

# PUBLIC HEALTH REPORTS

VOL. 45

MARCH 7, 1930

NO. 10

## Resistance of *Paramecium* to Heat as Affected by Changes in Hydrogen-ion Concentration and in Inorganic Salt Balance in Surrounding Medium<sup>1</sup>

By H. W. CHALKLEY, *Physiologist, Hygienic Laboratory, United States Public Health Service*

It is well known that organisms differ in resistance to increased temperature. It is also apparent that this difference extends to tissues and cells of single organisms.

Schereschewsky (1928) has reported the selective destruction of malignant tumor tissue in mice by means of a high-frequency electric field. Experiments recently performed in this laboratory by Kahler, Chalkley, and Voegtlin (1929) have shown that the destruction of cells in such a field is a thermal effect. N. Westermarck (1927) using diathermy was able to destroy malignant growths in rats without injury to surrounding normal tissue. The experiments of Lambert (1912) and of Rohdenberg and Prime (1921) prove that there exists a considerable difference in thermal death point between normal and tumor tissue.

Inasmuch as little is known as to the factors responsible for variation in cellular resistance to heat, and since knowledge of these factors may be of importance from a therapeutic standpoint, their determination constitutes a problem of considerable importance. The experiments here presented constituted an attempt to ascertain the effect of changes in hydrogen-ion concentration and in the inorganic salt balance of the surrounding medium on the resistance of cells to heat.

### MATERIAL AND METHODS

During the experiments of Kahler, Chalkley, and Voegtlin referred to above, it was noted that *Paramecia* from different cultures exhibited slight but noticeable differences in their resistance to heat. Since material was abundant, since its unicellular character made rapid and complete environmental change a simple matter, and since changes

<sup>1</sup> The problem discussed here originated at the instigation of Prof. Carl Voegtlin, Chief of the Division of Pharmacology, and the author wishes to express his thanks to Professor Voegtlin for his advice and suggestions during the progress of the investigation.

in its normal motility would serve as an excellent index of injury, *Paramecium caudatum* was used in these experiments. The *Paramecia* utilized were the progeny of a single cell.<sup>2</sup> Culture was made in glass crystallizing dishes, holding about 200 cubic centimeters, in saline solution composed of NaCl 0.1 gram, CaCl<sub>2</sub> 0.006 gram, KCl 0.004 gram, NaHCO<sub>3</sub> 0.004 gram, H<sub>2</sub>O 1,000 cubic centimeters. From 10 to 12 wheat grains were added to each culture. The hydrogen-ion concentration of the cultures was maintained at slight acidity, pH 6.8 to 6.2, by addition of food (wheat) when necessary. Closer control was found to be unnecessary.

The saline solutions in which the *Paramecia* were heated were (1) saline as used for culture and referred to hereafter as balanced saline;<sup>3</sup> (2) the same but with the KCl omitted and CaCl<sub>2</sub> added in equimolar concentration; (3) the same but with the CaCl<sub>2</sub> omitted and KCl added in equimolar concentration; (4) the same but with KCl and CaCl<sub>2</sub> omitted and NaCl added in equimolar concentration. All of these were used at hydrogen-ion concentrations from pH 5.8 or 6.0 to 8.4 or 8.6, as the continued resistance of the organisms required. The pH of all solutions was controlled as follows: The solution was adjusted to a point slightly alkaline of the required value by omitting a portion of the NaCl and substituting NaHCO<sub>3</sub>, the substitution being made so that the Na concentration was not changed. The exact pH wanted was then reached by addition of dilute HCl with aeration to remove CO<sub>2</sub> until the solution was stable at the requisite pH over a period of at least two hours. The error due to dilution with HCl was deemed negligible as it never exceeded 0.2 per cent by volume. The pH measurements were made with a LaMotte colorimetric set, and since with these slightly buffered solutions the indicator might introduce error, two indicators at least were used over the range. The indicators used were methyl red, brom thymol purple, thymol blue, phenol red, and cresol red. These allow simultaneous colorimetric measurements with two different indicators over the range used, with the exception of pH 8.6 where cresol red was used alone.

The experimental procedure was as follows: 10 cubic centimeters of culture fluid with suspended *Paramecia* was taken from a vigorous culture, the *Paramecia* thus obtained were washed three times with balanced saline at pH 6.8 by low speed centrifugation, and then left for 24 hours. From these *Paramecia*, lots of 25 each were moved with a paraffined capillary pipette and each lot was placed separately in a paraffined Petri dish. Then by means of a pipette superfluous saline was removed until the drop containing the *Paramecia* was reduced to approximately 0.02 cubic centimeter as checked by comparison with

<sup>2</sup> No conjugation was observed during the course of the investigation.

<sup>3</sup> The term "balanced" is not used to imply a physiologically determined optimum condition. The solution used is simply one that was found empirically to be suitable for culture purposes.

measured drops of saline placed in the dish for reference. The dish was kept covered, except when under manipulation, to prevent evaporation or accidental contamination.

The lots of *Paramecia* were then transferred separately at timed intervals to paraffined test tubes each of which contained 5 cubic centimeters of the saline solution used. These tubes had all been previously brought to 40° C. in a water bath and were maintained at that temperature throughout the experiment. When exposure to heat had been completed, all tubes were removed simultaneously from the bath and were cooled in a second bath at 20° to 22° C. for 30 minutes. At the end of this time the tubes were emptied separately into small round-bottomed glass dishes and the surviving *Paramecia* in each lot were counted. Each individual as counted was removed from the dish with a pipette. A test of the accuracy of count was made by running through the procedure with the baths at room temperature. Ten such runs gave a maximum error, occurring once in the 10 runs, of 2 *Paramecia* or 8 per cent on individual counts.<sup>4</sup>

EFFECT OF CHANGES IN HYDROGEN-ION CONCENTRATION ON THE RESISTANCE OF PARAMECIA TO A TEMPERATURE OF 40° C. WHEN EXPOSURE IS MADE (a) IN BALANCED SALINE; (b) IN SALINE WITH POTASSIUM EXCESS; (c) IN SALINE WITH CALCIUM EXCESS; (d) IN SALINE WITH SODIUM EXCESS

(a) *In balanced saline.*—*Paramecia* were exposed to 40° C. in balanced saline at pH 6.0 to 8.6 in 0.2 unit steps, for 2, 4, 8, 12, and 16 minutes. Five counts were obtained of the number of protozoa surviving at the end of each time interval in each hydrogen-ion concentration used. These counts were averaged and the percentage of survivors was plotted as a function of time. This gave a series of curves which showed the rate of death at each pH. From this series of curves the time taken to kill 50 per cent at each pH was obtained by interpolation and plotted as a function of pH. Inasmuch as the making of this series of tests took several days, controls were established by obtaining, after all the counts had been completed for a given pH, a single count at pH 6.6 (the first pH value used) at each time interval used, for comparison with the previous counts. Similarly, when other solutions were used such control counts were always made using the balanced solution at pH 6.4, 6.6, or 7.0. This latitude in pH value was allowed, because owing to the difficulty of making the solutions it seemed impracticable to run all controls at exactly the same pH. Further, once the curve for the balanced solution was established, variation in the pH used for controls served to establish the curve in the balanced solution more firmly by providing additional check points.

The number of cells coagulated, i. e., in which the protoplasm was opaque and no rupture of the cell had occurred, was noted in all

<sup>4</sup> A binocular dissecting microscope was used for making the counts and other observations.

counts. The figures obtained were averaged for each pH step and plotted as percentages of total deaths for each pH. Also a qualitative observation was made for each pH of the condition of the cell as to swelling. This observation was based on simultaneous ocular comparison of surviving *Paramecia* with normal individuals. The curves

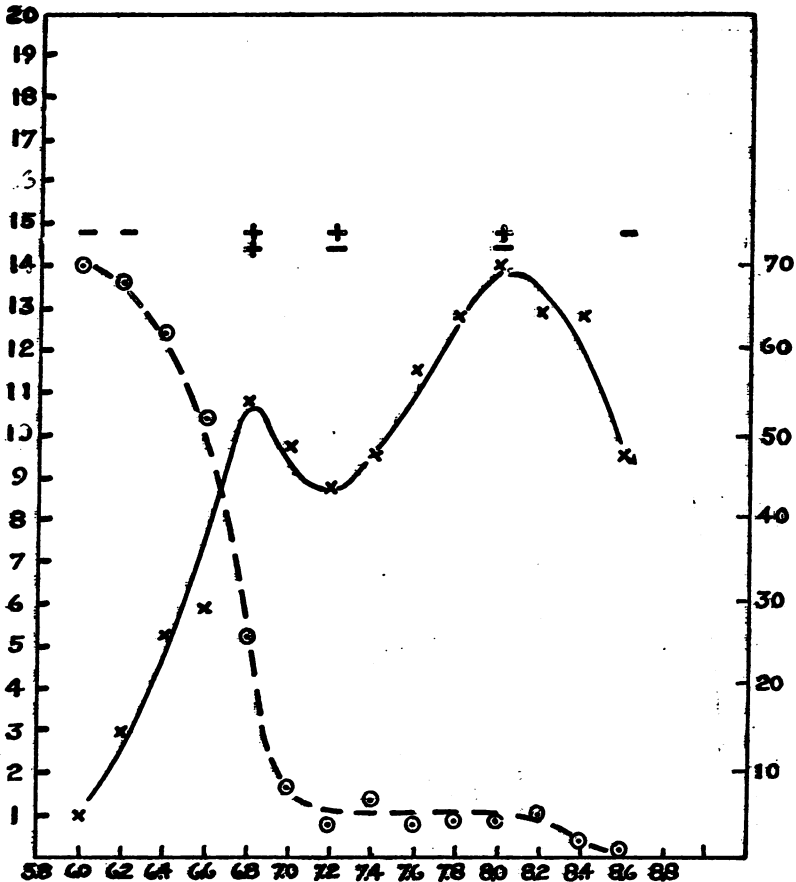


FIGURE 1.—Graph showing the variations in resistance to heat and swelling, and in the per cent of deaths due to coagulation of the cell, in *Paramecia* exposed to 40° C. in balanced saline at different hydrogen-ion concentrations. Abscissas represent pH; ordinate scale on left, time in minutes required to kill 50 per cent; scale on right per cent of deaths in which cells were unruptured and coagulated; continuous line, resistance; broken line, per cent of deaths by coagulation. Swelling indicated as follows: — none or shrinkage; ± slight to none; + marked; ‡ great

obtained are presented in Figure 1. From the curves it will be noted that the time of resistance rises from 1 minute at pH 6.0 to a maximum of 10.6 minutes at pH 6.8, drops to a minimum of 8.8 minutes at pH 7.2, rises again to a maximum of 14 minutes at pH 8.0, and then declines to 9.5 minutes at pH 8.6. The percentage of cells coagulated is 70 per cent at pH 6.0. It then drops gradually to about 5 per cent

at pH 7.2, remains relatively constant to pH 8.2, and then drops gradually to 2 per cent at pH 8.6.

Swelling apparently is negligible or absent at pH 6.0, but great at pH 6.8, and apparently less at pH 7.0 and on into the alkaline range. In the extreme alkaline range, from approximately pH 8.0 on, few fragments of cells were found. The membrane and cell contents

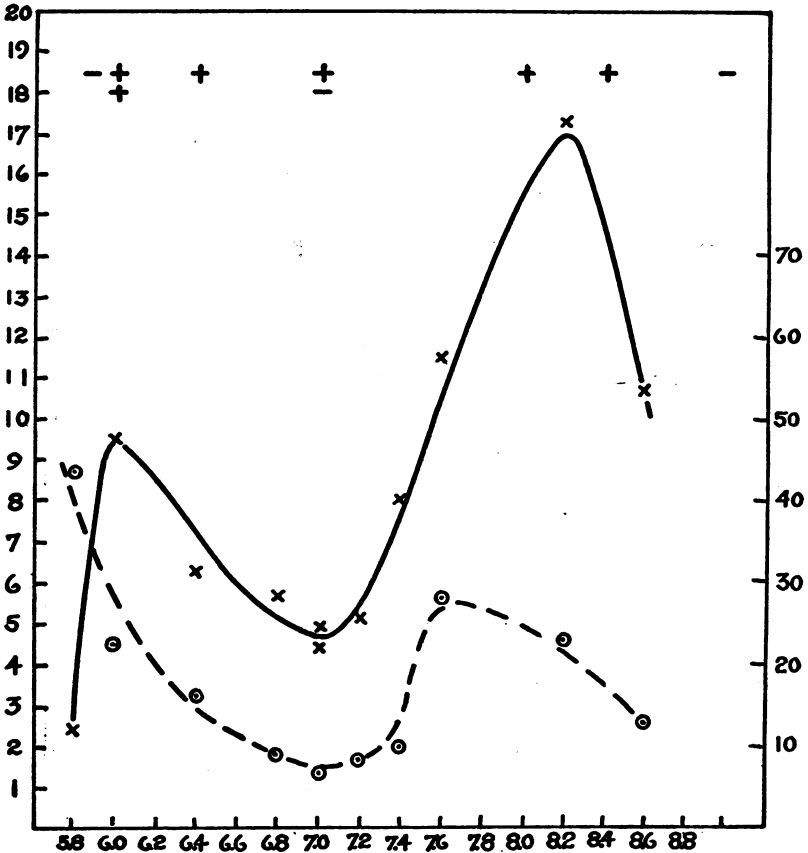


FIGURE 2.—Graph showing the variation in resistance to heat and swelling and in the per cent of deaths due to coagulation in *Paramecia* exposed to 40° C. in saline with potassium excess at different hydrogen-ion concentrations. Abscissas, pH; ordinate scale on the left, time in minutes to kill 50 per cent; scale on right, per cent of deaths in which cells were unruptured and coagulated; continuous line, resistance; broken line, per cent of deaths by coagulation. Swelling indicated as follows: — none or shrinkage; ± slight to none; + marked; † great

rapidly dissolved and the degree of swelling as noted in surviving cells was, if anything, less than that at neutrality.

(b) *In saline with potassium excess.*—In this experiment the procedure was as previously outlined, except that exposure was made in a saline solution which contained in place of the  $\text{CaCl}_2$  of the balanced saline an equimolar addition of  $\text{KCl}$ . The curves for variation of resistance and coagulation are presented in Figure 2.

From these it will be seen that the time of resistance increases from 2.4 minutes at pH 5.8 to 9.5 minutes at pH 6.0, declines gradually to about 4.8 minutes at pH 7.0, rises sharply to a maximum of 17.3 minutes at pH 8.2, then declines to 10.7 minutes at pH 8.6. As compared with the results of the previous experiment the maximum on the acid side is lower and occurs at a lower pH. The neutral mini-

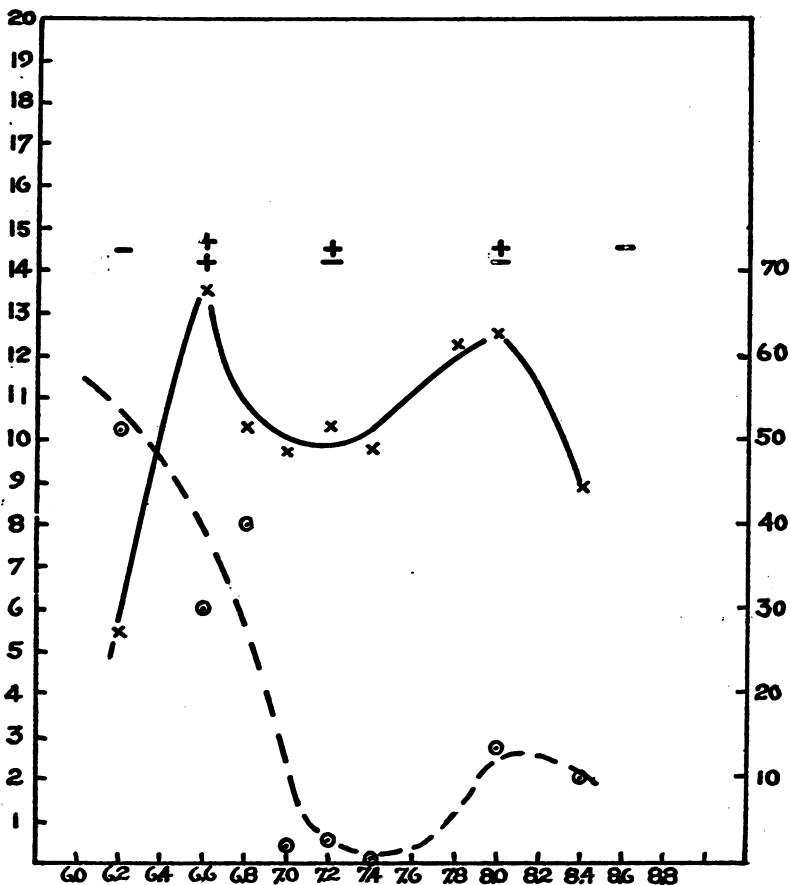


FIGURE 3.—Graph showing the variation in resistance to heat and swelling and in the per cent of deaths due to coagulation in *Paramecia* exposed to 40° C. in saline with calcium excess, at different hydrogen-ion concentrations. Abscissas, pH; ordinate scale on left, time in minutes to kill 50 per cent; scale on right, per cent of deaths in which cells were unruptured and coagulated; continuous line, resistance; broken line, per cent of deaths by coagulation. Swelling is indicated as follows: - none or shrinkage; ± none to slight; + marked; † great

imum is lower and possibly shifted slightly toward the acid side. The alkaline maximum is much increased and is shifted slightly to the alkaline side.

The curve for the percentage of deaths showing coagulation starts at 45 per cent at pH 5.8, drops to about 8 per cent at pH 7.2, rises to about 28 per cent at pH 7.8, and then declines to 12 per cent at pH

8.6. The swelling was not noticeable at pH 5.8, very marked at pH 6.0, less at pH 6.8 and 7.0, more marked at pH 7.6, and negligible at pH 8.6. A comparison with the preceding experiment could not be made as it was impracticable to place the data on a quantitative basis.

(c) *In saline with calcium excess.*—This experiment was carried out as before, but the KCl was omitted from the saline and replaced by molar equivalent  $\text{CaCl}_2$ . The curves for resistance and coagulation are presented in Figure 3.

It will be noted from these graphs that the resistance curve again shows two maxima; this time, however, the maxima occur at pH 6.6 on the acid side and at pH 8.0 on the alkaline side. The acid maximum time is the greatest, reaching 13.5 minutes, while the alkaline is 12.5 minutes. The neutral minimum is rather wider and apparently at pH 7.2, the resistance time here being 10.0 minutes. The coagulation curve drops from 52 per cent at pH 6.2 to about 2 per cent at pH 7.0, rises to 13 per cent at pH 8.0, and then declines to 10 per cent at pH 8.4. The swelling was, as before, negligible in extreme acidity, noticeable in the region of the acid resistance maximum and less at neutrality. The alkaline side, however, showed definitely less swelling than at pH 7.0.

(d) *In saline with sodium excess.*—In this experiment the same procedure was followed but both KCl and  $\text{CaCl}_2$  were omitted and sufficient NaCl was added to replace the Ca and K concentrations by Na.

The resistance and coagulation curves obtained are given in Figure 4. From this figure it will be noted that the resistance rises from about 1 minute at pH 6.2 to a maximum of about 4 minutes at 6.6, declines to a minimum of 2 minutes at pH 7.2, reaches a maximum of 5.2 minutes at pH 7.6, and drops very gradually to about 4.5 minutes at pH 8.4. Thus, in comparison with the previous experiments, the resistance over the whole range is much lowered.

The percentage of coagulation drops from 35 per cent at pH 6.2 to 0 per cent at pH 7.4, and then remains at about 1 per cent or less for the remainder of the alkaline range covered. The swelling noted was none at extreme acidity and markedly less throughout than in the previous experiments. It appeared also that the character of the coagulation was somewhat different. It was not so definite and the cells appeared milky rather than densely white.

#### DISCUSSION

From the foregoing it appears that when *Paramecium* is exposed to a temperature of  $40^\circ \text{C}$  its resistance is affected by the hydrogen-ion concentration, and also by the salt balance of the surrounding medium.

If the region between pH 6.6 and pH 7.8 approximating the pH range of mammalian tissue is considered, it is apparent that with reference to the balanced solution used, an excess of potassium tends to decrease and an excess of calcium to increase resistance. It is also to be noted that in alkaline conditions the resistance is in general greater than in acid.

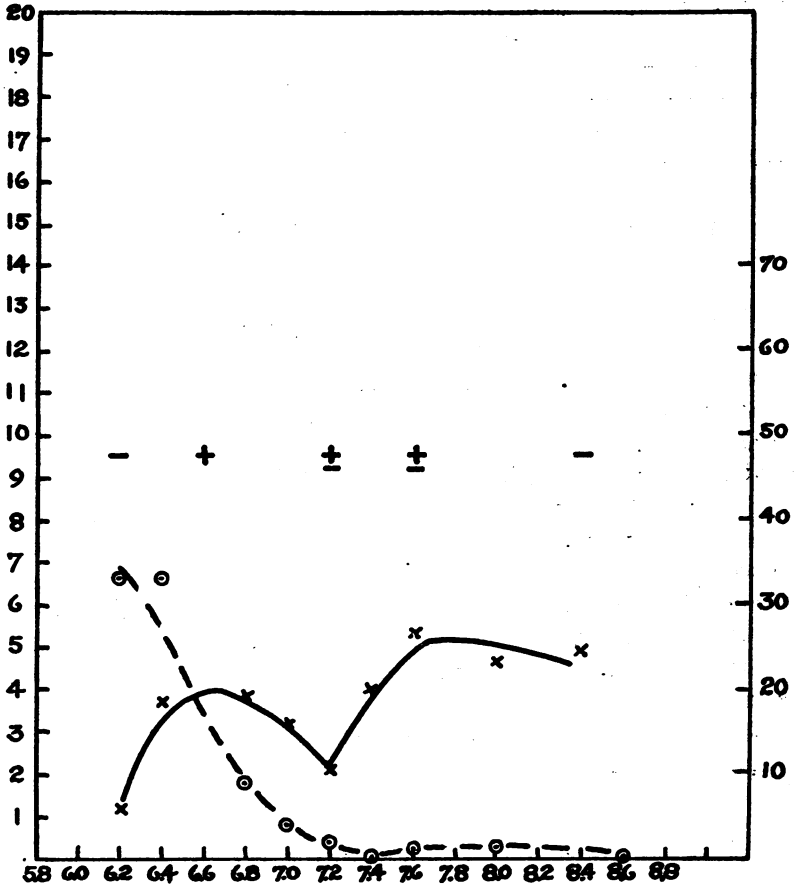


FIGURE 4.—Graph showing the variation in resistance to heat and swelling, and in the per cent of deaths due to coagulation in *Paramecia* exposed to 40° C. in saline with sodium excess, at different hydrogen-ion concentrations. Abscissas, pH; ordinate scale on left, time in minutes to kill 50 per cent; scale on right, per cent of deaths in which cells were unruptured and coagulated; continuous line, resistance; broken line, per cent of deaths by coagulation. Swelling is indicated as follows: - none or shrinkage; ± none to slight; + marked; † great.

It is of interest to note that Beebe (1904) and Rohdenberg and Krehbiel (1922) find that in tumors there is in general a tendency toward relative excess of potassium, and also to note that there is reason to expect from the relatively high lactic acid production of such tissue that the fluids in actual contact with the cells will have a relatively low pH.



It would therefore seem probable (with the necessary reservations when results obtained for one type of cell are applied to another) that the low resistance to heat of tumor tissue as reported by Rohdenberg and Prime, Lambert and others (loc. cit.) is a correlate of the altered salt balance and acid base equilibrium that prevails in their immediate environment. Further research along this line might make possible a rationale of heat treatment of tumors.

From the curves presented for coagulation it will be noted that the type of death varies with the pH. Coagulative changes appear to be associated with death when the cell is in acid media, while swelling resulting in rupture of the cell membrane or dissolution of the cell with no swelling result when neutral or alkaline media, respectively, are used. It is proposed to deal with the implications of these differences in a separate paper.

#### SUMMARY

The resistance of *Paramecium caudatum* to a temperature of 40° C. varies with the hydrogen-ion concentration of the medium. The curve obtained by plotting the resistance, as measured by the time necessary to kill 50 per cent of the organisms exposed, against pH is bimodal, having maxima in the alkaline and acid ranges and a minimum at or about neutrality.

In a balanced solution, and in solutions containing an excess of sodium or potassium, the alkaline maximum is the higher. If calcium is in excess, the acid maximum is the higher.

In general, acidity decreases and alkalinity increases resistance.

Between pH 6.6 and 7.6 excess of potassium decreases resistance and excess of calcium increases resistance under the experimental conditions.

#### REFERENCES CITED

- Beebe, S. P.: (1904) Am. Jour. Physiol., **12**, p. 170.  
 Kahler, H., Chalkley, H. W., and Voegtlin, Carl: (1929) Pub. Health Rep., **44**, p. 339.  
 Lambert, Robert A.: (1912) Jour. A. M. A., **59**, p. 2147.  
 Rohdenberg, G. L., and Prime, Frederick: (1921) Arch. of Surg., **2**, p. 116.  
 Rohdenberg, G. L., and Krehbiel, O. F.: (1922) Jour. Cancer Res., **7**, p. 417.  
 Scherewschewsky, J. W.: (1928) Pub. Health Rep., **43**, p. 927.  
 Westermarck, Nils: (1927) Skand. Archiv. f. path., **52**, p. 315.

