## HOW TO GIVE ARTIFICIAL RESPIRATION BY THE PRONE PRESSURE METHOD[1]

1. Lay the patient on his belly, one arm extended directly overhead, the other arm bent at elbow and with the face turned outward and resting on hand or forearm, so that the nose and mouth are free for breathing. (See fig. 1.)

2. Kneel straddling the patient's thighs with your knees placed at such a distance from the hip bones as will allow you to assume the position shown in Figure 1.

Place the palms of the hands on the small of the back with fingers resting on the ribs, the little finger just touching the lowest rib, with the thumb and fingers in a natural position, and the tips of the fingers just out of sight. (See fig. 1.)

3. With arms held straight, swing forward slowly, so that the weight of your body is gradually brought to bear upon the patient. The shoulder should be directly over the heel of the hand at the end of the forward swing. (See fig. 2.) Do not bend your elbows. This operation should take about two seconds.

4. Now immediately swing backward, so as to remove the pressure completely. (See fig. 3.)

5. After two seconds, swing forward again. Thus repeat deliberately twelve to fifteen times a minute the double movement of compression and release, a complete respiration in four or five seconds.

6. Continue artificial respiration without interruption until natural breathing is restored, if necessary, four hours or longer, or until a physician declares the patient is dead.

7. As soon as this artificial respiration has been started and while it is being continued, an assistant should loosen any tight clothing about the patient's neck, chest, or waist. *Keep the patient warm.* Do not give any liquids whatever by mouth until the patient is fully conscious.

8. To avoid strain on the heart when the patient revives, he should be kept lying down and not allowed to stand or sit up. If

[1] This method has been approved by the following organizations: American Telephone & Telegraph Co.; American Red Cross; American Gas Association; Bethlehem Steel Co.; National Electric Light Association; National Safety Council; Bureau of Medicine and Surgery, Navy Department; Office of the Surgeon General, War Department; U. S. Bureau of Mines; U. S. Bureau of Standards; and U. S. Public Health Service.

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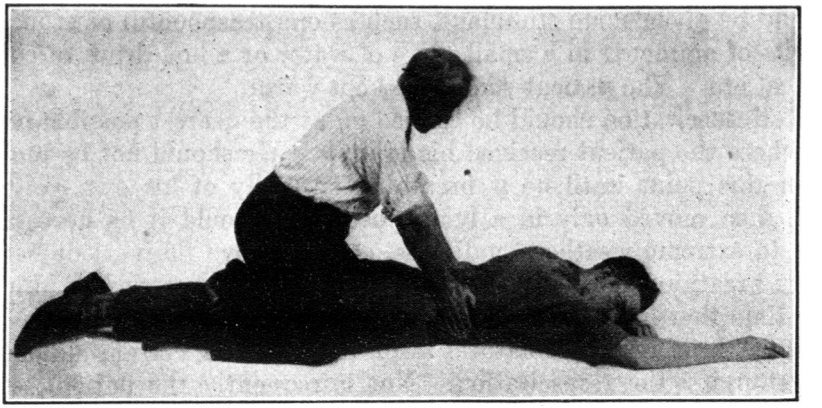

FIGURE 1

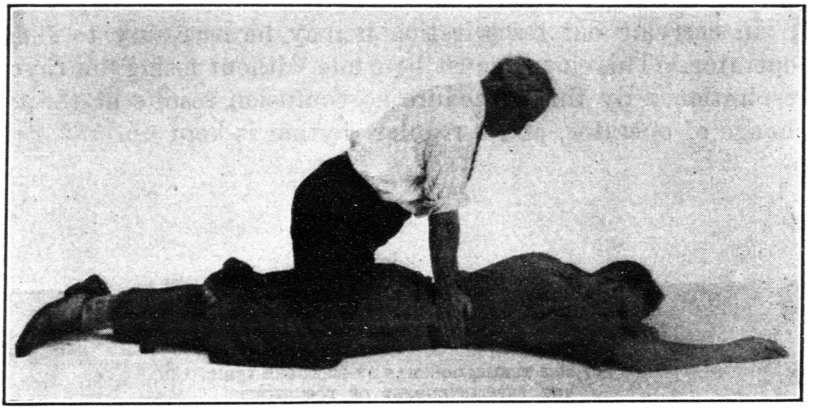

FIGURE 2

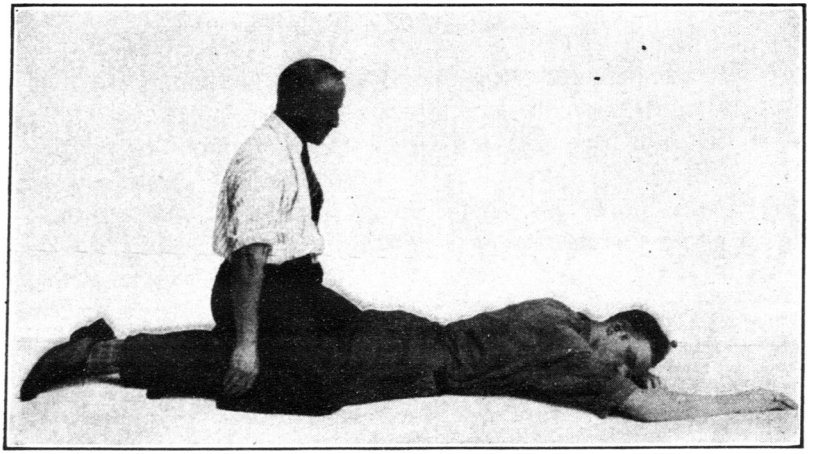

FIGURE 3

the doctor has not arrived by the time the patient has revived, he should be given some stimulant, such as one teaspoonful of aromatic spirits of ammonia in a small glass of water or a hot drink of coffee or tea, etc. The patient should be kept warm.

9. Resuscitation should be carried on at the nearest possible point to where the patient received his injuries. He should not be moved from this point until he is breathing normally of his own volition and then moved only in a lying position. Should it be necessary, due to extreme weather conditions, etc., to move the patient before he is breathing normally, resuscitation should be carried on during the time that he is being moved.

10. A brief return of natural respiration is not a certain indication for stopping the resuscitation. Not infrequently the patient, after a temporary recovery of respiration, stops breathing again. The patient must be watched and if natural breathing stops, artificial respiration should be resumed at once.

11. In carrying out resuscitation it may be necessary to change the operator. This change must be made without losing the rhythm of respiration. By this procedure no confusion results at the time of change of operator, and a regular rhythm is kept up.

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# PUBLIC HEALTH REPORTS

VOL. 43 JANUARY 20, 1928 NO. 3

## PREVALENCE OF SCARLET FEVER IN THE UNITED STATES

Preliminary reports of cases of scarlet fever from the health officers of 37 States for 52 weeks of the years 1925, 1926, and 1927 show that the disease was more prevalent during 1927 than it was during the two preceding years. The figures are as follows:

| | Cases |
|---|---|
| 1925 | 135,937 |
| 1926 | 143,150 |
| 1927 | 158,978 |

The estimated population of these States was 86,571,000 in 1925 and 90,482,000 in 1927.

The number of cases of scarlet fever reported by these 37 States for the last eight weeks of the year was less in 1927 than it was in either 1925 or 1926. The following table gives a comparison of the reports by four-week periods for the last 20 weeks of the years 1925 to 1927, inclusive:

| Four weeks ended— | Corresponding week | | |
|---|---|---|---|
| | 1927 | 1926 | 1925 |
| Sept. 10, 1927 | 3,419 | 3,121 | 2,812 |
| Oct. 8, 1927 | 5,378 | 5,624 | 4,294 |
| Nov. 5, 1927 | 8,586 | 9,823 | 8,122 |
| Dec. 3, 1927 | 10,860 | 13,330 | 11,617 |
| Dec. 31, 1927 | 11,943 | 13,876 | 12,222 |
| Total | 40,186 | 45,774 | 39,067 |

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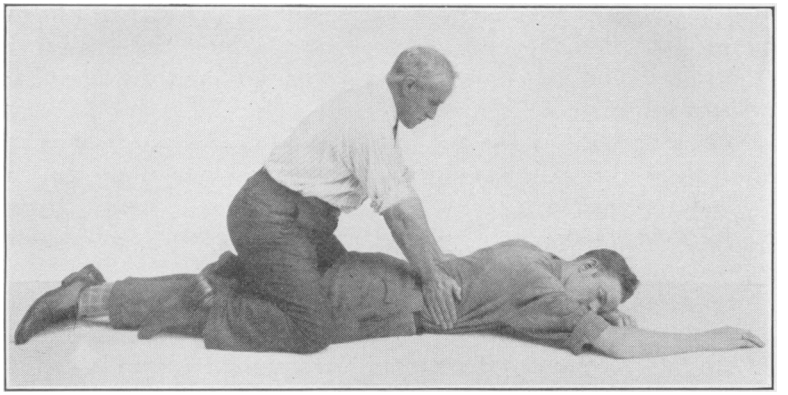

FIGURE 1

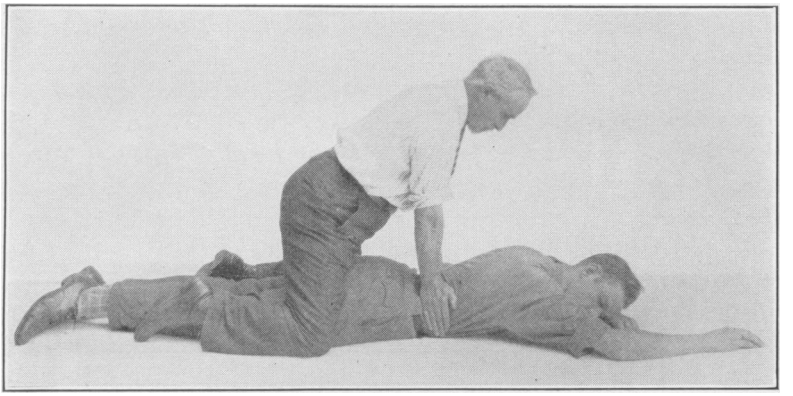

FIGURE 2

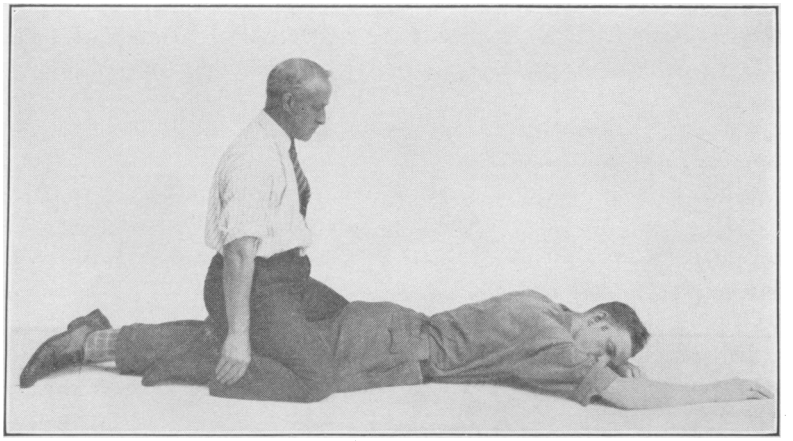

FIGURE 3

# A RESURVEY OF ENDEMIC THYROID ENLARGEMENT IN CINCINNATI

By ROBERT OLESEN, *Surgeon United States Public Health Service*

The incidence of endemic thyroid enlargement among the school children of Cincinnati was less in 1927 than it was in 1924. Moreover, there was a notable decrease in the number of enlargements of considerable size during the three-year period. These conclusions are apparently substantiated by a resurvey made during the 1926–27 school session. Therefore, it becomes a matter of importance to determine, if possible, what were the factors involved in the changes. However, before proceeding to the consideration of the probable causes for the improvement in the goiter situation, it may be of interest to discuss briefly the purpose and value of resurveys, incidentally citing instances in which such investigations have been undertaken.

*The purpose and value of resurveys.*—Just as a primary thyroid survey is valuable in indicating the extent to which endemic goiter prevails in a given community, so does a reexamination of the same group indicate the extent to which prophylactic endeavor has proved successful. A reexamination of thyroids also accomplishes other useful purposes, among which may be mentioned the determination of the results of goiter treatment and the extent to which thyroid enlargement disappears spontaneously.

Resurveys, however, are seldom made, and if they are made, usually fail to find their way into the literature. Yet, it is obvious that the real effect of goiter prophylaxis can not be ascertained without a carefully planned check up. Among the conspicuous resurveys, attesting the value of iodine prophylaxis, were those of Marine and Kimball in Akron, Ohio. Four annual examinations of the same girls showed a decrease in the size of many existing enlargements and maintenance of thyroid equilibrium among normal individuals.

In Rochester, N. Y., resurveys have followed iodization of the water supply. Apparently endemic thyroid enlargements were reduced in number after the institution of this procedure, though other prophylactics were undoubtedly used at the same time. The failure to record the total number of examinations made in each survey casts doubt upon the validity of the conclusion that goiter incidence was reduced. Moreover, no attempt appears to have been made to determine the possible coincident effect of other iodine-containing prophylactics which may have been used. Resurveys are also available from Lorain, Ohio, and Aroostook County, Me., though no significant changes are recorded.

Provided goiter surveys are made by the same observers, under similar conditions, the resulting information serves to indicate changes, or lack of changes, which either have come about naturally or followed definitely planned prophylaxis. While the desirability of thyroid examinations is obvious, it may be pointed out that the best results will accrue when the examiners possess a reasonable amount of skill, training, and experience. Especially are these qualifications essential when it is recalled that the dividing line between the normal and abnormal thyroid gland is not definite and that classification of thyroid size is entirely arbitrary.

*Findings during first Cincinnati survey.*—During the 1923–24 school session a thyroid survey was made of 47,493 children in the elementary schools of Cincinnati, Ohio.[1] The purpose of this survey was twofold; first, to determine the incidence of endemic goiter; and, second, to make appropriate recommendations for dealing with the conditions discovered.

Examination of 23,710 boys during the first Cincinnati survey disclosed an incidence of thyroid enlargements of all degrees amounting to 26.6 per cent. Among 23,783 girls the percentage was higher, 39.8 per cent. It was particularly noted that a considerable number of goiters of moderate and marked size were present among those examined. As a result of the findings it was recommended to the board of health of Cincinnati that the general use of iodized table salt be advocated for the prevention of simple thyroid enlargement. Following this recommendation iodized salt was used to a considerable extent in the city. The Cincinnati Academy of Medicine withheld its official sanction of this prophylactic, but did not go on record against it.

*Methods employed and scope of the 1927 survey.*—The method of examining and the classification of enlargements noted during the 1927 survey was identical with the procedure adopted in 1924. The conduct of the thyroid survey has been presented in several service publications.[1, 2]. In 1924 the examinations were made by the writer in conjunction with the district physicians of the board of health, all of whom had been carefully schooled in uniform procedure. In 1927 the examinations were made exclusively by two examiners, the writer being assisted by Acting Assistant Surgeon Neil E. Taylor, who had already had two years of experience with the original method of examination.

In 1924 the thyroid survey included the children in 61 elementary public and 43 elementary parochial schools. In 1927 fewer children, 12,722 boys and 12,818 girls, were examined, but 5 high schools,

[1] Robert Olesen: Thyroid survey of 47,493 elementary school children in Cincinnati. Pub. Health Rep., vol. 39, No. 30, pp. 1777–1802 (July 25, 1924). (Reprint No. 941.)

[2] Robert Olesen: Endemic goiter in Colorado. Pub. Health Rep., vol. 40, No. 1, pp. 1–23 (Jan. 1, 1926). (Reprint No. 983.)

as well as 31 elementary public and 4 elementary parochial schools, were included. The schools included in the 1927 survey, while fewer in number than in 1924, were equally representative of location, environment, economic condition and other factors likely to exert an influence upon thyroid status.

## RESULTS OF 1927 SURVEY

*Age incidence of goiter.*—Among the 12,722 boys surveyed in 1927 there were 2,859 boys having enlargements of all degrees, a percentage of 22.5. Among the girls, on the other hand, there were 5,026 having enlargements, a percentage of 39.2. The numbers and percentages of children having thyroid enlargement have been set forth in Table 1, according to age, sex, and color. The percentage incidence of simple goiter at each age among the boys is shown in Chart 1. In the same chart is displayed the incidence among the

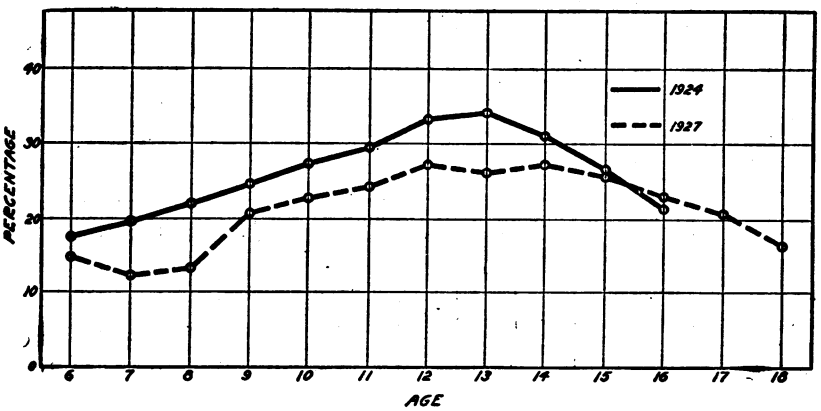


CHART 1.—Comparison of age incidence of endemic thyroid enlargement among 23,710 boys examined in 1924 and 12,722 boys examined in 1927 in Cincinnati

boys examined in 1924. A similar graphic representation for the girls of each age is presented in Chart 2. In these charts it will be noted that there is a gradual though steady increase in the incidence of thyroid enlargement among boys, beginning at the age of 6 and reaching a peak between 12 and 14 years. Thereafter there is a similarly gradual decrease in thyroid involvement until the age of 18 is reached. Among the girls the increase in percentage incidence of thyroid enlargement is steady from 6 to 16 years of age.

*Incidence of various degrees of thyroid enlargement.*—That the vast majority of enlargements present in both sexes were very slight in character is indicated in Table 2. Ninety-four and five-tenths per cent of the boys and $78\frac{5}{10}$ per cent of the girls having enlargements were so classified. Slight enlargements were present to the extent of 5 per cent among the boys and 16.8 per cent among the girls having enlargements. Contrary to the findings in the 1924 survey,

there were very few moderate and marked thickenings among the boys examined in 1927. There were also fewer of the larger goiters among the girls, 2.1 per cent of the girls with enlargements being classed as having moderate and 0.28 per cent as having marked enlargements. Among the 2,859 boys with some degree of thyroid enlargement, 67 or 2.3 per cent were presumably adenomatous in character. There were 314 or 6.2 per cent of adenomatous glands among the 5,026 girls with enlargements. The numbers, degrees, and percentages of endemic thyroid enlargement among the boys and girls at each age period are shown in Table 3.

## COMPARISON OF 1924 AND 1927 FINDINGS

When a comparison is made of the results of the 1924 and 1927 thyroid surveys, some interesting observations are possible. In the

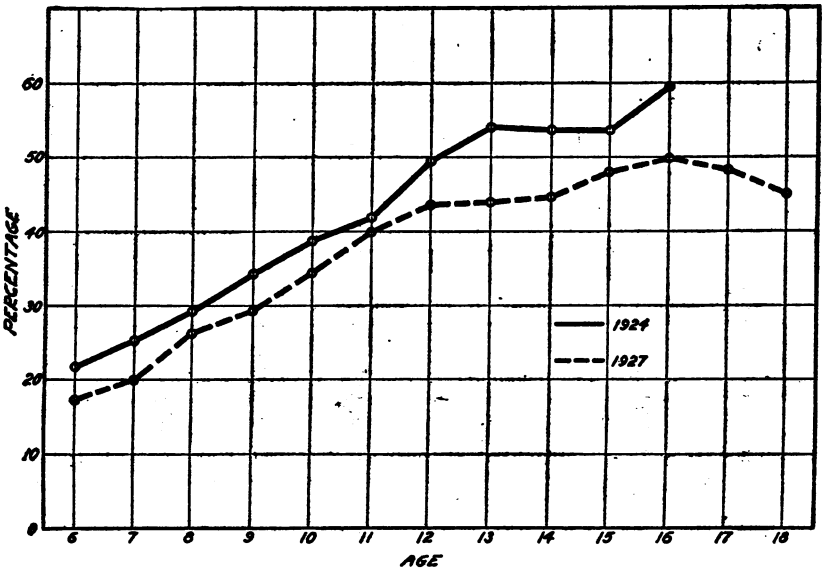


CHART 2.—Comparison of age incidence of endemic thyroid enlargement among 23,783 girls examined in 1924 and 12,818 girls examined in 1927 in Cincinnati

aggregate, the incidence of endemic thyroid enlargement differs little in the two surveys. Thus, the total percentage of thyroid enlargement among the boys in 1924 was 26.6, and it was 22.5 in 1927; among the girls 39.8 in 1924 and 39.3 in 1927.

Inasmuch as the aggregate rates were approximately the same in the two surveys, it becomes necessary to institute a careful study in order to detect evidence of changes that may have occurred in the three-year interval. In chart 1 the curves showing the incidence of endemic thyroid enlargement among the boys examined in 1924 and 1927 are presented graphically. Similar curves for the girls are shown in chart 2. A study of the curves in these charts shows

uniform trends for each sex and a lessened incidence at each age in 1927. The apparent discrepancy between the approximately similar total incidence rates and the interval between the age incidence can probably be explained by the inclusion of the 17 and 18 year age groups in the 1927 survey.

*Differences in degrees of thyroid enlargement.*—The percentages of each degree of thyroid enlargement encountered during the 1924 and 1927 surveys are set forth in Table 3. These data are shown graphically in chart 3. It will be seen that more very slight thyroid enlargements were recorded in 1927 than in 1924, the excess being more marked among the girls. However, among the other degrees of enlargement there were marked reductions in the precentages noted in 1927 when compared with the findings of the earlier survey.

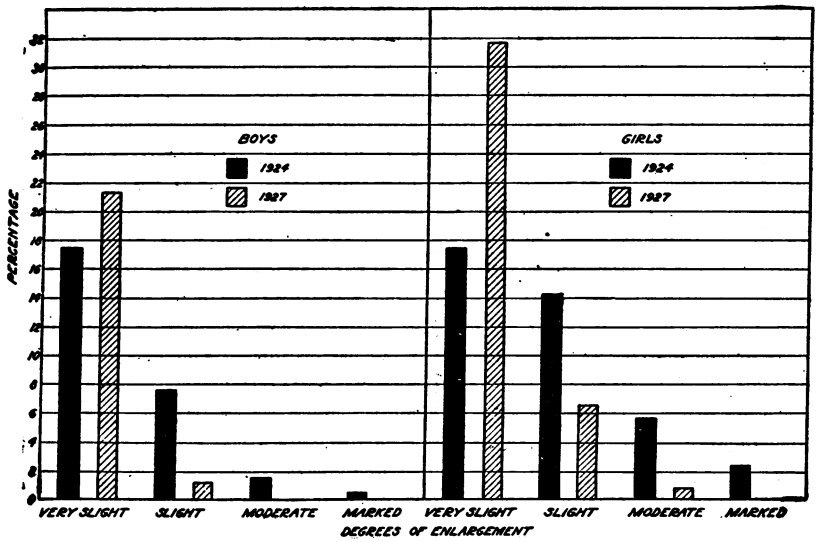


CHART 3.—Comparison of degrees of endemic thyroid enlargement among 23,710 boys and 23,783 girls examined in 1924 and 12,722 boys and 12,818 girls examined in 1927 in Cincinnati

In fact, moderate and marked thickenings were comparatively infrequent among the girls and rare among the boys examined in 1927.

A point of considerable interest in connection with the resurvey in 1927 was the increased incidence of simple thyroid enlargement among the colored girls. Repeated inquiry has elicited the information that relatively few colored children receive either prophylaxis or treatment for goiter. Then, too, it is known, as a result of studies made in Cincinnati, that the natural incidence of simple goiter is greater among colored children, and particularly among the girls.

## CAUSES OF CHANGES OCCURRING BETWEEN THE TWO SURVEYS

*The same children examined in both surveys.*—The children included in the 1927 survey were, with minor exceptions due to the extensive

turnover peculiar to a large city, those examined in 1924. The children attending the first, second, and third grades in 1927 were not, of course, examined in 1924 because they were not in school at that time. However, those attending the sixth, seventh, and eighth grades in 1924 were again examined in 1927 by including the high schools, to which many of them had in the meantime advanced. In view of these facts, it may be concluded that the children examined in the two surveys were, with minor exceptions difficult of control, the same.

*Reasons for changes in goiter incidence.*—In seeking for an explanation of the reduction in the general incidence of goiter and the marked decrease in the number of thyroid enlargements of considerable size, a number of factors deserve consideration. Among these may be mentioned changes in methods of examining, altered standards of recording, and changes in the personnel engaged in making the examinations. The possibility of spontaneous disappearance or natural reduction in size of thyroid enalrgements must likewise receive a share of attention. Furthermore, the influence of prophylaxis and treatment also enters into the problem.

*Variations in estimates of thyroid involvement.*—As previously indicated, the writer supervised and actively participated in both surveys, coaching the other examiners in uniform methods of examining and classifying the thyroids. Consequently the results of the surveys may be regarded as comparable. As additional experience and skill in palpating the thyroid gland are gained there may be a tendency, unconsciously, to revise the arbitrary standards for classifying enlargements. An effort was made to prevent such errors from creeping into the work. As a matter of fact, it is believed that the thyroid enlargements were more sharply classified in 1927 than during the earlier investigation. All things considered, it is believed that no detectable changes in methods occurred which might distort the comparative figures. To some extent this contention is borne out by the similarity of trends, as indicated in charts 2 and 3.

*Spontaneous reduction in thyroid enlargement.*—It is well known that many endemic goiters tend to disappear spontaneously as children grow older. This tendency is particularly marked among boys after the age of 12 or 13 years. As to the factors involved in the voluntary subsidence of thyroid swelling, little is known beyond the fact that it does occur. However, it is not felt that spontaneous resolution of thyroid involvement accounts either for the decrease in goiter incidence or the reduction in size of existing enlargements noted between the two surveys.

