.5	4.4	91.8	91.5	95.4	102.0	96.8
Indiana	243.7	231.8	243.9	265.5	254.2	(2)	(2)	(2)	(2)	(2)	5.4	8.4	8.5	8.9	6.3	63.1	63.2	63.4	74.3	64.7
Iowa	264.4	242.1	220.5	231.7	225.7	53.2	54.7	54.8	56.9	61.0	2.3	3.4	3.8	4.4	3.9	53.6	56.3	58.3	59.9	62.3
Kansas	249.8	242.0	224.8	241.8	217.0	58.1	60.6	62.5	72.2	70.7	3.9	5.0	6.1	6.8	6.5	93.6	93.8	87.2	97.1	92.4
Kentucky	206.3	178.2	165.2	207.1	185.3	63.2	73.3	71.9	84.0	74.9	18.0	28.8	22.2	30.0	21.7	62.3	68.4	66.0	76.2	72.8
Louisiana	234.5	217.1	211.6	198.9	183.6	72.7	77.0	74.8	81.8	81.5	13.5	17.7	16.5	17.4	17.5	98.9	101.1	104.3	107.7	108.1
Maine	369.4	335.4	359.5	344.4	326.4	54.4	57.7	59.0	66.2	78.3	5.5	7.6	14.0	6.0	12.9	79.8	81.8	81.3	87.1	87.1
Maryland	334.4	327.2	313.8	304.6	273.5	57.4	62.1	69.0	70.3	70.8	10.0	11.9	13.8	16.1	14.0	126.7	132.1	138.6	142.4	137.4
Massachusetts	372.5	364.3	359.2	358.7	337.1	50.9	54.9	59.2	61.5	61.1	1.8	2.7	2.7	3.5	5.2	61.5	67.2	69.0	73.5	76.3
Michigan	303.0	284.2	272.8	278.9	262.8	60.9	62.3	65.6	75.2	67.3	5.5	6.4	5.8	9.8	4.5	57.2	56.8	60.6	63.5	62.9
Minnesota	262.5	248.7	232.4	244.0	213.9	56.3	54.3	56.0	62.2	63.2	3.4	3.4	2.8	4.6	3.8	40.8	42.7	45.4	48.1	48.4
Mississippi	162.6	161.0	155.0	156.7	136.7	61.5	56.4	62.5	63.5	52.5	13.9	18.2	20.7	20.6	13.0	94.4	100.6	101.8	102.4	97.4
Missouri	259.8	252.4	254.2	260.3	229.7	62.8	63.6	62.2	84.6	73.0	8.4	10.7	10.9	15.1	11.6	105.0	100.9	99.3	115.6	111.4
Montana	235.1	212.3	220.8	193.8	205.5	68.7	68.1	73.5	88.5	94.0	5.3	5.9	7.0	11.5	8.1	58.7	46.6	58.1	65.3	66.8
Nebraska	203.1	216.9	219.9	220.6	189.7	49.9	50.9	61.4	74.6	65.6	2.1	2.3	4.0	4.8	3.7	63.6	58.7	63.1	69.6	51.5
Nevada	278.6	279.4	255.4	290.0	218.2	44.7	66.7	72.3	104.0	104.1	3.9	4.9	5.0	7.0	7.1	42.7	39.2	46.5	84.0	100.0
New Jersey	339.2	322.2	308.8	301.9	285.1	53.7	56.2	57.2	58.2	57.0	2.6	3.0	3.2	3.4	3.4	64.4	69.7	70.3	75.6	79.0
New Mexico	133.3	137.7	135.8	128.2	114.2	109.9	116.8	151.2	127.1	134.8	46.7	52.6	88.4	74.4	79.1	54.5	61.6	54.3	67.1	67.8
New York	370.5	364.7	360.9	349.8	318.4	59.9	61.9	67.6	68.3	67.0	4.3	4.7	5.9	6.1	6.2	66.4	70.9	75.5	78.7	80.3
North Carolina	160.4	162.7	158.3	175.1	155.7	63.1	75.9	71.0	64.9	63.9	18.9	29.2	24.6	23.5	22.0	81.9	87.4	84.5	98.1	90.5
North Dakota	187.3	146.8	163.7	160.6	146.0	48.7	48.6	54.8	67.5	65.5	6.3	6.9	10.0	12.2	10.4	37.2	40.3	35.6	41.7	47.4
Ohio	303.1	280.9	284.9	282.8	262.8	56.5	58.6	67.6	73.2	69.2	5.2	6.9	8.2	8.3	6.0	76.9	76.7	78.8	84.4	81.5
Oklahoma	137.8	128.1	129.5	136.9	121.4	58.5	55.8	65.1	70.7	67.0	8.5	9.4	13.0	15.3	13.1	49.5	56.3	61.8	58.0	52.6
Oregon	293.1	273.8	273.3	277.4	277.5	46.2	49.4	52.3	66.2	63.0	2.2	2.0	1.6	2.3	1.8	116.3	109.2	106.6	104.3	103.7
Pennsylvania	312.2	301.5	301.9	292.8	271.7	50.5	53.6	55.5	53.7	55.7	4.3	5.2	6.0	5.8	5.5	79.0	80.0	84.5	82.0	83.1
Rhode Island	376.4	362.6	368.0	355.1	328.3	62.6	62.4	60.6	61.2	66.2	4.1	5.3	5.1	3.8	5.3	99.7	105.3	108.5	107.2	103.8
South Carolina	185.1	187.1	185.2	177.8	178.4	43.1	39.0	29.8	41.6	63.2	7.0	11.0	9.8	16.2	22.1	88.1	90.0	92.0	93.8	93.5
South Dakota	188.0	163.0	167.0	153.6	139.6	56.1	52.0	54.5	60.4	59.0	5.1	5.3	4.6	10.1	7.8	40.0	38.4	44.1	60.5	61.1

Tennessee	170.3	159.3	158.0	161.3	142.6	63.5	74.3	75.2	80.3	77.9	12.5	21.6	17.6	20.4	18.9	58.7	62.5	65.2	67.9	63.1
Texas	168.7	174.2	170.3	168.0	152.4	[3]	[2]	[3]	[2]	[3]	26.1	25.1	31.4	26.8	29.2	53.8	57.6	60.1	61.7	58.0
Utah	244.9	233.8	227.9	218.4	202.5	56.0	66.0	67.8	78.0	80.6	2.3	5.6	3.8	9.9	4.9	56.6	54.4	57.2	58.5	58.3
Vermont	331.9	280.3	311.2	356.3	313.0	47.0	49.7	47.8	69.2	63.9	3.3	2.6	2.6	5.3	3.4	73.5	75.6	72.6	88.2	88.3
Virginia	235.9	227.6	219.2	231.4	208.0	51.0	57.7	51.7	57.8	55.4	10.6	15.6	12.3	13.3	10.8	82.0	80.5	83.5	91.5	86.3
Washington	295.4	281.4	301.9	277.0	264.6	53.4	59.5	47.8	66.3	65.3	2.3	3.2	3.2	3.3	3.7	65.3	67.8	75.3	74.3	79.2
West Virginia	168.8	164.5	166.2	170.5	150.2	61.1	70.3	71.6	92.1	76.8	17.7	25.9	21.3	34.3	20.1	64.4	69.3	66.4	67.3	69.5
Wisconsin	315.5	289.6	282.5	290.8	256.4	[2]	[2]	[2]	[2]	[2]	4.9	5.1	4.7	6.2	4.6	59.8	62.7	68.9	68.8	70.0
Wyoming	217.2	214.8	254.0	207.3	184.9	65.7	76.0	73.6	90.7	75.9	6.3	9.3	14.0	11.6	3.9	72.4	56.5	40.9	53.2	55.2

[1] Data not available prior to 1937.

[2] Data not available.

[3] No deaths reported.

TABLE 4.—*Trend of death rates for various causes per 100,000 population*—Continued

State	All accidents (176–195, 201–214)					Automobile accidents (206, 208, 210)				
	1939	1938	1937	1936	1935	1939	1938	1937	1936	1935
Alabama	67.7	66.8	72.7	70.2	63.6	21.0	20.3	23.4	24.1	21.0
Alaska [1]	160.0	196.8	206.7			(2)	(2)	1.7		
California	96.3	96.8	107.0	108.5	98.0	44.4	43.9	50.9	50.8	46.0
Colorado	90.4	91.2	94.5	103.1	94.3	29.6	31.5	35.9	36.3	31.2
Connecticut	59.6	69.9	68.4	69.7	72.7	20.1	19.1	24.0	25.7	28.1
Delaware	72.2	80.2	106.5	93.4	96.1	29.3	26.7	42.9	33.6	28.1
District of Columbia	76.4	64.3	82.3	82.0	83.8	23.0	20.6	27.8	33.6	27.8
Florida	100.3	98.2	105.1	102.3	119.2	39.3	41.8	42.8	41.6	39.1
Georgia	55.6	66.8	75.3	90.5	79.3	19.8	24.7	29.6	32.3	30.8
Hawaii	42.4	52.6	51.1	59.4	65.0	12.6	16.4	15.0	20.4	18.4
Idaho	100.0	90.0	104.5	111.4	92.1	34.7	34.2	36.7	38.4	34.0
Illinois	70.9	74.1	80.8	99.9	73.5	28.2	27.5	33.1	32.2	29.1
Indiana	70.6	72.3	86.8	105.1	84.5	28.6	30.7	39.3	39.5	35.1
Iowa	64.9	64.9	75.1	87.1	74.9	19.1	18.9	23.9	22.1	24.5
Kansas	99.7	104.3	114.2	95.0	85.9	22.3	24.1	26.9	30.6	31.5
Kentucky	73.3	62.1	71.6	85.8	77.2	21.8	20.8	26.1	23.8	23.7
Louisiana	69.8	71.4	69.4	78.2	73.6	22.2	22.4	22.6	27.2	24.5
Maine	70.3	67.4	74.2	83.5	82.2	21.6	21.7	18.6	24.3	24.8
Maryland	74.4	72.7	92.2	84.9	85.3	23.4	23.0	32.2	27.6	28.0
Massachusetts	57.7	60.0	63.9	69.0	68.7	14.1	15.0	18.9	20.2	19.3
Michigan	76.4	73.5	92.2	99.7	82.7	28.8	28.5	41.0	40.1	35.2
Minnesota	70.0	69.9	75.0	97.8	75.2	22.3	24.1	24.8	26.8	23.7
Mississippi	63.3	67.8	68.6	86.8	66.0	20.5	20.0	22.9	25.9	20.0
Missouri	67.6	67.3	79.2	95.4	74.2	20.2	21.9	27.7	25.6	24.7
Montana	95.5	103.5	108.0	124.3	104.0	27.5	24.6	33.2	32.4	30.0
Nebraska	66.6	57.3	66.5	77.9	82.3	20.6	16.9	24.0	22.8	25.6
Nevada	201.0	141.2	157.3	184.0	177.8	73.8	58.8	59.4	74.0	80.8
New Jersey	56.2	58.4	72.1	72.4	69.0	19.4	20.2	26.6	25.8	27.6
New Mexico	104.9	97.6	125.5	108.2	93.1	47.4	35.1	49.2	49.0	37.2
New York	62.6	65.0	72.6	71.4	70.7	18.0	18.7	22.6	20.4	22.3
North Carolina	64.7	62.6	72.0	71.4	70.6	26.0	24.9	29.9	28.1	29.4
North Dakota	47.0	51.0	58.9	64.1	55.7	13.1	17.4	19.3	19.2	15.7
Ohio	84.6	81.7	94.6	103.2	91.9	28.2	27.9	36.9	35.8	35.5
Oklahoma	74.6	66.9	61.5	76.2	68.9	20.1	21.8	24.2	25.8	26.5
Oregon	95.5	93.9	89.7	109.6	95.9	31.2	31.9	33.2	35.7	28.8
Pennsylvania	52.7	57.3	66.1	76.6	72.2	16.1	16.9	21.6	24.0	23.4
Rhode Island	53.4	94.0	55.9	58.3	60.4	11.3	11.6	18.1	16.5	15.8
South Carolina	68.8	62.9	70.1	75.2	71.9	27.8	24.6	27.9	31.4	27.7
South Dakota	51.2	62.7	60.3	70.5	63.9	20.0	20.2	15.9	18.5	21.4

Tennessee	60.8	60.8	68.3	77.2	72.5	19.0	19.4	24.5	27.2	25.3
Texas	62.4	73.9	88.5	82.2	78.9	23.6	29.0	34.0	32.6	30.6
Utah	82.5	97.7	98.4	92.1	91.9	31.3	41.5	38.9	35.9	36.5
Vermont	61.2	64.0	65.5	82.3	92.9	20.3	19.2	17.0	26.3	22.6
Virginia	71.5	68.0	70.8	83.4	82.1	29.0	24.2	28.0	31.2	32.2
Washington	89.9	84.3	99.0	111.4	99.4	27.9	29.0	33.0	38.5	34.6
West Virginia	77.7	79.1	95.1	104.0	99.2	18.4	19.8	24.8	28.0	28.2
Wisconsin	80.6	72.1	83.6	91.2	77.1	24.1	23.5	29.9	26.6	28.6
Wyoming	118.0	113.5	128.9	131.3	124.6	49.4	40.9	53.2	48.9	43.5

[1] Data not available prior to 1937.

[2] No deaths reported.

EXISTENCE AND USE OF HOSPITAL FACILITIES AMONG THE SEVERAL STATES IN RELATION TO WEALTH AS EXPRESSED BY PER CAPITA INCOME [1]

By ELLIOTT H. PENNELL, *Statistician*, JOSEPH W. MOUNTIN, *Senior Surgeon*, and KAY PEARSON, *United States Public Health Service*

In other reports of the series pertaining to the Business Census of Hospitals,[2] distribution of hospital facilities in the United States has been examined in relation to such matters as the geographic locality, population range, and urban character of areas containing hospitals. Repeatedly, through the several investigations, wealth appeared to be such an important factor in regulating distribution of facilities that it seemed worth while to make a special analysis of the bearing of financial resources of a particular region upon the establishment and operation of hospitals therein. From the resulting study came verification of the fact that the presence of hospital facilities and the extent to which they are used depend in great measure upon levels of wealth as reflected by income. Throughout many of the States with limited per capita income, facilities for hospitalization are very meager and the system of financial support in existing hospitals is often so arranged as to deny their benefits to those persons in the income brackets where need is most acute. Obviously, hospitals are scarce within such an area because of collective inability to provide and maintain them; at the same time beds in the few established ones are often unoccupied because of individual inability to pay for their use.

It is the purpose of this investigation to demonstrate the extent of the influence exerted by the relative income of a State or group of States upon the supply of hospital beds and upon the rate of occupancy for these beds, as well as upon the sums expended for their operation. Information which makes possible an evaluation of the relationship between regional financial capacity and the presence and use of hospital facilities flows from two bodies of data: One, assembled by the Bureau of Foreign and Domestic Commerce, makes possible a classi-

[1] From the Division of Public Health Methods, National Institute of Health.

[2] Previous articles based on the 1935 Business Census of Hospitals conducted by the United States Public Health Service are:

Pennell, Elliott H., and Mountin, Joseph W.: The financial support of non-Government hospitals as revealed by the recent Federal Business Census of Hospitals. Hospitals, vol. 11, No. 12, December 1937.

