PUBLIC HEALTH REPORTS

VOL. 42 MARCH 11, 1927 NO. 10

STANDARD MILK ORDINANCE RESULTS IN 14 ALABAMA TOWNS[1]

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If one wishes to picture the status of milk sanitation of the combined milk supplies of a group of communities, one method is to give the percentages of the combined milk supplies which comply with each of the items of sanitation with which the milk supplies should be surrounded.

This has been done in the present paper with regard to 14 Alabama towns in which the Standard Milk Ordinance of the United States Public Health Service has been in force long enough to warrant the measurement of results, namely, Albany, Decatur, Eufaula, Florence, Gadsden, Huntsville, Jasper, Mobile, Montgomery, Selma, Sheffield, Tuscumbia, Troy, and Tuscaloosa.

POPULATION

The population of these 14 towns is given in the 1920 census as follows:

TABLE 1.—*Population*

Albany	7, 652	Montgomery	43, 464
Decatur	4, 752	Selma	15, 589
Eufaula	4, 939	Sheffield	6, 682
Florence	10, 529	Tuscumbia	3, 855
Gadsden	14, 737	Troy	5, 696
Huntsville	8, 818	Tuscaloosa	11, 996
Jasper	3, 246		
Mobile	60, 777	Total population	202, 732

The total population figure of 202,732 does not, however, represent the total population served by the milk supplies discussed in this paper. The actual total population served at present probably approaches 300,000 if we take into account the suburban populations and the natural growth since 1920.

[1] Read at the 20th annual meeting of the Southern Medical Association, Atlanta, Ga., Nov. 15-18, 1926.

MILK LEGISLATION

On January 1, 1923, no two of the milk ordinances of these 14 towns were alike, and half of these towns had no milk ordinances of any kind. The Standard Milk Ordinance of the United States Public Health Service was enacted on the dates given below:

TABLE 2.—*Date upon which Standard Milk Ordinance passed*

Albany	June 5, 1925.
Decatur	Jan. 10, 1925.
Eufaula	Nov., 1924.
Florence	Sept. 4, 1923.
Gadsden	June 18, 1923.
Huntsville	Oct. 26, 1923.
Jasper	July 6, 1925.
Mobile	Aug. 21, 1923.
Montgomery	Dec. 18, 1923.
Selma	Mar. 24, 1924.
Sheffield	Apr. 5, 1925.
Tuscumbia	May 12, 1925.
Troy	Aug. 18, 1925.
Tuscaloosa	June 12, 1923.

THE STANDARD MILK ORDINANCE

The Standard Milk Ordinance of the United States Public Health Service has been described in Reprint No. 971 from the PUBLIC HEALTH REPORTS for November 7, 1924, and in the PUBLIC HEALTH REPORTS for July 30, 1926. On May 25, 1926, the Standard Milk Ordinance, slightly modified, was adopted as standard for the United States by the Conference of State and Territorial Health Officers at Washington, D. C. The ordinance has now been enacted by over 100 American communities.

The ordinance has been so thoroughly described in the publications mentioned above that no further description will be given in this paper other than to state that the ordinance grades both raw and Pasteurized milk supplies on the basis of compliance or noncompliance with certain definite items of sanitation listed in the ordinance, and requires that bottle caps must show the grade thus awarded. Milk supplies which comply with all of the items of sanitation listed are given a grade "A" rating. Violations are punished by lower grade ratings, the grade given depending upon the nature of the violations. Health officers are advised to recommend that grade "A" Pasteurized milk is the safest grade of milk.

IMPROVEMENT IN RETAIL RAW MILK

Figure 1 is a graphic presentation of the change in the percentages of the total volume of retail raw milk in these 14 towns which comply with the several items of sanitation and quality prescribed for grade

"A" raw milk. The preenforcement percentages have been compiled from data collected in each community just prior to or immedi-

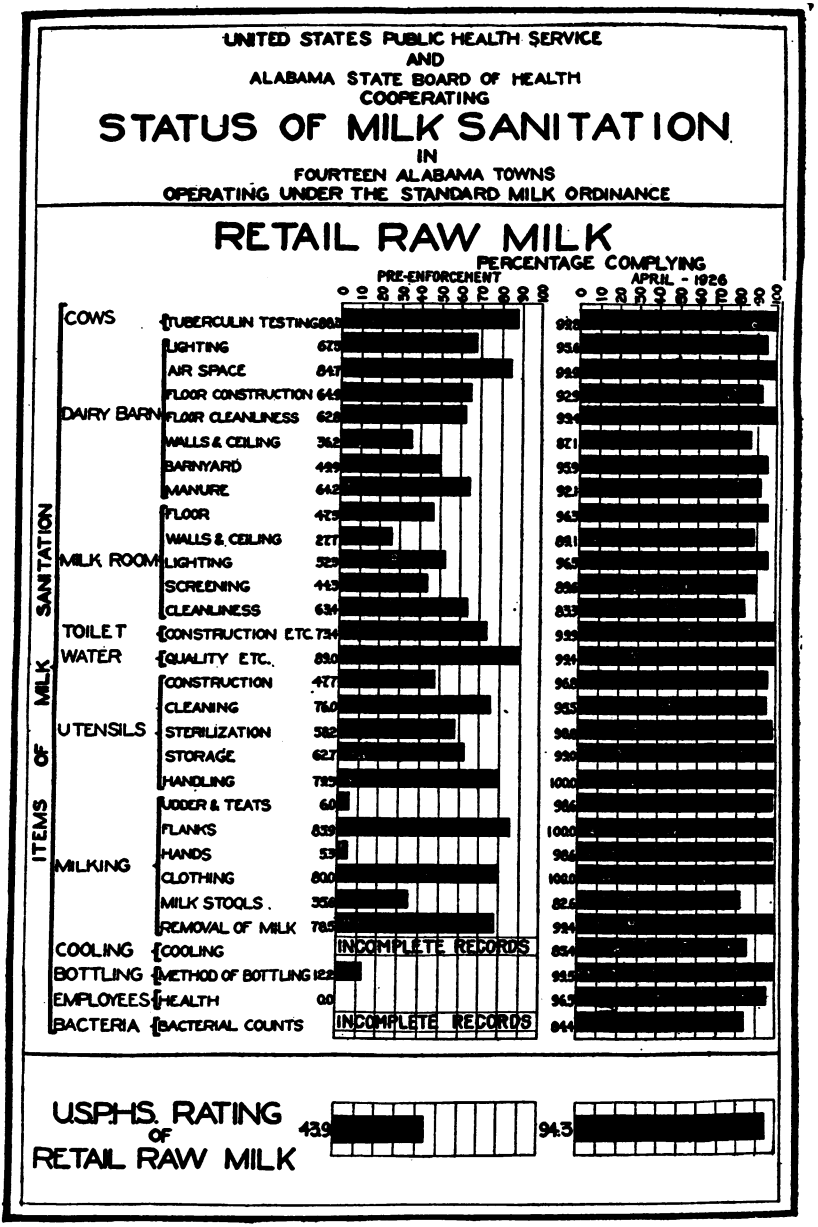

FIG. 1

ately following the passage of the Standard Ordinance. The April, 1926, percentages are compiled from data collected in an inspection survey of Alabama community milk supplies made by Mr. P. E.

LeFevre, Associate Milk Specialist, Office of Milk Investigations, United States Public Health Service. All data upon which this and the other figures and tables appearing in this paper are based have been checked by the Office of Milk Investigations.

It will be observed in general that the ideal of 100 per cent compliance was somewhat less than half satisfied before the ordinance went into effect and is over 90 per cent satisfied for April, 1926.

It is desirable to be able to give a single percentage figure to represent the retail raw milk sanitation status as a whole. This has been done in the form of the United States Public Health Service Retail Raw Milk Rating. This rating is similar to the Production Rating described in the Public Health Reports for July 30, 1926, except that it is made to apply to retail raw milk only. A 100 per cent retail raw milk rating would mean that all retail raw milk supplies had entirely satisfied all of the requirements for grade "A" raw milk as described in the Standard Ordinance.

The United States Public Health Service retail raw milk ratings for the 14 towns both prior to the enactment of the Standard Ordinanace and for April, 1926, are shown in Table 3. It will be noted that the improvement in all of the communities has been very marked, all except one of the communities now having retail raw milk ratings of over 80 per cent, and all except three of them having retail raw milk ratings of over 90 per cent.

The weighted retail raw milk rating for the 14 communities as a whole has improved from 43.9 per cent to 94.3 per cent, which means a percentage improvement of 115 per cent.

TABLE 3.—*United States Public Health Service rating for retail raw milk*

Community	Preenforcement rating	April, 1926, rating	Per cent improvement
Albany-Decatur	16.2	68.9	325
Eufaula	34.2	82.8	142
Florence	40.9	99.0	142
Gadsden	43.5	94.9	118
Huntsville	39.4	95.6	143
Jasper	20.2	92.4	357
Mobile	45.0	96.2	114
Montgomery	51.5	92.9	80
Selma	48.5	95.9	98
Sheffield-Tuscumbia	35.8	92.6	159
Troy	59.8	89.3	49
Tuscaloosa	44.0	99.6	126
Weighted average ratings	43.9	94.3	115

IMPROVEMENT IN RAW MILK DELIVERED TO PASTEURIZATION PLANTS

Figure 2 shows the improvement in raw milk delivered to Pasteurization plants.

The improvement in this fraction of the milk supplies of the 14 towns is almost as marked as in the case of the retail raw milk sup-

plies. Several of the items are still less than 90 per cent satisfied; but this is in most cases due to the fact that compliance with the

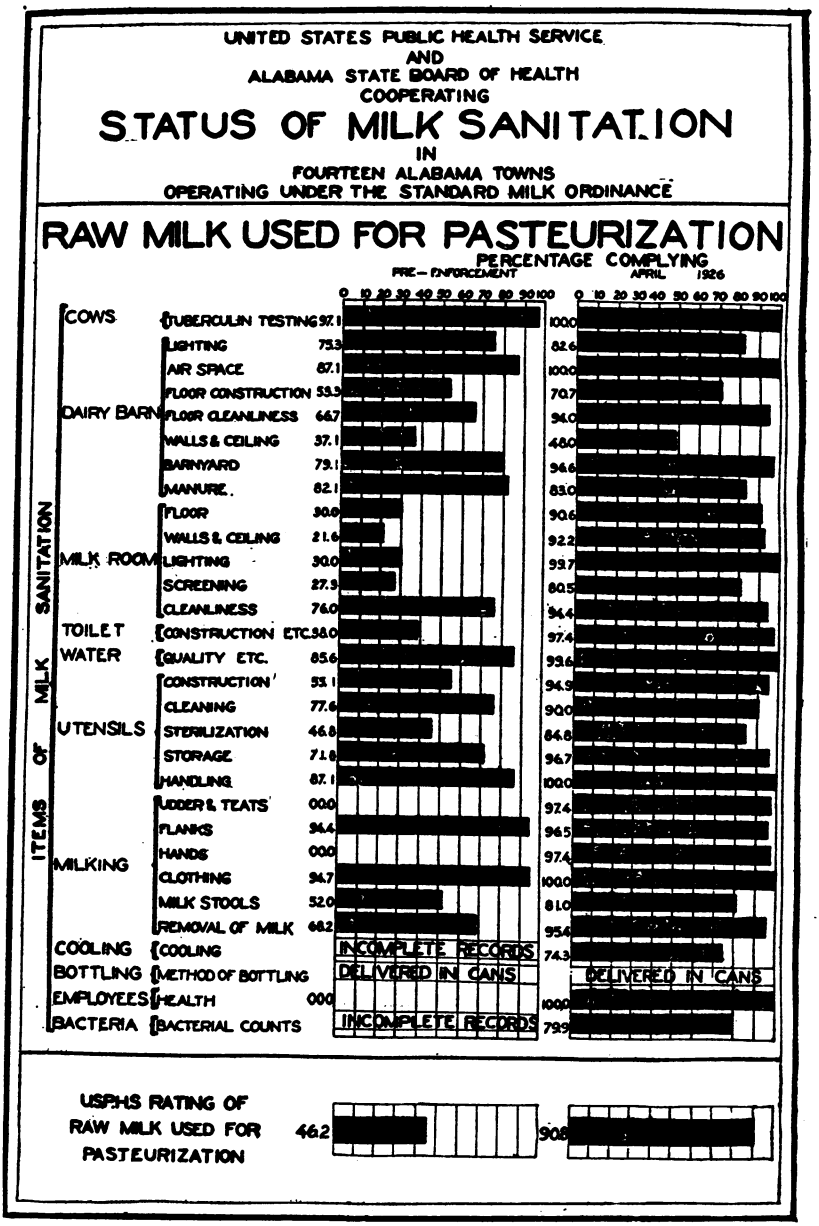

FIG. 2.

item in question is not required in the production of grade "A" Pasteurized milk. For example, barn floors are not required to be concreted though they are required to be clean. This explains why

only 82 per cent of the Pasteurization-plant milk complies with the barn floor construction requirement of grade "A" raw milk. Again,

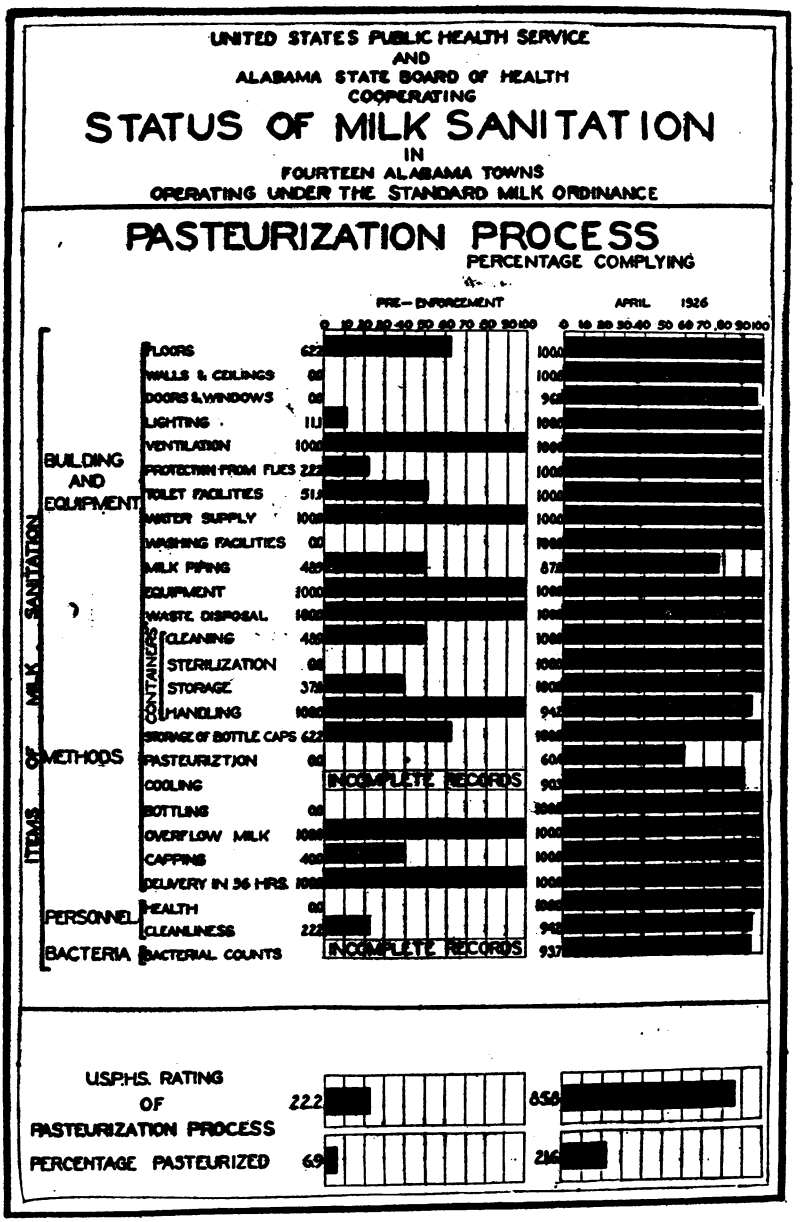

FIG. 3.

walls and ceilings of barns are not required to be whitewashed or painted, as in the case of retail raw milk supplies, although they must be clean. This explains the 48 per cent rating on this item.

Furthermore, hot-water sterilization is accepted in place of steam sterilization, which is responsible for a rating of only 84.8 per cent on this item. For the same reason the cooling rating and the bacterial-count rating for raw milk to plants are not quite as high as in the case of retail raw milk.

There is evidently further room for improvement in the case of screening of milk rooms and in the case of cleanliness of milk stools, these two items receiving only 80.5 per cent and 81 per cent ratings, respectively. However, even here the improvement is very marked, the preenforcement ratings for these items having been only 27.3 per cent and 52 per cent, respectively.

The United States Public Health Service ratings for raw milk to Pasteurization plants have been computed for these 14 towns and are included in Table 4.

The weighted average rating for the three towns having Pasteurized milk before the ordinance was passed was 46.2 as compared with the weighted average rating of 90.8 per cent for the nine towns having Pasteurized milk in the spring of 1926. This represents a 97 per cent improvement in the milk sanitation status of raw milk to plants.

IMPROVEMENT IN PASTEURIZATION PROCESS

Figure 3 shows the improvement in the Pasteurization process in those of the 14 cities selling Pasteurized milk. As stated before, the number of cities selling Pasteurized milk has increased from three to nine. The number of Pasteurization plants in these cities has increased from five to nine.

As will be seen from Figure 3, the compliance with the Pasteurization items of sanitation of the Standard Ordinance was very poor when the Standard Ordinance program was first introduced. The average impression given by the diagram of Figure 3 is that of considerably less than 50 per cent compliance before the ordinance was adopted, as compared with almost complete compliance for the spring of 1926.

If the information contained in Figure 3 be summarized in the form of the United States Public Health Service Pasteurization process rating we find that the weighted rating before the ordinance went into effect was 22.2 per cent, while the rating for the spring of 1926 is 85.8 per cent, representing a percentage improvement of 286 per cent.

The ratings for the Pasteurization process in each of the individual towns selling Pasteurized milk are given in Table 5.