*Decrease in number of larger goiters.*—The marked decrease in the number of goiters of considerable size is probably due to the action taken in behalf of many children who, in 1924, were found to have such enlargements. The results of the 1924 goiter survey were

afforded much publicity. Consequently many children received treatment from their family physicians. That such treatment was successful to a large extent is attested by the reduction in the sizes of many goiters. Credit must also be given the nurses of the Cincinnati Health Department, who "followed up" the children having moderate or marked thyroid enlargements and saw that appropriate medical treatment was secured. That goiter of marked size became less frequent in occurrence after the 1924 survey in Cincinnati was a fact noted by many lay observers, particularly school teachers, whose close contact with the children enabled them to see the changes.

*Influence of prophylaxis.*—Following the announcement that endemic goiter prevailed to a considerable extent in Cincinnati prophylactic measures were advocated and widely practiced. In addition to the rather general use of iodized table salt, various other iodine prophylactics were obtained by many children from their family physicians. The reduction in goiter incidence, though comparatively slight, suggested the possibility that iodized salt, the principal prophylactic recommended, may have had a share in the inprovement. However, as other preparations were undoubtedly used at the same time, it can not be asserted that iodized salt played the sole or principal rôle.

It is also difficult to estimate the influence of iodized salt or other prophylactics upon existing enlargements. Ordinarily it is doubtful whether iodine in prophylactic doses assists in reducing thyroid enlargements. However, in the present instance it may be surmised that iodized table salt and other iodine-containing preparations aided to some extent in reducing the size of the goiters. Further observations of more extensive and accurate character are manifestly required before a conclusion can be reached.

## SUMMARY

1. A resurvey of endemic thyroid enlargement in Cincinnati, Ohio, in 1927, three years after the original thyroid survey, showed a lessened incidence of the disease and a considerable reduction in the number of goiters of moderate and marked degree.

2. The aggregate incidence of endemic goiter in 1927 was only slightly less than in 1924 but the age incidence was distinctly less in 1927. While iodized table salt was the chief prophylactic recommended and used, it is known that other iodine-containing preparations were also used. It may be surmised that iodized salt was a factor in the slight reduction of goiter revealed by the 1927 survey.

3. There was a notable decrease in the thyroid enlargements of considerable size noted in 1924 and again in 1927. This was due largely to efficient treatment instituted by physicians at the instigation of parents. It is possible that iodized salt and other prophylactics may also have exerted a favorable influence.

TABLE 1.—*Number and percentage of thyroid enlargements among 12,722 boys and 12,818 girls examined in the schools of Cincinnati, Ohio, during the 1927 session, by age, color, and sex*

| Age | Boys | | | | | | | | | Girls | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | White | | | Colored | | | Total | | | White | | | Colored | | | Total | | |
| | A | B | C | A | B | C | A | B | C | A | B | C | A | B | C | A | B | C |
| 6 | 106 | 15 | 14.1 | 1 | 1 | 100.0 | 107 | 16 | 14.9 | 79 | 14 | 17.7 | 2 | | | 81 | 14 | 17.3 |
| 7 | 710 | 86 | 12.1 | 39 | 5 | 12.8 | 749 | 91 | 12.1 | 758 | 148 | 19.5 | 22 | 8 | 36.4 | 780 | 156 | 20.0 |
| 8 | 1,159 | 152 | 13.1 | 42 | 8 | 19.0 | 1,201 | 160 | 13.3 | 1,151 | 291 | 25.3 | 65 | 29 | 44.6 | 1,216 | 320 | 26.3 |
| 9 | 1,166 | 241 | 20.7 | 60 | 15 | 25.0 | 1,226 | 256 | 20.9 | 1,157 | 335 | 28.9 | 77 | 28 | 36.4 | 1,234 | 363 | 29.4 |
| 10 | 1,164 | 250 | 21.5 | 54 | 15 | 27.8 | 1,218 | 265 | 21.7 | 1,098 | 372 | 33.9 | 72 | 30 | 41.7 | 1,170 | 402 | 34.3 |
| 11 | 1,238 | 289 | 23.3 | 86 | 32 | 37.2 | 1,324 | 321 | 24.2 | 1,188 | 471 | 39.7 | 65 | 29 | 44.6 | 1,253 | 500 | 39.9 |
| 12 | 1,217 | 324 | 26.6 | 57 | 22 | 38.6 | 1,274 | 346 | 27.2 | 1,117 | 478 | 42.8 | 66 | 38 | 57.6 | 1,183 | 516 | 43.7 |
| 13 | 1,215 | 312 | 25.7 | 56 | 20 | 35.7 | 1,271 | 332 | 26.1 | 1,151 | 501 | 43.5 | 69 | 36 | 52.2 | 1,220 | 537 | 44.0 |
| 14 | 1,299 | 349 | 26.9 | 31 | 11 | 35.5 | 1,330 | 360 | 27.1 | 1,377 | 604 | 43.9 | 80 | 48 | 56.0 | 1,457 | 652 | 44.8 |
| 15 | 1,357 | 347 | 25.5 | 48 | 17 | 35.4 | 1,405 | 364 | 25.9 | 1,434 | 679 | 47.4 | 90 | 54 | 60.0 | 1,524 | 733 | 48.1 |
| 16 | 763 | 177 | 23.2 | 35 | 7 | 20.0 | 798 | 184 | 23.0 | 845 | 403 | 47.8 | 77 | 57 | 74.1 | 922 | 460 | 49.9 |
| 17 | 532 | 112 | 21.1 | 19 | 4 | 21.0 | 551 | 116 | 21.1 | 535 | 257 | 48.0 | 44 | 23 | 52.3 | 579 | 280 | 48.4 |
| 18 | 199 | 32 | 16.1 | 10 | 3 | 30.0 | 209 | 35 | 16.7 | 169 | 76 | 44.9 | 1 | 1 | 100.0 | 170 | 77 | 45.3 |
| 19 and over | 52 | 12 | 23.0 | 7 | 1 | 14.3 | 59 | 13 | 22.0 | 28 | 15 | 53.6 | 1 | 1 | 100.0 | 29 | 16 | 55.2 |
| Total | 12,177 | 2,698 | 22.1 | 545 | 161 | 29.5 | 12,722 | 2,859 | 22.5 | 12,087 | 4,644 | 38.4 | 731 | 382 | 52.2 | 12,818 | 5,026 | 39.2 |

Explanation: A, number of children; B, number of thyroid enlargements; C, percentage of thyroid enlargements.

TABLE 2.—*Numbers and percentages of each degree of thyroid enlargement among 2,859 boys and 5,026 girls in the 1927 survey in Cincinnati*

| Sex | Number and percentage | Degrees of enlargement | | | | | |
|---|---|---|---|---|---|---|---|
| | | Very slight | Slight | Moderate | Marked | Very marked | Total |
| Boys | Number | 2,703 | 144 | 10 | 2 | | 2,859 |
| | Percentage | 94.5 | 5.0 | 0.35 | 0.07 | | 100.0 |
| Girls | Number | 4,057 | 847 | 107 | 14 | 1 | 5,026 |
| | Percentage | 80.7 | 16.8 | 2.1 | 0.28 | 0.02 | 100.0 |

TABLE 3.—*Numbers and degrees of thyroid enlargement among 12,722 boys and 12,818 girls in Cincinnati (1927)*

| Age | Boys | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | With enlarged thyroids | | | | | | Normal | Total |
| | Degree of enlargement | | | | Total | Per cent | | |
| | Very slight | Slight | Moderate | Marked | | | | |
| 6 | 16 | | | | 16 | 14.9 | 91 | 107 |
| 7 | 91 | | | | 91 | 12.1 | 658 | 749 |
| 8 | 160 | | | | 160 | 13.3 | 1,041 | 1,201 |
| 9 | 246 | 10 | | | 256 | 20.9 | 970 | 1,226 |
| 10 | 261 | 4 | | | 265 | 21.7 | 953 | 1,218 |
| 11 | 312 | 7 | 2 | | 321 | 24.2 | 1,003 | 1,324 |
| 12 | 328 | 18 | | | 346 | 27.2 | 928 | 1,274 |
| 13 | 309 | 22 | | 1 | 332 | 26.1 | 939 | 1,271 |
| 14 | 329 | 29 | 2 | | 360 | 27.1 | 970 | 1,330 |
| 15 | 329 | 32 | 2 | 1 | 364 | 25.9 | 1,041 | 1,405 |
| 16 | 172 | 10 | 2 | | 184 | 23.0 | 614 | 798 |
| 17 | 107 | 9 | | | 116 | 21.1 | 435 | 551 |
| 18 | 30 | 3 | 2 | | 35 | 16.7 | 174 | 209 |
| 19 and over | 13 | | | | 13 | 22.0 | 46 | 59 |
| Total | 2,703 | 144 | 10 | 2 | 2,859 | 22.5 | 9,868 | 12,722 |
| Per cent | 21.2 | 1.2 | 0.08 | 0.0016 | | 22.5 | 77.5 | 100.0 |

TABLE 3.—*Numbers and degrees of thyroid enlargement among 12,722 boys and 12,818 girls in Cincinnati (1927)*—Continued

| Age | Girls | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | With enlarged thyroids | | | | | | | Normal | Total |
| | Degree of enlargement | | | | | Total | Per cent | | |
| | Very slight | Slight | Moderate | Marked | Very marked | | | | |
| 6 | 14 | | | | | 14 | 17.3 | 67 | 81 |
| 7 | 155 | | 1 | | | 156 | 20.0 | 624 | 780 |
| 8 | 310 | 10 | | | | 320 | 26.3 | 896 | 1,216 |
| 9 | 340 | 21 | 2 | | | 363 | 29.4 | 871 | 1,234 |
| 10 | 373 | 26 | 3 | | | 402 | 34.3 | 768 | 1,170 |
| 11 | 424 | 73 | 2 | 1 | | 500 | 39.9 | 753 | 1,253 |
| 12 | 416 | 91 | 7 | 2 | | 516 | 43.7 | 667 | 1,183 |
| 13 | 416 | 109 | 9 | 3 | | 537 | 44.0 | 683 | 1,220 |
| 14 | 488 | 133 | 24 | 1 | 1 | 652 | 44.8 | 805 | 1,457 |
| 15 | 509 | 192 | 30 | 2 | | 733 | 48.1 | 791 | 1,524 |
| 16 | 339 | 98 | 19 | 4 | | 460 | 49.9 | 462 | 922 |
| 17 | 198 | 73 | 8 | 1 | | 280 | 48.4 | 299 | 579 |
| 18 | 61 | 14 | 2 | | | 77 | 45.3 | 93 | 170 |
| 19 and over | 14 | 2 | | | | 16 | 55.2 | 13 | 29 |
| Total | 4,057 | 847 | 107 | 14 | 1 | 5,026 | 39.2 | 7,792 | 12,818 |
| Per cent | 31.7 | 6.6 | 0.84 | 0.017 | 0.008 | | 39.2 | 60.7 | 100.0 |

TABLE 4.—*Comparison of percentages of each degree of endemic thyroid enlargement (by sex and color) of 47,493 children examined in Cincinnati schools during the 1924 session and 25,540 children examined during the 1927 session*

| Sex and color | Year of examination | Degree and percentage of enlargement | | | | |
|---|---|---|---|---|---|---|
| | | Very slight | Slight | Moderate | Marked and very marked | Total |
| White boys | 1924 | 17.4 | 7.4 | 1.5 | .43 | 26.7 |
| | 1927 | 20.9 | 1.1 | .075 | .008 | 22.1 |
| White girls | 1924 | 17.4 | 14.2 | 5.7 | 2.4 | 39.7 |
| | 1927 | 31.3 | 6.3 | .75 | .066 | 38.4 |
| Colored boys | 1924 | 17.4 | 9.0 | 1.2 | .57 | 28.2 |
| | 1927 | 27.7 | 1.4 | .2 | .2 | 29.5 |
| Colored girls | 1924 | 18.2 | 18.4 | 7.2 | 2.9 | 46.7 |
| | 1927 | 37.5 | 11.5 | 2.3 | .9 | 52.2 |

## LEAD POISONING FROM THE USE OF SNUFF

A case of lead poisoning traced to the use of snuff adulterated by the addition of coloring materials containing lead, was reported in the Weekly Bulletin for November 5, 1927, issued by the New York City Department of Health. Attention is also called to the fact that snuff may be adulterated by lead pigments either for coloring purposes or to give spurious weight. The case reported is of clinical interest in showing the alertness that is sometimes necessary in discovering the cause of such poisoning. The following is taken from the Weekly Bulletin:

"One of the medical staff of Mount Sinai Hospital recently called the attention of the department of health to a male patient, who,

upon examination, presented a marked polyneuritic condition that was suggestive of poisoning by one of the heavy metals. Lead was suspected, and the only possible etiological factor in this case was thought to be snuff, which the patient habitually used. The patient's stool contained lead, and an examination of the specimen of the snuff used by the patient in the chemical laboratory of the department of health showed lead present.

"Investigation by the bureau of food and drugs, at the plant where the snuff used by this patient was manufactured, proved conclusively that the lead content of the snuff was due to the use of a yellow and green coloring material. When the analysis of the chemical laboratory indicated the source of the lead content, an embargo was placed on all coloring materials in the plant, and the manufacturer was ordered to discontinue the use of all coloring matter at once. Prosecution proceedings have been instituted against the manufacturer."

## DEATH RATES IN A GROUP OF INSURED PERSONS

### Rates for Principal Causes for November, 1927

The death rate for November among approximately 18,000,000 industrial policyholders in the United States and Canada was 8.5 per 1,000, according to the Statistical Bulletin for December, published by the Metropolitan Life Insurance Co. This is the same rate as that for November of last year for this group of persons.

*Death rates (annual basis) for principal causes per 100,000 lives exposed, November 1927, as compared with October and with November, 1926*

| Cause of death | Rate per 100,000 lives exposed [1] | | | |
|---|---|---|---|---|
| | Nov. 1927 | Oct. 1927 | Nov. 1926 | Year 1926 |
| Total, all causes | 849.8 | 769.7 | 850.2 | 945.6 |
| Typhoid fever | 4.3 | 3.7 | 6.2 | 4.2 |
| Measles | 1.0 | .4 | 1.2 | 10.2 |
| Scarlet fever | 2.6 | 1.5 | 3.2 | 3.4 |
| Whooping cough | 3.9 | 4.1 | 6.1 | 9.6 |
| Diphtheria | 12.4 | 9.6 | 12.9 | 9.7 |
| Influenza | 11.0 | 6.5 | 13.5 | 31.1 |
| Tuberculosis (all forms) | 79.2 | 74.7 | 85.9 | 99.0 |
| Tuberculosis of respiratory system | 70.3 | 66.5 | 76.4 | 86.7 |
| Cancer | 73.5 | 71.6 | 72.2 | 73.7 |
| Diabetes mellitus | 16.2 | 15.0 | 16.1 | 16.7 |
| Cerebral hemorrhage | 53.2 | 49.0 | 50.6 | 55.6 |
| Organic diseases of heart | 135.2 | 112.0 | 125.5 | 134.3 |
| Pneumonia (all forms) | 66.0 | 46.3 | 71.6 | 98.2 |
| Other respiratory diseases | 14.9 | 12.6 | 11.8 | 13.0 |
| Diarrhea and enteritis | 23.1 | 36.6 | 27.7 | 29.8 |
| Bright's disease (chronic nephritis) | 66.7 | 60.5 | 70.5 | 73.5 |
| Puerperal state | 14.5 | 12.6 | 11.1 | 15.3 |
| Suicides | 8.0 | 7.4 | 8.0 | 7.7 |
| Homicides | 7.6 | 6.8 | 7.3 | 7.0 |
| Other external causes (excluding suicides and homicides) | 62.4 | 62.4 | 62.6 | 62.3 |
| Traumatism by automobiles | 20.8 | 20.3 | 19.8 | 16.8 |
| All other causes | 194.2 | 176.4 | 186.1 | 191.0 |

[1] All figures include infants insured under 1 year of age.

The mortality rates for the principal causes of death of major public health interest were lower than those prevailing last year, with the single exception of the rate for puerperal causes.

The mortality from organic heart disease was 7.7 per cent higher in November than it was a year ago. The rates for cancer and cerebral hemorrhage were also a little higher, while the death rate for Bright's disease was lower.

## COURT DECISIONS RELATING TO PUBLIC HEALTH

*Liability of town for antirabic treatment.*—(Massachusetts Supreme Judicial Court; Bryant *v.* Nolin et al., 158 N. E. 791; decided November 23, 1927.) The chairman of a town board of health requested the town physician to "look into the case" of a boy who had been bitten by a rabid dog. The boy's parents permitted antirabic treatment to be given, but with the expectation that the town would pay for same. "Rabies" and "dog bite requiring antirabic treatment" were diseases defined by the State department of public health as dangerous to the public health. In an action brought by the physician against the parents to recover for medical services rendered the child, the supreme court upheld the action of the trial court in directing a verdict for the defendants, saying:

> The order was clearly right. There was no express contract, and no contract was implied in fact or in law, to pay the plaintiff for the services rendered in the circumstances disclosed. Assuming the physician rendered services outside the terms of his employment as town physician to the board of health, and further assuming that such services were reasonably required by the board of health in making the provisions required by law for persons infected with a disease dangerous to the public health, the town was obligated to pay to the plaintiff the reasonable value of the services rendered at the request or at the direction of the board of health, and had a remedy over against the defendant[s] if they were able to pay. (G. L. c. 111, sec. 116; Haverhill *v.* Marlborough, 187 Mass. 150, 72 N. E. 943.)

*Town held liable for sewage pollution of stream.*—(Iowa Supreme Court; Stovern *v.* Town of Calmar, Winneshiek County, 216 N. W. 112; decided November 22, 1927.) An action was brought against a town for an injunction and damages on account of the pollution by sewage of a creek which flowed through the edge of plaintiff's farm. At the time of the trial in the lower court in October, 1926, the town had a sanitary sewage disposal plant about three-fourths completed. The trial court allowed the plaintiff damages, refused an injunction, and ordered the nuisance abated on or before January 1, 1927. Both parties appealed. The supreme court approved the amount allowed as damages by the trial court, but held that the latter court "should not have made its decree final, but the same should have been in its nature interlocutory, giving the defendant a reasonable time in which to abate the nuisance, but holding jurisdiction for the final determina-

tion herein as to the rights of the parties in this respect." The supreme court stated that it did not know whether the nuisance had been abated and remanded the case to the district court "for the purpose of taking evidence upon the single proposition as to whether a nuisance still exists, and for the purpose, that, upon said hearing, such decree with reference thereto as may be warranted by the evidence may be rendered."

*Ordinance for prevention of pollution of source of city's water supply, located in United States forest reservation, held invalid.*—(Washington Supreme Court; Brown *v.* City of Cle Elum, 261 P. 112; decided November 23, 1927.) The city of Cle Elum, under contract with the United States, took its water supply from a lake outside the city and within the limits of a United States forest reservation. The city, pursuant to statutory authority, passed an ordinance designed to prevent the pollution of the source of its water supply. This ordinance, among other things, prohibited swimming, fishing, and boating in the said lake. The United States had rented cottage sites along part of the lake, and the plaintiff in this case was a tenant of the United States. He sought to restrain the defendant city from enforcing or attempting to enforce the ordinance, particularly in so far as it prohibited or attempted to prohibit swimming, fishing, or boating in the lake. The validity of the ordinance was attacked on two grounds: (1) That its enactment was an attempted exercise of the police power of the city over lands and waters owned by the United States, and (2) that it was unreasonable. The case was heard before department 2 of the supreme court, and on April 28, 1927, a decision (255 P. 961) was rendered in favor of the city. Upon a reargument of the case before the court en banc the question was presented to the court as to whether or not the legislature could constitutionally delegate to a city authority to exercise police power beyond its territorial limits and outside the boundaries of property it may own beyond its territorial limits by the passing and enforcing of ordinances assuming to regulate the conduct of citizens beyond such limits and boundaries. The State constitution provided:

> Any county, city, town, or township may make and enforce within its limits all such local, police, sanitary, and other regulations as are not in conflict with general laws.

The court then held that, in view of this provision, those statutory provisions, which purported to give to the city the power to pass such an ordinance as the one involved in the instant case, could have no validity. The court said:

> This delegation of its police power by the State to various municipalities is strictly limited to the exercise of that power *within the limits* of such municipalities. Authorities are cited to the effect that the State, by legislative enactment, might delegate its police power to various municipalities to be exercised beyond

their limits, but those authorities will be found to have not arisen where a constitutional provision obtains such as the one existing in this State. In order for the appellant in this case to pass a valid ordinance under the sections of the code relied on, it would be necessary for the court to read out of the constitutional provision the words, "*within its limits*," and no case has been cited to us, and we have been unable to find one, where legislation similar to that here under consideration has been sustained where there also existed a constitutional provision such as ours. * * *

## THE EIGHTH PAN AMERICAN SANITARY CONFERENCE—RESOLUTIONS—CORRECTION

In the report of the resolutions adopted at the Eighth Pan American Sanitary Conference, published in Public Health Reports for January 6, 1928, the word "maritime" was omitted before the last word, "travel," in paragraph (*b*), page 9. The concluding part of this paragraph should read, "during the time in which he is not engaged in maritime travel."

## PUBLIC HEALTH ENGINEERING ABSTRACTS

**Distribution and Succession of Protozoa in Imhoff Tanks.** James B. Lackey. Report of sewage substation of the New Jersey Agricultural Experiment Station for year ending June 30, 1926, pp. 506-520.

A study to determine how and why protozoa are distributed throughout the depth of Imhoff tanks. Six diagrams and three tables present numerical data.

"(1) Flagellates are far more numerous than ciliates in Imhoff tanks; (2) vertically, flagellates are present in maximum numbers usually between 5 and 7 feet; (3) there is no definitely located point for the ciliate maximum; it varies greatly; (4) there is as yet no proof of a well-defined seasonal succession for any of the protozoa; (5) tanks which are not foaming have relatively small protozoan populations; (6) the numbers of protozoa decrease to the point of defaunation in tanks which are shut off; conversely, they increase enormously if a tank runs indefinitely; (7) their numbers are independent of observed ranges of pH and temperature in the tanks; (8) they are largely saprophytic forms, so a continuously running tank offers a constant food supply for them; (9) there is an absolute correlation between large increases in their numbers and foaming; (10) no definite explanation is at hand for the part they play in foaming."

But an increase in protozoa marks a danger point for the tank, and "if their increase be noted, the tank should be shut off or, better, corrected with lime."

**English View of Sewage Disposal.** Anon. *Public Works*, vol. 58, No. 10, October, 1927, pp. 400–402. (Abstract by W. J. Downer.)

Compares present status of dilution, irrigation, contact beds, percolating filters, activated sludge, tank treatment, and sludge disposal. Operation and advantages of each are briefly described.

Activated sludge treated more fully. Dilution is an authenticated method when sewage volume is reasonably apportioned to volume of diluent, salt or fresh. The Royal Commission has stated that 1 cubic yard of medium used in form of percolating filters is capable of performing same duty as 2 cubic yards of medium used in form of contact beds. Lagooning has taken the place of

pressing in English practice to a large extent and is far from ideal as regards smell nuisance.

**Research on the Composition of the Gray Slimy Growth on the Surface of Sewage Filters.** H. D. Bell. (*Surveyor*, 1926, v. 70, 561–565. Abstract by W. Rushton in the *Bulletin of Hygiene*, vol. 2, No. 7, July, 1927, pp. 546–547.

"The author describes attempts to isolate the various mixed growths of organisms which make up the flora of the gray slime of sewage filters and to investigate their relationships to the insect *Achorutus viaticus*.

"By the use of dilute solutions of copper sulphate and formalin it was found that two types of fungi and two types of bacteria were the principal living forms, namely: *Oidium lactis*, a mold; *Torula rosea*, a pink wild yeast; *Bacillus subtilis* and *Bacillus coli communis*.

"In 1922 a slimy growth was found on the walls of a cellar in which food, beer, etc., had been stored, and thriving on this growth types of the insect *Achorutus viaticus* were found. In general appearance this growth resembled the sewage filter growths except in color.

"Isolation of the growths showed—

| Slimy growths from Barnsley sewage | Slimy growths from Ripon cellar |
|---|---|
| *Torula rosea* (wild yeast). | *Torula rosea*. |
| *Mucor mucedo* (mold). | *Mucor rouxii* (mold). |
| *Oidium lactis* (mold). | *Oidium lactis*. |
| *Penicillium* (mold). | *Penicillium glaucum* (mold). |
| *Bacillus coli communis*. | |

"The growth from the Ripon cellar had no contact with sewage, yet it contained two organisms in common with sewage, viz, *Oidium lactis* and *Torula rosea*.

"The molds produce hyphal threads and spores, and *Torula rosea* has a somewhat similar structure in media containing carbohydrates.

"As *Schorutus viaticus* thrived equally well on both sewage and cellar growths it would appear that their food was the filamentous structures of the molds *O. lactis* and *Mucor* and *Penicillium*.

"The author suggests a theory as to the formation of the gray slimy growths, showing how the sticky fluid having attached a mold to a piece of solid matter such as filter media, offers a surface upon which another film of tank effluent may rest, and so accelerate the production of more molds from spores, thus forming a network of molds which prevents free aeration, and encourages anærobic growths, causing the surface to become foul. This is what is known as the beginning of clogging. As *Achorutus viaticus* is unable to live under the surface of a liquor, nor in the absence of air, it must either attack the molds or the slimy growths formed below, and prevent the formation of spores, or it must walk on the surface of the liquor and attack the hyphal threads with attached spores. Probably it does both, and in doing so aids in opening up the filter surface, thus restarting the free circulation of air by which the oxidizing and nitrifying organisms can propagate at a greater rate.

"The effect of this action is borne out by the increase of nitric nitrogen and suspended matter from a filter after colonization by *Achorutus*.