### DEATH RATES IN A GROUP OF INSURED PERSONS

Rates for Principal Causes of Death for December, 1929, and for the Years 1911 and 1919 to 1929

The accompanying tables are taken from the Statistical Bulletin for January, 1930, issued by the Metropolitan Life Insurance Co. They present the mortality experience of the industrial insurance department of the company for the principal causes of death for December, 1929, and a comparison of the rates for the years 1911 and

1919 to 1929, inclusive. The rates for 1929 are based on a strength of nearly 19,000,000 insured persons in the United States and Canada, comprising about one-seventh of the total and about one-third of the urban population of the two countries. While this is a more or less selected group and is largely urban, the death rate serves as an index of conditions in the general population. In recent years the general death rates in this group of persons have been consistently about 72 per cent of the rates for the registration area of the United States.

DECEMBER, 1929

The December death rate for these insured persons, 8.7 per 1,000, is stated to be the lowest recorded rate for this month. It is much lower than the rate for the corresponding month of the preceding year, 9.3 per 1,000, which reflected the rise due to the influenza epidemic. In addition to influenza and pneumonia, the following named causes of death showed improvement as compared with December of 1928: Whooping cough, diphtheria, tuberculosis, diabetes, respiratory diseases other than pneumonia, diarrhea and enteritis, and chronic nephritis. The death rate for typhoid fever was higher for December, 1929, than for the same month of 1928, as was also that for automobile fatalities.

*Death rates (annual basis) per 100,000 for principal causes of death, December, 1929*

[Industrial department, Metropolitan Life Insurance Co.]

Cause of death	Rate per 100,000 lives exposed <sup>1</sup>				
	Decem-ber, 1929 <sup>2</sup>	Novem-ber, 1929 <sup>2</sup>	Decem-ber, 1928 <sup>3</sup>	Year	
				1929 <sup>2</sup>	1928 <sup>3</sup>
Total, all causes.....	869.6	790.7	926.0	916.2	916.6
Typhoid fever.....	2.1	2.4	1.7	2.3	2.7
Measles.....	1.8	.4	1.4	2.9	5.2
Scarlet fever.....	3.3	1.8	2.4	2.6	2.7
Whooping cough.....	3.3	3.7	4.8	5.6	5.7
Diphtheria.....	10.4	11.8	11.3	8.6	9.7
Influenza.....	20.5	13.1	48.8	41.1	24.8
Tuberculosis (all forms).....	74.1	73.2	75.8	85.2	90.1
Tuberculosis of respiratory system.....	66.2	65.4	68.3	75.2	78.8
Cancer.....	75.1	73.8	74.0	76.0	75.7
Diabetes mellitus.....	16.7	16.6	18.0	18.0	17.6
Cerebral hemorrhage.....	57.7	50.6	57.3	56.9	56.7
Organic diseases of heart.....	144.5	126.1	144.3	144.0	142.2
Pneumonia (all forms).....	87.9	64.1	103.9	86.9	89.3
Other respiratory diseases.....	10.8	9.2	19.5	11.4	12.4
Diarrhea and enteritis.....	12.7	15.0	14.0	20.4	24.0
Bright's disease (chronic nephritis).....	65.6	63.1	68.6	68.1	70.5
Puerperal state.....	11.4	11.1	9.9	13.3	13.9
Suicides.....	7.5	7.7	7.1	8.4	8.3
Homicides.....	6.9	5.3	6.9	6.4	6.7
Other external causes (excluding suicides and homi- cides).....	65.6	61.7	59.4	63.9	62.6
Traumatism by automobiles.....	21.3	23.9	20.5	20.6	18.4
All other causes.....	191.8	179.8	196.8	194.0	195.7

<sup>1</sup> All figures in this table include infants insured under 1 year of age.

<sup>2</sup> All 1929 death rates subject to slight correction, as they are based on provisional estimate of lives exposed to risk.

<sup>3</sup> 1928 death rate is final figure.

## YEAR 1929 AND COMPARISON WITH 1911 AND YEARS 1919-1928

The general death rate in this group of persons for the year 1929 was 8.7 per 1,000, practically the same as that for 1928 and for the month of December of 1929. This is approximately one-third less than the rate for 1911, namely, 12.5 per 1,000.

The year 1929 brought new low records for some diseases and conditions which are important from the standpoint of health work. The tuberculosis death rate was 85.6 per 100,000, the lowest rate recorded to date for this group. Typhoid fever, the scourge of urban populations 30 years ago, also registered a new low death rate, 2.3 per 100,000, as did the rate for puerperal causes. The mortality rates for measles and diphtheria also show declines to new minimum figures. The falling death rate for diarrhea and enteritis reflects improved standards of hygiene—better protection of food and water supplies and more intelligent care in the feeding of children. The rate for 1929, viz, 7.8 per 100,000, was approximately only one-fourth of the figure for 1911.

Among the unfavorable items reflecting health conditions for 1929 are influenza, which registered the highest death rate for any year since 1920, organic heart disease, cancer, and diabetes. Automobile fatalities also increased.

The influenza mortality brought the combined death rate for influenza and pneumonia higher than it has been since 1920, although the pneumonia rate alone was only a little higher than the average for the six preceding years; in fact only four years (1927, 1925, 1924, and 1921) registered a lower pneumonia death rate than that for 1929.

The death rate for heart disease was 146.1 per 100,000, as compared with 144.4 in 1928, the previous maximum rate for this group of persons. The rate for 1929 was 3 per cent higher than in 1911.

The death rate for cancer continued its slow but persistent increase to a new high point, 77.3 per 100,000, as compared with 77.0 in 1928. The 1929 rate for cancer was 13.7 per cent in excess of that for 1911.

Diabetes also registered a new high death rate in 1929, the rate being 18.3 per 100,000 as compared with 17.9 in 1928, and with 13.3 for 1911—an increase over the latter rate of nearly 38 per cent.

The rate for automobile fatalities was 20.9 per 100,000, the highest rate yet recorded for these persons, a rise of 12 per cent in one year and of 809 per cent since 1911. Approximately one-third of all accidental deaths among these 19,000,000 persons was in connection with the use of automobiles.

Acute and chronic alcoholism (not including deaths from methanol and denatured alcohol) caused 641 deaths in this group in 1929, as compared with 599 deaths in 1928. It is stated that among these

persons the alcoholism death rate during the past eight years has been six times as high in the United States as in Canada.

Deaths from cirrhosis of the liver numbered 1,208 in 1929, as compared with 1,217 in 1928. The rate, however, declined from 6.7 to 6.5 per 100,000.

*Death rates for principal causes per 100,000 lives exposed, 1929 as compared with 1911 and years 1919 to 1928, ages 1 and over*

Cause of death	1929 <sup>1</sup>	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919	1911
All causes of death.....	874.3	869.3	842.2	885.7	846.3	848.0	897.1	882.9	870.6	989.4	1,063.0	1,253.0
Typhoid fever.....	2.3	2.7	4.7	4.2	4.6	4.4	5.2	5.7	6.7	6.7	7.3	22.8
Communicable diseases of childhood.....	16.3	19.0	19.7	25.9	19.7	26.2	33.1	29.8	37.9	43.1	31.5	58.9
Measles.....	2.4	4.2	3.4	8.0	2.5	5.7	8.4	4.3	3.2	8.5	3.5	11.4
Scarlet fever.....	2.6	2.6	3.0	3.4	3.4	4.3	4.4	4.9	7.0	6.0	3.9	13.1
Whooping cough.....	2.9	2.7	3.1	5.0	3.6	3.5	4.8	2.6	3.9	6.6	3.2	7.1
Diphtheria.....	8.5	9.5	10.2	9.5	10.2	12.7	15.5	18.0	23.8	22.1	20.9	27.3
Influenza and pneumonia.....	109.5	94.8	78.7	105.6	88.3	84.4	107.7	95.3	76.5	159.5	214.1	131.2
Influenza.....	36.9	22.0	15.7	27.4	19.4	14.2	30.1	21.7	8.7	53.5	96.9	15.9
Pneumonia.....	72.6	72.8	63.0	78.2	69.0	70.2	77.6	73.7	67.8	106.1	117.2	115.3
Poliomyelitis.....	.6	1.2	2.0	.7	1.4	1.0	.7	.9	1.7	1.0	.6	1.6
Tuberculosis, all forms.....	85.6	90.6	93.8	99.5	98.2	104.4	110.5	114.2	117.4	137.9	156.5	224.6
Tuberculosis of respiratory system.....	76.2	80.0	83.0	87.9	87.0	93.4	100.6	108.6	105.6	124.0	141.6	203.0
Cancer, all forms.....	77.3	77.0	75.6	75.1	71.8	71.5	72.7	72.0	71.7	69.8	67.0	68.0
Diabetes mellitus.....	18.3	17.9	17.1	17.0	15.5	15.1	16.2	17.2	15.5	14.1	13.4	13.3
Alcoholism.....	3.4	3.3	3.5	3.7	3.0	2.9	3.0	2.1	.9	.6	1.4	4.0
Cerebral hemorrhage, apoplexy.....	57.7	57.6	56.0	56.5	54.4	61.1	61.9	62.9	62.1	61.3	59.8	64.2
Diseases of heart.....	146.1	144.4	134.7	136.4	128.7	125.2	128.7	126.7	117.4	117.0	113.9	94.8
Diarrhea and enteritis.....	7.8	8.7	9.1	10.5	12.3	11.3	11.1	10.8	14.2	15.8	16.9	28.0
Chronic nephritis (Bright's disease).....	69.2	71.8	70.8	74.9	71.2	66.5	69.6	70.3	68.0	70.8	73.5	95.0
Puerperal state, total.....	13.5	14.2	15.7	15.6	16.9	17.2	17.9	19.0	19.8	23.0	20.0	19.8
Puerperal septicemia.....	5.0	5.0	6.4	6.0	6.6	6.6	6.9	7.4	8.5	8.6	6.7	8.8
Puerperal albuminuria and convulsions.....	3.1	3.1	3.2	3.6	3.8	4.3	4.2	4.7	4.9	5.0	4.8	4.7
Accidents of pregnancy.....	1.5	1.6	1.3	1.7	1.6	1.6	1.8	1.7	1.6	3.1	3.0	1.7
Total, external causes.....	78.9	77.8	79.8	77.2	78.3	76.9	77.8	71.8	72.0	72.0	94.2	97.9
Suicides.....	8.5	8.5	8.4	7.8	7.0	7.3	7.4	7.5	7.6	6.1	6.8	13.3
Homicides.....	6.5	6.8	7.4	7.2	7.4	7.2	7.3	6.3	6.7	5.8	6.9	7.2
Accidents, total.....	63.9	62.5	63.9	62.3	63.9	62.4	63.0	58.0	57.5	59.6	63.8	77.4
Accidental burns.....	4.8	5.3	5.3	6.1	6.1	6.4	6.3	6.1	6.6	8.1	8.1	8.8
Accidental drowning.....	6.4	7.1	6.8	6.3	6.5	7.3	6.7	7.3	8.2	6.7	8.6	10.2
Accidental traumatism by fall.....	8.9	8.0	8.5	7.9	8.1	7.7	8.4	7.3	7.1	7.3	8.0	13.2
Accidental traumatism by machines.....	1.6	1.2	1.4	1.4	1.3	1.3	1.7	1.6	1.0	1.7	1.6	1.8
Railroad accidents.....	3.8	3.9	4.1	4.2	4.0	4.0	4.9	4.1	3.9	5.2	5.7	9.5
Automobile accidents.....	20.9	18.7	18.7	17.0	16.8	15.9	15.4	13.6	12.2	11.1	10.7	2.3
All other accidents.....	17.4	18.3	19.1	19.4	21.2	19.7	19.5	18.0	18.5	19.5	21.2	31.6
War deaths.....	(?)	(?)	(?)	(?)	(?)	(?)	(?)	1	1	.5	16.6	---
Other diseases and conditions.....	187.7	188.3	181.0	183.6	183.4	180.9	181.7	185.1	190.5	197.8	193.5	283.5

<sup>1</sup> All 1929 death rates subject to slight correction, as they are based on a provisional estimate of lives exposed to risk.

<sup>2</sup> Death rate less than 0.05 per 100,000.

## RECENT STATE MORTALITY STATISTICS <sup>a</sup>

For the information of public health officials and others interested, mortality rates for the latest month for which records are available are given for various States in the following tables. These rates are computed from current and generally preliminary reports furnished by State departments of health. Because of (a) some lack of uniformity in the method of classifying deaths according to cause, (b) some delayed death certificates, and (c) various other reasons, these

<sup>a</sup> From the Office of Statistical Investigations, U. S. Public Health Service.

preliminary rates can not be expected to agree in all instances with final rates published by the Bureau of the Census; the final figures are based on a complete review and retabulation of the individual death certificates from every State. The preliminary rates given in the following tables are intended to serve as a current index of mortality until final figures are issued by the Bureau of the Census.

For purposes of comparison, the mortality records for a few preceding years are given, the rates being those for the month corresponding to the latest month for which the 1929 rate is available. These comparative rates for preceding years are from the same source as the current reports. Although final figures are often available for these earlier years, the preliminary figures are retained as being more comparable with current preliminary rates.

*Monthly State mortality statistics*

[All rates are on an annual basis, and, with the exception of mortality from all causes, infant mortality, and congenital malformations and diseases of early infancy, are per 100,000 population]

ALL CAUSES: ANNUAL RATE PER 1,000 POPULATION

	1929									Corresponding month for—			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1928	1927	1926	1925
Alabama.....	11.2	11.9	11.8	11.1	11.0	10.8	11.0	10.9	13.2	13.4	13.3	11.6	13.5
White.....	9.0	9.2	9.2	8.7	8.5	8.4	8.8	8.5	10.5	11.1	11.3	9.9	-----
Colored.....	15.3	16.9	16.8	15.7	15.7	15.5	15.1	15.2	18.4	17.5	17.0	15.1	-----
Arizona.....	16.1	17.6	17.9	13.2	11.3	11.8	11.6	13.7	14.9	20.0	-----	-----	-----
California.....	15.2	13.8	14.2	13.1	12.8	12.4	13.1	14.3	-----	16.6	-----	-----	-----
Connecticut.....	10.4	11.1	9.0	9.3	8.9	9.5	10.2	10.0	-----	10.2	9.4	10.4	11.6
Florida.....	-----	-----	-----	-----	-----	-----	11.8	12.2	-----	-----	-----	-----	-----
White.....	-----	-----	-----	-----	-----	-----	9.5	10.7	-----	-----	-----	-----	-----
Colored.....	-----	-----	-----	-----	-----	-----	16.9	15.4	-----	-----	-----	-----	-----
Georgia.....	9.6	9.1	11.3	10.3	10.0	10.4	10.5	9.9	12.1	-----	-----	-----	-----
Hawaii Territory.....	14.6	14.5	12.7	12.1	9.7	10.8	10.3	11.1	10.7	12.6	11.9	-----	-----
Indiana.....	12.4	12.2	11.0	10.5	10.5	10.9	10.9	11.0	-----	11.2	11.4	11.5	11.6
Iowa.....	10.7	10.4	-----	9.7	8.6	9.7	9.5	13.4	10.8	14.4	-----	-----	-----
Kansas.....	11.0	9.8	9.6	9.2	9.7	8.7	9.0	10.2	-----	10.8	-----	-----	-----
Louisiana.....	11.5	11.2	11.6	11.1	10.8	11.1	11.8	12.4	-----	11.9	-----	-----	-----
White.....	8.8	8.2	8.2	8.3	8.4	9.0	9.1	9.7	-----	9.4	-----	-----	-----
Colored.....	16.5	16.7	16.9	16.0	15.1	15.1	16.8	17.3	-----	16.6	-----	-----	-----
Maryland.....	-----	-----	-----	11.7	11.9	11.1	12.2	12.5	14.0	-----	-----	-----	-----
White.....	-----	-----	-----	10.4	10.8	9.9	11.0	11.6	12.6	-----	-----	-----	-----
Colored.....	-----	-----	-----	18.4	17.5	16.8	18.2	17.3	21.7	-----	-----	-----	-----
Michigan.....	12.7	13.2	11.7	10.8	10.4	11.2	10.9	10.7	11.9	16.2	-----	-----	-----
Minnesota.....	9.3	9.2	8.6	8.3	8.0	7.9	8.1	8.6	9.7	12.5	-----	-----	-----
Mississippi.....	11.8	11.1	12.6	11.7	10.7	10.0	11.9	-----	-----	10.7	-----	-----	-----
White.....	8.8	8.4	9.0	8.6	8.4	8.0	9.8	-----	-----	8.1	-----	-----	-----
Colored.....	14.6	13.7	15.9	14.5	12.7	11.7	13.8	-----	-----	13.2	-----	-----	-----
Montana.....	-----	-----	-----	-----	-----	9.0	-----	-----	-----	-----	-----	-----	-----
Nebraska.....	9.7	9.6	8.4	8.2	7.7	8.4	-----	-----	-----	8.0	-----	-----	-----
New Jersey.....	12.1	11.3	10.5	10.4	9.0	10.3	10.8	11.2	12.7	13.2	11.5	13.1	12.3
New York <sup>1</sup> .....	13.5	13.0	16.0	11.1	11.3	11.4	12.2	12.2	-----	12.4	12.4	12.6	14.5
North Carolina.....	11.7	11.9	-----	-----	-----	-----	-----	10.7	-----	17.5	-----	-----	-----
Pennsylvania.....	11.7	11.2	9.8	9.6	9.2	10.0	10.6	10.7	-----	11.5	11.5	11.7	12.0
South Dakota.....	8.0	9.0	7.1	6.8	8.3	7.3	7.2	6.3	10.1	14.1	-----	-----	-----
Tennessee.....	11.3	10.7	10.9	11.9	10.9	10.8	11.0	11.4	14.2	16.1	13.6	12.7	-----
White.....	9.6	9.1	9.3	10.1	9.4	9.2	9.4	9.9	12.9	-----	-----	-----	-----
Colored.....	19.8	18.2	18.9	20.9	18.2	18.4	18.4	18.7	20.5	-----	-----	-----	-----
Virginia.....	10.3	9.8	9.7	10.2	8.9	9.0	9.6	10.2	12.1	13.1	-----	-----	-----
White.....	8.8	7.8	8.0	8.8	7.4	7.4	8.3	9.0	10.2	11.5	-----	-----	-----
Colored.....	14.4	15.1	14.4	14.0	13.0	13.2	12.9	13.4	17.0	17.3	-----	-----	-----
Wisconsin.....	11.1	10.6	10.0	-----	8.9	9.2	9.4	9.4	11.0	-----	-----	-----	-----

<sup>1</sup> Exclusive of New York City.

Monthly State mortality statistics—Continued

INFANT MORTALITY, PER 1,000 LIVE BIRTHS

	1929										Corresponding month for—			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1928	1927	1926	1925	
Alabama.....	69	78	73	70	60	61	67	62	61	72	75	53	-----	
White.....	62	66	69	67	52	54	59	51	48	60	65	45	-----	
Colored.....	80	99	81	75	75	75	83	84	84	95	92	68	-----	
Arizona.....	115	139	185	112	129	142	110	95	97	148	-----	-----	-----	
California.....	69	65	63	62	56	57	56	58	-----	69	-----	-----	-----	
Connecticut.....	61	79	50	44	53	74	72	71	-----	43	63	60	73	
Florida.....	-----	-----	-----	-----	-----	-----	65	58	-----	-----	-----	-----	-----	
White.....	-----	-----	-----	-----	-----	-----	44	49	-----	-----	-----	-----	-----	
Colored.....	-----	-----	-----	-----	-----	-----	105	76	-----	-----	-----	-----	-----	
Georgia.....	-----	-----	-----	-----	-----	63	73	68	78	-----	-----	-----	-----	
Hawaii Territory.....	117	100	108	89	158	81	83	90	94	113	-----	-----	-----	
Indiana.....	60	63	48	52	64	74	62	55	66	81	61	73	70	
Iowa.....	61	48	-----	44	43	40	45	49	49	44	-----	-----	-----	
Kansas.....	69	53	49	47	49	47	46	49	-----	56	-----	-----	-----	
Louisiana.....	86	91	95	69	64	62	71	68	-----	68	-----	-----	-----	
Maryland.....	-----	-----	-----	70	82	78	80	66	70	-----	-----	-----	-----	
White.....	-----	-----	-----	60	75	68	66	57	56	-----	-----	-----	-----	
Colored.....	-----	-----	-----	105	113	111	134	99	120	-----	-----	-----	-----	
Michigan.....	67	69	57	53	51	68	65	53	59	86	-----	-----	-----	
Minnesota.....	51	49	36	39	40	42	40	38	44	56	-----	-----	-----	
Montana.....	-----	-----	-----	-----	-----	55	-----	-----	-----	-----	-----	-----	-----	
Nebraska.....	50	48	48	36	37	49	-----	-----	-----	50	-----	-----	-----	
New Jersey.....	70	59	43	46	56	59	59	54	-----	-----	-----	-----	-----	
New York <sup>1</sup> .....	70	64	52	45	47	58	64	58	-----	63	64	76	69	
Pennsylvania.....	69	65	51	49	56	74	68	60	-----	65	64	72	74	
South Dakota.....	63	63	41	50	39	43	40	51	44	59	-----	-----	-----	
Tennessee.....	61	86	63	83	71	63	70	73	70	-----	-----	-----	-----	
Virginia.....	61	-----	67	75	61	65	62	65	68	72	-----	-----	-----	
Wisconsin.....	89	60	51	-----	43	56	54	50	-----	-----	-----	-----	-----	

CONGENITAL MALFORMATIONS AND DISEASES OF EARLY INFANCY (159-163), PER 1,000 LIVE BIRTHS

Alabama.....	27	34	29	27	30	31	21	26	24	23	28	25	-----
White.....	29	34	34	30	30	29	33	26	23	26	27	23	-----
Colored.....	24	34	20	21	31	35	29	26	28	18	29	28	-----
Arizona.....	30	35	35	34	32	23	26	46	66	37	-----	-----	-----
California.....	33	32	30	27	26	30	31	31	-----	31	-----	-----	-----
Florida.....	-----	-----	-----	-----	-----	-----	29	29	-----	-----	-----	-----	-----
White.....	-----	-----	-----	-----	-----	-----	25	27	-----	-----	-----	-----	-----
Colored.....	-----	-----	-----	-----	-----	-----	38	34	-----	-----	-----	-----	-----
Iowa.....	35	31	-----	30	30	27	28	29	25	35	-----	-----	-----
Kansas.....	39	33	36	31	30	30	29	30	-----	34	-----	-----	-----
Louisiana.....	31	32	34	28	30	28	29	30	-----	25	-----	-----	-----
Maryland.....	-----	-----	-----	36	34	35	38	32	30	-----	-----	-----	-----
White.....	-----	-----	-----	36	37	31	36	29	27	-----	-----	-----	-----
Colored.....	-----	-----	-----	36	27	49	46	39	38	-----	-----	-----	-----
Michigan.....	35	38	33	36	33	33	36	40	35	39	-----	-----	-----
Minnesota.....	33	32	26	28	29	30	29	24	28	21	-----	-----	-----
Nebraska.....	31	29	33	22	26	35	-----	-----	-----	29	-----	-----	-----
New York <sup>1</sup> .....	38	41	35	45	35	33	38	37	-----	39	39	44	39
Pennsylvania.....	34	35	32	30	29	32	33	30	-----	34	35	-----	-----
South Dakota.....	32	29	21	35	16	26	31	31	22	28	-----	-----	-----
Tennessee.....	20	26	26	29	25	25	26	27	23	-----	-----	-----	-----

TYPHOID FEVER (1)

Alabama.....	5.7	5.5	11.4	12.4	17.4	11.3	6.9	8.0	3.2	6.0	8.9	9.0	15.3
Arizona.....	12.8	32.3	25.7	12.4	5.0	15.4	14.9	7.7	2.5	(?)	-----	-----	-----
California.....	1.6	1.6	1.9	3.1	2.6	3.5	2.3	1.9	-----	1.1	-----	-----	-----
Connecticut.....	-----	1.4	1.5	1.4	1.4	-----	1.4	1.5	-----	(?)	1.6	2.4	-----
Florida.....	-----	-----	-----	-----	-----	-----	5.0	3.4	-----	-----	-----	-----	-----
Georgia.....	5.3	7.4	12.2	20.2	19.9	20.9	14.3	8.4	9.9	-----	-----	-----	-----
Hawaii Territory.....	3.5	3.4	3.5	6.6	-----	6.8	3.3	3.4	-----	-----	-----	-----	-----
Illinois.....	.9	.5	1.6	2.2	1.9	2.5	2.2	-----	1.0	2.1	1.6	2.2	4.6
Indiana.....	3.4	1.5	2.3	7.0	5.6	5.0	5.6	6.1	3.0	3.0	3.7	5.3	-----
Iowa.....	2.6	1.0	-----	9.7	3.4	2.5	2.4	7.3	5.3	3.4	-----	-----	-----
Kansas.....	1.3	1.3	5.3	3.2	7.1	2.0	3.2	5.3	-----	2.0	-----	-----	-----
Louisiana.....	11.2	14.5	10.0	17.5	16.9	18.1	13.9	13.7	-----	12.5	-----	-----	-----
Maryland.....	-----	-----	-----	5.1	8.0	7.5	5.8	5.3	2.9	-----	-----	-----	-----

<sup>1</sup> Exclusive of New York City.

<sup>2</sup> No deaths.