Mountin, Joseph W., Pennell, Elliott H., and Hankla, Emily: A study of the variations in reports on hospital facilities and their use. Pub. Health Rep., vol. 53, No. 1, January 7, 1938.

Pennell, Elliott H., Mountin, Joseph W., and Hankla, Emily: Summary figures on income, expenditures, and personnel of hospitals. Hospitals, vol. 12, No. 4, April 1938.

Pennell, Elliott H., Mountin, Joseph W., and Pearson, Kay: Prevailing ratios of personnel to patients in hospitals offering general care. Hospitals, vol. 12, No. 11, November 1938.

Pennell, Elliott H., Mountin, Joseph W., and Pearson, Kay: Business Census of Hospitals, 1935. General Report. Supplement No. 154 to the Public Health Reports, U. S. Government Printing Office, 1939.

Mountin, Joseph W., Pennell, Elliott H., and Pearson, Kay: Regional differences in hospital facilities for tuberculosis, from the standpoints of accommodations, sources of financial support, and operating costs. Transactions of the National Tuberculosis Association, Thirty-fifth Annual Meeting, June 26-29, 1939, Boston, Mass.

fication of States on the basis of per capita income; the other, secured from the American Medical Association and the Business Census of Hospitals, enumerates type and quantity of hospital facilities by States and describes, along with the degree of their utilization, something of their fiscal structure.

Average per capita income for each State during 1935, 1936, and 1937, as reported by the Bureau of Foreign and Domestic Commerce,[3] was selected as a satisfactory gage of current ability to provide and to use means for hospital care. During an era of economic instability, the advantages of a criterion based on figures for a 3-year interval rather than for a single year are apparent. Information tabulated by the Public Health Service regarding facilities and volume of service has in large part been derived from the hospital number of the Journal of the American Medical Association which was published in the early part of 1938.[4] Since much of the material presented heretofore applies to hospitals so registered, selection of the same group for this analysis permits one to follow with consistency specific items recurring in the several publications.

In order that comparison by areas might be facilitated, the 48 States and the District of Columbia were arranged in descending order of annual per capita income, 1935–37. Such arrangement places the District of Columbia with $1,165 in first position, Indiana with $441 at the median point, and Mississippi with only $196 per capita in last place. As would be expected, industrial States, chiefly of the Northeast, stand high in the array and agricultural ones, especially those of the lower South, rank among the last. Thus ordered, States are analyzed according to provision of hospital facilities and to certain other factors relative to hospitals, such as operating agency and financial structure, which presumably influence their availability.

Tables giving in detail information for each State are supplied in the appendix. For simplicity of discussion there are incorporated in the body of the report summary charts illustrating the measure to which financial resources of different range react on selected aspects of the hospital situation. To this end, States arrayed as described above are divided into four groups, equal in number, which will hereafter be referred to as first, second, third, and fourth quarters, descending order of per capita income prevailing in the respective quarters. It should be explained that the District of Columbia which conforms in economic character with the first or upper one-fourth is added to this class.

Consolidation of States into groups obliterates, of course, in each analysis peculiarities of atypical States. Although examination of

[3] Nathan, Robert R., and Martin, John L.: State Income Payments, 1929–37. Bureau of Foreign and Domestic Commerce, Department of Commerce.

[4] Journal of the American Medical Association, vol. 110, No. 13, Mar. 26, 1938.

the appendix tables treating States individually serves to substantiate the general trends revealed by the summary charts, it shows at the same time that a few States manifest characteristics contrary to those of the majority of States in the same per capita income class. Closer inspection reveals the fact that irregular States are chiefly the thinly settled ones, that is, those with such small populations that ratios based thereon are likely to fluctuate considerably with but slight changes in the basic figures.

Notwithstanding the diversity in kind of medical service offered, hospitals may for convenience be grouped into three major types: General and allied special,[5] mental, and tuberculosis. Mental and tuberculosis hospitals are considered separately since they offer more prolonged treatment than do most of the other types, since they are so organized that patient-day costs of operation are considerably less than for other institutions, and since they operate under a scheme of financial support different from that of general hospitals.

All hospitals under the control of the Federal Government are excluded from the figures contained in this analysis. Source of support and rules governing eligibility for admission to these centers are in great measure distinct from those of other hospitals. Rarely does the matter of residence enter into the question of hospitalization in Federal units. Infirmary departments of institutions, such as colleges, prisons, and homes for the aged, are also omitted from the study. They, like Federal hospitals, accept for care only isolated fragments of the population. Furthermore, these departments are operated in such close conjunction with the parent institutions that it is frequently impossible to separate the revenues or expenditures of the two.

In the discussion which follows, each of the three medical types is, as stated earlier, treated separately; however, the general and allied special hospitals receive more extensive investigation than either the mental or tuberculosis. In the first place, popular interest tends to be focused on general hospitals chiefly because of the variety and spread of their service. Differences in the numbers of persons reached by hospitals of the three major medical types are illustrated by the fact that registered mental and tuberculosis institutions, although providing two-thirds of the patient days of care afforded by all hospitals, report less than 300,000 annual admissions, while registered general and special hospitals report approximately 9,000,000.[6] In the second place, diversity in operating agencies and consequently in sources of revenue distinguishes those offering general or closely related special services. Being largely of voluntary control, they are

[5] Special hospitals, as used here, are those furnishing types of care which are closely identified with general medical and surgical service. They include maternity, industrial, isolation, eye-ear-nose-throat, orthopedic, children's, and others offering similar specialized types of care.

[6] See footnote 4.

supported in great measure by fees received directly from patients, whereas those affording care to mental and tuberculosis cases are maintained chiefly by governmental appropriations.

GENERAL AND ALLIED SPECIAL HOSPITALS

More than 400,000 beds distributed among some 4,500 registered hospitals represent the aggregate general and allied special facilities owned by non-Federal agencies. Of these beds, one-fourth are supported by State, county, or city governments, or by the last two in combination; almost two-thirds are controlled by nonprofit organizations such as churches, fraternal orders, and similar associations; and one-tenth are maintained by individuals or organized groups, often referred to as proprietary agencies, that are free to use as they see fit any profits which may be derived from their hospital investments.

The power of financial resources over the presence of hospital facilities within an area is clearly demonstrated in figure 1, which shows

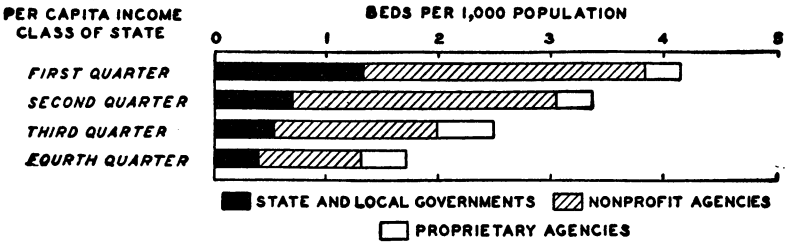

FIGURE 1.—Beds per 1,000 population in general and special hospitals of different control, by per capita income class of State.

for the four income classes of States number of beds per 1,000 population according to the agency in control. From 4.16 beds per 1,000 persons in the first quarter of the States, the total drops to 1.72 in the last quarter, a decline that is especially striking inasmuch as recent surveys show disabling illnesses to be more prevalent among the poorer than the wealthier families.[7] In the main, distribution within separate control groups follows the pattern just described. Beds in hospitals managed by State and local governments and by nonprofit organizations are roughly three times more numerous in the highest quarter of the States than in the lowest. To this apportionment the facilities owned by proprietary agencies offer exception, for, on a population base, they are more common in the States with low incomes than in the relatively prosperous ones.

Among individual States, ratios of beds to population are, of course, wider in range. The District of Columbia and Massachusetts, with more than 5 beds per 1,000 persons, afford strong contrast with

[7] Britten, Rollo H., Collins, Selwyn D., and Fitzgerald, James S.: The National Health Survey: Some general findings as to disease, accidents, and impairments in urban areas. Pub. Health Rep., 55:444 (1940).

Arkansas and Mississippi which possess scarcely more than 1 bed for the same number of inhabitants. Nevertheless, considerable uniformity exists among the ratios applying to States within each income class. Probably the only notable exception is that Wyoming in the first class has a smaller share of beds, comparatively, than has North Dakota, which belongs to the last income group.

Since it has been demonstrated that the income of an area reflects the quantity of hospital facilities existing there, the question may well be asked as to what influence is exerted by income rate upon the amount of hospitalization for inhabitants of each economic area. In other words, how does the number of days of hospital care per unit of population in one area compare with corresponding figures for areas of different financial status? In answer to the question, figure 2 is submitted. The aggregate days of care in general and special hospitals represent the reported average daily census multi-

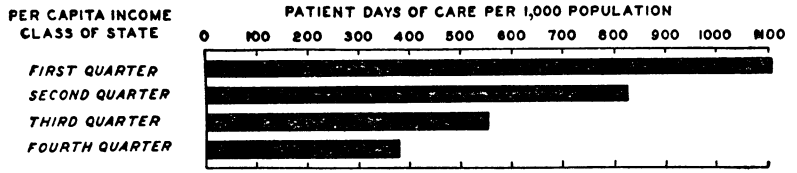

FIGURE 2.—Patient days of care per 1,000 population in general and special hospitals, by per capita income class of State.

plied by 365. The resulting total is a slight understatement since a few hospitals containing approximately 2 percent of all beds failed to report data on the number of patients per day.

The weight of average income upon amount of hospitalization is closely equivalent to its weight upon provision of facilities. If money is available, evidently needs for hospital treatment are frequently met, for in States of the highest income group more than 1,100 days of care per 1,000 population are recorded for 1937. In States of the lowest income group, annual days of care for the same unit of population amount to only 377. Three members of the wealthiest class of States, District of Columbia, Massachusetts, and Rhode Island, actually exceed 1,300 days of care for every 1,000 persons; two members of the poorest class, Arkansas and Mississippi, barely exceed 200 days.

The sequence of the findings concerning the dominance of income over supply and use of hospital facilities is sustained by the percentages appearing in figure 3, which shows the proportion of beds occupied in each of the four areas established on an income basis. The percentage of occupancy, it may be explained, represents the ratio of the average daily census to the number of beds reported by the hospital. Despite the fact that one would expect beds in regions where bed-population ratios are low to be used more extensively than those located in regions

where these ratios are high, such is not the case—presumably because of the limitations imposed by the restricted incomes characterizing areas with meager facilities. In States of the highest income class, three-fourths of all general and special bed facilities are occupied; among those of the second quarter, hardly more than two-thirds are in use; and the last two quarters, almost equal in rate of occupancy, show even further reduction. Practically every State in the wealthiest class maintains an occupancy rate above the average for all non-Federal general and special hospitals, outstanding exceptions being Nevada and Wyoming. The figures for Rhode Island show a utilization rate slightly above 80, which closely approaches the figure usually considered optimum. Louisiana, one of the poorer States, ranks next to Rhode Island in point of utilization, an anomaly partially explained by the existence in Louisiana of a chain of State-supported hospitals. The two States ranking lowest in per capita income are the only ones

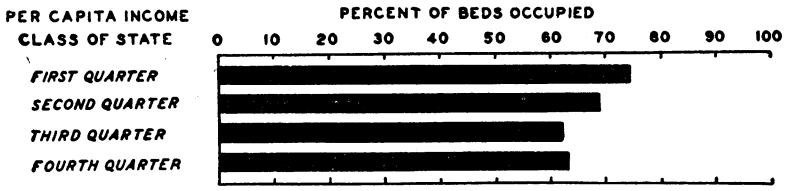

FIGURE 3.—Percentage of beds occupied in general and special hospitals, by per capita income class of State.

reporting less than half of their beds to be occupied. Clearly, then, where money is scarcest beds are fewest, and where beds are fewest they are least often used.

Analysis of the total receipts of hospitals for current operating purposes and of the channels through which this revenue is obtained clarifies to some degree reasons for the low occupancy prevailing in many general and special hospitals. In succeeding pages frequent reference will be made to per capita payments to hospitals; these may be identified as the sums obtained when all hospital income, exclusive of gifts for permanent endowment, is divided by the total population of the area involved. Further, per capita payments are broken into three parts according to the source from which hospitals secure them. The first part includes all fees for regular and special services collected directly from patients; the second contains all tax funds, emergency or otherwise, appropriated by governments; and the third represents donations, interest, and miscellaneous income that may be used to meet operating expense.

The estimated average per capita payment by inhabitants of the United States toward the operation of general and special hospitals, exclusive of Federal, is $3.37. As may be noted in figure 4, striking reductions in the payments per capita to hospitals occur from the highest fourth of the States to the lowest. Residents of the richest

States pay annually more than $5 per person toward the operation of general and special hospitals; those of the next wealthiest class pay $3; those of the third group pay $2; and those living in the poorest States make a per capita outlay of less than $1.50. These averages for the several economic areas conceal extreme divergences among separate States, as illustrated by the fact that inhabitants of Massachusetts spend $7.05 for the upkeep of general and special hospitals while people in Mississippi pay out $0.67.

Components of the payments under discussion, that is, amounts received from patients, from taxes, and from miscellaneous sources, repeat the pattern established by the whole. If the payments by patients to hospitals located in States of the first income class are distributed over the entire population of these States, it is found that the average for residents thereof is nearly $3; in like manner, the average for those in States of the last income class is less than $1. Similar reductions occur in the per capita sums received by hospitals in the form of taxes or as so-called miscellaneous revenue. Singulari-

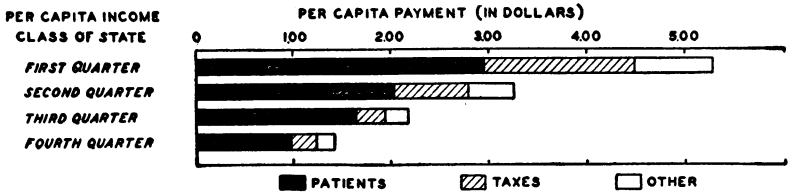

FIGURE 4.—Estimated annual per capita payment for care in general and special hospitals, by per capita income class of State.

ties of certain States may be illustrated by citing such extremes as these: Residents of the District of Columbia, wealthiest of areas from point of income, make an annual per capita payment of $4.22 in the form of fees charged patients; and those in Arkansas, second poorest of the States, average $0.46 per person for such payments. Residents of California spend through the medium of taxes $2.15 per capita; for Alabama the corresponding figure is $0.01. Hospital income classed here as miscellaneous amounts to $2.07 per person in Rhode Island and to $0.01 in Mississippi.

Of greater interest than the absolute per capita payments is the proportion of each of these payments that is derived from a particular source. About 62 percent of the aggregate sum is expended in the form of fees collected from patients, 24 percent through taxes, and the remaining 14 percent by way of other channels. Such distribution places major responsibility for hospital maintenance upon individuals who are ill and who by virtue of the fact are likely to be less able to afford hospital service. If operation of hospitals is mainly dependent upon fees paid by patients, opportunities for treatment are limited not only among indigent persons but also among the marginal income

classes that are not on relief but are unable to purchase hospital care after essentials of life have been procured. As taxation becomes an important means of support, possibilities become greater that those of straitened circumstances, as well as their more prosperous neighbors, may obtain hospital care. As wealth decreases from one income class of States to another, the proportion of hospital income obtained directly from patients increases; concomitantly, the relative amounts from taxes and miscellaneous sources diminish. To the evenness of this trend the fourth quarter of the States offers slight interruption in that the percentage of revenue from patients does not continue the increase but drops to a smaller figure than that for the third quarter.