"If this theory is correct, it explains why a sewage filter is kept clean by means of the insect named, and also why a sewage filter will eventually 'pond,' even in the presence of the insect if an excessive amount of tank effluent is sprayed on the filter without suitable resting periods.

"Proof of the food of the insect was demonstrated by feeding it on pure cultures of the molds *O. lactis*, *M. mucedo*, *M. rouxii* and *Penicillium*, when it was seen that it lives at the expense of the mycelium of the molds.

"Since the author published his paper on The Maintenance of Clean Filtering Media on Sewage Filters (Assn. Managers Sewage Disposal, Leeds, Nov. 12, 1921) he has sent boxes of media containing eggs of the insect to nearly 40 sewage installations, including many abroad, some of which had to withstand tropical conditions and others extreme cold. On nearly 20 sewage installations in this country the insect has appeared naturally, and on these works ponding has scarcely been seen; this is attributed to its activities.

"The author desires information from sewage-disposal works where the insect is present naturally or introduced, (*a*) whether the insects are doing good work, (*b*) whether they appeared naturally or were introduced, (*c*) whether their colonization has been attempted and found successful.

"In conclusion, the author affirms that the interlacing hyphæ of *O. lactis*, the *Mucors* and probably other fungi is the probable origin of the gray, slimy growth of sewage filters, that the insect *Achorutus viaticus* feeds on it, and that neither copper sulphate 1–50,000 nor formalin 1–100,000 sprayed on the surface will prevent the formation of the gray, slimy growths on filters where the insect named has failed to colonize.

"In discussion, some speakers confirmed in all respects the usefulness of *Achorutus;* one pointed out that the winter period is the time when the slimy deposits are most prolific, suggesting a temperature factor. Others associated the slimy growth rather with bacterial activity than fungal, i. e., a bacterial factor as the dominant one. Attention was drawn to the Report of the Royal Commission on Sewage Disposal, where some of the workers tried various chemical ingredients, such as quicklime, chloros, and reported that caustic soda removed the growths.

"In reply the author stated his investigations had been confined to two or three works where the trade wastes had not been large, and it was possible other growths might appear at other sewage works."

**Digestion of Activated Sludge.** W. Rudolfs and P. J. A. Zellar. *Public Works*, vol. 18, No. 7, July, 1927, pp. 253–255. (Abstract by H. H. Hasson.)

This article is a summary of experiments on the effect of seeding activated sludge with ripe Imhoff sludge, mixing ripe sludge and fresh solids with it in proportion to secure most rapid digestion, and the effect of reaction control on digestion. Mixtures of ripe sludge and fresh solids, ripe sludge, fresh solids and activated sludge, ripe sludge and activated sludge, and activated sludge alone were used. Regular analyses (detailed description of method to be published later) of solids and ash and pH determinations were made. Bacterial and protozoan numbers were obtained and gas production of all materials was measured and analyzed.

The conclusions reached were that the activated sludge digests most rapidly when seeded with proper amounts of ripe sludge; that properly seeded activated sludge digests more rapidly and with less odors than properly seeded fresh solids; and that if gasification be desired properly seeded activated sludge should be treated with hydrated lime to a pH value of 7.5 to 7.6 (when necessary).

**Effect of Lime on Sludge Digestion.** W. Rudolfs, H. Heukelekian, P. J. A. Zeller, D. Peterson, J. R. Downes. Report of the Sewage Substation of the New Jersey Agricultural Experiment Station, year ending June 30, 1926, pp. 412–498. (Abstract by W. M. Olson.)

Presents detailed results of exhaustive research to determine the effect of lime under different conditions prevailing during digestion. Thirty-eight figures show 230 series of observed relations. Thirteen tables of data are given.

The report describes experiments with a series of bottles in the laboratory, with three Imhoff tanks in operation and at rest, and with a separate sludge-digestion tank. In each case methods and results (chemical, bacteriological, and zoological) are stated, followed by a discussion and summary. The amounts of lime necessary for the adjustment of fresh solids and other material in digestion tanks are discussed at some length, previous to the concluding general discussion of the study as a whole.

The laboratory work showed that lime has a pronounced effect upon sludge digestion, influencing the flora and fauna and consequently the chemical intermediate and end products. "Most rapid and satisfactory digestion proceeds at pH values of 7.3 to 7.8. If the reaction of incoming fresh solids is kept at pH 7.3 to 7.6, odors are practically absent." In a previous report (*American Journal of Public Health*, 16: 365–368) it was stated that digestion takes a normal course when two parts of dry fresh solids are added daily to 98 parts of ripe sludge (dry basis). With the use of lime to adjust the pH values of incoming fresh solids to 7.3 to 7.6, the above mentioned ratio may be increased from 2.0 to 3.5 or possibly 5 per cent, reducing greatly the volume of ripe sludge necessary for efficient digestion. Using the ratio of 2 parts fresh solids to 98 parts ripe sludge, "unadjusted but properly seeded material requires a per capita digestion space (in summer) of not less than 2.6 to 2.7 cubic feet. With reaction control * * * this * * * capacity can be reduced to 1.4 to 1.5 cubic feet."

In the plant experiments, "A comparison of two Imhoff tanks, one treated with lime to adjust the reaction of its contents, and the other untreated, showed that the treated tank gave no sign of foaming and was free from scum for several months in spite of the fact that it was continuously operating, whereas the untreated tank had to rest and could not be put into operation for a long time on account of heavy foaming."

On account of special conditions prevailing at the treatment plant it was not possible to carry the experiments on the separate sludge-digestion tank far enough to determine the maximum load which the tank could handle. With reaction control and the application of heat toward the end of the test, the tank provided satisfactory digestion in winter of 2.3 per cent fresh solids (dry basis) daily. The practicability of maintaining a comparatively high temperature in a sludge-digestion tank was demonstrated. The separate sludge-digestion tank did as well as a good working Imhoff tank. "Whether Imhoff tanks or separate sludge-digestion tanks are to be used depends upon the cost (construction and operating) and upon their flexibility and their ease of control." The control of the reaction of the contents and of the daily addition of definite quantities of fresh solids is simpler in separate sludge-digestion tanks than in Imhoff tanks. Likewise it is easier to heat a separate sludge-digestion tank.

"Figures and curves are presented to show the amounts of lime necessary to adjust the reaction of incoming fresh solids of different concentration. Examples are given for correction of poorly working, acid tanks. The reasons for adjustment are briefly discussed. Lime, if needed, should be added daily * * *. Examples of adjustment and methods of application of lime are given. The amount of lime necessary to adjust Plainfield fresh sewage solids to pH 7.3 is from 3 to 4 pounds per million gallons sewage daily; to adjust them to a pH value of 7.6 about 25 pounds per million gallons daily. * * * Good results in the correction of an Imhoff tank were obtained by adding dry hydrated lime to the digestion compartment with the aid of a small pump * * *. Material was pumped out of one compartment into the other and lime added. * * * With increased hardness of water the rate of sludge digestion should increase."

"Summarizing the discussion on the effect of lime on digestion we can state that probably several factors are of more or less importance: (*a*) Its effect on the activities of microorganism; (*b*) chemical reactions induced; (*c*) cause of change in physical conditions of digesting material.

"The effect on the activities of microorganisms may be: (1) Making the medium more favorable for acid producing organisms; (2) inducing the establishment of a predominantly different flora; (3) making the medium less (or more) favorable for protozoa.

"Chemically it affects the organic and mineral acids and under certain circumstances favors the liberation of ammonia.

"Physically it flocculates the finely divided materials (hydrophyllic colloids) changing the viscosity and affects the surface tension of the liquid."

**Bushy, Hertz, Sewerage and Sewage Disposal.** Anon. *Surveyor*, vol. 72, No. 1867, November 4, 1927, p. 406. (Abstract by J. B. Harrington.)

This is a brief article describing the sewage-disposal plant for the urban district of Bushy, present population 12,743. All sewage, with the exception of a small area flows by gravity to the purification works located on a 31½-acre tract of land in the district of Watford.

Previous treatment of sewage consisted of chemical precipitation and downward filtration through 5 acres of land. Unsatisfactory results by this method were responsible for the construction in 1910 of a more modern plant comprising the following units: Duplicate grit and screening chambers, two sedimentation tanks 28 feet in diameter by 14 feet deep, four rectangular sedimentation tanks 40½ by 35 by 4½ feet, one dosing chamber with two automatic siphons, two sludge tanks 17½ by 15 by 15 feet, five trickling filters 90 feet in diameter by 5 feet deep, six sand filters, combined area 2,300 square yards, and two rectangular storm-water tanks 80 by 22 feet by 2 feet 9 inches.

Increased population made it necessary to provide the following minor changes: Two new grit and screening chambers, remodeling of one circular sedimentation tank, construction of an octagonal humus tank 25 feet in diameter by 24 feet 2 inches deep, between the trickling filters and sand filters, and three new sludge digestion tanks and five sludge drying beds.

The construction of the supplementary units makes it possible to deliver practically an odorless effluent and sludge.

**Production of Illuminating Gas from the Stuttgart Sewage Filter Plant.** W. Sohler, *Gas. u. Wasserfach*, 70, 945–9 (1927). Abstract by R. W. Ryan in *Chemical Abstracts*, vol. 21, No. 22, Part I, November 20, 1927, p. 4000.

"A daily gas production of 3,000 to 4,000 cubic meters of gas is obtained from the anærobic fermentation of sludge from the Stuttgart sewage (population of Stuttgart, 350,000). The gas analyzes about 12 to 20 per cent $CO_2$, 4.8 per cent $H_2$, 75.5 per cent $CH_4$, and 4.7 per cent $N_2$, and has a calorific value of 7,500 to 8,500 cal. per cu. m. The method of recovery of this gas is described and illustrated. The gas is sold to the Gaisburg gas works."

**The Aluminate-Alum Coagulation of Water.** C. H. Christman. Bulletin 18–A, issued by the Chicago Chemical Co. 6 pages. (Abstract by W. A. Hardenbergh.)

Alum has been used almost universally as a coagulent in water purification, but its use with certain waters or under certain conditions has not been satisfactory. In some waters in the Great Lakes region, 0.2 to 0.4 grains per gallon is an efficient dose, but some plants in other sections require as much as 5 or 6 grains per gallon. Studies of these phenomena have shown that colloidal waters do not yield readily to treatment by alum. The application of hydrogen-ion

control resulted in great advances, but the principles of colloid chemistry, it is felt, will yield still further advances.

Many workers have sought a coagulant that would meet the conditions required by their water supply, and also yield an effluent of sufficient alkalinity to be noncorrosive. Sodium aluminate therefore came into use, but was not entirely satisfactory, until a certain type of the chemical, itself possessing colloidal properties, was used. Further research is now going on. An account of the results at several plants is given.

**Ueber die Abwasserreinigung mit Aktiviertem Schlamm Nach Versuchen mit Muenchener Kanalwasser.** (Experiments with activated sludge, etc.) M. Strell. *Gesundheits-Ingenieur.* 1927, vol. 50, pp. 179–182. Abstract by M. E. Delafield in the *Bulletin of Hygiene,* vol. 2, No. 7, July, 1927, pp. 549–550.

"This is in the main a description of certain experiments with the activated sludge process. It is maintained that the mode of action is only to a slight extent a physical one and that by far the greatest part is a biological action brought about by bacteria, protozoa, and metazoa. In activated sludge it is possible to demonstrate the existence of such enzymes as diastase, invertase, glycogenase, maltase, lipase, pepsin, trypsin, urease, oxydase, and katalase. The experiments consisted in determining the variation in the purification of crude sewage resulting from varying the time and the amount of aeration, and the proportion of added sludge.

"The general conclusions reached were: (1) That the addition of about one-third of activated sludge was the most effective; (2) that the greatest purification occurred in the first hour and was about 60 to 70 per cent; (3) provided there is sufficient aeration to keep the sludge in movement, further increasing the amount of air does not improve the purification materially; (4) too great an aeration has the effect of breaking up still further the sludge particles and so producing a turbid effluent containing more suspended matter."

**Residential Sewage Treatment Plants.** Lindon J. Murphy. Bulletin 93, Iowa State College of Agriculture and Mechanic Arts Official Publication, vol. 25, No. 70, May 28, 1927. 23 pages. (Abstract by W. L. Havens.)

This article summarizes the essential design and construction details of house plumbing, grease traps, house sewers, cesspools, Imhoff tanks, septic tanks, subsurface irrigation, trickling filters and intermittent sand filters as applied to sewerage facilities for residences and small communities. Sketches of the various devices are given, together with methods of construction and methods of estimating the costs of the different systems. Basic features of design and general operating suggestions are also given. The article should be of particular interest to those who contemplate the installation of small residential plants and who depend upon a carpenter contractor for engineering advice.

# MORTALITY SUMMARY FOR 75 LARGE CITIES, 1927

*Number of deaths, death rates, and infant mortality in 75 large cities of the United States for 1927 and comparison with 1926*

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

| City[1] | Total deaths[2] | Death rate[3] | Deaths under 1 year[2] | Provisional infant mortality rate, 1927[3,4] | Infant mortality rate, 1926 | Mortality data for calendar year, 1926[5] | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Total deaths | Death rate | Deaths under 1 year |
| Total (67 cities) | 363,799 | 12.3 | 39,054 | [6] 62 | [6] 72 | 384,746 | 13.2 | 45,727 |
| Akron[7] | 1,906 | ------- | 283 | 59 | 82 | 2,060 | ------- | 392 |
| Albany | 1,905 | 16.0 | 168 | 66 | 61 | 1,989 | 16.8 | 152 |
| Atlanta[8] | 3,793 | 15.3 | 473 | ------- | ------- | 3,907 | 16.0 | 543 |
| White | 1,976 | 11.3 | 207 | ------- | ------- | 1,901 | 11.1 | 262 |
| Colored | 1,817 | 24.7 | 266 | ------- | ------- | 2,006 | 27.6 | 281 |
| Baltimore | 11,535 | 14.1 | 1,330 | 81 | 83 | 12,210 | 15.1 | 1,359 |
| White | 8,583 | 12.3 | 894 | 68 | 71 | 9,220 | 13.4 | 952 |
| Colored | 2,952 | 24.6 | 436 | 131 | 128 | 2,990 | 25.1 | 427 |
| Birmingham | 3,405 | 15.7 | 450 | 74 | ------- | 3,718 | 17.7 | 537 |
| White | 1,575 | 11.9 | 197 | 52 | ------- | 1,731 | 13.5 | 239 |
| Colored | 1,830 | 21.7 | 253 | 109 | ------- | 1,987 | 24.0 | 298 |
| Boston | 11,006 | 13.9 | 1,449 | 77 | 84 | 11,720 | 14.9 | 1,573 |
| Bridgeport[7] | 1,505 | ------- | 132 | 46 | 73 | 1,692 | ------- | 223 |
| Buffalo | 7,275 | 13.3 | 836 | 69 | 84 | 7,779 | 14.3 | 1,037 |
| Cambridge | 1,385 | 11.2 | 156 | 53 | 68 | 1,481 | 12.1 | 199 |
| Camden | 1,634 | 12.3 | 220 | 67 | 87 | 1,768 | 13.5 | 264 |
| Canton | 1,109 | 9.8 | 147 | 67 | 91 | 1,141 | 10.4 | 197 |
| Chicago | 35,582 | 11.5 | 3,813 | 63 | 67 | 35,625 | 11.7 | 4,005 |
| Cincinnati | 6,887 | 16.8 | 646 | 75 | 89 | 7,104 | 17.3 | 764 |
| Cleveland | 9,463 | 9.8 | 1,043 | 54 | 72 | 10,640 | 11.1 | 1,396 |
| Columbus | 3,886 | 13.4 | 352 | 63 | 75 | 3,968 | 13.9 | 424 |
| Dallas[8] | 2,411 | 11.4 | 318 | ------- | ------- | 2,730 | 13.5 | 440 |
| White | 1,880 | 10.2 | 269 | ------- | ------- | 2,104 | 11.9 | 358 |
| Colored | 531 | 19.4 | 49 | ------- | ------- | 626 | 23.4 | 82 |
| Dayton | 2,210 | 12.3 | 231 | 73 | 84 | 2,162 | 12.2 | 264 |
| Denver[8] | 4,187 | 14.5 | 403 | ------- | ------- | 3,963 | 13.9 | 385 |
| Des Moines | 1,586 | 10.7 | 131 | 42 | 68 | 1,716 | 11.8 | 202 |
| Detroit | 14,393 | 10.8 | 2,323 | 69 | 84 | 16,229 | 12.6 | 2,875 |
| Duluth | 1,122 | 9.8 | 97 | 43 | 59 | 1,195 | 10.6 | 142 |
| El Paso[8] | 1,610 | 14.2 | 293 | ------- | ------- | 1,762 | 16.1 | 372 |
| Erie[7] | 1,269 | ------- | 132 | 52 | 89 | 1,509 | ------- | 218 |
| Fall River | 1,431 | 10.8 | 222 | 73 | 91 | 1,707 | 13.0 | 277 |
| Flint | 1,389 | 9.8 | 311 | 76 | 85 | 1,295 | 9.5 | 280 |
| Fort Worth[8] | 1,752 | 10.7 | 188 | ------- | ------- | 1,551 | 9.7 | 202 |
| White | 1,399 | 9.7 | 161 | ------- | ------- | 1,260 | 9.0 | 169 |
| Colored | 353 | 18.1 | 27 | ------- | ------- | 291 | 15.1 | 33 |
| Grand Rapids | 1,587 | 9.8 | 190 | 54 | 66 | 1,773 | 11.3 | 235 |
| Houston[7,8] | 2,957 | ------- | 353 | ------- | ------- | 2,881 | ------- | 336 |
| White | 1,954 | ------- | 253 | ------- | ------- | 1,929 | ------- | 229 |
| Colored | 1,003 | ------- | 100 | ------- | ------- | 952 | ------- | 107 |
| Indianapolis | 4,900 | 13.1 | 414 | 61 | 77 | 5,146 | 14.0 | 527 |
| White | 4,101 | 12.5 | 329 | 55 | 70 | 4,331 | 13.4 | 421 |
| Colored | 799 | 17.9 | 85 | 99 | 123 | 815 | 18.7 | 106 |
| Jersey City | 3,541 | 11.0 | 425 | 61 | 67 | 3,802 | 11.9 | 463 |
| Kansas City, Kans | 1,533 | 13.1 | 162 | 66 | 84 | 1,590 | 13.6 | 209 |
| White | 1,136 | 11.8 | 110 | 52 | 78 | 1,210 | 12.6 | 165 |
| Colored | 397 | 18.8 | 52 | 145 | 122 | 380 | 18.5 | 44 |
| Kansas City, Mo | 4,994 | 13.1 | 448 | 61 | ------- | 5,137 | 13.7 | 578 |
| Knoxville | 1,470 | 14.4 | 156 | 65 | ------- | 1,423 | 14.4 | 185 |
| White | 1,144 | 12.8 | 128 | 59 | ------- | 1,062 | 12.2 | 144 |
| Colored | 326 | 26.8 | 28 | 115 | ------- | 361 | 29.8 | 41 |
| Los Angeles[7] | 12,926 | ------- | 1,186 | 65 | 59 | 12,222 | ------- | 1,083 |
| Lowell | 1,394 | 12.7 | 216 | 87 | 89 | 1,549 | 14.0 | 220 |
| Lynn | 1,137 | 10.9 | 119 | 58 | 66 | 1,178 | 11.3 | 125 |
| Memphis | 3,444 | 19.3 | 347 | 78 | ------- | 3,529 | 20.0 | 416 |
| White | 1,738 | 15.1 | 168 | 60 | ------- | 1,737 | 15.3 | 199 |
| Colored | 1,706 | 27.0 | 179 | 108 | ------- | 1,792 | 28.4 | 217 |

[1] For 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; Memphis, 38; Nashville, 30; New Orleans, 26; Richmond, 32; and Washington, D. C., 25.

[2] Based upon telegraphic reports received each week from city health officers.

[3] Allowance has been made for the extra day which must be added to the 52 weeks to give a period of 365 days.

[4] Infant mortality rate is based upon deaths under 1 year as returned each week and estimated births, 1927.

[5] Based upon deaths which occurred within the calendar year.

[6] Infant mortality rate for the cities in the birth registration area appearing in the summary.

[7] Mortality rates are omitted, pending the establishment of more satisfactory estimates of population.

[8] Cities with no infant mortality rate are not in the registration area for births.

*Number of deaths, death rates, and infant mortality in 75 large cities of the United States for 1927 and comparison with 1926*—Continued

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

| City | Total deaths | Death rate | Deaths under 1 year | Provisional infant mortality rate, 1927 | Infant mortality rate, 1926 | Mortality data for calendar year, 1926 | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Total deaths | Death rate | Deaths under 1 year |
| Milwaukee | 5,706 | 10.7 | 770 | 66 | 75 | 5,730 | 11.1 | 856 |
| Minneapolis | 4,702 | 10.5 | 377 | 43 | 56 | 5,002 | 11.5 | 518 |
| Nashville | 2,405 | 17.5 | 221 | 67 | ------- | 2,698 | 19.7 | 337 |
| White | 1,459 | 14.8 | 137 | 56 | ------- | 1,566 | 16.0 | 217 |
| Colored | 946 | 24.4 | 84 | 97 | ------- | 1,132 | 29.0 | 120 |
| New Bedford | 1,303 | 10.9 | 161 | 67 | 102 | 1,500 | 12.5 | 283 |
| New Haven | 2,028 | 11.0 | 178 | 48 | 54 | 2,212 | 12.2 | 200 |
| New Orleans | 7,917 | 18.7 | 918 | 85 | ------- | 7,933 | 18.9 | 808 |
| White | 4,641 | 14.8 | 450 | 63 | ------- | 4,656 | 15.0 | 411 |
| Colored | 3,276 | 29.8 | 468 | 130 | ------- | 3,277 | 30.0 | 397 |
| New York | 70,243 | 11.8 | 7,254 | 56 | 68 | 76,065 | 12.8 | 8,480 |
| Bronx Borough | 8,574 | 9.3 | 694 | 40 | 58 | 9,244 | 10.3 | 947 |
| Brooklyn Borough | 23,763 | 10.5 | 2,856 | 55 | 66 | 26,930 | 12.0 | 3,282 |
| Manhattan Borough | 29,075 | 16.1 | 2,923 | 66 | 72 | 30,068 | 16.0 | 3,157 |
| Queens Borough | 6,735 | 8.3 | 633 | 49 | 75 | 7,833 | 10.3 | 894 |
| Richmond Borough | 2,096 | 14.3 | 148 | 51 | 72 | 1,990 | 14.0 | 200 |
| Newark, N. J. | 5,081 | 11.2 | 602 | 59 | 70 | 5,464 | 11.9 | 737 |
| Oakland | 2,952 | 11.1 | 260 | 54 | 63 | 2,802 | 10.8 | 277 |
| Oklahoma City [7, 8] | 1,509 | ------- | 169 | ------- | ------- | 1,186 | ------- | 134 |
| Omaha | 2,670 | 12.2 | 237 | 53 | 64 | 2,794 | 13.0 | 295 |
| Paterson | 1,729 | 12.1 | 162 | 54 | 64 | 1,830 | 12.8 | 187 |
| Philadelphia | 24,811 | 12.2 | 2,465 | 64 | 78 | 27,667 | 13.8 | 3,007 |
| Pittsburgh | 9,055 | 13.6 | 1,147 | 72 | 82 | 9,001 | 14.1 | 1,234 |
| Portland, Oreg. [7] | 3,516 | ------- | 205 | 42 | 39 | 3,377 | ------- | 189 |
| Providence | 3,165 | 11.3 | 379 | 63 | 69 | 3,544 | 12.9 | 416 |
| Richmond | 2,699 | 14.1 | 274 | 69 | 107 | 3,035 | 16.0 | 430 |
| White | 1,559 | 11.5 | 133 | 52 | 76 | 1,711 | 12.8 | 197 |
| Colored | 1,140 | 20.6 | 141 | 99 | 164 | 1,324 | 23.9 | 233 |
| Rochester | 3,755 | 11.6 | 405 | 63 | 67 | 4,103 | 12.8 | 414 |
| St. Louis | 10,817 | 12.9 | 817 | 52 | ------- | 11,540 | 13.9 | 1,146 |
| St. Paul | 2,812 | 11.3 | 195 | 36 | 56 | 3,052 | 12.3 | 318 |
| Salt Lake City | 1,654 | 12.2 | 195 | 61 | 66 | 1,703 | 12.8 | 217 |
| San Antonio [8] | 2,978 | 14.1 | 522 | ------- | ------- | 3,015 | 14.7 | 606 |
| San Diego | 2,074 | 18.0 | 160 | 58 | 46 | 1,849 | 16.7 | 108 |
| San Francisco | 7,907 | 13.8 | 390 | 47 | 50 | 7,662 | 13.5 | 415 |
| Schenectady | 984 | 10.6 | 111 | 67 | 71 | 1,087 | 11.7 | 124 |
| Seattle | 3,538 | 9.5 | 187 | 37 | 47 | 3,564 | 9.7 | 228 |
| Somerville | 929 | 9.2 | 96 | 64 | 61 | 1,081 | 10.8 | 110 |
| Springfield, Mass | 1,663 | 11.3 | 170 | 52 | 69 | 1,820 | 12.6 | 229 |
| Syracuse | 2,394 | 12.2 | 243 | 57 | 69 | 2,513 | 13.6 | 277 |
| Toledo | 3,631 | 11.9 | 335 | 62 | 82 | 3,733 | 12.6 | 448 |
| Trenton | 1,927 | 14.1 | 226 | 73 | 77 | 1,890 | 14.1 | 228 |
| Utica | 1,578 | 15.3 | 130 | 56 | 81 | 1,681 | 16.4 | 182 |
| Washington, D. C. | 6,964 | 12.9 | 605 | 66 | 85 | 7,388 | 14.0 | 758 |
| White | 4,332 | 10.8 | 305 | 48 | 67 | 4,583 | 11.6 | 407 |
| Colored | 2,632 | 19.4 | 300 | 106 | 123 | 2,805 | 21.0 | 351 |
| Waterbury [7] | 1,021 | ------- | 118 | 66 | 82 | 1,194 | ------- | 182 |
| Wilmington, Del | 1,446 | 11.5 | 145 | 73 | 87 | 1,615 | 13.0 | 183 |
| Worcester | 2,504 | 12.8 | 245 | 57 | 75 | 2,701 | 14.0 | 322 |
| Yonkers | 1,106 | 9.3 | 138 | 60 | 75 | 1,215 | 10.4 | 170 |
| Youngstown | 1,716 | 10.2 | 257 | 66 | 85 | 1,770 | 10.7 | 332 |

[7] Mortality rates are omitted, pending the establishment of more satisfactory estimates of population.
[8] Cities with no infant mortality rate are not in the registration area for births.