Monthly State mortality statistics—Continued

TYPHOID FEVER (1)—continued

	1929									Corresponding month for—			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1928	1927	1926	1925
Michigan	1.9	2.1	1.9	1.5	2.8	3.5	2.8	1.9	0.5	1.3			
Minnesota	.5	.4	1.3	2.6	1.3	1.8	.4	.9	(?)	.4			
Mississippi	4.1	7.2	15.6	19.7	19.1	15.6	6.6			12.5			
Montana						17.7							
Nebraska	0	2.5	.9	1.7	2.5	5.2				3.5			
New Jersey	.3	1.9	.3	1.9	1.8	2.2	2.8	1.9	1.8				
New York <sup>1</sup>	.6	.6	2.1	2.3	2.1	3.2	2.5	2.4		3.1	2.0	4.3	3.5
North Carolina	2.1	3.2							4.0	7.2			
Pennsylvania	.4	1.8	2.3	2.5	2.5	3.3	2.3	2.5		2.1	3.4	4.9	
South Carolina	3.9	10.1	22.8	25.3	27.8	20.2	15.8	9.8		15.0	21.8		
South Dakota			3.5	1.7	3.3	12.1	3.3	6.9		6.7			
Tennessee	2.9	5.2	7.3	19.3	31.1	25.3	16.5	17.5	12.7	8.9			
Virginia	.9	5.9	3.8	7.8	5.9	4.3	7.3	3.8	5.0	2.3			
Wisconsin	1.2	.4	.8	.8	2.4	2.1	2.0	1.7	1.2	.8			

MEASLES (7)

Alabama	5.7	3.2	2.8	1.4	0.5	0.5	0.5	0.5	0.9	3.2	2.8		
California		.5		.8	.5		.3						
Connecticut	7.4	6.5	3.7	.7		.7		(?)		.7	(?)		3.2
Florida								(?)					
Georgia	3.0	2.2		.4	.4								
Hawaii Territory		16.9	17.4	13.2	3.3			(?)	(?)	(?)	(?)		
Illinois	10.1	9.7	6.9	2.1	.8	.2	.2	.5	.5	1.1	.5		1.9
Indiana	13.4	7.0	5.0	.4	.4		.7	(?)	.4	1.1	(?)	2.7	
Iowa	2.5	1.9		.5		1.0	1.5	3.3	2.4				
Kansas	5.3	7.1	7.3	1.3	1.3		.6	.7					
Louisiana	4.4	4.2	0	2.4	0	4.4	.6	(?)		.6			
Maryland				.7	1.5				.7				
Michigan	7.7	9.2	5.0	2.3	.3		.8	2.4	2.8	1.3			
Minnesota	5.8	4.3	4.9	1.3		.9	.4	1.8		1.3			
Mississippi	7.5	5.3	2.0	2.0	.7	0			3.0	2.6			
Nebraska	0	4.2	7.8	1.7	1.7	1.7				(?)			
New Jersey	2.2	.6	1.0	.3	.3	0	0	.3	.9				
New York <sup>1</sup>	3.6	4.1	2.1	1.0	1.4	.6	.6	.9		1.3	.7	1.8	3.5
North Carolina	.8	.8							(?)	2.0			
Pennsylvania	6.0	5.9	3.8	1.8	1.0	.7	.7	1.4		2.3	1.3	2.3	
South Carolina		.6					(?)	(?)		.7	4.6		
South Dakota	6.9	1.7	1.7	3.3			(?)	(?)	1.7				
Tennessee	1.0	.5	.5	1.5		.5	.9	2.4	3.3	.5			
Virginia	2.4	3.7	.9	.5	.9		1.4	.9		2.7			
Wisconsin	7.0	6.0	4.5	2.0		.8	.8	1.2	2.8	.4			

SCARLET FEVER (8)

Alabama			0.9	1.4	0.9	0.5	0.5	2.4	3.2		1.4	1.9	1.9
Arizona	20.5	2.5	(?)	(?)	(?)	(?)	(?)	2.6	2.5	2.5			
California	3.7	4.4	2.9	.8	.5	.8	.8	1.3		1.9			
Connecticut	.7	.7	.7	1.4	1.4		(?)	(?)		(?)	(?)	2.3	3.2
Florida							(?)	(?)					
Georgia	1.1	.7			1.5	2.3	1.5	1.5	2.6				
Illinois	6.2	5.3	3.7	3.8	.5	.8	3.0		4.5	2.7	1.4	3.2	
Indiana	3.8	4.4	3.4	1.5	1.9	.8	1.1	1.9	3.7	2.6	1.9	3.4	
Iowa	3.5	1.9		1.5	1.5	1.0	1.9	4.0	1.9	7.3			
Kansas	6.0	2.6	2.7				1.3	6.6		5.3			
Louisiana	.6	1.8	0	.6	0		1.2	1.2		3.1			
Maryland				1.5	.8		2.2	2.3	2.9				
Michigan	7.7	3.3	2.7	1.5	.5	.8	1.5	2.7	2.3	5.9			
Minnesota	2.7	2.2		1.3	1.7	1.3	1.3	2.2	3.9	1.7			
Montana						4.4							
Nebraska	9.5	6.7	1.7	1.7	0	1.7				(?)			
New Jersey	2.2	1.5	1.6	.3		1.0	.6	1.3	.9				
New York <sup>1</sup>	2.6	2.3	1.1	1.8	1.4	1.1	1.0	1.1		2.8	1.3	.7	1.5
North Carolina	2.9	2.4							1.6	1.6			
Pennsylvania	3.3	3.1	2.1	1.4	1.0	1.2	1.1	1.5		2.0	3.2	2.8	
South Carolina		1.3	7	1.3		.7	(?)	3.9		.7	.7		
South Dakota		6.7	5.2		1.7		1.7	(?)	3.3	3.3			
Tennessee	2.9	2.8		.9	.5	1.5	2.8	3.4	5.2	2.8			
Virginia		.5		.5	.5	.5	3.7	1.9	5.5	2.3			
Wisconsin	5.4	.4	2.9	2.0	1.2	.8	2.4	.4	4.4	3.6			

<sup>1</sup> Exclusive of New York City.

<sup>2</sup> No deaths.

Monthly State mortality statistics—Continued

WHOOPING COUGH (9)

	1929										Corresponding month for—			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1928	1927	1926	1925	
	Alabama.....	10.4	10.1	10.4	17.4	11.9	8.6	4.6	7.1	6.4	6.9	5.2	3.8	6.7
Arizona.....	10.3	12.4	20.5	5.0	5.0	5.1	(?)	2.6	(?)	17.4	.....	.....	.....	
California.....	8.3	9.0	10.2	7.8	6.7	3.5	2.8	2.7	.....	6.4	.....	.....	.....	
Connecticut.....	.7	2.2	3.0	2.2	2.2	1.5	.7	2.2	.....	2.3	5.4	3.9	8.7	
Florida.....	.....	.....	.....	.....	.....	.....	3.3	1.7	.....	.....	.....	.....	.....	
Georgia.....	4.9	4.4	13.7	15.8	13.6	12.9	9.6	4.9	9.2	.....	.....	.....	.....	
Hawaii Territory.....	83.7	67.5	38.3	16.4	6.6	13.6	9.9	.....	.....	20.2	(?)	.....	.....	
Illinois.....	3.5	4.3	3.4	3.2	5.9	5.1	2.4	.....	2.5	3.7	3.3	3.7	1.1	
Indiana.....	6.5	7.0	6.5	4.8	6.7	4.2	3.3	3.4	3.3	5.6	3.7	9.1	.....	
Iowa.....	8.0	4.8	.....	4.8	4.8	5.0	.....	3.3	2.4	5.3	.....	.....	.....	
Kansas.....	4.6	2.6	2.7	4.5	3.8	2.0	3.2	4.0	.....	3.3	.....	.....	.....	
Louisiana.....	7.5	6.0	6.9	11.5	4.8	4.4	3.0	5.6	.....	5.6	.....	.....	.....	
Maryland.....	.....	.....	.....	7.3	11.7	5.3	6.6	7.5	8.7	.....	.....	.....	.....	
Michigan.....	7.2	8.2	5.6	3.3	7.4	6.6	4.6	2.1	2.8	10.0	.....	.....	.....	
Minnesota.....	4.9	5.2	.9	4.8	3.0	4.0	2.6	1.8	3.0	6.5	.....	.....	.....	
Mississippi.....	14.3	10.5	17.7	12.5	11.8	8.2	8.5	.....	.....	3.9	.....	.....	.....	
Montana.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Nebraska.....	1.7	6.7	3.5	5.0	3.3	3.5	.....	.....	.....	1.7	.....	.....	.....	
New Jersey.....	5.7	4.0	2.2	2.8	4.9	4.1	4.0	1.6	2.5	.....	.....	.....	.....	
New York <sup>1</sup> .....	4.3	3.3	2.1	1.3	4.1	2.6	3.7	2.4	.....	2.8	3.3	4.7	2.8	
North Carolina.....	7.5	9.6	.....	.....	.....	.....	.....	.....	8.0	4.4	.....	.....	.....	
Pennsylvania.....	4.8	4.3	4.3	5.0	6.0	5.0	3.9	3.2	.....	7.4	2.0	6.1	.....	
South Carolina.....	13.1	17.1	22.8	18.3	15.8	9.1	8.8	9.1	1.7	2.6	10.6	.....	.....	
South Dakota.....	1.7	11.7	6.9	1.7	1.7	1.7	3.3	5.2	1.7	.....	.....	.....	.....	
Tennessee.....	6.3	7.5	6.3	13.7	10.0	7.8	5.6	6.3	6.6	5.2	.....	.....	.....	
Virginia.....	6.1	8.2	9.9	12.8	16.9	9.4	7.3	5.2	11.4	6.4	.....	.....	.....	
Wisconsin.....	6.6	5.6	4.9	4.4	4.0	2.1	1.6	3.3	3.6	3.2	.....	.....	.....	

DIPHTHERIA (10)

Alabama.....	2.8	2.3	1.4	2.8	7.3	16.6	23.3	17.5	13.3	17.9	19.7	22.7	12.9
Arizona.....	7.7	(?)	2.6	(?)	(?)	5.1	9.9	20.5	14.9	12.4	.....	.....	.....
California.....	3.7	3.4	4.3	1.8	3.1	2.9	4.7	7.7	.....	5.1	.....	.....	.....
Connecticut.....	3.7	4.3	3.7	2.9	1.4	4.4	7.2	4.4	.....	6.0	1.5	1.6	8.0
Florida.....	.....	.....	.....	.....	.....	.....	4.2	6.9	.....	.....	.....	.....	.....
Georgia.....	1.9	22.4	20.9	11.4	5.2	9.9	11.8	7.2	9.6	.....	.....	.....	.....
Hawaii Territory.....	20.9	6.7	10.5	6.6	3.3	13.6	6.6	3.4	9.0	23.6	18.1	.....	.....
Illinois.....	11.6	12.6	11.1	9.1	7.0	4.6	11.5	.....	14.8	15.0	15.8	7.0	8.3
Indiana.....	5.0	3.3	1.5	2.2	3.0	4.2	7.4	8.8	6.7	10.0	11.6	10.9	.....
Iowa.....	2.0	1.5	.....	2.4	1.0	1.5	1.5	2.0	2.9	4.4	.....	.....	.....
Kansas.....	4.6	1.3	1.3	.6	6	4.0	7.1	10.6	.....	5.3	.....	.....	.....
Louisiana.....	2.5	5.4	3.1	3.6	6.0	5.0	11.5	14.4	.....	14.4	.....	.....	.....
Maryland.....	.....	.....	.....	1.5	5.1	1.5	3.6	6.8	3.6	.....	.....	.....	.....
Michigan.....	10.3	11.3	13.0	9.8	6.9	8.5	13.3	9.3	14.6	12.8	.....	.....	.....
Minnesota.....	2.2	2.6	.9	2.6	1.7	1.8	1.3	4.0	4.3	5.2	.....	.....	.....
Mississippi.....	2.0	.....	1.4	1.3	5.3	6.8	25.6	.....	.....	11.8	.....	.....	.....
Montana.....	.....	.....	.....	.....	.....	8.9	.....	.....	.....	.....	.....	.....	.....
Nebraska.....	4.3	.8	5.2	.8	0	1.7	.....	.....	.....	1.7	.....	.....	.....
New Jersey.....	10.5	10.5	9.9	8.9	5.5	6.7	10.8	15.3	16.9	.....	.....	.....	.....
New York <sup>1</sup> .....	2.4	3.1	4.1	2.1	2.7	1.7	4.1	4.9	.....	4.6	6.0	5.4	8.5
North Carolina.....	4.1	1.6	.....	.....	.....	.....	.....	.....	31.3	26.4	.....	.....	.....
Pennsylvania.....	6.8	5.7	.....	5.7	4.4	2.9	6.0	7.4	8.1	10.9	12.6	8.4	.....
South Carolina.....	2.0	4.4	3.3	1.9	10.1	10.4	16.4	13.1	.....	22.2	19.8	.....	.....
South Dakota.....	3.5	3.3	.....	.....	.....	1.7	.....	3.5	6.7	1.7	.....	.....	.....
Tennessee.....	2.9	3.3	2.9	1.4	6.1	8.8	20.7	20.4	16.5	15.8	.....	.....	.....
Virginia.....	1.9	1.4	1.4	2.7	3.2	10.4	16.9	13.2	10.4	12.4	.....	.....	.....
Wisconsin.....	.8	4.4	2.5	1.6	2.0	2.1	3.6	3.3	4.4	4.8	.....	.....	.....

<sup>1</sup> Exclusive of New York City.

<sup>2</sup> No deaths.



Monthly State mortality statistics—Continued

INFLUENZA (11)

	1929										Corresponding month for—			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1928	1927	1926	1925	
	Alabama.....	53.2	43.6	19.5	9.6	9.2	9.9	10.1	21.8	58.1	164.7	52.1	29.3	49.6
White.....	47.1	32.2	18.1	8.4	6.3	10.1	9.8	16.7	50.5	152.8	43.7	24.4	.....	
Colored.....	64.0	77.8	21.8	11.9	14.5	9.5	10.5	31.3	72.5	185.9	67.1	38.1	.....	
Arizona.....	35.9	27.3	15.4	9.9	2.5	7.7	6.0	5.1	12.4	342.8	.....	.....	.....	
California.....	23.5	13.4	7.5	5.2	4.1	5.9	9.3	15.0	.....	127.1	.....	.....	.....	
Connecticut.....	21.5	9.3	3.7	2.9	2.2	5.2	12.2	11.9	.....	9.0	10.7	11.7	22.3	
Florida.....	.....	.....	.....	.....	.....	.....	16.7	23.3	.....	.....	.....	.....	.....	
White.....	.....	.....	.....	.....	.....	.....	12.1	13.8	.....	.....	.....	.....	.....	
Colored.....	.....	.....	.....	.....	.....	.....	26.7	44.1	.....	.....	.....	.....	.....	
Georgia.....	74.5	22.4	20.9	11.4	5.2	9.1	19.5	22.4	44.5	.....	.....	.....	.....	
Hawaii Territory.....	58.3	27.0	20.9	19.7	13.2	6.8	3.3	6.8	3.3	30.4	14.5	.....	.....	
Illinois.....	20.5	15.0	7.1	3.5	3.3	4.8	8.4	.....	18.0	.....	.....	.....	.....	
Indiana.....	36.4	21.1	13.0	11.1	8.5	10.3	18.9	18.8	41.2	267.7	23.9	36.2	36.5	
Iowa.....	28.1	28.6	.....	9.7	5.3	8.0	9.2	18.6	33.9	256.5	.....	.....	.....	
Kansas.....	46.4	29.5	21.2	12.2	11.5	9.9	10.9	17.9	.....	29.2	.....	.....	.....	
Louisiana.....	41.8	19.9	11.8	11.5	11.5	15.6	18.7	39.3	.....	34.3	.....	.....	.....	
White.....	30.8	14.9	9.6	8.4	9.3	10.6	12.1	30.8	.....	31.8	.....	.....	.....	
Colored.....	61.9	29.1	15.9	17.1	15.4	24.8	30.3	54.9	.....	38.9	.....	.....	.....	
Maryland.....	.....	.....	.....	2.2	.7	5.3	8.7	11.3	14.6	.....	.....	.....	.....	
White.....	.....	.....	.....	.9	.9	4.5	7.8	11.7	13.0	.....	.....	.....	.....	
Colored.....	.....	.....	.....	9.1	.....	9.4	13.7	9.4	22.8	.....	.....	.....	.....	
Michigan.....	24.1	21.8	10.2	6.7	5.1	6.4	11.8	9.8	13.6	157.2	.....	.....	.....	
Minnesota.....	19.2	17.7	6.7	4.3	5.2	6.3	6.9	14.3	32.0	150.1	.....	.....	.....	
Mississippi.....	42.8	27.0	17.7	11.2	7.9	6.8	13.1	.....	.....	9.2	.....	.....	.....	
White.....	34.2	20.7	11.4	17.6	8.3	5.7	13.8	.....	.....	8.3	.....	.....	.....	
Colored.....	50.8	32.7	23.4	15.8	7.5	7.8	12.6	.....	.....	10.1	.....	.....	.....	
Montana.....	.....	.....	.....	.....	.....	11.1	.....	.....	.....	.....	.....	.....	.....	
Nebraska.....	32.8	26.8	23.3	5.9	5.0	12.1	.....	.....	.....	9.5	.....	.....	.....	
New Jersey.....	15.0	10.2	2.2	2.2	1.8	1.6	4.9	9.9	14.8	45.0	9.7	15.7	11.8	
New York <sup>1</sup> .....	23.1	13.0	3.3	2.9	2.0	3.2	8.1	8.8	.....	13.7	11.1	10.6	10.8	
North Carolina.....	59.2	37.3	.....	.....	.....	.....	.....	.....	49.3	195.2	.....	.....	.....	
Pennsylvania.....	26.9	20.6	10.0	6.7	4.9	9.7	16.7	19.4	.....	21.0	19.5	19.8	21.6	
South Carolina.....	51.6	29.7	17.6	13.9	10.7	9.1	15.8	28.1	.....	60.7	18.5	.....	.....	
South Dakota.....	41.5	38.5	15.6	10.0	11.7	8.6	11.7	13.8	36.8	224.1	.....	.....	.....	
Tennessee.....	71.0	33.4	13.0	13.2	10.4	5.8	19.8	36.5	62.6	225.9	52.1	.....	.....	
White.....	61.6	27.8	14.7	11.9	9.7	5.9	16.5	32.9	52.2	.....	.....	.....	.....	
Colored.....	116.6	60.5	34.1	19.2	13.7	5.7	35.7	54.0	112.7	.....	.....	.....	.....	
Virginia.....	48.7	19.2	9.9	5.0	5.9	9.0	14.2	15.6	35.2	155.0	.....	.....	.....	
White.....	36.6	11.4	5.9	1.9	7.0	3.9	10.1	11.1	29.1	149.8	.....	.....	.....	
Colored.....	80.3	39.7	20.6	13.2	3.3	22.2	24.8	27.3	51.3	163.7	.....	.....	.....	
Wisconsin.....	27.2	20.7	9.9	7.2	6.0	6.6	10.4	10.3	19.5	199.8	.....	.....	.....	

POLIOMYELITIS (22)

Alabama.....	0.9	.....	2.8	0.5	1.4	0.5	0.5	1.4	0.9	1.8	.....	.....	.....
Arizona.....	( <sup>1</sup> )	( <sup>1</sup> )	2.6	( <sup>1</sup> )	( <sup>1</sup> )	2.6	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	( <sup>1</sup> )	.....	.....	.....
California.....	.8	2.1	.8	.3	1.8	1.9	.3	1.1	.....	1.6	.....	.....	.....
Connecticut.....	.....	.....	1.5	.7	.....	.....	( <sup>1</sup> )	1.5	.....	( <sup>1</sup> )	0.8	( <sup>1</sup> )	( <sup>1</sup> )
Florida.....	.....	.....	.....	.....	.....	.....	( <sup>1</sup> )	( <sup>1</sup> )	.....	.....	.....	.....	.....
Hawaii Territory.....	.....	3.4	.....	.....	3.3	3.4	.....	3.4	.....	( <sup>1</sup> )	( <sup>1</sup> )	.....	.....
Illinois.....	.....	.3	.....	.2	.....	.3	.3	.....	.2	.....	.....	.....	.....
Indiana.....	.....	.....	.4	.....	.....	.4	.....	.8	2.7	.4	.....	.....	.....
Iowa.....	.5	.....	.....	.5	1.0	1.5	1.5	1.3	1.5	1.5	.....	.....	.....
Kansas.....	.....	.....	1.3	.6	.6	1.3	( <sup>1</sup> )	( <sup>1</sup> )	.....	1.5	.....	.....	.....
Louisiana.....	1.3	.6	.....	.6	.6	.....	( <sup>1</sup> )	.6	.....	1.9	.....	.....	.....
Maryland.....	.....	.....	.....	.7	.8	.....	.....	.8	.7	.....	.....	.....	.....
Michigan.....	.5	.5	.8	1.0	1.0	2.1	2.1	1.9	.5	.8	.....	.....	.....
Minnesota.....	.4	.9	.....	.4	.....	.9	.4	.....	.....	.....	.....	.....	.....
Mississippi.....	1.4	.....	2.0	2.0	.....	.....	.....	.....	.....	.7	.....	.....	.....
Nebraska.....	.....	.....	.8	.....	1.7	( <sup>1</sup> )	.....	.....	.....	.9	.....	.....	.....
New Jersey.....	.....	.3	.6	.6	.3	.3	1.5	( <sup>1</sup> )	.3	.....	.....	.....	.....
New York <sup>1</sup> .....	.2	.4	.2	1.4	3.3	4.1	3.7	1.3	.....	2.0	2.0	0.7	1.5
North Carolina.....	1.2	.8	.....	.....	.....	.....	.....	.....	.....	.4	.....	.....	.....
Pennsylvania.....	.....	.5	.7	.5	.7	.6	1.0	1.0	.....	.6	1.0	.....	.....
South Carolina.....	.....	1.3	.....	.6	.6	.7	.6	.7	.....	.7	1.3	.....	.....
South Dakota.....	.....	5.0	.....	.....	.....	.....	.....	1.7	.....	3.3	.....	.....	.....
Tennessee.....	.5	1.9	1.5	1.9	1.4	1.0	2.4	1.5	.5	4.2	.....	.....	.....
Virginia.....	.9	.....	.....	.9	4.6	1.4	2.3	1.9	.9	1.8	.....	.....	.....
Wisconsin.....	.....	.8	1.2	.4	.....	1.2	.4	.4	.4	.8	.....	.....	.....

<sup>1</sup> Exclusive of New York City.

<sup>2</sup> No deaths.

Monthly State mortality statistics—Continued

LETHARGIC ENCEPHALITIS (23)

	1929										Corresponding month for—			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1928	1927	1926	1925	
Alabama.....	1.9	0.5	0.5	0.9	0.5	0.9	0.9	1.0	(?)					
Arizona.....	2.6	(?)	(?)	(?)	2.5	(?)	(?)	(?)	(?)	(?)				
California.....	2.4	1.6	1.3	1.3	1.3	1.6	1.8	1.9		1.6				
Connecticut.....		1.4	.7	.7	1.4	2.2	1.4	1.5		(?)				
Florida.....							.8	1.7						
Hawaii Territory.....				3.3	3.3	3.4		(?)						
Illinois.....	1.4	1.1	.7	.3	.2	.2	.2		1.0					
Indiana.....	1.5	.7	1.1	.7	.4	.8		1.1	2.2					
Iowa.....	1.0	1.5		.5		1.5	1.9	1.3	1.0	1.9				
Kansas.....	.7	2.6		1.3	.6		.6	.7						
Louisiana.....	0	1.8	0	0	0	0	1.8	(?)		.6				
Maryland.....						5.4	2.2	3.0	(?)					
Michigan.....	1.6	2.3	2.1	.5	.3	1.1	1.0	.8	1.0	1.0				
Minnesota.....	1.8	1.7	4.0	2.6	.9	.9	1.7	2.7	.4	3.0				
Mississippi.....	1.4	.7	0	0	1.3					1.3				
Montana.....						2.2								
Nebraska.....	0	0	1.7	0	.8	(?)				1.7				
New Jersey.....	1.0	1.2	1.9	.6	1.2	.3	2.5	1.3	.6					
New York <sup>1</sup> .....	.7	.8	2.4	.6	1.0	.2	.6	.4						
North Carolina.....	.4	.4							(?)					
Pennsylvania.....	1.2	1.2	.6	1.0	.7	.7	.7	.6		1.5	1.0	0.9		
South Carolina.....	2.0	4.4	3.3		1.3	1.3	2.5	3.3		2.0	3.3			
South Dakota.....	1.7		1.7				5.0			1.7				
Tennessee.....	1.5	.5	.5	1.9	.9	.6	.9	(?)		.5				
Virginia.....	2.4	.5	.9		1.4	.5	.5	.5	1.4					
Wisconsin.....	1.6	2.8	2.5	2.8	.4	1.2	1.2	.8	.8	.8				

MENINGOCOCCUS MENINGITIS (24)

Alabama.....		0.5	0.9	0.5	0.5	0.5	1.0	0.9					
Arizona.....	23.1	17.4	18.0	9.9	2.5	12.8	2.5	25.7	18.9	9.9			
California.....	12.6	13.2	9.4	4.7	4.1	5.1	3.4	4.3		2.7			
Connecticut.....	.7	1.4			.7		(?)	3.0		(?)			
Florida.....							(?)	.9					
Hawaii Territory.....	38.3	50.6	27.9	19.7	3.3	6.8	16.4	(?)	6.6	6.7	(?)		
Illinois.....	2.8	3.2	2.6	2.1	2.1	.8	1.8		4.3	4.9	1.6	.5	1.1
Indiana.....	1.9	3.0	1.9	1.1	.7	1.1		1.1	19.3	1.5			
Iowa.....	2.0	1.5		1.0	1.0		.5	2.7	(?)	1.5			
Kansas.....	2.7	3.2	2.0	3.2	1.3	2.0	1.3	2.0		2.0			
Louisiana.....	5.6	1.8	1.9	.6	1.8	0	3.6	1.9		(?)			
Maryland.....						.8	1.5	2.3	2.9				
Michigan.....	37.9	41.8	27.8	19.2	11.0	7.7	7.7	8.7	11.0	4.6			
Minnesota.....	2.2	1.7	1.3	3.5	1.7	.4	.4	1.3	.9	3.9			
Mississippi.....	.7		.7	1.3				1.3					
Montana.....						4.4							
Nebraska.....	2.6	1.7	1.7	.8	2.5	(?)				(?)			
New Jersey.....	2.2	4.6	2.2	2.2	1.2	1.9	2.2	4.8	4.3				
New York <sup>1</sup> .....	2.1	1.4	.6	1.0	2.1	.2	1.7	1.5					
North Carolina.....	.4	1.2							(?)	.4			
Pennsylvania.....	2.2	3.4	1.2	1.6	2.4	2.1	1.5	1.5		1.1	.5		
South Carolina.....	3.9	2.5	2.0	1.9	.6	3.9	2.5	2.0		2.6	2.0		
South Dakota.....	1.7												
Tennessee.....	3.4	1.9	1.5	2.8	.5	1.5	1.4	2.4		5.6			
Virginia.....	1.4	2.7	.9	1.4		.9		2.4	1.8	.9			
Wisconsin.....	2.9	3.6	4.5	1.2	2.4	1.6	1.6	1.7	2.4	3.6			

TUBERCULOSIS, ALL FORMS (31-37)

Alabama.....	91.8	88.1	81.3	86.5	78.7	82.8	76.4	74.2	89.7	73.0	84.0	85.2	101.2
White.....	55.0	45.6	39.1	45.6	37.8	44.9	42.8	39.1	49.8	44.9	48.8	36.2	
Colored.....	159.4	167.4	159.4	163.5	155.6	154.0	139.8	140.3	164.8	125.3	147.4	172.2	
Arizona.....	449.2	481.9	395.3	350.2	223.6	220.7	260.8	277.2	340.3	347.8			
California.....	138.6	139.6	130.3	122.8	122.0	109.5	109.3	119.4		129.0			
Connecticut.....	64.5	66.0	61.5	61.7	61.0		52.6	48.8	50.4	53.5	58.3	67.9	60.4
Florida.....								60.9	75.9				
White.....								25.5	47.7				
Colored.....								138.6	137.7				
Georgia.....	74.5	72.4	85.9	68.7	59.2	65.7	53.2	60.8	69.8				
Hawaii Territory.....	121.9	124.8	129.0	111.8	105.2	105.5	108.5	119.1	118.4	141.7	126.8		

<sup>1</sup> Exclusive of New York City.