Although multiple schemes of hospital support prevail among the various States, there is noticeable congruity in the patterns formed by percentages designating specific sources of income for hospitals located in States composing the same economic group. Within no State except Wyoming do the hospitals located in States of the first per capita income class receive more than two-thirds of their income from patients; within the second, third, and fourth quarters, the maximum percentages from patients are 82, 87, and 94, respectively, for the ranking States taken as a whole. The two minimum figures are those for Louisiana and Rhode Island, which belong, in the order named, to the lowest and highest per capita income classes. In Rhode Island, as in a number of other New England States, a considerable fraction of the total hospital income represents earnings from endowments; in Louisiana, governmental appropriations account for almost half of the receipts. From the standpoint of sums derived from taxes, it may be added that hospitals in States of the first two quarters receive anywhere from 10 to 38 percent from public funds. Among the 24 States comprising the lower half, there are 8 in which hospitals secure less than 10 percent of their income from taxes.

Are the small sums paid to hospitals by inhabitants of poor States truly commensurate with their ability to pay? To determine whether average expenditures for hospital support are in keeping with average income, the hospital payments per person were converted into figures showing payments per $1,000 income within the States. For this purpose, State income reported for the single year 1935[8] was used, since hospital income data employed in this report cover that year. The resulting hypothetical amounts as shown in figure 5 prove that contributions toward hospital maintenance conform in great measure with the monetary resources of the area. It will be remembered that according to figure 4 per capita payments to hospitals are only one-fourth as large in the last quarter of the States as in the first. When expressed as payments per $1,000 income, the sum for the lowest income class of States is almost three-fourths of the sum for the

[8] See footnote 3.

highest income class. To be exact, residents of the more impoverished States contribute from every $1,000 of income $6.06 toward hospital upkeep, and those residing in the more prosperous States contribute, correspondingly, $8.42.

Extraordinary differences among States or financially related classes of States are likewise found to be largely effaced when the total payments per $1,000 income are divided according to the sources from which hospitals secure the funds. Reference to figure 5 reveals the narrow range of the new ratios. Amounts from patients are remarkably uniform for each of the per capita income classes of States, and, as may be seen in table 5, are not widely dissimilar among particular States constituting the four classes. Although more divergent than the sums paid by patients, amounts originating from taxes and miscellaneous sources are not notably disparate. These last-mentioned amounts tend, however, to be less in the half of the States with lowest per capita incomes than in the other half. The somewhat larger

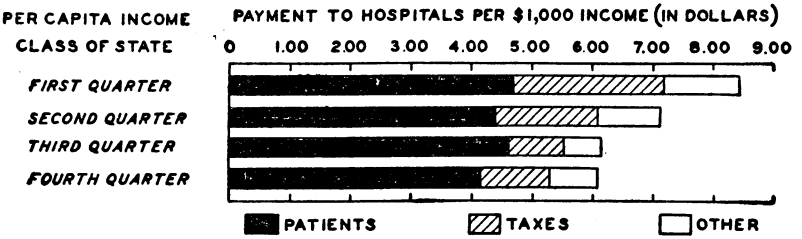

FIGURE 5.—Estimated annual payment per $1,000 income within State for care in general and special hospitals, by per capita income class of State.

payments per $1,000 income to hospitals in States of the upper half do not, then, reflect greater direct expenditures by patients but rather indirect outlays in such forms as bequests and governmental appropriations that are considerably larger than corresponding allotments in States of the lower half. In reality, persons in the poorer States are, according to financial ability, devoting more toward hospitalization purposes than are inhabitants of the richer States, inasmuch as the former must spend a greater share of their income for absolute necessities, thereby leaving proportionately less for such matters as hospital service.

MENTAL HOSPITALS

It is a matter of interest that for the United States as a whole the number of beds in the group of mental hospitals is greater than the number in all general and allied special hospitals. Almost 533,000 beds, slightly more than 4 for every 1,000 persons, are contained in 558 non-Federal mental hospitals throughout the country. In only 7 of the individual States is there a preponderance of beds in general and special hospitals over those in mental institutions. As is evident

in figure 6, most of the facilities for care of mental cases are supported by State and local governments. Actually, mental hospitals so controlled contain 96 percent of the total non-Federal bed facilities. Almost 4 beds per 1,000 persons are provided by mental hospitals under the management of State, county, and city governments, whereas less than 0.2 of a bed per 1,000 is maintained by nongovernmental or voluntary agencies. Every State is supplied with at least one mental hospital of governmental control; on the other hand, there are roughly a dozen which contain no mental institution of voluntary sponsorship. It may be added that care of persons with mental disorders appears to be largely a function of State governments, for the governmental group under discussion is composed chiefly of State-owned facilities. In Wisconsin only is there extensive operation of mental hospitals by county governments; control by city governments is rare in all areas.

The close relationship between economic status, as reflected by income rates, and supply of facilities is again emphasized in the sev-

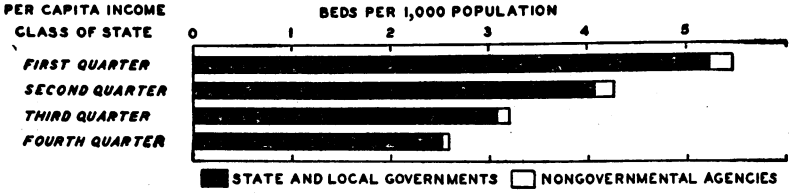

FIGURE 6.—Beds per 1,000 population in mental hospitals of different control, by per capita income class of State.

eral ratios giving beds in mental hospitals per unit of population. In both the voluntary and nonvoluntary control groups, facilities for hospitalizing mental cases are far more abundant in wealthy States than in poor ones. More than twice as many beds per unit of population are provided by governmental agencies in States of the first per capita income class as are supplied by similar agencies in States of the fourth income class. Instances of particular States magnify the dominance of wealth over the supply of existing facilities. Two of the 8 richest States are supplied with more than 6 beds per 1,000 persons. One State of the poorest group falls below 2 beds for the same number of inhabitants. The scarcity of total beds for mental patients, 0.9 per 1,000 population, as recorded for the District of Columbia is readily explained by the fact that the major part of the facilities found there are in hospitals under Federal supervision, which are excluded from this study.

That mental institutions, most of which are usually tax-supported, are occupied to full capacity is apparent in figure 7. Other information not of formal survey character shows that many hospitals are

filled beyond their rated capacity. Although practically complete utilization is indicated for hospitals in States composing each of the per capita income classes, yet even in the exceptionally high occupancy figures there is discernible slight evidence of the influence exerted by financial resources upon the sum total of hospital use. Where income per person is most restricted, the rate of occupancy is a trifle below the average for the country. Among individual States,

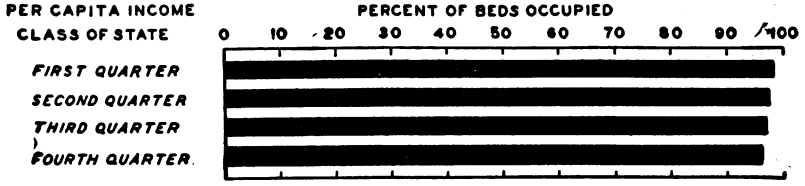

FIGURE 7.—Percentage of beds occupied in mental hospitals, by per capita income class of State.

percentages are consistently high, only two, Nevada and North Dakota, dropping below 90.

The sums required to operate mental hospitals are decidedly smaller than those necessary for the upkeep of general and special institutions. Reduced though they are, the amounts still reflect the power of varying financial capacities upon the payments to hospitals in localities of different economic status. The pattern of figure 8 showing the range of individual payments to mental hospitals almost reproduces that of figure 4 which describes the general and special group, except that the amounts are at a lower level. Inhabitants of States with per capita incomes of less than $335 (the lowest quarter) pay for hospitalization

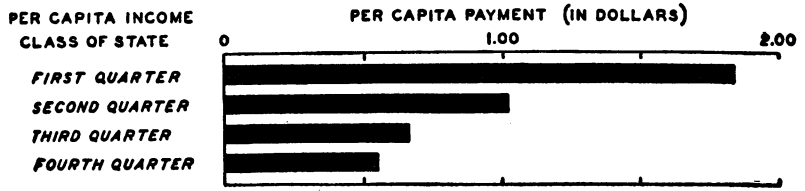

FIGURE 8.—Estimated annual per capita payment for care in mental hospitals, by per capita income class of State.

in mental institutions an average of only $0.55. Persons in States with incomes of nearly $600 or more (the highest quarter) spend $1.83 for the same purpose.

In the appendix it will be observed that financial figures for certain States are withheld from the tables to avoid disclosure of confidential information. This course is followed when the number of hospitals of particular type in the State is so small that data reported by individual institutions might be revealed. Massachusetts and North Carolina, which are unlike economically, occupy extreme positions when States are ranked according to per capita payments to hospitals, residents of

the former averaging $3 each, those of the latter $0.25. Hence, as in the case of the general and special group, the measure of support afforded mental hospitals is determined in general by the average income of the area involved.

TUBERCULOSIS HOSPITALS

Tuberculosis hospitals, almost as numerous as the mental, contain roughly 70,000 beds or a little more than one-half of a bed per 1,000 population. Distribution of tuberculosis hospitals according to ownership resembles in the main that of mental institutions. State and local governments are not, however, so completely dominant in the control of tuberculosis sanatoria as they are in the control of mental hospitals. Nor are States the principal operating agencies; county governments have assumed major responsibility for main-

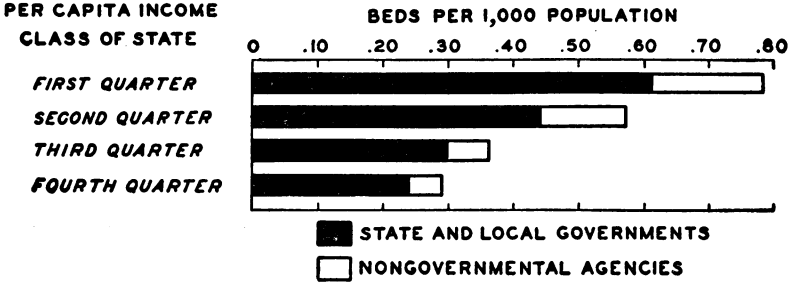

FIGURE 9.—Beds per 1,000 population in tuberculosis hospitals of different control, by per capita income class of State.

tenance of facilities to be used in combating tuberculosis. Figure 9 illustrates the sparseness of bed facilities where income is lowest. Regardless of whether hospitals are sponsored by governmental or voluntary agencies, the pattern of bed distribution is the same—a larger proportion in regions with sufficient means to provide and maintain them, and decreased proportions as the income ranges grade downward.

Though knowledge of the ratios of hospital beds to population is of some value in planning tuberculosis control programs, it is rather generally conceded that the most satisfactory measure of need for facilities is not total population but prevalence of tuberculosis as indicated by the number of deaths from the disease. Such being the case, figure 10 was prepared to show the number of beds per annual death from tuberculosis [9] in the four previously established economic areas of the country. The totals presented in this figure cover all beds for tuberculosis which are contained in tuberculosis sanatoria and preventoria and in general and isolation hospitals,[10] except those

[9] Vital Statistics—Special Reports, vol. 7, No. 26, March 23, 1939. Bureau of the Census, Department of Commerce.

[10] Tuberculosis Hospital and Sanatorium Directory, 1938. National Tuberculosis Association.

of Federal control. The presence in mental hospitals of a few thousand beds devoted to care of tuberculous inmates leads to a slight understatement of the bed-death ratios, since these beds are excluded from the aggregate facilities while deaths from tuberculosis occurring in such institutions are contained in the mortality reports employed in the analysis. The resulting discrepancy is not, however, believed to be sufficient to reduce the value of the comparisons which are made.

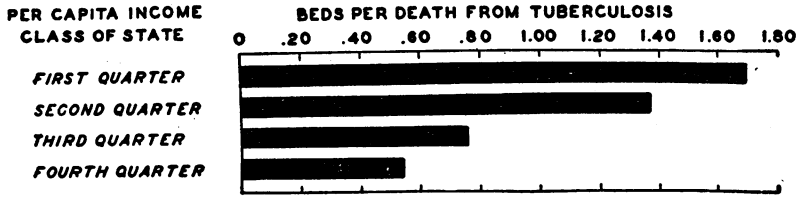

FIGURE 10.—Beds in tuberculosis hospitals and in tuberculosis departments of general hospitals per death from tuberculosis (all forms), by per capita income class of State.

Figure 10 confirms in cogent manner the findings of figure 9, which establish the ascendant position of per capita income in regulating the distribution of facilities. Beds for care of tuberculosis are not apportioned according to needs as manifested by frequency of deaths from the disease but chiefly according to the purchasing power of the particular area. A decrease from 1.68 to 0.54 beds per death from tuberculosis occurs between the average for the first quarter of the States and for the fourth quarter. Certain States fail, of course, to

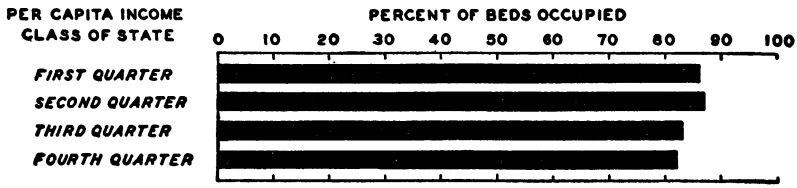

FIGURE 11.—Percentage of beds occupied in tuberculosis hospitals, by per capita income class of State.

comply with the pattern established by those of similar economic rank. For example, Nevada, Wyoming, Montana, and Arizona have fewer beds per death than have other States of like per capita income standing; on the contrary, Iowa and North Dakota have considerably more than have the States closely resembling them in economic capacity.

Since tuberculosis hospitals, like mental hospitals, depend principally upon taxes for support, their admissions are not limited to those who possess means with which to pay for services. Consequently their occupancy rates, not rigidly governed by the economic status of the localities served, tend to run high in all parts of the country, as is indicated in figure 11. The percentages for each of the income classes do reveal, nevertheless, that there is a small difference in the

utilization rates for the upper and the lower half of the States, the presence of wealth being conducive to more complete occupancy.

The influence of per capita income on the payments per person to tuberculosis sanatoria is even more pronounced than it is in the instance of mental or of general and special hospitals. Reference to figure 12 shows that the average sum paid by those dwelling in States of the uppermost group is four times as great as that paid by dwellers in States of the lowest economic group. When States are considered singly, Colorado, with an average of $1.32, stands foremost in per capita payments to tuberculosis hospitals. Since the State contains no tax-supported sanatoria and since many charitable and fraternal orders in different sections of the country have established tuberculosis hospitals there, support of these institutions can be only in small

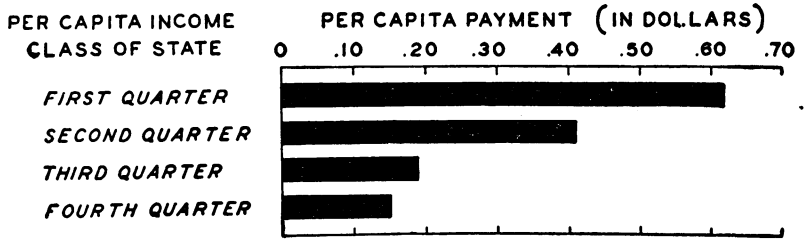

FIGURE 12.—Estimated annual per capita payment for care in tuberculosis hospitals, by per capita income class of State.

measure a responsibility of residents of the State. In two other States of the more affluent half, Connecticut and Massachusetts, persons pay more than $1 each for support of tuberculosis sanatoria; in a few States of the less affluent half, expenditures for the same objective are around $0.05.