## DEATHS DURING WEEK ENDED DECEMBER 31, 1927

*Summary of information received by telegraph from industrial insurance companies for the week ended December 31, 1927, and corresponding week of 1926. (From the Weekly Health Index, January 7, 1928, issued by the Bureau of the Census, Department of Commerce)*

| | Week ended Dec. 31, 1927 | Corresponding week, 1926 |
|---|---|---|
| Policies in force | 69,653,164 | 66,378,884 |
| Number of death claims | 14,773 | 13,103 |
| Death claims per 1,000 policies in force, annual rate | 11.1 | 10.3 |

*Deaths from all causes in certain large cities of the United States during the week ended December 31, 1927, infant mortality, annual death rate, and comparison with corresponding week of 1926. (From the Weekly Health Index, January 7, 1928, issued by the Bureau of the Census, Department of Commerce)*

| City | Week ended Dec. 31, 1927 | | Annual death rate per 1,000 corresponding week, 1926 | Deaths under 1 year | | Infant mortality rate, week ended Dec. 31, 1927 [2] |
|---|---|---|---|---|---|---|
| | Total deaths | Death rate [1] | | Week ended Dec. 31, 1927 | Corresponding week, 1926 | |
| Total (68 cities) | 7,917 | 13.8 | [3] 14.2 | 786 | [3] 813 | [4] 67 |
| Akron | 29 | | | 6 | 6 | 65 |
| Albany [5] | 47 | 20.5 | 18.0 | 3 | 4 | 63 |
| Atlanta [6] | 88 | 18.4 | 15.6 | 10 | 8 | |
| White | 53 | 15.8 | 12.8 | 3 | 5 | |
| Colored | 35 | 24.7 | 22.2 | 7 | 3 | |
| Baltimore [5, 6] | 234 | 14.9 | 17.8 | 25 | 33 | 79 |
| White | 171 | 12.8 | 15.0 | 15 | 21 | 60 |
| Colored | 63 | 27.3 | 33.7 | 10 | 12 | 156 |
| Birmingham [6] | 90 | 21.6 | 21.0 | 9 | 12 | |
| White | 40 | 15.7 | 15.5 | 4 | 7 | |
| Colored | 50 | 30.8 | 29.6 | 5 | 5 | |
| Boston | 223 | 14.7 | 16.9 | 28 | 30 | 78 |
| Bridgeport | 43 | | | 7 | 4 | 119 |
| Buffalo | 143 | 13.6 | 12.2 | 13 | 11 | 55 |
| Cambridge | 38 | 16.0 | 14.5 | 3 | 4 | 53 |
| Camden | 33 | 12.9 | 11.6 | 4 | 2 | 68 |
| Canton | 25 | 11.5 | 12.3 | 2 | 3 | 48 |
| Chicago [5] | 773 | 13.0 | 13.0 | 81 | 73 | 70 |
| Cincinnati | 149 | 18.8 | 17.8 | 10 | 13 | 60 |
| Cleveland | 220 | 11.8 | 11.1 | 26 | 22 | 70 |
| Columbus | 90 | 16.1 | 15.9 | 3 | 7 | 28 |
| Dallas [6] | 71 | 17.5 | 13.1 | 5 | 9 | |
| White | 56 | 15.9 | 12.4 | 5 | 8 | |
| Colored | 15 | 28.5 | 17.6 | 0 | 1 | |
| Dayton | 36 | 10.4 | 12.7 | 6 | 5 | 99 |
| Denver | 105 | 18.9 | 15.9 | 9 | 9 | |
| Des Moines | 32 | 11.2 | 12.9 | 4 | 7 | 71 |
| Detroit | 283 | 11.1 | 12.6 | 35 | 62 | 54 |
| Duluth | 29 | 13.2 | 15.7 | 1 | 2 | 22 |
| El Paso | 42 | 19.3 | 12.9 | 5 | 3 | |
| Erie | 20 | | | 3 | 4 | 64 |
| Fall River [5] | 29 | 11.4 | 12.3 | 5 | 12 | 85 |
| Flint | 42 | 15.3 | 9.2 | 7 | 4 | 110 |
| Fort Worth [6] | 35 | 11.2 | 11.8 | 3 | 2 | |
| White | 26 | 9.4 | 9.3 | 3 | 0 | |
| Colored | 9 | 23.9 | 29.7 | 0 | 2 | |
| Grand Rapids | 35 | 11.3 | 11.7 | 4 | 5 | 59 |
| Houston [6] | 70 | | | 9 | 5 | |
| White | 50 | | | 8 | 4 | |
| Colored | 20 | | | 1 | 1 | |
| Indianapolis [6] | 100 | 13.9 | 15.1 | 11 | 6 | 84 |
| White | 82 | 13.0 | 14.8 | 10 | 5 | 87 |
| Colored | 18 | 21.0 | 16.8 | 1 | 1 | 60 |
| Jersey City | 66 | 10.7 | 12.1 | 10 | 11 | 75 |
| Kansas City, Kans. [6] | 25 | 11.1 | 10.7 | 3 | 5 | 63 |
| White | 18 | 9.7 | 10.3 | 2 | 4 | 49 |
| Colored | 7 | 17.2 | 12.7 | 1 | 1 | 145 |
| Kansas City, Mo. | 128 | 17.4 | 18.2 | 3 | 12 | |
| Knoxville [6] | 23 | 11.7 | | 2 | | |
| White | 14 | 8.1 | | 1 | | |
| Colored | 9 | 38.5 | | 1 | | |
| Los Angeles | 306 | | | 34 | 23 | 97 |
| Lowell | 38 | 18.0 | 13.7 | 3 | 3 | 63 |
| Lynn | 27 | 13.4 | 16.5 | 2 | 4 | 55 |
| Memphis [6] | 65 | 18.9 | 20.1 | 5 | 9 | |
| White | 30 | 13.5 | 14.7 | 1 | 2 | |
| Colored | 35 | 28.8 | 29.7 | 4 | 7 | |
| Milwaukee | 111 | 10.8 | 12.3 | 18 | 14 | 83 |
| Minneapolis | 120 | 14.0 | 10.7 | 11 | 7 | 62 |
| Nashville [6] | 58 | 21.9 | 15.6 | 9 | 4 | |
| White | 42 | 22.1 | 12.2 | 9 | 3 | |
| Colored | 16 | 21.4 | 24.1 | 0 | 1 | |
| New Bedford | 35 | 15.3 | 11.3 | 4 | 4 | 76 |
| New Haven | 31 | 8.7 | 14.0 | 4 | 3 | 56 |
| New Orleans [6] | 216 | 26.5 | 17.9 | 18 | 7 | |
| White | 142 | 23.6 | 15.3 | 14 | 2 | |
| Colored | 74 | 35.0 | 25.3 | 4 | 5 | |

(See footnotes at end of table.)

*Deaths from all causes in certain large cities of the United States during the week ended December 31, 1927, infant mortality, annual death rate, and comparison with corresponding week of 1926. (From the Weekly Health Index, January 7, 1928, issued by the Bureau of the Census, Department of Commerce)*—Contd.

| City | Week ended Dec. 31, 1927 | | Annual death rate per 1,000 corresponding week, 1926 | Deaths under 1 year | | Infant mortality rate, week ended Dec. 31, 1927 |
|---|---|---|---|---|---|---|
| | Total deaths | Death rate | | Week ended Dec. 31, 1927 | Corresponding week, 1926 | |
| New York | 1,514 | 13.2 | 14.1 | 150 | 160 | 63 |
| Bronx boro | 191 | 10.8 | 12.3 | 20 | 17 | 64 |
| Brooklyn boro | 473 | 10.8 | 13.2 | 56 | 58 | 58 |
| Manhattan boro | 654 | 18.8 | 17.4 | 55 | 64 | 66 |
| Queens boro | 148 | 9.5 | 10.6 | 16 | 17 | 70 |
| Richmond boro | 48 | 17.1 | 14.6 | 3 | 4 | 57 |
| Newark, N. J | 94 | 10.5 | 11.9 | 14 | 15 | 70 |
| Oakland | 74 | 14.4 | 16.8 | 9 | 3 | 106 |
| Oklahoma City | 27 | | | 1 | 2 | |
| Omaha | 60 | 14.3 | 11.9 | 12 | 3 | 136 |
| Paterson | 27 | 9.8 | 10.6 | 2 | 0 | 36 |
| Philadelphia | 498 | 12.8 | 14.8 | 47 | 51 | 63 |
| Pittsburgh | 216 | 16.9 | 16.5 | 25 | 17 | 87 |
| Portland, Oreg | 80 | | | 2 | 6 | 21 |
| Providence | 70 | 13.0 | 9.3 | 6 | 4 | 52 |
| Richmond [6] | 56 | 15.2 | 18.2 | 5 | 4 | 65 |
| White | 31 | 11.9 | 14.4 | 3 | 2 | 61 |
| Colored | 25 | 23.4 | 27.3 | 2 | 2 | 73 |
| Rochester | 65 | 10.4 | 12.0 | 6 | 5 | 51 |
| St. Louis | 251 | 15.6 | 16.9 | 17 | 22 | |
| St. Paul | 52 | 10.8 | 13.2 | 2 | 7 | 18 |
| Salt Lake City [5] | 45 | 17.3 | 14.5 | 4 | 3 | 64 |
| San Antonio | 78 | 19.2 | 15.0 | 12 | 8 | |
| San Diego | 48 | 21.7 | 21.7 | 6 | 4 | 132 |
| San Francisco | 166 | 15.0 | 15.9 | 10 | 6 | 62 |
| Schenectady | 14 | 7.8 | 10.1 | 2 | 3 | 60 |
| Seattle | 76 | 10.6 | 13.2 | 5 | 6 | 53 |
| Somerville | 25 | 12.8 | 15.1 | 3 | 4 | 87 |
| Springfield, Mass | 38 | 13.4 | 15.1 | 5 | 4 | 79 |
| Syracuse | 44 | 11.6 | 13.8 | 4 | 4 | 52 |
| Tacoma | 20 | 9.7 | 12.3 | 1 | 1 | 23 |
| Toledo | 83 | 14.2 | 11.8 | 4 | 4 | 38 |
| Trenton | 47 | 17.9 | 13.6 | 4 | 5 | 71 |
| Utica | 36 | 18.2 | 17.3 | 0 | 3 | 0 |
| Washington, D. C. [6] | 142 | 13.7 | 13.6 | 15 | 11 | 88 |
| White | 81 | 10.5 | 11.8 | 3 | 3 | 26 |
| Colored | 61 | 23.4 | 19.1 | 12 | 8 | 219 |
| Waterbury | 28 | | | 3 | 4 | 70 |
| Wilmington, Del | 33 | 13.6 | 13.0 | 1 | 4 | 25 |
| Worcester | 42 | 11.2 | 12.1 | 4 | 6 | 48 |
| Yonkers | 26 | 11.4 | 11.7 | 4 | 4 | 92 |
| Youngstown | 42 | 12.9 | 14.6 | 3 | 11 | 40 |

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.
[3] Data for 67 cities.
[4] Data for 61 cities.
[5] Deaths for week ended Friday, Dec. 30, 1927.
[6] 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; Memphis, 38; Nashville, 30; New Orleans, 26; Richmond, 32; and Washington, D. C., 25.

## DEATHS DURING WEEK ENDED JANUARY 7, 1928

*Summary of information received by telegraph from industrial insurance companies for week ended January 7, 1928, and corresponding week of 1927. (From the Weekly Health Index, January 12, 1928, issued by the Bureau of the Census, Department of Commerce)*

| | Week ended Jan. 7, 1928 | Corresponding week, 1927 |
|---|---|---|
| Policies in force | 69,402,221 | 66,407,940 |
| Number of death claims | 9,325 | 11,467 |
| Death claims per 1,000 policies in force, annual rate | 7.0 | 9.0 |

***Deaths from all causes in certain large cities of the United States during the week ended January 7, 1928, infant mortality, annual death rate, and comparison with corresponding week of 1927. (From the Weekly Health Index, January 12, 1928, issued by the Bureau of the Census, Department of Commerce).***

| City | Week ended Jan. 7, 1928 | | Annual death rate per 1,000, corresponding week, 1927 | Deaths under 1 year | | Infant mortality rate, week ended Jan. 7, 1928 [2] |
|---|---|---|---|---|---|---|
| | Total deaths | Death rate [1] | | Week ended Jan. 7, 1928 | Corresponding week, 1927 | |
| Total (66 cities) | 7,862 | 13.7 | [3] 14.7 | 762 | [3] 895 | [4] 63 |
| Akron | 36 | | | 8 | 10 | 87 |
| Albany [5] | 35 | 15.2 | 20.1 | 2 | 3 | 41 |
| Atlanta | 77 | 15.9 | 19.5 | 11 | 11 | |
| White | 45 | | 14.0 | 5 | 4 | |
| Colored | 32 | (6) | 32.5 | 6 | 7 | |
| Baltimore [5] | 253 | 15.9 | 17.0 | 24 | 37 | 76 |
| White | 195 | | 14.9 | 14 | 21 | 56 |
| Colored | 58 | (6) | 29.4 | 10 | 16 | 157 |
| Birmingham | 87 | 20.5 | 19.4 | 12 | 12 | 103 |
| White | 41 | | 14.9 | 7 | 5 | 97 |
| Colored | 46 | (6) | 26.5 | 5 | 7 | 113 |
| Boston | 237 | 15.5 | 14.9 | 25 | 22 | 69 |
| Bridgeport | 37 | | | 3 | 6 | 55 |
| Buffalo | 168 | 15.8 | 24.4 | 17 | 30 | 73 |
| Cambridge | 33 | 13.7 | 16.8 | 6 | 6 | 107 |
| Camden | 25 | 9.7 | 12.5 | 3 | 3 | 48 |
| Canton | 17 | 7.6 | 6.0 | 0 | 1 | 0 |
| Chicago [5] | 810 | 13.4 | 14.5 | 65 | 92 | 56 |
| Cincinnati | 128 | 16.2 | 20.2 | 6 | 17 | 36 |
| Cleveland | 154 | 8.0 | 11.4 | 17 | 24 | 46 |
| Columbus | 86 | 15.1 | 12.9 | 4 | 7 | 37 |
| Dallas | 57 | 13.7 | 13.8 | 10 | 4 | |
| White | 43 | | 11.8 | 8 | 3 | |
| Colored | 14 | (6) | 26.6 | 2 | 1 | |
| Dayton | 27 | 7.7 | 15.6 | 5 | 4 | 83 |
| Denver | 81 | 14.4 | 18.7 | 6 | 8 | |
| Des Moines | 29 | 10.0 | 8.8 | 3 | 4 | 50 |
| Detroit | 318 | 12.1 | 13.9 | 56 | 70 | 86 |
| Duluth | 13 | 5.8 | 6.8 | 1 | 2 | 23 |
| El Paso | 35 | 15.5 | 23.4 | 7 | 11 | |
| Erie | 14 | | | 2 | 2 | 41 |
| Fall River [5] | 31 | 12.1 | 9.4 | 2 | 5 | 34 |
| Flint | 15 | 5.3 | 10.6 | 4 | 7 | 51 |
| Fort Worth | 44 | 13.7 | 13.1 | 5 | 4 | |
| White | 34 | | 12.7 | 3 | 4 | |
| Colored | 10 | (6) | 16.0 | 2 | 0 | |
| Grand Rapids | 34 | 10.8 | 10.6 | 4 | 1 | 60 |
| Houston | 53 | | | 5 | 9 | |
| White | 45 | | | 5 | 6 | |
| Colored | 8 | (6) | | 0 | 3 | |
| Indianapolis | 110 | 15.1 | 14.5 | 8 | 16 | 61 |
| White | 93 | | 14.1 | 7 | 13 | 61 |
| Colored | 17 | (6) | 17.5 | 1 | 3 | 61 |
| Jersey City | 83 | 13.4 | 13.0 | 8 | 9 | 60 |
| Kansas City, Mo | 84 | 11.2 | 13.9 | 6 | 17 | 42 |
| Knoxville | 17 | 8.4 | 12.3 | 1 | 3 | 22 |
| White | 13 | | 9.9 | 1 | 2 | 24 |
| Colored | 4 | (6) | 29.9 | 0 | 1 | 0 |
| Los Angeles | 313 | | | 31 | 23 | 89 |
| Lowell | 27 | 12.8 | 18.4 | 1 | 4 | 21 |
| Lynn | 34 | 16.9 | 16.9 | 1 | 4 | 25 |
| Memphis | 54 | 15.6 | 18.1 | 9 | 8 | 105 |
| White | 29 | | 13.5 | 5 | 4 | 94 |
| Colored | 25 | (6) | 26.3 | 4 | 4 | 125 |
| Milwaukee | 125 | 12.0 | 10.9 | 19 | 26 | 85 |
| Minneapolis | 99 | 11.4 | 13.4 | 8 | 8 | 48 |
| Nashville | 53 | 20.9 | 22.3 | 6 | 6 | 94 |
| White | 29 | | 17.4 | 5 | 5 | 107 |
| Colored | 24 | (6) | 34.9 | 1 | 1 | 60 |
| New Bedford | 32 | 14.0 | 14.4 | 4 | 3 | 87 |
| New Haven | 45 | 12.5 | 11.6 | 5 | 5 | 71 |
| New Orleans | 206 | 25.1 | 18.8 | 21 | 15 | 102 |
| White | 141 | | 12.5 | 14 | 3 | 102 |
| Colored | 65 | (6) | 36.9 | 7 | 12 | 102 |

(See footnotes at end of table.)

*Deaths from all causes in certain large cities of the United States during the week ended January 7, 1928, infant mortality, annual death rate, and comparison with corresponding week of 1927. (From the Weekly Health Index, January 12, 1928, issued by the Bureau of the Census, Department of Commerce)*—Continued

| City | Week ended Jan. 7, 1928 | | Annual death rate per 1,000, corresponding week, 1927 | Deaths under 1 year | | Infant mortality rate, week ended Jan. 7, 1928 |
|---|---|---|---|---|---|---|
| | Total deaths | Death rate | | Week ended Jan. 7, 1928 | Corresponding week, 1927 | |
| New York | 1,574 | 13.7 | 13.2 | 145 | 138 | 59 |
| Bronx Borough | 198 | 10.9 | 10.3 | 12 | 11 | 36 |
| Brooklyn Borough | 515 | 11.7 | 11.7 | 46 | 45 | 46 |
| Manhattan Borough | 650 | 19.4 | 17.8 | 66 | 67 | 78 |
| Queens Borough | 164 | 10.0 | 9.6 | 20 | 13 | 81 |
| Richmond Borough | 47 | 16.3 | 18.5 | 1 | 2 | 18 |
| Newark, N. J | 104 | 11.5 | 16.2 | 7 | 12 | 36 |
| Oakland | 68 | 13.0 | 16.6 | 7 | 2 | 76 |
| Oklahoma City | 34 | | | 5 | 1 | |
| Omaha | 58 | 13.6 | 16.7 | 6 | 4 | 70 |
| Paterson | 47 | 17.0 | 13.4 | 5 | 3 | 87 |
| Philadelphia | 551 | 14.0 | 13.7 | 49 | 60 | 66 |
| Pittsburgh | 192 | 14.9 | 18.4 | 28 | 29 | 92 |
| Portland, Oreg | 72 | | | 4 | 4 | 43 |
| Providence | 68 | 12.4 | 15.2 | 3 | 8 | 26 |
| Richmond | 67 | 18.0 | 15.2 | 6 | 4 | 78 |
| White | 38 | | 13.8 | 4 | 4 | 81 |
| Colored | 29 | (6) | 18.8 | 2 | 0 | 73 |
| Rochester | 93 | 14.8 | 11.2 | 4 | 4 | 32 |
| St. Louis | 231 | 14.2 | 14.7 | 20 | 18 | 67 |
| St. Paul | 82 | 17.0 | 13.1 | 8 | 1 | 77 |
| Salt Lake City [5] | 34 | 12.9 | 13.1 | 2 | 7 | 33 |
| San Antonio | 90 | 21.6 | 16.5 | 16 | 11 | |
| San Diego | 48 | 21.0 | 18.5 | 4 | 7 | 76 |
| San Francisco | 183 | 16.3 | 18.6 | 13 | 4 | 82 |
| Schenectady | 11 | 6.2 | 16.2 | 2 | 2 | 63 |
| Somerville | 30 | 15.3 | 10.8 | 4 | 3 | 138 |
| Spokane | 33 | 15.8 | 17.7 | 1 | 2 | 26 |
| Springfield, Mass | 27 | 9.4 | 14.5 | 3 | 7 | 48 |
| Syracuse | 52 | 13.6 | 16.1 | 4 | 8 | 49 |
| Tacoma | 26 | 12.3 | 15.6 | 2 | 2 | 51 |
| Toledo | 79 | 13.2 | 13.7 | 4 | 8 | 38 |
| Trenton | 44 | 16.6 | 19.1 | 7 | 8 | 119 |
| Washington, D. C | 148 | 14.0 | 15.9 | 5 | 15 | 29 |
| White | 81 | | 13.3 | 1 | 10 | 8 |
| Colored | 67 | (6) | 23.7 | 4 | 5 | 74 |
| Waterbury | 18 | | | 3 | 3 | 87 |
| Wilmington, Del | 45 | 18.3 | 18.6 | 5 | 3 | 132 |
| Worcester | 63 | 16.7 | 15.2 | 6 | 5 | 73 |
| Yonkers | 21 | 9.1 | 9.7 | 2 | 2 | 46 |
| Youngstown | 30 | 9.0 | 13.2 | 2 | 9 | 27 |

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.
[3] Date for 59 cities.
[4] Date for 66 cities.
[5] Deaths for week ended Friday, Jan. 6, 1928.
[6] 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; Knoxville, 15; Memphis, 38; Nashville, 30; New Orleans, 26; Richmond, 32; 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 January 15, 1927, and January 14, 1928**

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended January 15, 1927, and January 14, 1928*

| Division and State | Diphtheria | | Influenza | | Measles | | Meningococcus meningitis | |
|---|---|---|---|---|---|---|---|---|
| | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 |
| New England States: | | | | | | | | |
| Maine | 1 | 2 | 5 | 3 | 201 | 59 | 0 | 0 |
| New Hampshire | | | | | | | | |
| Vermont | 2 | | | | 91 | 2 | 0 | 0 |
| Massachusetts | 109 | 129 | 12 | 10 | 197 | 1,202 | 1 | 1 |
| Rhode Island | 16 | 17 | | | 2 | 5 | 0 | 0 |
| Connecticut | 31 | 44 | 24 | 3 | 17 | 142 | 2 | 0 |
| Middle Atlantic States: | | | | | | | | |
| New York | 288 | 421 | [1] 98 | [1] 22 | 821 | 1,119 | 9 | 2 |
| New Jersey | 134 | 198 | 28 | 24 | 62 | 188 | 1 | 3 |
| Pennsylvania | 213 | 251 | | | 860 | 857 | 2 | 2 |
| East North Central States: | | | | | | | | |
| Ohio | 65 | 47 | 139 | 33 | 90 | 87 | 0 | 0 |
| Indiana | 136 | 184 | 88 | 33 | 1,137 | 58 | 4 | 9 |
| Illinois | 139 | 109 | | 9 | 91 | 354 | 0 | 1 |
| Michigan | 43 | 40 | 35 | 87 | 814 | 28 | 6 | 3 |
| Wisconsin | | | | | | | | |
| West North Central States: | | | | | | | | |
| Minnesota | 36 | 39 | 3 | 1 | 130 | 6 | 0 | 2 |
| Iowa [2] | 36 | | | | 199 | | 0 | |
| Missouri | 56 | 46 | 3 | 11 | 186 | 30 | 1 | 5 |
| North Dakota | 4 | 9 | | | 130 | 1 | 2 | 3 |
| South Dakota | | | | 1 | 20 | 45 | 0 | 0 |
| Nebraska | 6 | 11 | 5 | | 73 | 4 | 0 | 3 |
| Kansas | 17 | 32 | 22 | 10 | 137 | 25 | 2 | 7 |
| South Atlantic States: | | | | | | | | |
| Delaware | 8 | 1 | 1 | 2 | 3 | 17 | 0 | 0 |
| Maryland [2] | 75 | 25 | 96 | 49 | 20 | 249 | 1 | 1 |
| District of Columbia | 20 | | 10 | | | | 0 | |
| Virginia | | | | | | | | |
| West Virginia | 39 | 14 | 61 | 31 | 98 | 71 | 1 | 1 |
| North Carolina | 43 | 80 | | | 161 | 3,689 | 0 | 0 |
| South Carolina | 21 | 49 | 914 | 1,439 | 49 | 1,459 | 0 | 0 |
| Georgia | 32 | 23 | 107 | 184 | 56 | 173 | 0 | 0 |
| Florida | 30 | 28 | | 11 | 6 | 7 | 0 | 1 |

[1] New York City only.

[2] Week ended Friday.