<sup>2</sup> No deaths.

Monthly State mortality statistics—Continued

TUBERCULOSIS, ALL FORMS (31-37)—continued

	1929										Corresponding month for—			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1928	1927	1926	1925	
Illinois.....	98.4	70.7	73.9	68.3	64.3	54.1	59.1	59.1	59.1	74.3	72.9	69.7	70.2	
Indiana.....	81.6	74.9	81.2	58.2	63.4	63.2	59.3	65.1	69.0	80.6	69.2	66.0	73.4	
Iowa.....	40.6	37.3	---	35.0	36.4	33.6	24.7	27.2	23.6	38.8	---	---	---	
Kansas.....	36.5	41.1	42.4	34.7	35.3	33.2	25.0	35.8	---	39.1	---	---	---	
Louisiana.....	104.2	90.6	99.2	83.3	70.0	81.7	85.1	83.6	---	77.4	---	---	---	
White.....	54.9	47.6	53.0	42.9	36.4	52.0	47.6	31.8	---	44.3	---	---	---	
Colored.....	194.7	169.0	184.1	157.6	131.9	136.3	154.2	178.8	---	138.0	---	---	---	
Maryland.....	---	---	---	99.8	92.5	76.8	91.8	88.1	116.6	---	---	---	---	
White.....	---	---	---	67.6	70.2	55.6	68.5	63.6	76.3	---	---	---	---	
Colored.....	---	---	---	268.8	209.6	188.3	214.2	216.6	323.5	---	---	---	---	
Michigan.....	80.6	85.7	71.3	66.2	60.0	67.3	56.9	50.9	58.7	69.2	---	---	---	
Minnesota.....	65.3	55.8	57.2	49.7	51.9	46.5	38.1	35.3	61.0	50.2	---	---	---	
Mississippi.....	98.5	91.4	95.8	83.5	67.7	67.3	83.5	---	---	54.6	---	---	---	
White.....	41.3	38.6	39.9	30.3	31.1	27.1	40.0	---	---	22.1	---	---	---	
Colored.....	150.9	139.8	147.0	132.2	99.3	103.9	119.4	---	---	84.2	---	---	---	
Montana.....	---	---	---	---	---	44.3	---	---	---	---	---	---	---	
Nebraska.....	42.3	36.0	25.9	29.3	27.6	25.9	---	---	---	20.7	---	---	---	
New Jersey.....	84.7	76.1	70.1	75.5	72.4	65.9	69.6	71.3	79.8	65.9	72.9	84.5	75.9	
New York <sup>1</sup> .....	80.6	82.3	78.4	64.7	70.3	57.7	58.5	60.0	---	67.0	68.9	69.0	88.3	
North Carolina.....	102.7	91.4	---	---	---	---	---	---	87.8	84.2	---	---	---	
Pennsylvania.....	68.8	69.6	63.6	62.3	56.0	52.6	53.8	52.4	---	55.5	63.4	65.3	68.7	
South Carolina.....	71.2	87.8	94.0	79.0	69.5	64.6	59.4	65.9	---	65.9	77.8	---	---	
South Dakota.....	48.4	60.2	48.4	65.2	65.2	39.7	36.8	38.0	78.0	60.2	---	---	---	
Tennessee.....	146.9	133.2	140.5	112.9	105.9	103.9	104.5	100.7	155.8	145.9	145.0	131.2	---	
White.....	107.4	102.8	109.1	79.0	81.2	78.6	84.0	78.6	98.9	---	---	---	---	
Colored.....	338.3	280.6	292.8	277.6	225.4	221.5	203.4	207.3	189.6	---	---	---	---	
Virginia.....	93.6	96.9	78.4	82.3	76.8	74.2	78.6	79.4	80.5	88.3	---	---	---	
White.....	53.6	58.8	45.7	49.3	48.7	48.3	52.5	52.9	50.6	67.0	---	---	---	
Colored.....	198.3	196.8	164.1	168.7	150.5	141.9	147.2	148.7	153.8	143.9	---	---	---	
Wisconsin.....	72.9	47.8	63.4	48.3	46.3	49.0	51.8	49.0	45.9	43.6	---	---	---	

CANCER, ALL FORMS (43-49)

Alabama.....	45.0	48.2	54.7	50.8	44.4	53.4	57.2	53.0	53.5	50.5	58.6	51.6	57.3
White.....	55.8	52.6	53.6	58.9	40.6	59.4	59.6	57.2	53.3	48.4	59.8	57.6	---
Colored.....	40.9	39.6	55.9	35.6	51.4	42.3	52.7	45.0	54.1	54.1	56.6	40.7	---
Arizona.....	61.6	69.6	46.2	37.3	47.2	25.7	37.3	38.5	64.6	57.1	---	---	---
California.....	140.7	146.0	134.5	138.8	147.6	137.0	149.6	147.1	---	141.5	---	---	---
Connecticut.....	103.0	116.2	100.8	103.3	119.8	119.4	109.7	120.1	---	110.1	100.5	100.0	112.9
Florida.....	---	---	---	---	---	---	75.9	68.1	---	---	---	---	---
White.....	---	---	---	---	---	---	86.2	79.1	---	---	---	---	---
Colored.....	---	---	---	---	---	---	53.3	44.1	---	---	---	---	---
Georgia.....	36.1	39.7	50.1	44.5	47.4	47.9	51.8	44.4	49.3	---	---	---	---
Hawaii Territory.....	59.3	67.5	80.2	59.2	36.2	91.8	69.1	68.0	59.2	50.6	54.3	---	---
Indiana.....	101.9	110.9	90.0	107.1	84.9	112.2	101.6	96.9	112.7	100.5	102.0	96.5	105.8
Iowa.....	112.7	100.1	---	111.5	106.2	102.7	81.0	154.5	119.8	121.2	---	---	---
Kansas.....	96.8	86.6	94.2	93.7	100.7	88.2	87.3	101.4	---	104.1	---	---	---
Louisiana.....	77.4	75.5	63.0	62.8	69.4	71.1	80.9	65.5	---	64.3	---	---	---
White.....	73.2	86.7	66.5	62.5	69.0	74.2	80.2	66.5	---	59.7	---	---	---
Colored.....	85.0	54.8	56.6	63.4	70.2	65.5	82.2	63.7	---	72.6	---	---	---
Maryland.....	---	---	---	96.9	116.6	102.4	123.1	127.2	110.7	---	---	---	---
White.....	---	---	---	92.7	124.9	112.0	128.6	138.9	102.3	---	---	---	---
Colored.....	---	---	---	82.0	72.9	51.8	104.8	65.9	150.4	---	---	---	---
Michigan.....	98.3	89.0	86.7	100.5	102.8	95.1	95.1	99.6	99.8	96.4	---	---	---
Minnesota.....	112.2	98.6	96.5	97.3	110.3	113.5	121.5	105.5	108.6	110.7	---	---	---
Mississippi.....	51.6	52.6	61.1	38.9	50.0	49.6	47.3	---	---	49.3	---	---	---
White.....	67.0	55.2	78.4	44.1	62.0	49.9	62.0	---	---	56.5	---	---	---
Colored.....	46.8	50.4	45.5	34.0	39.0	49.3	33.9	---	---	42.7	---	---	---
Montana.....	---	---	---	---	---	86.4	---	---	---	---	---	---	---
Nebraska.....	100.2	101.2	100.2	102.2	72.8	93.3	---	---	---	109.4	---	---	---
New Jersey.....	105.7	110.9	117.8	123.3	104.5	123.6	113.7	110.2	119.3	119.9	102.7	113.6	114.5
New York <sup>1</sup> .....	117.9	128.4	118.1	120.1	121.6	125.9	130.5	125.2	---	115.5	117.6	120.4	128.5
Pennsylvania.....	96.6	98.0	91.0	100.4	93.4	80.8	92.6	93.6	---	100.7	99.3	99.7	87.8
South Carolina.....	36.6	49.1	43.1	43.6	36.9	33.3	46.1	39.8	---	47.0	31.0	---	---
South Dakota.....	74.3	60.2	69.1	66.9	71.9	63.0	80.3	53.6	68.6	87.0	---	---	---
Tennessee.....	63.2	53.6	56.9	62.1	58.8	63.7	51.8	73.9	62.6	66.4	64.4	---	---
White.....	62.2	50.5	52.8	61.3	56.2	62.2	53.9	72.8	63.3	---	---	---	---
Colored.....	68.2	68.8	76.8	66.0	71.5	71.0	41.2	79.5	49.5	---	---	---	---
Virginia.....	56.7	59.4	56.2	68.6	59.9	53.4	48.9	64.3	56.2	63.6	---	---	---
White.....	62.0	63.8	59.4	75.8	61.3	56.5	55.0	68.6	60.0	72.0	---	---	---
Colored.....	42.7	48.0	47.9	49.6	56.2	47.9	33.0	53.0	46.3	41.3	---	---	---
Wisconsin.....	104.7	104.9	96.8	111.2	117.6	125.7	119.6	108.4	---	111.2	---	---	---

<sup>1</sup> Exclusive of New York City.

Monthly State mortality statistics—Continued

DIABETES (57)

	1929										Corresponding month for—			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1928	1927	1926	1925	
Alabama.....	10.9	6.4	10.0	6.4	5.0	9.5	8.7	9.5	10.1	10.1	14.1	7.6	5.7	
White.....	12.3	5.6	12.3	4.9	5.6	11.6	6.3	11.6	10.5	11.9	16.8	8.9	-----	
Colored.....	8.2	7.9	5.4	9.2	4.0	5.5	13.2	5.4	9.2	6.6	9.2	5.3	-----	
Arizona.....	10.3	9.9	7.7	(?)	(?)	2.6	7.5	5.1	9.9	2.5	-----	-----	-----	
California.....	21.4	18.1	19.0	20.4	21.4	19.5	21.2	24.6	-----	24.8	-----	-----	-----	
Connecticut.....	14.1	17.2	11.9	15.1	12.2	18.5	23.7	11.9	-----	15.8	-----	-----	-----	
Florida.....	-----	-----	-----	-----	-----	-----	14.2	10.3	-----	-----	-----	-----	-----	
White.....	-----	-----	-----	-----	-----	-----	12.1	10.0	-----	-----	-----	-----	-----	
Colored.....	-----	-----	-----	-----	-----	-----	18.7	11.0	-----	-----	-----	-----	-----	
Georgia.....	6.5	6.3	7.6	10.3	-----	9.1	11.0	8.0	11.8	-----	-----	-----	-----	
Hawaii Territory.....	13.9	16.9	17.4	19.7	3.3	17.0	19.7	3.4	13.2	6.7	7.2	-----	-----	
Indiana.....	13.8	14.1	11.9	12.2	16.3	17.2	-----	15.3	17.4	14.8	-----	-----	-----	
Iowa.....	18.0	21.3	-----	16.5	11.6	16.0	20.9	27.9	17.0	29.6	-----	-----	-----	
Kansas.....	22.5	19.2	17.2	15.4	21.2	20.6	19.3	24.5	-----	15.3	-----	-----	-----	
Louisiana.....	7.0	10.3	6.2	9.7	9.1	15.0	10.9	13.1	-----	11.9	-----	-----	-----	
White.....	6.7	8.4	2.9	11.2	11.2	18.3	11.2	14.5	-----	15.4	-----	-----	-----	
Colored.....	7.1	13.7	12.4	6.9	5.1	8.8	10.3	10.6	-----	5.3	-----	-----	-----	
Maryland.....	-----	-----	-----	21.9	13.1	13.6	14.6	15.1	24.0	-----	-----	-----	-----	
White.....	-----	-----	-----	20.8	13.0	11.7	16.5	16.1	23.4	-----	-----	-----	-----	
Colored.....	-----	-----	-----	22.8	13.7	23.5	4.6	9.4	27.3	-----	-----	-----	-----	
Michigan.....	21.2	23.3	19.3	20.3	17.4	18.0	15.4	18.0	20.8	26.4	-----	-----	-----	
Minnesota.....	13.9	14.7	15.2	9.5	21.2	13.9	13.0	17.9	20.3	26.0	-----	-----	-----	
Mississippi.....	6.8	7.2	2.0	8.6	4.6	4.1	8.5	-----	-----	6.6	-----	-----	-----	
White.....	7.1	6.9	1.4	8.3	4.1	4.3	11.0	-----	-----	8.2	-----	-----	-----	
Colored.....	6.5	7.6	2.6	8.8	5.0	3.9	6.3	-----	-----	5.0	-----	-----	-----	
Montana.....	-----	-----	-----	-----	-----	8.9	-----	-----	-----	-----	-----	-----	-----	
Nebraska.....	24.2	20.1	17.3	25.9	17.6	18.1	-----	-----	-----	19.0	-----	-----	-----	
New Jersey.....	24.5	22.2	22.6	22.8	17.9	19.1	24.0	22.9	26.5	26.2	31.7	29.4	-----	
New York <sup>1</sup> .....	22.9	27.1	22.3	25.4	20.1	20.9	25.8	24.1	-----	20.4	23.9	22.3	22.8	
Pennsylvania.....	23.4	21.8	16.2	15.2	13.9	20.3	24.0	18.3	-----	21.3	19.4	19.3	18.4	
South Carolina.....	5.2	7.6	3.3	10.7	11.4	9.1	5.7	6.5	-----	8.5	6.6	-----	-----	
South Dakota.....	8.6	21.7	20.7	10.0	20.1	8.6	18.4	15.6	26.8	31.8	-----	-----	-----	
Tennessee.....	9.2	8.0	9.2	8.0	8.9	10.7	7.5	13.1	14.6	8.5	-----	-----	-----	
White.....	8.2	10.2	7.6	9.1	7.4	9.4	7.9	13.5	14.2	-----	-----	-----	-----	
Colored.....	14.2	11.0	17.2	2.8	16.5	17.0	5.5	11.4	16.5	-----	-----	-----	-----	
Virginia.....	10.9	7.8	7.1	10.1	10.1	11.3	10.5	9.9	-----	13.3	-----	-----	-----	
White.....	13.1	5.1	6.5	9.5	11.4	12.4	9.5	13.1	22.1	11.4	-----	-----	-----	
Colored.....	5.1	14.9	8.6	11.6	6.6	8.5	13.2	1.7	13.2	18.2	-----	-----	-----	

DISEASES OF THE NERVOUS SYSTEM (70-86)

Alabama.....	108.3	111.2	97.9	87.0	96.1	98.5	103.0	94.1	119.0	109.4	-----	-----	-----
White.....	97.0	99.5	79.7	69.4	78.5	81.1	89.0	78.9	99.5	100.9	-----	-----	-----
Colored.....	129.4	133.2	132.2	120.0	129.2	132.2	129.2	122.6	155.6	125.3	-----	-----	-----
Arizona.....	112.9	104.3	82.1	72.0	64.6	69.3	62.1	79.6	91.9	106.8	-----	-----	-----
California.....	143.4	125.0	139.9	130.8	118.9	118.9	114.5	127.1	-----	154.1	-----	-----	-----
Florida.....	-----	-----	-----	-----	-----	-----	107.6	119.9	-----	-----	-----	-----	-----
White.....	-----	-----	-----	-----	-----	-----	86.2	107.9	-----	-----	-----	-----	-----
Colored.....	-----	-----	-----	-----	-----	-----	154.6	146.0	-----	-----	-----	-----	-----
Iowa.....	144.3	134.3	-----	123.6	120.7	110.7	111.0	202.2	142.6	144.0	-----	-----	-----
Kansas.....	139.2	143.7	135.9	120.6	132.8	103.4	121.9	127.3	-----	161.7	-----	-----	-----
Louisiana.....	91.7	91.2	101.7	79.7	85.7	81.7	111.1	104.2	-----	106.1	-----	-----	-----
White.....	80.0	64.3	85.8	69.0	69.9	73.2	89.5	76.1	-----	80.9	-----	-----	-----
Colored.....	113.3	140.5	131.0	99.3	114.8	97.3	150.7	155.8	-----	152.2	-----	-----	-----
Maryland.....	-----	-----	-----	115.8	96.9	118.2	132.6	137.8	173.4	-----	-----	-----	-----
White.....	-----	-----	-----	114.5	94.5	113.8	126.6	134.4	155.2	-----	-----	-----	-----
Colored.....	-----	-----	-----	123.0	109.4	141.3	164.0	160.7	268.8	-----	-----	-----	-----
Michigan.....	138.6	145.2	126.1	115.2	135.9	120.1	129.5	120.1	136.7	161.8	-----	-----	-----
Minnesota.....	99.7	100.8	82.2	91.3	77.4	78.7	81.8	99.7	94.7	99.9	-----	-----	-----
Montana.....	-----	-----	-----	-----	-----	77.6	-----	-----	-----	-----	-----	-----	-----
Nebraska.....	108.9	120.4	106.3	77.8	92.8	91.6	-----	-----	-----	96.8	-----	-----	-----
New Jersey.....	128.3	112.5	96.5	103.5	88.7	107.6	108.8	117.8	130.0	118.9	123.1	145.3	152.4
New York <sup>1</sup> .....	150.4	160.3	119.7	125.9	118.9	126.7	137.1	140.6	-----	136.6	141.3	148.8	190.8
Pennsylvania.....	122.4	119.6	94.0	96.0	93.6	98.7	104.2	108.9	-----	119.8	-----	-----	-----
South Dakota.....	96.8	83.6	81.2	70.2	98.7	83.0	87.0	74.3	123.8	130.5	-----	-----	-----
Tennessee.....	103.6	108.4	104.1	98.8	83.6	91.9	101.6	98.2	126.5	-----	-----	-----	-----
White.....	90.3	85.9	91.5	81.8	75.5	75.1	93.1	83.3	130.4	-----	-----	-----	-----
Colored.....	167.7	206.3	250.2	181.4	123.7	173.2	142.9	170.4	167.7	-----	-----	-----	-----
Virginia.....	125.7	108.4	108.7	111.6	86.0	105.4	104.7	110.6	116.6	-----	-----	-----	-----
White.....	101.2	88.4	80.5	97.3	60.0	84.2	91.0	92.7	98.7	85.3	-----	-----	-----
Colored.....	189.9	160.4	158.0	148.9	153.8	160.6	140.6	157.2	168.7	210.0	-----	-----	-----

<sup>1</sup> Exclusive of New York City.

<sup>2</sup> No deaths.

Monthly State mortality statistics—Continued

CEREBRAL HEMORRHAGE, APOPLEXY (74)

	1929										Corresponding month for—			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1928	1927	1926	1925	
	Alabama.....	63.7	68.4	56.6	56.3	55.8	69.0	60.9	57.7	67.7	65.6	68.9	64.8	54.4
White.....	54.3	58.9	44.9	42.8	46.3	56.5	51.2	49.2	58.2	65.9	62.7	61.3	.....	
Colored.....	79.0	84.4	76.3	81.8	73.8	92.7	79.1	73.6	85.7	63.3	80.3	71.0	.....	
Arizona.....	46.2	59.6	46.2	22.4	32.3	46.2	39.7	51.3	57.1	42.2	.....	.....	.....	
California.....	100.9	91.7	95.3	93.8	89.9	81.2	86.6	92.7	.....	112.2	.....	.....	.....	
Florida.....	.....	.....	.....	.....	.....	.....	87.6	84.5	.....	.....	.....	.....	.....	
White.....	.....	.....	.....	.....	.....	.....	70.5	70.3	.....	.....	.....	.....	.....	
Colored.....	.....	.....	.....	.....	.....	.....	125.3	115.7	.....	.....	.....	.....	.....	
Georgia.....	58.1	67.6	77.5	69.5	59.6	69.9	.....	.....	.....	67.5	65.2	.....	.....	
Hawaii Territory.....	43.8	50.6	45.3	72.4	55.9	57.8	69.1	23.8	59.2	140.1	123.3	113.1	106.6	
Indiana.....	104.2	107.1	106.5	104.5	85.6	91.9	.....	105.3	122.7	.....	.....	.....	.....	
Iowa.....	108.7	98.4	.....	88.7	89.7	85.7	86.8	147.9	99.9	106.2	.....	.....	.....	
Kansas.....	110.8	112.9	106.8	93.0	102.7	81.6	95.6	98.1	.....	131.3	.....	.....	.....	
Louisiana.....	61.2	62.2	61.8	50.1	51.3	59.9	70.7	66.1	.....	73.6	.....	.....	.....	
White.....	51.1	44.8	49.1	44.8	39.2	53.0	63.4	49.1	.....	54.9	.....	.....	.....	
Colored.....	79.6	94.2	84.9	60.0	73.7	72.6	101.1	97.3	.....	108.0	.....	.....	.....	
Maryland.....	.....	.....	.....	88.9	72.9	84.3	105.6	96.4	126.8	.....	.....	.....	.....	
White.....	.....	.....	.....	88.5	73.7	78.0	98.9	95.9	118.0	.....	.....	.....	.....	
Colored.....	.....	.....	.....	91.1	68.3	117.7	141.3	98.9	173.1	.....	.....	.....	.....	
Michigan.....	100.2	102.3	89.6	80.0	82.6	85.3	95.9	91.2	102.3	115.2	.....	.....	.....	
Minnesota.....	71.5	77.9	63.0	64.0	58.8	56.8	60.6	78.7	74.0	74.4	.....	.....	.....	
Mississippi.....	64.6	77.6	63.2	71.0	64.4	63.9	84.1	.....	.....	61.8	.....	.....	.....	
White.....	59.8	66.2	58.4	55.2	52.4	62.7	78.6	.....	.....	62.0	.....	.....	.....	
Colored.....	69.0	88.2	67.6	85.6	75.4	64.9	89.2	.....	.....	61.6	.....	.....	.....	
Montana.....	.....	.....	.....	.....	.....	55.4	.....	.....	.....	.....	.....	.....	.....	
Nebraska.....	82.1	92.8	72.6	60.2	71.1	71.7	.....	.....	.....	76.9	.....	.....	.....	
New Jersey.....	90.1	85.1	67.2	75.5	67.8	76.7	80.1	89.2	103.5	.....	.....	.....	.....	
New York <sup>1</sup> .....	115.6	120.8	95.1	95.3	84.2	96.4	109.6	110.7	.....	107.2	107.2	112.3	149.0	
Pennsylvania.....	88.4	87.5	71.7	76.0	64.5	71.9	77.7	82.8	.....	92.0	88.1	91.2	63.9	
South Dakota.....	55.3	53.5	50.1	45.2	51.9	48.4	56.9	34.6	85.3	78.6	.....	.....	.....	
Tennessee.....	55.9	69.6	59.3	53.2	52.7	55.9	63.1	63.7	77.6	.....	.....	.....	.....	
White.....	45.8	53.4	51.6	47.1	47.1	48.7	58.5	51.0	70.4	.....	.....	.....	.....	
Colored.....	105.2	148.6	96.7	82.5	79.7	90.9	85.2	125.0	112.7	.....	.....	.....	.....	
Virginia.....	90.3	71.3	78.4	84.6	57.6	70.4	78.2	85.0	88.2	82.8	.....	.....	.....	
White.....	73.1	57.5	63.4	74.6	41.1	51.6	69.5	69.2	72.0	56.9	.....	.....	.....	
Colored.....	135.0	107.5	117.9	110.8	100.9	119.6	100.9	126.5	130.7	150.5	.....	.....	.....	