TABLE. 4.—*United States Public Health Service rating for raw milk to Pasteurization plants*

Community	Preenforcement rating	April, 1926, rating	Percentage improvement
Albany-Decatur		90.1	
Eufaula			
Florence		98.5	
Gadsden			
Huntsville	58.6	94.5	61
Jasper		85.2	
Mobile			
Montgomery	50.3	85.3	70
Selma			
Sheffield-Tuscumbia		94.9	
Troy			
Tuscaloosa	26	94	262
Weighted average ratings	46.2	90.8	97

One of the principal weaknesses still existent is that several of the plants are still operating their old Pasteurization machinery, which is not completely equipped with flush-type valves. When the several plants still operating with such machinery are brought up to date, which the Alabama State Board of Health intends to bring about during the present year, the Pasteurization process rating for the 14 communities as a whole will be well over 90 per cent.

PERCENTAGE OF MILK PASTEURIZED

Table 6 shows the increase in the percentage of milk Pasteurized in each of the 14 towns.

It will be noted that only three of the communities were selling any considerable volume of Pasteurized milk before the ordinance went into effect, whereas in April, 1926, in nine communities a considerable percentage of the total milk supply, varying from 24.3 per cent for Montgomery to 88.5 per cent for Florence, was being Pasteurized.

THE UNITED STATES PUBLIC HEALTH SERVICE GENERAL MILK-SUPPLY RATING

The United States Public Health Service general milk-supply rating pictures the sanitation status of a milk supply as a whole, combining the effect of the retail raw milk rating, the rating of raw milk to Pasteurization plants, the Pasteurization process rating, and the percentage of milk Pasteurized. A 100 per cent general rating means that the total milk supply has been both properly produced and properly Pasteurized. The general milk sanitation ratings have been computed for each of the 14 Alabama Standard Ordinance communities, and are given in Table 7.

TABLE 5.—*United States Public Health Service rating for Pasteurization process*

Community	Pre-enforcement rating	April, 1926, rating	Percentage improvement
Albany-Decatur		99.2	
Eufaula			
Florence		99.3	
Gadsden			
Huntsville	20.0	99.0	395
Jasper		63.5	
Mobile			
Montgomery	22.2	66.8	201
Selma			
Sheffield-Tuscumbia		90.9	
Troy			
Tuscaloosa	24.0	100.0	317
Weighted average ratings	22.2	85.8	286

TABLE 6.—*United States Public Health Service percentage of milk Pasteurized*

Community	Preenforcement	April, 1926	Community	Preenforcement	April, 1926
Albany-Decatur	0	73.0	Montgomery	17.6	24.3
Eufaula	0	0	Selma	0	0
Florence	0	88.5	Sheffield-Tuscumbia	0	37.3
Gadsden	0	0	Troy	0	0
Huntsville	19.2	50.4	Tuscaloosa	19.8	53.3
Jasper	0	47.7			
Mobile	0	0	Group	6.9	21.6

It will be observed that the percentage increase in general ratings varies from 49 per cent for the city of Troy to 868 per cent for the twin cities Albany-Decatur. The weighted general ratings for the group as a whole increased from 23.2 to 56.1 per cent, an average improvement of 142 per cent.

It will be observed that the preenforcement ratings given in Table 7 are, on the average, about 5 per cent lower than the preenforcement ratings given in Table 4 of the July 30, 1926, issue of the PUBLIC HEALTH REPORTS. This is the result of a new policy adopted of disbarring all "estimates" of bacterial counts and temperatures, and accepting only actual counts and temperatures upon a minimum number of samples. In the tables given in the July 30 issue of the PUBLIC HEALTH REPORTS an attempt was made to estimate where figures were not complete, but this is believed to be dangerous practice and is no longer followed.

CONSUMPTION OF MARKET MILK

Table 8 shows the increase in the volume of market milk sales in the 14 communities.

It is difficult to believe that the sales of market milk have increased 90 per cent on the average in these 14 Alabama towns, particularly as the increase shown by the December, 1925, survey was only 49.2

per cent. However, it should be noted that the December, 1925, figures were for a period of extreme milk shortage, and that had it not been for this shortage the increase in milk consumption shown at that time would have been much greater than 49 per cent.

TABLE 7.—*United States Public Health Service general milk supply rating*

Community	Preenforcement rating	April, 1926	Percentage improvement
Albany-Decatur	8.1	78.4	868
Eufaula	17.1	41.4	142
Florence	20.5	93.1	354
Gadsden	21.8	47.5	118
Huntsville	24.0	72.4	201
Jasper	10.1	59.6	490
Mobile	22.5	48.1	113
Montgomery	27.5	53.6	95
Selma	24.3	48.0	97
Sheffield	17.9	63.6	255
Troy	29.9	44.7	49
Tuscaloosa	22.6	75.0	232
Group weighted average	23.2	56.1	142

TABLE 8.—*Increase in market milk sales*

Community	Preenforcement (gallons per day)	April, 1926 (gallons per day)	Percentage increase
Albany-Decatur	177	315	78
Eufaula	91	112	23
Florence	277	347	25
Gadsden	362	389	8
Huntsville	365	665	82
Jasper	90	178	98
Mobile	[1] 2,000	3,797	90
Montgomery	1,538	4,030	154
Selma	605	625	3
Sheffield-Tuscumbia	298	415	39
Troy	175	414	137
Tuscaloosa	505	1,126	123
Total	6,533	12,413	90

[1] This volume is estimated.

The Alabama State Board of Health Bureau of Inspection has for more than a year collected and compiled production and sales data every time a dairy inspection is made. This information is collected directly from the dairymen, and is felt to be as accurate an approximation as it is possible to obtain.

MANNER OF ADMINISTRATION OF THE ORDINANCE

Each of the 14 communities discussed in this paper is located in a county which is served by a full-time county health unit. Each of them employs a sanitary inspector who, in most cases, combines milk inspection with other duties. The local sanitary inspector takes milk

samples, makes dairy inspections, and performs the other enforcement details of the Standard Milk Ordinance.

The Bureau of Inspection of the State Board of Health employs two district State milk inspectors, whose duties are to coordinate the milk sanitation activities of the various local inspectors so that the interpretation of the ordinance by all local inspectors will be uniform. All milk samples and disease-carrier specimens are sent to a branch of the State laboratories, of which there are seven, so located that samples shipped in insulated cases may be kept under 50° F. through the period of transit.

Grades are announced every three months in each of the Standard Ordinance communities, and in each case the State inspector cooperates with the local inspector in awarding grades, so as to insure that grades will be awarded uniformly throughout the State.

Full duplicate records are kept in the State Bureau of Inspection, which is thus kept constantly informed of the status of milk sanitation throughout the State.

CONCLUSION

In conclusion, it is believed to be a conservative statement that the Standard Ordinance has materially helped to bring about the following observed results in 14 Alabama towns:

(1) A marked improvement in the quality of the retail raw milk supplies, the retail raw milk rating increasing from 43.9 per cent to 94.3 per cent, an improvement of 115 per cent.

(2) A marked improvement in the quality of the raw milk delivered to Pasteurization plants, the raw milk to plants rating increasing from 46.2 per cent to 90.8 per cent, an improvement of 97 per cent.

(3) A marked improvement in the care with which the Pasteurization process is applied, the Pasteurization process rating increasing from 22.2 per cent to 85.8 per cent, an increase of 286 per cent.

(4) An increase in the percentage of milk Pasteurized, the percentage for the group of towns as a whole increasing from 6.9 to 21.6 per cent, and the number of towns provided with Pasteurized milk increasing from 3 to 9, 5 of these now having over 50 per cent of the milk Pasteurized.

(5) A marked increase in the general milk sanitation rating, which summarizes the combined effect of the three specific ratings and of the percentage of milk Pasteurized. The general rating of the group of 14 communities has increased from 23.2 to 56.1 per cent, an improvement of 142 per cent.

(6) A marked increase in the consumption of market milk, the combined consumption having increased from 6,533 gallons per day to 12,413 gallons per day, representing an increase of 90 per cent.

THE ORTHOTOLIDINE REAGENT FOR FREE CHLORINE IN WATER

By Emery J. Theriault, *Chemist, United States Public Health Service*

Orthotolidine was first proposed by Phelps (1909) as a qualitative test for the detection of minute amounts of free chlorine and hypochlorites "in connection with a court case in which the presence or absence of residual available chlorine was a matter in dispute" (*cf.* Phelps and Shoub, 1917, p. 769).

According to Kinnicutt (1909) the reagent employed by Phelps consisted of a solution of orthotolidine in dilute sulphuric acid.

Seith (1913), without success, used a solution containing 0.1 per cent of orthotolidine in 10 per cent acetic acid. "Instead of a yellow color in the more dilute samples which had been treated with hypochlorite, a green color appeared which gradually deepened and changed to yellow and finally to deep red as the concentration of free chlorine increased." In one instance a light blue color was obtained. "No explanation for this is attempted."

Ellms and Hauser (1913), using the acetic acid solution of Seith (1913), concluded that "the variations in the colors formed appeared to be intimately associated with the original degree of (titratable) alkalinity of the water * * *. The higher the original alkalinity of the water containing free chlorine, the bluer is the shade of color produced. The more nearly neutral is the water being examined, the yellower the tint." On the other hand, Ellms and Hauser also found that, even with small amounts of free chlorine, a deep yellow color is produced when the orthotolidine reagent is prepared with hydrochloric acid. They accordingly proposed the use of a reagent containing "one-tenth per cent *o*–tolidine in a 10 per cent solution of hydrochloric acid. This reagent does not deteriorate on standing." The more recent studies of Clark, Cohen, and Gibbs (1926, p. 41) have furnished a very satisfactory explanation for the color transformations of orthotolidine. "A return to the blue color test would be useful in the examination of colored waters and could now be logically designed, but it is improbable that the specifications would be simple enough for field use."

Ellms and Hauser (1914) experimented with a sulphuric acid solution of orthotolidine. "It is apparent from these tests that a sulphuric acid solution of orthotolidine is not as much affected by ferric salts and nitrites as is the hydrochloric acid solution. However, a sulphuric acid solution of orthotolidine is not as easily prepared as one of hydrochloric acid and * * * does not seem to be able to indicate quite as small amounts of free chlorine as does the hydrochloric acid solution."

Forsberg (1926) concludes that "dilute solutions of ferrous and manganous salts, up to 10 p. p. m., do not react with ortho tolidine." Also, "for all practical purposes, ferric salts do not interfere with the accuracy of the ortho tolidine test." However, "water containing manganese as manganic hydroxides gives the same reaction with ortho tolidine as chlorinated water, irrespective of whether a water, alcohol, sulphuric or hydrochloric acid solution of the reagent is used." Interference by manganese compounds has also been reported by Olzewiski (1923), Hale (1926), Montfort (1926), and others. Montfort (1926) also considers that when applied to the determination of free chlorine in water treated with hypochlorites, "the ortho tolidine test becomes one for chlorates rather than for chlorine."

According to "Standard Methods for the Examination of Water and Sewage" (1917, 3d edition), the reagent in question was to be prepared by dissolving one gram of orthotolidine, purified by recrystallization from alcohol, in 1 liter of 10 per cent hydrochloric acid. By weight, therefore, there should be added about $\frac{100}{(1.18)\ (0.3539)} =$ 240 c. c. of 35 per cent HCl per liter. These directions were repeated in "Standard Methods" for 1920. In more recent editions it is specified that the reagent should be prepared by dissolving 1 gram of orthotolidine, melting point 129° C., in 1 liter of dilute hydrochloric acid ("100 c. c. concentrated acid to 1 liter.") Orthotolidine of the requisite purity may be obtained from a designated manufacturer or else it may be prepared "by extraction from water from the technical product in a Soxhlet apparatus" (5th edition, 1923, first reprinting, p. 44; see also 6th edition, 1925, p. 44).

Roake (1925) found it difficult to prepare the orthotolidine reagent by the usual procedure of dissolving one gram of the recrystallized salt in one liter of 10 per cent hydrochloric acid. The orthotolidine does not dissolve completely, at least in a reasonable time, and, on filtering off the undissolved part, a weaker solution is obtained than called for. In certain cases this might lead to appreciable error. Roake gives the following directions for preparing the reagent:

"To 1 gram of *o*-tolidine add the calculated amount of hydrochloric acid ("about 236 c. c."), stir well, dilute to about 500 c. c. and filter. The residue left on the filter will be found to be soluble in distilled water. Make up to 1 liter."

The following procedure avoids the filtration recommended by Roake and gives very satisfactory results.

PREPARATION OF ORTHOTOLIDINE REAGENT

1. Weigh out 1 gram of orthotolidine, transfer to a 6-inch mortar, and add 5 c. c. of 1:5 hydrochloric acid (previously prepared by adding 100 c. c. of concentrated hydrochloric acid, sp. gr. 1.18–1.19, to 400 c. c. of distilled water).

2. Grind to a thin paste and add 150 to 200 c. c. of distilled water. The orthotolidine goes into solution immediately.

3. Transfer to a 1,000 c. c. graduate and make up to 505 c. c. with distilled water.

4. Make up to the 1,000 c. c. mark by adding the balance (495 c. c.) of the 1:5 hydrochloric acid.

These directions are based on the fact that, while orthotolidine itself is quite insoluble in distilled water, the compound obtained by treating it with a small amount of hydrochloric acid is relatively soluble. (One gram of orthotolidine treated with 5 c. c. of 1:5 HCl will dissolve in about 60 c. c. of distilled water). As the hydrochloride which is presumably formed is relatively insoluble in hydrochloric acid, the solution is first diluted to 505 c. c. before adding the balance of the hydrochloric acid. The reagent prepared in this manner will contain 1 gram of orthotolidine and 100 c. c. of concentrated hydrochloric acid, specific gravity 1.18–1.19, per liter, in exact conformity with Standard Methods. The directions may also be used for the preparation of a reagent containing 10 per cent of HCl *by weight* corresponding roughly to 240 c. c. of concentrated hydrochloric acid, specific gravity 1.18–1.19, per liter. Also, using only 100 c. c. of concentrated acid, a reagent may easily be prepared which contains 2 grams of orthotolidine per liter.

The desired yellowish colorations will be obtained when 1 c. c. of the usual reagent is added to 100 c. c. of a chlorine-containing sample, provided (*a*) that its volumetric alkalinity does not exceed, say, 400 or 500 parts per million, and (*b*) that its chlorine content is less than 4 or 5 parts per million (*cf.* Ellms and Hauser, 1912; also Muer and Hale, 1925). When the volumetric alkalinity of the sample is too high, it is a matter of common knowledge that bluish-green colorations are obtained. On the other hand, in solutions which are distinctly acid, orange-red colorations may result if relatively large amounts of free chlorine are present. These reddish hues tend to become lighter in color as the amount of chlorine is increased, and, if a sufficient excess of free chlorine is added, yellowish colorations may eventually be again obtained. At higher pH values, almost any desired shade of color may be obtained by varying the proportion of reagent added to the amount of free chlorine present. In this connection it is interesting to note that a field test for hypochlorite dosage which depends on the formation of an orange-red color with ortho-

tolidine has recently been adopted by the Medical Department of the United States Army (Anon., 1925).

Muer and Hale (1925) recommend that 5 c. c. of reagent (1 gram of orthotolidine in 1,000 c. c. of water containing 100 c. c. of concentrated HCl) be used when the sample under examination contains from 1 to 10 parts per million of free chlorine. Five cubic centimeters of orthotolidine reagent added to 100 c. c. of a chlorinated sample should also give a suitable acid solution even with exceedingly hard waters. If desired, a reagent of somewhat greater strength in respect both to orthotolidine and to acid content could be prepared by the procedure described above. For general use, such a reagent might possess certain advantages over the more dilute solution.

Finally, it may be remarked that, using the method of Palkin (1923), notable differences were found to exist in the actual orthotolidine content of four widely advertised brands of this chemical. The color of the reagents prepared from these four samples of orthotolidine also differed appreciably. On the score of cleanliness, actual purity, and clarity of the resulting reagent, the brand recommended in Standard Methods (1925, p. 44) is undoubtedly to be preferred. However, as a practical matter, it is to be noted that the sensitiveness to free chlorine of the reagents prepared with these four different brands of orthotolidine was very much the same regardless of the color of the reagent or the purity of the chemical. Furthermore, excluding gross impurities, all four brands were found to dissolve completely and with equal facility in a solution containing 10 per cent of HCl by weight.

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PUBLIC HEALTH ENGINEERING ABSTRACTS

Investigations of Mosquito Problems in New Jersey. Willem Rudolfs. Proceedings of the Thirteenth Annual Meeting of New Jersey Mosquito Extermination Association, February, 1926, pp. 33–51. (Abstract by J. A. LePrince.)

The causes of disappearance of oil films from water and the effect of material on oil are discussed. Oil remained present on distilled water for 20 days and disappeared from water containing hydrogen sulfide gas in three hours. The reaction of mosquitoes to mosquito repellents was studied. Pyrethrum extract and other substances were tried. Protection appears to be based on the volatility of the oils or active substances in the materials. When mixed with vaseline, volatilization is retarded and the user is protected longer. The best repellents used alone lasted from one-half to one and a half hours, but when used in jelly or powder form they lasted from two to three hours. The experiments were carried out with mosquitoes alighting at the rate of 5 to 20 per minute.

In this paper the food supply of mosquito larvae is discussed in detail and this food supply, which appears to be dependent on the chemical composition of the water, is the main factor governing breeding.

Anopheles Mosquitoes and Malaria at Eastern Army Stations. Maj. William Borden. *Military Surgeon*, vol. 59, No. 4, October, 1926, pp. 452–469. (Abstract by L. D. Fricks.)

A comparison of the literature bearing upon the relative importance of the three common species of *Anopheles* in transmitting malaria with the reports of malaria incidence and mosquito prevalence at 15

United States Army stations along the Atlantic coast. The literature seems to show that *A. quadrimaculatus* is the principal vector of malaria in the United States. A tabulation was made by months, of the various species of *Anopheles* mosquitoes sent to the Army Medical Museum for identification from these stations during a period of four years, 1921 to 1924. A comparison of these tables with the reports of malaria cases sent in from the same stations at the same time seems to corroborate the literature. That is, most of the malaria was reported during May, June, July, August, September, and October, while *A. quadrimaculatus* was most abundant during June, July, August, September, and October.