SUMMARY

A digest of the findings accumulated from the foregoing investigations may serve to emphasize the salient point developed by the various analyses: Presence of hospital facilities and utilization of these facilities, as well as the sums paid for their maintenance, are to a striking degree dependent upon the purchasing power of an area. After States had been grouped into four economic classes according to descending order of average per capita income for the 3-year period ending in 1937, hospital facilities located in each class were projected against the economic background thus provided. It was found that regardless of the medical type of the hospitals or, as a rule, of their operating agency, the number of beds per unit of population is roughly proportionate to the financial means of the area. Bed facilities in general and allied special hospitals are almost two and a half times as numerous in the wealthy States constituting the first quarter as in the poor ones of the fourth quarter. Practically the same coordination

between amount of income and quantity of facilities obtains in the distribution of beds for mental and tuberculosis cases.

The effect of varying income rates is even more far-reaching. A person's chances to receive hospital care, as well as the opportunity which hospitals, especially those dependent upon fees from patients, have to operate at optimum capacity, are contingent upon the economic status of the area. Despite the fact that illness is more commonly an adjunct of poverty than of wealth, it is in the poorest States that the fewest patient days per unit of population are reported for general and special hospitals. Although no tabular material showing amount of hospitalization has been given here for mental and tuberculosis hospitals, it is known that proportionate days of care within them are also affected strongly by income rates for a designated region.

Not only on the days of hospital care received per population unit is per capita income influential but also on the proportion of beds occupied in a given group of hospitals. Inasmuch as most mental and tuberculosis hospitals are largely supported by taxation, they are not compelled as are many of the general and special hospitals to demand direct payments from patients; hence they are often used to capacity and sometimes even beyond the level which assures efficiency of operation. Yet they reveal in small measure what the general and special hospitals reveal to a marked extent—that the finances of an area determine the degree to which beds in existing hospitals are used. In brief, the situation is that few facilities, limited amounts of hospitalization, and low occupancy are coexistent in areas with meager per capita incomes; in areas of increasingly high economic status, supply of facilities and extent of their use are on the whole roughly proportionate to the enlarged average income.

Payments per individual toward hospital operation show striking deviation from one income class of States to another, sometimes being four times as great in States of the first class as in those of the last class. This interrelationship between payments to hospitals and per capita income prevails among institutions of all medical types. The foremost question which follows examination of the actual sums paid to hospitals is whether or not persons are sharing according to their ability the burden of hospital maintenance. Conversion of per capita payments into payments per $1,000 income established the fact that throughout the several areas total outlays as based on income are remarkably consistent. Of particular import is the uniformity, on this basis, of the amounts supplied directly by patients. Thus it appears that for the support of hospital facilities persons everywhere are paying according to their means, but that from region to region their achievements are widely different as a result of divergent financial capacities.

Appendix

TABLE 1.—*Beds per 1,000 population in general and special hospitals [1] of different control, by States arrayed in descending order of average per capita income 1935–37 [2]*

State	Population (add 000) [3]	Total beds [4]	Beds per 1,000 population in hospitals of specified control			
			All hospitals	State and local governments	Non-profit agencies	Proprietary agencies
United States	129,257	405,846	3.14	0.83	1.96	0.35
First quarter	45,915	190,922	4.16	1.34	2.53	.29
District of Columbia	627	3,348	5.34	1.78	3.50	.06
Delaware	261	809	3.10	.33	2.71	.06
New York	12,959	59,344	4.58	1.35	2.90	.33
Nevada	101	427	4.23	2.70	1.18	.35
California	6,154	27,187	4.42	2.14	1.74	.54
Connecticut	1,741	6,304	3.62	.34	3.22	.06
Rhode Island	681	3,026	4.44	1.48	2.91	.05
Massachusetts	4,426	23,137	5.23	2.01	2.89	.33
Michigan	4,830	17,115	3.54	1.47	1.86	.21
Maryland	1,679	6,871	4.09	1.17	2.72	.20
Illinois	7,878	27,832	3.53	.77	2.52	.24
New Jersey	4,343	14,849	3.42	.79	2.51	.12
Wyoming	235	673	2.86	1.65	.55	.66
Second quarter	32,034	107,707	3.36	.69	2.38	.29
Montana	539	2,687	4.98	.55	3.67	.76
Ohio	6,733	19,094	2.84	.70	2.04	.10
Washington	1,658	6,240	3.76	.65	2.64	.47
Pennsylvania	10,176	35,416	3.48	.64	2.73	.11
Oregon	1,027	3,763	3.66	.47	2.27	.92
Wisconsin	2,926	10,915	3.73	.85	2.61	.27
Colorado	1,071	4,639	4.33	.93	2.98	.42
Arizona	412	1,487	3.61	.66	2.57	.38
Minnesota	2,652	10,942	4.13	1.07	2.22	.84
New Hampshire	510	2,049	4.02	.73	2.74	.55
Maine	856	2,724	3.18	.26	2.08	.84
Indiana	3,474	7,751	2.23	.60	1.43	.20
Third quarter	23,999	60,183	2.51	.53	1.50	.48
Florida	1,670	4,539	2.72	1.08	1.23	.41
Utah	519	1,763	3.40	.70	2.29	.41
Idaho	493	1,400	2.84	.38	1.58	.88
Missouri	3,989	11,094	2.78	.70	1.85	.23
Vermont	383	1,149	3.00	----------	2.68	.32
Nebraska	1,364	4,350	3.19	.67	1.92	.60
Iowa	2,552	6,966	2.73	.55	1.92	.26
Kansas	1,864	4,851	2.60	.38	2.02	.20
New Mexico	422	1,361	3.23	.48	2.33	.42
West Virginia	1,865	4,955	2.66	.26	1.26	1.14
Texas	6,172	12,232	1.98	.45	.94	.59
Virginia	2,706	5,523	2.04	.39	1.17	.48
Fourth quarter	27,309	47,034	1.72	.40	.93	.39
Louisiana	2,132	5,608	2.63	1.27	.96	.40
South Dakota	692	1,823	2.63	.11	2.05	.47
Oklahoma	2,548	4,246	1.67	.32	.52	.83
North Dakota	706	2,144	3.04	.09	2.77	.18
Tennessee	2,893	4,831	1.67	.49	.88	.30
Kentucky	2,920	4,931	1.69	.34	1.08	.27
Georgia	3,085	4,783	1.55	.54	.55	.46
North Carolina	3,492	6,500	1.86	.21	1.41	.24
South Carolina	1,875	3,002	1.60	.50	.95	.15
Alabama	2,895	4,028	1.39	.28	.64	.47
Arkansas	2,048	2,590	1.26	.17	.76	.33
Mississippi	2,023	2,548	1.26	.22	.55	.49

[1] Special hospitals, as used here, are hospitals furnishing types of care which are closely identified with general medical and surgical service. These hospitals include maternity, industrial, isolation, eye-ear-nose-throat, orthopedic, children's, and others offering similar specialized types of care. Mental and tuberculosis hospitals are given separate classification.

[2] Average per capita income computed from annual data published by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

[3] Population, as of July 1, 1937, estimated by the Bureau of the Census, Department of Commerce.

[4] Bed totals represent tabulations of data for individual hospitals published in the Journal of the American Medical Association, vol. 110, No. 13, Mar. 26, 1938. Data for all institutional hospitals and for other hospitals operated by Federal agencies are excluded.

TABLE 2.—*Patient days of care per 1,000 population in general and special hospitals,*[1] *by States arrayed in descending order of average per capita income 1935–37* [2]

State	Population (add 000) [3]	Total patient days of care [4]	Patient days of care per 1,000 population	State	Population (add 000) [3]	Total patient days of care [4]	Patient days of care per 1,000 population
United States	129,257	100,825,775	780.0	Third quarter	23,999	13,217,015	550.7
				Florida	1,670	859,940	514.9
First quarter	45,915	50,908,010	1,108.7	Utah	519	417,560	804.5
District of Columbia	627	853,370	1,361.0	Idaho	493	284,335	576.7
Delaware	261	206,225	790.1	Missouri	3,989	2,726,185	683.4
New York	12,959	16,666,995	1,286.1	Vermont	383	281,415	734.8
Nevada	101	93,440	925.1	Nebraska	1,364	980,025	718.5
California	6,154	7,219,335	1,173.1	Iowa	2,552	1,526,795	598.3
Connecticut	1,741	1,672,430	960.6	Kansas	1,864	1,063,610	570.6
Rhode Island	681	885,855	1,300.8	New Mexico	422	233,965	554.4
Massachusetts	4,426	5,934,535	1,340.8	West Virginia	1,865	1,057,040	566.8
Michigan	4,830	4,774,565	988.5	Texas	6,172	2,434,915	394.5
Maryland	1,679	1,857,485	1,106.3	Virginia	2,706	1,351,230	499.3
Illinois	7,878	6,815,280	865.1				
New Jersey	4,343	3,795,635	874.0	Fourth quarter	27,309	10,294,095	376.9
Wyoming	235	132,860	565.4	Louisiana	2,132	1,545,775	725.0
				South Dakota	692	335,070	484.2
Second quarter	32,034	26,406,655	824.3	Oklahoma	2,548	767,960	301.4
Montana	539	575,240	1,067.2	North Dakota	706	463,185	656.1
Ohio	6,733	4,953,780	735.7	Tennessee	2,893	1,118,360	386.6
Washington	1,658	1,443,210	870.5	Kentucky	2,920	1,068,720	366.0
Pennsylvania	10,176	8,993,600	883.8	Georgia	3,085	1,059,595	343.5
Oregon	1,027	940,605	915.9	North Carolina	3,492	1,518,765	434.9
Wisconsin	2,926	2,511,565	858.4	South Carolina	1,875	741,315	395.4
Colorado	1,071	1,043,900	974.7	Alabama	2,895	825,995	285.3
Arizona	412	320,470	777.8	Arkansas	2,048	425,225	207.6
Minnesota	2,652	2,635,300	993.7	Mississippi	2,023	424,130	209.7
New Hampshire	510	483,260	947.6				
Maine	856	653,715	763.7				
Indiana	3,474	1,852,010	533.1				

[1] Special hospitals, as used here, are hospitals furnishing types of care which are closely identified with general medical and surgical service. These hospitals include maternity, industrial, isolation, eye-ear-nose-throat, orthopedic, children's, and others offering similar specialized types of care. Mental and tuberculosis hospitals are given separate classification.

[2] Average per capita income computed from annual data published by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

[3] Population, as of July 1, 1937, estimated by the Bureau of the Census, Department of Commerce.

[4] Total patient days of care represent tabulations of data for individual hospitals published in the Journal of the American Medical Association, vol. 110, No. 13, Mar. 26, 1938. Data for all institutional hospitals and for other hospitals operated by Federal agencies are excluded. To compute total days of care, the average daily census was multiplied by 365. This figure represents a slight understatement inasmuch as a few hospitals containing approximately 2 percent of all beds failed to report their average daily census.

TABLE 3.—*Percentage of beds occupied in general and special hospitals,*[1] *by States arrayed in descending order of average per capita income 1935–37* [2]

State	Total beds [3]	Average daily census	Percent of beds occupied	State	Total beds [3]	Average daily census	Percent of beds occupied
United States	396,239	276,235	69.7	Third quarter	58,448	36,211	62.0
				Florida	4,311	2,356	54.7
First quarter	187,690	139,474	74.3	Utah	1,735	1,144	65.9
District of Columbia	3,096	2,338	75.5	Idaho	1,304	779	59.7
Delaware	809	565	69.8	Missouri	11,013	7,469	67.8
New York	58,378	45,663	78.2	Vermont	1,149	771	67.1
Nevada	427	256	60.0	Nebraska	4,305	2,685	62.4
California	26,628	19,779	74.3	Iowa	6,850	4,183	61.1
Connecticut	6,173	4,582	74.2	Kansas	4,790	2,914	60.8
Rhode Island	3,026	2,427	80.2	New Mexico	1,236	641	51.9
Massachusetts	22,412	16,259	72.5	West Virginia	4,765	2,896	60.8
Michigan	16,924	13,081	77.3	Texas	11,610	6,671	57.5
Maryland	6,787	5,089	75.0	Virginia	5,380	3,702	68.8
Illinois	27,552	18,672	67.8				
New Jersey	14,805	10,399	70.2	Fourth quarter	44,739	28,203	63.0
Wyoming	673	364	54.1	Louisiana	5,348	4,235	79.2
				South Dakota	1,628	918	56.4
Second quarter	105,362	72,347	68.7	Oklahoma	3,951	2,104	53.3
Montana	2,613	1,576	60.3	North Dakota	2,091	1,269	60.7
Ohio	18,735	13,572	72.4	Tennessee	4,578	3,064	66.9
Washington	5,960	3,954	66.3	Kentucky	4,763	2,928	61.5
Pennsylvania	34,919	24,640	70.6	Georgia	4,414	2,903	65.8
Oregon	3,548	2,577	72.6	North Carolina	6,205	4,161	67.1
Wisconsin	10,851	6,881	63.4	South Carolina	2,917	2,031	69.6
Colorado	4,483	2,860	63.8	Alabama	3,950	2,263	57.3
Arizona	1,409	878	62.3	Arkansas	2,565	1,165	45.4
Minnesota	10,715	7,220	67.4	Mississippi	2,329	1,162	49.9
New Hampshire	1,910	1,324	69.3				
Maine	2,571	1,791	69.7				
Indiana	7,648	5,074	66.3				

[1] Special hospitals, as used here, are hospitals furnishing types of care which are closely identified with general medical and surgical service. These hospitals include maternity, industrial, isolation, eye-ear-nose-throat, orthopedic, children's, and others offering similar specialized types of care. Mental and tuberculosis hospitals are given separate classification.

[2] Average per capita income computed from annual data published by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

[3] Bed totals represent tabulations of data for individual hospitals published in the Journal of the American Medical Association, vol. 110, No. 13, Mar. 26, 1938. Data for all institutional hospitals and for other hospitals operated by Federal agencies are excluded. Only beds in hospitals that reported satisfactory information regarding average daily census are employed here.