DISEASES OF THE CIRCULATORY SYSTEM (87-96)

Alabama.....	141.4	149.2	134.3	132.3	138.7	130.0	148.7	152.3	175.3	151.5	.....	.....	.....
White.....	119.5	113.5	107.9	89.7	107.2	97.8	124.0	120.9	138.1	128.3	.....	.....	.....
Colored.....	182.6	216.2	183.9	212.3	197.8	190.8	195.1	211.2	245.2	195.1	.....	.....	.....
Arizona.....	112.9	86.9	136.0	129.2	62.1	100.1	114.3	136.0	166.4	253.4	.....	.....	.....
California.....	360.2	335.7	326.1	294.1	304.2	286.8	312.4	358.0	.....	387.0	.....	.....	.....
Florida.....	.....	.....	.....	.....	.....	.....	165.2	190.6	.....	.....	.....	.....	.....
White.....	.....	.....	.....	.....	.....	.....	160.3	180.7	.....	.....	.....	.....	.....
Colored.....	.....	.....	.....	.....	.....	.....	175.9	212.1	.....	.....	.....	.....	.....
Iowa.....	282.6	271.6	.....	222.1	190.6	231.0	240.0	340.1	295.8	329.8	.....	.....	.....
Kansas.....	198.9	198.0	179.0	160.4	158.5	175.0	182.9	196.3	.....	193.6	.....	.....	.....
Louisiana.....	206.6	195.0	195.9	196.8	178.1	175.3	201.7	217.8	.....	202.2	.....	.....	.....
White.....	164.8	148.3	154.2	149.2	140.8	128.2	150.1	180.2	.....	166.7	.....	.....	.....
Colored.....	292.0	280.9	272.6	284.3	246.7	262.0	296.3	286.7	.....	269.0	.....	.....	.....
Maryland.....	.....	.....	.....	239.7	140.4	219.8	241.9	253.7	280.5	.....	.....	.....	.....
White.....	.....	.....	.....	230.7	105.5	199.0	230.7	248.2	273.2	.....	.....	.....	.....
Colored.....	.....	.....	.....	282.5	231.5	282.5	300.7	282.5	314.4	.....	.....	.....	.....
Michigan.....	266.3	278.5	245.4	215.2	206.5	219.7	219.5	242.2	265.4	345.2	.....	.....	.....
Minnesota.....	178.8	189.5	176.1	171.3	153.1	161.4	168.3	175.2	208.1	269.5	.....	.....	.....
Montana.....	.....	.....	.....	.....	.....	.....	139.6	.....	.....	.....	.....	.....	.....
Nebraska.....	173.7	209.1	146.9	168.2	130.5	176.3	.....	.....	.....	163.3	.....	.....	.....
New Jersey.....	297.4	258.5	255.1	233.9	192.3	222.6	108.8	106.0	318.0	307.2	256.6	272.9	255.1
New York <sup>1</sup> .....	369.9	341.2	297.2	301.3	305.2	304.7	337.7	347.9	.....	358.2	318.4	315.5	248.6
Pennsylvania.....	269.7	248.0	217.5	206.7	190.9	201.2	237.3	254.1	.....	243.2	.....	.....	.....
South Carolina.....	269.6	296.9	312.0	272.9	296.9	277.4	318.4	323.7	.....	284.6	253.2	.....	.....
South Dakota.....	134.8	160.6	115.8	95.3	148.9	100.2	128.8	133.1	225.8	224.1	.....	.....	.....
Tennessee.....	136.6	149.2	149.8	142.6	120.0	134.2	135.1	134.7	176.0	.....	.....	.....	.....
White.....	116.2	132.3	119.1	113.0	97.4	111.5	109.6	112.7	155.6	.....	.....	.....	.....
Colored.....	235.9	231.1	298.5	285.8	219.9	244.2	258.4	241.4	274.8	.....	.....	.....	.....
Virginia.....	164.4	185.2	174.3	149.1	140.4	145.1	177.9	179.1	198.4	204.4	.....	.....	.....
White.....	150.9	159.9	145.0	130.8	105.5	121.5	167.4	162.0	175.1	180.7	.....	.....	.....
Colored.....	200.0	251.4	251.2	196.8	231.5	206.8	231.5	223.9	259.7	266.3	.....	.....	.....

<sup>1</sup> Exclusive of New York City.

Monthly State mortality statistics—Continued

DISEASES OF THE HEART (87-90)

	1929										Corresponding month for—			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1928	1927	1926	1925	
Alabama	132.6	140.4	125.0	124.0	125.4	122.0	136.8	136.2	158.8	140.9	125.7	109.2	126.0	
White	110.8	105.1	96.9	86.9	93.9	90.5	111.4	105.7	128.3	115.6	115.1	95.3	-----	
Colored	171.7	205.7	177.1	193.8	184.6	181.3	184.6	193.5	216.2	187.2	144.7	134.1	-----	
Arizona	112.9	79.5	120.6	119.2	96.9	84.7	104.3	151.4	141.6	231.0	-----	-----	-----	
California	317.0	299.0	286.3	258.7	267.8	259.6	263.9	312.4	-----	344.9	-----	-----	-----	
Connecticut	194.3	190.9	155.0	170.0	154.3	153.5	137.1	162.4	-----	198.3	148.8	175.6	214.0	
Florida	-----	-----	-----	-----	-----	-----	151.0	171.6	-----	-----	-----	-----	-----	
White	-----	-----	-----	-----	-----	-----	144.5	160.7	-----	-----	-----	-----	-----	
Colored	-----	-----	-----	-----	-----	-----	165.3	195.6	-----	-----	-----	-----	-----	
Georgia	107.5	105.9	141.7	117.7	102.9	109.8	117.3	101.0	140.8	-----	-----	-----	-----	
Hawaii Territory	132.5	141.7	118.5	92.1	102.0	119.1	95.4	136.1	108.5	108.0	108.7	-----	-----	
Indiana	199.2	228.0	222.2	187.6	167.9	186.2	-----	170.5	184.2	269.5	183.2	179.0	165.5	
Iowa	251.1	239.6	-----	197.4	167.3	209.5	209.5	303.0	197.4	292.9	-----	-----	-----	
Kansas	173.1	175.2	153.2	139.9	131.5	151.8	162.3	172.4	-----	171.2	-----	-----	-----	
Louisiana	192.8	183.6	177.8	182.9	167.3	159.7	190.2	200.3	-----	187.8	-----	-----	-----	
White	150.3	137.1	137.8	138.9	131.5	115.6	137.1	162.9	-----	152.2	-----	-----	-----	
Colored	270.8	268.9	251.3	263.8	233.0	240.7	287.8	280.0	-----	253.1	-----	-----	-----	
Maryland	-----	-----	-----	204.0	199.6	183.7	218.6	224.4	254.3	-----	-----	-----	-----	
White	-----	-----	-----	198.6	184.7	174.8	208.1	216.9	245.4	-----	-----	-----	-----	
Colored	-----	-----	-----	232.4	278.0	230.7	273.4	263.7	296.2	-----	-----	-----	-----	
Michigan	238.5	240.0	218.1	285.2	177.7	186.6	188.5	214.9	230.8	293.3	-----	-----	-----	
Minnesota	100.1	152.7	136.8	140.6	121.5	127.8	132.8	139.5	172.6	231.4	-----	-----	-----	
Mississippi	106.7	111.8	108.0	127.0	111.8	87.6	124.3	-----	-----	83.7	-----	-----	-----	
White	95.5	95.1	84.1	91.0	104.8	69.8	113.1	-----	-----	80.0	-----	-----	-----	
Colored	117.1	127.2	130.1	159.9	118.1	103.9	134.5	-----	-----	96.8	-----	-----	-----	
Montana	-----	-----	-----	-----	-----	126.3	-----	-----	-----	-----	-----	-----	-----	
Nebraska	173.7	187.3	132.2	145.5	117.1	152.9	-----	-----	-----	140.8	-----	-----	-----	
New Jersey	276.1	236.0	226.7	214.8	273.5	207.3	241.9	-----	289.0	-----	-----	-----	-----	
New York <sup>1</sup>	322.0	292.6	257.9	262.4	261.6	268.6	292.4	295.9	-----	312.0	275.2	270.4	299.8	
Pennsylvania	232.3	221.3	196.7	185.9	172.8	178.3	214.3	228.7	-----	222.0	225.0	214.0	199.0	
South Dakota	115.8	142.2	102.0	76.9	117.1	95.0	112.1	103.7	192.3	204.0	-----	-----	-----	
Tennessee	125.0	137.9	135.7	128.0	106.4	122.5	120.9	122.1	155.8	158.6	-----	-----	-----	
White	92.7	122.6	108.5	97.7	83.5	102.1	94.3	100.9	135.1	-----	-----	-----	-----	
Colored	201.8	211.8	267.2	274.8	217.1	221.5	250.1	224.4	255.6	-----	-----	-----	-----	
Virginia	149.3	171.0	156.4	129.5	121.6	129.0	158.7	164.4	180.2	188.4	-----	-----	-----	
White	134.5	145.4	129.3	131.3	89.1	167.8	137.8	146.9	158.0	168.1	-----	-----	-----	
Colored	188.0	238.2	227.3	186.9	206.7	184.6	213.4	210.2	238.2	241.5	-----	-----	-----	

DISEASES OF THE RESPIRATORY SYSTEM (97-107)

Alabama	102.6	84.7	61.0	37.1	40.7	42.1	68.6	86.1	142.3	141.4	-----	-----	-----
White	84.7	63.1	43.5	24.5	34.3	39.8	58.9	72.4	117.7	114.2	-----	-----	-----
Colored	134.2	125.3	84.5	60.7	52.7	46.3	87.0	111.7	188.5	192.5	-----	-----	-----
Arizona	197.6	171.4	166.6	101.8	74.5	87.3	79.5	187.4	226.5	320.4	-----	-----	-----
California	139.1	98.5	92.1	64.4	56.3	63.6	76.0	117.2	-----	159.2	-----	-----	-----
Florida	-----	-----	-----	-----	-----	-----	54.2	69.8	-----	-----	-----	-----	-----
White	-----	-----	-----	-----	-----	-----	35.2	56.5	-----	-----	-----	-----	-----
Colored	-----	-----	-----	-----	-----	-----	90.0	99.2	-----	-----	-----	-----	-----
Iowa	82.2	71.3	-----	43.2	35.4	47.6	54.3	88.9	110.6	150.5	-----	-----	-----
Kansas	86.2	50.9	33.8	20.5	37.2	27.8	37.2	67.0	-----	61.0	-----	-----	-----
Louisiana	90.5	65.2	61.8	51.3	56.2	54.3	79.7	138.5	-----	102.9	-----	-----	-----
White	51.1	42.0	49.1	28.9	39.2	37.6	60.6	81.9	-----	79.0	-----	-----	-----
Colored	134.5	107.9	84.9	92.5	87.4	85.0	114.8	185.8	-----	146.9	-----	-----	-----
Maryland	-----	-----	-----	-----	56.1	53.2	61.0	96.9	118.7	161.0	-----	-----	-----
White	-----	-----	-----	-----	34.7	37.3	48.4	74.6	88.7	137.0	-----	-----	-----
Colored	-----	-----	-----	-----	168.6	136.7	127.1	269.6	263.7	287.1	-----	-----	-----
Michigan	130.1	121.8	87.5	42.6	45.4	51.9	79.0	73.1	112.8	219.8	-----	-----	-----
Minnesota	74.2	71.8	49.2	35.0	32.9	32.9	64.9	67.1	103.8	153.1	-----	-----	-----
Montana	-----	-----	-----	-----	-----	-----	24.4	-----	-----	-----	-----	-----	-----
Nebraska	75.2	56.9	40.6	22.6	17.7	36.3	-----	-----	-----	30.2	-----	-----	-----
New Jersey	116.9	101.4	62.7	50.5	45.3	49.4	69.9	92.3	128.8	-----	-----	-----	-----
New York <sup>1</sup>	134.2	109.2	73.6	46.7	48.2	51.1	86.2	87.6	-----	104.4	98.7	117.0	142.8
Pennsylvania	117.6	99.1	67.1	47.7	47.8	61.2	90.1	95.2	-----	112.7	-----	-----	-----
South Dakota	81.2	75.3	44.9	46.8	55.2	31.1	35.1	29.4	118.7	145.6	-----	-----	-----
Tennessee	97.7	74.8	50.1	44.7	30.4	66.6	79.5	103.0	171.8	-----	-----	-----	-----
White	83.3	59.0	37.5	36.9	41.5	54.6	67.6	85.1	153.3	-----	-----	-----	-----
Colored	167.7	151.3	110.9	82.6	93.4	123.6	137.4	193.1	261.1	-----	-----	-----	-----
Virginia	79.9	71.8	41.6	35.2	38.4	41.1	62.2	89.3	134.9	113.9	-----	-----	-----
White	61.4	53.7	30.7	31.0	26.5	26.8	43.0	65.3	104.3	95.4	-----	-----	-----
Colored	128.2	119.1	70.1	46.3	69.5	78.6	112.5	152.1	215.0	162.1	-----	-----	-----

<sup>1</sup> Exclusive of New York City.

## Monthly State mortality statistics—Continued

PNEUMONIA, ALL FORMS (100, 101)

	1929										Corresponding month for—			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1928	1927	1926	1925	
Alabama.....	97.9	79.8	53.4	32.5	34.8	31.7	56.7	75.7	129.5	131.2	143.0	93.7	157.0	
White.....	80.4	60.3	41.3	21.7	28.0	32.6	47.7	62.3	108.6	104.4	136.3	85.7	-----	
Colored.....	129.4	116.0	76.3	52.7	47.5	30.0	73.8	100.8	168.8	180.6	155.5	107.8	-----	
Arizona.....	154.0	144.1	148.9	67.1	47.2	56.5	64.6	146.3	188.8	337.8	-----	-----	-----	
California.....	119.4	83.5	76.9	54.8	45.2	47.8	62.5	100.4	-----	139.9	-----	-----	-----	
Connecticut.....	104.5	86.8	64.1	43.8	35.2	44.5	66.7	69.7	-----	71.6	72.1	78.0	137.6	
Florida.....	-----	-----	-----	-----	-----	-----	39.2	59.5	-----	-----	-----	-----	-----	
White.....	-----	-----	-----	-----	-----	-----	26.7	47.7	-----	-----	-----	-----	-----	
Colored.....	-----	-----	-----	-----	-----	-----	66.6	85.4	-----	-----	-----	-----	-----	
Georgia.....	70.3	46.7	52.4	34.2	24.3	39.1	47.1	60.0	102.9	-----	-----	-----	-----	
Hawaii Territory.....	217.5	202.4	139.4	121.7	157.9	105.5	102.0	95.3	92.1	141.7	210.1	-----	-----	
Illinois.....	92.2	86.6	57.6	34.2	30.7	36.2	50.9	-----	111.8	210.5	107.8	104.6	91.2	
Indiana.....	83.5	85.6	50.2	24.8	38.2	55.2	71.9	77.4	134.6	233.2	117.0	120.6	139.6	
Iowa.....	71.7	40.2	-----	36.4	26.7	37.6	45.1	82.9	95.5	145.0	-----	-----	-----	
Kansas.....	76.9	41.1	23.9	13.5	28.2	23.2	30.2	61.7	-----	50.4	-----	-----	-----	
Louisiana.....	68.0	52.5	58.0	43.5	45.9	48.7	67.0	105.4	-----	88.6	-----	-----	-----	
White.....	41.4	31.7	45.3	24.2	29.8	32.8	50.4	71.3	-----	67.4	-----	-----	-----	
Colored.....	116.8	90.8	81.4	73.8	75.4	77.9	97.6	168.1	-----	127.4	-----	-----	-----	
Maryland.....	-----	-----	-----	46.6	45.2	52.0	89.6	102.4	150.1	-----	-----	-----	-----	
White.....	-----	-----	-----	27.8	31.2	41.2	66.8	75.3	130.1	-----	-----	-----	-----	
Colored.....	-----	-----	-----	145.8	118.5	108.3	205.0	244.8	255.2	-----	-----	-----	-----	
Michigan.....	114.2	105.7	73.4	33.6	33.9	41.3	62.8	61.0	93.4	190.3	-----	-----	-----	
Minnesota.....	68.4	65.3	39.8	28.1	29.4	36.2	56.2	60.3	101.2	147.5	-----	-----	-----	
Mississippi.....	63.2	38.8	26.5	15.1	19.7	38.7	43.4	-----	-----	28.9	-----	-----	-----	
White.....	48.4	41.4	17.1	13.8	23.4	44.2	38.6	-----	-----	26.2	-----	-----	-----	
Colored.....	76.8	36.5	35.0	16.4	16.3	33.8	47.8	-----	-----	31.4	-----	-----	-----	
Montana.....	-----	-----	-----	-----	-----	17.7	-----	-----	-----	-----	-----	-----	-----	
Nebraska.....	65.7	51.0	35.4	16.7	11.7	29.4	-----	-----	-----	23.3	-----	-----	-----	
New Jersey.....	99.4	91.2	51.6	44.1	37.0	39.8	61.3	82.5	116.8	160.5	61.2	76.8	79.8	
New York <sup>1</sup> .....	116.7	92.4	62.8	37.6	39.3	42.5	71.8	72.9	-----	89.2	83.0	100.2	118.1	
North Carolina.....	113.5	81.0	-----	-----	-----	-----	-----	-----	158.7	151.9	-----	-----	-----	
Pennsylvania.....	97.7	85.0	52.7	38.9	37.5	49.3	75.3	80.9	-----	97.1	92.2	120.0	140.0	
South Carolina.....	90.7	77.1	62.0	37.9	44.8	58.1	70.7	78.3	-----	95.9	89.7	-----	-----	
South Dakota.....	62.2	68.6	34.6	36.8	46.8	25.9	26.8	29.4	95.3	117.1	-----	-----	-----	
Tennessee.....	86.6	66.4	39.4	33.9	41.4	55.9	66.4	90.9	154.8	122.4	163.0	116.9	-----	
White.....	73.9	53.4	31.7	28.4	34.1	46.9	55.6	75.7	137.4	-----	-----	-----	-----	
Colored.....	147.8	129.3	76.8	60.5	79.7	99.4	118.2	164.7	239.1	-----	-----	-----	-----	
Virginia.....	68.0	60.4	36.9	26.5	28.8	31.7	52.1	77.0	120.7	-----	-----	-----	-----	
White.....	50.9	44.9	28.1	24.0	20.2	20.2	36.0	53.6	92.3	80.3	-----	-----	-----	
Colored.....	112.8	100.9	59.8	33.1	51.3	61.5	94.3	138.4	195.2	145.5	-----	-----	-----	
Wisconsin.....	84.5	78.9	49.0	30.0	29.9	38.3	0	69.6	92.5	164.3	-----	-----	-----	

## DISEASES OF THE DIGESTIVE SYSTEM (108-127)

Alabama.....	61.9	106.2	147.5	139.1	107.5	100.7	67.7	60.5	63.1	67.7	-----	-----	-----
White.....	46.3	101.6	143.4	36.0	100.2	92.0	64.5	51.4	61.0	66.6	-----	-----	-----
Colored.....	91.3	104.7	155.3	145.0	121.3	117.2	73.8	77.7	67.2	69.9	-----	-----	-----
Arizona.....	79.6	201.2	264.4	139.1	206.2	238.7	166.4	92.4	109.3	106.8	-----	-----	-----
California.....	94.5	92.0	103.9	112.9	103.6	111.1	109.1	103.6	-----	90.0	-----	-----	-----
Florida.....	-----	-----	-----	-----	-----	-----	93.5	104.3	-----	-----	-----	-----	-----
White.....	-----	-----	-----	-----	-----	-----	76.5	99.2	-----	-----	-----	-----	-----
Colored.....	-----	-----	-----	-----	-----	-----	130.6	115.7	-----	-----	-----	-----	-----
Hawaii Territory.....	198.7	182.2	174.3	180.9	157.9	132.7	115.1	193.9	138.1	145.1	130.4	-----	-----
Iowa.....	66.6	62.1	-----	63.9	62.1	66.6	62.1	74.9	84.9	62.6	-----	-----	-----
Kansas.....	84.2	62.9	76.3	85.3	91.1	82.2	80.9	67.6	-----	76.9	-----	-----	-----
Louisiana.....	78.6	112.3	128.5	122.6	105.7	111.1	106.3	102.9	-----	87.4	-----	-----	-----
White.....	56.9	87.7	86.7	106.3	86.7	82.1	97.3	-----	-----	65.5	-----	-----	-----
Colored.....	118.6	157.6	205.3	152.4	140.5	155.8	150.7	113.3	-----	127.4	-----	-----	-----
Maryland.....	-----	-----	-----	96.2	142.8	115.2	96.9	75.3	79.4	-----	-----	-----	-----
White.....	-----	-----	-----	80.7	124.9	99.5	83.3	67.2	77.2	-----	-----	-----	-----
Colored.....	-----	-----	-----	173.1	236.9	193.1	168.6	117.7	91.1	-----	-----	-----	-----
Michigan.....	80.6	90.5	89.0	78.2	95.7	128.3	101.6	74.5	83.1	90.8	-----	-----	-----
Minnesota.....	63.5	67.9	59.0	64.5	64.0	63.0	56.2	60.8	73.5	58.4	-----	-----	-----
Montana.....	-----	-----	-----	-----	-----	-----	88.6	-----	-----	-----	-----	-----	-----
Nebraska.....	73.4	71.9	55.3	71.1	86.1	73.4	-----	-----	-----	86.4	-----	-----	-----
New Jersey.....	76.1	75.8	73.6	74.6	71.8	92.7	79.5	74.2	69.9	74.6	57.2	62.1	59.9
New York <sup>1</sup> .....	69.9	71.5	62.0	64.7	79.0	93.6	80.2	70.3	-----	72.4	80.4	71.9	89.8
Pennsylvania.....	75.0	61.4	62.9	71.5	87.8	120.3	82.3	65.5	-----	73.8	-----	-----	-----
South Dakota.....	58.8	73.6	44.9	58.5	80.3	95.0	58.5	39.7	78.6	87.0	-----	-----	-----
Tennessee.....	70.0	71.1	110.9	171.8	133.2	98.2	101.2	74.9	68.2	-----	-----	-----	-----
White.....	55.1	63.0	142.1	160.7	127.2	90.9	89.1	65.1	63.6	-----	-----	-----	-----
Colored.....	142.1	110.0	104.4	225.4	162.2	133.5	159.4	122.1	90.7	-----	-----	-----	-----
Virginia.....	52.0	60.4	102.5	104.3	90.7	69.9	64.9	54.8	54.9	51.7	-----	-----	-----
White.....	47.7	36.7	73.8	87.9	87.8	59.4	56.9	50.9	42.3	39.8	-----	-----	-----
Colored.....	63.2	122.4	177.7	147.2	130.7	97.4	86.0	64.9	87.7	82.7	-----	-----	-----

<sup>1</sup> Exclusive of New York City.