Mosquito Work Throughout the World. L. O. Howard. *American Journal of Public Health*, vol. 16, No. 12, December, 1926, pp. 1210–1214. (Abstract by J. A. LePrince.)

Up to 35 years ago no concerted intelligent effort had been undertaken in any part of the world to reduce mosquito population. At that time the detailed life history of only one species of mosquito was known. To-day, mosquito-control work is going on all over the world. The greatest mass of this work is being done against disease-conveying species of mosquitoes. New information relative to the behavior of the less common *Anopheles* is being recorded from time to time. Great variations in habits of life occur in the nondisease-bearing mosquitoes. Some forms are found at considerable altitudes in the far North, and the woods mosquitoes of the northern states of Canada breed in pools of melting snow water in the spring.

Pestiferous mosquitoes, when in great abundance, have significance from the health point of view and have considerable effect on property values and general economic prosperity. Since the State of New Jersey has been controlling the salt-marsh mosquito pest of her seacoast, the resorts are flourishing as never before, and the State is far richer in the taxable value of her coastal land. This work is being done largely through engineering methods and should be classified as sanitary engineering.

In 1925 a great flight of salt-marsh mosquitoes in three States on the Gulf coast temporarily interrupted a justifiable real estate advance and discredited much excellent malaria-control work being conducted by local health officers. Heavy mosquito prevalence does endanger public health. One-half of the salt-marsh area of the United States is within the State of Louisiana where investigations relative to mosquito-control measures are now being conducted by the United States Public Health Service.

In protecting northern summer resorts we must determine which species of mosquitoes are involved. Where the problem is to abolish the temporary breeding places of the early spring mosquito crops, the removal of permanent standing water will not solve the problem.

The mosquito-control measures conducted during the World War gave considerable impetus to mosquito-control work, and some of the papers and books written on this subject are referred to in this article.

Control of all species of pestiferous mosquitoes is sanitary work and should be promoted by sanitary authorities. Engineers, sanitarians, and all others engaged in mosquito-control measures can get more satisfactory and more economical results by cooperating closely with entomologists.

In most localities mosquito annoyance and mosquito-borne disease are unnecessary and can be controlled. Experimental work of potential practical value is being done which may lead to easier and more efficient control measures.

Substantial Accomplishment in New Jersey Mosquito Control. T. J. Headlee. Proceedings of Thirteenth Annual Meeting New Jersey Mosquito Extermination Association, February, 1926, pp. 20–26. (Abstract by J. A. LePrince.)

This paper indicates what has been accomplished—the reduction of mosquito prevalence obtained in large sections of a number of counties and the resulting financial benefits. Under New Jersey coastal conditions where salt-marsh mosquitoes are naturally absent there has occurred an average increase in taxable values during the last 10 years of 55 per cent more than where they are still present or only very recently reduced; and where salt-marsh mosquitoes have been largely eliminated during the last 10 years, there has occurred an average annual increase of 75 per cent more than where they are still present or very recently reduced.

Preventable Diseases and Their Effect on the Labor Supply. W. Machlaclan McDonald. Collected Papers on Tropical Diseases, Government Printing Office, Leewards Islands, Antigua, B. W. I. (A paper read at a meeting of the Agricultural and Commercial Society, Antigua, May, 1920.) (Abstract by J. A. LePrince.)

The main points presented are that control of malaria is desirable and profitable, that control is feasible, and that the loss of efficiency caused by malaria is greater than that caused by any other two or three diseases combined. Of 50 cases examined, more than half showed the parasites of malignant tertian malaria, and a condition of chronic anemia which, even in fever-free periods, reduces working capacity to about one-half normal. The writer believes that the reduction of *Anopheles* to within reasonable limits will effectively reduce malaria, that antimalaria work can be advantageously begun on a small scale, and that while the results obtained will be in proportion to the work done, successive reductions in *Anopheles* breeding places will bring reductions in fresh cases of malaria. Malaria has a very serious effect on the quantity and quality of labor supply. A bad type of malaria is now gaining ground in Antigua; and if infection is

allowed to go on unchecked, it is likely to become a serious problem. The fact is stressed that even a small amount of work will be of some value in reducing the number of fresh infections, and the important thing is to get control work started.

Mosquito Work During the Year 1925. L. O. Howard. Proceedings of Thirteenth Annual Meeting New Jersey Mosquito Extermination Association, February, 1926, pp. 6–19. (Abstract by J. A. LePrince.)

This paper outlines progress, discoveries, and advances in matters relating to mosquito control in a number of countries. During the year 1925, 38 new species of mosquitoes were described throughout the world, and the discovery of many new forms may be expected. Experimental work so far conducted with *Chara foetida* does not appear to show that it has any effect on *Anopheles* larvae. Top minnows, *Boecila spenops*, were taken from Panama to Samoa for use in mosquito control.

Soluble cresol is being used as a larvicide in England. A campaign in Madagascar, principally against malaria, resulted in a reduction of total mortality of 35 per cent. In Formosa an experiment involving 15,000 individual mosquitoes indicates that *Anopheles* had color preferences for yellow, white, deep red, and green, as compared to blue, purple, red, and black, while, on the other hand, with *Culex* and *Aëdes*, the preference was reversed. In the United States the yellow-fever mosquito is capable of carrying dengue, while *Culex fatigans* is probably not a vector.

Influence on Malaria of Helminthic Infestation. P. P. Moufell. Russian Jour. Trop. Med. 1926, No. 5, French summary, p. 78. Abstract by C. L. in *Tropical Diseases Bulletin*, vol. 23, No. 11, November, 1926, p. 818.

"Examination of 1,060 malarial cases by Fulleborn's method (presumably his flotation one) showed ova of intestinal worms in 35 per cent and eosinophilia in 35 per cent. The records of helminthic invasion (or, more accurately, the detection of the presence of eggs) in chronic malarial cases did not authorize the conclusion that helminthiasis predisposes to chronic malaria, but disinfestation might be followed by very favorable malarial results."

Studies of an Epidemic of Malaria at the Gantt Impounded Area, Covington County, Ala. W. G. Smillie. *The American Journal of Hygiene*, vol. 7, No. 1, January, 1927, pp. 40–72. (Abstract by J. A. LePrince.)

This article is well illustrated by photographs, maps, and charts, and covers a period of a year previous to the impounding of water and two years subsequently thereto. The lake was narrow and about 9 miles long, thus largely reducing the usual beneficial effect of wave action. Previous to the impounding of water there was very little malaria in the area near the lake, though a few cases were seen at

the construction camp, and after the impounding there were 238 cases in one season in a population of 742. Nearly all of the cases were within a mile of the edge of the lake, and the density of malaria was in direct proportion to the density of *Anopheles quadrimaculatus*.

The brush and trees in the lake bed were slashed, left where they had fallen, and later flooded. Suitable adult *Anopheles* catching stations were selected, and *Anopheles* counts made periodically. Large numbers of *Anopheles quadrimaculatus* were found in the months of August and September, and, in general, these adults were numerous near the uncleared sections of the lake and relatively scarce near that portion of the lake which was properly cleared of débris and flotage. Lowering of the lake level sufficiently to strand flotage and to remove water from the slashed-over area terminated *Anopheles* production and largely reduced malaria.

The writer is of the opinion that in the United States during the past 100 years the gradual elimination of rural mill ponds has been an important factor in the malaria reduction that has taken place over a great part of the country.

In the area under observation the flight range and other habits of *Anopheles quadrimaculatus* were found to be similar to those determined by previous observers in North Carolina and South Carolina.

Malaria in the Kingdom of the Serbs, Croats, and Slovenes. Dr. A. Stampar. League of Nations Health Organization, C. H. 326, pp. 26–36. (Abstract by L. D. Fricks.)

A general discussion of the malaria problem of Yugoslavia and report on control program adopted since the World War. Exact figures are not given, but it is stated that more than a million of the population are suffering from malaria. Macedonia shows the heaviest infection, Dalmatia next, and the valleys of the Save and Danube are the least infected, but still present a malaria problem.

A definite antimalaria program was adopted in 1923 and has been continued since. Antimalaria stations were established in the three malarious regions of the Kingdom and intensive antimalaria campaigns were conducted from these stations. The most important steps were taken—The collection of malaria data, dispensing quinine, educational measures, minor drainage, and larvae destruction.

Water Softening Problems and Their Remedies.—Frank S. Taylor, chemist, water softening and purification works, Greenville, Ohio. *Water Works Engineering*, vol. 79, No. 24, December 15, 1926, pp. 1579–1580 and 1607–1608. (Abstract by H. V. Pedersen.)

In this article the author describes the new water-softening plant recently constructed at Greenville, Ohio. The water is secured from two sources, namely, two wells and the Greenville Creek. The well water is pumped by air lift to a receiving well, which is also connected with a gravity flow from the creek. The plant is supplied

with a Dorr clarifier, a mixing chamber, four dry-feed machines to feed hydrated lime, soda ash, and alum, a sedimentation basin, four ¾-million gallon capacity filters, carbonation equipment, and the clear well.

When the plant was first placed in operation the mixing tanks gave trouble owing to the slipping of the drive belt. A positive drive was installed to overcome the difficulty. Various troubles were also experienced with the new drive-feed machines and rate of flow gauges and controller valves, but were all overcome by changing the method of operation and by making some mechanical change. Considerable trouble was experienced with the carbonation equipment. The scrubber drain would clog with fine coke particles. This trouble was overcome by causing the drain pipes to empty into a bucket of water, thereby forming a water seal. Considerable trouble has been experienced with the pitting of valve seats due to the sulphur content in the coke.

In spite of the various difficulties experienced in getting the new plant operating smoothly, the author states that good results have been obtained. The treated water is clear and sparkling and has been reduced from a total hardness of 455 p. p. m. to 125 p. p. m. The people of the city are very well satisfied with the results of the new plant, as indicated by a lady calling the author and telling him that her goldfish, which she prized very highly, were doing very well.

Water Softening as an Adjunct to Purification. Charles P. Hoover, chemist in charge, water purification works, Columbus, Ohio. From a paper presented at the Ninth Texas Water Works Short School, Dallas, Tex., January 24–29, 1927. (Abstract by V. M. Ehlers.)

Superchlorination and dechlorination.—One of the most interesting developments at the present time is the use of superchlorination and dechlorination at Toronto for securing elimination of tastes and odors in connection with sterilization.

There has recently come to attention an interesting experiment at Greenville, Tenn., where ammonia is being fed in doses of about 0.35 p. p. m. to the inlet of the mixing chamber of a lime-softening plant in order to eliminate odors previously noticed in the treated supply.

Water softening.—There are now two municipal water supplies in this country softened by zeolite. One is the plant at McKees Rocks, Pa., operated by the Ohio Valley Water Co., and the other is at Coopersville, Ohio, operated by the municipality. Both of these plants have about 4.5 m. g. d. capacity.

Very good results have been reported from Columbus from the use of sodium aluminate in connection with lime-soda softening as a means of reducing the residual hardness lower than can be ordinarily obtained.

Effluent aeration.—At Providence, R. I., and West Palm Beach, Fla., the effluent of soft, highly colored waters is aerated, as well as the influent, in order to adjust the point and lessen corrosiveness without adding much, if any, lime.

COURT DECISIONS RELATING TO PUBLIC HEALTH

Statute requiring vaccination of pupils held constitutional; furnishing of certificate of unfitness.—(New Hampshire Supreme Court; Barber *v.* School Board of Rochester et al., 135 A. 159; decided November 2, 1926.) A State law provided as follows:

> No child shall attend a public or private school in this State unless he has been vaccinated; * * * or holds a certificate of the local board of health that he is an unfit subject for vaccination. The local board of health shall issue such a certificate on the advice of a registered physician approved by it.

In 1924 certain school children had furnished certificates of unfitness. In 1925 new certificates were demanded by the local school board, and, in a proceeding brought by the father of the children, two questions were raised, (1) whether the statute was constitutional and (2) whether the school board could require a new exemption certificate after one had been furnished. Regarding the first question raised, the supreme court decided that the statute was constitutional. Regarding the second, the court stated as follows:

> * * * The statute is silent as to how often a certificate may be required. It was the legislative intent to provide efficient protection, and the statute is to be construed accordingly. Conditions making it improper to vaccinate the child at one time might not exist at a later date. (Jacobson *v.* Massachusetts, 197 U. S. 11, 25 S. Ct. 358, 49 L. Ed. 643, 3 Ann. Cas. 765.) Assuming that the physical conditions might be such as to show that the child never would be a proper subject for vaccination, and also assuming that, in such a case, no more than one certificate could be required, the point of the present controversy is not reached. There is nothing to show the existence of such conditions here. The plaintiff rests his case upon the proposition that, in all cases, one certificate is sufficient for all time. This construction can not be adopted. The meaning of the statute is that a new certificate may be required whenever there is reasonable ground to believe that there may have been such a change of conditions that the child is no longer "an unfit subject for vaccination."

City held liable for pollution of stream.—(South Dakota Supreme Court; Gellert *v.* City of Madison et al., 210 N. W. 978; decided December 6, 1926.) The plaintiff occupied land which was crossed by a small stream. The defendant city discharged its sewage into the said stream immediately above the plaintiff's premises, and by reason thereof the stream became so polluted as to cause such premises to be uninhabitable. The plaintiff brought action against the city for damages, and the city contended that it was not liable unless it was shown to have been negligent in the construction of its

sewer system. One of the provisions of the State constitution provided that "private property shall not be taken for public use, or damaged, without just compensation." The court rejected the city's contention, stating as follows:

In some States, whose constitutions do not contain the provision as to damaging, the courts have held as contended for by appellant. But this court has repeatedly held that cities are liable for consequential damages arising from the construction of improvements where no negligence is proven. The law of this State is well established upon that point.

City held without power to require license of bakeries in addition to State license.—(Wisconsin Supreme Court; Wisconsin Association of Master Bakers et al. *v.* City of Milwaukee et al., 210 N. W. 707; decided November 9, 1926.) An ordinance of the city of Milwaukee required a license of those engaged in the business of conducting bakeries. No provision of the city charter expressly authorized the city to license, or to exact a license fee from, those engaged in such business. A provision of a State law had authorized cities of 5,000 inhabitants or over to license bakeries, but a later law had struck out this provision and inserted in lieu thereof a provision requiring a State license. In a suit to restrain the enforcement of the Milwaukee ordinance, the supreme court's holding was adverse to the validity of the ordinance, the following appearing in the opinion:

* * * It will thus be seen that, when the legislature provided for the issuance of such licenses by the State, it expressly repealed the authority theretofore granted to cities to issue such licenses. In view of this legislation, the power of cities to require an additional license can not rest in implication, and should not be accorded by construction. Furthermore, no necessity for a municipal license appears. An examination of sections 98.16 to 98.30, inclusive Stats., all of which relate to the sanitary regulation of bakeries, indicates that the health commissioner of the city of Milwaukee enjoys all the power of inspection under the State law that is accorded to him by this ordinance, and the imposition of an additional license fee upon the bakers of Milwaukee is a burden not warranted by law, but would seem to be most unnecessary and unreasonable in fact. * * *

Typhoid fever held not compensable under workmen's compensation act in instant case.—(California Supreme Court; Pattiani *v.* State Industrial Accident Commission et al., 250 P. 864; decided November 9, 1926.) An employee of a San Francisco company, which was engaged in the maintenance and operation of drug stores, was sent by his employers upon a business trip, in the course of which he visited a number of cities, including New York. During his few day's stay in New York City he ate some raw oysters, and while on his homeward trip he was taken ill with what was finally determined to be typhoid fever. At the time of the employee's visit to New York City an epidemic of typhoid fever existed there. An award under the workmen's compensation act was denied by the State industrial accident commission, and the supreme court affirmed the order of the

commission. The reason for the denial of compensation is shown by the following extract from the court's opinion:

In the instant case, however, no such direct connection between the employee and his infection with the disease of typhoid was shown; on the contrary, his attempted proof of such connection was negatived by the commission in its finding that the evidence did not establish the fact that the epidemic of typhoid in New York was caused or aggravated by contaminated oysters. No other direct contact between the petitioner herein and the existing epidemic of typhoid in New York during the brief period of his visit there being shown, we are of the opinion that the commission was correct in holding that the evidence before it was insufficient to show a special exposure arising out of the employment, and that the mere fact that there was an epidemic of typhoid fever in said city during the period of the petitioner's visit there constituted an exposure or risk of the commonalty in general and was not peculiar to or characteristic of his employment, and for that reason compensation to the applicant was properly denied.

City ordinance for the collection and removal of garbage and refuse upheld.—(Arkansas Supreme Court; Porter et al. *v.* City of Hot Springs, 287 S. W. 585; decided November 8, 1926.) An ordinance of the city of Hot Springs authorized the board of public affairs of the city to enter into a contract for a period of years with some suitable person for the removal of garbage and other refuse, and prohibited the removal of such substances by other persons. A provision of the ordinance, however, authorized the issuance of permits to persons for the removal of "kitchen refuse commonly known as swill." This ordinance was held valid in an action brought to restrain its enforcement.

Change in law held not to release county from contract for tuberculin testing of cattle.—(Minnesota Supreme Court; State ex rel. Hilton, Atty. Gen., et al. *v.* Board of Commissioners of Lincoln County et al., 210 N. W. 635; decided November 12, 1926.) Pursuant to a statute, a county entered into a contract with the State sanitary board and the Federal Bureau of Animal Industry for the testing of all cattle in the county for tuberculosis with the object of making the county a modified accredited tuberculosis-free area. Pursuant to the contract, a certain sum was appropriated by the county to assist in the expense of conducting the first test, which test was made and paid for. By the terms of the contract the county had agreed to appropriate further amounts for necessary additional tests, but the county refused to raise further sums and a mandamus proceeding was brought to compel the county board to levy a tax for that purpose. A statute, enacted after the county had made the contract, changed materially the amount of indemnity paid to cattle owners, no indemnity being paid for certain condemned animals, but the supreme court's view was that "the legislature may amend the statutes relating to testing animals and the payment for condemned animals without thereby releasing the parties from the contract."

County required to pay fees of local registrar of vital statistics.—(Kentucky Court of Appeals; Darnaby, County Treasurer, et al. *v.* Furlong, 287 S. W. 913; decided October 19, 1926.) The court in this case adhered to a previous decision (Furlong *v.* Darnaby, 257 S. W. 707, decided April 24, 1923), and held that a county was required, in conformity to a State law, to pay the fees due to a local registrar of vital statistics for duties performed by him.