TABLE 4.—*Estimated annual per capita payment for care in general and special hospitals,*[1] *by States arrayed in descending order of average per capita income 1935–37* [2]

State	Population (add 000) [3]	Per capita payment to hospitals [4] from specified source			
		All sources	Patients	Taxes	Other
United States	127,521	$3.37	$2.08	$0.82	$0.47
First quarter	45,346	5.27	2.94	1.54	.79
District of Columbia	594	6.38	4.22	1.25	.91
Delaware	256	3.57	2.02	.91	.64
New York	12,890	6.53	3.28	2.10	1.15
Nevada	99	7.04	3.81	1.49	1.74
California	5,997	5.67	3.08	2.15	.44
Connecticut	1,717	4.51	3.02	.61	.88
Rhode Island	681	5.70	2.77	.86	2.07
Massachusetts	4,375	7.05	3.94	1.50	1.61
Michigan	4,731	4.72	3.08	1.38	.26
Maryland	1,669	3.76	2.06	.96	.74
Illinois	7,817	3.20	2.16	.72	.32
New Jersey	4,288	4.33	2.20	1.58	.55
Wyoming	232	2.81	2.03	.58	.20
Second quarter	31,725	3.25	2.02	.77	.46
Montana	531	3.64	2.99	.36	.29
Ohio	6,707	3.30	2.04	.73	.53
Washington	1,633	3.34	2.47	.65	.22
Pennsylvania	10,067	3.07	1.56	.87	.64
Oregon	1,008	3.02	2.46	.47	.09
Wisconsin	2,908	3.68	2.39	1.04	.25
Colorado	1,062	4.49	2.62	.97	.90
Arizona	406	3.03	1.88	.65	.50
Minnesota	2,627	4.16	2.78	1.04	.34
New Hampshire	502	3.87	2.82	.38	.67
Maine	845	3.10	2.29	.31	.50
Indiana	3,429	2.20	1.60	.45	.15
Third quarter	23,626	2.15	1.62	.31	.22
Florida	1,614	2.37	1.55	.62	.20
Utah	515	3.05	2.39	.56	.10
Idaho	479	2.31	1.96	.32	.03
Missouri	3,913	2.75	1.93	.15	.67
Vermont	377	2.56	1.96	.08	.52
Nebraska	1,364	2.36	1.89	.37	.10
Iowa	2,534	2.38	1.67	.57	.14
Kansas	1,878	2.14	1.68	.39	.07
New Mexico	422	1.75	1.29	.03	.43
West Virginia	1,816	2.16	1.87	.09	.20
Texas	6,077	1.65	1.28	.27	.10
Virginia	2,637	1.73	1.37	.25	.11
Fourth quarter	26,824	1.40	.96	.27	.17
Louisiana	2,120	1.99	.92	.97	.10
South Dakota	692	1.87	1.55	.15	.17
Oklahoma	2,509	1.36	1.27	.06	.03
North Dakota	700	1.98	1.65	.30	.03
Tennessee	2,824	1.70	1.11	.30	.29
Kentucky	2,846	1.42	.91	.34	.17
Georgia	3,035	1.64	1.04	.48	.12
North Carolina	3,417	1.55	1.06	.15	.34
South Carolina	1,840	1.17	.69	.17	.31
Alabama	2,834	1.08	.99	.01	.08
Arkansas	1,999	.74	.46	.09	.19
Mississippi	2,008	.67	.49	.17	.01

[1] Special hospitals, as used here, are hospitals furnishing types of care which are closely identified with general medical and surgical service. These hospitals include maternity, industrial, isolation, eye-ear-nose-throat, orthopedic, children's, and others offering similar specialized types of care. Mental and tuberculosis hospitals are given separate classification.

[2] Average per capita income computed from annual data published by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

[3] Population, as of July 1, 1935, estimated by the Bureau of the Census, Department of Commerce.

[4] Pennell, Elliott H., Mountin, Joseph W., and Pearson, Kay: Business Census of Hospitals, 1935, General Report. Supplement 154 to the Public Health Reports. U. S. Government Printing Office, 1939.

TABLE 5.—*Estimated annual payment per $1,000 income within State for care in general and special hospitals,*[1] *by States arrayed in descending order of average per capita income 1935–37* [2]

State	Total income within State [3] 1935 (add 000,000)	Payment to hospitals [4] per $1,000 income within State from specified source			
		All sources	Patients	Taxes	Other
United States	$57,368	$7.49	$4.63	$1.82	$1.04
First quarter	28,387	8.42	4.70	2.47	1.25
District of Columbia	625	6.06	4.01	1.19	.86
Delaware	191	4.78	2.71	1.21	.86
New York	9,647	8.73	4.39	2.80	1.54
Nevada	69	10.06	5.45	2.12	2.49
California	3,993	8.51	4.63	3.22	.66
Connecticut	1,081	7.17	4.80	.97	1.40
Rhode Island	418	9.30	4.52	1.40	3.38
Massachusetts	2,639	11.69	6.53	2.48	2.68
Michigan	2,412	9.25	6.04	2.70	.51
Maryland	883	7.11	3.90	1.82	1.39
Illinois	4,024	6.21	4.19	1.40	.62
New Jersey	2,283	8.14	4.14	2.97	1.03
Wyoming	122	5.36	3.88	1.10	.38
Second quarter	14,530	7.10	4.41	1.68	1.01
Montana	276	7.01	5.77	.69	.55
Ohio	3,268	6.78	4.20	1.50	1.08
Washington	777	7.02	5.20	1.36	.46
Pennsylvania	4,799	6.44	3.27	1.83	1.34
Oregon	451	6.76	5.51	1.04	.21
Wisconsin	1,312	8.16	5.30	2.30	.56
Colorado	472	10.09	5.88	2.18	2.03
Arizona	177	6.93	4.30	1.47	1.16
Minnesota	1,112	9.83	6.57	2.47	.79
New Hampshire	228	8.52	6.20	.84	1.48
Maine	368	7.11	5.23	.73	1.15
Indiana	1,290	5.85	4.24	1.21	.40
Third quarter	8,252	6.16	4.64	.88	.64
Florida	616	6.20	4.06	1.62	.52
Utah	197	7.98	6.26	1.48	.24
Idaho	179	6.16	5.24	.85	.07
Missouri	1,535	7.02	4.93	.39	1.70
Vermont	146	6.60	5.04	.21	1.35
Nebraska	493	6.52	5.24	1.01	.27
Iowa	921	6.56	4.61	1.57	.38
Kansas	668	6.01	4.71	1.09	.21
New Mexico	141	5.22	3.84	.10	1.28
West Virginia	600	6.55	5.67	.29	.59
Texas	1,958	5.12	3.96	.84	.32
Virginia	798	5.71	4.52	.82	.37
Fourth quarter	6,199	6.06	4.18	1.16	.72
Louisiana	623	6.77	3.13	3.30	.34
South Dakota	188	6.90	5.73	.54	.63
Oklahoma	661	5.15	4.82	.22	.11
North Dakota	178	7.80	6.48	1.21	.11
Tennessee	693	6.94	4.53	1.22	1.19
Kentucky	685	5.89	3.76	1.43	.70
Georgia	741	6.72	4.25	1.97	.50
North Carolina	812	6.51	4.45	.63	1.43
South Carolina	391	5.49	3.26	.78	1.45
Alabama	539	5.68	5.21	.06	.41
Arkansas	357	4.16	2.59	.48	1.09
Mississippi	331	4.06	2.98	1.02	.06

[1] Special hospitals, as used here, are hospitals furnishing types of care which are closely identified with general medical and surgical service. These hospitals include maternity, industrial, isolation, eye-ear-nose-throat, orthopedic, children's, and others offering similar specialized types of care. Mental and tuberculosis hospitals are given separate classification.

[2] Average per capita income computed from annual data published by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

[3] Nathan, Robert R., and Martin, John L.: State Income Payments, 1929–37. Bureau of Foreign and Domestic Commerce, Department of Commerce.

[4] Pennell, Elliott H., Mountin, Joseph W., and Pearson, Kay: Business Census of Hospitals, 1935, General Report. Supplement 154 to the Public Health Reports. U. S. Government Printing Office, 1939.

TABLE 6.—*Beds per 1,000 population in mental hospitals of different control, by States arrayed in descending order of average per capita income 1935–37* [1]

State	Population (add 000) [2]	Total beds [3]	Beds per 1,000 population in hospitals of specified control		
			All hospitals	State and local governments	Nongovernmental agencies
United States	129,257	532,627	4.12	3.97	0.15
First quarter	45,915	250,165	5.45	5.24	.21
District of Columbia	627	569	.91	.87	.04
Delaware	261	1,557	5.96	5.96	
New York	12,959	89,080	6.87	6.65	.22
Nevada	101	332	3.29	3.29	
California	6,154	28,859	4.69	4.48	.21
Connecticut	1,741	9,438	5.42	4.91	.51
Rhode Island	681	3,409	5.01	4.68	.33
Massachusetts	4,426	28,315	6.40	6.26	.14
Michigan	4,830	20,802	4.31	4.17	.14
Maryland	1,679	8,431	5.02	4.32	.70
Illinois	7,878	36,349	4.61	4.52	.09
New Jersey	4,343	22,110	5.09	4.84	.25
Wyoming	235	914	3.89	3.89	
Second quarter	32,034	135,852	4.24	4.05	.19
Montana	539	1,900	3.53	3.53	
Ohio	6,733	27,196	4.04	3.88	.16
Washington	1,658	7,589	4.58	4.53	.05
Pennsylvania	10,176	40,946	4.03	3.70	.33
Oregon	1,027	4,950	4.82	4.81	.01
Wisconsin	2,926	15,885	5.43	5.13	.30
Colorado	1,071	4,740	4.42	4.10	.32
Arizona	412	900	2.19	2.19	
Minnesota	2,652	13,448	5.07	5.03	.04
New Hampshire	510	2,641	5.18	5.18	
Maine	856	3,670	4.29	4.23	.06
Indiana	3,474	11,987	3.45	3.41	.04
Third quarter	23,999	76,786	3.20	3.07	.13
Florida	1,670	4,869	2.92	2.84	.08
Utah	519	1,392	2.68	2.68	
Idaho	493	1,460	2.96	2.96	
Missouri	3,989	14,074	3.53	3.34	.19
Vermont	383	2,160	5.64	3.49	2.15
Nebraska	1,364	5,324	3.90	3.80	.10
Iowa	2,552	10,573	4.15	3.94	.21
Kansas	1,864	6,912	3.71	3.66	.05
New Mexico	422	856	2.03	2.03	
West Virginia	1,865	3,964	2.12	2.12	
Texas	6,172	14,867	2.41	2.37	.04
Virginia	2,706	10,335	3.82	3.70	.12
Fourth quarter	27,309	69,824	2.56	2.51	.05
Louisiana	2,132	7,374	3.46	3.30	.16
South Dakota	692	2,390	3.45	3.45	
Oklahoma	2,548	8,262	3.24	3.21	.03
North Dakota	706	3,074	4.35	4.35	
Tennessee	2,893	7,020	2.43	2.37	.06
Kentucky	2,920	7,045	2.41	2.36	.05
Georgia	3,085	7,644	2.48	2.41	.07
North Carolina	3,492	7,600	2.18	2.08	.10
South Carolina	1,875	4,846	2.58	2.56	.02
Alabama	2,895	6,064	2.09	2.07	.02
Arkansas	2,048	4,021	1.96	1.96	
Mississippi	2,023	4,484	2.22	2.20	.02

[1] Average per capita income computed from annual data published by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

[2] Population, as of July 1, 1937, estimated by the Bureau of the Census, Department of Commerce.

[3] Bed totals represent tabulations of data for individual hospitals published in the Journal of the American Medical Association, vol. 110, No. 13, Mar. 26, 1938. Data for all hospitals operated by Federal agencies are excluded.

TABLE 7.—*Percentage of beds occupied in mental hospitals, by States arrayed in descending order of average per capita income 1935–37* [1]

State	Total beds [2]	Average daily census	Percent of beds occupied
United States	529,918	514,823	97.2
First quarter	249,845	244,439	97.8
District of Columbia	569	557	97.9
Delaware	1,557	1,483	95.2
New York	89,080	87,111	97.8
Nevada	332	231	69.6
California	28,627	28,066	98.0
Connecticut	9,418	8,883	94.3
Rhode Island	3,409	3,278	96.2
Massachusetts	28,315	27,738	98.0
Michigan	20,802	20,767	99.8
Maryland	8,431	8,124	96.4
Illinois	36,299	36,064	99.4
New Jersey	22,092	21,230	96.1
Wyoming	914	887	97.0
Second quarter	134,279	129,953	96.8
Montana	1,900	1,845	97.1
Ohio	27,196	26,392	97.0
Washington	7,577	7,330	96.7
Pennsylvania	40,946	40,125	98.0
Oregon	4,950	4,779	96.5
Wisconsin	14,762	13,799	93.5
Colorado	4,740	4,391	92.6
Arizona	900	833	92.6
Minnesota	13,428	13,019	97.0
New Hampshire	2,641	2,622	99.3
Maine	3,670	3,357	91.5
Indiana	11,569	11,461	99.1
Third quarter	76,766	74,200	96.7
Florida	4,849	4,666	96.2
Utah	1,392	1,375	98.8
Idaho	1,460	1,445	99.0
Missouri	14,074	13,634	96.9
Vermont	2,160	2,056	95.2
Nebraska	5,324	5,270	99.0
Iowa	10,573	10,160	96.1
Kansas	6,912	6,651	96.2
New Mexico	856	832	97.2
West Virginia	3,964	3,793	95.7
Texas	14,867	14,325	96.4
Virginia	10,335	9,993	96.7
Fourth quarter	69,028	66,231	95.9
Louisiana	7,099	6,455	90.9
South Dakota	2,390	2,256	94.4
Oklahoma	8,262	8,265	100.0
North Dakota	3,074	2,597	84.5
Tennessee	6,998	6,664	95.2
Kentucky	7,005	7,126	101.7
Georgia	7,644	7,478	97.8
North Carolina	7,555	7,007	92.7
South Carolina	4,846	4,645	95.9
Alabama	6,064	5,934	97.9
Arkansas	4,021	3,944	98.1
Mississippi	4,070	3,860	94.8

[1] Average per capita income computed from annual data published by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

[2] Bed totals represent tabulations of data for individual hospitals published in the Journal of the American Medical Association, vol. 110, No. 13, Mar. 26, 1938. Data for hospitals operated by Federal agencies are excluded. Only beds in hospitals that reported satisfactory information regarding average daily census are employed here.

TABLE 8.—*Estimated annual per capita payment for care in mental hospitals, by States arrayed in descending order of average per capita income 1935–37* [1]

State	Population (add 000) [2]	Per capita payment to hospitals [3]
United States	127,521	$1.14
First quarter	45,346	1.83
District of Columbia	594	[4]
Delaware	256	[4]
New York	12,890	2.63
Nevada	99	[4]
California	5,997	1.08
Connecticut	1,717	2.08
Rhode Island	681	1.91
Massachusetts	4,375	3.00
Michigan	4,731	1.30
Maryland	1,669	1.06
Illinois	7,817	.98
New Jersey	4,288	1.84
Wyoming	232	[4]
Second quarter	31,725	1.02
Montana	531	[4]
Ohio	6,707	.78
Washington	1,633	1.06
Pennsylvania	10,067	1.14
Oregon	1,008	.80
Wisconsin	2,908	1.75
Colorado	1,062	1.02
Arizona	406	[4]
Minnesota	2,627	.97
New Hampshire	502	1.77
Maine	845	.83
Indiana	3,429	.69
Third quarter	23,626	$0.66
Florida	1,614	.79
Utah	515	[4]
Idaho	479	.44
Missouri	3,913	.73
Vermont	377	2.07
Nebraska	1,364	.88
Iowa	2,534	.84
Kansas	1,878	.77
New Mexico	422	[4]
West Virginia	1,816	.33
Texas	6,077	.49
Virginia	2,637	.58
Fourth quarter	26,824	.55
Louisiana	2,120	.96
South Dakota	692	[4]
Oklahoma	2,509	.54
North Dakota	700	[4]
Tennessee	2,824	.48
Kentucky	2,846	.37
Georgia	3,035	1.16
North Carolina	3,417	.25
South Carolina	1,840	.46
Alabama	2,834	.39
Arkansas	1,999	[4]
Mississippi	2,008	.28

[1] Average per capita income computed from annual data published by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

[2] Population, as of July 1, 1935, estimated by the Bureau of the Census, Department of Commerce.