Monthly State mortality statistics—Continued

DIARRHEA AND ENTERITIS UNDER 2 YEARS (113)

	1929										Corresponding month for—			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1928	1927	1926	1925	
	Alabama.....	12.4	40.8	64.8	62.7	33.4	28.4	22.0	12.8	13.3	13.3	18.8	10.4	13.6
White.....	5.8	38.5	65.9	67.3	30.8	26.8	21.0	11.6	12.6	13.3	19.7	10.3	-----	
Colored.....	24.5	44.8	62.7	54.1	38.2	31.3	23.7	15.0	14.5	13.2	17.1	10.5	-----	
Arizona.....	28.2	131.7	202.8	136.6	139.1	148.9	114.3	43.6	28.8	47.2	-----	-----	-----	
California.....	11.2	17.6	23.9	28.4	27.1	27.0	23.0	19.2	-----	15.0	-----	-----	-----	
Connecticut.....	5.2	11.5	8.2	5.0	17.9	-----	(?)	13.3	-----	4.5	17.6	7.8	8.7	
Florida.....	-----	-----	-----	-----	-----	-----	18.4	14.7	-----	-----	-----	-----	-----	
White.....	-----	-----	-----	-----	-----	-----	14.6	12.6	-----	-----	-----	-----	-----	
Colored.....	-----	-----	-----	-----	-----	-----	26.7	19.3	-----	-----	-----	-----	-----	
Georgia.....	12.2	22.8	35.3	29.8	27.6	14.8	12.9	14.4	7.7	-----	-----	-----	-----	
Hawaii Territory.....	-----	-----	-----	-----	-----	-----	98.7	78.3	82.2	-----	-----	-----	-----	
Indiana.....	5.7	7.4	10.3	25.6	47.1	43.7	23.7	6.1	7.8	-----	4.5	7.2	10.3	
Iowa.....	4.5	2.9	-----	3.9	5.8	4.5	1.9	7.3	2.9	-----	1.9	-----	-----	
Kansas.....	7.3	4.5	6.0	12.2	19.2	24.5	15.4	7.3	-----	-----	12.6	-----	-----	
Louisiana.....	22.4	34.4	49.3	34.4	31.4	29.9	29.6	22.5	-----	-----	23.7	-----	-----	
White.....	15.4	21.4	27.0	28.9	22.4	19.3	21.5	21.2	-----	-----	19.3	-----	-----	
Colored.....	35.4	58.2	99.3	44.5	48.0	49.6	44.5	24.8	-----	-----	31.8	-----	-----	
Maryland.....	-----	-----	-----	-----	-----	-----	19.7	-----	-----	-----	-----	-----	-----	
White.....	-----	-----	-----	-----	-----	-----	16.5	-----	-----	-----	-----	-----	-----	
Colored.....	-----	-----	-----	-----	-----	-----	36.5	-----	-----	-----	-----	-----	-----	
Michigan.....	11.1	12.6	11.4	10.0	23.1	44.3	28.0	10.3	9.2	13.3	-----	-----	-----	
Minnesota.....	3.6	3.9	3.1	2.2	6.5	3.6	4.3	2.7	4.8	3.0	-----	-----	-----	
Mississippi.....	12.2	32.9	55.0	50.0	25.0	18.3	22.4	-----	-----	22.4	-----	-----	-----	
White.....	14.3	28.9	59.8	49.6	15.2	18.5	22.1	-----	-----	19.3	-----	-----	-----	
Colored.....	10.4	36.6	105.4	50.4	33.9	18.2	22.6	-----	-----	25.1	-----	-----	-----	
Montana.....	-----	-----	-----	-----	-----	-----	19.9	-----	-----	-----	-----	-----	-----	
Nebraska.....	5.2	3.3	3.5	3.3	12.5	6.9	-----	-----	-----	-----	17.3	-----	-----	
New Jersey.....	10.5	7.7	6.4	10.2	17.3	29.6	19.4	11.8	10.2	12.6	9.4	15.4	12.8	
New York <sup>1</sup> .....	7.9	8.7	7.2	6.0	13.9	23.9	16.7	9.4	-----	10.0	13.7	14.0	19.8	
North Carolina.....	11.2	38.5	-----	-----	-----	-----	-----	-----	15.6	30.1	-----	-----	-----	
Pennsylvania.....	12.3	10.2	8.6	15.6	28.4	52.2	28.4	15.0	-----	15.8	22.4	22.9	25.4	
South Dakota.....	6.9	3.3	1.7	1.7	10.6	17.3	3.3	1.7	5.0	8.4	-----	-----	-----	
Tennessee.....	6.8	10.4	38.9	77.7	83.6	36.5	29.2	12.6	12.7	18.4	14.2	14.8	-----	
White.....	5.3	7.4	38.7	74.4	55.6	38.7	27.8	13.5	14.8	-----	-----	-----	-----	
Colored.....	14.2	24.8	39.8	93.5	44.0	25.6	35.7	8.5	2.7	-----	-----	-----	-----	
Virginia.....	3.3	12.3	37.3	50.3	37.0	27.9	16.5	11.8	9.6	7.3	-----	-----	-----	
White.....	3.3	6.3	18.9	41.7	32.9	26.8	17.1	10.4	7.0	4.4	-----	-----	-----	
Colored.....	3.4	28.1	85.5	72.8	48.0	30.8	14.9	15.4	16.5	14.9	-----	-----	-----	
Wisconsin.....	11.9	14.8	9.5	6.8	8.0	9.4	8.8	-----	-----	13.6	-----	-----	-----	

NEPHRITIS (128, 129)

Alabama.....	91.7	104.3	96.9	95.2	92.9	76.1	99.3	100.3	125.4	98.8	-----	-----	-----
White.....	79.7	80.6	71.0	84.1	79.2	60.1	79.1	81.8	105.1	91.8	-----	-----	-----
Colored.....	114.4	149.0	145.8	116.0	118.7	106.3	154.3	121.3	163.5	112.1	-----	-----	-----
Arizona.....	53.9	39.7	30.8	39.7	32.3	35.9	22.4	33.4	49.7	44.7	-----	-----	-----
California.....	123.2	106.7	108.7	98.5	91.0	84.9	101.0	104.1	-----	130.1	-----	-----	-----
Connecticut.....	68.2	116.2	54.9	46.6	35.2	56.3	70.3	60.8	-----	67.1	-----	-----	-----
Florida.....	-----	-----	-----	-----	-----	-----	124.3	123.3	-----	-----	-----	-----	-----
White.....	-----	-----	-----	-----	-----	-----	100.8	118.0	-----	-----	-----	-----	-----
Colored.....	-----	-----	-----	-----	-----	-----	175.9	135.0	-----	-----	-----	-----	-----
Georgia.....	117.8	111.1	123.1	115.8	111.8	119.3	126.8	125.0	137.5	-----	-----	-----	-----
Indiana.....	95.0	92.7	74.3	73.8	63.8	70.9	-----	83.5	87.1	96.4	74.8	75.4	72.3
Iowa.....	61.6	56.7	-----	42.2	36.9	52.1	41.2	61.0	46.6	56.3	-----	-----	-----
Kansas.....	94.8	93.0	92.8	77.6	69.9	80.2	75.7	100.1	-----	168.7	-----	-----	-----
Louisiana.....	112.3	115.9	120.4	99.0	103.7	106.7	118.3	121.0	-----	124.2	-----	-----	-----
White.....	84.8	79.3	90.6	82.1	88.6	90.6	94.2	101.2	-----	99.2	-----	-----	-----
Colored.....	162.8	183.3	175.2	130.2	145.6	136.3	162.7	157.5	-----	169.9	-----	-----	-----
Maryland.....	-----	-----	-----	123.9	133.3	124.2	157.4	144.6	169.0	-----	-----	-----	-----
White.....	-----	-----	-----	117.1	127.5	110.2	148.3	138.9	166.5	-----	-----	-----	-----
Colored.....	-----	-----	-----	191.4	154.9	197.8	205.0	174.2	182.3	-----	-----	-----	-----
Michigan.....	73.4	67.4	72.6	59.8	62.6	62.8	61.0	50.9	78.7	82.3	-----	-----	-----
Minnesota.....	54.1	49.7	48.7	42.4	39.4	40.2	46.7	57.7	63.6	71.4	-----	-----	-----
Mississippi.....	112.1	70.3	117.5	106.0	92.0	99.9	120.3	-----	-----	112.4	-----	-----	-----
White.....	89.6	101.2	74.1	84.1	74.5	68.4	99.3	-----	-----	78.6	-----	-----	-----
Colored.....	128.5	132.7	147.0	127.2	108.1	128.5	139.5	-----	-----	143.3	-----	-----	-----
Montana.....	-----	-----	-----	-----	-----	-----	68.7	-----	-----	-----	-----	-----	-----
Nebraska.....	57.0	51.0	51.8	56.9	51.8	45.8	-----	-----	-----	31.1	-----	-----	-----
New Jersey.....	104.4	102.6	101.3	85.7	78.0	89.8	99.5	93.0	112.5	118.9	111.5	108.5	109.2
New York <sup>1</sup> .....	124.1	111.0	103.4	91.0	90.3	94.7	102.9	99.8	-----	99.6	112.2	113.0	128.0
Pennsylvania.....	102.3	105.8	88.6	83.9	80.7	85.4	98.4	102.6	-----	109.3	97.8	106.0	105.0
South Dakota.....	31.1	35.1	36.2	38.5	51.9	32.8	30.1	41.5	58.5	63.6	-----	-----	-----
Tennessee.....	77.3	69.2	71.0	73.9	69.6	76.4	73.9	72.9	83.3	-----	-----	-----	-----
White.....	67.5	62.5	59.8	57.9	60.2	64.5	60.2	64.5	75.5	-----	-----	-----	-----
Colored.....	125.1	101.8	125.1	151.2	115.4	123.5	149.2	113.6	120.9	-----	-----	-----	-----
Virginia.....	89.8	74.1	91.7	97.4	88.2	95.4	89.6	95.4	114.8	112.0	-----	-----	-----
White.....	79.7	67.0	81.0	88.5	72.7	78.4	81.5	84.2	93.5	105.5	-----	-----	-----
Colored.....	116.2	92.6	119.6	120.8	129.0	140.1	110.8	124.8	170.4	129.0	-----	-----	-----

<sup>1</sup> Exclusive of New York City.

<sup>2</sup> No deaths reported.



## Monthly State mortality statistics—Continued

PUERPERAL STATE (143-150)

	1929									Corresponding month for—			
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	1928	1927	1926	1925
	Alabama.....	23.8	23.9	29.0	12.4	25.2	23.2	18.3	17.0	15.6	16.5	18.8	17.5
White.....	17.4	19.6	20.3	8.4	20.3	13.8	12.6	11.6	13.3	14.0	18.9	14.0	-----
Colored.....	35.4	31.6	45.0	19.8	34.3	40.9	29.0	27.2	19.8	21.1	18.4	23.7	-----
Arizona.....	12.8	12.4	12.8	5.0	14.9	7.7	5.0	2.6	5.0	7.5	-----	-----	-----
California.....	12.8	16.3	7.7	11.4	9.0	6.7	8.8	10.1	-----	7.7	-----	-----	-----
Connecticut.....	4.4	5.0	12.6	8.6	8.6	3.7	8.6	9.6	-----	6.0	8.4	13.3	5.6
Florida.....	-----	-----	-----	-----	-----	-----	20.0	17.2	-----	-----	-----	-----	-----
White.....	-----	-----	-----	-----	-----	-----	19.4	20.1	-----	-----	-----	-----	-----
Colored.....	-----	-----	-----	-----	-----	-----	21.3	11.0	-----	-----	-----	-----	-----
Georgia.....	14.8	19.5	13.3	13.2	18.0	22.0	18.7	15.6	18.4	-----	-----	-----	-----
Indiana.....	10.7	12.2	15.3	10.2	11.9	10.7	7.4	9.2	13.7	8.9	9.7	10.6	9.1
Iowa.....	10.5	8.2	-----	8.2	8.2	11.0	7.3	7.3	7.3	9.7	-----	-----	-----
Kansas.....	10.6	11.5	16.6	12.2	12.2	5.3	7.1	8.6	-----	12.6	-----	-----	-----
Louisiana.....	25.6	21.1	16.8	21.7	25.4	25.0	19.3	21.2	-----	20.0	-----	-----	-----
White.....	25.1	16.8	10.6	12.1	17.7	16.4	16.8	18.3	-----	21.2	-----	-----	-----
Colored.....	26.5	29.1	28.3	39.4	39.4	40.7	24.0	28.5	-----	17.7	-----	-----	-----
Maryland.....	-----	-----	-----	11.7	14.6	7.5	7.3	6.0	6.6	-----	-----	-----	-----
White.....	-----	-----	-----	8.7	13.0	6.3	5.2	5.4	6.9	-----	-----	-----	-----
Colored.....	-----	-----	-----	27.3	22.8	14.1	18.2	9.4	4.6	-----	-----	-----	-----
Michigan.....	17.2	11.0	13.5	16.9	10.0	10.6	11.0	10.9	12.6	12.3	-----	-----	-----
Minnesota.....	8.5	5.2	7.2	4.8	5.2	4.5	2.9	4.5	8.7	8.7	-----	-----	-----
Montana.....	-----	-----	-----	-----	-----	-----	8.9	-----	-----	-----	-----	-----	-----
Nebraska.....	6.9	10.9	14.7	10.0	6.7	9.5	-----	-----	-----	6.9	-----	-----	-----
New Jersey.....	10.5	10.2	8.9	9.2	10.8	8.9	8.0	8.3	9.6	-----	-----	-----	-----
New York <sup>1</sup> .....	4.1	11.2	8.5	8.3	6.8	8.8	8.5	6.8	-----	8.7	11.5	7.9	10.0
South Dakota.....	15.6	6.7	6.9	13.4	11.7	8.6	13.4	6.9	5.0	10.0	-----	-----	-----
Tennessee.....	20.9	16.0	8.3	17.4	15.5	13.1	12.2	16.5	17.4	7.1	5.2	-----	-----
White.....	20.0	13.6	8.8	15.3	13.1	13.5	7.4	14.7	13.6	-----	-----	-----	-----
Colored.....	25.5	27.5	5.7	27.5	27.5	11.4	35.7	25.6	35.7	-----	-----	-----	-----
Virginia.....	15.1	17.8	13.7	13.3	18.3	9.0	10.1	6.6	13.7	18.3	-----	-----	-----
White.....	10.5	10.1	11.1	10.7	9.5	5.9	7.0	5.2	7.6	12.6	-----	-----	-----
Colored.....	27.3	38.0	20.5	19.9	23.2	17.1	18.2	10.3	29.8	33.1	-----	-----	-----

<sup>1</sup> Exclusive of New York City.

## COURT DECISION RELATING TO PUBLIC HEALTH

*Issuance by local registrar of certified copy of death certificate.*—(Alabama Supreme Court; *Scott v. Culpepper*, 125 So. 643; decided Jan. 16, 1930.) The statute relating to the registration of births and deaths provided for the filing of death certificates with the local registrar and the entry of same by such registrar in a record book. It was required that this record book, when filled, be delivered by the local registrar to the probate judge for keeping as a permanent local record. Original certificates of births and deaths for any one month were not required to be transmitted by the local registrar to the State registrar until the 10th of the following month. Certified copies of the records of births and deaths registered could be obtained from the State registrar.

Other statutes gave a citizen a right to inspect and take a copy of any public writing, except as otherwise expressly provided, and also set forth that every public officer having the custody of a public writing, which a citizen had a right to inspect, was bound to give him a certified copy on demand and on payment of the legal fees.

A death certificate was filed and entered on the record book of a local registrar. On the same date and after its record, a certified

copy was demanded and the legal fee therefor tendered. In mandamus proceedings to compel the local registrar to issue such certified copy, the trial court dismissed the petition on the theory that such copy should be obtained either from the State registrar or from the office of the probate judge. But the supreme court, on appeal, pointed out that there could be a considerable period of time during which the local registrar was sole custodian of certificates and the record book in his office the sole record thereof. The supreme court held a local registrar to be a public officer and the record made by such registrar to be a public writing, and decided that the petitioner was entitled to a certified copy from the local registrar, saying:

The death certificate entered on the record book of the local registrar was a public writing in the custody of such registrar as a public officer, subject to inspection by any citizen, and to which a certified copy is due to be given upon demand and the payment of the legal fee therefor.

### DEATHS DURING WEEK ENDED FEBRUARY 22, 1930

*Summary of information received by telegraph from industrial insurance companies for the week ended February 22, 1930, and corresponding week of 1929. (From the Weekly Health Index, February 26, 1930, issued by the Bureau of the Census, Department of Commerce)*

	Week ended Feb. 22, 1930	Corresponding week, 1929
Policies in force.....	75, 485, 684	73, 314, 879
Number of death claims.....	15, 322	14, 838
Death claims per 1,000 policies in force, annual rate.....	10. 6	10. 6

*Deaths from all causes in certain large cities of the United States during the week ended February 22, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929. (From the Weekly Health Index, February 26, 1930, issued by the Bureau of the Census, Department of Commerce)*

City	Week ended Feb. 22, 1930		Annual death rate per 1,000, corresponding week, 1929	Deaths under 1 year		Infant mortality rate, week ended Feb. 22, 1930 <sup>1</sup>
	Total deaths	Death rate <sup>1</sup>		Week ended Feb. 22, 1930	Corresponding week, 1929	
Total (62 cities).....	7, 961	14. 4	14. 5	785	803	72
Akron.....	42			4	6	37
Albany <sup>4</sup> .....	39	16. 9	15. 6	3	0	66
Atlanta.....	71	14. 5	18. 2	11	8	116
White.....	34			4	3	127
Colored.....	37	( <sup>9</sup> )	( <sup>9</sup> )	7	5	111
Baltimore <sup>4</sup> .....	240	15. 1	16. 5	19	21	65
White.....	185			12	15	52
Colored.....	55	( <sup>9</sup> )	( <sup>9</sup> )	7	6	113
Birmingham.....	67	15. 7	15. 0	7	10	65
White.....	31			3	4	46
Colored.....	36	( <sup>9</sup> )	( <sup>9</sup> )	4	6	95
Boston.....	260	17. 0	16. 2	28	30	79
Bridgeport.....	37			4	5	68

See footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended February 22, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929—Continued

City	Week ended Feb. 22, 1930		Annual death rate per 1,000, corresponding week, 1929	Deaths under 1 year		Infant mortality rate, week ended Feb. 22, 1930
	Total deaths	Death rate		Week ended Feb. 22, 1930	Corresponding week, 1929	
Buffalo.....	157	14.7	14.6	16	16	71
Cambridge.....	18	7.5	12.8	0	4	0
Camden.....	33	12.7	11.9	2	1	36
Canton.....	26	11.6	8.5	2	4	50
Chicago.....	812	13.4	12.7	84	61	74
Cincinnati.....	170			14	17	83
Cleveland.....	210	10.8	12.9	22	45	66
Columbus.....	77	13.4	16.6	7	7	68
Dallas.....	73	17.5	14.6	7	5	
White.....	61			6	4	
Colored.....	12	( <sup>5</sup> )	( <sup>5</sup> )	1	1	
Dayton.....	42	11.9	11.0	4	3	59
Denver.....	104	18.4	15.2	9	5	94
Des Moines.....	35	12.0	15.1	6	4	104
Detroit.....	413	15.6	13.1	70	56	106
Duluth.....	24	10.7	13.4	3	0	81
El Paso.....	34	15.0	19.0	3	13	
Erie.....	20			2	4	43
Fall River.....	44	17.1	15.1	6	5	137
Flint.....	26	9.1	14.7	8	4	93
Fort Worth.....	42	12.8	10.7	5	8	
White.....	31			3	3	
Colored.....	11	( <sup>5</sup> )	( <sup>5</sup> )	2	5	
Grand Rapids.....	37	11.7	11.4	2	2	30
Houston.....	87			3	10	
White.....	60			3	7	
Colored.....	27	( <sup>5</sup> )	( <sup>5</sup> )	0	3	
Indianapolis.....	128	17.5	15.1	5	7	37
White.....	109			5	6	43
Colored.....	19	( <sup>5</sup> )	( <sup>5</sup> )	0	1	0
Jersey City.....	86	13.8	16.5	3	14	26
Kansas City, Kans.....	37	16.3	19.0	6	4	142
White.....	25			4	4	106
Colored.....	12	( <sup>5</sup> )	( <sup>5</sup> )	2	0	435
Kansas City, Mo.....	115	15.3	16.4	6	11	47
Knoxville.....	27	13.4	8.4	3	2	70
White.....	20			2	2	52
Colored.....	7	( <sup>5</sup> )	( <sup>5</sup> )	1	0	247
Los Angeles.....	282			19	30	58
Louisville.....	91	14.4	16.8	6	9	52
White.....	67			3	8	30
Colored.....	24	( <sup>5</sup> )	( <sup>5</sup> )	3	1	217
Lowell.....	32			6	0	142
Lynn.....	24	11.9	13.8	2	2	51
Memphis.....	78	21.4	17.3	3	8	36
White.....	32			1	1	18
Colored.....	46	( <sup>5</sup> )	( <sup>5</sup> )	2	7	67
Minneapolis.....	91	10.4	13.2	10	15	65
Nashville.....	53	19.8	15.7	4	5	62
White.....	36			3	3	62
Colored.....	17	( <sup>5</sup> )	( <sup>5</sup> )	1	2	63
New Bedford.....	25			4	5	103
New Haven.....	56	15.5	10.5	3	6	58
New Orleans.....	162	19.7	24.2	10	20	58
White.....	84			4	10	35
Colored.....	78	( <sup>5</sup> )	( <sup>5</sup> )	6	10	101
New York.....	1,615	14.0	14.7	182	176	77
Bronx Borough.....	215	11.8	12.3	24	25	56
Brooklyn Borough.....	570	12.9	12.7	67	55	71
Manhattan Borough.....	637	19.0	20.2	74	69	121
Queens Borough.....	159	9.7	10.3	14	23	41
Richmond Borough.....	34	11.8	19.7	3	4	56
Newark, N. J.....	121	13.3	10.0	17	10	89
Oakland.....	50	9.5	14.3	4	6	48
Oklahoma City.....	49			8	8	157
Paterson.....	37	13.3	12.2	1	3	17
Philadelphia.....	598	15.1	14.0	45	52	67
Pittsburgh.....	217	16.8	16.4	31	16	114
Portland, Oreg.....	66			1	2	12
Providence.....	74	13.5	14.4	9	4	83

*Deaths from all causes in certain large cities of the United States during the week ended February 22, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929—Continued*

City	Week ended Feb. 22, 1930		Annual death rate per 1,000, corresponding week, 1929	Deaths under 1 year		Infant mortality rate, week ended Feb. 22, 1930
	Total deaths	Death rate		Week ended Feb. 22, 1930	Corresponding week, 1929	
Richmond.....	61	16.4	21.2	4	10	59
White.....	34			0	3	0
Colored.....	27	( <sup>1</sup> )	( <sup>1</sup> )	4	7	175
Rochester.....	100	15.9	14.8	5	11	44
St. Louis.....	249	15.3	16.8	15	16	49
St. Paul.....	46			2	5	20
Salt Lake City <sup>4</sup> .....	42	15.9	14.4	6	3	94
San Antonio.....	76	18.2	20.8	12	11	
San Diego.....	50			2	2	42
San Francisco.....	151	13.5	15.6	8	9	55
Schenectady.....	24	13.4	11.2	1	2	31
Seattle.....	84	11.4	11.4	3	6	30
Spokane.....	30	14.3	15.8	2	2	52
Springfield, Mass.....	44	15.3	15.3	5	1	79
Syracuse.....	52	13.6	16.0	5	3	62
Tacoma.....	26	12.3	12.3	3	2	77
Toledo.....	86	14.3	13.0	5	6	46
Trenton.....	42	15.8	16.1	5	5	93
Utica.....	34	17.0	16.0	4	1	114
Washington, D. C.....	165	15.6	15.2	22	14	128
White.....	105			16	7	138
Colored.....	60	( <sup>5</sup> )	( <sup>5</sup> )	6	7	106
Waterbury.....	25			5	3	128
Wilmington, Del.....	29	11.8	9.7	5	3	113
Worcester.....	70	18.5	16.9	9	7	117
Yonkers.....	20	8.6	12.9	1	5	24
Youngstown.....	32	9.6	9.9	1	4	16

<sup>1</sup> Annual rate per 1,000 population.

<sup>2</sup> Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.

<sup>3</sup> Data for 70 cities.

<sup>4</sup> Deaths for week ended Friday.

<sup>5</sup> In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans., 14; Knoxville, 15; Louisville, 17; Memphis, 33; Nashville, 30; New Orleans, 26; Richmond, 32; and Washington, D. C., 25.

# 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

### CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

Reports for Weeks Ended February 22, 1930, and February 23, 1929

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended February 22, 1930, and February 23, 1929*

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929
<b>New England States:</b>								
Maine.....	3	1	26	195	10	202	0	0
New Hampshire.....	1	2	4	40	36	13	0	0
Vermont.....	2	2	-----	17	7	13	0	0
Massachusetts.....	75	62	6	169	447	285	3	1
Rhode Island.....	18	14	-----	11	3	57	0	0
Connecticut.....	20	16	10	99	13	375	2	1
<b>Middle Atlantic States:</b>								
New York.....	130	237	139	126	575	834	17	36
New Jersey.....	86	107	15	52	445	194	7	5
Pennsylvania.....	161	115	-----	-----	781	1,199	14	10
<b>East North Central States:</b>								
Ohio.....	28	40	19	74	515	485	3	5
Indiana.....	38	21	-----	133	29	404	23	0
Illinois.....	171	129	25	228	674	833	6	17
Michigan.....	67	57	17	25	482	342	20	20
Wisconsin.....	15	21	21	96	951	621	5	6
<b>West North Central States:</b>								
Minnesota.....	13	11	-----	1	292	540	1	1
Iowa.....	12	20	-----	111	732	-----	2	2
Missouri.....	48	63	17	60	112	334	16	23
North Dakota.....	1	6	-----	-----	59	34	2	3
South Dakota.....	1	2	-----	2	107	68	1	0
Nebraska.....	24	17	-----	8	484	65	8	4
Kansas.....	11	17	7	70	437	315	3	0
<b>South Atlantic States:</b>								
Delaware.....	3	-----	-----	-----	21	11	0	0
Maryland <sup>1</sup> .....	25	16	35	402	16	104	1	1
District of Columbia.....	21	18	-----	28	15	8	0	0
West Virginia.....	4	16	28	140	58	195	2	0
North Carolina.....	37	36	36	-----	14	118	9	2
South Carolina.....	11	21	985	922	-----	1	3	0
Georgia.....	8	7	92	191	146	89	3	1
Florida.....	12	11	5	15	76	16	0	0

<sup>1</sup> New York City only.

<sup>2</sup> Week ended Friday.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended February 22, 1930, and February 23, 1929—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929
<b>East South Central States:</b>								
Kentucky.....		8		14		26	6	0
Tennessee.....	16	4	133	344	205	4	13	2
Alabama.....	27	44	120	891	167	177	3	3
Mississippi.....	16	4					22	0
<b>West South Central States:</b>								
Arkansas.....	5	7	80	653	9	57	2	1
Louisiana.....	9	29	38	107	118	84	4	0
Oklahoma <sup>1</sup> .....	5	17	175	437	92	4	4	7
Texas.....	39	32	292	321	143	86	1	3
<b>Mountain States:</b>								
Montana.....	1	4		5	25	116	0	0
Idaho.....	2	4		3	22	1	2	6
Wyoming.....	2	1		7	13	11	0	0
Colorado.....	12	16		28	170	4	3	1
New Mexico.....	22	11	5	3	110	6	1	0
Arizona.....	9	1	14	3	2	5	5	8
Utah <sup>2</sup> .....		4	1	5	160	1	5	10
<b>Pacific States:</b>								
Washington.....	14	17		20	193	135	5	2
Oregon.....	7	13	80	95	24	162	0	0
California.....	69	70	34	133	1, 151	47	9	13

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929
<b>New England States:</b>								
Maine.....	0	0	60	9	0	4	2	0
New Hampshire.....	0	0	19	5	0	0	0	0
Vermont.....	0	0	8	5	4	4	0	1
Massachusetts.....	1	0	256	240	0	0	2	3
Rhode Island.....	0	0	39	18	0	0	0	2
Connecticut.....	0	0	131	56	0	2	1	0
<b>Middle Atlantic States:</b>								
New York.....	2	3	461	479	1	0	16	17
New Jersey.....	1	1	223	134	0	0	0	0
Pennsylvania.....	0	0	546	332	0	0	18	12
<b>East North Central States:</b>								
Ohio.....	2	0	284	187	175	50	8	3
Indiana.....	0	0	201	227	144	35	2	14
Illinois.....	2	1	604	448	113	131	4	11
Michigan.....	1	0	305	304	62	16	3	6
Wisconsin.....	1	2	145	152	36	12	3	1
<b>West North Central States:</b>								
Minnesota.....	1	0	131	139	5	5	3	3
Iowa.....	0	1	103	225	80	54	1	4
Missouri.....	0	0	135	119	76	50	1	3
North Dakota.....	1	0	28	44	15	0	0	0
South Dakota.....	0	0	23	21	39	22	0	0
Nebraska.....	0	0	103	105	67	30	0	1
Kansas.....	0	0	158	189	68	75	3	3
<b>South Atlantic States:</b>								
Delaware.....	1	0	16	1	0	0	0	0
Maryland <sup>2</sup> .....	0	1	113	67	0	0	2	3
District of Columbia.....	0	0	24	25	0	0	0	0
West Virginia.....	0	0	45	24	15	9	5	8
North Carolina.....	1	2	56	46	16	19	2	2
South Carolina.....	0	0	12	8	1	3	16	3
Georgia.....	1	0	6	11	0	3	1	0
Florida.....	0	0	8	5	1	0	1	4

<sup>1</sup> Week ended Friday.