TRAPPING SURVEY IN LOS ANGELES COUNTY BEING MADE BY THE COUNTY HEALTH DEPARTMENT

Dr. J. L. Pomeroy, county health officer of the county of Los Angeles, calls attention to the fact that the trapping survey of rat conditions in the county adjacent to the city of Los Angeles is being made by the county health department and not by the city department of health, as stated in Public Health Reports for February 4, 1927, page 347. Doctor Dickie stated in his letter that this action was being taken by the county department of health.

DEATHS DURING WEEK ENDED FEBRUARY 26, 1927

Summary of information received by telegraph from industrial insurance companies for week ended February 26, 1927, and corresponding week of 1926. (From the Weekly Health Index, March 3, 1927, issued by the Bureau of the Census, Department of Commerce)

	Week ended Feb. 26, 1927	Corresponding week 1926
Policies in force	66, 849, 234	63, 454, 977
Number of death claims	11, 837	12, 366
Death claims per 1,000 policies in force, annual rate	9. 2	10. 2

Deaths from all causes in certain large cities of the United States during the week ended February 26, 1927, infant mortality, annual death rate, and comparison with corresponding week of 1926. (From the Weekly Health Index, March 3, 1927, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Feb. 26, 1927		Annual death rate per 1,000 corresponding week 1926	Deaths under 1 year		Infant mortality rate week ended Feb. 26, 1927 [2]
	Total deaths	Death rate [1]		Week ended Feb. 26, 1927	Corresponding week 1926	
Total (67 cities)	7,888	13.9	15.8	924	1,016	[3] 76
Akron	34			4	6	43
Albany [4]	43	18.7	21.0	7	3	146
Atlanta	75			10	13	
White	39			3	4	
Colored	36	(5)		7	9	

[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 63 cities.
[4] Deaths for week ended Friday, Feb. 25, 1927.
[5] 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, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D. C., 25.

Deaths from all causes in certain large cities of the United States during the week ended February 26, 1927, infant mortality, annual death rate, and comparison with corresponding week of 1926. (From the Weekly Health Index, March 3, 1927, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Feb. 26, 1927		Annual death rate per 1,000 corresponding week 1926	Deaths under 1 year		Infant mortality rate week ended Feb. 26, 1927
	Total deaths	Death rate		Week ended Feb. 26, 1927	Corresponding week 1926	
Baltimore [4]	251	16.0	19.4	27	29	83
White	186		17.9	16	20	62
Colored	65	(5)	28.5	11	9	171
Birmingham	59	14.3	23.7	9	10	
White	18		17.1	2	5	
Colored	41	(5)	33.9	7	5	
Boston	245	16.1	14.7	26	26	73
Bridgeport	38			2	9	37
Buffalo	144	13.7	14.9	23	24	97
Cambridge	35	14.7	11.1	4	3	71
Camden	42	16.5	22.7	5	7	86
Canton	16	7.4	12.8	1	5	24
Chicago [4]	766	12.9	12.9	95	92	83
Cincinnati	145	18.4	15.2	10	15	62
Cleveland	225	11.9	12.5	27	32	71
Columbus	94	16.8	13.0	9	5	84
Dallas	51	12.7	18.5	5	8	
White	36		16.6	4	7	
Colored	15	(5)	30.9	1	1	
Denver	102	18.3	19.8	12	7	
Des Moines	25	8.7	20.4	5	2	84
Detroit	338	13.2	15.0	68	60	107
Duluth	21	9.5	13.8	0	3	0
El Paso	25	11.4	20.6	5	6	
Erie	26			3	4	59
Fall River [4]	44	17.3	12.7	8	1	141
Flint	27	9.8	7.7	4	3	65
Fort Worth	40	12.7	10.2	7	4	
White	32		8.9	7	2	
Colored	8	(5)	19.2	0	2	
Grand Rapids	29	9.5	9.7	2	4	29
Houston	54			8	7	
White	37			6	4	
Colored	17	(5)		2	3	
Indianapolis	107	14.9	17.0	12	18	94
White	93		16.8	11	15	99
Colored	14	(5)	19.0	1	3	61
Jersey City	76	12.3	14.9	8	13	60
Kansas City, Kans	30	13.4	12.9	6	1	117
White	24		13.0	5	1	111
Colored	6	(5)	12.7	1	0	152
Kansas City, Mo	120	16.3	16.0	8	13	
Los Angeles	259			14	19	40
Louisville	82	13.4	14.1	8	11	68
White	60		13.4	7	10	68
Colored	22	(5)	17.8	1	1	70
Lowell	22	10.4	17.0	4	8	77
Lynn	27	13.4	13.0	4	1	106
Memphis	74	21.6	25.0	7	8	
White	42		14.6	2	1	
Colored	32	(5)	43.9	5	7	
Milwaukee	111	11.0	10.7	19	19	89
Minneapolis	99	11.7	9.0	10	7	56
Nashville [4]	41	15.5	18.3	5	7	
White	27		17.0	3	7	
Colored	14	(5)	21.4	2	0	
New Bedford	33	14.4	9.6	7	7	121
New Haven	46	13.0	11.5	2	4	28
New Orleans	157	19.3	24.5	18	12	
White	100		18.3	4	3	
Colored	57	(5)	42.1	14	9	
New York	1,565	13.7	15.9	176	217	73
Bronx Borough	186	10.5	11.4	14	14	45
Brooklyn Borough	540	12.4	14.2	73	76	75
Manhattan Borough	644	18.5	22.3	71	99	83
Queens Borough	149	9.6	10.1	15	25	64
Richmond Borough	46	16.3	19.3	3	3	56

[4] Deaths for week ended Friday, Feb. 25, 1927.

[5] 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, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D. C., 25.

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City	Week ended Feb. 26, 1927		Annual death rate per 1,000 corresponding week 1926	Deaths under 1 year		Infant mortality rate week ended Feb. 26, 1927
	Total deaths	Death rate		Week ended Feb. 26, 1927	Corresponding week 1926	
Newark, N. J	100	11.2	14.1	9	18	45
Norfolk	48	14.0	14.4	6	6	121
White	15		12.2	1	1	33
Colored	33	(5)	18.2	5	5	265
Oakland	63	12.3	13.0	9	11	105
Oklahoma City	33			6	4	
Omaha	58	13.8	16.4	5	7	56
Paterson	29	10.5	15.3	4	6	71
Philadelphia	539	13.8	20.5	58	70	77
Pittsburgh	212	17.2	14.6	25	24	87
Portland, Oreg	116			6	4	63
Providence	55	10.2	15.7	5	7	42
Richmond	47	12.8	35.3	5	8	66
White	19		32.7	1	4	20
Colored	28	(5)	41.7	4	4	152
Rochester	80	12.9	14.6	7	12	59
St. Louis	208	12.9	15.1	16	20	
St. Paul	64	13.3	12.8	2	3	18
Salt Lake City [4]	36	13.8	15.3	6	4	91
San Antonio	70	17.3	21.6	12	15	
San Diego	51	23.1	25.6	1	3	21
San Francisco	148	13.4	15.1	12	15	75
Schenectady	30	16.8	11.8	5	4	149
Seattle	80			3	5	31
Somerville	21	10.7	10.4	4	3	114
Spokane	38	18.2	21.0	5	3	125
Springfield, Mass	32	11.4	12.6	5	5	77
Syracuse	64	16.9	12.4	5	10	64
Tacoma	27	13.2	11.8	3	1	71
Toledo	80	13.7	14.1	7	10	67
Trenton	49	18.6	19.5	3	8	52
Utica	42	21.3	19.7	4	6	91
Washington, D. C	187	18.1	22.2	19	21	110
White	100		18.4	5	10	42
Colored	87	(5)	33.5	14	11	257
Waterbury	24			2	5	47
Wilmington, Del	31	12.8	29.9	5	7	124
Worcester	61	16.3	12.4	9	4	108
Yonkers	28	12.3	12.6	5	6	114
Youngstown	33	10.2	8.8	10	4	140

[5] 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, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D. C., 25.

PREVALENCE OF DISEASE

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

UNITED STATES

CURRENT WEEKLY STATE REPORTS

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

Reports for Week Ended March 5, 1927

ALABAMA

	Cases
Chicken pox	35
Diphtheria	62
Influenza	82
Lethargic encephalitis	1
Malaria	21
Measles	244
Mumps	30
Ophthalmia neonatorum	1
Pellagra	5
Pneumonia	67
Poliomyelitis	1
Scarlet fever	22
Smallpox	40
Tetanus	3
Tuberculosis	169
Typhoid fever	25
Typhus fever	2
Whooping cough	58

ARIZONA

Chicken pox	22
Diphtheria	7
Influenza	1
Measles	77
Mumps	1
Pellagra	1
Pneumonia	2
Scarlet fever	10
Tuberculosis	47
Typhoid fever	3

ARKANSAS

Chicken pox	34
Diphtheria	2
Influenza	51
Malaria	26
Measles	20
Mumps	22

ARKANSAS—continued

	Cases
Pellagra	5
Scarlet fever	12
Smallpox	1
Tuberculosis	3
Typhoid fever	3
Whooping cough	26

CALIFORNIA

Cerebrospinal meningitis—Los Angeles	1
Chicken pox	785
Diphtheria	130
Influenza	101
Jaundice (epidemic)	3
Lethargic encephalitis	2
Measles	3,748
Mumps	285
Poliomyelitis—Long Beach	1
Scarlet fever	238
Smallpox	12
Tuberculosis	205
Typhoid fever	5
Whooping cough	132

COLORADO

Cerebrospinal meningitis	3
Chicken pox	30
Diphtheria	8
German measles	7
Impetigo contagiosa	1
Measles	362
Mumps	7
Pneumonia	6
Scarlet fever	54
Septic sore throat	4
Smallpox	8
Tuberculosis	21
Typhoid fever	2
Whooping cough	8

CONNECTICUT

	Cases
Cerebrospinal meningitis	1
Chicken pox	107
Diphtheria	29
German measles	7
Influenza	7
Malaria	1
Measles	146
Mumps	55
Pneumonia (broncho)	34
Pneumonia (lobar)	53
Scarlet fever	96
Septic sore throat	2
Tuberculosis (all forms)	32
Typhoid fever	1
Whooping cough	52

DELAWARE

Chicken pox	11
Diphtheria	4
Measles	10
Mumps	2
Pneumonia	4
Scarlet fever	41
Tuberculosis	7
Whooping cough	4

FLORIDA

Chicken pox	46
Diphtheria	23
Influenza	10
Malaria	6
Measles	147
Mumps	18
Scarlet fever	10
Smallpox	50
Tuberculosis	6
Typhoid fever	13
Whooping cough	22

GEORGIA

Cerebrospinal meningitis	1
Chicken pox	45
Conjunctivitis (infectious)	1
Diphtheria	12
Dysentery	2
Influenza	222
Malaria	9
Measles	102
Mumps	23
Pellagra	3
Pneumonia	50
Rabies	1
Scarlet fever	22
Septic sore throat	5
Smallpox	87
Tuberculosis	16
Typhoid fever	2
Whooping cough	46

IDAHO

Chicken pox	1
Diphtheria	1
Measles	62
Mumps	13
Pneumonia (broncho)	2
Rocky Mountain spotted fever	1
Scarlet fever	21
Tuberculosis	1
Whooping cough	4

ILLINOIS

	Cases
Cerebrospinal meningitis:	
Cook County	3
Du Page County	1
Chicken pox	346
Diphtheria	109
Influenza	44
Measles	2,420
Mumps	580
Pneumonia	363
Poliomyelitis—Champaign County	1
Scarlet fever	370
Smallpox	34
Tuberculosis	325
Typhoid fever	6
Whooping cough	276

INDIANA

Chicken pox	169
Diphtheria	40
Influenza	27
Measles	215
Pneumonia	11
Scarlet fever	242
Smallpox	171
Tuberculosis	41
Typhoid fever	6
Whooping cough	72

IOWA

Cerebrospinal meningitis—Des Moines	1
Chicken pox	39
Diphtheria	20
Measles	498
Mumps	10
Scarlet fever	71
Smallpox	5
Tuberculosis	[1] 30
Typhoid fever	1
Whooping cough	14

KANSAS

Chicken pox	113
Diphtheria	24
Dysentery	1
German measles	8
Influenza	7
Lethargic encephalitis	1
Measles	737
Mumps	55
Pneumonia	73
Scarlet fever	188
Septic sore throat	2
Smallpox	43
Tuberculosis	53
Typhoid fever	2
Whooping cough	74

LOUISIANA

Diphtheria	18
Influenza	17
Malaria	3
Measles	106
Pneumonia	31
Scarlet fever	4
Smallpox	3
Tuberculosis	17
Typhoid fever	4
Whooping cough	24

[1] Includes delayed report.

MAINE

	Cases
Chicken pox	39
Diphtheria	3
German measles	68
Influenza	8
Measles	158
Mumps	9
Pneumonia	20
Scarlet fever	25
Tuberculosis	1
Typhoid fever	3
Vincent's angina	1
Whooping cough	51

MARYLAND [2]

Chicken pox	162
Diphtheria	60
German measles	6
Influenza	356
Measles	38
Mumps	44
Ophthalmia neonatorum	1
Pneumonia (broncho)	75
Pneumonia (lobar)	74
Scarlet fever	82
Septic sore throat	3
Tetanus	1
Trachoma	1
Tuberculosis	75
Typhoid fever	4
Whooping cough	91

MASSACHUSETTS

Cerebrospinal meningitis	1
Chicken pox	206
Conjunctivitis (suppurative)	9
Diphtheria	87
German measles	16
Influenza	23
Lethargic encephalitis	3
Measles	271
Mumps	346
Ophthalmia neonatorum	48
Pellagra	1
Pneumonia (lobar)	137
Poliomyelitis	2
Scarlet fever	457
Septic sore throat	6
Tuberculosis (pulmonary)	84
Tuberculosis (other forms)	76
Typhoid fever	9
Whooping cough	143

MICHIGAN

Diphtheria	85
Measles	266
Pneumonia	123
Scarlet fever	364
Smallpox	25
Tuberculosis	61
Typhoid fever	10
Whooping cough	169

MINNESOTA

Cerebrospinal meningitis	6
Chicken pox	158

[2] Week ended Friday.

MINNESOTA—continued

	Cases
Diphtheria	40
Influenza	1
Measles	283
Pneumonia	3
Scarlet fever	282
Smallpox	1
Tuberculosis	36
Typhoid fever	4
Whooping cough	8

MISSISSIPPI

Diphtheria	4
Scarlet fever	11
Smallpox	12
Typhoid fever	6

MISSOURI

Chicken pox	82
Diphtheria	40
Epidemic sore throat	10
Measles	193
Mumps	64
Ophthalmia neonatorum	1
Pneumonia	9
Poliomyelitis	2
Scarlet fever	143
Smallpox	16
Tuberculosis	59
Typhoid fever	2
Whooping cough	41

MONTANA

Cerebrospinal meningitis	6
Diphtheria	13
Measles	66
Mumps	37
Scarlet fever	144
Smallpox	24
Typhoid fever	1
Whooping cough	53

NEBRASKA

Chicken pox	80
Diphtheria	6
German measles	106
Influenza	27
Measles	215
Mumps	56
Pneumonia	5
Scarlet fever	49
Septic sore throat	11
Smallpox	55
Tuberculosis	1
Typhoid fever	2
Whooping cough	27

NEW JERSEY

Chicken pox	331
Diphtheria	123
Influenza	36
Measles	54
Pneumonia	189
Scarlet fever	396
Typhoid fever	3
Whooping cough	272

NEW MEXICO

	Cases
Chicken pox	52
Conjunctivitis	1
Diphtheria	4
German measles	57
Influenza	2
Measles	48
Mumps	22
Pneumonia	3
Scarlet fever	17
Septicemia	3
Smallpox	7
Tuberculosis	20
Typhoid fever	1
Whooping cough	1

NEW YORK

(Exclusive of New York City)

Cerebrospinal meningitis	1
Chicken pox	539
Diphtheria	64
German measles	329
Lethargic encephalitis	1
Measles	830
Mumps	476
Ophthalmia neonatorum	1
Pneumonia	342
Scarlet fever	420
Septic sore throat	11
Smallpox	10
Tetanus	1
Trachoma	2
Typhoid fever	8
Vincent's angina	30
Whooping cough	321

NORTH CAROLINA

Chicken pox	166
Diphtheria	30
German measles	19
Measles	160
Scarlet fever	21
Smallpox	48
Typhoid fever	12
Whooping cough	604

OKLAHOMA

(Exclusive of Oklahoma City and Tulsa)

Cerebrospinal meningitis:	
Kay County	1
Muskogee County	2
Osage County	1
Pottawatomie County	1
Chicken pox	51
Diphtheria	34
Influenza	[1] 214
Malaria	[1] 18
Measles	357
Mumps	27
Pneumonia	[1] 122
Poliomyelitis—Hughes County	1
Scarlet fever	55
Smallpox	55
Typhoid fever	14
Whooping cough	14

[1] Includes delayed reports.

OREGON

	Cases
Cerebrospinal meningitis	3
Chicken pox	45
Diphtheria	10
Influenza	270
Measles	85
Mumps	12
Pneumonia	[3] 7
Scarlet fever	73
Septic sore throat	2
Smallpox	25
Tuberculosis	7
Typhoid fever	2
Whooping cough	8

PENNSYLVANIA

Cerebrospinal meningitis—Harrisburg	1
Chicken pox	919
Diphtheria	187
German measles	127
Impetigo contagiosa	10
Lethargic encephalitis	1
Measles	1,014
Mumps	379
Pneumonia	236
Scabies	7
Scarlet fever	650
Trachoma	2
Tuberculosis	111
Typhoid fever	20
Whooping cough	305

RHODE ISLAND

Chicken pox	6
Diphtheria	10
German measles	1
Measles	3
Mumps	7
Pneumonia	2
Scarlet fever	23
Tuberculosis	5
Whooping cough	4

SOUTH CAROLINA

Chicken pox	127
Diphtheria	11
Hookworm disease	36
Influenza	979
Malaria	87
Measles	121
Mumps	3
Pellagra	30
Scarlet fever	8
Smallpox	15
Tuberculosis	42
Typhoid fever	4
Whooping cough	93

SOUTH DAKOTA

Cerebrospinal meningitis	1
Chicken pox	23
Diphtheria	4
Influenza	17
Measles	477
Mumps	9
Pneumonia	21

[3] Deaths.