[3] Pennell, Elliott H., Mountin, Joseph W., and Pearson, Kay: Business Census of Hospitals, 1935, General Report. Supplement 154 to the Public Health Reports. U. S. Government Printing Office, 1939.

[4] Withheld to avoid disclosure of confidential information.

TABLE 9.—*Beds per 1,000 population in tuberculosis hospitals of different control, by States arrayed in descending order of average per capita income 1935–37* [1]

State	Population (add 000) [2]	Total beds [3]	Beds per 1,000 population in hospitals of specified control		
			All hospitals	State and local governments	Nongovernmental agencies
United States	129,257	70,584	0.55	0.43	0.12
First quarter	45,915	35,908	.78	.61	.17
District of Columbia	627	700	1.11	1.11	
Delaware	261	224	.86	.77	.09
New York	12,959	10,305	.80	.59	.21
Nevada	101				
California	6,154	4,434	.72	.46	.26
Connecticut	1,741	1,925	1.11	.96	.15
Rhode Island	681	785	1.15	1.00	.15
Massachusetts	4,426	4,388	.99	.77	.22
Michigan	4,830	4,027	.83	.64	.19
Maryland	1,679	1,240	.74	.58	.16
Illinois	7,878	3,911	.50	.40	.10
New Jersey	4,343	3,936	.91	.80	.11
Wyoming	235	33	.14	.14	
Second quarter	32,034	18,151	.57	.44	.13
Montana	539	200	.37	.37	
Ohio	6,733	3,314	.49	.43	.06
Washington	1,658	1,004	.61	.52	.09
Pennsylvania	10,176	4,285	.42	.31	.11
Oregon	1,027	575	.56	.50	.06
Wisconsin	2,926	2,142	.73	.69	.04
Colorado	1,071	1,719	1.60		1.60
Arizona	412	574	1.39	.33	1.06
Minnesota	2,652	2,084	.78	.76	.02
New Hampshire	510	240	.47	.27	.20
Maine	856	485	.57	.53	.04
Indiana	3,474	1,529	.44	.44	
Third quarter	23,999	8,689	.36	.30	.06
Florida	1,670	607	.36	.35	.01
Utah	519				
Idaho	493				
Missouri	3,989	2,014	.50	.44	.06
Vermont	383	204	.53	.33	.20
Nebraska	1,364	160	.12	.12	
Iowa	2,552	800	.31	.31	
Kansas	1,864	420	.23	.23	
New Mexico	422	385	.91	.15	.76
West Virginia	1,865	761	.41	.37	.04
Texas	6,172	2,128	.35	.25	.10
Virginia	2,706	1,210	.45	.42	.03
Fourth quarter	27,309	7,836	.29	.24	.05
Louisiana	2,132	326	.15	.05	.10
South Dakota	692	192	.28	.28	
Oklahoma	2,548	807	.32	.31	.01
North Dakota	706	405	.57	.57	
Tennessee	2,893	1,075	.37	.26	.11
Kentucky	2,920	682	.23	.23	
Georgia	3,085	603	.19	.18	.01
North Carolina	3,492	1,575	.45	.33	.12
South Carolina	1,875	578	.31	.27	.04
Alabama	2,895	391	.14	.11	.03
Arkansas	2,048	707	.35	.35	
Mississippi	2,023	495	.24	.22	.02

[1] Average per capita income computed from annual data published by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

[2] Population, as of July 1, 1937, estimated by the Bureau of the Census, Department of Commerce.

[3] Bed totals represent tabulations of data for individual hospitals published in the Journal of the American Medical Association, vol. 110, No. 13, Mar. 26, 1938. Data for all hospitals operated by Federal agencies are excluded.

TABLE 10.—*Beds in tuberculosis hospitals and in tuberculosis departments of general hospitals per death from tuberculosis (all forms), by States arrayed in descending order of average per capita income 1935–37* [1]

State	Deaths from tuberculosis,[2] 1937	Total beds for tuberculosis [3]	Beds per death from tuberculosis	State	Deaths from tuberculosis [2]	Total beds for tuberculosis [3]	Beds per death from tuberculosis
United States	69,324	81,330	1.17	Third quarter	12,361	9,369	0.76
				Florida	960	862	.90
First quarter	25,063	41,983	1.68	Utah	113	48	.42
District of Columbia	550	900	1.64	Idaho	106	45	.42
Delaware	141	224	1.59	Missouri	2,127	2,049	.96
New York	7,320	12,449	1.70	Vermont	190	172	.91
Nevada	95	11	.12	Nebraska	263	243	.92
California	4,425	6,817	1.54	Iowa	542	811	1.50
Connecticut	658	1,676	2.55	Kansas	485	417	.86
Rhode Island	319	728	2.28	New Mexico	533	491	.92
Massachusetts	1,908	4,485	2.35	West Virginia	998	820	.82
Michigan	2,137	4,991	2.34	Texas	4,289	2,124	.50
Maryland	1,405	1,454	1.03	Virginia	1,755	1,287	.73
Illinois	4,005	4,361	1.09				
New Jersey	2,050	3,854	1.88	Fourth quarter	16,408	8,839	.54
Wyoming	50	33	.66	Louisiana	1,511	659	.44
				South Dakota	271	220	.81
Second quarter	15,492	21,139	1.36	Oklahoma	1,217	805	.66
Montana	241	200	.83	North Dakota	179	405	2.26
Ohio	3,333	4,062	1.22	Tennessee	2,445	1,161	.47
Washington	773	990	1.28	Kentucky	2,181	755	.35
Pennsylvania	4,906	5,266	1.07	Georgia	1,573	641	.41
Oregon	365	594	1.63	North Carolina	1,924	1,659	.86
Wisconsin	1,037	2,307	2.22	South Carolina	969	905	.93
Colorado	738	2,130	2.89	Alabama	1,778	352	.20
Arizona	1,075	731	.68	Arkansas	1,073	755	.70
Minnesota	911	2,403	2.64	Mississippi	1,287	522	.41
New Hampshire	143	240	1.68				
Maine	287	567	1.98				
Indiana	1,683	1,649	.98				

[1] Average per capita income computed from annual data published by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

[2] Vital Statistics—Special Reports, vol. 7, No. 26, Mar. 23, 1939. Bureau of the Census, Department of Commerce.

[3] Tuberculosis Hospital and Sanatorium Directory, 1938. National Tuberculosis Association. Data for all hospitals operated by Federal agencies are excluded.

TABLE 11.—*Percentage of beds occupied in tuberculosis hospitals, by States arrayed in descending order of average per capita income 1935–37* [1]

State	Total beds [2]	Average daily census	Percent of beds occupied
United States	66,815	57,208	85.6
First quarter	33,970	29,331	86.3
District of Columbia	700	394	56.3
Delaware	224	168	75.0
New York	10,305	9,203	89.3
Nevada			
California	4,220	3,566	84.5
Connecticut	1,925	1,720	89.4
Rhode Island	685	607	88.6
Massachusetts	3,927	3,313	84.4
Michigan	3,877	3,252	83.9
Maryland	1,240	1,192	96.1
Illinois	3,227	2,825	87.5
New Jersey	3,607	3,063	84.9
Wyoming	33	28	84.8
Second quarter	17,548	15,243	86.9
Montana	200	200	100.0
Ohio	3,135	2,855	91.1
Washington	1,004	879	87.5
Pennsylvania	4,120	3,769	91.5
Oregon	575	509	88.5
Wisconsin	2,142	1,948	90.9
Colorado	1,537	956	62.2
Arizona	534	329	61.6
Minnesota	2,084	1,874	89.9
New Hampshire	240	184	76.7
Maine	485	459	94.6
Indiana	1,492	1,281	85.9
Third quarter	7,863	6,537	83.1
Florida	207	133	64.3
Utah			
Idaho			
Missouri	1,984	1,656	83.5
Vermont	204	181	88.7
Nebraska	160	150	93.8
Iowa	800	638	79.8
Kansas	420	396	94.3
New Mexico	385	204	53.0
West Virginia	761	675	88.7
Texas	1,732	1,422	82.1
Virginia	1,210	1,082	89.4
Fourth quarter	7,434	6,097	82.0
Louisiana	326	220	67.5
South Dakota	192	153	79.7
Oklahoma	807	675	83.6
North Dakota	405	225	55.6
Tennessee	1,035	905	87.4
Kentucky	682	644	94.4
Georgia	567	549	96.8
North Carolina	1,332	1,111	83.4
South Carolina	578	481	83.2
Alabama	308	191	62.0
Arkansas	707	643	90.9
Mississippi	495	300	60.6

[1] Average per capita income computed from annual data published by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

[2] Bed totals represent tabulations of data for individual hospitals published in the Journal of the American Medical Association, vol. 110, No. 13, Mar. 26, 1938. Data for hospitals operated by Federal agencies are excluded. Only beds in hospitals that reported satisfactory information regarding average daily census are employed here.

TABLE 12.—*Estimated annual per capita payment for care in tuberculosis hospitals, by States arrayed in descending order of average per capita income 1935–37* [1]

State	Population (add 000) [2]	Per capita payment to hospitals [3]
United States	127,521	$0.39
First quarter	45,346	.62
District of Columbia	594	.55
Delaware	256	.61
New York	12,890	.65
Nevada	99	
California	5,997	.55
Connecticut	1,717	1.15
Rhode Island	681	.93
Massachusetts	4,375	1.04
Michigan	4,731	.55
Maryland	1,669	.41
Illinois	7,817	.32
New Jersey	4,288	.65
Wyoming	232	[4]
Second quarter	31,725	.41
Montana	531	[4]
Ohio	6,707	.43
Washington	1,633	.35
Pennsylvania	10,067	.25
Oregon	1,008	.30
Wisconsin	2,908	.58
Colorado	1,062	1.32
Arizona	406	.82
Minnesota	2,627	.67
New Hampshire	502	[4]
Maine	845	.51
Indiana	3,429	.27
Third quarter	23,626	$0.19
Florida	1,614	[4]
Utah	515	
Idaho	479	
Missouri	3,913	.32
Vermont	377	.33
Nebraska	1,364	[4]
Iowa	2,534	.17
Kansas	1,878	.18
New Mexico	422	.27
West Virginia	1,816	.22
Texas	6,077	.17
Virginia	2,637	.23
Fourth quarter	26,824	.16
Louisiana	2,120	[4]
South Dakota	692	[4]
Oklahoma	2,509	.14
North Dakota	700	[4]
Tennessee	2,824	.19
Kentucky	2,846	.20
Georgia	3,035	.14
North Carolina	3,417	.24
South Carolina	1,840	.16
Alabama	2,834	.05
Arkansas	1,999	[4]
Mississippi	2,008	[4]

[1] Average per capita income computed from annual data published by the Bureau of Foreign and Domestic Commerce, Department of Commerce.

[2] Population, as of July 1, 1935, estimated by the Bureau of the Census, Department of Commerce.

[3] Pennell, Elliott H., Mountin, Joseph W., and Pearson, Kay: Business Census of Hospitals, 1935, General Report. Supplement 154 to the Public Health Reports. U. S. Government Printing Office, 1939. Data for hospitals operated by Federal agencies are excluded.

[4] Withheld to avoid disclosure of confidential information.

NATIONAL HOSPITAL BILL REPORTED OUT OF COMMITTEE

On April 30, 1940, the Senate Committee on Education and Labor reported favorably on the National Hospital Bill, and recommended that the bill pass as amended.

The bill as reported (which is a substitute for the original bill, the title of which was changed to "Hospital Construction Act of 1940") provides for a limited Federal program of hospital construction and leasing, equipment, and for assistance toward the maintenance of such hospitals.

The fundamental purpose of the bill is to assist "States, counties, health or hospital districts, and other subdivisions of the States in providing better health and medical services through the construction, improvement, and enlargement of needed hospitals, especially in rural communities and economically depressed areas."

The principal findings and conclusions of the Committee, upon which the recommendation of the bill is based, may be summarized in brief as follows:

Among the counties of the United States, 1,338, with a total population of 17,000,000, do not have a registered general hospital. Remoteness from metropolitan centers, a small percentage of urban population, and a low tax income characterize these counties.

It is in these communities, without adequate hospital facilities and without evidence that in the normal course of events private hospital construction will ever meet community needs, that the provisions of the bill will apply.

All areas of the country should have the protection of modern public health services and opportunity for adequate care in sickness.

The great differences in the economic ability of the States and communities to provide and operate hospitals should be equalized.

The Committee finds, "on the basis of incontrovertible evidence, that without a reasonable amount of Federal assistance to the States for the construction of public hospitals, it cannot be expected that there will ever be any fair degree of equality in the location of such facilities."

The bill authorizes six annual appropriations of $10,000,000, the first, for the fiscal year 1941, to be used for the construction of needed hospitals, and the subsequent appropriations to be used as grants to States, counties, health or hospital districts, alone or in combination, for the improvement and enlargement of needed hospitals, and to assist in the maintenance of any such hospitals and the training of personnel.

It also authorizes the appropriation, for the five fiscal years beginning with the fiscal year 1947, of such sums as may be necessary during such period for hospital maintenance grants.

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The bill provides that the act is to be administered by the Surgeon General of the Public Health Service, subject to the direction and supervision of the Federal Security Administrator. The Surgeon General is authorized to consult with other Federal health and welfare agencies and to perform certain specified important functions in connection with the operation of the Act, after consultation with the National Advisory Hospital Council.

The bill provides for the creation of the National Advisory Hospital Council, consisting of nine members. This Council is given the power to pass on all hospital construction projects under the appropriation made for the fiscal year 1941 and is subsequently vested with advisory power only.

In a message to Congress on January 30, 1940, the President recommended the passage of enabling legislation and an appropriation for the construction of small hospitals in needy areas of the country, "especially in rural areas not now provided with them." In that message he stated that, "Hospitals are essential to physicians in giving modern medical service to the people. In many areas present hospital facilities are almost nonexistent. The most elementary needs are not being met."

In the course of the hearings on this proposed legislation it developed that the support of the basic purposes was practically unanimous.

DIPHTHERIA AND DIPHTHERIA IMMUNIZATION IN ENGLAND AND WALES

The British Ministry of Health has recently issued a memorandum recommending that the advantages of immunization against diphtheria be brought to the notice of parents of children over 1 year of age so that requisite consent may be secured for the immunizing procedure.[1] The memorandum recommends dispensing with the Schick test in routine immunization. It points out that, in districts where diphtheria is endemic, the infection is disseminated, with the result that a large proportion of the population becomes immunized before the end of school life, but at a heavy cost in sickness and death, whereas artificial immunization, when properly performed, involves no risk.