<sup>2</sup> Figures for 1930 are exclusive of Oklahoma City and Tulsa and for 1929 are exclusive of Oklahoma City only.

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended February 22, 1930, and February 23, 1929—Continued*

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929	Week ended Feb. 22, 1930	Week ended Feb. 23, 1929
<b>East South Central States:</b>								
Kentucky.....	0	0	62	55	14	21	0	0
Tennessee.....	1	1	22	34	15	2	6	4
Alabama.....	1	4	15	26	13	4	1	13
Mississippi.....	0	1	55	11	2	2	3	2
<b>West South Central States:</b>								
Arkansas.....	0	0	17	15	14	5	5	6
Louisiana.....	0	1	20	43	11	1	12	4
Oklahoma <sup>1</sup> .....	0	0	21	34	128	64	7	2
Texas.....	0	1	43	53	118	51	9	5
<b>Mountain States:</b>								
Montana.....	0	0	29	30	2	39	2	0
Idaho.....	0	0	5	8	2	24	1	2
Wyoming.....	0	0	15	19	16	4	0	0
Colorado.....	0	1	23	17	24	17	0	0
New Mexico.....	0	0	26	9	2	0	1	2
Arizona.....	0	0	9	3	18	1	10	2
Utah <sup>2</sup> .....	0	0	6	5	1	3	1	0
<b>Pacific States:</b>								
Washington.....	0	1	50	26	82	80	14	0
Oregon.....	0	0	58	62	28	56	1	2
California.....	0	2	263	391	97	65	7	4

<sup>1</sup> Week ended Friday.

<sup>2</sup> Figures for 1930 are exclusive of Oklahoma City and Tulsa and for 1929 are exclusive of Oklahoma City only.

### SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week:

State	Menin- gococ- cus menin- gitis	Diph- theria	Influa- enza	Ma- laria	Meas- les	Peilleg- ra	Polio- mye- litis	Scarlet fever	Small- pox	Ty- phoid fever
<i>December, 1929</i>										
Colorado.....	16	51			75		3	180	105	9
Hawaii Territory.....	3	30	12		23		0	2	0	12
<i>January, 1930</i>										
Alabama.....	10	132	691	89	80	21	4	156	51	25
Colorado.....	15	24	5		235		1	144	120	7
Illinois.....	61	858	227	10	1,616		4	2,442	625	45
Louisiana.....	20	161	126	22	172	7	0	89	27	44
Maryland.....	7	117	189	1	45	0	1	378	0	22
Massachusetts.....	20	563	49	1	1,153	2	4	1,497	0	24
Michigan.....	117	418	24	1	1,264	1	2	1,617	381	11
Minnesota.....	12	110	5	2	893		1	581	35	21
Missouri.....	53	174	146	22	219		0	416	210	17
Nevada.....	3				33		0	22	0	
New Hampshire.....		18	27				0	97	0	
New Mexico.....	6	49	11	3	368	2	3	45	12	7
New Jersey.....	25	529	67	1	932		1	1,138	0	13
New York.....	70	649	6	0	1,893		5	2,075	58	59
North Carolina.....	18	259	149		71	60	1	319	151	5
Ohio.....	45	306	111	2	2,992		6	1,350	1,068	33
Oklahoma <sup>1</sup> .....	11	136	697	41	307	7	0	166	281	27
Pennsylvania.....	39	874			2,664		1	2,077	8	59
Rhode Island.....	3	75	16		7		0	147	0	2
West Virginia.....	9	60	138		325		2	148	92	26

<sup>1</sup> Exclusive of Oklahoma City and Tulsa.

December, 1929

	Cases
Chicken pox:	
Colorado.....	549
Hawaii Territory.....	30
Conjunctivitis, infectious:	
Hawaii Territory.....	87
Dysentery (amebic):	
Hawaii Territory.....	1
German measles:	
Colorado.....	2
Impetigo contagiosa:	
Hawaii Territory.....	7
Leprosy:	
Hawaii Territory.....	5
Lethargic encephalitis:	
Colorado.....	1
Mumps:	
Colorado.....	115
Hawaii Territory.....	37
Tetanus:	
Colorado.....	1
Hawaii Territory.....	3
Trachoma:	
Hawaii Territory.....	434
Whooping cough:	
Colorado.....	106
Hawaii Territory.....	7

January, 1930

Actinomycosis:	
Illinois.....	1
Anthrax:	
New York.....	2
Pennsylvania.....	1
Botulism:	
Colorado.....	3
Chicken pox:	
Alabama.....	331
Colorado.....	361
Illinois.....	2,180
Louisiana.....	67
Maryland.....	452
Massachusetts.....	1,697
Michigan.....	1,609
Minnesota.....	758
Missouri.....	306
New Jersey.....	1,632
New Mexico.....	114
New York.....	3,515
North Carolina.....	1,088
Ohio.....	2,475
Oklahoma <sup>1</sup> .....	71
Pennsylvania.....	4,065
Rhode Island.....	128
West Virginia.....	216
Conjunctivitis:	
New Mexico.....	3
Oklahoma <sup>1</sup> .....	3
Diarrhea:	
Maryland.....	2
Diarrhea and enteritis (under 2 years):	
Ohio.....	21

<sup>1</sup> Exclusive of Oklahoma City and Tulsa.

	Cases
Dysentery:	
Illinois.....	9
Maryland.....	3
Minnesota (amebic).....	3
New Jersey.....	1
New York.....	4
Oklahoma <sup>1</sup> .....	2
German measles:	
Colorado.....	12
Illinois.....	68
Maryland.....	6
Massachusetts.....	85
New Jersey.....	207
New Mexico.....	6
New York.....	331
North Carolina.....	19
Ohio.....	17
Pennsylvania.....	193
Rhode Island.....	18
Hookworm disease:	
Louisiana.....	11
Impetigo contagiosa:	
Colorado.....	1
Maryland.....	4
Lead poisoning:	
Illinois.....	1
New Jersey.....	4
Ohio.....	27
Leprosy:	
Michigan.....	1
Lethargic encephalitis:	
Alabama.....	1
Illinois.....	6
Louisiana.....	2
Massachusetts.....	8
Michigan.....	3
Minnesota.....	1
New York.....	9
Ohio.....	6
Pennsylvania.....	2
Mumps:	
Alabama.....	42
Colorado.....	185
Illinois.....	655
Louisiana.....	12
Maryland.....	84
Massachusetts.....	1,005
Michigan.....	514
Missouri.....	91
Nevada.....	1
New Mexico.....	132
New York.....	2,103
Ohio.....	582
Oklahoma <sup>1</sup> .....	84
Pennsylvania.....	1,305
Rhode Island.....	3
West Virginia.....	8
Ophthalmia neonatorum:	
Illinois.....	43
Maryland.....	2
Massachusetts.....	134
Missouri.....	3



Ophthalmia neonatorum—Continued.	Cases	Trachoma—Continued.	Cases
New Jersey.....	12	Maryland.....	5
New York.....	8	Missouri.....	18
North Carolina.....	3	New York.....	1
Ohio.....	130	Ohio.....	8
Oklahoma <sup>1</sup> .....	1	Oklahoma <sup>1</sup> .....	20
Pennsylvania.....	7	Trichinosis:	
Paratyphoid fever:		Maryland.....	1
Illinois.....	1	New Jersey.....	1
New Jersey.....	1	Tularaemia:	
New York.....	12	Alabama.....	2
Psittacosis:		Illinois.....	19
Illinois.....	2	Louisiana.....	1
Maryland.....	14	Maryland.....	6
Pennsylvania.....	3	Minnesota.....	1
Puerperal septicemia:		Missouri.....	4
Illinois.....	5	North Carolina.....	3
New York.....	8	Ohio.....	9
Ohio.....	12	Pennsylvania.....	3
Pennsylvania.....	11	Typhus fever:	
Rabies in animals:		Alabama.....	1
Illinois.....	3	Undulant fever:	
Louisiana.....	13	Alabama.....	1
Maryland.....	3	Illinois.....	2
Missouri.....	19	Maryland.....	2
New York <sup>1</sup> .....	18	Massachusetts.....	3
North Carolina.....	2	Minnesota.....	3
Rhode Island.....	5	Missouri.....	5
Rabies in man:		New Mexico.....	1
North Carolina.....	2	New York.....	9
Scabies:		Ohio.....	10
Maryland.....	5	Pennsylvania.....	1
Oklahoma.....	2	Vincent's angina:	
Septic sore throat:		Colorado.....	1
Illinois.....	15	Illinois.....	1
Louisiana.....	4	Maryland.....	6
Maryland.....	11	New York.....	87
Massachusetts.....	45	Whooping cough:	
Michigan.....	60	Alabama.....	231
Missouri.....	14	Colorado.....	66
New Mexico.....	1	Illinois.....	1,096
New York.....	31	Louisiana.....	21
North Carolina.....	11	Maryland.....	146
Ohio.....	52	Massachusetts.....	1,710
Oklahoma <sup>1</sup> .....	19	Michigan.....	820
Rhode Island.....	5	Minnesota.....	174
Tetanus:		Missouri.....	140
Illinois.....	5	New Jersey.....	789
Louisiana.....	1	New Mexico.....	20
Maryland.....	5	New York.....	2,171
Missouri.....	1	North Carolina.....	1,198
New York.....	5	Ohio.....	969
Pennsylvania.....	4	Oklahoma <sup>1</sup> .....	49
Trachoma:		Pennsylvania.....	1,726
Illinois.....	3	Rhode Island.....	105
Louisiana.....	2	West Virginia.....	270

<sup>1</sup> Exclusive of Oklahoma City and Tulsa.<sup>1</sup> Exclusive of New York City.

**GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES**

The 96 cities reporting cases used in the following table are situated in all parts of the country and have an estimated aggregate population of more than 31,630,000. The estimated population of the 89 cities reporting deaths is more than 30,035,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

*Weeks ended February 15, 1930, and February 16, 1929*

	1930	1929	Estimated expectancy
<i>Cases reported</i>			
<b>Diphtheria:</b>			
46 States.....	1,394	1,568	-----
96 cities.....	587	733	969
<b>Measles:</b>			
43 States.....	9,890	9,502	-----
96 cities.....	2,556	2,451	-----
<b>Meningococcus meningitis:</b>			
47 States.....	281	255	-----
96 cities.....	100	136	-----
<b>Poliomyelitis:</b>			
47 States.....	23	17	-----
<b>Scarlet fever:</b>			
46 States.....	5,142	5,230	-----
96 cities.....	1,891	1,672	1,690
<b>Smallpox:</b>			
46 States.....	1,615	979	-----
96 cities.....	164	48	63
<b>Typhoid fever:</b>			
46 States.....	187	119	-----
96 cities.....	33	30	28
<i>Deaths reported</i>			
<b>Influenza and pneumonia:</b>			
89 cities.....	1,116	1,543	-----
<b>Smallpox:</b>			
89 cities.....	0	0	-----

## City reports for week ended February 15, 1930

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence the number of cases of the disease under consideration that may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding weeks of the preceding years. When the reports include several epidemics, or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If the reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1921 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviation from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases, reported	Cases reported	Deaths reported			
<b>NEW ENGLAND</b>								
Maine:								
Portland.....	14	1	0	1	0	0	20	1
New Hampshire:								
Concord.....	0	1	0		0	0	0	2
Manchester.....	0	1	0		0	0	0	1
Nashua.....	1	0	0		0	0	0	0
Vermont:								
Barre.....	0	0	0		0	4	0	0
Burlington.....	2	0	1		0	0	0	0
Massachusetts:								
Boston.....	67	46	21	4	0	104	82	40
Fall River.....	10	4	4	1	1	2	0	1
Springfield.....	8	4	5	1	1	0	3	5
Worcester.....	7	3	1		0	82	0	1
Rhode Island:								
Pawtucket.....	10	1	0		0	0	0	0
Providence.....	2	9	8		0	0	0	10
Connecticut:								
Bridgeport.....	2	7	1	3	0	0	0	5
Hartford.....	8	7	3	1	0	1	1	8
New Haven.....	73	1	0	1	0	2	19	7
<b>MIDDLE ATLANTIC</b>								
New York:								
Buffalo.....	18	14	8		2	3	2	31
New York.....	208	225	91	42	12	167	142	217
Rochester.....	15	9	0	2	0	5	1	7
Syracuse.....	26	3	0		1	0	47	9
New Jersey:								
Camden.....	3	6	5	1	1	2	0	5
Newark.....	65	17	18	10	0	134	10	17
Trenton.....	11	2	2		0	26	0	8
Pennsylvania:								
Philadelphia.....	103	73	25	9	8	54	51	85
Pittsburgh.....	28	22	22	2	7	77	5	40
Reading.....	21	2	2		0	1	3	3
Scranton.....	4	4	3		0	1	0	0
<b>EAST NORTH CENTRAL</b>								
Ohio:								
Cincinnati.....	17	10	2		1	1	0	14
Cleveland.....	120	33	15	23	3	4	35	20
Columbus.....	8	4	0	3	3	16	0	8
Toledo.....	49	7	2	2	2	264	8	7
Indiana:								
Fort Wayne.....	5	3	1		0	0	0	3
Indianapolis.....	17	8	4		0	8	2	14
South Bend.....	11	1	0		0	0	0	2
Terre Haute.....	4	1	2		0	0	0	4
Illinois:								
Chicago.....	114	100	119	10	13	17	55	78
Springfield.....	11	1	0	6	3	0	3	2

City reports for week ended February 15, 1930—Continued

Division, State, and city	Chick- en pox, cases re- ported	Diphtheria		Influenza		Meas- les, cases re- ported	Mumps, cases re- ported	Pneu- monia, deaths re- ported
		Cases, esti- mated expect- ancy	Cases, re- ported	Cases re- ported	Deaths re- ported			
<b>EAST NORTH CENTRAL—CON.</b>								
<b>Michigan:</b>								
Detroit.....	53	53	20	13	3	315	27	40
Flint.....	14	3	1		0	5	0	4
Grand Rapids.....	8	2	0		1	1	1	2
<b>Wisconsin:</b>								
Kenosha.....	5	1	0		0	0	1	0
Madison.....	7	0	0			90	1	
Milwaukee.....	195	19	0	1	1	23	46	11
Racine.....	3	3	0		0	1	2	2
Superior.....	0	0	0		0	13	0	2
<b>WEST NORTH CENTRAL</b>								
<b>Minnesota:</b>								
Duluth.....	2	0	0		0	64	1	2
Minneapolis.....	41	17	1		0	22	19	7
St. Paul.....	25	9	1		2	7	11	7
<b>Iowa:</b>								
Davenport.....	0	0	0			0	2	
Des Moines.....	0	3	2			0	0	
Sioux City.....	9	1	0			2	0	
Waterloo.....	14	1	2			176	0	
<b>Missouri:</b>								
Kansas City.....	0	6	0		1	4	2	11
St. Joseph.....	1	2	1		0	1	0	3
St. Louis.....	23	46	33	1		2	27	
<b>North Dakota:</b>								
Fargo.....	6	1	0		0	0	6	1
Grand Forks.....	1	0	0			0	0	
<b>South Dakota:</b>								
Aberdeen.....	6	0	0			0	1	
<b>Nebraska:</b>								
Omaha.....	12	4	17		0	56	1	0
<b>Kansas:</b>								
Topeka.....	18	2	1	1	1	79	6	2
Wichita.....	23	4	0		0	5	0	4
<b>SOUTH ATLANTIC</b>								
<b>Delaware:</b>								
Wilmington.....	2	2	1		0	0	0	6
<b>Maryland:</b>								
Baltimore.....	120	28	17	28	2	6	7	30
Cumberland.....	0	0	0		1	0	0	1
Fredrick.....	0	1	0		0	0	0	1
<b>District of Columbia:</b>								
Washington.....	19	21	14	1	0	9	0	18
<b>Virginia:</b>								
Lynchburg.....	9	1	2		1	122	12	3
Norfolk.....	5	2	5		0	2	23	5
Richmond.....	7	4	6		3	0	1	8
Roanoke.....	0	1	4		0	5	1	5
<b>West Virginia:</b>								
Charleston.....	15	0	0		0	3	0	0
Wheeling.....	1	1	0		0	1	0	1
<b>North Carolina:</b>								
Raleigh.....	2	1	0		0	0	0	3
Wilmington.....	5	0	0		0	1	0	2
Winston-Salem.....	10	1	2	3	1	1	17	5
<b>South Carolina:</b>								
Charleston.....	3	0	0	31	1	0	6	1
Columbia.....	11	1	0		0	0	6	4
<b>Georgia:</b>								
Atlanta.....	8	3	2	43	5	5	15	13
Brunswick.....	0	1	0		0	0	3	1
Savannah.....	0	0	0	2	2	0	0	4
<b>Florida:</b>								
Miami.....	7	1	4		0	1	1	2
St. Petersburg.....		0			0			1
Tampa.....	10	2	3		0	14	8	1

## City reports for week ended February 15, 1930—Continued

Division, State, and city	Chick- en pox, cases re- ported	Diphtheria		Influenza		Meas- les, cases re- ported	Mumps, cases re- ported	Pneu- monia, deaths re- ported
		Cases, esti- mated expect- ancy	Cases, re- ported	Cases re- ported	Deaths re- ported			
<b>EAST SOUTH CENTRAL</b>								
Kentucky:								
Covington.....	1	1	2	0	0	0	0	2
Tennessee:								
Memphis.....	11	3	0	5	0	28	0	8
Nashville.....	1	1	1	1	0	0	0	13
Alabama:								
Birmingham.....	3	3						
Mobile.....	1	1	2	3	0	3	0	1
Montgomery.....	28	1	1			34	0	
<b>WEST SOUTH CENTRAL</b>								
Arkansas:								
Fort Smith.....	0	0	0			1	0	
Little Rock.....	4	1	0	0	0	0	1	5
Louisiana:								
New Orleans.....	1	13	12	8	9	70	0	22
Shreveport.....	3	0	0	0	0	0	6	9
Oklahoma:								
Oklahoma City.....	1	3	1	3	3	2	0	6
Tulsa.....	11	1	5			181	0	
Texas:								
Dallas.....	10	6	13	2	1	127	3	10
Fort Worth.....	26	2	2		0	0	0	0
Galveston.....	1	1	0		0	0	0	3
Houston.....	4	5	8		0	0	1	13
San Antonio.....	1	3	6	1	9	1	0	10
<b>MOUNTAIN</b>								
Montana:								
Billings.....	0	0	0	0	0	0	9	1
Great Falls.....	1	1	0	0	0	0	20	0
Helena.....	0	0	0	0	0	0	31	0
Missoula.....	0	1	0	0	0	1	0	2
Idaho:								
Boise.....	0	0	0	0	0	0	0	2
Colorado:								
Denver.....		12						
Pueblo.....	6	1	0	0	0	0	29	2
New Mexico:								
Albuquerque.....	5	0	2	0	0	0	4	1
Arizona:								
Phoenix.....	2	0	2	0	1	3	3	3
Utah:								
Salt Lake City.....	20	3	0	1	52	16	3	3
Nevada:								
Reno.....	0	0	0	0	0	0	0	1
<b>PACIFIC</b>								
Washington:								
Seattle.....	47	5	2			59	67	
Spokane.....	19	3	2	3		0	0	
Tacoma.....	24	1	2		0	1	0	2
Oregon:								
Portland.....	18	8	6	4	1	2	15	10
Salem.....	5	0	0	1		1	12	
California:								
Los Angeles.....	94	41	13	40	4	84	34	26
Sacramento.....	4	2	0		0	3	39	4
San Francisco.....	47	16	18	2	3	467	81	11

City reports for week ended February 15, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
<b>NEW ENGLAND</b>											
<b>Maine:</b>											
Portland	3	6	0	0	0	1	0	0	0	0	21
<b>New Hampshire:</b>											
Concord	0	0	0	0	0	0	0	0	0	0	11
Manchester	3	0	0	0	0	1	0	0	0	0	18
Nashua	1	1	0	0	0	0	0	0	0	0	
<b>Vermont:</b>											
Barre	0	0	0	3	0	2	0	0	0	1	4
Burlington	1	0	0	0	0	0	0	0	0	1	2
<b>Massachusetts:</b>											
Boston	84	78	0	0	0	12	1	0	0	70	262
Fall River	4	2	0	0	0	3	0	0	0	15	30
Springfield	10	4	0	0	0	0	0	0	0	21	39
Worcester	10	10	0	0	0	1	0	1	0	9	75
<b>Rhode Island:</b>											
Pawtucket	2	1	0	0	0	0	0	0	0	1	11
Providence	12	19	0	0	0	2	0	0	0	32	73
<b>Connecticut:</b>											
Bridgeport	14	15	0	0	0	4	0	0	0	0	42
Hartford	5	7	0	0	0	3	0	0	0	2	55
New Haven	11	16	0	0	0	0	0	0	0	12	39
<b>MIDDLE ATLANTIC</b>											
<b>New York:</b>											
Buffalo	30	30	0	0	0	6	1	0	0	8	141
New York	343	226	0	0	0	100	7	11	0	54	1,606
Rochester	11	18	0	0	0	2	0	0	0	4	78
Syracuse	15	30	0	0	0	0	0	0	0	30	51
<b>New Jersey:</b>											
Camden	7	6	0	0	0	1	1	0	0	1	29
Newark	38	49	0	0	0	8	1	0	0	29	140
Trenton	6	12	0	0	0	5	0	1	0	3	54
<b>Pennsylvania:</b>											
Philadelphia	103	118	0	0	0	33	2	0	0	33	553
Pittsburgh	41	24	0	0	0	11	0	1	0	43	217
Reading	7	2	0	0	0	0	0	0	0	25	30
Scranton	4	4	0	0	0	0	0	0	0	1	
<b>EAST NORTH CENTRAL</b>											
<b>Ohio:</b>											
Cincinnati	21	35	1	0	0	7	0	0	0	7	127
Cleveland	50	75	1	0	0	18	1	1	0	46	216
Columbus	11	8	1	8	0	8	0	0	0	4	70
Toledo	13	3	0	2	0	10	0	1	0	2	85
<b>Indiana:</b>											
Fort Wayne	5	4	0	11	0	0	0	2	0	2	29
Indianapolis	13	27	8	4	0	6	0	0	0	4	
South Bend	3	9	1	1	0	1	0	0	0	0	20
Terre Haute	3	1	0	1	0	0	0	0	0	0	23
<b>Illinois:</b>											
Chicago	137	304	3	2	0	45	3	0	0	66	771
Springfield	4	0	0	2	0	0	1	0	0	3	29
<b>Michigan:</b>											
Detroit	113	140	2	11	0	25	0	1	0	71	308
Flint	14	20	0	12	0	4	1	0	0	9	32
Grand Rapids	13	16	0	0	0	0	0	0	0	4	44
<b>Wisconsin:</b>											
Kenosha	2	13	1	0	0	0	0	0	0	4	10
Madison	5	6	0	1	0	0	0	0	0	20	
Milwaukee	40	38	1	1	0	11	0	1	0	8	120
Racine	5	5	0	0	0	1	0	0	0	17	22
Superior	4	4	0	0	0	0	0	0	0	0	10
<b>WEST NORTH CENTRAL</b>											
<b>Minnesota:</b>											
Duluth	10	1	0	2	0	0	0	0	0	4	20
Minneapolis	59	15	4	0	0	2	0	1	0	11	91
St. Paul	36	23	1	0	0	5	0	0	0	18	60