SOUTH DAKOTA—Continued

	Cases
Poliomyelitis	1
Scarlet fever	153
Smallpox	6
Tuberculosis	2
Typhoid fever	2
Whooping cough	19

TENNESSEE

Cerebrospinal meningitis—Nashville	1
Chicken pox	76
Diphtheria	14
Influenza	47
Malaria	5
Measles	221
Mumps	13
Ophthalmia neonatorum	1
Pellagra	1
Pneumonia	52
Rabies	1
Scarlet fever	46
Smallpox	24
Trachoma	1
Tuberculosis	42
Typhoid fever	14
Whooping cough	91

TEXAS

Cerebrospinal meningitis	1
Chicken pox	190
Diphtheria	40
Dysentery	2
Influenza	71
Measles	146
Mumps	72
Pellagra	4
Pneumonia	11
Scarlet fever	57
Smallpox	128
Trachoma	1
Tuberculosis	30
Typhoid fever	1
Whooping cough	29

UTAH

Chicken pox	25
Diphtheria	11
Influenza	8
Measles	209
Mumps	14
Pneumonia	11
Scarlet fever	12
Smallpox	1
Whooping cough	18

VERMONT

Chicken pox	26
Diphtheria	4
Measles	37
Mumps	63
Scarlet fever	10
Typhoid fever	3
Whooping cough	13

WASHINGTON

	Cases
Cerebrospinal meningitis	3
Chicken pox	105
Diphtheria	9
German measles	260
Influenza	8
Measles	198
Mumps	108
Pneumonia	5
Scarlet fever	116
Smallpox	43
Tuberculosis	10
Typhoid fever	4
Whooping cough	23

WEST VIRGINIA

Chicken pox	94
Diphtheria	23
Influenza	86
Measles	174
Scarlet fever	53
Smallpox	39
Tuberculosis	12
Typhoid fever	28
Whooping cough	118

WISCONSIN

Milwaukee:	
Cerebrospinal meningitis	2
Chicken pox	96
Diphtheria	26
German measles	2
Measles	50
Mumps	73
Pneumonia	24
Scarlet fever	48
Typhoid fever	1
Whooping cough	35
Scattering:	
Chicken pox	216
Diphtheria	24
German measles	31
Influenza	46
Measles	570
Mumps	269
Pneumonia	14
Poliomyelitis	1
Scarlet fever	177
Smallpox	4
Tuberculosis	23
Typhoid fever	4
Whooping cough	116

WYOMING

Chicken pox	1
Diphtheria	3
German measles	47
Influenza	1
Measles	44
Mumps	1
Scarlet fever	45
Typhoid fever	1

Reports for Week Ended February 26, 1927

DISTRICT OF COLUMBIA

	Cases
Chicken pox	62
Diphtheria	25
Influenza	7
Measles	7
Pneumonia	71
Scarlet fever	17
Tuberculosis	29
Typhoid fever	1
Whooping cough	20

NORTH DAKOTA

	Cases
Cerebrospinal meningitis	2
Chicken pox	18
Diphtheria	1
German measles	3
Measles	149
Pneumonia	6
Scarlet fever	128
Tuberculosis	6
Typhoid fever	1
Whooping cough	12

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	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
January, 1927										
Idaho	6	18	4	--------	1,115	--------	0	284	51	5
Indiana	2	349	446	--------	692	--------	1	1,108	729	12
Kansas	10	100	38	2	1,155	--------	3	802	220	11
Mississippi	1	97	4,591	1,990	1,306	217	1	104	129	60
Montana	19	19	19	--------	435	--------	0	514	41	3
New York	27	1,448	--------	--------	3,594	--------	15	2,997	55	122
Oregon	9	74	332	--------	277	--------	0	316	167	29
Pennsylvania	6	928	--------	--------	3,452	--------	4	2,477	0	92
South Carolina	0	110	4,672	560	284	116	11	70	69	53
Virginia	5	250	4,343	60	1,032	1	1	351	229	47
Washington	24	123	44	--------	1,157	--------	1	572	252	28
Wyoming	9	18	10	--------	681	--------	0	142	0	--------

January, 1927

	Cases
Anthrax:	
New York	1
Pennsylvania	1
Chicken pox:	
Idaho	146
Indiana	818
Kansas	863
Mississippi	935
Montana	102
New York	3,593
Oregon	278
Pennsylvania	3,873
South Carolina	515
Virginia	1,044
Washington	560
Wyoming	42
Conjunctivitis (epidemic):	
Idaho	2
Dengue:	
Mississippi	13
South Carolina	11
Dysentery:	
New York	6
Virginia	41
Dysentery (amebic):	
Mississippi	31
Dysentery (Bacillary):	
Mississippi	200
German measles:	
Kansas	26
Montana	5
New York	513
Pennsylvania	178
Washington	193
Wyoming	89
Hookworm disease:	
Mississippi	237
South Carolina	105
Virginia	5
Impetigo contagiosa:	
Oregon	28
Pennsylvania	66
Wyoming	1
Lethargic encephalitis:	
Kansas	2
New York	26
Washington	3
Meningitis (tubercular):	
Mississippi	5
Meningitis (other forms):	
Mississippi	6
Mumps:	
Idaho	59
Indiana	2
Kansas	115
Mississippi	521

Mumps—Continued.	Cases
Montana	81
New York	2,478
Oregon	107
Pennsylvania	1,008
Washington	265
Wyoming	79
Ophthalmia neonatorum:	
Mississippi	10
New York	1
Pennsylvania	7
Paratyphoid fever:	
New York	2
Oregon	1
South Carolina	5
Washington	2
Wyoming	3
Puerperal septicemia:	
Mississippi	44
New York	11
Rabies in animals:	
Idaho	2
Mississippi	53
Oregon	1
South Carolina	23
Rabies in man:	
Mississippi	1
Scabies:	
Oregon	6
Pennsylvania	30
Septic sore throat:	
Idaho	2
Kansas	7

Septic sore throat—Continued.	Cases
Montana	3
New York	34
Oregon	13
Wyoming	1
Tetanus:	
Kansas	4
New York	1
Pennsylvania	7
Trachoma:	
Mississippi	6
Pennsylvania	2
Washington	6
Tularaemia:	
Wyoming	3
Typhus fever:	
New York	1
Vincent's angina:	
New York	62
Whooping cough:	
Idaho	19
Indiana	261
Kansas	198
Mississippi	1,361
Montana	11
New York	1,411
Oregon	26
Pennsylvania	1,399
South Carolina	313
Virginia	1,562
Washington	84
Wyoming	22

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 99 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 30,790,000. The estimated population of the 91 cities reporting deaths is more than 29,520,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended February 19, 1927, February 20, 1926

	1926	1927	Estimated expectancy
Cases reported			
Diphtheria:			
41 States	1,435	2,072	----------
99 cities	794	1,206	1,000
Measles:			
38 States	20,742	13,788	----------
99 cities	11,628	4,612	----------
Poliomyelitis:			
40 States	14	16	----------
Scarlet fever:			
41 States	4,538	6,321	----------
99 cities	1,801	2,589	1,324
Smallpox:			
41 States	991	907	----------
99 cities	236	154	136
Typhoid fever:			
41 States	211	254	----------
99 cities	38	54	43
Deaths reported			
Influenza and pneumonia:			
91 cities	1,746	958	----------

City reports for week ended February 19, 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 how many cases of the disease under consideration 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	20	1	0	0	0	2	0	2
New Hampshire:									
Concord	22,546	0	0	1	0		25	0	0
Manchester	83,097	0	3	0	0	0	0	0	3
Vermont:									
Barre	10,008	0	0	0	0	0	7	0	0
Burlington	24,089	3	1	0	0	0	0	1	0
Massachusetts:									
Boston	779,620	77	60	34	5	0	35	117	15
Fall River	128,993	7	5	2	1	1	1	0	3
Springfield	142,065	16	2	2	1	1	1	2	1
Worcester	190,757	4	4	3	0	0	0	3	7
Rhode Island:									
Pawtucket	69,760	1	1	0	0	0	1	0	4
Providence	267,918	0	10	5	0	1	1	0	7
Connecticut:									
Bridgeport	(1)	3	9	8	0	1	4	2	2
Hartford	160,197	10	9	2	0	0	1	2	0
New Haven	178,927	37	3	0	0	0	0	1	3
MIDDLE ATLANTIC									
New York:									
Buffalo	538,016	33	14	19		3	3	14	16
New York	5,873,356	362	192	401	140	25	35	580	185
Rochester	316,786	7	10	8		1	4	1	7
Syracuse	182,003	24	6	1		0	6	6	5
New Jersey:									
Camden	128,642	5	5	23	1	0	1	1	5
Newark	452,513	48	21	18	24	1	13	52	11
Trenton	132,020	2	5	1	0	1	1	1	3
Pennsylvania:									
Philadelphia	1,979,364	125	78	67		14	11	98	52
Pittsburgh	631,563	71	21	22		5	63	6	16
Reading	112,707	6	3	2		0	2	29	1
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	409,333	22	9	7	1	5	1	32	13
Cleveland	926,485	84	32	53	5	1	4	22	25
Columbus	279,836	23	4	9	0	0	2	1	8
Toledo	287,380	44	7	4	5	4	21	4	8
Indiana:									
Fort Wayne	97,846	5	3	1	0	0	49	0	3
Indianapolis	358,819	42	9	7	0	0	3	13	8
South Bend	80,091	5	1	0	0	0	30	0	1
Terre Haute	71,071	6	2	0	0	1	8	0	1
Illinois:									
Chicago	2,995,239	111	94	85	20	11	979	116	55
Peoria	81,564	6	1	2	0	0	62	13	0
Springfield	63,923	11	1	1	1	2	178	0	0
Michigan:									
Detroit	1,245,824	102	60	51	3	3	5	66	48
Flint	130,316	27	5	2	0	1	5	0	4
Grand Rapids	153,698	4	3	1	2	1	0	0	2

[1] No estimate made.

City reports for week ended February 19, 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			
EAST NORTH CENTRAL—continued									
Wisconsin:									
Kenosha	50,891	5	2	0	0	0	168	39	2
Madison	46,385	16	0	1	0	0	0	2	0
Milwaukee	509,192	98	17	34	3	2	56	65	9
Racine	67,707	17	2	1	0	2	14	33	0
Superior	39,671	1	0	0	0	0	12	0	2
WEST NORTH CENTRAL									
Minnesota:									
Duluth	110,502	4	1	0	0	0	42	0	3
Minneapolis	425,435	71	17	14	0	3	4	0	8
St. Paul	246,001	29	14	9	0	2	4	0	9
Iowa:									
Davenport	52,469	2	1	1	0		15	0	
Des Moines	141,441	4	3	0	0		0	3	
Sioux City	76,411	19	2	0	0		26	0	
Waterloo	36,771	7	0	1	0		64	3	
Missouri:									
Kansas City	367,481	40	8	5	2	5	60	6	10
St. Joseph	78,342	0	2	1	0	0	2	0	4
St. Louis	821,543	33	49	51	1	1	18	65	
North Dakota:									
Fargo	26,403	5	1	0	0	0	8	6	0
Grand Forks	14,811	0	1	0	0		1	0	
South Dakota:									
Aberdeen	15,036	15	1	0	0		37	1	
Sioux Falls	30,127	2	0	0	0		1	0	
Nebraska:									
Lincoln	60,941	13	1	2	0	0	29	1	1
Omaha	211,768	16	5	2	0	0	45	20	7
Kansas:									
Topeka	55,411	7	2	0	0	0	12	1	2
Wichita	88,367	25	4	0	0	0	0	0	1
SOUTH ATLANTIC									
Delaware:									
Wilmington	122,049	1	2	0	0	2	0	0	5
Maryland:									
Baltimore	796,296	107	29	41	108	4	3	13	50
Cumberland	33,741	2	1	0	0	0	0	0	2
Frederick	12,035	0	1	0	0	0	0	1	1
District of Columbia:									
Washington	497,906	42	18	43	24	1	1	0	24
Virginia:									
Lynchburg	30,395	12	1	3	0	0	6	1	4
Norfolk	(1)	6	1	2	1	0	74	2	4
Richmond	186,403	3	4	4	0	1	204	4	10
Roanoke	58,208	2	1	1	0	0	1	0	2
West Virginia:									
Charleston	49,019	27	1	0	2	1	0	0	2
Wheeling	56,208	9	1	0	0	0	5	0	0
North Carolina:									
Raleigh	30,371	19	1	1	0	0	2	0	3
Wilmington	37,061	2	0	1	0	0	0	7	0
Winston-Salem	69,031	6	1	0	0	1	0	17	1
South Carolina:									
Charleston	73,125	4	0	0	52	0	3	0	4
Columbia	41,225	2	1	0	0		0	5	
Greenville	27,311	3	0	1	0	0	0	0	1
Georgia:									
Atlanta	(1)	8	3	8	60	6	69	31	7
Brunswick	16,809	0	0	1	0	0	1	2	0
Savannah	93,134	4	1	0	7	1	1	0	5
Florida:									
Miami	69,754	22	2	1	0	0	1	6	3
St. Petersburg	26,847		0			0			0
Tampa	94,743	3	3	0	0	0	69	0	5

[1] No estimate made.

City reports for week ended February 19, 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			
EAST SOUTH CENTRAL									
Kentucky:									
Covington	58,309	1	1	3	0	0	0	0	2
Louisville	305,935	7	6	3	1	0	3	1	6
Tennessee:									
Memphis	174,533	36	3	0	0	1	4	0	12
Nashville	136,220	5	1	1	0	0	0	0	8
Alabama:									
Birmingham	205,670	16	2	8	11	7	36	1	5
Mobile	65,955	6	1	1	0	0	41	0	0
Montgomery	46,481	1	1	1	0	0	8	1	0
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	31,643	4	0	0	0	-------	5	13	2
Little Rock	74,216	1	0	0	0	1	0	0	0
Louisiana:									
New Orleans	414,493	1	12	14	4	4	123	0	22
Shreveport	57,857	3	0	1	0	0	1	2	2
Oklahoma:									
Oklahoma City	(1)	0	1	0	11	1	0	0	3
Texas:									
Dallas	194,450	12	6	13	1	1	6	2	9
Galveston	48,375	0	1	2	0	0	0	1	2
Houston	164,954	0	3	3	0	0	0	1	7
San Antonio	198,069	1	2	8	0	3	1	0	6
MOUNTAIN									
Montana:									
Billings	17,971	0	1	1	0	0	5	0	2
Great Falls	29,883	6	1	0	0	0	11	0	0
Helena	12,037	2	0	0	0	0	0	0	1
Missoula	12,668	2	0	1	0	0	0	11	0
Idaho:									
Boise	23,042	0	0	2	0	0	17	1	0
Colorado:									
Denver	280,911	21	11	4	-------	3	950	1	11
Pueblo	43,787	20	1	3	0	0	4	0	2
New Mexico:									
Albuquerque	21,000	3	0	0	0	0	101	25	4
Arizona:									
Phoenix	38,669	1	0	1	0	0	0	1	6
Utah:									
Salt Lake City	130,948	17	3	7	0	0	91	1	4
Nevada:									
Reno	12,665	0	0	0	0	0	0	0	1
PACIFIC									
Washington:									
Seattle	(1)	39	7	6	0	-------	18	68	-------
Spokane	108,897	6	4	0	0	-------	49	0	-------
Tacoma	104,455	14	2	3	0	0	31	2	6
Oregon:									
Portland	282,383	9	8	2	74	4	61	2	14
California:									
Los Angeles	(1)	101	36	48	31	1	722	16	37
Sacramento	72,260	6	2	0	1	0	102	10	2
San Francisco	557,530	36	21	15	9	4	140	84	6

[1] No estimate made.

City reports for week ended February 19, 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		
NEW ENGLAND											
Maine:											
Portland	3	1	0	0	0	0	1	0	0	14	19
New Hampshire:											
Concord	1	2	0	0	0	0	0	0	0	0	5
Manchester	3	3	0	0	0	0	1	0	0	0	18
Vermont:											
Barre	0	0	0	0	0	0	0	0	0	0	4
Burlington	1	1	0	0	0	0	0	1	0	2	3
Massachusetts:											
Boston	67	132	0	0	0	17	2	0	0	28	242
Fall River	3	4	0	0	0	1	0	1	0	4	37
Springfield	8	3	0	0	0	2	0	0	0	2	38
Worcester	9	16	0	0	0	2	0	0	0	3	50
Rhode Island:											
Pawtucket	1	1	0	0	0	0	0	0	0	0	18
Providence	8	15	0	0	0	3	0	0	0	4	70
Connecticut:											
Bridgeport	9	20	0	0	0	1	0	0	0	0	26
Hartford	8	4	0	0	0	0	0	0	0	4	45
New Haven	11	4	0	0	0	0	0	0	0	0	40
MIDDLE ATLANTIC											
New York:											
Buffalo	24	39	0	0	0	7	1	1	1	8	158
New York	248	852	0	0	0	[1] 106	7	12	0	113	1,507
Rochester	13	33	0	0	0	3	0	0	0	11	86
Syracuse	17	7	0	0	0	2	1	5	0	5	61
New Jersey:											
Camden	5	8	0	0	0	0	1	0	0	1	39
Newark	26	63	0	0	0	6	1	1	1	58	114
Trenton	5	1	0	0	0	1	0	0	0	6	35
Pennsylvania:											
Philadelphia	83	139	0	0	0	37	2	0	0	24	520
Pittsburgh	38	29	1	0	0	6	0	1	0	8	167
Reading	2	9	0	0	0	0	0	0	0	1	25
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	15	32	1	1	0	13	0	0	0	1	155
Cleveland	45	62	1	0	0	15	1	1	0	47	193
Columbus	12	8	2	1	0	9	0	0	0	10	87
Toledo	14	8	2	0	0	3	0	0	0	53	73
Indiana:											
Fort Wayne	5	8	0	4	0	2	0	0	0	0	23
Indianapolis	10	25	12	27	0	2	0	0	1	10	92
South Bend	2	2	1	0	0	1	0	0	0	0	14
Terre Haute	2	0	0	0	0	0	0	0	0	0	19
Illinois:											
Chicago	140	130	3	2	0	47	3	4	2	72	690
Peoria	5	7	0	0	0	2	0	0	0	2	23
Springfield	2	6	0	0	0	0	1	0	0	1	26
Michigan:											
Detroit	95	102	3	0	0	21	1	0	1	71	324
Flint	7	33	1	7	0	0	1	1	0	5	19
Grand Rapids	10	15	1	0	0	1	0	0	0	8	39
Wisconsin:											
Kenosha	2	10	1	0	0	1	0	0	0	5	7
Madison	3	10	0	0	0	0	0	0	0	5	9
Milwaukee	27	37	2	0	0	7	0	0	0	48	105
Racine	5	4	0	0	0	0	0	0	0	15	17
Superior	3	9	3	0	0	0	0	0	0	0	6

[1] Pulmonary tuberculosis only.