The Ministry points out that the experience of the United States and Canada shows that, if three-fourths of the children at each age below 15 were immune and if this level should be maintained year by year, diphtheria would be practically eliminated.

Immunization in Great Britain has never been practiced on as large a scale as it has in the United States and Canada. In 1938 England and Wales had twice as many cases of diphtheria as the United States and 15 percent more deaths from the disease, with less than one-third

[1] Foreign Letter—London. J. Am. Med. Assoc., 114: 1470 (Apr. 13, 1940).

the population. In that year England and Wales, with approximately 41,000,000 population, recorded 65,008 cases and 2,931 deaths, as compared with 30,508 cases and 2,500 deaths in the United States (130,000,000 estimated population).

For children under 8 years of age, a dose of 0.1 cc. of alum-precipitated toxoid followed after 4 weeks by 0.5 cc. is recommended. For older children and adults, the first dose of 0.1 cc. serves to detect unusual sensitiveness. Two further similar doses are advocated at intervals of 2 or 3 weeks; but if the person is not unduly sensitive, the same procedure as that for younger children is advised. A Schick test is recommended not less than 2 months after the last injection.

COURT DECISION ON PUBLIC HEALTH

Pollution of city water supply.—(Mississippi Supreme Court, Division A; *Carey-Reed Co., Inc.*, v. *Farmer*, 192 So. 48; decided November 20, 1939.) An action was brought to recover damages for injuries alleged to have resulted from drinking water from a city supply which the plaintiff claimed had become polluted through the negligence of a company engaged in laying a concrete paving on a highway between two municipalities about three miles apart. The evidence for the plaintiff tended to establish, among other things, the following: A bayou ran through the city of Cleveland on south through the town of Boyle, which bayou received the greater part of the sewage from both places and the residences between them and was, therefore, highly polluted at all times. The company had a water line which, while the work was going on near Cleveland, was connected with that city's water supply. When the work had progressed for such a distance from Cleveland that the pressure from that city's water main was insufficient to supply the required amount of water, the company, without the knowledge or consent of the authorities of Cleveland, extended its line to the bayou and installed a force pump at Boyle, after which the company had an unbroken water line from the force pump at Boyle to the water main at Cleveland. The company failed to install a safety valve at the proper place in the line to prevent the water from the bayou being pumped into the Cleveland water supply. On a certain date the pump at Boyle ran all night, its pressure gauge registering 125 lbs. while the pressure at the fireplug at the Cleveland end did not exceed 40 lbs. On ascertaining for the first time that the company's water line was connected with both the Cleveland main and the bayou, the water commissioner of Cleveland immediately disconnected the line at the fireplug and when this was done the water from the pipe coming from Boyle had sufficient pressure to throw a stream a distance of from 10 to 15 feet. A survey showed that, out of 366 people in the area surrounding the fire hydrant,

157 were sick, and the conclusion reached by the health authorities was that the sickness was acute gastroenteritis caused by polluted water.

The evidence on behalf of the company was contradictory of some of the material evidence necessary to support the plaintiff's case but there was a verdict for the plaintiff for $3,000 and the company appealed from the judgment thereon.

The appellant argued that it was entitled to a directed verdict because the evidence fell short of tending to establish negligence in a substantial way. The supreme court said that the question was whether the appellant negligently polluted the water in the water main in the area surrounding the city fire hydrant to which appellant's water line was attached. Stating that it was of the opinion that the question should be answered in the affirmative, the court said it reached that conclusion upon the following considerations:

* * * The bayou water was so polluted as to be unfit for human consumption; it was dangerous to the health of those drinking it. Its contamination was sufficient to cause the character of ailments suffered by appellee and others in the affected area. Appellant is bound to have known, as everyone did, that the bayou was a sewage receptacle to a large extent of the city of Cleveland and the town of Boyle, as well as along the way between the two places. Appellant must have known that greater pressure at the pump end of its water line than at the other end would result in forcing the bayou water into Cleveland's water supply. The fact, which was undisputed, that the outbreak of sickness was confined alone to the area around the Cleveland connection of the pipe line and the balance of the inhabitants of the city were unaffected, is strong evidence that the pollution was from the bayou water and not from any other source. The evidence showed that by the installation of a safety valve, which would have cost little, the possibility of the city water being contaminated by the bayou water would have been avoided. * * *

In affirming the judgment the appellate court also stated that "Although the verdict seems large, we cannot say with absolute confidence that it is so large as to evince passion or prejudice on the part of the jury."

DEATHS DURING WEEK ENDED APRIL 20, 1940

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended Apr. 20, 1940	Corresponding week, 1939
Data from 88 large cities of the United States:		
Total deaths	8,784	8,967
Average for 3 prior years	8,931	
Total deaths, first 16 weeks of year	149,774	149,959
Deaths under 1 year of age	444	521
Average for 3 prior years	538	
Deaths under 1 year of age, first 16 weeks of year	8,198	8,758
Data from industrial insurance companies:		
Policies in force	65,744,323	67,479,316
Number of death claims	12,840	17,925
Death claims per 1,000 policies in force, annual rate	10.2	13.9
Death claims per 1,000 policies, first 16 weeks of year, annual rate	10.7	11.7

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

REPORTS FROM STATES FOR WEEK ENDED MAY 4, 1940

Summary

The incidence of each of the nine communicable diseases reported weekly by telegraph by the State health officers remained low for the week ended May 4, 1940. Reports show decreases for diphtheria, influenza, scarlet fever, and whooping cough, slight increases for measles, meningococcus meningitis, smallpox, and typhoid fever, with poliomyelitis unchanged, as compared with the preceding week, and all except influenza are below the 5-year (1935–39) median expectancy for the current week.

For the country as a whole the incidence of smallpox this year has been the lowest on record. For the week ended May 4, there were 95 cases reported (11 in Alabama, 13 in Iowa, 12 in Oklahoma, and 18 in Texas) as compared with 296 in 1939, 454 in 1938, and a 5-year median expectancy of 252. Only 115 cases of typhoid fever were reported for the current week (24 in Ohio), as compared with the 5-year median of 132.

The number of deaths in 88 large cities, as reported to the Bureau of the Census for the current week, was 8,458 as compared with 8,484 for the preceding week and with a 3-year (1937–39) average of 8,268.

The infant mortality in these 88 large cities has been unusually favorable this year. For the current week, 491 deaths of infants under 1 year of age were reported, as compared with 504 last week and with a 3-year average of 513. The total number of infant deaths for the first 18 weeks of this year, ended with the week of May 4, was 9,193 as compared with 9,727 last year and with a 3-year average of 9,745.

Telegraphic morbidity reports from State health officers for the week ended May 4, 1940, and comparison with corresponding week of 1939 and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none were reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median, 1935–39	Week ended—		Median, 1935–39	Week ended—		Median, 1935–39	Week ended—		Median, 1935–39
	May 4, 1940	May 6, 1939		May 4, 1940	May 6, 1939		May 4, 1940	May 6, 1939		May 4, 1940	May 6, 1939	
NEW ENG.												
Maine	1	0	1	1	154	3	566	56	176	0	0	0
New Hampshire	0	0	0	------	------	------	0	2	50	0	0	0
Vermont	0	1	0	------	------	------	2	44	44	0	0	0
Massachusetts	0	5	5	------	------	------	566	1, 264	683	2	2	4
Rhode Island	0	0	0	------	------	------	200	66	66	1	0	1
Connecticut	3	0	5	8	3	3	76	929	373	1	0	0
MID. ATL.												
New York	12	15	39	[1] 16	[1] 14	[1] 7	713	2, 181	2, 825	3	5	9
New Jersey	4	5	12	6	6	10	786	36	1, 070	1	3	3
Pennsylvania	23	33	34	------	------	------	445	135	1, 135	5	5	9
E. NO. CEN.												
Ohio	3	30	23	26	------	6	19	42	1, 015	0	1	5
Indiana	9	8	5	10	11	16	17	19	467	0	0	2
Illinois	18	20	27	13	38	38	121	32	274	1	3	7
Michigan [3]	2	15	11	12	------	2	629	584	584	1	1	2
Wisconsin	0	1	3	38	56	56	680	803	803	1	2	1
W. NO. CEN.												
Minnesota	1	1	3	5	1	2	116	468	468	0	0	3
Iowa	5	3	2	------	2	6	191	259	253	0	0	0
Missouri	7	1	4	5	2	31	23	5	20	2	0	1
North Dakota	1	2	1	2	12	5	4	20	20	0	0	0
South Dakota	1	0	1	1	2	2	5	199	6	3	0	0
Nebraska	0	1	2	------	9	------	24	244	233	0	0	1
Kansas	1	6	6	7	3	4	653	62	62	0	0	1
SO. ATL.												
Delaware	0	0	1	------	------	------	0	0	10	0	1	0
Maryland [3]	7	3	6	6	7	8	3	292	292	0	1	6
Dist. of Col	0	2	5	------	------	------	3	314	103	0	1	1
Virginia	4	8	13	110	254	------	196	807	490	3	0	8
West Virginia [3]	7	4	9	41	48	35	60	4	66	1	3	9
North Carolina [3]	11	16	12	10	21	30	100	866	341	2	1	1
South Carolina	5	5	4	400	471	211	25	13	55	0	2	1
Georgia [3]	3	3	3	38	251	------	148	111	------	1	0	1
Florida	1	2	3	1	50	5	220	209	28	0	1	1
E. SO. CEN.												
Kentucky	4	4	5	12	30	16	95	73	206	3	3	7
Tennessee	2	4	7	16	74	74	190	45	58	1	0	7
Alabama [3]	5	1	6	45	419	174	63	264	175	1	1	3
Mississippi [2 3]	2	7	5	------	------	------	------	------	------	0	1	1
W. SO. CEN.												
Arkansas	3	7	4	58	151	66	20	155	60	0	0	0
Louisiana [3]	2	9	11	14	30	16	6	92	70	2	2	1
Oklahoma	2	6	6	80	140	75	25	251	194	2	1	3
Texas [3]	33	19	30	372	533	365	1, 120	495	495	2	1	2
MOUNTAIN												
Montana	2	1	3	16	64	18	90	49	35	0	0	0
Idaho	0	0	0	------	1	1	22	95	29	0	0	0
Wyoming [4]	0	2	2	------	------	------	52	115	25	0	0	0
Colorado [3]	15	16	5	10	8	------	51	384	247	1	0	0
New Mexico	0	0	3	------	5	1	36	20	38	0	0	0
Arizona	1	1	1	109	50	32	104	39	39	1	0	0
Utah [2]	0	0	0	------	26	------	694	77	36	0	0	0
PACIFIC												
Washington	0	0	2	------	------	------	712	840	399	0	1	2
Oregon [4]	4	0	0	9	37	28	591	88	88	1	0	0
California	11	28	28	35	36	48	259	2, 673	1, 595	1	1	1
Total	215	295	395	1, 532	3, 019	1, 411	10, 721	15, 821	15, 821	43	43	138
18 weeks	6, 185	8, 180	9, 654	160, 776	141, 425	129, 958	127, 341	212, 810	242, 810	714	897	2, 487

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended May 4, 1940, and comparison with corresponding week of 1939 and 5-year median—Con.

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever		
	Week ended—		Median, 1935–39	Week ended—		Median, 1935–39	Week ended—		Median, 1935–39	Week ended—		Median, 1935–39
	May 4, 1940	May 6, 1939		May 4, 1940	May 6, 1939		May 4, 1940	May 6, 1939		May 4, 1940	May 6, 1939	
NEW ENG.												
Maine	0	0	0	15	19	18	0	0	0	1	0	0
New Hampshire	0	0	0	4	0	8	0	0	0	0	0	0
Vermont	0	0	0	4	4	9	0	0	0	0	1	0
Massachusetts	0	0	0	151	156	251	0	0	0	10	0	1
Rhode Island	0	0	0	12	7	12	0	0	0	0	0	0
Connecticut	0	0	0	93	77	84	0	0	0	0	0	0
MID ATL.												
New York	0	2	2	1,100	613	910	0	1	0	5	4	6
New Jersey	0	0	0	383	223	188	0	0	0	3	4	4
Pennsylvania	1	0	0	495	388	590	0	0	0	7	7	8
E. NO. CEN.												
Ohio	1	0	0	325	330	330	0	25	0	24	9	6
Indiana	0	0	0	114	167	150	6	35	23	8	1	1
Illinois	0	0	0	800	451	618	2	4	7	2	9	4
Michigan [3]	0	0	0	356	449	374	1	12	3	0	3	3
Wisconsin	0	0	0	122	206	296	1	0	11	0	0	0
W. NO. CEN.												
Minnesota	1	0	0	84	77	142	2	10	10	0	0	0
Iowa	0	0	0	53	141	141	13	43	36	2	6	1
Missouri	0	0	0	73	81	192	3	41	19	1	3	2
North Dakota	0	0	0	9	3	30	7	1	4	0	1	1
South Dakota	0	0	0	15	14	14	1	20	18	0	1	0
Nebraska	0	0	0	6	23	57	4	2	17	0	0	0
Kansas	1	0	0	61	60	98	0	2	15	3	1	1
SO. ATL.												
Delaware	0	0	0	9	5	5	0	0	0	0	0	0
Maryland [3]	1	0	0	33	39	72	0	0	0	2	1	1
Dist. of Col.	0	0	0	35	14	20	0	0	0	1	1	1
Virginia	0	1	1	63	31	31	0	0	0	2	1	3
West Virginia [3]	0	0	0	41	30	46	0	0	0	8	3	5
North Carolina [3]	1	1	1	36	21	19	2	0	0	0	2	2
South Carolina	0	13	0	3	2	2	0	0	0	4	3	3
Georgia [3]	0	3	0	13	12	8	0	0	0	2	1	7
Florida	0	3	1	3	5	6	0	1	0	1	4	4
E. SO. CEN.												
Kentucky	0	0	0	83	38	33	0	1	1	5	6	4
Tennessee	0	0	0	85	42	23	0	1	0	2	2	3
Alabama [3]	0	1	1	12	4	4	11	1	1	1	5	3
Mississippi [2 3]	0	1	0	10	1	6	1	0	0	1	1	1
W. SO. CEN.												
Arkansas	0	1	1	1	1	3	2	0	0	5	3	2
Louisiana [3]	0	0	0	6	8	13	0	0	0	2	7	7
Oklahoma	1	1	0	18	20	20	12	49	3	3	3	3
Texas [3]	2	1	0	26	41	73	18	14	7	3	10	10
MOUNTAIN												
Montana	0	0	0	31	19	19	0	0	8	1	1	1
Idaho	0	0	0	5	2	10	0	3	3	0	0	0
Wyoming [4]	0	0	0	9	11	18	0	0	4	0	1	0
Colorado [5]	2	0	0	30	39	39	4	0	5	0	1	0
New Mexico	0	0	0	7	2	11	0	0	0	1	1	3
Arizona	0	1	0	6	21	18	0	4	0	0	3	1
Utah [3]	0	0	0	7	11	15	0	0	0	0	0	0
PACIFIC												
Washington	0	0	0	48	31	34	0	3	10	1	1	1
Oregon [4]	0	0	0	13	12	26	4	12	12	0	6	0
California	2	3	3	122	148	199	[6] 1	11	12	4	8	5
Total	13	32	21	5,030	4,099	6,338	95	296	252	115	125	132
18 weeks	425	324	359	86,787	90,400	123,493	[6] 1,332	6,446	5,737	1,461	2,076	2,076

See footnotes at end of table.