## City reports for week ended February 15, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culo- sis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths, all causes
	Cases, esti- mated expect- ancy	Cases re- ported	Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		
<b>WEST NORTH CENTRAL—continued</b>											
<b>Iowa:</b>											
Davenport.....	2	0	1	26	-----	0	0	-----	0	-----	-----
Des Moines.....	9	18	2	4	-----	0	0	-----	0	-----	31
Sioux City.....	1	6	0	1	-----	0	0	-----	3	-----	-----
Waterloo.....	2	0	1	12	-----	0	0	-----	0	-----	-----
<b>Missouri:</b>											
Kansas City.....	18	41	2	0	0	10	0	1	0	0	7
St. Joseph.....	3	2	0	1	0	2	0	0	0	0	0
St. Louis.....	47	44	2	4	0	12	1	2	0	19	265
<b>North Dakota:</b>											
Fargo.....	2	2	0	0	0	0	0	0	0	7	2
Grand Forks.....	1	4	0	2	-----	-----	0	0	-----	0	-----
<b>South Dakota:</b>											
Aberdeen.....	2	0	0	1	-----	-----	0	0	-----	2	-----
<b>Nebraska:</b>											
Omaha.....	5	6	2	2	0	0	0	1	0	1	59
<b>Kansas:</b>											
Topeka.....	2	4	1	2	0	1	0	0	0	11	16
Wichita.....	6	27	1	1	0	1	0	0	0	15	35
<b>SOUTH ATLANTIC</b>											
<b>Delaware:</b>											
Wilmington.....	5	8	0	0	0	2	0	0	0	3	48
<b>Maryland:</b>											
Baltimore.....	35	55	0	0	0	16	1	2	0	11	238
Cumberland.....	1	1	0	0	0	0	0	0	0	0	13
Frederick.....	0	0	0	0	0	0	0	0	0	0	3
<b>District of Columbia:</b>											
Washington.....	26	22	1	0	0	11	1	0	0	14	149
<b>Virginia:</b>											
Lynchburg.....	0	2	0	0	0	0	0	0	0	2	13
Norfolk.....	3	4	0	0	0	1	0	0	0	6	-----
Richmond.....	4	10	0	0	0	4	0	0	0	0	55
Roanoke.....	1	2	0	0	0	0	0	0	0	0	27
<b>West Virginia:</b>											
Charleston.....	2	1	0	1	0	1	0	1	0	8	9
Wheeling.....	2	0	0	0	0	1	0	0	0	1	22
<b>North Carolina:</b>											
Raleigh.....	1	1	0	2	0	1	0	0	0	0	33
Wilmington.....	0	0	0	0	0	0	0	0	0	3	11
Winston-Salem.....	1	5	0	0	0	2	0	0	0	8	21
<b>South Carolina:</b>											
Charleston.....	1	0	0	0	0	1	0	0	0	4	25
Columbia.....	0	0	0	0	0	0	0	0	0	19	13
<b>Georgia:</b>											
Atlanta.....	5	16	4	0	0	14	0	1	0	0	109
Brunswick.....	0	0	0	0	0	0	0	0	0	0	5
Savannah.....	1	0	0	0	0	3	0	0	0	0	29
<b>Florida:</b>											
Miami.....	3	0	0	0	0	0	0	1	0	1	35
St. Petersburg.....	0	0	0	0	0	0	0	0	0	0	19
Tampa.....	0	3	0	0	0	1	1	0	0	0	24
<b>EAST SOUTH CENTRAL</b>											
<b>Kentucky:</b>											
Covington.....	2	6	0	4	0	0	0	0	0	0	15
<b>Tennessee:</b>											
Memphis.....	7	12	1	0	0	3	0	0	0	7	101
Nashville.....	3	-----	0	0	0	4	0	1	2	2	46
<b>Alabama:</b>											
Birmingham.....	2	-----	4	-----	-----	-----	-----	-----	-----	-----	-----
Mobile.....	0	0	0	0	0	5	0	0	0	1	26
Montgomery.....	1	5	1	0	-----	-----	0	0	-----	2	-----
<b>WEST SOUTH CENTRAL</b>											
<b>Arkansas:</b>											
Fort Smith.....	1	1	0	0	-----	-----	0	0	-----	0	-----
Little Rock.....	2	1	0	0	0	2	0	0	0	0	-----
<b>Louisiana:</b>											
New Orleans.....	7	10	0	0	0	12	3	1	0	0	181
Shreveport.....	0	0	0	6	0	0	0	0	0	0	38

City reports for week ended February 15, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
<b>WEST SOUTH CENTRAL—continued</b>											
Oklahoma:											
Oklahoma City	2	5	2	10	0	1	0	0	0	0	45
Tulsa	2	2	1	5			0	0		15	
Texas:											
Dallas	4	12	3	6	0	5	0	0	0	3	65
Fort Worth	1	8	3	0	0	0	0	0	0	0	
Galveston	0	0	0	0	0	0	0	0	0	0	14
Houston	2	5	3	8	0	1	0	1	0	0	72
San Antonio	2	2	0	8	0	8	0	0	0	0	79
<b>MOUNTAIN</b>											
Montana:											
Billings	0	2	1	0	0	0	0	0	0	0	3
Great Falls	2	20	0	0	0	0	0	0	0	0	6
Helena	0	0	0	0	0	0	0	0	0	1	1
Missoula	0	0	0	2	0	0	0	0	0	0	4
Idaho:											
Boise	1	5	1	0	0	0	0	0	0	2	8
Colorado:											
Denver	13		0				0				
Pueblo	1	0	0	1	0	0	0	0	0	1	15
New Mexico:											
Albuquerque	1	1	0	0	0	4	0	1	0	0	12
Arizona:											
Phoenix	1	7	0	1	0	3	0	0	0	0	14
Utah:											
Salt Lake City	3	5	1	1	0	0	0	1	34	38	
Nevada:											
Reno	0	3	0	0	0	0	0	0	0	0	3
<b>PACIFIC</b>											
Washington:											
Seattle	11	34	3	5			1	0		6	
Spokane	7	0	9	22			0	0		21	
Tacoma	2	7	3	10	0	0	0	0	0	5	31
Oregon:											
Portland	7	3	15	8	0	3	0	1	0	8	94
Salem	0	0	1	1	0	0	0	0	0	8	
California:											
Los Angeles	40	46	2	2	0	30	1	0	0	20	265
Sacramento	2	5	0	2	0	3	0	0	0	0	22
San Francisco	22	41	1	3	0	9	0	2	0	1	171

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
<b>NEW ENGLAND</b>									
Massachusetts:									
Boston	2	0	1	0	0	0	0	0	0
Springfield	1	0	0	0	0	0	0	0	0
Rhode Island:									
Providence	0	1	1	0	0	0	0	0	0
<b>MIDDLE ATLANTIC</b>									
New York:									
New York	14	7	1	0	0	0	1	0	0
Rochester	0	0	0	0	0	0	0	1	0
Syracuse	1	0	0	0	0	0	0	0	0
New Jersey:									
Newark	2	0	0	0	0	0	0	0	0
Pennsylvania:									
Philadelphia	3	3	1	0	0	0	0	0	0
Pittsburgh	0	1	0	0	0	0	0	0	0



## City reports for week ended February 15, 1930—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
<b>EAST NORTH CENTRAL</b>									
Ohio:									
Cincinnati.....	3	1	0	0	0	0	0	0	0
Cleveland.....	3	2	2	1	0	0	0	0	0
Indiana:									
Indianapolis.....	9	0	0	0	0	0	0	0	0
South Bend.....	1	0	0	0	0	0	0	0	0
Illinois:									
Chicago.....	5	6	0	0	0	0	1	3	0
Springfield.....	1	0	0	0	0	0	0	0	0
Michigan:									
Detroit.....	11	6	0	0	1	1	0	0	0
Flint.....	1	0	0	0	0	0	0	0	0
Grand Rapids.....	1	1	0	0	0	0	0	0	0
Wisconsin:									
Milwaukee.....	1	2	0	0	0	0	0	0	0
<b>WEST NORTH CENTRAL</b>									
Minnesota:									
Minneapolis.....	1	0	0	0	0	0	0	0	0
St. Paul.....	0	0	1	0	0	0	0	0	0
Missouri:									
Kansas City.....	11	7	0	0	0	0	0	0	0
St. Louis.....	6	4	0	0	0	0	0	0	0
Nebraska:									
Omaha.....	1	0	0	0	0	0	0	0	0
<b>SOUTH ATLANTIC</b>									
Maryland:									
Baltimore.....	0	0	0	1	0	0	0	0	0
District of Columbia:									
Washington.....	1	1	1	1	0	0	0	1	0
Virginia:									
Richmond.....	0	1	0	0	0	0	0	0	0
North Carolina:									
Raleigh.....	0	0	0	0	0	2	0	0	0
Winston-Salem.....	0	0	0	0	2	0	0	0	0
South Carolina:									
Charleston.....	0	0	0	0	3	0	0	0	0
Columbia.....	1	0	0	0	0	1	0	0	0
Georgia:									
Atlanta.....	8	3	0	0	1	1	0	0	0
Florida:									
Miami <sup>1</sup> .....	0	0	0	0	0	1	0	0	0
St. Petersburg.....	0	0	0	1	0	0	0	0	0
<b>EAST SOUTH CENTRAL</b>									
Tennessee:									
Memphis.....	2	3	0	0	0	0	0	0	0
Alabama:									
Mobile.....	1	1	0	0	0	0	0	0	0
<b>WEST SOUTH CENTRAL</b>									
Louisiana:									
New Orleans.....	1	1	0	0	0	0	0	0	0
Shreveport.....	0	0	0	0	0	1	0	0	0
Oklahoma:									
Oklahoma City.....	0	0	0	1	0	0	0	0	0
Tulsa.....	1	0	0	0	0	0	0	0	0
Texas:									
Galveston.....	0	0	0	0	0	1	0	0	0
<b>MOUNTAIN</b>									
New Mexico:									
Albuquerque.....	0	1	0	0	0	0	0	0	0
Utah:									
Salt Lake City.....	1	0	0	0	0	0	0	0	0
<b>PACIFIC</b>									
Washington:									
Seattle.....	2	0	0	0	0	0	0	0	0
Spokane.....	2	0	0	0	0	0	0	0	0
California:									
Los Angeles.....	1	2	0	1	0	0	0	0	0
Sacramento.....	1	1	0	0	0	0	0	0	0
San Francisco.....	1	1	0	0	0	0	0	0	0

<sup>1</sup> Typhus fever; 1 case at Miami, Fla.

The following table gives the rates per 100,000 population for 98 cities for the 5-week period ended February 15, 1930, compared with those for a like period ended February 16, 1929. The population figures used in computing the rates are approximate estimates, authoritative figures for many of the cities not being available. The 98 cities reporting cases have an estimated aggregate population of more than 32,000,000. The 91 cities reporting deaths have more than 30,500,000 estimated population.

Summary of weekly reports from cities, January 12 to February 15, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929<sup>1</sup>

DIPHTHERIA CASE RATES

	Week ended—									
	Jan. 13, 1930	Jan. 19, 1929	Jan. 25, 1930	Jan. 26, 1929	Feb. 1, 1930	Feb. 2, 1929	Feb. 8, 1930	Feb. 9, 1929	Feb. 15, 1930	Feb. 16, 1929
98 cities.....	110	132	114	125	115	109	95	117	97	121
New England.....	122	177	146	200	128	108	112	117	95	130
Middle Atlantic.....	94	158	96	136	103	133	97	141	83	147
East North Central.....	127	107	145	122	140	106	103	113	115	115
West North Central.....	108	146	82	115	47	90	94	146	104	150
South Atlantic.....	103	99	106	79	106	107	70	67	93	73
East South Central.....	67	171	74	137	94	68	81	82	58	82
West South Central.....	205	76	157	114	232	95	168	114	146	114
Mountain.....	51	61	51	52	34	70	34	78	0	44
Pacific.....	94	104	92	92	68	65	43	68	87	77

MEASLES CASE RATES

98 cities.....	208	218	227	261	221	274	329	252	421	404
New England.....	157	700	210	667	323	514	305	561	432	541
Middle Atlantic.....	124	70	117	86	160	93	186	129	224	114
East North Central.....	152	303	137	381	168	418	172	66	253	761
West North Central.....	364	423	457	627	604	770	695	1,193	793	983
South Atlantic.....	167	84	157	84	287	103	245	133	306	135
East South Central.....	40	34	27	27	61	7	81	14	357	41
West South Central.....	400	11	624	34	314	34	695	34	743	50
Mountain.....	240	853	377	871	462	697	479	1,341	908	1,019
Pacific.....	676	56	730	75	124	99	1,200	135	1,450	164

SCARLET FEVER CASE RATES

98 cities.....	278	225	295	230	305	232	327	246	312	277
New England.....	363	294	419	317	321	303	479	305	350	373
Middle Atlantic.....	223	183	239	217	252	190	274	196	246	222
East North Central.....	398	258	379	262	420	280	432	318	438	340
West North Central.....	260	248	307	296	346	306	332	312	324	360
South Atlantic.....	198	122	176	114	205	131	203	146	231	157
East South Central.....	101	232	169	232	162	157	216	246	222	260
West South Central.....	134	183	105	99	78	145	138	232	116	255
Mountain.....	335	183	479	104	616	61	411	113	599	87
Pacific.....	276	377	402	258	367	350	338	304	314	323

<sup>1</sup> The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1930 and 1929, respectively.

<sup>2</sup> South Bend, Ind., not included.

<sup>3</sup> Denver, Colo., not included.

<sup>4</sup> Portland, Me., Buffalo, N. Y., St. Louis, Mo., Denver, Colo., and San Francisco, Calif., not included.

<sup>5</sup> Portland, Me., Kansas City, Mo., and Denver, Colo., not included.

<sup>6</sup> Birmingham, Ala., and Denver, Colo., not included.

<sup>7</sup> Portland, Me., not included.

<sup>8</sup> Buffalo, N. Y., not included.

<sup>9</sup> St. Louis, Mo., not included.

<sup>10</sup> Kansas City, Mo., not included.

<sup>11</sup> Birmingham, Ala., not included.

<sup>12</sup> San Francisco, Calif., not included.

Summary of weekly reports from cities, January 12 to February 15, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929—Continued

## SMALLPOX CASE RATES

	Week ended—									
	Jan. 18, 1930	Jan. 19, 1929	Jan. 25, 1930	Jan. 26, 1929	Feb. 1, 1930	Feb. 2, 1929	Feb. 8, 1930	Feb. 9, 1929	Feb. 15, 1930	Feb. 16, 1929
98 cities.....	33	27	26	8	33	7	30	5	27	8
New England.....	0	0	4	0	70	0	2	0	7	0
Middle Atlantic.....	0	0	1	0	0	0	0	0	0	0
East North Central.....	36	26	19	8	39	10	34	8	33	15
West North Central.....	121	13	70	2	53	8	69	2	47	0
South Atlantic.....	5	6	2	7	5	11	4	0	5	2
East South Central.....	0	7	0	14	13	7	0	0	11	0
West South Central.....	41	46	37	46	78	27	101	50	105	23
Mountain.....	51	17	34	61	86	78	34	26	68	70
Pacific.....	144	17	177	19	244	7	146	7	104	24

## TYPHOID FEVER CASE RATES

	6	24	34	4	45	4	4	5	5	5
98 cities.....	6	24	34	4	45	4	4	5	5	5
New England.....	4	4	0	2	70	2	70	2	2	4
Middle Atlantic.....	3	4	5	2	5	4	3	4	6	4
East North Central.....	3	13	3	4	3	1	5	3	3	2
West North Central.....	11	2	2	4	6	6	10	2	9	12
South Atlantic.....	5	6	7	2	7	7	11	6	7	6
East South Central.....	13	21	20	7	7	0	20	7	11	14
West South Central.....	7	8	4	23	4	8	7	27	7	11
Mountain.....	60	0	17	0	17	0	0	9	0	0
Pacific.....	5	2	2	10	20	7	2	7	5	7

## INFLUENZA DEATH RATES

	19	183	22	131	18	84	14	58	20	54
91 cities.....	19	183	22	131	18	84	14	58	20	54
New England.....	9	141	9	204	2	141	5	90	4	56
Middle Atlantic.....	15	152	14	134	16	83	11	58	15	44
East North Central.....	17	148	17	70	13	48	13	28	18	36
West North Central.....	27	123	18	69	18	45	10	51	12	33
South Atlantic.....	22	288	31	182	11	114	11	92	29	60
East South Central.....	44	948	59	619	59	288	37	127	11	224
West South Central.....	65	329	111	199	88	168	64	162	73	182
Mountain.....	26	157	0	70	17	35	17	78	17	37
Pacific.....	15	75	18	44	5	41	9	41	21	41

## PNEUMONIA DEATH RATES

	155	366	142	327	171	273	176	230	174	222
91 cities.....	155	366	142	327	171	273	176	230	174	222
New England.....	115	442	126	465	7	507	7	384	177	308
Middle Atlantic.....	167	446	135	454	165	360	100	298	202	254
East North Central.....	109	280	111	184	129	170	139	133	129	183
West North Central.....	207	241	148	189	160	189	10	146	186	109
South Atlantic.....	170	474	196	388	218	288	198	240	196	243
East South Central.....	162	455	221	358	272	209	256	194	11	263
West South Central.....	237	383	310	297	314	191	291	191	278	211
Mountain.....	249	200	171	157	205	148	274	235	188	244
Pacific.....	169	119	95	123	167	113	160	129	132	123

<sup>2</sup> South Bend, Ind., not included.

<sup>3</sup> Denver, Colo., not included.

<sup>4</sup> Portland, Me., Buffalo, N. Y., St. Louis, Mo., Denver, Colo., and San Francisco, Calif., not included.

<sup>5</sup> Portland, Me., Kansas City, Mo., and Denver, Colo., not included.

<sup>6</sup> Birmingham, Ala., and Denver, Colo., not included.

<sup>7</sup> Portland, Me., not included.

<sup>8</sup> Buffalo, N. Y., not included.

<sup>9</sup> St. Louis, Mo., not included.

<sup>10</sup> Kansas City, Mo., not included.

<sup>11</sup> Birmingham, Ala., not included.

<sup>12</sup> San Francisco, Calif., not included.

<sup>13</sup> Portland, Me., Buffalo, N. Y., Denver, Colo., and San Francisco, Calif., not included.

## FOREIGN AND INSULAR

### CANADA

*Provinces—Communicable diseases—Week ended February 8, 1930.*—The Department of Pensions and National Health reports cases of certain communicable diseases from eight Provinces of Canada for the week ended February 8, 1930, as follows:

Province	Cerebro-spinal fever	Influenza	Poliomyelitis	Small-pox	Typhoid fever
Prince Edward Island <sup>1</sup> .....					
Nova Scotia <sup>1</sup> .....					
Quebec.....	1		2		5
Ontario.....	1	20		12	2
Manitoba.....	1			3	1
Saskatchewan.....			1	22	
Alberta.....				8	1
British Columbia.....	1			3	5
Total.....	4	20	3	48	14

<sup>1</sup> No case of any disease included in the table was reported during the week.

*Quebec Province—Communicable diseases—Week ended February 15, 1930.*—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the week ended February 15, 1930, as follows:

Disease	Cases	Disease	Cases
Chicken pox.....	76	Poliomyelitis.....	1
Diphtheria.....	45	Puerperal fever.....	3
German measles.....	12	Scarlet fever.....	103
Influenza.....	6	Tuberculosis.....	48
Measles.....	212	Typhoid fever.....	10
Mumps.....	142	Whooping cough.....	121

### CHINA

*Meningitis.*—During the week ended February 15, 1930, 8 cases of meningitis were reported in Shanghai, China.

### DENMARK

*Communicable diseases—December, 1929.*—During the month of December, 1929, cases of communicable diseases were reported in Denmark as follows:

Disease	Cases	Disease	Cases
Broncho-pneumonia.....	1,567	Paratyphoid fever.....	6
Cerebrospinal meningitis.....	8	Pneumonia.....	292
Chicken pox.....	72	Poliomyelitis.....	13
Diphtheria and croup.....	619	Puerperal fever.....	8
Erysipelas.....	263	Scabies.....	896
German measles.....	9	Scarlet fever.....	193
Influenza.....	3,984	Tetanus.....	2
Jaundice.....	185	Tuberculosis.....	169
Lethargic encephalitis.....	11	Typhoid fever.....	3
Measles.....	588	Undulant fever <sup>1</sup> .....	37
Mumps.....	1,683	Whooping cough.....	825

<sup>1</sup> Reported from the State Serum Institute.

## MEXICO

*Meningitis.*—According to recent information, an epidemic of cerebrospinal meningitis is prevailing in northern Sonora. Cases to February 20, 1930, were reported in the following districts: Cananea 7, Hermosillo 4, Nogales 1, El Plomo 10, Cumtás 6, Sahuarita 9. Seven deaths had been reported. The State Government of Sonora has sent physicians and medicine to outlying regions to combat the disease.

## TRINIDAD (BRITISH WEST INDIES)

*Port of Spain—Vital statistics (comparative)—January, 1930.*—The following statistics for the month of January for the years 1926 to 1930 are taken from a report issued by the Public Health Department of Port of Spain, Trinidad:

### January

	1926	1927	1928	1929	1930
Number of births.....	164	154	159	177	157
Birth rate per 1,000 population.....	30.2	27.9	28.8	31.9	27.8
Number of deaths.....	140	126	141	119	125
Death rate per 1,000 population.....	25.8	22.8	25.5	21.4	23.9
Deaths under 1 year.....	28	22	25	16	35
Infant mortality rate per 1,000 births.....	170.7	141.6	157.0	90.4	222.9

## VIRGIN ISLANDS

*Communicable diseases—January, 1930.*—During the month of January, 1930, cases of certain communicable diseases were reported in the Virgin Islands, as follows:

St. Thomas and St. John:	Cases	St. Croix:	Cases
Gonorrhoea.....	2	Chicken pox.....	1
Malaria.....	1	Gonorrhoea.....	3
Syphilis.....	9	Syphilis.....	2
Tuberculosis (chronic pulmonary).....	1		













Place	Aug- ust, 1929	Sep- tem- ber, 1929	Octo- ber, 1929	No- vem- ber, 1929	De- cem- ber, 1929	Janu- ary, 1930	Place	Aug- ust, 1929	Sep- tem- ber, 1929	Octo- ber, 1929	No- vem- ber, 1929	De- cem- ber, 1929	Janu- ary, 1930
Turkey: Adalia.....						1							
Union of Socialist Soviet Republics: Caucasia.....						2							
Kashan.....						1							
Ural-Kirghis.....							P						
Union of South Africa: Cape Province.....													
Orange Free State.....													
On vessel: S. S. Chaban, at Port Said, from Jaffa.....						1							
Steamship at Porto Novo, from Lagos.....						1							
At Rio de Janeiro, Brazil, from Argentina.....													1
British East Africa (see also table above): Kenya.....	19	28	146	157	15		Madagascar—Continued.						
Uganda.....	866	740		179	105		Moramanga Province.....	C	2	5	27	4	
Ecuador: Guayaquil.....	6	7	12	14	17		Tamatave Province.....	D	2	4	27	3	
Plague-infected rats.....	1	3	4	3	6		Tananarive Province.....	D	36	141	141	103	
Greece (see also table above).....	4	8	5	9	13		Peru.....	D	34	135	132	93	
Indo-China (see also table above).....	2	2	5	2	1		Senegal: Baol I.....	D	2				
Madagascar (see also table above).....	9	1	2	1	10	4	Dakar I.....	C	32	42	45	23	5
Ambositra Province.....	48	195	203	182			Louga I.....	C	13	24	13	16	2
Antistrabe Province.....	46	182	193	163			Rufisque I.....	D	76	26	3	17	8
Itasy Province.....	9	9	2	42			Thies I.....	D	65	17	2	5	1
Majunga Province.....	9	9	2	33			Tlivoouane I.....	D	121	108	41		
Miarinarivo.....	1	1	13	17	6				70	64	24	1	
	1	5	5	10	10								
	2	2	11	12	5								3
	2	11	12	5	5								1
	11	11	11	5	5								4

1 Incomplete reports.



Prince Edward Island.....	2	1	7	22	16	1	2	4	1	6		
Quebec.....	3								1			
Montreal.....									1			
Quebec.....	1	4		11	40	18	10	12	21	33	19	22
Saanichtewan.....							9	13	9			
Regina.....												
Saskatoon.....	1	13		13		1				1		
Ceylon: Colombo.....												
China:												
Canton.....	2				4	1		4			2	
Chungking.....												
Foochow.....	P	P	P	P	P	P	P	P	P	P	P	P
Hong Kong.....	5	2	3	15	62	19	36	20	27	19	37	18
Manchuria—	4	2	3	13	55	12	16	29	16	7	37	15
Harbin.....	1	2	1	1	2							
Kwantung—Dairen.....							1			1	3	
Nanking.....	1	P										
Shanghai.....	P											
Shanghai—												
Foreigners only.....			2	4	5	2	2	1	2	2	1	1
Including natives.....				1	2	2	2					
Swatow.....												
Tientsin.....	2	2	3	1	4	2						
Chosen (see table below).....												
Colombia:												
Barranquilla.....		4	15	50	56	9		1	2			100
Buenaventura.....												
Dutch East Indies:												
Belawan Del.....	1	1	11	4	1	1						
Borneo—Samarinda.....	7		3									
Celebes—Makassar.....	4	12	156									
Java—	3	5	1									
Batavia and West Java.....	10	35	31	11	37	5	2			2	1	
East Java and Madura.....	5	7	6	7	8	3	2			2		
Sangi Islands.....	3			13	13							
Sumatra—Medan.....	1			10								
Egypt:					105	17						
Alexandria.....	3	3		4	1	1						
Suez.....		5	1		5							









Place	August, 1929		September, 1929		October, 1929			November, 1929			December, 1929			January, 1930		
	1-10	11-20	1-10	11-20	1-10	11-20	21-30	1-10	11-20	21-31	1-10	11-20	21-31	1-10	11-20	21-31
Belgian Congo.....			725	19				42	2							
Dahomey.....	C	D														
Indo-China (see also table above).....	C	C														
Ivory Coast.....	C	C	263	2				245	19					136		184
Sudan (French).....	C	C														
Syria: French.....	C	C	29	37				22	22	P						225
Syria: British.....	C	D		1				6	10					18	6	46
Place	Aug- ust, 1929	Sep- tem- ber, 1929	Octo- ber, 1929	No- vem- ber, 1929	De- cem- ber, 1929	Jan- uary, 1930	Place	Aug- ust, 1929	Sep- tem- ber, 1929	Octo- ber, 1929	No- vem- ber, 1929	De- cem- ber, 1929	Jan- uary, 1930			
Belivia: La Plak.....				22			Morocco.....	C	10	3	12	41	84			
British East Africa (see also table above):							Persia.....	C		62	57	P				
Kenya.....	C	60	66	278			Turkey.....	D		158	37					
Chosen.....	C	1		2				C	1	41	100	136				
	D	1						D		9	29	12				
Mexico: Durango (see also table above).....	D			2	4	12										