City reports for week ended February 19, 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		
WEST NORTH CENTRAL											
Minnesota:											
Duluth	7	7	0	0	0	1	0	1	0	0	23
Minneapolis	52	69	11	1	0	3	0	0	0	2	92
St. Paul	34	55	6	5	0	6	1	1	0	2	67
Iowa:											
Davenport	2	2	2	2	-------	-------	0	0	-------	0	-------
Des Moines	7	11	2	0	-------	-------	0	0	-------	0	-------
Sioux City	2	5	2	1	-------	-------	0	0	-------	1	-------
Waterloo	2	0	1	0	-------	-------	0	0	-------	0	-------
Missouri:											
Kansas City	13	41	2	12	0	14	0	0	0	4	126
St. Joseph	3	3	0	0	0	0	0	0	0	0	23
St. Louis	32	49	4	3	0	16	1	2	1	27	210
North Dakota:											
Fargo	2	11	0	0	0	0	0	0	0	2	6
Grand Forks	0	6	0	0	-------	-------	0	0	-------	0	-------
South Dakota:											
Aberdeen	2	11	0	0	-------	-------	0	0	-------	0	-------
Sioux Falls	3	4	1	0	-------	-------	0	0	-------	0	-------
Nebraska:											
Lincoln	3	10	0	0	0	0	0	1	0	0	14
Omaha	6	18	10	1	0	5	0	0	0	0	62
Kansas:											
Topeka	2	7	1	18	0	1	0	0	0	18	10
Wichita	3	8	1	0	0	1	0	1	0	2	31
SOUTH ATLANTIC											
Delaware:											
Wilmington	3	43	0	0	0	0	0	0	0	6	35
Maryland:											
Baltimore	44	33	0	0	0	23	2	7	0	57	266
Cumberland	0	2	0	0	0	0	0	0	0	0	13
Frederick	0	1	0	0	0	0	0	0	0	0	7
District of Columbia:											
Washington	25	19	2	0	0	15	1	0	0	21	171
Virginia:											
Lynchburg	0	0	0	0	0	0	0	0	0	0	13
Norfolk	2	7	0	0	0	1	0	0	0	24	-------
Richmond	4	3	0	0	0	2	0	0	0	10	54
Roanoke	0	0	0	0	0	0	0	0	0	3	22
West Virginia:											
Charleston	1	5	0	1	0	2	0	0	0	4	14
Wheeling	2	6	0	0	0	1	0	0	0	3	18
North Carolina:											
Raleigh	0	2	0	0	0	2	0	0	0	37	18
Wilmington	0	4	0	0	0	0	1	0	0	19	7
Winston-Salem	0	2	4	0	0	3	0	0	0	65	20
South Carolina:											
Charleston	1	3	0	0	0	5	0	1	1	0	28
Columbia	0	0	0	1	-------	-------	0	0	-------	10	-------
Greenville	0	1	1	0	0	0	0	0	0	3	6
Georgia:											
Atlanta	4	5	3	27	0	5	0	1	1	5	78
Brunswick	0	0	0	0	0	1	0	0	0	0	10
Savannah	1	1	0	3	0	2	0	1	0	1	31
Florida:											
Miami	1	3	-------	0	0	2	1	1	0	6	41
St. Petersburg	0	-------	0	-------	0	1	0	-------	0	-------	17
Tampa	0	1	1	1	0	4	1	3	1	0	34

City reports for week ended February 19, 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 SOUTH CENTRAL											
Kentucky:											
Covington	2	3	0	0	0	1	1	0	0	0	-------
Louisville	5	19	0	2	0	6	1	1	0	85	98
Tennessee:											
Memphis	4	21	2	14	0	3	0	1	0	14	55
Nashville	4	2	1	0	0	3	0	1	0	1	55
Alabama:											
Birmingham	2	2	7	7	0	3	1	2	0	7	64
Mobile	0	0	1	0	0	0	0	0	0	0	16
Montgomery	1	1	1	3	0	0	0	1	0	2	15
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	1	2	1	0	-------	2	0	0	-------	4	8
Little Rock	1	2	0	0	0	3	0	1	0	3	-------
Louisiana:											
New Orleans	6	2	2	0	0	13	2	1	0	7	151
Shreveport	0	0	2	0	0	0	0	0	0	0	22
Oklahoma:											
Oklahoma City	2	2	3	4	0	0	0	0	0	0	24
Texas:											
Dallas	2	7	3	5	0	3	0	0	0	0	60
Galveston	0	1	1	0	0	3	1	0	0	0	11
Houston	1	0	2	8	0	2	1	0	0	0	61
San Antonio	1	2	0	2	0	6	0	0	0	0	54
MOUNTAIN											
Montana:											
Billings	1	2	1	2	0	0	0	0	0	0	9
Great Falls	2	10	2	0	0	2	0	0	0	0	9
Helena	1	0	0	0	0	0	0	0	0	0	7
Missoula	0	11	0	0	0	0	0	0	0	0	6
Idaho:											
Boise	1	4	1	1	0	0	0	0	0	0	5
Colorado:											
Denver	14	93	3	0	0	12	1	0	0	0	95
Pueblo	1	5	0	0	0	2	1	0	0	0	16
New Mexico:											
Albuquerque	2	8	0	0	0	6	0	0	0	1	21
Arizona:											
Phoenix	1	6	0	0	0	13	0	1	1	0	39
Utah:											
Salt Lake City	3	14	2	0	0	0	1	0	0	9	47
Nevada:											
Reno	0	0	1	0	0	0	0	0	0	0	6
PACIFIC											
Washington:											
Seattle	11	12	4	1	-------	-------	0	1	-------	10	-------
Spokane	4	32	6	7	-------	-------	0	0	-------	2	-------
Tacoma	3	13	3	24	0	0	0	0	0	3	27
Oregon:											
Portland	6	15	10	0	0	1	0	1	0	1	102
California:											
Los Angeles	26	41	8	0	0	27	2	0	0	7	295
Sacramento	1	2	1	4	0	2	0	0	0	0	36
San Francisco	15	30	5	0	0	10	1	0	0	10	178

City reports for week ended February 19, 1927—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
MIDDLE ATLANTIC									
New York:									
New York [1]	2	3	5	2	0	0	0	1	0
New Jersey:									
Newark	1	0	2	0	0	0	0	0	0
Pennsylvania:									
Philadelphia	0	0	1	1	0	0	0	1	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	0	2	0	0	0	0	0	0	0
Cleveland	0	0	0	0	0	0	0	1	0
Columbus	0	0	0	2	0	0	0	0	0
Illinois:									
Chicago	0	0	2	0	0	0	1	0	0
Springfield	1	1	0	0	0	0	0	0	0
Michigan:									
Detroit	1	0	0	0	0	0	1	1	0
Wisconsin:									
Milwaukee	2	1	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth	0	2	0	0	0	0	0	0	0
Minneapolis	1	1	0	0	0	0	0	0	0
St. Paul	0	0	1	0	0	0	0	0	0
SOUTH ATLANTIC									
District of Columbia:									
Washington	0	0	0	1	0	0	0	0	0
South Carolina:									
Charleston	0	0	0	0	0	1	0	0	0
Georgia:									
Atlanta	0	0	0	0	1	0	0	0	0
EAST SOUTH CENTRAL									
Tennessee:									
Memphis	0	0	0	0	0	2	0	0	0
Nashville	2	2	1	1	0	0	0	0	0
Alabama:									
Mobile	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	1	0	1	1	2	2	0	1	0
MOUNTAIN									
Montana:									
Missoula	1	0	0	0	0	0	0	0	0
Colorado:									
Pueblo	3	2	0	0	0	0	0	0	0
Utah:									
Salt Lake City	1	1	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Spokane	3		0		0		0	0	
Tacoma	1	0	0	0	0	0	0	1	0
Oregon:									
Portland	0	1	0	2	0	0	0	0	0
California:									
Los Angeles	3	5	0	0	0	0	0	0	0
Sacramento	1	1	0	0	0	0	0	0	0
San Francisco	0	0	1	1	0	0	0	1	0

[1] Typhus fever: 1 case and 1 death at New York, N. Y.

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended February 19, 1927, compared with those for a like period ended February 20, 1926. 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 30,440,000 in 1926 and 30,960,000 in 1927. The 95 cities reporting deaths had nearly 29,780,000 estimated population in 1926 and nearly 30,290,000 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, January 16 to February 19, 1927—Annual rates per 100,000 population, compared with rates for the corresponding period of 1926 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Jan. 23, 1926	Jan. 22, 1927	Jan. 30, 1926	Jan. 29, 1927	Feb. 6, 1926	Feb. 5, 1927	Feb. 13, 1926	Feb. 12, 1927	Feb. 20, 1926	Feb. 19, 1927
101 cities	142	176	142	178	134	195	[2] 136	[3] 177	137	[4] 204
New England	132	151	118	163	97	146	123	[3] 168	116	132
Middle Atlantic	138	192	130	194	129	229	141	188	132	277
East North Central	131	170	138	175	119	202	[2] 132	179	134	169
West North Central	210	147	250	127	222	123	171	155	206	[5] 168
South Atlantic	151	161	115	199	132	143	134	223	104	192
East South Central	72	153	41	102	41	127	47	61	57	87
West South Central	155	172	142	206	137	235	116	151	90	172
Mountain	155	117	264	198	128	189	173	153	219	162
Pacific	139	233	166	168	188	217	139	168	204	[6] 191

MEASLES CASE RATES

101 cities	1,336	445	1,385	417	1,481	560	[2] 1,719	[3] 645	1,995	[4] 781
New England	2,566	548	2,745	323	2,403	378	2,342	[3] 364	2,703	181
Middle Atlantic	1,090	49	1,187	46	1,350	41	1,514	45	1,917	69
East North Central	2,071	516	2,091	500	2,155	647	[2] 2,637	738	2,933	899
West North Central	153	278	280	298	395	455	551	685	676	[5] 554
South Atlantic	2,457	303	2,261	257	2,557	538	3,086	361	3,248	795
East South Central	284	204	393	188	708	270	729	453	957	469
West South Central	13	453	26	382	34	570	13	457	9	570
Mountain	118	5,088	100	4,459	91	7,237	109	7,866	137	9,691
Pacific	64	1,346	72	1,508	104	1,542	166	2,225	201	[6] 2,853

SCARLET FEVER CASE RATES

101 cities	292	383	287	386	298	402	[2] 298	[3] 391	309	[4] 438
New England	300	536	377	539	401	508	361	[3] 544	361	469
Middle Atlantic	237	369	235	379	209	434	197	424	208	582
East North Central	325	330	300	342	338	319	[2] 359	327	372	323
West North Central	678	518	666	488	754	522	782	500	782	[5] 540
South Atlantic	184	281	153	254	162	246	169	259	149	250
East South Central	202	336	109	321	119	245	114	224	243	245
West South Central	69	197	69	113	137	126	107	75	107	67
Mountain	374	1,349	255	1,609	155	1,519	219	1,250	237	1,250
Pacific	254	319	332	327	324	437	308	390	330	[6] 324

[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] Madison, Wis., not included.
[3] Worcester, Mass., not included.
[4] Topeka, Kans., and Tacoma, Wash., not included.
[5] Topeka, Kans., not included.
[6] Tacoma, Wash., not included.

Summary of weekly reports from cities, January 16 to February 19, 1927—Annual rates per 100,000 population, compared with rates for the corresponding period of 1926—Continued

SMALLPOX CASE RATES

	Week ended—									
	Jan. 23, 1926	Jan. 22, 1927	Jan. 30, 1926	Jan. 29, 1927	Feb. 6, 1926	Feb. 5, 1927	Feb. 13, 1926	Feb. 12, 1927	Feb. 20, 1926	Feb. 19, 1927
101 cities	35	20	40	26	47	25	[2] 53	[3] 26	41	[4] 26
New England	0	0	0	0	0	0	0	[3] 0	0	0
Middle Atlantic	0	1	1	0	0	0	1	0	0	0
East North Central	33	17	43	17	16	22	[2] 23	15	33	28
West North Central	34	60	54	79	52	54	32	71	65	[5] 47
South Atlantic	56	34	58	60	101	43	80	63	50	60
East South Central	47	25	21	87	41	102	52	82	103	132
West South Central	99	63	125	42	155	80	112	67	142	63
Mountain	27	0	18	9	73	9	73	18	36	27
Pacific	193	63	204	71	321	63	458	76	193	[6] 33

TYPHOID FEVER CASE RATES

101 cities	9	7	8	7	7	7	[2] 6	[3] 7	7	[4] 9
New England	9	2	9	5	14	9	5	[3] 5	7	2
Middle Atlantic	10	5	9	4	3	9	6	5	4	10
East North Central	3	6	4	2	3	5	[2] 4	2	5	4
West North Central	4	4	2	8	6	4	4	6	6	[5] 10
South Atlantic	7	7	9	18	13	5	15	18	4	24
East South Central	5	10	10	36	21	5	10	10	5	31
West South Central	47	4	17	0	4	17	0	13	21	8
Mountain	0	27	18	18	36	0	0	0	18	0
Pacific	16	21	11	21	16	8	13	18	16	[6] 3

INFLUENZA DEATH RATES

95 cities	20	21	29	25	34	19	[2] 33	[3] 24	50	[7] 23
New England	7	5	17	9	12	5	19	[3] 3	2	[8] 10
Middle Atlantic	14	20	18	22	20	21	15	28	27	25
East North Central	8	25	12	21	12	9	[2] 11	22	11	[9] 17
West North Central	11	4	13	4	19	12	4	15	19	[5] 23
South Atlantic	40	20	36	50	68	28	64	24	138	31
East South Central	57	15	72	31	103	56	62	36	160	41
West South Central	88	43	141	73	168	65	282	39	278	39
Mountain	18	54	73	72	109	45	128	72	109	27
Pacific	39	31	78	14	67	7	35	21	95	[6] 19

PNEUMONIA DEATH RATES

95 cities	199	183	201	159	206	168	[2] 212	[3] 147	259	[7] 146
New England	210	207	144	158	200	188	156	[3] 155	175	[8] 104
Middle Atlantic	228	197	218	174	213	197	212	174	290	149
East North Central	139	138	166	132	145	122	[2] 161	128	181	[9] 117
West North Central	82	116	110	127	125	135	78	96	127	[5] 89
South Atlantic	289	283	286	193	346	226	408	171	490	239
East South Central	228	245	207	204	248	199	222	112	295	168
West South Central	291	202	415	202	362	151	516	146	516	207
Mountain	273	216	164	171	228	144	328	144	173	189
Pacific	184	134	173	107	184	121	110	114	173	[6] 167

[2] Madison, Wis., not included.
[3] Worcester, Mass., not included.
[4] Topeka, Kans., and Tacoma, Wash., not included.
[5] Topeka, Kans., not included.
[6] Tacoma, Wash., not included.
[7] New Haven, Conn., Cincinnati, Ohio, Topeka, Kans., and Tacoma, Wash., not included.
[8] New Haven, Conn., not included.
[9] Cincinnati, Ohio, not included.

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, 438, 500	30, 960, 600	29, 778, 400	30, 289, 800
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, 644, 900	7, 804, 500	7, 644, 900	7, 804, 500
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

FOREIGN AND INSULAR

THE FAR EAST

Report for week ended February 12, 1927.—The following report for the week ended February 12, 1927, was transmitted by the eastern bureau of the secretariat of the health section of the League of Nations, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Ceylon: Colombo	1	1	0	0	0	0
British India:						
Karachi		0		0		1
Bombay		2		0	38	18
Madras		0		0	33	0
Calcutta		0		2	153	102
Rangoon		4		8	46	2
Negapatam		0		3	4	4
Straits Settlements: Singapore	0	0	1	0	0	0
Dutch East Indies: Surabaya	4	4	0	0	0	0
Siam: Bangkok	0	0	7	3	0	0
French Indo-China:						
Saigon	0	0	0	0	1	0
Turane	0	0		1	0	0
Hongkong	0	0	0	0	4	3
U. S. S. R.: Vladivostok	0	0	0	0	12	
Manchuria: Mukden	0	0	0	0	2	0

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Arabia.—Aden, Jeddah, Kamaran, Perim.

Iraq.—Basrah.

Persia.—Mohammerah, Bender-Abbas, Bushire, Lingah.

British India.—Chittagong, Cochin, Tuticorin, Vizagapatam.

Portuguese India.—Nova Goa.

Federated Malay States.—Port Swettenham.

Straits Settlements.—Penang.

Dutch East Indies.—Batavia, Sabang, Samarinda, Macassar, Belawan-Deli, Pontianak, Semarang, Menado, Banjermasin, Cheribon, Padang, Palembang, Tarakan, Samarinda.

Sarawak.—Kuching.

British North Borneo.—Sandakan, Jesselton, Kudat, Tawao.

Portuguese Timor.—Dilly.

French Indo-China.—Haiphong.

Philippine Islands.—Manila, Iloilo, Jolo, Cebu, Zamboanga.

China.—Amoy, Shanghai (International Settlement).

Macao.

Formosa.—Keelung.

Chosen.—Chemulpo, Fusan.

Manchuria.—Harbin, Antung, Yingkow, Changchun.

Kwantung.—Port Arthur, Dairen.

Japan.—Yokohama, Nagasaki, Niigata, Hakodate, Shimonoseki, Moji, Tsuruga, Osaka, Kobe.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island, Cairns.

New Guinea.—Port Moresby.