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended January 15, 1927, and January 14, 1928*—Continued

| Division and State | Diphtheria | | Influenza | | Measles | | Meningococcus meningitis | |
|---|---|---|---|---|---|---|---|---|
| | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 |
| East South Central States: | | | | | | | | |
| Kentucky | | 13 | | 8 | | 51 | | 0 |
| Tennessee | 39 | 17 | 83 | 141 | 136 | 445 | 1 | 0 |
| Alabama | 72 | 33 | 99 | 224 | 75 | 165 | 0 | 0 |
| Mississippi | 21 | 16 | | | | | 1 | 2 |
| West South Central States: | | | | | | | | |
| Arkansas | 12 | 19 | 121 | 266 | 11 | 183 | 1 | 0 |
| Louisiana | 28 | 29 | 21 | 48 | 83 | 62 | 0 | 1 |
| Oklahoma [3] | 34 | 55 | 278 | 187 | 37 | 60 | 1 | 2 |
| Texas | 76 | 80 | 408 | 65 | 19 | 36 | 0 | 1 |
| Mountain States: | | | | | | | | |
| Montana | 7 | 1 | | | 67 | 1 | 6 | 0 |
| Idaho | 2 | | | | 77 | 2 | 0 | 0 |
| Wyoming | 5 | 1 | | | 66 | | 3 | 7 |
| Colorado | 5 | 18 | 4 | | 15 | 61 | 1 | 3 |
| New Mexico | | 7 | | | | 46 | | 0 |
| Arizona | 4 | 35 | | | 7 | 27 | 0 | 1 |
| Utah [2] | 8 | 9 | | 4 | 491 | | 0 | 3 |
| Nevada | | | | | | | | |
| Pacific States: | | | | | | | | |
| Washington | 21 | 8 | | 1 | 361 | 269 | 8 | 5 |
| Oregon | 19 | 14 | 23 | 23 | 55 | 46 | 5 | 0 |
| California | 152 | 129 | 41 | 34 | 1,537 | 96 | 3 | 9 |

| Division and State | Poliomyelitis | | Scarlet fever | | Smallpox | | Typhoid fever | |
|---|---|---|---|---|---|---|---|---|
| | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 |
| New England States: | | | | | | | | |
| Maine | 0 | 1 | 31 | 26 | 0 | 0 | 1 | 1 |
| New Hampshire | | | | | | | | |
| Vermont | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| Massachusetts | 2 | 6 | 495 | 364 | 0 | 0 | 12 | 5 |
| Rhode Island | 0 | 0 | 14 | 38 | 0 | 0 | 1 | 1 |
| Connecticut | 0 | 0 | 101 | 112 | 0 | 53 | 1 | 3 |
| Middle Atlantic States: | | | | | | | | |
| New York | 1 | 6 | 720 | 626 | 18 | 18 | 27 | 15 |
| New Jersey | 1 | 1 | 266 | 205 | 0 | 0 | 5 | 5 |
| Pennsylvania | 1 | 3 | 508 | 450 | 0 | 0 | 40 | 20 |
| East North Central States: | | | | | | | | |
| Ohio | | | | | | | | |
| Indiana | 0 | 1 | 210 | 115 | 129 | 125 | 3 | 2 |
| Illinois | 1 | 1 | 334 | 366 | 27 | 25 | 8 | 16 |
| Michigan | 0 | 2 | 395 | 306 | 45 | 49 | 11 | 9 |
| Wisconsin | 1 | 1 | 202 | 164 | 29 | 27 | 4 | 0 |
| West North Central States: | | | | | | | | |
| Minnesota | 0 | 1 | 254 | 137 | 4 | 3 | 5 | 4 |
| Iowa [2] | 0 | | 75 | | 16 | | 0 | |
| Missouri | 1 | 2 | 171 | 98 | 10 | 51 | 6 | 4 |
| North Dakota | 0 | 3 | 88 | 29 | 11 | 6 | 0 | 1 |
| South Dakota | 0 | 0 | 35 | 40 | 3 | 7 | 0 | 1 |
| Nebraska | 0 | 1 | 52 | 83 | 23 | 44 | 1 | 1 |
| Kansas | 1 | 4 | 134 | 192 | 40 | 125 | 8 | 1 |
| South Atlantic States: | | | | | | | | |
| Delaware | 0 | 0 | 47 | 5 | 0 | 0 | 0 | 0 |
| Maryland [2] | 0 | 1 | 106 | 69 | 0 | 0 | 10 | 6 |
| District of Columbia | 0 | | 32 | | 0 | | 0 | |
| Virginia | | | | | | | | |
| West Virginia | 0 | 4 | 81 | 56 | 4 | 17 | 8 | 10 |
| North Carolina | 0 | 1 | 66 | 81 | 99 | 106 | 5 | 4 |
| South Carolina | 2 | 1 | 12 | 10 | 16 | 33 | 12 | 0 |
| Georgia | 0 | 0 | 24 | 24 | 71 | 0 | 4 | 9 |
| Florida | 2 | 0 | 16 | 14 | 40 | 10 | 15 | 3 |

[2] Week ended Friday.

[3] Exclusive of Tulsa.

*Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended January 15, 1927, and January 14, 1928*—Continued

| Division and State | Poliomyelitis | | Scarlet fever | | Smallpox | | Typhoid fever | |
|---|---|---|---|---|---|---|---|---|
| | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 | Week ended Jan. 15, 1927 | Week ended Jan. 14, 1928 |
| East South Central States: | | | | | | | | |
| Kentucky | | 0 | | 58 | | 27 | | 3 |
| Tennessee | 0 | 1 | 51 | 21 | 13 | 23 | 21 | 7 |
| Alabama | 0 | 0 | 18 | 16 | 78 | 4 | 7 | 12 |
| Mississippi | 0 | 0 | 14 | 20 | 9 | 7 | 2 | 5 |
| West South Central States: | | | | | | | | |
| Arkansas | 0 | 0 | 8 | 26 | 4 | 9 | 11 | 3 |
| Louisiana | 1 | 1 | 8 | 11 | 7 | 11 | 8 | 11 |
| Oklahoma [3] | 0 | 1 | 61 | 41 | 39 | 201 | 11 | 7 |
| Texas | 0 | 2 | 76 | 90 | 406 | 78 | 10 | 6 |
| Mountain States: | | | | | | | | |
| Montana | 0 | 0 | 141 | 35 | 6 | 27 | 0 | 0 |
| Idaho | 0 | 0 | 30 | 25 | 6 | 11 | 0 | 1 |
| Wyoming | 0 | 0 | 35 | 34 | 0 | 18 | 0 | 0 |
| Colorado | 0 | 2 | 67 | 151 | 9 | 18 | 0 | 0 |
| New Mexico | | 0 | | 9 | | 0 | | 1 |
| Arizona | 1 | 0 | 12 | 8 | 0 | 0 | 1 | 1 |
| Utah [2] | 0 | 0 | 17 | 17 | 3 | 33 | 0 | 0 |
| Nevada | | | | | | | | |
| Pacific States: | | | | | | | | |
| Washington | 0 | 6 | 116 | 54 | 61 | 70 | 4 | 4 |
| Oregon | 0 | 4 | 80 | 32 | 26 | 49 | 9 | 3 |
| California | 3 | 8 | 280 | 206 | 23 | 22 | 14 | 13 |

[2] Week ended Friday.

[3] Exclusive of Tulsa.

## Reports for Week Ended January 7, 1928

| DIPHTHERIA | Cases |
|---|---|
| District of Columbia | 27 |
| North Dakota | 6 |
| **INFLUENZA** | |
| District of Columbia | 2 |
| New Hampshire | 56 |
| **MEASLES** | |
| District of Columbia | 3 |
| New Hampshire | 8 |
| **MENINGOCOCCUS MENINGITIS** | |
| North Dakota | 1 |
| **POLIOMYELITIS** | |
| New Hampshire | 1 |
| **SCARLET FEVER** | |
| District of Columbia | 29 |
| New Hampshire | 12 |
| North Dakota | 48 |
| **SMALLPOX** | |
| North Dakota | 1 |

## 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 | Meningococcus meningitis | Diphtheria | Influenza | Malaria | Measles | Pellagra | Poliomyelitis | Scarlet fever | Smallpox | Typhoid fever |
|---|---|---|---|---|---|---|---|---|---|---|
| *October, 1927* | | | | | | | | | | |
| Pennsylvania | 16 | 916 | | | 1,059 | | 119 | 1,070 | 0 | 164 |
| *November, 1927* | | | | | | | | | | |
| California | 21 | 747 | 98 | 9 | 261 | 5 | 139 | 794 | 52 | 46 |
| Hawaii Territory | 5 | 17 | 7 | | 17 | | 1 | 2 | 0 | 8 |
| Pennsylvania | 9 | 1,187 | | | 1,735 | 1 | 70 | 1,626 | 0 | 132 |
| South Dakota | 1 | 25 | 7 | | 70 | | 19 | 191 | 13 | 13 |
| *December, 1927* | | | | | | | | | | |
| Arizona | 5 | 41 | 1 | | 18 | | 1 | 11 | 2 | 10 |
| Connecticut | 1 | 196 | 51 | | 193 | | 5 | 302 | 0 | 6 |
| Indiana | 3 | 216 | 127 | | 178 | | 11 | 421 | 216 | 24 |

*October, 1927*

| Pennsylvania: | Cases |
|---|---|
| Anthrax | 1 |
| Chicken pox | 1,183 |
| Dysentery (epidemic) | 1 |
| German measles | 37 |
| Impetigo contagiosa | 59 |
| Lead poisoning | 2 |
| Lethargic encephalitis | 3 |
| Mumps | 545 |
| Ophthalmia neonatorum | 10 |
| Tetanus | 1 |
| Trachoma | 2 |
| Whooping cough | 551 |

*November, 1927*

| | |
|---|---|
| Anthrax: | |
| California | 1 |
| Pennsylvania | 1 |
| Chicken pox: | |
| California | 1,346 |
| Hawaii Territory | 13 |
| Pennsylvania | 2,832 |
| South Dakota | 37 |
| Conjunctivitis (follicular): | |
| Hawaii Territory | 48 |
| Dysentery: | |
| California (bacillary) | 7 |
| Hawaii Territory (amoebic) | 1 |
| German measles | |
| California | 409 |
| Pennsylvania | 62 |
| Lead poisoning: | |
| Pennsylvania | 1 |
| Leprosy: | |
| California | 1 |
| Hawaii Territory | 5 |
| Lethargic encephalitis: | |
| California | 9 |
| Pennsylvania | 7 |
| Mumps: | |
| California | 348 |
| Pennsylvania | 1,292 |
| South Dakota | 21 |
| Ophthalmia neonatorum: | |
| California | 1 |
| Pennsylvania | 15 |
| Paratyphoid fever: | |
| California | 2 |
| Puerperal fever: | Cases |
| Pennsylvania | 11 |
| Rabies in animals: | |
| California | 46 |
| Rabies in man: | |
| California | 1 |
| Tetanus: | |
| California | 5 |
| Hawaii Territory | 2 |
| Pennsylvania | 4 |
| Trachoma: | |
| California | 214 |
| Hawaii Territory | 43 |
| South Dakota | 2 |
| Trichinosis: | |
| California | 2 |
| Tularaemia: | |
| California | 1 |
| Whooping cough: | |
| California | 504 |
| Hawaii Territory | 1 |
| Pennsylvania | 711 |
| South Dakota | 20 |

*December, 1927*

| | |
|---|---|
| Chicken pox: | |
| Arizona | 29 |
| Connecticut | 428 |
| Indiana | 322 |
| Conjunctivitis (infectious): | |
| Connecticut | 4 |
| German measles: | |
| Connecticut | 8 |
| Lethargic encephalitis: | |
| Connecticut | 1 |
| Mumps: | |
| Arizona | 22 |
| Connecticut | 146 |
| Indiana | 68 |
| Rabies in animals: | |
| Connecticut | 5 |
| Septic sore throat: | |
| Connecticut | 10 |
| Trachoma: | |
| Arizona | 14 |
| Whooping cough: | |
| Arizona | 6 |
| Connecticut | 470 |
| Indiana | 77 |

## GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 97 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 30,500,000. The estimated population of the 93 cities reporting deaths is more than 29,900,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

## Weeks ended December 31, 1927, and January 1, 1927 [1]

| | 1927 | 1926 | Estimated expectancy |
|---|---|---|---|
| *Cases reported* | | | |
| Diphtheria: | | | |
| 42 States | 2,283 | 1,907 | |
| 97 cities | 1,096 | 1,017 | 1,150 |
| Measles: | | | |
| 41 States | 6,419 | 6,669 | |
| 97 cities | 1,846 | 1,345 | |
| Poliomyelitis: | | | |
| 42 States | 56 | 17 | |
| Scarlet fever: | | | |
| 42 States | 3,750 | 4,387 | |
| 97 cities | 1,229 | 1,542 | 1,195 |
| Smallpox: | | | |
| 42 States | 711 | 675 | |
| 97 cities | 90 | 78 | 68 |
| Typhoid fever: | | | |
| 42 States | 242 | 312 | |
| 97 cities | 41 | 67 | 47 |
| *Deaths reported* | | | |
| Influenza and pneumonia: | | | |
| 93 cities | 1,013 | 1,014 | |
| Smallpox: | | | |
| 93 cities | 0 | 0 | |

[1] The week ended Jan. 1, 1927, is considered to be the last week of 1926.

## *City reports for week ended December 31, 1927*

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 week 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 reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1918 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations 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 | Population, July 1, 1925, estimated | Chicken pox, cases reported | Diphtheria | | Influenza | | Measles, cases reported | Mumps, cases reported | Pneumonia, deaths reported |
|---|---|---|---|---|---|---|---|---|---|
| | | | Cases, estimated expectancy | Cases reported | Cases reported | Deaths reported | | | |
| NEW ENGLAND | | | | | | | | | |
| Maine: | | | | | | | | | |
| Portland | 75,333 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 4 |
| New Hampshire: | | | | | | | | | |
| Concord | 22,546 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| Manchester | 83,097 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 1 |
| Nashua | 29,723 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Vermont: | | | | | | | | | |
| Barre | 10,008 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Burlington | 24,689 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Massachusetts: | | | | | | | | | |
| Boston | 779,620 | 68 | 59 | 26 | 2 | 0 | 266 | 2 | 22 |
| Fall River | 128,993 | 1 | 5 | 3 | 1 | 1 | 0 | 0 | 3 |
| Springfield | 142,065 | 8 | 4 | 8 | 0 | 0 | 1 | 8 | 3 |
| Worcester | 190,757 | 5 | 5 | 5 | 0 | 0 | 0 | 21 | 2 |
| Rhode Island: | | | | | | | | | |
| Pawtucket | 69,760 | 0 | 1 | 2 | 0 | 0 | 0 | 3 | 2 |
| Providence | 267,918 | 2 | 10 | 6 | 0 | 1 | 2 | 4 | 6 |

*City reports for week ended December 31, 1927*—Continued

| Division, State, and city | Population, July 1, 1926, estimated | Chicken pox, cases reported | Diphtheria | | Influenza | | Measles, cases reported | Mumps, cases reported | Pneumonia, deaths reported |
|---|---|---|---|---|---|---|---|---|---|
| | | | Cases, estimated expectancy | Cases reported | Cases reported | Deaths reported | | | |
| NEW ENGLAND—cont'd. | | | | | | | | | |
| Connecticut: | | | | | | | | | |
| Bridgeport | (1) | 2 | 9 | 10 | 0 | 0 | 1 | 0 | 10 |
| Hartford | 160,197 | 7 | 8 | 8 | 0 | 0 | 0 | 0 | 7 |
| New Haven | 178,927 | 5 | 4 | 2 | 1 | 0 | 34 | 6 | 4 |
| MIDDLE ATLANTIC | | | | | | | | | |
| New York: | | | | | | | | | |
| Buffalo | 538,016 | 27 | 22 | 21 | ---- | 0 | 200 | 0 | 13 |
| New York | 5,873,356 | 105 | 202 | 275 | 14 | 14 | 101 | 20 | 194 |
| Rochester | 316,786 | 2 | 12 | 12 | ---- | 0 | 3 | 7 | 7 |
| Syracuse | 182,003 | 14 | 6 | 0 | ---- | 0 | 44 | 6 | 9 |
| New Jersey: | | | | | | | | | |
| Camden | 128,642 | 3 | 5 | 7 | 0 | 0 | 0 | 0 | 5 |
| Newark | 452,513 | 27 | 17 | 17 | 7 | 0 | 49 | 10 | 11 |
| Trenton | 132,020 | 1 | 6 | 3 | 1 | 0 | 10 | 0 | 5 |
| Pennsylvania: | | | | | | | | | |
| Philadelphia | 1,979,364 | ---- | 84 | 47 | ---- | 8 | ---- | ---- | 50 |
| Pittsburgh | 631,563 | 33 | 24 | 61 | ---- | 4 | 262 | 74 | 24 |
| Reading | 112,707 | 16 | 4 | 5 | ---- | 0 | 2 | 2 | 3 |
| EAST NORTH CENTRAL | | | | | | | | | |
| Ohio: | | | | | | | | | |
| Cincinnati | 409,333 | 16 | 14 | 8 | 0 | 3 | 55 | 0 | 17 |
| Cleveland | 936,485 | 23 | 40 | 62 | 1 | 5 | 11 | 84 | 19 |
| Columbus | 279,836 | 11 | 6 | 10 | 1 | 1 | 1 | 3 | 8 |
| Toledo | 287,380 | 35 | 13 | 3 | 2 | 2 | 44 | 11 | 3 |
| Indiana: | | | | | | | | | |
| Fort Wayne | 97,846 | 2 | 5 | 3 | 0 | 0 | 0 | 0 | 1 |
| Indianapolis | 358,819 | 11 | 13 | 4 | 0 | 0 | 6 | 36 | 18 |
| South Bend | 80,091 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 1 |
| Terre Haute | 71,071 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 6 |
| Illinois: | | | | | | | | | |
| Chicago | 2,995,239 | 91 | 113 | 139 | 23 | 4 | 9 | 23 | 91 |
| Springfield | 63,923 | 0 | 2 | 0 | 0 | 0 | 0 | 9 | 2 |
| Michigan: | | | | | | | | | |
| Detroit | 1,245,824 | 34 | 74 | 45 | 4 | 2 | 133 | 16 | 24 |
| Flint | 130,316 | 10 | 9 | 6 | 0 | 0 | 1 | 11 | 5 |
| Grand Rapids | 153,698 | 1 | 4 | 1 | 0 | 0 | 21 | 0 | 1 |
| Wisconsin: | | | | | | | | | |
| Kenosha | 50,891 | 10 | 2 | 6 | 0 | 0 | 0 | 1 | 1 |
| Milwaukee | 509,192 | 44 | 24 | 11 | 6 | 0 | 2 | 7 | 7 |
| Racine | 67,707 | 2 | 3 | 3 | 0 | 0 | 0 | 2 | 0 |
| Superior | 39,671 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WEST NORTH CENTRAL | | | | | | | | | |
| Minnesota: | | | | | | | | | |
| Duluth | 110,502 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 2 |
| Minneapolis | 425,435 | 64 | 20 | 16 | 0 | 3 | 0 | 7 | 18 |
| St. Paul | 246,001 | 2 | 16 | 4 | 0 | 0 | 0 | 0 | 8 |
| Iowa: | | | | | | | | | |
| Davenport | 52,469 | 1 | 1 | 2 | 0 | ---- | 0 | 0 | ---- |
| Des Moines | 141,441 | 0 | 5 | 0 | 0 | ---- | 0 | 0 | ---- |
| Sioux City | 76,411 | ---- | 2 | ---- | ---- | ---- | ---- | ---- | ---- |
| Waterloo | 36,771 | 4 | 0 | 0 | 0 | ---- | 0 | 0 | ---- |
| Missouri: | | | | | | | | | |
| Kansas City | 367,481 | 16 | 12 | 2 | 0 | 1 | 0 | 31 | 14 |
| St. Joseph | 78,342 | 5 | 3 | 0 | 0 | 0 | 0 | 1 | 1 |
| St. Louis | 821,543 | 21 | 51 | 31 | 0 | 0 | 18 | 8 | ---- |
| North Dakota: | | | | | | | | | |
| Fargo | 26,403 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Grand Forks | 14,811 | 0 | 0 | 0 | 0 | ---- | 0 | 0 | ---- |
| South Dakota: | | | | | | | | | |
| Aberdeen | 15,036 | 4 | 0 | 0 | 0 | ---- | 0 | 0 | ---- |
| Sioux Falls | 30,127 | 0 | 1 | 0 | 0 | ---- | 0 | 0 | ---- |
| Nebraska: | | | | | | | | | |
| Lincoln | 60,941 | 9 | 1 | 4 | 0 | 0 | 1 | 8 | 0 |
| Omaha | 211,768 | 6 | 5 | 3 | 0 | 0 | 0 | 0 | 4 |
| Kansas: | | | | | | | | | |
| Topeka | 55,411 | 20 | 2 | 6 | 0 | 0 | 0 | 2 | 0 |
| Wichita | 88,367 | 3 | 6 | 1 | 0 | 0 | 0 | 0 | 3 |

[1] No estimate made.

*City reports for week ended December 31, 1927*—Continued

| Division, State, and city | Population, July 1, 1925, estimated | Chicken pox, cases reported | Diphtheria | | Influenza | | Measles, cases reported | Mumps, cases reported | Pneumonia, deaths reported |
|---|---|---|---|---|---|---|---|---|---|
| | | | Cases, estimated expectancy | Cases reported | Cases reported | Deaths reported | | | |
| **SOUTH ATLANTIC** | | | | | | | | | |
| Delaware: | | | | | | | | | |
| Wilmington | 122,049 | 0 | 2 | 1 | 0 | 0 | 1 | 1 | 3 |
| Maryland: | | | | | | | | | |
| Baltimore | 796,296 | 67 | 36 | 35 | 15 | 0 | 87 | 4 | 35 |
| Cumberland | 33,741 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 2 |
| Frederick | 12,035 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| District of Columbia: | | | | | | | | | |
| Washington | 497,906 | 4 | 20 | 13 | 4 | 4 | 4 | 0 | 18 |
| Virginia: | | | | | | | | | |
| Lynchburg | 30,395 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 |
| Norfolk | (1) | 10 | 3 | 2 | 0 | 0 | 1 | 0 | 8 |
| Richmond | 186,403 | 2 | 8 | 4 | 0 | 2 | 24 | 0 | 5 |
| Roanoke | 58,208 | 2 | 2 | 1 | 0 | 0 | 1 | 0 | 0 |
| West Virginia: | | | | | | | | | |
| Charleston | 49,019 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wheeling | 56,208 | 8 | 2 | 1 | 0 | 0 | 0 | 0 | 6 |
| North Carolina: | | | | | | | | | |
| Raleigh | 30,371 | 4 | 1 | 2 | 0 | 0 | 3 | 0 | 0 |
| Wilmington | 37,061 | 0 | 0 | 1 | 0 | 0 | 117 | 0 | 1 |
| Winston-Salem | 69,031 | 0 | 1 | 4 | 0 | 0 | 10 | 13 | 1 |
| South Carolina: | | | | | | | | | |
| Charleston | 73,125 | 0 | 2 | 0 | 87 | 1 | 1 | 0 | 2 |
| Columbia | 41,225 | 6 | 0 | 0 | 0 | ---- | 100 | 20 | ---- |
| Greenville | 27,311 | ---- | 0 | ---- | ---- | ---- | ---- | ---- | ---- |
| Georgia: | | | | | | | | | |
| Atlanta | (1) | 2 | 4 | 3 | 37 | 5 | 2 | 2 | 8 |
| Brunswick | 16,809 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Savannah | 93,134 | 0 | 2 | 0 | 4 | 0 | 47 | 0 | 8 |
| Florida: | | | | | | | | | |
| Miami | 69,754 | 1 | ---- | 1 | 0 | 0 | 0 | 0 | 3 |
| St. Petersburg | 26,847 | ---- | 1 | ---- | ---- | 0 | ---- | ---- | 3 |
| Tampa | 94,743 | 7 | 1 | 2 | 0 | 0 | 0 | 0 | 3 |
| **EAST SOUTH CENTRAL** | | | | | | | | | |
| Kentucky: | | | | | | | | | |
| Covington | 58,309 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| Lexington | 46,895 | 0 | ---- | 1 | 0 | 1 | 0 | 0 | 2 |
| Louisville | 305,935 | ---- | 8 | ---- | ---- | ---- | ---- | ---- | ---- |
| Tennessee: | | | | | | | | | |
| Memphis | 174,533 | 5 | 6 | 7 | 0 | 0 | 67 | 5 | 6 |
| Nashville | 136,220 | 2 | 2 | 0 | 0 | 5 | 2 | 3 | 12 |
| Alabama: | | | | | | | | | |
| Birmingham | 205,670 | 0 | 3 | 6 | 0 | 4 | 5 | 0 | 9 |
| Mobile | 65,955 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 2 |
| Montgomery | 46,481 | 0 | 1 | 7 | 3 | 0 | 0 | 0 | 0 |
| **WEST SOUTH CENTRAL** | | | | | | | | | |
| Arkansas: | | | | | | | | | |
| Fort Smith | 31,643 | ---- | 1 | ---- | ---- | ---- | ---- | ---- | ---- |
| Little Rock | 74,216 | 0 | 1 | 1 | 4 | 0 | 9 | 0 | 6 |
| Louisiana: | | | | | | | | | |
| New Orleans | 414,493 | 0 | 12 | 19 | 18 | 12 | 0 | 0 | 35 |
| Shreveport | 57,857 | 2 | 1 | 2 | 0 | 0 | 10 | 0 | 5 |
| Oklahoma: | | | | | | | | | |
| Oklahoma City | (1) | 1 | 2 | 1 | 4 | 0 | 1 | 0 | 4 |
| Texas: | | | | | | | | | |
| Dallas | 194,450 | 11 | 12 | 23 | 4 | 5 | 3 | 0 | 5 |
| Galveston | 48,375 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| Houston | 164,954 | 1 | 5 | 13 | 0 | 0 | 1 | 0 | 8 |
| San Antonio | 198,069 | 0 | 3 | 5 | 0 | 2 | 4 | 0 | 11 |
| **MOUNTAIN** | | | | | | | | | |
| Montana: | | | | | | | | | |
| Billings | 17,971 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Great Falls | 29,883 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Helena | 12,037 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Missoula | 12,668 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Idaho: | | | | | | | | | |
| Boise | 23,042 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 0 |

[1] No estimate made.