Telegraphic morbidity reports from State health officers for the week ended May 4, 1940, and comparison with corresponding week of 1939 and 5-year median—Con.

Division and State	Whooping cough	
	Week ended—	
	May 4, 1940	May 6, 1939
NEW ENG.		
Maine	26	67
New Hampshire	11	0
Vermont	35	33
Massachusetts	166	154
Rhode Island	17	63
Connecticut	11	46
MID. ATL.		
New York	279	446
New Jersey	124	265
Pennsylvania	350	327
E. NO. CEN.		
Ohio	173	157
Indiana	27	59
Illinois	98	198
Michigan [2]	157	143
Wisconsin	143	139
W. NO. CEN.		
Minnesota	18	30
Iowa	38	10
Missouri	11	15
North Dakota	7	4
South Dakota	1	1
Nebraska	9	2
Kansas	40	32
SO. ATL.		
Delaware	17	10
Maryland [2]	142	24
Dist. of Col	4	28
Virginia	32	61
West Virginia [2]	33	20
North Carolina [3]	67	285
South Carolina	27	99
Georgia [3]	21	39
Florida	7	69
E. SO. CEN.		
Kentucky	123	6
Tennessee	47	40
Alabama [3]	35	40
Mississippi [2 3]	----------	----------
W. SO. CEN.		
Arkansas	30	14
Louisiana [3]	13	6
Oklahoma	37	4
Texas [3]	291	139
MOUNTAIN		
Montana	0	4
Idaho	3	0
Wyoming [4]	4	2
Colorado [5]	4	60
New Mexico	50	41
Arizona	11	13
Utah [2]	153	47
PACIFIC		
Washington	64	27
Oregon [4]	20	15
California	354	262
Total	3,330	3,555
18 weeks	55,202	72,625

[1] New York City only.
[2] Period ended earlier than Saturday.
[3] Typhus fever, week ended May 4, 1940, 20 cases as follows: North Carolina, 1; Georgia, 6; Alabama, 3; Mississippi, 1; Louisiana; 2; Texas, 7.
[4] Rocky Mountain spotted fever, week ended May 4, 1940, 5 cases as follows: Wyoming, 3; Oregon, 2.
[5] Colorado tick fever, week ended May 4, 1940, Colorado, 2 cases.
[6] Two cases of smallpox were reported in California during the week ended Apr. 6, 1940, instead of no cases as shown in the Public Health Reports of Apr. 12, p. 659.

WEEKLY REPORTS FROM CITIES

City reports for week ended Apr. 20, 1940

This table summarizes the reports received weekly from a selected list of 140 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table.

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Data for 90 cities:											
5-year average	139	207	70	7,377	720	2,301	22	400	20	1,240	----
Current week	60	102	45	2,209	441	1,922	2	369	17	1,009	----
Maine:											
Portland	0	----	0	125	3	2	0	0	0	8	23
New Hampshire:											
Concord	0	----	0	1	0	0	0	0	0	0	8
Manchester	0	----	1	1	0	0	0	0	0	0	15
Nashua	0	----	0	1	0	0	0	0	0	0	4
Vermont:											
Barre	0	----	0	0	0	0	0	0	0	0	1
Burlington	0	----	0	1	0	0	0	0	0	2	10
Rutland	0	----	1	0	0	0	0	0	0	0	10
Massachusetts:											
Boston	0	----	0	77	20	52	0	12	0	50	230
Fall River	0	----	0	23	1	0	0	1	0	5	23
Springfield	0	----	0	1	0	7	0	2	0	4	31
Worcester	0	----	0	15	13	4	0	2	0	1	50
Rhode Island:											
Providence	0	2	2	124	1	21	0	1	0	6	65
Connecticut:											
Bridgeport	0	----	----	1	1	3	0	0	0	2	28
Hartford	0	----	0	1	3	5	0	1	0	5	34
New Haven	0	2	0	0	0	3	0	1	0	3	39
New York:											
Buffalo	0	----	0	0	7	8	0	4	0	5	145
New York	17	15	1	96	88	657	0	91	1	151	1,593
Rochester	0	2	0	6	5	18	0	0	0	14	85
Syracuse	0	----	0	0	2	14	0	0	0	1	62
New Jersey:											
Camden	0	1	1	0	0	13	0	0	0	0	19
Newark	0	3	0	269	2	23	0	5	0	34	106
Trenton	0	----	0	0	4	3	0	1	0	0	43
Pennsylvania:											
Philadelphia	0	----	1	0	24	0	0	29	0	0	478
Pittsburgh	0	5	5	1	8	30	0	10	0	9	176
Reading	0	----	0	0	0	0	0	0	1	6	21
Scranton	0	----	0	0	0	1	0	0	0	0	1
Ohio:											
Cincinnati	4	1	0	4	3	8	0	7	0	35	138
Cleveland	1	25	2	2	12	48	0	7	0	36	204
Columbus	0	----	0	0	1	6	0	1	0	13	68
Toledo	0	1	1	5	6	41	0	4	0	13	79
Indiana:											
Anderson	0	----	0	1	2	0	0	0	0	4	13
Fort Wayne	0	----	1	0	3	2	0	0	0	4	23
Indianapolis	1	----	3	1	6	20	0	3	0	9	112
Muncie	0	----	0	0	1	1	0	1	0	1	10
South Bend	0	----	0	0	1	0	0	0	0	0	13
Terre Haute	1	----	0	0	1	2	0	0	0	2	13
Illinois:											
Alton	0	----	0	0	2	4	0	0	0	4	13
Chicago	9	2	5	38	38	568	0	26	3	40	764
Elgin	0	----	0	1	1	2	0	0	0	0	8
Moline	0	----	0	3	0	1	0	0	0	0	6
Springfield	0	1	1	0	5	3	0	0	0	3	25
Michigan:											
Detroit	1	1	1	96	17	69	0	12	1	44	294
Flint	1	----	0	5	6	28	0	2	0	6	25
Grand Rapids	0	----	0	3	1	21	0	1	0	20	34
Wisconsin:											
Kenosha	0	----	0	37	0	1	0	1	0	0	8
Madison	0	----	0	0	1	4	0	0	0	2	15
Milwaukee	0	1	1	40	4	26	0	3	0	1	109
Racine	0	----	0	1	0	1	0	0	0	0	15
Superior	0	----	0	88	1	1	0	0	0	0	12
Minnesota:											
Duluth	0	----	0	57	2	1	0	0	0	0	36
Minneapolis	1	----	1	2	6	15	0	1	0	8	108
St. Paul	0	----	0	4	7	15	0	0	0	14	56

City reports for week ended Apr. 20, 1940—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Iowa:											
Cedar Rapids	0			69		2	0		0	0	
Davenport	0			4		5	0		0	0	
Des Moines	0		0	23	0	12	5	0	0	0	48
Sioux City	0			0		0	0		0	0	
Waterloo	0			6		1	0		0	1	
Missouri:											
Kansas City	0		0	12	5	15	0	5	0	0	92
St. Joseph	0		0	0	2	0	0	0	0	0	27
St. Louis	4		0	2	11	24	0	5	2	13	234
North Dakota:											
Fargo	0		0	0	0	0	2	0	0	0	8
Grand Forks	0			0		0	0		0	0	
Minot	0		0	0	0	1	0	0	0	0	4
South Dakota:											
Aberdeen	0			0		0	0		0	2	
Sioux Falls	0		0	0	0	5	0	0	0	0	8
Nebraska:											
Lincoln	0			1		0	0		0	1	
Omaha	0		0	3	6	7	0	1	0	1	55
Kansas:											
Lawrence	0		1	1	0	0	0	0	0	0	8
Topeka	1		0	19	3	0	0	0	0	0	16
Wichita	0		0	44	3	0	0	1	0	4	37
Delaware:											
Wilmington	0		0	0	0	5	0	2	0	6	25
Maryland:											
Baltimore	1	4	0	1	12	16	0	15	0	130	242
Cumberland	0		0	0	0	0	0	0	0	0	12
Frederick	0		0	0	0	0	0	0	0	0	2
Dist. of Col.:											
Washington	0	2	2	4	6	19	0	13	0	7	150
Virginia:											
Lynchburg	0		0	1	1	2	0	0	0	31	17
Norfolk	0		0	4	2	10	0	5	0	0	31
Richmond	1		1	0	5	3	0	5	0	1	70
Roanoke	0		0	9	1	1	0	0	0	0	17
West Virginia:											
Charleston	1		0	0	0	0	0	0	0	0	5
Huntington	3			0		2	0		0	0	
Wheeling	0		0	0	3	0	0	1	0	2	16
North Carolina:											
Gastonia	0			0		0	0		0	0	
Raleigh	0		0	0	3	0	0	0	0	0	10
Wilmington	0		0	0	0	0	0	0	0	0	9
Winston-Salem	0	1	0	1	3	2	0	1	0	0	12
South Carolina:											
Charleston	0	4	0	0	0	0	0	0	0	0	18
Florence	0		0	0	1	0	0	0	0	0	10
Greenville	0		0	0	0	0	0	0	0	2	6
Georgia:											
Atlanta	0		1	9	3	1	0	5	0	0	89
Brunswick	0		0	1	0	0	0	0	0	0	6
Savannah	0	1	0	0	2	1	0	3	0	0	40
Florida:											
Miami	0	2	1	1	3	0	0	2	0	0	37
Tampa	0	2	2	42	0	0	0	0	0	2	27
Kentucky:											
Ashland	0		0	0	0	0	0	0	0	3	7
Covington	2		0	6	0	1	0	1	0	0	15
Lexington	0		0	10	3	1	0	1	0	11	16
Louisville	1	1	0	4	7	34	0	2	1	37	70
Tennessee:											
Knoxville	0	2	0	3	1	5	0	1	0	0	31
Memphis	0	4	2	31	6	27	0	8	2	12	80
Nashville	0		1	13	4	4	0	1	0	6	66
Alabama:											
Birmingham	0	2	1	6	2	3	0	7	1	2	79
Mobile	0		1	0	1	0	0	0	0	0	17
Montgomery	0			5		1	0		0	1	
Arkansas:											
Fort Smith	0			0		0	0		0	0	
Little Rock	0	4	0	0	8	1	0	0	0	0	
Louisiana:											
New Orleans	3	2	1	6	10	5	0	17	2	5	145
Shreveport	0		0	0	6	0	0	1	1	0	47

City reports for week ended Apr. 20, 1940—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Oklahoma:											
Oklahoma City	0		0	0	5	1	1	1	0	0	46
Tulsa	0			13		0	0		0	39	
Texas:											
Dallas	1	2	2	186	6	0	0	2	1	48	64
Forth Worth	0		0	2	6	1	0	0	0	8	33
Galveston	0		0	1	3	1	0	0	0	0	19
Houston	1		0	15	7	2	0	6	2	3	80
San Antonio	0		1	19	6	0	0	7	0	7	52
Montana:											
Billings	0		1	0	1	0	0	0	0	0	8
Great Falls	0		0	1	2	6	0	0	0	0	10
Helena	0		0	0	0	0	0	0	0	0	2
Missoula	0		0	0	1	0	0	0	0	0	6
Idaho:											
Boise	0		0	0	0	0	0	1	0	0	8
Colorado:											
Colorado Springs	0		0	0	0	6	0	0	0	2	14
Denver	7		0	20	2	5	0	4	0	2	87
Pueblo	0		0	4	0	6	0	0	0	0	9
New Mexico:											
Albuquerque	0		0	0	0	0	0	2	0	10	6
Utah:											
Salt Lake City	0		0	247	0	7	0	0	0	56	48
Washington:											
Seattle	0		3	335	3	3	0	3	0	31	100
Spokane	0		0	5	0	4	0	1	0	3	32
Tacoma	0		0	5	1	10	0	1	0	0	27
Oregon:											
Portland	0	2	0	234	8	2	0	0	0	15	71
Salem	0			5		0	0		0	0	
California:											
Los Angeles	1	12	1	33	3	30	0	21	0	34	362
Sacramento	2		0	12	0	1	0	2	0	43	26
San Francisco	1	1	0	4	4	13	0	6	0	21	152

State and city	Meningitis, meningococcus		Poliomyelitis cases	State and city	Meningitis, meningococcus		Poliomyelitis cases
	Cases	Deaths			Cases	Deaths	
New York:				Maryland:			
Buffalo	2	1	0	Baltimore	1	1	0
Pennsylvania:				Kentucky:			
Pittsburgh	3	1	1	Louisville	0	1	0
Scranton	1	1	0	Oklahoma:			
Ohio:				Tulsa	1	1	0
Toledo	1	1	0	Texas:			
Wisconsin:				Houston	0	0	1
Madison	1	0	0				
Minnesota:							
St. Paul	0	0	1				

Encephalitis, epidemic or lethargic.—Cases: New York, 1; Columbus, 1; Wichita, 2.
Pellagra.—Cases: Charleston, S. C., 3; Birmingham, 1.

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended April 6, 1940.—During the week ended April 6, 1940, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis			1	2	3			1	1	8
Chickenpox		8		361	423	47	19	11	107	976
Diphtheria			2	7		2	12	2		25
Dysentery				24	2					26
Influenza		30			62				9	101
Lethargic encephalitis						1				1
Measles	1	16		230	588	601	382	1	107	1,926
Mumps		1		31	491	7	49		6	585
Pneumonia	4	10			19	5	2		17	57
Scarlet fever	1	18	4	84	146	13	36	15	8	325
Trachoma									1	1
Tuberculosis	4	12	13	40	52	21		1		143
Typhoid and paratyphoid fever			2	16		14	1			33
Whooping cough	2	5	1	193	66	25	47	11	39	389

JAMAICA

Communicable diseases—4 weeks ended February 17, 1940.—During the 4 weeks ended February 17, 1940, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Chickenpox	2	3	Leprosy		2
Diphtheria	8	3	Puerperal sepsis		3
Dysentery	8	23	Tuberculosis	28	73
Erysipelas		1	Typhoid fever	5	60

YUGOSLAVIA

Communicable diseases—4 weeks ended March 24, 1940.—During the 4 weeks ended March 24, 1940, certain communicable diseases were reported in Yugoslavia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	22	3	Paratyphoid fever	11	
Cerebrospinal meningitis	892	168	Poliomyelitis	3	1
Diphtheria and croup	577	52	Scarlet fever	239	2
Dysentery	18	2	Sepsis	11	2
Erysipelas	188	13	Tetanus	8	5
Favus	8		Typhoid fever	162	26
Leprosy	1		Typhus fever	48	5
Lethargic encephalitis	2	1			

REPORTS OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER RECEIVED DURING THE CURRENT WEEK

NOTE.—A cumulative table giving current information regarding the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS of April 26, 1940, pages 745-749. A similar table will appear in future issues of the PUBLIC HEALTH REPORTS for the last Friday of each month.

Smallpox

Algeria—Philippeville.—During the period March 11–20, 1940, 1 case of smallpox was reported in Philippeville, Algeria.

Sumatra—Medan.—During the week ended March 9, 1940, 1 case of smallpox was reported in Medan, Sumatra.

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