New Britain Mandated Territory.—Rabaul and Kokopo.

New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.

New Caledonia.—Noumea.

Fiji.—Suva.
Hawaii.—Honolulu.
Society Islands.—Papeete.

AFRICA

Egypt.—Port Said, Suez, Alexandria.
Anglo-Egyptain Sudan.—Port Sudan, Suakin.
Eritrea.—Massaua.
French Somaliland.—Jibuti.
British Somaliland.—Berbera.
Italian Somaliland.—Mogadiscio.
Kenya.—Mombasa.
Zanzibar.—Zanzibar.
Tanganyika.—Dar-es-Salaam.
Seychelles.—Victoria.
Portuguese East Africa.—Mozambique, Beira, Lourenco Marques.
Union of South Africa.—East London, Port Elizabeth, Cape Town, Durban.
Reunion.—St. Denis.
Mauritius.—Port Louis.

Reports had not been received in time for distribution from—

Madagascar.—Tamatave, Majunga.
Dutch East Indies.—Balikpapan.

Other epidemiological information received by the Singapore bureau:

Singapore: S/S Mundra arrived on February 13 from Calcutta infected with smallpox.

Belated information

Week ended January 29—

Pondicherry.—Cholera, 1 case.

INFLUENZA IN FOREIGN COUNTRIES

The health section of the secretariat of the League of Nations has published the following information relative to the prevalence of influenza in foreign countries. The data were obtained from the health administrations of the several countries. (See Public Health Reports, March 4, 1927, p. 646.)

Czechoslovakia.—(February 11.) The returns for the week ended February 5 showed a lower incidence of influenza than those for the previous week. There were 28,601 cases reported in Bohemia, as compared with 34,887 during the previous week. There were 146 deaths, as compared with 94 during the previous week. Cases with complications increased, on the other hand, from 341 to 493. The most frequent complication was broncho-pneumonia, which was reported in 358 cases. The character of the disease is generally more severe in the districts which were affected early during the epidemic than in those affected more recently.

In Moravia, 6,379 cases and 21 deaths were reported, as compared with 6,156 cases and 18 deaths during the previous week. Complications were reported in 68 cases.

In Silesia, 3,246 cases and 10 deaths were reported during the week ended February 5, as compared with 4,325 and 11 deaths during the previous week. Complications were reported in 78 cases.

Denmark.—(February 12.) Twenty-nine thousand six hundred and forty-seven influenza cases were reported during the week ended February 5, as compared with 38,673 cases during the previous week; 4,356 of these cases were notified in Copenhagen, 8,518 in other towns, and 16,773 in the rural districts.

The total number of cases reported during the month of January was 139,733, which is 4,500 more than in January, 1922. The large majority of the cases continue to be very benign.

England and Wales.—(February 15.) Although influenza of mild type is still widely prevalent in the Midlands, particularly in Nottingham, Birmingham, Leeds, Derby, Manchester, and Liverpool, the epidemic generally appears to be abating.

Provisional returns for the week ended February 12 show 159 deaths from influenza in London, as compared with 215 during the previous week, and 759 deaths in 105 large towns, as compared with 818 during the previous week. The pneumonia notifications numbered 266 in London and 3,006 in the whole country, as compared with 423 and 3,198, respectively, during the previous week.

During the week ended February 5, the highest incidence was reported at Bristol, where there were 60 deaths from influenza and where the general death rate was 31.1 per 1,000. The death rate from influenza per million population in the great towns was, during the said week, 71.4 in the South, as compared with 60.3 during the previous week; 62.2 in the Midlands, as compared with 44.2; 49.1 in Wales, as compared with 51.6; 46.7 in London, as compared with 54.8, and 16.3 in the North, as compared with 13.9 during the previous week.

French Indo-China.—Reports from the various Provinces show very little prevalence of influenza.

Germany.—Statistics of causes of death in 46 German towns showed an increase of deaths attributed to influenza from 261 during the week ended January 15 to 377 during the week ended January 22. The highest weekly number of deaths due to influenza in German towns was 1,024 in 1922 (first week of January), 344 in 1923 (second week of January), and 216 in 1924 (last week of March). Influenza was little in evidence in 1925 and 1926.

There was no corresponding increase of the deaths attributed to diseases of the respiratory system, nor of the general mortality. The general death rate was 13.5 per 1,000 during the week ended January 22, which is normal for the season. The highest mortality was reported at Stuttgart, where the death rate was 19.4 per 1,000, and where 35 deaths were ascribed to influenza.

Greece.—(February 13.) The influenza epidemic continues in mild form. The number of cases is diminishing, except in the departments of Evrou, Rodope, Arta, and Zante, where there is a slight increase.

Hungary.—(February 16.) The influenza epidemic has decreased materially and has come to an end in certain localities; 143 cases were reported in the army during the week ended February 12, as compared with 701 during the previous week; 259 influenza cases with complications and 10 deaths were reported at Budapest during the said week. There were 143 deaths from influenza reported in the whole country.

India.—Reports for the Provinces and presidencies showed no evidence of the prevalence of influenza.

Italy.—(February 11). The influenza manifestations of entirely benign character, which are occurring in a very few localities, have not influenced the health conditions, which remain perfectly normal. Influenza centers have hitherto shown no tendency to spread. The general mortality and deaths from diseases of the respiratory system do not exceed the average for the season. The number of admissions to hospitals is not higher than during the corresponding period of last year.

Korea.—During the week ended February 5, 46 cases of influenza were reported at Chemulpo, and 18 cases and 5 deaths at Fusan. Thirty-four cases were reported at Chemulpo and 255 at Fusan during the week ended February 12.

Rumania.—(February 15.) The influenza epidemic is extending. There are numerous cases of very mild type characterized by coryza and tracheitis. Cases of pleuro-pulmonary type are fairly numerous. Gastro-intestinal complications are reported at the town of Piteschti. The case mortality has hitherto been very low. There has been no fatal case in the army. The epidemic has shown a tendency to become more serious during the last few days. Twelve deaths were caused by broncho-pneumonic complications at Bucharest during the last two weeks.

Russia (U. S. S. R.).—Reports received from the municipal statistical office of Leningrad showed that the influenza situation remained unchanged there during the first half of January. There were 245 influenza cases and 7 deaths during the week ended January 1, 254 cases and 5 deaths during the week ended January 8, and 274 cases and 7 deaths during the week ended January 15.

Scotland.—(February 14.) The death rate remains normal. The number of influenza deaths in 16 towns during the week ended February 12 was only 19, as compared with 24 during the previous week. The general death rate was 14.7 per 1,000. Returns generally indicate fewer cases or absence of the epidemic, and several of them describe the epidemic as mild but with catarrhal symptoms.

Sweden.—Twenty deaths were attributed to influenza at Stockholm during the week ended January 29, as compared with 6 during the previous week. The number of deaths from all causes was 148, as compared with 116 during the previous week; 809 influenza cases and 6 deaths were reported at Gothenburg during the same week.

Switzerland.—(February 10.) The number of influenza cases reported during the week ended February 6 was 5,109, as compared with 10,003 during the previous week. The diminution has occurred in all cantons and the epidemic may be considered as finished in certain of them. The decrease is very marked even in those recently affected.

Yugoslavia.—Nine thousand three hundred and fifty-nine influenza cases and 21 deaths were reported from January 22 to 31, as compared with 1,652 cases and 9 deaths during the week ended January 21. The majority of the cases (6,363) were, as during the previous week, reported in the department of Zagreb.

LATER INFORMATION

A cablegram dated March 3, 1927, states that influenza was increasing rapidly in Lancashire and Yorkshire, England. During the last week of February there were 1,023 influenza deaths in 105 great English towns. Bulgaria reported 925 deaths from influenza for the third week of February. Influenza of mild type is increasing in Yugoslavia, Lithuania, Sweden, and Finland. The epidemic has terminated in Switzerland, France, Belgium, Netherlands, and Spain. It is decreasing elsewhere.

CANADA

Communicable diseases—Week ended February 19, 1927.—The Canadian ministry of health reports cases of certain communicable diseases from seven Provinces of Canada for the week ended February 19, 1927, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Influenza	17				2			19
Smallpox				15	2	9	9	35
Typhoid fever			4	10	3		3	20

Vital statistics—Quebec—December, 1926.—Births and deaths in the Province of Quebec for the month of December, 1926, have been reported as follows:

Estimated population	2,570,000
Births	6,437
Birth rate per 1,000 population	30.05
Deaths (all causes)	2,876
Death rate per 1,000 population	13.43
Deaths under 1 year	761
Infant mortality rate	118.22
Deaths from—	
Cancer	142
Cerebrospinal meningitis	9
Diabetes	29
Diphtheria	50
Deaths from—Continued.	
Heart disease	379
Influenza	123
Measles	34
Poliomyelitis	1
Scarlet fever	13
Syphilis	9
Tuberculosis (pulmonary)	183
Tuberculosis (other forms)	55
Typhoid fever	17
Whooping cough	57

CUBA

Typhoid fever inoculation—Santiago de Cuba.—A campaign of inoculation against typhoid fever was stated, under date of February 21, 1927, to have been begun by the local sanitary authorities at Santiago de Cuba.

HAWAII TERRITORY

Rodent operations—Island of Hawaii—January, 1927.—During the month of January, 1927, rodent operations in the island of Hawaii were reported as follows:

Rodents exterminated	13,012
Rodents examined	11,716
Rodents found plague infected	0
Human plague	0

Last case of rodent plague, July 24, 1926.
Last case of human plague, October 6, 1926.

MADAGASCAR

Plague—December 1-15, 1926.—During the period December 1 to 31, 1926, 152 cases of plague with 141 deaths were reported in the island of Madagascar, occurring in the Provinces of Itasy, Moramanga, and Tananarive. The largest occurrence was in the Province of Tananarive, with 120 cases and 113 deaths, of which 5 cases with 5 deaths occurred in the interior town of Tananarive. The distribution of occurrence according to type was: Bubonic—cases, 69; pneumonic, 44; septicemic, 39.

MAURITIUS

Plague—November, 1926.—During the month of November, 1926, 14 cases of plague with 12 deaths were reported in the island of Mauritius, of which 1 case with 1 death occurred in the Plaines Wilhems district and 13 cases with 11 deaths in the town of Port Louis.

MEXICO

Piedras Negras—Vaccination.—Under date of February 25, 1927, 68 new cases of smallpox were reported present in the district of Piedras Negras. It was stated that the public health service had ordered vaccination to be carried out.

NETHERLANDS EAST INDIES

Epidemic smallpox—Borneo—December 14, 1926.—Under date of January 4, 1927, epidemic smallpox was reported in two native villages of south and east Borneo, Netherlands East Indies.

TRINIDAD

Mortality—Prevalence of certain diseases—Year 1925.—During the year ended December 31, 1925, 7,888 deaths from all causes were reported in the island of Trinidad, including 1,708 deaths of infants under 1 year of age. Population, estimated, 383,422.

Prevalence of certain diseases—Malaria—Tuberculosis—Typhoid fever.—The principal cause of deaths during the period under report was stated to be malaria, 791 deaths from this cause being reported. This number was stated to be 29 below the mean for the preceding six-year period and the decrease was considered as possibly indicative of the results of the campaign of eradication.

Typhoid fever.—Steady decrease was noted for the five-year period in typhoid fever deaths in the northern rural districts of the island, with a sudden apparently temporary rise to 385 deaths in 1924. In the southern rural districts there was a marked increase, the figures quoted being as follows: In 1921, 94; 1924, 166; 1925, 293 deaths. Urban prevalence was quoted as follows: Port of Spain—1921, 287 cases; 1923, 365 cases; 1924, 373 cases; 1925, 170 cases. In the next largest town, San Fernando, steady increase was noted, the number of deaths rising from 11 in 1921 to 18 in 1923, to 36 in 1924, and 43 in 1925.

Tuberculosis.—There were reported 519 new cases occurring during the year, with 439 deaths.

VIRGIN ISLANDS

Communicable diseases—January, 1927.—During the month of January, 1927, communicable diseases were reported in the Virgin Islands of the United States as follows:

Island and disease	Cases	Remarks
St. Thomas and St. John:		
Chancroid	9	Imported, 3.
Dysentery	1	Unclassified.
Fish poisoning	6	
Gonorrhea	3	Imported, 2.
Syphilis	3	Secondary, 2; of cerebrum, 1.
St. Croix:		
Filariasis	1	Imported.
Schistosomiasis	2	Schistosoma mansoni.
Tetanus	1	
Uncinariasis	17	Necator americanus.

YUGOSLAVIA

Communicable diseases—January, 1927.—During the month of January, 1927, communicable diseases were reported in Yugoslavia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	14	3	Scarlet fever	561	101
Cerebrospinal meningitis	3		Smallpox	3	
Diphtheria	174	31	Tetanus	7	4
Dysentery	25	4	Typhoid fever	316	50
Influenza [1]	9,359	21	Typhus fever	43	3
Lethargic encephalitis	3		Whooping cough	183	20
Measles	940	10			

[1] Includes report from Jan. 22-31 only.

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

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended March 11, 1927 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
India				Dec. 12-25, 1926: Cases, 2,342; deaths, 1,984.
Calcutta	Jan. 9-15	88	65	
Siam				Apr. 1-Jan. 8, 1927: Cases, 7,867; deaths, 5,179.
Do	Jan. 2-8	20	15	
Straits Settlements:				
Singapore	Dec. 19-25	3	3	
Do	Dec. 26-Jan. 1	1		

[1] From medical officers of the Public Health Service, American consuls, and other sources.

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

Reports Received During Week Ended March 11, 1927—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
Azores:				
St. Michael's Island—				
Furnas	Nov. 7-13	4	1	27 miles distant from port.
Brazil:				
Rio de Janeiro	Jan. 2-8	1		
Ceylon:				
Colombo	Jan. 9-22	17	7	5 plague rodents.
Egypt				Jan. 22-28, 1927: Cases, 1. Total, Jan. 1-28, 1927: Cases, 13. Corresponding period, 1926; nil.
India				Dec. 12-25, 1926: Cases, 2,277; deaths, 1,486.
Bombay	Jan. 16-22	2	2	
Madras Presidency	Jan. 2-8	91	59	
Java:				
Batavia	Jan. 9-15	25	24	
East Java and Madoera	Dec. 19-25	2	2	
Do	Dec. 26-Jan. 1	1	1	
Madagascar				Dec. 1-15, 1926: Cases, 152; deaths, 141.
Providence—				
Itasy	Dec. 1-15	11	11	Bubonic, 3; pneumonic, 5; septicemic, 3.
Moramanga	do	21	17	Bubonic, cases, 11; deaths, 7; pneumonic, 4; septicemic, 6.
Tananarive	do	120	113	Bubonic, cases, 55; deaths, 48; pneumonic, 35; septicemic, 30.
Tananarive town	do	5	5	Bubonic, 3; septicemic, 2.
Other localities	do	115	108	Bubonic, cases, 52; deaths, 45; pneumonic, cases, 35; deaths, 35; septicemic, cases, 28; deaths, 28.
Mauritius				November, 1926: Cases, 14; deaths, 12.
Plaines Wilhems district	Nov. 1-30	1	1	
Port Louis	do	13	11	
Siam				Jan. 2-8, 1927: Cases, 30; deaths, 22.

SMALLPOX

Brazil:				
Rio de Janeiro	Jan. 2-Feb. 5	48	22	
Sao Paulo	Oct. 25-Dec. 5	22	9	
Canada	Feb. 13-19			Cases, 36.
Alberta	do	9		
British Columbia:				
Vancouver	Jan. 31-Feb. 6	2		
Manitoba	Feb. 13-19	2		
New Brunswick	do	1		In Westmoreland.
Ontario	do	15		
Kingston	do	1		
Toronto	do	4		
Saskatchewan	do	9		
China:				
Canton	Nov. 1-30	1		
Chungking	Jan. 2-8			Present.
Hongkong	Feb. 19-25	11	7	Chinese.
Tientsin	Jan. 16-22	2		
Egypt:				
Alexandria	Jan. 8-14	1		
France:				
Paris	Jan. 21-31	3	1	
Great Britain:				
England and Wales—				
Monmouthshire	Feb. 25	22		
Newcastle on Tyne	Feb. 5-12	3		
Sheffield	Jan. 22-Feb. 5	118		
India				Dec. 12-25, 1925: Cases, 6,185; deaths, 1,754.
Bombay	Jan. 16-22	22	15	
Calcutta	Jan. 9-15	134	87	
Karachi	Jan. 16-22	2		
Madras	Jan. 23-29	17	1	
Japan:				
Kobe	do	1		
Java:				
East Java and Madoera	Dec. 19-25	1		
Luxemburg:				
Luxemburg	Dec. 1-31	1		

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

Reports Received During Week Ended March 11, 1927—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Mexico:				
Mexico City	Jan. 29-Feb. 12	2		Including municipalities in Federal district.
Nuevo Leon State—				
Montemorelos	Feb. 24			Reported present.
Monterrey	do			About 60 cases reported present in one hospital; other cases stated to exist
Piedras Negras	Feb. 25	68		
Victoria	do			Present.
Netherlands East Indies	Dec. 14			Island of Borneo; epidemic in two villages.
Siam				Jan. 2-8, 1927: Cases, 3; deaths, 2.
Bangkok	Jan. 2-8	3	2	
Straits Settlements:				
Singapore	Dec. 19-25	5		
Do	Dec. 26-Jan. 1	1		
Yugoslavia				Dec. 1-31, 1926: Cases, 3.
Do	Jan. 1-31			Cases, 3.