*City reports for week ended December 31, 1927*—Continued

| Division, State, and city | Population, July 1, 1926, estimated | Chicken pox, cases reported | Diphtheria | | Influenza | | Measles, cases reported | Mumps, cases reported | Pneumonia, deaths reported |
|---|---|---|---|---|---|---|---|---|---|
| | | | Cases, estimated expectancy | Cases reported | Cases reported | Deaths reported | | | |
| MOUNTAIN—Continued | | | | | | | | | |
| Colorado: | | | | | | | | | |
| Denver | 280,911 | 19 | 11 | 2 | ---- | 7 | 4 | 12 | 18 |
| Pueblo | 43,787 | 9 | 3 | 1 | 0 | 1 | 0 | 1 | 0 |
| New Mexico: | | | | | | | | | |
| Albuquerque | 21,000 | 1 | 1 | 1 | 0 | 0 | 10 | 0 | 2 |
| Utah: | | | | | | | | | |
| Salt Lake City | 130,948 | 17 | 3 | 2 | 0 | 0 | 0 | 0 | 3 |
| Nevada: | | | | | | | | | |
| Reno | 12,665 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PACIFIC | | | | | | | | | |
| Washington: | | | | | | | | | |
| Seattle | (1) | 8 | 7 | 2 | 0 | ---- | 97 | 10 | ---- |
| Spokane | 108,897 | 10 | 4 | 0 | 0 | ---- | 0 | 0 | ---- |
| Tacoma | 104,455 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 2 |
| Oregon: | | | | | | | | | |
| Portland | 282,383 | 18 | 10 | 6 | 0 | 0 | 3 | 0 | 10 |
| California: | | | | | | | | | |
| Los Angeles | (1) | 31 | 41 | 32 | 16 | 6 | 3 | 15 | 31 |
| Sacramento | 72,260 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 1 |
| San Francisco | 557,530 | 31 | 20 | 19 | 0 | 2 | 8 | 7 | 6 |

| 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 | | |
| NEW ENGLAND | | | | | | | | | | | |
| Maine: | | | | | | | | | | | |
| Portland | 3 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 7 | 15 |
| New Hampshire: | | | | | | | | | | | |
| Concord | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Manchester | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 19 |
| Nashua | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Vermont: | | | | | | | | | | | |
| Barre | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 1 | 7 |
| Burlington | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 2 | 19 |
| Massachusetts: | | | | | | | | | | | |
| Boston | 57 | 77 | 0 | 0 | 0 | 16 | 1 | 1 | 0 | 27 | 223 |
| Fall River | 3 | 5 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 29 |
| Springfield | 7 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 43 |
| Worcester | 12 | 7 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 9 | 42 |
| Rhode Island: | | | | | | | | | | | |
| Pawtucket | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 23 |
| Providence | 7 | 26 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 70 |
| Connecticut: | | | | | | | | | | | |
| Bridgeport | 9 | 10 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 43 |
| Hartford | 9 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 52 |
| New Haven | 9 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 11 | 31 |
| MIDDLE ATLANTIC | | | | | | | | | | | |
| New York: | | | | | | | | | | | |
| Buffalo | 25 | 42 | 1 | 0 | 0 | 7 | 1 | 0 | 0 | 21 | 134 |
| New York | 201 | 188 | 1 | 0 | 0 | 102 | 11 | 7 | 2 | 134 | 1,514 |
| Rochester | 13 | 9 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 61 |
| Syracuse | 12 | 15 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 29 | 44 |
| New Jersey: | | | | | | | | | | | |
| Camden | 5 | 6 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 33 |
| Newark | 20 | 17 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 57 | 109 |
| Trenton | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| Pennsylvania: | | | | | | | | | | | |
| Philadelphia | 77 | 75 | 0 | 0 | 0 | 35 | 4 | 1 | 0 | 35 | 498 |
| Pittsburgh | 36 | 46 | 0 | 0 | 0 | 12 | 1 | 0 | 1 | 39 | 216 |
| Reading | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 35 |

[1] No estimate made.

*City reports for week ended December 31, 1927*—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 | | |
| **EAST NORTH CENTRAL** | | | | | | | | | | | |
| Ohio: | | | | | | | | | | | |
| Cincinnati | 14 | 10 | 0 | 0 | 0 | 6 | 0 | 1 | 2 | 2 | 149 |
| Cleveland | 37 | 24 | 0 | 0 | 0 | 17 | 2 | 0 | 2 | 33 | 220 |
| Columbus | 10 | 32 | 0 | 1 | 0 | 6 | 0 | 2 | 0 | 1 | 90 |
| Toledo | 14 | 6 | 1 | 0 | 0 | 6 | 0 | 0 | 0 | 11 | 83 |
| Indiana: | | | | | | | | | | | |
| Fort Wayne | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 15 |
| Indianapolis | 9 | 10 | 7 | 1 | 0 | 6 | 0 | 0 | 0 | 4 | 100 |
| South Bend | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 12 |
| Terre Haute | 3 | 0 | 1 | 6 | 0 | 2 | 0 | 0 | 0 | 0 | 21 |
| Illinois: | | | | | | | | | | | |
| Chicago | 122 | 130 | 0 | 8 | 0 | 47 | 5 | 1 | 0 | 99 | 773 |
| Springfield | 2 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 22 |
| Michigan: | | | | | | | | | | | |
| Detroit | 90 | 93 | 2 | 2 | 0 | 21 | 2 | 0 | 0 | 47 | 283 |
| Flint | 8 | 16 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 5 | 42 |
| Grand Rapids | 11 | 8 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 35 |
| Wisconsin: | | | | | | | | | | | |
| Kenosha | 1 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 |
| Milwaukee | 25 | 39 | 2 | 0 | 0 | 8 | 1 | 2 | 0 | 17 | 111 |
| Racine | 6 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 9 |
| Superior | 2 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 |
| **WEST NORTH CENTRAL** | | | | | | | | | | | |
| Minnesota: | | | | | | | | | | | |
| Duluth | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 29 |
| Minneapolis | 51 | 23 | 9 | 2 | 0 | 7 | 1 | 0 | 0 | 0 | 120 |
| St. Paul | 27 | 14 | 7 | 0 | 0 | 4 | 0 | 0 | 0 | 2 | 59 |
| Iowa: | | | | | | | | | | | |
| Davenport | 2 | 5 | 1 | 0 | ------- | ------- | 0 | 0 | ------- | 1 | ------- |
| Des Moines | 6 | 14 | 1 | 10 | ------- | ------- | 0 | 0 | ------- | 0 | ------- |
| Sioux City | 2 | ------- | 0 | ------- | ------- | ------- | 0 | ------- | ------- | ------- | ------- |
| Waterloo | 2 | 1 | 0 | 0 | ------- | ------- | 0 | 0 | ------- | 3 | ------- |
| Missouri: | | | | | | | | | | | |
| Kansas City | 12 | 4 | 1 | 3 | 0 | 0 | 0 | 2 | 0 | 3 | 128 |
| St. Joseph | 2 | 2 | 0 | 23 | 0 | 2 | 0 | 0 | 0 | 0 | 27 |
| St. Louis | 38 | 32 | 1 | 0 | 0 | 16 | 2 | 2 | 1 | 21 | 251 |
| North Dakota: | | | | | | | | | | | |
| Fargo | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 9 |
| Grand Forks | 0 | 0 | 0 | 0 | ------- | ------- | 0 | 0 | ------- | 0 | ------- |
| South Dakota: | | | | | | | | | | | |
| Aberdeen | 0 | 0 | 0 | 0 | ------- | ------- | 0 | 0 | ------- | 1 | ------- |
| Sioux Falls | 1 | 5 | 0 | 0 | ------- | ------- | 0 | 0 | ------- | 0 | ------- |
| Nebraska: | | | | | | | | | | | |
| Lincoln | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Omaha | 6 | 10 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 60 |
| Kansas: | | | | | | | | | | | |
| Topeka | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 7 | 12 |
| Wichita | 4 | 8 | 0 | 12 | 0 | 1 | 0 | 0 | 0 | 6 | 27 |
| **SOUTH ATLANTIC** | | | | | | | | | | | |
| Delaware: | | | | | | | | | | | |
| Wilmington | 4 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 33 |
| Maryland: | | | | | | | | | | | |
| Baltimore | 29 | 13 | 0 | 0 | 0 | 19 | 3 | 1 | 0 | 16 | 234 |
| Cumberland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Frederick | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| District of Columbia: | | | | | | | | | | | |
| Washington | 22 | 33 | 0 | 0 | 0 | 11 | 2 | 0 | 0 | 4 | 142 |
| Virginia: | | | | | | | | | | | |
| Lynchburg | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 15 |
| Norfolk | 2 | 4 | 0 | 0 | 0 | 2 | 1 | 0 | 1 | 1 | ------- |
| Richmond | 6 | 6 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 52 |
| Roanoke | 1 | 4 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 12 |
| West Virginia: | | | | | | | | | | | |
| Charleston | 1 | 4 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 12 |
| Wheeling | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |

*City reports for weeks ended December 31, 1927*—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 | | |
| SOUTH ATLANTIC—continued | | | | | | | | | | | |
| North Carolina: | | | | | | | | | | | |
| Raleigh | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 13 |
| Wilmington | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 14 |
| Winston-Salem | 1 | 3 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | |
| South Carolina: | | | | | | | | | | | |
| Charleston | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 26 |
| Columbia | 0 | 1 | 0 | 0 | | | 0 | 0 | | 0 | 10 |
| Greenville | 0 | | 1 | | | | 0 | | | | |
| Georgia: | | | | | | | | | | | |
| Atlanta | 4 | 3 | 1 | 0 | 0 | 3 | 0 | 1 | 1 | 1 | 88 |
| Brunswick | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| Savannah | 1 | 3 | 0 | 2 | 0 | 3 | 1 | 3 | 1 | 0 | |
| Florida: | | | | | | | | | | | |
| Miami | | 2 | | 0 | 0 | 0 | | 0 | 0 | 0 | 39 |
| St. Petersburg | 0 | | 0 | | 0 | 1 | 0 | | 0 | | 15 |
| Tampa | 1 | 5 | 1 | 0 | 0 | 4 | 0 | 1 | 0 | 0 | 31 |
| EAST SOUTH CENTRAL | | | | | | | | | | | |
| Kentucky: | | | | | | | | | | | |
| Covington | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 19 |
| Lexington | | 0 | | 0 | 0 | 2 | | 0 | 0 | 0 | 18 |
| Louisville | 5 | | 0 | | | | 0 | | | | |
| Tennessee: | | | | | | | | | | | H |
| Memphis | 5 | 4 | 1 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 65 |
| Nashville | 3 | 2 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 58 |
| Alabama: | | | | | | | | | | | |
| Birmingham | 4 | 2 | 1 | 1 | 0 | 4 | 0 | 0 | 0 | 3 | 90 |
| Mobile | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 33 |
| Montgomery | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | |
| WEST SOUTH CENTRAL | | | | | | | | | | | |
| Arkansas: | | | | | | | | | | | |
| Fort Smith | 1 | | 0 | | | | 0 | | | | |
| Little Rock | 2 | 2 | 0 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | |
| Louisiana: | | | | | | | | | | | |
| New Orleans | 5 | 3 | 0 | 0 | 0 | 12 | 2 | 2 | 0 | 3 | 216 |
| Shreveport | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 29 |
| Oklahoma: | | | | | | | | | | | |
| Oklahoma City | 3 | 4 | 1 | 9 | 0 | 3 | 0 | 1 | 0 | 0 | 27 |
| Texas: | | | | | | | | | | | |
| Dallas | 3 | 6 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 2 | 71 |
| Galveston | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| Houston | 2 | 8 | 1 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 70 |
| San Antonio | 1 | 7 | 0 | 0 | 0 | 10 | 0 | 1 | 0 | 0 | 78 |
| MOUNTAIN | | | | | | | | | | | |
| Montana: | | | | | | | | | | | |
| Billings | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 7 |
| Great Falls | 1 | 3 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | |
| Helena | 0 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Missoula | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| Idaho: | | | | | | | | | | | |
| Boise | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| Colorado: | | | | | | | | | | | |
| Denver | 12 | 6 | 1 | 1 | 0 | 11 | 0 | 1 | 0 | 4 | 105 |
| Pueblo | 2 | 9 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 1 | 7 |
| New Mexico: | | | | | | | | | | | |
| Albuquerque | 0 | 2 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 17 |
| Utah: | | | | | | | | | | | |
| Salt Lake City | 2 | 3 | 1 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 45 |
| Nevada: | | | | | | | | | | | |
| Reno | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

*City reports for week ended December 31, 1927*—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 | | |
| PACIFIC | | | | | | | | | | | |
| Washington: | | | | | | | | | | | |
| Seattle | 9 | 3 | 2 | 1 | ---- | ---- | 1 | 0 | ---- | 1 | ---- |
| Spokane | 5 | 11 | 4 | 5 | ---- | ---- | 0 | 0 | ---- | 0 | ---- |
| Tacoma | 3 | 1 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 20 |
| Oregon: | | | | | | | | | | | |
| Portland | 7 | 8 | 6 | 11 | 0 | 3 | 0 | 1 | 0 | 0 | 80 |
| California: | | | | | | | | | | | |
| Los Angeles | 24 | 23 | 4 | 0 | 0 | 25 | 2 | 0 | 0 | 7 | 306 |
| Sacramento | 2 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 24 |
| San Francisco | 13 | 9 | 0 | 4 | 0 | 5 | 1 | 0 | 0 | 3 | 164 |

| Division, State, and city | Meningococcus meningitis | | Lethargic encephalitis | | Pellagra | | Poliomyelitis (infantile paralysis) | | |
|---|---|---|---|---|---|---|---|---|---|
| | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases, estimated expectancy | Cases | Deaths |
| NEW ENGLAND | | | | | | | | | |
| Massachusetts: | | | | | | | | | |
| Boston | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 2 |
| Fall River | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Worcester | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| MIDDLE ATLANTIC | | | | | | | | | |
| New York: | | | | | | | | | |
| New York | 2 | 3 | 3 | 12 | 0 | 0 | 1 | 1 | 1 |
| Pennsylvania: | | | | | | | | | |
| Philadelphia | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 |
| EAST NORTH CENTRAL | | | | | | | | | |
| Ohio: | | | | | | | | | |
| Cleveland | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Illinois: | | | | | | | | | |
| Chicago | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Michigan: | | | | | | | | | |
| Detroit | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Wisconsin: | | | | | | | | | |
| Milwaukee | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| WEST NORTH CENTRAL | | | | | | | | | |
| Minnesota: | | | | | | | | | |
| Duluth | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| Minneapolis | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Missouri: | | | | | | | | | |
| St. Joseph | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nebraska: | | | | | | | | | |
| Omaha | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Kansas: | | | | | | | | | |
| Wichita | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SOUTH ATLANTIC | | | | | | | | | |
| North Carolina: | | | | | | | | | |
| Wilmington | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Georgia: | | | | | | | | | |
| Savannah [1] | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |

[1] Typhus fever: 2 cases at Savannah, Ga.

*City reports for week ended December 31, 1927*—Continued

| Division, State, and city | Meningococcus meningitis | | Lethargic encephalitis | | Pellagra | | Poliomyelitis (infantile paralysis) | | |
|---|---|---|---|---|---|---|---|---|---|
| | Cases | Deaths | Cases | Deaths | Cases | Deaths | Cases, estimated expectancy | Cases | Deaths |
| EAST SOUTH CENTRAL | | | | | | | | | |
| Tennessee: | | | | | | | | | |
| Memphis | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| WEST SOUTH CENTRAL | | | | | | | | | |
| Arkansas: | | | | | | | | | |
| Little Rock | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Louisiana: | | | | | | | | | |
| New Orleans | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 |
| Oklahoma: | | | | | | | | | |
| Oklahoma City | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Texas: | | | | | | | | | |
| Dallas | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 0 | 0 |
| MOUNTAIN | | | | | | | | | |
| Montana: | | | | | | | | | |
| Missoula | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Colorado: | | | | | | | | | |
| Denver | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Utah: | | | | | | | | | |
| Salt Lake City | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PACIFIC | | | | | | | | | |
| Washington: | | | | | | | | | |
| Seattle | 1 | ---- | 0 | ---- | 0 | ---- | 0 | 0 | ---- |
| Spokane | 2 | ---- | 0 | ---- | 0 | ---- | 0 | 0 | ---- |
| Oregon: | | | | | | | | | |
| Portland | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 3 |
| California: | | | | | | | | | |
| Los Angeles | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 2 | 0 |
| Sacramento | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| San Francisco | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended December 31, 1927, compared with those for a like period ended January 1, 1927. The population figures used in computing the rates are approximate estimates as of July 1, 1926 and 1927, respectively, authoritative figures for many of the cities not being available. The 101 cities reporting cases had estimated aggregate populations of approximately 30,445,000 in 1926 and 30,966,000 in 1927. The 95 cities reporting deaths had nearly 29,785,000 estimated population in 1926 and nearly 30,296,000 in 1927. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

*Summary of weekly reports from cities, November 27 to December 31, 1927—Annual rates per 100,000 population, compared with rates for the corresponding period of 1926* [1]

## DIPHTHERIA CASE RATES

| | Week ended— | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Dec. 4, 1926 | Dec. 3, 1927 | Dec. 11, 1926 | Dec. 10, 1927 | Dec. 18, 1926 | Dec. 17, 1927 | Dec. 25, 1926 | Dec. 24, 1927 | Jan. 1, 1927 | Dec. 31, 1927 |
| 101 cities | 224 | 233 | 201 | 204 | 188 | [2] 206 | [3] 163 | [2] 203 | 176 | [4] 187 |
| New England | 172 | 267 | 163 | 216 | 160 | 200 | 160 | 193 | 158 | 165 |
| Middle Atlantic | 177 | 252 | 161 | 228 | 167 | 226 | 140 | 233 | 171 | 221 |
| East North Central | 266 | 220 | 223 | 228 | 213 | 248 | [5] 182 | 212 | 193 | 200 |
| West North Central | 210 | 179 | 194 | 129 | 129 | 129 | 113 | 123 | 165 | [6] 129 |
| South Atlantic | 240 | 225 | 237 | 190 | 216 | 140 | [7] 214 | 143 | 173 | [8] 128 |
| East South Central | 300 | 168 | 284 | 71 | 145 | [2] 162 | 150 | [2] 177 | 186 | [2] 147 |
| West South Central | 318 | 273 | 266 | 218 | 258 | 218 | 168 | 344 | 223 | [9] 271 |
| Mountain | 228 | 144 | 246 | 144 | 164 | 162 | 137 | 117 | 137 | 63 |
| Pacific | 268 | 259 | 238 | 168 | 252 | 168 | 225 | 157 | 155 | 141 |

## MEASLES CASE RATES

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 101 cities | 177 | 189 | 197 | 225 | 193 | [2] 249 | [3] 209 | [2] 288 | 231 | [4] 315 |
| New England | 101 | 539 | 165 | 539 | 229 | 604 | 167 | 536 | 184 | 708 |
| Middle Atlantic | 37 | 180 | 23 | 199 | 24 | 206 | 22 | 251 | 22 | 331 |
| East North Central | 151 | 122 | 212 | 140 | 256 | 117 | [5] 249 | 157 | 294 | 160 |
| West North Central | 113 | 24 | 129 | 50 | 109 | 46 | 77 | 38 | 61 | [6] 39 |
| South Atlantic | 48 | 308 | 54 | 527 | 89 | 607 | [7] 62 | 797 | 179 | [8] 730 |
| East South Central | 26 | 224 | 78 | 367 | 21 | [2] 737 | 31 | [2] 1,032 | 78 | [2] 545 |
| West South Central | 142 | 122 | 146 | 134 | 82 | 252 | 103 | 84 | 13 | [9] 116 |
| Mountain | 2,844 | 27 | 3,217 | 36 | 2,351 | 27 | 2,780 | 18 | 3,545 | 36 |
| Pacific | 699 | 228 | 613 | 178 | 603 | 238 | 879 | 257 | 697 | 283 |

## SCARLET FEVER CASE RATES

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 101 cities | 242 | 184 | 238 | 184 | 279 | [2] 212 | [3] 253 | [2] 187 | 267 | [4] 210 |
| New England | 325 | 276 | 340 | 320 | 387 | 325 | 248 | 281 | 356 | 346 |
| Middle Atlantic | 157 | 155 | 178 | 156 | 214 | 199 | 212 | 173 | 235 | 200 |
| East North Central | 237 | 192 | 235 | 216 | 241 | 243 | [5] 255 | 212 | 245 | 257 |
| West North Central | 436 | 250 | 432 | 206 | 413 | 204 | 371 | 202 | 385 | [6] 194 |
| South Atlantic | 181 | 174 | 173 | 134 | 199 | 163 | [7] 171 | 145 | 238 | [8] 150 |
| East South Central | 243 | 148 | 150 | 82 | 248 | [2] 147 | 243 | [2] 103 | 176 | [2] 59 |
| West South Central | 210 | 143 | 142 | 117 | 236 | 172 | 125 | 92 | 150 | [9] 129 |
| Mountain | 930 | 360 | 802 | 306 | 1,112 | 243 | 975 | 171 | 893 | 234 |
| Pacific | 265 | 128 | 230 | 152 | 383 | 154 | 303 | 191 | 252 | 126 |

## SMALLPOX CASE RATES

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 101 cities | 14 | 17 | 11 | 13 | 16 | [2] 19 | [3] 14 | [2] 16 | 14 | [4] 15 |
| New England | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Middle Atlantic | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| East North Central | 21 | 10 | 7 | 4 | 11 | 17 | [5] 16 | 12 | 7 | 12 |
| West North Central | 48 | 115 | 38 | 75 | 46 | 115 | 28 | 77 | 40 | [6] 82 |
| South Atlantic | 19 | 5 | 19 | 7 | 26 | 5 | [7] 30 | 20 | 41 | [8] 4 |
| East South Central | 0 | 10 | 21 | 5 | 78 | [2] 7 | 36 | [2] 29 | 47 | [2] 15 |
| West South Central | 9 | 8 | 9 | 8 | 43 | 0 | 26 | 13 | 21 | [9] 4 |
| Mountain | 18 | 45 | 18 | 99 | 0 | 117 | 18 | 99 | 9 | 144 |
| Pacific | 35 | 39 | 43 | 39 | 40 | 31 | 43 | 26 | 21 | 29 |

[1] 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, 1926 and 1927, respectively.
[2] Louisville, Ky., not included.
[3] Terre Haute, Ind., and Norfolk, Va., not included.
[4] Sioux City, Iowa, Greenville, S. C., Louisville, Ky., and Fort Smith, Ark., not included.
[5] Terre Haute, Ind., not included.
[6] Sioux City, Iowa, not included.
[7] Norfolk, Va., not included.
[8] Greenville, S. C., not included.
[9] Fort Smith, Ark., not included.

*Summary of weekly reports from cities, November 27 to December 31, 1927—Annual rates per 100,000 population, compared with rates for the corresponding period of 1926* —Continued

TYPHOID FEVER CASE RATES

| | Week ended— | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Dec. 4, 1926 | Dec. 3, 1927 | Dec. 11, 1926 | Dec. 10, 1927 | Dec. 18, 1926 | Dec. 17, 1927 | Dec. 25, 1926 | Dec. 24, 1927 | Jan. 1, 1927 | Dec. 31, 1927 |
| 101 cities | [10] 10 | 9 | 13 | 11 | 12 | [2] 8 | [3] 10 | [2] 11 | 12 | [4] 7 |
| New England | 7 | 7 | 2 | 12 | 31 | 0 | 40 | 9 | 24 | 14 |
| Middle Atlantic | 9 | 10 | 18 | 8 | 8 | 8 | 5 | 10 | 7 | 4 |
| East North Central | 6 | 5 | 3 | 9 | 5 | 3 | [5] 3 | 8 | 5 | 5 |
| West North Central | 10 | 12 | 4 | 14 | 10 | 6 | 10 | 8 | 4 | [6] 10 |
| South Atlantic | 17 | 16 | 24 | 9 | 19 | 9 | [7] 16 | 16 | 34 | [8] 13 |
| East South Central | 41 | 15 | 41 | 31 | 21 | [2] 29 | 16 | [2] 29 | 21 | [2] 15 |
| West South Central | 9 | 21 | 13 | 21 | 21 | 17 | 17 | 17 | 17 | [9] 13 |
| Mountain | 9 | 9 | 9 | 9 | 9 | 18 | 0 | 9 | 27 | 18 |
| Pacific | 16 | 5 | 16 | 13 | 24 | 16 | 21 | 10 | 16 | 0 |

INFLUENZA DEATH RATES

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 95 cities | 14 | 12 | 17 | 12 | 14 | [2] 14 | [3] 15 | [2] 17 | 17 | [10] 19 |
| New England | 7 | 5 | 9 | 9 | 7 | 12 | 7 | 5 | 12 | 5 |
| Middle Atlantic | 13 | 11 | 12 | 7 | 13 | 9 | 14 | 11 | 21 | 14 |
| East North Central | 9 | 9 | 14 | 9 | 12 | 11 | [5] 10 | 13 | 15 | 10 |
| West North Central | 4 | 4 | 15 | 6 | 15 | 6 | 11 | 10 | 8 | 8 |
| South Atlantic | 21 | 13 | 34 | 17 | 26 | 15 | [7] 34 | 20 | 17 | [8] 22 |
| East South Central | 41 | 46 | 41 | 56 | 5 | [2] 88 | 36 | [2] 59 | 26 | [2] 81 |
| West South Central | 40 | 43 | 40 | 47 | 40 | 56 | 18 | 73 | 13 | 82 |
| Mountain | 46 | 27 | 36 | 9 | 9 | 9 | 27 | 27 | 46 | 72 |
| Pacific | 11 | 14 | 11 | 3 | 7 | 17 | 4 | 24 | 0 | 31 |

PNEUMONIA DEATH RATES

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 95 cities | 123 | 114 | 129 | 110 | 137 | [2] 118 | [3] 137 | [2] 135 | 164 | [10] 157 |
| New England | 118 | 100 | 134 | 51 | 149 | 102 | 151 | 121 | 172 | 146 |
| Middle Atlantic | 151 | 123 | 140 | 119 | 147 | 117 | 166 | 127 | 180 | 158 |
| East North Central | 89 | 103 | 103 | 97 | 117 | 97 | [5] 109 | 105 | 134 | 135 |
| West North Central | 74 | 71 | 118 | 100 | 120 | 91 | 91 | 98 | 118 | 108 |
| South Atlantic | 106 | 149 | 155 | 138 | 127 | 164 | [7] 153 | 186 | 187 | [8] 189 |
| East South Central | 134 | 199 | 171 | 148 | 129 | [2] 162 | 109 | [2] 243 | 191 | [2] 221 |
| West South Central | 163 | 108 | 150 | 103 | 172 | 194 | 84 | 233 | 150 | 310 |
| Mountain | 210 | 54 | 109 | 216 | 273 | 135 | 164 | 243 | 201 | 198 |
| Pacific | 152 | 103 | 113 | 110 | 124 | 131 | 148 | 165 | 198 | 138 |

*Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1926, and 1927, respectively*

| Group of cities | Number of cities reporting cases | Number of cities reporting deaths | Aggregate population of cities reporting cases | | Aggregate population of cities reporting deaths | |
|---|---|---|---|---|---|---|
| | | | 1926 | 1927 | 1926 | 1927 |
| Total | 101 | 95 | 30,443,800 | 30,966,700 | 29,783,700 | 30,295,900 |
| New England | 12 | 12 | 2,211,000 | 2,245,900 | 2,211,000 | 2,245,900 |
| Middle Atlantic | 10 | 10 | 10,457,000 | 10,567,000 | 10,457,000 | 10,567,000 |
| East North Central | 16 | 16 | 7,650,200 | 7,810,600 | 7,650,200 | 7,810,600 |
| West North Central | 12 | 10 | 2,585,500 | 2,626,600 | 2,470,600 | 2,510,000 |
| South Atlantic | 21 | 20 | 2,799,500 | 2,878,100 | 2,757,700 | 2,835,700 |
| East South Central | 7 | 7 | 1,008,300 | 1,023,500 | 1,008,300 | 1,023,500 |
| West South Central | 8 | 7 | 1,213,800 | 1,243,300 | 1,181,500 | 1,210,400 |
| Mountain | 9 | 9 | 572,100 | 580,000 | 572,100 | 580,000 |
| Pacific | 6 | 4 | 1,946,400 | 1,991,700 | 1,475,300 | 1,512,800 |

[2] Louisville, Ky., not included.
[3] Terre Haute, Ind., and Norfolk, Va., not included.
[4] Sioux City, Iowa, Greenville, S. C., Louisville, Ky., and Fort Smith, Ark., not included.
[5] Terre Haute, Ind., not included.
[6] Sioux City, Iowa, not included.
[7] Norfolk, Va., not included.
[8] Greenville, S. C., not included.
[9] Fort Smith, Ark., not included.
[10] Greenville, S. C., and Louisville, Ky., not included.

# FOREIGN AND INSULAR

## PLAGUE ON VESSEL

*Vessel at La Plata from Rosario, Argentina.*—Information dated January 4, 1928, shows the arrival of a case of plague at La Plata on a vessel coming from Rosario, Argentina.

## THE FAR EAST

*Report for the week ended December 24, 1927.*—The following report for the week ended December 24, 1927, was transmitted by the Eastern Bureau of the Health Section of the Secretariat of the League of Nations, located at Singapore, to the headquarters at Geneva:

Plague, cholera, or smallpox was reported present in the following ports:

PLAGUE

*Egypt.*—Alexandria.
*Dutch East Indies.*—Balik-Papan, Makassar.
*India.*—Bassein, Rangoon.

CHOLERA

*India.*—Calcutta, Rangoon.
*Straits Settlements.*—Singapore.
*Siam.*—Bangkok.

SMALLPOX

*India.*—Bombay, Calcutta, Rangoon, Moulmein.
*Kwangtung.*—Dairen.
*Manchuria.*—Mukden.

Returns for the week ended December 24 were not received from the following ports:

*Aden Protectorate.*—Aden, Kamaran, Perim.
*Iraq.*—Basra.
*India.*—Madras, Tuticorin.
*Ceylon.*—Colombo.
*Dutch East Indies.*—Pontianak.
*China.*—Canton.
*Union of Socialist Soviet Republics.*—Vladivostok.

## ANGOLA

*Communicable diseases—October, 1927.*—During the month of October, 1927, communicable diseases were reported in Angola as follows:

*October, 1927—Cases*

| Disease | Coast district | Interior | Land frontier | Total |
|---|---|---|---|---|
| Ancylostomiasis | 13 | 7 | | 20 |
| Beriberi | 2 | 8 | | 10 |
| Bilharzia | 6 | 2 | | 8 |
| Chicken pox | 25 | 11 | 3 | 39 |
| Dysentery | 39 | 11 | 13 | 63 |
| Hemogobin fever | 2 | 9 | | 11 |
| Influenza | 54 | 81 | 56 | 191 |
| Leprosy | | 1 | | 1 |
| Malaria | 266 | 72 | 90 | 428 |
| Measles | 26 | | | 26 |
| Meningitis | | | 1 | 1 |
| Mumps | 4 | | 6 | 10 |
| Pneumonia | 32 | 6 | 3 | 41 |
| Relapsing fever | 1 | 1 | 2 | 4 |
| Scabies | 6 | | | 6 |
| Smallpox | 6 | 77 | | 83 |
| Tuberculosis | 19 | | 5 | 24 |
| Trypanosomiasis | 128 | 14 | 99 | 241 |
| Venereal diseases | 122 | 26 | 67 | 215 |
| Whooping cough | 37 | | 2 | 39 |
| Yaws | 168 | 76 | 48 | 292 |

## ARGENTINA

*Campaign of disinfection and rat destruction—Rosario.*—Under date of December 24, 1927, a campaign of intensive disinfection and destruction of rats was reported as being carried out at Rosario, Argentina.

## BARBADOS (BRITISH WEST INDIES)

*Malarial fever—October, 1927.*—Information dated November 15, 1927, shows the occurrence of an outbreak of malarial fever in the Island of Barbados, British West Indies, during October, 1927, with 200 cases distributed in two districts of the island. The infection was attributed to importation of mosquitoes on a vessel arrived from a port in Cuba. Later information shows rapid spread of the epidemic and a total of about 400 cases by the last of October. The outbreak was stated to be among plantation laborers.

## CANADA

*Communicable diseases—Week ended December 24, 1927.*—The Canadian Department of Health reports cases of certain communicable diseases from six Provinces of Canada for the week ended December 24, 1927, as follows:

| Disease | Nova Scotia | New Brunswick | Quebec | Manitoba | Saskatchewan | Alberta | Total |
|---|---|---|---|---|---|---|---|
| Influenza | 3 | | | | | | 3 |
| Poliomyelitis | | | 1 | | | 1 | 2 |
| Smallpox | | | | 2 | 12 | | 14 |
| Typhoid fever | | 48 | 10 | 1 | | 1 | 60 |

Report from Ontario for week ended Dec. 17, cerebrospinal fever, 1; lethargic encephalitis, 1; smallpox, 104; typhoid fever, 11.

*Communicable diseases—Week ended December 31, 1927.*—The Canadian Ministry of Health reports cases of certain communicable diseases from seven Provinces of Canada for the week ended December 31, 1927, as follows:

| Disease | Nova Scotia | New Brunswick | Quebec | Ontario | Manitoba | Saskatchewan | Alberta | Total |
|---|---|---|---|---|---|---|---|---|
| Cerebrospinal fever | | | | 1 | | | | 1 |
| Influenza | 9 | | | | 3 | | | 12 |
| Lethargic encephalitis | | | | 1 | | | | 1 |
| Poliomyelitis | | | | 1 | | | 1 | 2 |
| Smallpox | | | | 53 | | 13 | 3 | 69 |
| Typhoid fever | 26 | 78 | 7 | 5 | 1 | 1 | 1 | 119 |

*Communicable diseases—Quebec—Week ended December 24, 1927.*—The Bureau of Health of the Province of Quebec reports cases of certain communicable diseases for the week ended December 24, 1927, as follows:

| Disease | Cases | Disease | Cases |
|---|---|---|---|
| Chicken pox | 47 | Scarlet fever | 88 |
| Diphtheria | 78 | Smallpox | 14 |
| Influenza | 3 | Tuberculosis | 43 |
| Measles | 80 | Typhoid fever | 10 |
| Poliomyelitis | 1 | Whooping cough | 21 |

*Communicable diseases—Quebec—Week ended December 31, 1927.*—The bureau of health of the Province of Quebec reports cases of certain communicable diseases for the week ended December 31, 1927, as follows:

| Disease | Cases | Disease | Cases |
|---|---|---|---|
| Chicken pox | 61 | Smallpox | 3 |
| Diphtheria | 68 | Tuberculosis | 23 |
| Influenza | 33 | Typhoid fever | 7 |
| Measles | 86 | Whooping cough | 9 |
| Scarlet fever | 74 | | |

*Communicable diseases—Ontario—November, 1927—Comparison with corresponding period, year 1926.*—During the month of November, 1927, communicable diseases were reported in the Province of Ontario, Canada, as follows:

| Disease | November, 1927 | | November, 1926 | |
|---|---|---|---|---|
| | Cases | Deaths | Cases | Deaths |
| Cerebrospinal meningitis | 1 | | | 2 |
| Chancroid | 7 | | 1 | |
| Chicken pox | 1,080 | | 1,527 | |
| Diphtheria | 343 | 17 | 393 | 14 |
| Dysentery | | 4 | | |
| German measles | 14 | | 15 | |
| Gonorrhea | 190 | | 157 | |
| Influenza | | 3 | | 7 |
| Lethargic encephalitis | 4 | 1 | 2 | |
| Measles | 542 | | 746 | |
| Mumps | 1,007 | | 47 | |
| Pneumonia | | 74 | | 127 |
| Poliomyelitis | 7 | | 8 | 1 |
| Scarlet fever | 402 | 4 | 546 | |
| Smallpox | 271 | | 95 | 1 |
| Syphilis | 115 | | 90 | |
| Tuberculosis | 94 | 53 | 84 | 42 |
| Typhoid fever | 59 | 1 | 46 | 5 |
| Whooping cough | 285 | | 312 | 2 |

*Smallpox.*—Smallpox was reported present in 21 localities, the greatest prevalence being reported at Ottawa, with 97 cases, Toronto 59, and East York, 51. At eight localities one case each was reported.

## CUBA

*Communicable diseases—Habana, Cuba—December, 1927.*—During the month of December, 1927, communicable diseases were reported in Habana, Cuba, as follows:

| Disease | New cases | Deaths | Remaining under treatment Dec. 31, 1927 | Disease | New cases | Deaths | Remaining under treatment Dec. 31, 1927 |
|---|---|---|---|---|---|---|---|
| Chicken pox | 3 | 1 | 1 | Measles | 9 | | 4 |
| Diphtheria | 8 | 1 | 4 | Paratyphoid fever | 1 | 1 | |
| Leprosy | | | 18 | Scarlet fever | 4 | | |
| Malaria [1] | 77 | | 13 | Typhoid fever [1] | 47 | 5 | 44 |

[1] Many of these cases from the interior.

## ECUADOR

*Plague—Plague-infected rats—Guayaquil—November, 1927.*—During the month of November, 1927, nine cases of plague, with three deaths, were reported at Guayaquil, Ecuador.

During the same period, of 23,240 rats taken at Guayaquil, 6 rats were found plague infected.

*Smallpox.*—During the period under report one case of smallpox was reported at Guayaquil.

## GREAT BRITAIN

*Smallpox—Newcastle-on-Tyne District.*—Information dated January 7, 1928, shows marked prevalence of smallpox in the Newcastle-on-Tyne area, Great Britain, with many new cases reported daily. The type of the disease is stated to be mild.

## HAWAII TERRITORY

*Rodent report—Hilo laboratory—November, 1927.*—The rodent report from the Hilo laboratory at Hilo, Hawaii, for the month of November, 1927, shows that 13,009 rodents were received and examined during the month. Of these, four were found plague infected. There were no cases of human plague reported, the last case being on August 12, 1927. The last case of rodent plague occurred on November 25, 1927, at Honokaa, Hawaii.

## IRAQ

*Cholera—November 27–December 3, 1927—Summary.*—During the week ended December 3, 1927, 56 cases of cholera with 53 deaths were reported in Iraq. The occurrence was distributed as follows:

| Province | Nov. 27–Dec. 3, 1927 | | Summary to Dec. 3, 1927 | |
|---|---|---|---|---|
| | Cases | Deaths | Cases | Deaths |
| Amarah | 1 | 1 | 184 | 146 |
| Baghdad | 38 | 38 | 70 | 48 |
| Basra | | | 417 | 337 |
| Diwaniyah | | | 91 | 50 |
| Diyala | 1 | 1 | 1 | 1 |
| Dulaim | 1 | | 1 | |
| Hillah | 7 | 4 | 94 | 54 |
| Kerbala | | | 43 | 31 |
| Kut | | | 34 | 22 |
| Muntafique | 8 | 8 | 215 | 139 |
| Ramadi | | 1 | 85 | 64 |
| Total | 56 | 53 | 1,235 | 892 |

## JAVA

*Plague—Surabaya—November 10, 1927.*—Under date of November 11, 1927, Surabaya, Island of Java, was reported plague infected.

## MALTA

*Communicable diseases—November, 1927.*—During the month of November, 1927, communicable diseases were reported in the island of Malta as follows:

| Disease | Cases | Disease | Cases |
|---|---|---|---|
| Broncho-pneumonia | 5 | Poliomyelitis | 1 |
| Diphtheria | 5 | Scarlet fever | 12 |
| Erysipelas | 3 | Trachoma | 48 |
| Malta (undulant) fever | 66 | Tuberculosis | 21 |
| Measles | 1 | Typhoid fever | 74 |
| Pneumonia | 4 | Whooping cough | 3 |

Population, civil, estimated, 227,440.

## MAURITIUS

*Plague—Port Louis—September, 1927.*—During the month of September, 1927, a case of plague was reported at Port Louis, island of Mauritius.

## MEXICO

*Mortality, November and December, 1927—Malaria and typhoid fever prevalence—Progreso.*—During the month of November, 1927, 64 deaths were reported at Progreso, Mexico, and during December, 1927, 73 deaths. The principal causes of death were stated to be malarial fevers. Severe typhoid fever prevalence was reported, and it was stated that an active campaign of inoculation against the disease was being carried out. Population, 8,877.

## UNION OF SOUTH AFRICA

*Plague—Orange Free State—Infection among wild rodents—November 13–19, 1927.*—During the week ended November 19, 1927, a fatal case of plague was reported in the Orange Free State, Union of South Africa. The case occurred in a native laborer employed on Lang' Tlass farm, Heilbron District, situated 8 miles east of Dover Station, who, feeling sick, was proceeding to Johannesburg. He was admitted to hospital and died the following day. It was stated that active plague infection had been verified among veldt rodents on the Lang Tlass farm.

*Smallpox.*—During the week ended November 19, 1927, outbreaks of smallpox were reported in Bothaville District, Orange Free State.

*Typhus fever.*—During the four weeks ended November 26, 1927, typhus fever was reported present in the Cape Province, Natal, and Transvaal.

# CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, Health Section of the League of Nations, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

## CHOLERA

[C indicates cases; D, deaths; P, present]

| Place | | Week ended— | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | September, 1927 | | | | October, 1927 | | | | | November, 1927 | | | | December, 1927 | | |
| | | 3 | 10 | 17 | 24 | 1 | 8 | 15 | 22 | 29 | 5 | 12 | 19 | 26 | 3 | 10 | 17 |
| China: | | | | | | | | | | | | | | | | | |
| Amoy | C | 18 | 21 | 19 | 14 | 10 | 4 | 2 | | | | | | | | | |
| | D | 1 | 2 | | | | | | | | | | | | | | |
| Canton | C | 10 | 17 | 7 | 2 | 6 | | 2 | 6 | 5 | 1 | 6 | | | 1 | | |
| | D | 6 | 10 | 7 | 2 | 6 | | 2 | 6 | 5 | 1 | 5 | | | 1 | | |
| Foochow | C | P | | P | P | P | P | P | P | | | | | | | | |
| Hong Kong | C | 1 | P | P | P | P | P | P | | | | | | | | | |
| | D | 1 | | | | | | | | | | | | | | | |
| Shanghai | C | 1 | 3 | 2 | | 1 | 2 | | | | | | | | | | |
| | D | 25 | 22 | 21 | 6 | 4 | | 2 | 1 | | | | | | | | |
| Swatow | C | P | P | | P | | P | P | P | P | P | | | | | | |
| Tientsin | C | 4 | 3 | 5 | 3 | 2 | | | | | | | | | | | |
| India | C | 11,180 | 8,391 | 6,630 | 5,189 | 4,907 | 4,055 | 6,142 | 5,056 | 5,303 | 4,845 | 5,987 | | | | | |
| | D | 5,559 | 4,278 | 3,532 | 2,526 | 2,549 | 2,104 | 3,027 | 2,691 | 2,867 | 2,641 | 3,350 | | | | | |
| Bombay | C | 1 | 1 | 1 | | | | | | | | 2 | | | | | |
| | D | 1 | 1 | | | | | | | | | 2 | | | | | |
| Calcutta | C | 18 | 19 | 20 | 19 | 21 | 13 | 34 | 33 | 28 | 35 | 65 | 71 | 156 | | | |
| | D | 10 | 13 | 5 | 11 | 15 | 11 | 19 | 19 | 22 | 25 | 42 | 49 | 106 | 77 | 55 | 43 |
| Madras | C | 29 | 8 | 15 | 7 | 4 | 9 | | 1 | | | 6 | 7 | | | | |
| | D | 24 | 11 | 6 | 7 | 3 | 3 | 1 | 1 | | | 3 | 4 | 1 | | 1 | |
| Rangoon | C | | | | 2 | 3 | 1 | | 2 | | 1 | | 1 | 3 | | | |
| | D | | | | 2 | 3 | 1 | | 1 | 1 | | 3 | 4 | 2 | 1 | 2 | 1 |
| India, French Settlements in | C | 6 | 4 | 1 | | | | | | | | | | | | | |
| | D | 3 | 4 | 1 | | | | | | | | | | | | | |
| Karikal | C | 1 | | | | | | | | | | | | | | | |
| | D | 1 | | | | | | | | | | | | | | | |
| Pondicherry | C | 4 | 4 | 1 | 6 | | | | | | | | | | | | |
| | D | 2 | 4 | 1 | 8 | | | | | | | | | | | | |
| Indo-China: Saigon | C | | | | | | 1 | | | 1 | | | | | | | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Iraq:[1] | | | | | | | | | | | | | | | | | | |
| Amarah | C | | | | | | | | 35 | 4 | 8 | 3 | 2 | | | 1 | | |
| | D | | | | | | | | 23 | 6 | 8 | 3 | 2 | | | 1 | | |
| Baghdad | C | | | | | | | | 1 | | 10 | 13 | 8 | | | | | |
| | D | | | | | | | | 1 | | 5 | 2 | 2 | | | | | |
| Basra | C | | | | | | | | 1 | | | | | | | | | |
| Diwaniyah | C | | | | | | | | 28 | 4 | 3 | 1 | 2 | | | | | |
| | D | | | | | | | | 17 | 2 | | | 1 | | | | | |
| Hillah | C | | | | | | | | 12 | 7 | 3 | 5 | 53 | | | | | |
| | D | | | | | | | | 7 | 6 | 2 | 1 | 29 | | | | | |
| Kerbala | C | | | | | | | | 3 | 1 | 4 | 2 | 2 | | | | | |
| | D | | | | | | | | 3 | 1 | 5 | 2 | 2 | | | | | |
| Kut | C | | | | | | | | 11 | 9 | 1 | 5 | | | | | | |
| | D | | | | | | | | 8 | 4 | 1 | 3 | | | | | | |
| Muntafique | C | | | | | | | | 4 | | | 4 | 14 | | | | | |
| | D | | | | | | | | 1 | | | 2 | 10 | | | | | |
| Ramadi | C | | | | | | | | | 19 | 18 | 27 | 21 | | | | | |
| | D | | | | | | | | | 10 | 23 | 14 | 16 | | | | | |
| Java: Batavia | C | | | | | | | | | | 1 | 2 | 25 | 2 | | | | |
| | D | | | | | | | | | | 1 | 2 | 15 | 2 | | | | |
| Siam | C | 4 | 5 | 21 | | 6 | 4 | 8 | 8 | 14 | 23 | 43 | 30 | 19 | | | | |
| | D | 3 | 3 | 11 | | 4 | 2 | 5 | 7 | 10 | 15 | 25 | 26 | 11 | | | | |
| Bangkok | C | 1 | 1 | 1 | | | 2 | 3 | 1 | | 1 | | 3 | | 1 | 1 | 1 | |
| | D | | | 1 | | | | 3 | 1 | | 1 | | 1 | | 1 | | 1 | |
| Straits Settlements: Singapore | C | | | | | | | | | 1 | | | | 1 | 2 | | 2 | |
| | D | | | | | | | | | 1 | | | | 2 | | | 2 | |
| On vessel S. S. Tabaristan; at Basra | C | | | | | | 1 | | | | | | | | | | | |

[1] From July 24 to Oct. 8, 1927, 831 cases and 617 deaths from cholera were reported in Iraq, of these 181 cases and 108 deaths occurred in Amarah; 416 cases and 387 deaths in Basra; 53 cases and 30 deaths in Diwaniyah; 7 cases and 5 deaths in Hillah; 31 cases and 18 deaths in Kerbala; 8 cases and 6 deaths in Kut; and 135 cases and 118 deaths in Muntafique.

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

### PLAGUE

[C indicates cases; D, deaths; P, present]

| Place | | Week ended— | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | September, 1927* | | | | October, 1927 | | | | | November, 1927 | | | | December, 1927 | | | | |
| | | 3 | 10 | 17 | 24 | 1 | 8 | 15 | 22 | 29 | 5 | 12 | 19 | 26 | 3 | 10 | 17 | 24 | 31 |
| Algeria: Oran | C | | 1 | | | | | | | | 1 | | 1 | | | | | | |
| | D | | 1 | | | | | | | | | | | | | | | | |
| Argentina: | | | | | | | | | | | | | | | | | | | |
| Bahia Blanca District | C | | | | | | | | | | | | | 1 | 1 | 1 | | | |
| Cordoba Province | C | | | | | P | P | P | P | P | P | | | 10 | | | | | 1 |
| Firmat | C | | | | | | | | | | | | | | | | 1 | | |
| Quilino | C | | | | | | | | | | | | | 1 | 1 | 1 | | | |
| Rosario | C | | | | | | | | | | | | | 1 | 1 | 1 | 1 | | 3 |
| Unacha | C | | | | | | | | | | | | | | | | 1 | | |
| Azores: St. Michaels Island | C | | 1 | | 1 | 1 | | | 2 | 1 | | 1 | 1 | 1 | 1 | 1 | | | |
| | D | | 1 | | | 1 | | | | | | | | | | 1 | | | |
| British East Africa: Tanganyiki | D | | | | 10 | 10 | | | | | 10 | | | | | | | | |
| Canary Islands: Las Palmas | C | | | | | | 4 | 4 | 1 | | | | | 1 | | | 1 | | |
| Ceylon: Colombo | C | 1 | | 1 | 1 | 2 | | | 1 | | | | | 1 | | | | | |
| | D | 1 | | 1 | 1 | 1 | | | | | | | | | | | | | |
| China: Tungliao | D | | | | | | | 200 | | | | | | | | | | | |
| Egypt: | | | | | | | | | | | | | | | | | | | |
| Alexandria | C | 1 | | | | | | | | | | | | 5 | 2 | | | | |
| | D | | | | | | | | | | | | | 5 | 2 | | | | |
| Suez | C | | 1 | | | | | | | | | | | | | | | | |
| Greece: | | | | | | | | | | | | | | | | | | | |
| Mitylene | C | | | | 5 | | | | | | | | | | | | | | |
| Patras | C | 2 | | | | 1 | | | | | 1 | | | | | | | | |
| | D | | | | | 1 | | | | | 1 | | | | | | | | |
| India | C | 403 | 1,087 | 612 | 608 | 655 | 715 | 920 | 956 | 812 | 1,015 | 856 | | | | | | | |
| | D | 216 | 569 | 324 | 319 | 381 | 359 | 508 | 544 | 495 | 551 | 485 | | | | | | | |
| Bombay | C | 3 | 1 | 1 | 2 | | 2 | | 2 | | | | | | | | | | |
| | D | 2 | 1 | 1 | 1 | | 2 | | 1 | | | | | | | | | | |
| Calcutta | C | 18 | | | | | | | | | | | | | | | | | |
| | D | 10 | | | | | | | | | | | | | | | | | |
| Madras | C | 144 | 111 | 87 | 123 | 88 | 156 | 167 | 172 | | 83 | 152 | | | | | | | |
| | D | 76 | 62 | 43 | 49 | 60 | 72 | 72 | 84 | | 54 | 80 | | | | | | | |
| Rangoon | C | 2 | | 4 | | 3 | 4 | 1 | 3 | 5 | 2 | | 4 | 5 | | | | | |
| | D | 2 | | 4 | | 3 | 4 | 1 | 3 | 5 | 2 | | 4 | 5 | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Indo-China: Saigon | C | | 1 | 1 | | | | | | | | | 1 | | | | | | |
| Java: | | | | | | | | | | | | | | | | | | | |
| Batavia | C | 18 | 14 | 17 | 21 | 24 | 33 | 42 | 31 | 41 | 29 | 31 | 34 | | | | | | |
| | D | 18 | 14 | 17 | 21 | 24 | 33 | 41 | 31 | 41 | 29 | 31 | 34 | | | | | | |
| East Java and Madura | C | 5 | 4 | 2 | 7 | 3 | 3 | 7 | 4 | 3 | 4 | 2 | | | | | | | |
| | D | 5 | 4 | 2 | 7 | 3 | 3 | 7 | 4 | 3 | 4 | 2 | | | | | | | |
| Senegal | C | | | | 129 | | | | | | | | | | | | | | |
| | D | | | | 75 | | | | | | | | | | | | | | |
| Baol | C | 32 | | 27 | 13 | 39 | | 56 | | | | | P | | P | | | | |
| | D | 11 | | 15 | 7 | 26 | | 14 | | | | | | | | | | | |
| Cayor | C | 81 | 103 | 175 | 104 | 101 | 45 | 20 | 10 | 32 | 8 | 8 | P | | | | | | |
| | D | 27 | 58 | 90 | 58 | 57 | 16 | 10 | 5 | 20 | 4 | 4 | | | | | | | |
| Dakar | C | 9 | 5 | 5 | 1 | 1 | | | | | | | | | | | | | |
| | D | 4 | 4 | 3 | 1 | | | | | | | | | | | | | | |
| Louga | C | | | | 5 | | 8 | | | | | | | | | | | | |
| | D | | | | 4 | | | | | | | | | | | | | | |
| Rufisque | C | 4 | 9 | 2 | 1 | | | | | | | | | | | | | | |
| | D | 3 | 7 | 1 | 1 | | | | | | | | | | | | | | |
| Thies | C | 2 | | 2 | 5 | | | | | 1 | | | | | | | | | |
| | D | 2 | | 1 | 4 | | | | | | | | | | | | | | |
| Siam | C | | | | | | 1 | 11 | 1 | | | | | 2 | | | | | |
| | D | | | | | | 1 | 8 | | | 1 | | | 1 | | | | | |
| Bangkok | C | | | | | | 1 | | 1 | | | | | | | | | | |
| | D | | | | | | | | | | 1 | | | | | | | | |
| Turkey: Constantinople | C | | | | 1 | 1 | | | | | | | | 1 | | | | | |
| Union of South Africa: | D | | | | | 1 | | | | | | | | | | | | | |
| Cape Province— | | | | | | | | | | | | | | | | | | | |
| Richmond District | C | | | | | | | | | 2 | | | | | | | | | |
| | D | | | | | | | | | 2 | | | | | | | | | |
| Orange Free State | C | | | | | | | | | | | | 1 | | | | | | |
| | D | | | | | | | | | | | | 1 | | | | | | |
| On vessel: At La Plata, from Rosario, Argentina | C | | | | | | | | | | | | | | | | | | 1 |

| Place | | July | August | September | October | November |
|---|---|---|---|---|---|---|
| Algeria: Algiers | C | | | | 2 | |
| Ecuador: Guayaquil | C | 5 | 7 | 3 | 4 | 9 |
| | D | | | | | 3 |
| Madagascar: | | | | | | |
| Ambositra Province | C | 6 | 1 | | | |
| | D | 6 | 1 | | | |
| Antisirabe Province | C | | 34 | 5 | | |
| | D | | 34 | 4 | | |
| Itasy Province | C | 14 | 11 | 21 | | |
| | D | 14 | 7 | 20 | | |
| Madagascar—Continued: | | | | | | |
| Moramanga Province | C | 5 | 4 | 3 | | |
| | D | 5 | 4 | 3 | | |
| Tananarive Province | C | 21 | 48 | 142 | | |
| | D | 19 | 43 | 127 | | |
| Peru | C | 8 | 11 | | | |
| | D | 7 | 6 | | | |
| Callao | D | 3 | | | | |

Indo-China (French), 13 cases, Sept. 1–20; Beirut, Syria, 1 case, Sept. 1–10; 1 case, Oct. 21–31; 1 case, Dec. 1–10.

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

### SMALLPOX

[C indicates cases; D, deaths; P, present]

| Place | | Week ended— | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | September, 1927 | | | | October, 1927 | | | | | November, 1927 | | | | December, 1927 | | | | | Jan. 7, 1928 |
| | | 3 | 10 | 17 | 24 | 1 | 8 | 15 | 22 | 29 | 5 | 12 | 19 | 26 | 3 | 10 | 17 | 24 | 31 | |
| Algeria: Oran | C | | | | | | | | | | 10 | 4 | 6 | 9 | 11 | 10 | | | | |
| Arabia: Aden | C | | | | | | | | | | | | 1 | | 1 | | | | | |
| Brazil: Rio de Janeiro | C | | | 3 | | | | | | 1 | | | | | | | | | | |
| | D | | | 6 | | | | | | 1 | | | | | | | | | | |
| British East Africa: Tanganyiki | D | | | 8 | | | | 7 | | | | | | | | | | | | |
| British South Africa: | | | | | | | | | | | | | | | | | | | | |
| Northern Rhodesia | C | | 18 | | | | | 44 | | | 10 | 22 | 3 | 57 | | | | | | |
| | D | | | | | | | 1 | | | 23 | | 1 | 18 | | | | | | |
| Southern Rhodesia | C | | | | | | | | | | | | 3 | | | | | | | |
| Canada: | | | | | | | | | | | | | | | | | | | | |
| Alberta | C | 3 | 1 | 5 | 8 | 5 | 4 | 5 | 9 | 6 | 2 | 1 | 1 | 7 | 3 | 3 | 6 | | 3 | |
| Edmonston | C | | | | | | | | | 1 | | | | 6 | | 1 | 1 | | | |
| British Columbia— | | | | | | | | | | | | | | | | | | | | |
| Vancouver | C | 2 | | | | | | | | | | | | | | 4 | | | | |
| Manitoba | C | 2 | | 7 | | | 2 | | 5 | 3 | 14 | | 2 | 1 | 3 | 1 | 2 | 2 | | |
| Winnipeg | C | | | 4 | | | 1 | | 1 | | | | 2 | | | 1 | 1 | 1 | | |
| New Brunswick | C | | | 2 | | | | | | | | | | | | | | | | |
| Nova Scotia | C | | | 1 | | | | 1 | | | | | | | | | | 1 | | |
| Halifax | C | | | | | | | 1 | | | | | | | | | | | | |
| Ontario | C | | | 12 | 10 | 6 | 26 | 26 | 38 | 64 | 38 | 77 | 85 | 71 | 90 | 82 | 104 | | 53 | |
| Hamilton | C | | | | | | | | | | | | | | 2 | | | | | |
| Kingston | C | | | | | | | | | | | | 1 | | | | | 1 | | |
| Ottawa | C | 9 | 13 | 12 | 6 | 3 | 15 | 23 | 26 | 47 | 17 | 51 | 19 | 10 | 19 | | 34 | 18 | | 20 |
| Toronto | C | | 1 | | 1 | | 3 | 1 | 6 | 2 | 16 | 3 | 13 | | 25 | 14 | | 7 | | |
| Windsor | C | | | | | | | 9 | | | | | | | | | | | | |
| Quebec | C | | | | | | | | 8 | 7 | 3 | 12 | 3 | 8 | 5 | 3 | | 14 | 3 | |
| Montreal | C | | | | | | | | | | | 1 | | | | | | 1 | | |
| Quebec | C | | | | | | | | | | | | | | 2 | | 2 | | | |
| Reviere du Loup | C | | | | | | | | | | | | 3 | | | | | | | |
| Saskatchewan | C | 13 | 33 | | 22 | 12 | | 8 | 11 | 5 | 12 | 2 | 14 | 9 | 15 | 19 | 15 | 12 | 13 | |
| Moose Jaw | C | | 9 | | 7 | | | | 3 | | | | | | | | 1 | | 1 | |
| Regina | C | | | | | | 5 | | | | | 1 | | | | | 1 | | | |
| Saskatoon | C | | | | | | | | | | | | | | | 2 | | | | |

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| China: | | | | | | | | | | | | | | | | | | | | | |
| Canton | C | | | | 1 | | | | | | | | | | | | | | | | |
| | D | | | | 1 | | | | | | | | | | | | | | | | |
| Chefoo | C | | | | 1 | | | P | | P | | | | P | | | | | | | |
| | D | | | | 1 | | | | | | | | | | | | | | | | |
| Foochow | C | | P | | | | | P | P | | P | | | | | | | | | | |
| Hong Kong | C | 2 | | | | | | | | | | | | | | | | | | | |
| | D | 1 | | 1 | | | | | | | | | | | | | | | | | |
| Manchuria— | | | | | | | | | | | | | | | | | | | | | |
| Changchun | C | | | | | | | | | | | | | 1 | | | | | | | |
| Dairen | C | | | | | | | | 1 | | 2 | | | | | | | | | | |
| | D | | | | | | | | 1 | | | | | | | | | | | | |
| Fushun | C | | | 1 | | | | | | | | 1 | | | | | | | | | |
| Mukden | C | | | | | 1 | | | 1 | 1 | | | | | | | | | | | |
| Pensihu | C | | | | | 1 | | | | | | | | | | | | | | | |
| Tientsin | C | | | | | 12 | | | 1 | 8 | | | | 4 | 1 | | | | | | |
| Egypt | C | 3 | | | | | | | | | | | | | | | | | | | |
| | D | 1 | | | | 1 | | | | | | | | | | | | | | | |
| Great Britain: | | | | | | | | | | | | | | | | | | | | | |
| England and Wales | C | 111 | 146 | 126 | 125 | 122 | 149 | 124 | 200 | 199 | 219 | 258 | 226 | 233 | 366 | 230 | 212 | | | | |
| Bradford | C | | | | | | | | | 1 | 5 | 3 | 2 | 9 | 6 | 2 | 2 | | | | |
| Bristol | C | | | | | | | | 6 | 1 | | | 3 | 2 | 4 | 2 | | | | | |
| Cardiff | C | | | | | | | | | 1 | | | | | | | | | | | |
| Leeds | C | 3 | | | | 3 | 1 | | 6 | 1 | 1 | 1 | 2 | 3 | 3 | 6 | 4 | 4 | | | |
| Manchester | C | | | | | | 1 | 2 | | | 1 | 1 | 4 | 2 | 5 | 10 | 8 | | | | |
| Newcastle upon Tyne | C | | | 2 | | 1 | | 5 | | 2 | 6 | | 1 | 28 | 18 | 5 | 4 | 2 | 13 | | |
| Sheffield | C | | | | 1 | | 3 | 3 | 4 | 4 | | | 2 | 1 | 8 | | | | | | |
| India | C | 1,456 | 1,109 | 1,111 | 722 | 923 | 503 | 777 | 860 | 779 | 805 | 1,235 | | | | | | | | | |
| | D | 397 | 266 | 284 | 173 | 179 | 159 | 171 | 206 | 190 | 200 | 211 | | | | | | | | | |
| Bombay | C | 7 | 3 | 1 | 1 | 4 | 2 | | 4 | 2 | | 2 | | | 4 | | | | | | |
| | D | 5 | 2 | 1 | | | | | 2 | 2 | | 1 | | | 1 | | | | | | |
| Calcutta | C | 4 | 6 | 10 | 2 | | 4 | 1 | | | | | 5 | 4 | | | | | | | |
| | D | 2 | 5 | 5 | 2 | | 3 | 1 | 1 | | | | 2 | 2 | | | | | | | |
| Madras | C | 2 | | 3 | 2 | 3 | 1 | 2 | 2 | 3 | | 2 | 2 | 2 | 2 | 5 | | | | | |
| | D | | | 1 | 1 | | | | | 1 | | 1 | | 1 | 1 | 1 | | | | | |
| Rangoon | C | 2 | | 1 | 6 | 2 | 8 | | 7 | 4 | | 1 | 1 | 5 | | | | | | | |
| | D | 1 | | | 1 | 1 | 1 | | 1 | 1 | | | | 1 | | | | | | | |
| India, French settlements in: | | | | | | | | | | | | | | | | | | | | | |
| Karikal | C | | | | 1 | | | | | | | | | | | | | | | | |
| | D | | | | 1 | | | | | | | | | | | | | | | | |
| Pondicherry | C | 11 | 8 | 2 | 16 | | | | | | | | | | | | | | | | |
| | D | 11 | 8 | 2 | 16 | | | | | | | | | | | | | | | | |
| Indo-China: Saigon | C | | 1 | | | | | | | | | | | | | | | | | | |
| Iraq: | | | | | | | | | | | | | | | | | | | | | |
| Baghdad | C | | 1 | | | 5 | | | 2 | | | 5 | | | 5 | | | | | | |
| | D | | 1 | | | 3 | | | 1 | | | 4 | | | 5 | | | | | | |
| Basra | C | | | 4 | | | | 2 | | | | | | | | | | | | | |
| | D | | | 4 | | | | 2 | | | | | | | | | | | | | |
| Italy: Rome and vicinity | C | | 1 | | | | | | | | | | | | | | | | | | |

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

### SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

| Place | | Week ended— | | | | | | | | | | | | | | | | | | Jan. 7, 1928 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | September, 1927 | | | | October, 1927 | | | | | November, 1927 | | | | December, 1927 | | | | | |
| | | 3 | 10 | 17 | 24 | 1 | 8 | 15 | 22 | 29 | 5 | 12 | 19 | 26 | 3 | 10 | 17 | 24 | 31 | |
| Jamaica (outside Kingston) (alastrim) | C | 2 | 2 | 2 | 3 | 1 | 4 | 4 | | 7 | | | | 1 | | | | | | |
| Kingston (alastrim) | C | 2 | | 1 | | | 2 | | | | | | | | | | | | | |
| Java: | | | | | | | | | | | | | | | | | | | | |
| Batavia | C | | | | | 3 | | 1 | | | | 25 | | | | | | | | |
| | D | | | | | | | | | | | 15 | | | | | | | | |
| East Java and Madura | C | | 14 | 3 | 5 | 1 | | 7 | | 1 | 3 | 5 | | | | | | | | |
| | D | | | | | | | 1 | | | | | | | | | | | | |
| Mexico: | | | | | | | | | | | | | | | | | | | | |
| Acapulco | C | 1 | | 1 | | | | | | | | 1 | | | | | | | | |
| | D | 1 | | 1 | | | | | | | | 1 | | | | | | | | |
| Guadalajara | D | | | | | | | | | | | | | 1 | | | 1 | | | |
| Mexico City and surrounding territory | C | | | | | | | | | | | | | 1 | 1 | 1 | | | | |
| Torreon | D | | | | | | 2 | | | | | | | | | | | | | |
| Palestine: Jerusalem | C | | | | | | | | | | | | | | 1 | | | | | |
| Portugal: | | | | | | | | | | | | | | | | | | | | |
| Lisbon | C | 1 | | 1 | 1 | 1 | 4 | 1 | 2 | 1 | 2 | | | | | | | | | |
| Oporto | C | | 1 | | | | | | | | | | | | | | | | | |
| Siam | C | 24 | 3 | | | | 3 | 3 | | | | | 1 | | | | | | | |
| | D | 14 | 1 | | | | | | | | | | | | | | | | | |
| Bangkok | C | | | | | | | | | | | | 1 | | | | | | | |
| Spain: | | | | | | | | | | | | | | | | | | | | |
| Malaga | D | | | | | | | | | | | | 1 | | | | | | | |
| Valencia | C | | | | | 1 | | | | | | | | | | | | | | |
| Union of South Africa: Cape Province | C | | | | | | P | | | | | | | | | | | | | |
| Venezuela: Maracaibo | D | | | 2 | | | 1 | | | | | | | | | | | | | |

| Place | | September, 1927 | | | October, 1927 | | | November, 1927 | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1-10 | 11-20 | 21-30 | 1-10 | 11-20 | 21-31 | 1-10 | 11-20 |
| Algeria | C | 110 | 162 | 110 | 182 | 386 | | | |
| Oran | C | 4 | | 12 | 6 | | 5 | | |

| Place | | September, 1927 | | | October, 1927 | | | November, 1927 | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1-10 | 11-20 | 21-30 | 1-10 | 11-20 | 21-31 | 1-10 | 11-20 |
| Indo-China | C | 6 | 6 | 9 | | 4 | | | |
| Syria: Damascus | C | | 1 | 4 | 14 | 8 | | | 13 |

| Place | | July | August | September | October | November |
|---|---|---|---|---|---|---|
| Angola | C | 42 | 2 | 5 | 73 | |
| | D | | | | 2 | |
| Congo | C | | | 5 | 77 | |
| Cuanza-Norte | C | | | 1 | | |
| Laonda | C | | | 1 | | |
| Zaire | C | | | 3 | | |
| Brazil: Porto Alegre | C | 5 | 3 | 3 | 4 | |
| British East Africa: Zanzibar | C | | | | 2 | |
| | D | | | | 1 | |
| Chosen | C | 19 | 2 | | | |
| | D | 6 | | | | |

| Place | | July | August | September | October | November |
|---|---|---|---|---|---|---|
| Ecuador, Guayaquil | C | | 2 | 2 | 1 | 1 |
| Franco | C | 23 | 6 | 8 | | |
| Gold Coast | C | 1 | 1 | | | |
| Latvia | C | | | | 2 | |
| Mexico | D | 93 | | | | |
| Morocco | C | | 76 | 51 | | |
| Nigeria | C | 492 | 91 | | | |
| | D | 83 | 20 | | | |
| Spain: Madrid | D | | | | | 1 |

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

### TYPHUS FEVER

[C indicates cases; D, deaths; P, present]

| Place | | Week ended— | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | September, 1927 | | | | October, 1927 | | | | | November, 1927 | | | | December, 1927 | | | |
| | | 3 | 10 | 17 | 24 | 1 | 8 | 15 | 22 | 29 | 5 | 12 | 19 | 26 | 3 | 10 | 17 | 24 |
| Bulgaria: Sofia | C | | | | | 8 | 4 | 3 | 2 | 3 | 1 | 2 | | | | | | |
| | D | | | | | | | | | | 1 | | | | | | | |
| Chile: | | | | | | | | | | | | | | | | | | |
| Antofagasta | D | | | | | 1 | | | | | | | | | | | | |
| Valparaiso | C | 1 | | | | | | | | | | | | 1 | 1 | | | |
| | D | 1 | | | | | | | | | | | 1 | | | | | |
| China: | | | | | | | | | | | | | | | | | | |
| Manchuria: Harbin | | | | | | | | | | | | | | | 1 | | | |
| Tientsin | C | | | | 2 | | | | | | | | | | | | | |
| Egypt | C | | | | | 3 | 3 | 5 | 1 | | 4 | | | 1 | | | | |
| | D | | | | | 2 | 1 | 1 | 1 | | | | | | | | | |
| Port Said | C | | | | | 1 | | | | | | | | | 1 | | | |
| Ireland: | | | | | | | | | | | | | | | | | | |
| Cork County | C | | | | | | | | | | | | | | | 3 | | |
| Donegal County— | | | | | | | | | | | | | | | | | | |
| Letterkenny | C | | | | | | | | 4 | | | | | | | | | |
| Mexico: Mexico City (including municipalities in Federal District) | C | 9 | 4 | 1 | 5 | 7 | | 3 | 8 | 9 | 6 | 2 | 11 | 7 | 6 | 4 | | 4 |
| | D | | | | | | | | | | 2 | | | | | | 1 | 1 |
| Palestine | C | 3 | | 5 | | | 3 | | | | | | 2 | 3 | 1 | | | |
| Haifa | C | | | | | | 2 | | | | | | 1 | 1 | | | | |
| Herzliah | C | | | | | | | | | | | | | 1 | | | | |
| Jaffa | C | | | | | 1 | | | | | | | | 1 | | | | |
| Nazareth | C | | | | | | | | | | | | 1 | | | | | |
| Safad | C | | | | | | | | | | | | | 1 | | | | |
| Tel-Aviv | C | | | | | | 1 | | | | | | | 1 | 1 | | | |
| Poland | C | 12 | 5 | 12 | 6 | 10 | 9 | | | 35 | 12 | 6 | | | | | | |
| | D | | | 2 | | 3 | 1 | | | 6 | 3 | | | | | | | |
| Portugal: Oporto | C | | | | | | | | | 1 | | | | | | | | 1 |
| Rumania | C | 2 | 2 | 9 | 3 | 5 | | | | | | | | | | | | |
| | D | | | | | 1 | | | | | | | | | | | | |
| Syria: Aleppo | C | | | 2 | | | | | | | | | | | | | | |
| Tunisia | C | | | 1 | | | | 2 | 1 | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Union of South Africa: | | | | | | | | | | | | | | | | | | |
| Cape Province | C | P | | | | P | P | P | P | | | | | P | | | | |
| Natal | C | | | | | | | | P | | | | | P | | | | |
| Orange Free State | C | | | | | P | | | | | | | | | | | | |
| Transvaal— | | | | | | | | | | | | | | | | | | |
| Johannesburg | C | | | | | | | 5 | | | | | | | | | | |

| Place | | September, 1927 | | | October, 1927 | | Place | | September, 1927 | | | October, 1927 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1-10 | 11-20 | 21-30 | 1-10 | 11-20 | | | 1-10 | 11-20 | 21-30 | 1-10 | 11-20 |
| Algeria | C | 5 | 3 | 2 | 7 | 4 | Bulgaria | C | 5 | 1 | 1 | | |
| | D | | | | | 1 | | D | | 1 | 1 | | |
| Algiers | C | 1 | 5 | | 1 | 1 | Morocco | C | 3 | 2 | 2 | 6 | 4 |

| Place | | July | August | September | October | November | Place | | July | August | September | October | November |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Chosen | C | 72 | 17 | | | | Latvia | C | 6 | | | | |
| | D | 8 | | | | | Lithuania | C | 44 | 18 | 7 | | |
| Chemulpo | C | 1 | 2 | | | | | D | 5 | 8 | 1 | | |
| Gensan | C | 2 | | | | | Mexico | D | 12 | | | | |
| Seoul | C | 2 | 3 | | 2 | | Peru: | | | | | | |
| | D | 1 | | | 1 | | Arequipa | D | | 2 | 1 | 2 | |
| Czechoslovakia | C | 6 | | | | | Lima | D | 8 | | | | |
| Greece: Athens | C | 1 | | | | | Yugoslavia | C | 11 | 9 | | 1 | 1 |
| Japan | C | 1 | | | | | | D | 4 | 1 | | | |

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued

### YELLOW FEVER

[C, indicates cases; D, deaths; P, present]

| Place | | Week ended— | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | September, 1927 | | | | October, 1927 | | | | November, 1927 | | | | December, 1927 | | | | |
| | | 3 | 10 | 17 | 24 | 1 | 15 | 22 | 29 | 5 | 12 | 19 | 26 | 3 | 10 | 17 | 24 | 31 |
| Belgian Kongo: Boma and Matadi | C | | | | | | | | | | | | | | | | | 7 |
| Dahomey: Grand Popo | C | | | | | | | | | | | | 1 | | | | | |
| | D | | | | | | | | | | | | 1 | | | | | |
| Liberia: Monrovia | C | | 1 | | | | | | | | | | | | | | | |
| Nigeria | C | | | 2 | | | | | | | | | | | | | | |
| | D | | | 2 | | | | | | | | | | | | | | |
| Senegal | C | | | | | 5 | | 5 | 9 | 16 | 6 | 7 | | | | | | |
| | D | | | | | 5 | | 4 | 8 | 10 | 4 | 6 | | | | | | |
| Dakar | C | | | P | | | | | 3 | 6 | | 5 | 2 | 1 | 4 | | | |
| | D | | | | | | | | 2 | 4 | | 4 | 2 | 1 | 4 | | | |
| Geoul | C | | | | | 1 | | | | | | | | | | | | |
| | D | | | | | 1 | | | | | | | | | | | | |
| Goree, Island of | C | 2 | | | | | | | | | | | | | | | | |
| | D | 2 | | | | | | | | | | | | | | | | |
| Kebemer | C | | | | | | 1 | 1 | | | | | | | | | | |
| | D | | | | | | 1 | 1 | | | | | | | | | | |
| Kelle | C | | | | | | 2 | | 1 | | | | | | | | | |
| | D | | | | | | 1 | | 1 | | | | | | | | | |
| Keur Samba Kane | C | | | | | | | | 1 | 1 | | | | | | | | |
| | D | | | | | | | | | 1 | | | | | | | | |
| Keur Madiop | C | | | | | | | | 1 | | | | | | | | | |
| | D | | | | | | | | 1 | | | | | | | | | |
| Khombole | C | | | | | 1 | | | | | | 1 | | | | | | |
| | D | | | | | 1 | | | | | | 1 | | | | | | |
| Louga | C | | | | | 1 | | | 2 | 1 | 1 | | | | | | | |
| | D | | | | | 1 | | | 2 | 1 | 1 | | | | | | | |
| Mekhe | C | | | | | | | 1 | 1 | 2 | 2 | | | | | | | |
| | D | | | | | | | | 1 | 1 | 1 | | | | | | | |
| M'Dande | C | | | | | | | 1 | | 2 | 1 | | | | | | | |
| | D | | | | | | | 1 | | 1 | | | | | | | | |
| Pout | C | | | | 1 | | | | | | | | | | | | | |
| | D | | | | 1 | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rufisque | C | | | | | | 1 | | | | | | | | | | | | |
| | D | | | | | | 1 | | | | | | | | | | | | |
| St. Louis | C | | | | | 1 | | | | | | | | | | | | | |
| | D | | | | | 1 | | | | | | | | | | | | | |
| Sebikotane | C | | | | | | | 1 | | 2 | 1 | | | | | | | | |
| | D | | | | | | | 1 | | | 1 | | | | | | | | |
| Thies | C | | | 1 | 2 | 1 | | 1 | 1 | 2 | 1 | 1 | | | | | | | |
| | D | | | 1 | 2 | 1 | | 1 | 1 | 2 | 1 | 1 | | | | | | | |
| Tiaroye | C | 1 | | | | | | | | | | | | | | | | | |
| | D | 1 | | | | | | | | | | | | | | | | | |
| Tivaouane | C | | 1 | | | | | | | | | | | | | | | | |
| On vessel, S. S. Desirado, at Leixoes, Portugal | C | | | 1 | | | | | | | | | | | | | | | |
| | D | | | 1 | | | | | | | | | | | | | | | |

| Place | | July | August | September | October |
|---|---|---|---|---|---|
| Gold Coast | C | 15 | 2 | 6 | 1 |
| | D | 4 | 2 | 4 | 1 |