TYPHUS FEVER

Argentina:				
Rosario	Dec. 1-31		1	
Greece:				
Saloniki	Jan. 25-31	1		
Mexico:				
Mexico City	Jan. 30-Feb. 12	17		
Turkey:				
Constantinople	Jan. 16-22			One death reported by press.
Yugoslavia	Jan. 1-31	43	3	

Reports Received from January 1 to March 4, 1927 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China:				
Canton	Nov. 1-30	10	3	
Chungking	Nov. 14-20			Present.
Do	Jan. 2-8			Do.
Tsingtao	Nov. 14-Dec. 11			Do.
Chosen	Sept. 1-Oct. 31	252	159	
French Settlements in India	Aug. 29-Dec. 4	130	96	
India	Oct. 10-Nov. 27			Cases, 15,607; deaths, 9,185.
Bombay	Jan. 9-15	1	1	
Calcutta	Oct. 31-Jan. 1	385	313	
Do	Jan. 2-8	79	54	
Madras	Dec. 26-Jan. 1	2	2	
Do	Jan. 2-8	8	6	
Rangoon	Nov. 21-Jan. 1	11	7	
Do	Jan. 2-8	1	1	
Indo-China	July 1-31			Cases, 2,204; deaths 1,350. European, 1.
Saigon	Oct. 31-Nov. 13	2	2	
Province—				
Annam	July, 1926	215	178	July, 1925: Cases, none.
Cambodia	do	571	352	1 European, fatal. July, 1925: Cases, 3.
Cochin-China	do	390	317	July, 1925: Cases, 6; deaths, 2.
Kwang-Chow-Wan	do	220		July, 1925: Cases, 22; deaths, 15.
Laos	do	24	21	July, 1925: Case, 1.
Tonkin	do	784	482	July, 1925: Cases, 3; deaths, 1.
Japan:				
Hiogo	Nov. 14-20	3		
Philippine Islands:				
Manila	Oct. 31-Nov. 6	1		
Russia	Aug. 1-Sept. 30	8		
Siam	Apr. 1-Jan. 1			Cases, 7,847; deaths, 5,164.
Bangkok	Oct. 31-Jan. 1	16	5	
Straits Settlements	July 25-Oct. 16		60	
Singapore	Nov. 21-Dec. 18	10	5	

[1] From medical officers of the Public Health Service, American consuls, and other sources.

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

Reports Received from January 1 to March 4, 1927—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers	Reported Nov. 16	1		
Bona	Jan. 11-19	3	2	
Oran	Nov. 21-Dec. 10	32	22	
Tarafaraoui	Nov. 1-Dec. 9	10	9	Near Oran.
Angola:				
Buenguela district	Nov. 16-Dec. 31	9	6	
Cuanza Norte district	Dec. 1-31	18	10	
Mossamedes district	Dec. 16-31	10		
Brazil:				
Rio de Janeiro	Nov. 28-Dec. 4	2	2	
Do	Dec. 26-Jan. 1	1	1	On vessel in harbor.
Sao Paulo	Nov. 1-14	1	1	
British East Africa:				
Tanganyika Territory	Nov. 21-Dec. 18		12	
Uganda	Sept. 1-30	117	110	
Canary Islands:				
Atarfe	Dec. 20	1	1	Vicinity of Las Palmas.
Las Palmas	Jan. 8	1		
San Miguel	do	1		Vicinity of Santa Cruz de Teneriffe.
Celebes:				
Macassar	Dec. 22			Outbreak.
Ceylon:				
Colombo	Nov. 14-Dec. 11	3	1	2 plague rodents
Do	Jan. 2-8	1		
China:				
Mongolia	Reported Dec. 21	500		
Nanking	Oct. 31-Dec. 18			Prevalent.
Ecuador:				
Guayaquil	Nov. 1-Dec. 31	26	8	Rats taken, 50,615; found infected, 184.
Do	Jan. 1-15	5	3	Rats taken, 10,261; found infected, 53.
Egypt	Jan. 1-Dec. 9			Cases, 149.
Alexandria	Nov. 19-Dec. 2	2		
Charkia Province	Jan. 5	1	1	At Zagazig (Tel el Kebir).
Gharbia Province	Jan. 4	1	1	
Kafr el Sheikh	Dec. 3-9	2		
Marsa Matrah	Dec. 23-29	10		
Do	Jan. 27	1		
Tanta district	Nov. 19-Dec. 20	3		
Greece	Nov. 1-30	10	1	Athens and Piræus.
Athens	Nov. 1-Dec. 31	9	4	
Patras	Nov. 28-Dec. 4		1	
Pravi	Nov. 27	1	1	Province of Drama-Kavalla.
India	Oct. 10-Nov. 27			Cases, 12,988; deaths, 7,810.
Bombay	Nov. 21-27	1	1	
Madras	Oct. 31-Jan. 1	581	324	
Rangoon	Nov. 14-Dec. 25	11	9	
Do	Jan. 2-8	3	2	
Indo-China	July 1-31			Cases, 24; deaths, 10.
Province—				
Cambodia	July, 1926	6	6	July, 1925: Cases, 16; deaths, 13.
Cochin-China	do	8	4	July, 1925: No case.
Kwang-Chow-Wan	do	10		July, 1925: Cases, 22; deaths, 15.
Java:				
Batavia	Nov. 7-Jan. 1	91	90	Province.
Do	Jan. 2-8	11	11	
Surabaya	Oct. 24-Dec. 18	14	14	
Madagascar:				
Province—				
Analalava	Oct. 16-31	1	1	Bubonic.
Itasy	Oct. 16-Nov. 30	14	14	
Maevatanana	Oct. 16-31	10	10	
Moramanga	Oct. 16-Nov. 30	53	36	
Tamatave	do	14	1	
Tananarive	do			Cases, 309; deaths, 285.
Town—				
Tamatave	Nov. 16-30	2		
Tananarive	Oct. 16-Nov. 30	39	25	
Mauritius:				
Plaines Wilhems	Oct. 1-31	2	2	
Port Louis	do	7	7	
Nigeria	Aug. 1-Oct. 31	865	775	

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

Reports Received from January 1 to March 4, 1927—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Peru	Nov. 1-Dec. 31			Cases, 90; deaths, 26.
Departments—				
Ancash	Dec. 1-31	6	6	
Cajamarca	do	36	6	
Ica—				
Chincha	Nov. 1-30	1		
Lambayeque	do			Present in Province.
Chiclayo	do	3		
Libertad	Dec. 1-31	2		
Lima	Nov. 1-Dec. 31	42	14	
Canete Province	do	16	9	
Chancay Province	do	14	1	
Lima Province	do	12	4	
Portuguese West Africa:				
Angola—				
Benguela	Oct. 16-31	8	4	
Portugal:				
Lisbon	Nov. 23-26	3	2	In suburb of Balem.
Russia	May 1-June 30	44		
Do	July 1-Sept. 30	64		
Senegal	July 1-31	178	162	
Diourbel	Nov. 20-30	12	1	
Tivaouane	Dec. 19-25	6	2	In interior.
Siam	Apr. 1-Dec. 18			Cases, 26; deaths, 21
Syria:				
Beirut	Nov. 11-Dec. 20	4		
Tunisia	Dec. 1-31			Cases, 43.
Do	Jan. 12-26			Cases, 34.
Bousse	do	8		
Djeneniana	do	8		
Kairouan	do	3		
Mahares	do	15		
Sfax	Oct. 1-Dec. 31	304	128	
Turkey:				
Constantinople	Dec. 15-25	1		
Union of South Africa:				
Cape Province—				
De Aar district	Nov. 21-27	1		Native.
Craddock district	Jan. 2-8	2	1	
Hanover district	Nov. 14-Jan. 1	3	2	
Do	Jan. 2-8	1	1	
Middleburg district	Dec. 5-11	1	1	Do.
Orange Free State	do			Cases, 12; deaths, 2.
Bethaville district	Dec. 5-18	2	1	
Hoopstad district	Nov. 7-13	1	1	Native.
Do	Dec. 5-25	2	1	Do.
Do	Jan. 2-8	2		
Vredefort district	Dec. 19-25	10	5	First case occurred Dec. 1, 1926. Reported Dec. 17.

SMALLPOX

Algeria	Sept. 21-Dec. 20			Cases, 698.
Algiers	Dec. 11-31	4		
Do	Jan. 1-10	1		
Angola	Oct. 1-15			Present in Congo district.
Cuanza Norte	Nov. 1-15			Present.
Arabia:				
Aden	Dec. 12-18	1		Imported.
Belgium	Oct. 1-10	1		
Brazil:				
Bahia	Oct. 30-Dec. 18	12	8	
Para	Oct. 31-Nov. 6		1	
Pernambuco	Oct. 17-Dec. 25	58	4	
Rio de Janeiro	Year 1926			Cases, 4,083; deaths, 2,180.
Sao Paulo	Aug. 23-Dec. 5	34	18	
British East Africa:				
Tanganyika Territory	Oct. 31-Nov. 20	2		
Zanzibar	Oct. 1-31	23	12	
British South Africa:				
Northern Rhodesia	Nov. 27-Dec. 3			Cases, 200. In natives.
Bulgaria	Nov. 1-30	1		

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

Reports Received from January 1 to March 4, 1927—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Canada	Dec. 5-Jan. 1			Cases, 155.
Do	Jan. 2-Feb. 12			Cases, 271.
Alberta	Dec. 5-Jan. 1	132		
Do	Jan. 2-Feb. 12	57		
Calgary	Nov. 28-Dec. 25	12		
Do	Jan. 2-29	12		
Edmonton	Dec. 1-31	4		
Do	Jan. 1-31	5		
Manitoba	Dec. 5-Jan. 1	9		
Do	Jan. 2-Feb. 12	16		
Winnipeg	Dec. 19-25	1		
Do	Jan. 2-Feb. 12	6		
Ontario	Dec. 5-Jan. 1	96		
Do	Jan. 2-Feb. 12	170		
Kingston	Jan. 1-Feb. 5	2		
Ottawa	Dec. 12-31	5		
Do	Jan. 9-29	4		
Toronto	Dec. 14-25	14		
Do	Jan. 1-Feb. 12	47	1	
Saskatchewan	Dec. 5-Jan. 1	18		
Do	Jan. 2-Feb. 12	28		
Regina	Jan. 16-22	1		
Chile:				
Concepcion	Dec. 26-Jan. 1		5	
China:				
Amoy	Jan. 1-15	1		
Canton	Nov. 1-30	1		
Chungking	Nov. 7-Dec. 25			Present.
Do	Jan. 2-31			Do.
Foochow	Nov. 7-Dec. 25			Do.
Hankow	Nov. 6-30			Do.
Manchuria—				
Harbin	Dec. 16-31	3		
Mukden	Dec. 5-11	1		
Nanking	Dec. 12-25			Do.
Do	Jan. 2-15			Do.
Shanghai	Dec. 12-18		1	
Swatow	Nov. 21-27			Do.
Tientsin	Jan. 16-22	2		
Chosen	Aug. 1-Oct. 31	47	16	
Seoul	Nov. 1-30	2		
Egypt:				
Cairo	June 11-Aug. 26	27	4	
Estonia	Oct. 1-30	2		
France	Sept. 1-Nov. 30	214		
Paris	Dec. 1-31	10	3	
Do	Jan. 1-20	7	1	
French Settlements in India	Aug. 29-Dec. 4	108	108	
Germany:				
Stuttgart	Nov. 28-Dec. 4	7		
Gold Coast	Aug. 1-Oct. 31	57	14	
Great Britain:				
England and Wales	Nov. 14-Jan. 4			Cases, 2,262.
Do	Jan. 2-Feb. 5			Cases, 2,724.
Bradford	Jan. 9-22	2		
Newcastle-on-Tyne	Dec. 5-11	2		
Do	Jan. 2-Feb. 5	11		
Normanton	Dec. 30	1		9 miles from Leeds.
Sheffield	Nov. 28-Jan. 1	60		
Do	Jan. 2-22	243		
Wakefield	Jan. 30-Feb. 2	2		
Greece	Nov. 1-Dec. 31	25		
Athens	Dec. 1-31	14	2	
Guatemala:				
Guatemala City	Nov. 1-Dec. 31		15	
India	Oct. 10-Nov. 27			Cases, 13,112; deaths, 3,218.
Bombay	Nov. 7-Jan. 1	37	26	
Do	Jan. 2-15	29	20	
Calcutta	Oct. 31-Jan. 1	449	311	
Do	Jan. 2-8	114	89	
Karachi	Dec. 19-25	1	1	
Do	Jan. 2-15	21	21	
Madras	Nov. 21-Jan. 1	32	2	
Do	Jan. 2-22	25	3	
Rangoon	Nov. 28-Jan. 1	2	2	
Do	Jan. 2-8	1		

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

Reports Received from January 1 to March 4, 1927—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Indo-China	July 1-31			Cases, 29; deaths, 10.
Province—				
Annam	July, 1926	6	3	July, 1925: Cases, 39; deaths, 7.
Cambodia	do	11	4	July, 1925: Cases, 62; deaths, 18.
Cochin-China	do	6	1	July, 1925: Cases, 12; deaths, 7.
Laos	do	3	1	July, 1925: Cases, none.
Tonkin	do	3	1	July, 1925; Cases, 31; deaths, 3.
Iraq:				
Baghdad	Oct. 31-Dec. 4	7	4	
Basra	Nov. 7-13	1	1	
Italy	Aug. 29-Nov. 13	16		
Genoa	Dec. 20-31	1		
Do	Jan. 1-10	2		
Jamaica	Nov. 26-Jan. 1	37		Reported as alastrim.
Do	Jan. 2-Feb. 5	45		
Japan	Oct. 24-Dec. 4	6		
Kobe	Nov. 14-20	1		
Yokohama	Nov. 27-Dec. 3	2		
Java:				
Batavia	do	2		Province.
Surabaya	Oct. 24-Nov. 27	10	1	
Lithuania	Nov. 1-30	2		
Luxemburg	do	1		
Mexico	July 1-Sept. 30		413	
Chihuahua	Dec. 31			Several cases; mild.
Do	Jan. 31-Feb. 6			Present.
Ciudad Juarez	Dec. 14-27		2	
Mexico City	Nov. 23-Dec. 25	6		Including municipalities in Federal district.
Do	Dec. 26-Jan. 8	1		Do.
Parral	Jan. 31-Feb. 6			Cases, 25. Unofficially reported.
Saltillo	Feb. 6-12		1	
San Luis Potosi	Nov. 12-Dec. 18		3	
Do	Jan. 9-Feb. 12		14	
Tampico	Jan. 21-31	1		
Torreon	Nov. 28-Jan. 1		12	
Do	Jan. 2-22		5	
Nigeria	Aug. 1-Oct. 31	73	4	
Peru:				
Arequipa	Dec. 1-31		1	
Laredo	Dec. 1			Severe outbreak; vicinity of Trujillo.
Poland	Oct. 11-Dec. 18			Cases, 56; deaths, 1.
Portugal:				
Lisbon	Nov. 22-Jan. 1	43	4	
Do	Jan. 2-15	5		
Rumania	Jan. 1-Sept. 30	7	1	
Russia	May 1-June 30	705		
Do	July 1-Sept. 30	884		
Senegal:				
Dakar	Jan. 9-15	1		
Siam	Apr.-Jan. 1			Cases, 711; deaths, 268.
Bangkok	Oct. 31-Jan. 1	28	10	
Sierra Leone:				
Nanowa	Dec. 1-15	1		Pendembu district.
Spain	July 1-Sept. 30		9	
Straits Settlements:				
Singapore	Oct. 31-Dec. 18	6	2	
Tunisia	Oct. 1-Dec. 31	9		
Union of South Africa:				
Cape Province—				
Caledon district	Dec. 5-11			Outbreaks.
Steynsburg district	do			Do.
Stutterheim district	Nov. 21-27			Do.
Natal—				
Durban district	Nov. 7-27	9		Including Durban municipality. Total from date of outbreak; cases, 62; deaths, 16.
Orange Free State	Nov. 14-27			Outbreaks.
Bothaville district	Nov. 21-27			Do.
Transvaal	Nov. 7-20	2		Europeans.
Johannesburg	Nov. 14-20	1		
Yugoslavia	Nov. 1-30	1	1	

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

Reports Received from January 1 to March 4, 1927—Continued

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria	Sept. 21-Dec. 20	59	2	
Bulgaria	July 1-Nov. 30	33	5	
Chile:				
Valparaiso	Nov. 21-Dec. 25	6		
Do	Jan. 2-22	3	1	
China:				
Antung	Nov. 22-Dec. 5	4		
Chefoo	Oct. 24-Nov. 6			Present.
Chungking	Dec. 25-31			Do.
Chosen	Aug. 1-Oct. 30	17	2	
Seoul	Nov. 1-30	1		
Czechoslovakia	Oct. 1-Dec. 31	10		
Egypt:				
Alexandria	Dec. 3-9		1	
Cairo	Oct. 29-Nov. 4	1	1	
France	Nov. 1-30	1		
Gold Coast	Sept. 1-30	1	1	
Greece	Nov. 1-30			Cases, 12.
Athens	Nov. 1-Dec. 31	19	2	
Drama	Dec. 1-31	2		
Kavalla	do	2		
Ravokan	do	1		
Ireland:				
Clare County—				
Tulla district	Jan. 9-15	1		Suspect.
Italy	Aug. 29- Sept. 23	3		
Japan:				
Tokio Prefecture	Dec. 5-25	9		
Tokio city	do	5	1	
Lithuania	Sept. 1-Nov. 30	24	3	
Mexico	July 1-Aug. 31			Deaths, 46.
Aguascalientes	Jan. 9-Feb. 5	2		
Durango	Jan. 1-31		1	
Guadalajara	Jan. 25-31		1	
Mexico City	Dec. 5-11	3		Including municipalities in Federal district.
Do	Jan. 2-29	29		Do.
Parral	Jan. 30-Feb. 5	1		
Nigeria	Sept. 1-30	1		
Palestine:				
Acre	Dec. 29-Jan. 3	1		
Beisan	Dec. 21-27	1		
Haifa	Nov. 23-Dec. 13	5		
Do	Dec. 28-Jan. 31	6		
Jaffa	Nov. 23-Dec. 20	6		
Do	Jan. 11-31	2		
Jerusalem	Sept. 1-Oct. 30	19		
Majdal	Dec. 28-Jan. 3	1		
Nazareth	Nov. 16-Jan. 3	10		
Safad	Dec. 28-Jan. 3	1		
Peru:				
Arequipa	Dec. 1-31		2	
Poland	Oct. 11-Dec. 18			Cases, 314; deaths, 30.
District—				
Bialystok	Oct. 31-Nov. 27	16	1	
Kielce	Nov. 28-Dec. 4	30	3	
Stanislawow	Oct. 31-Nov. 27	52	4	
Warsaw	do	45	5	
Rumania	Aug. 1-Nov. 30	255	11	
Russia	May 1-June 30	6,043		
Do	July 1-Aug. 31	3,060		
Spain	July 1-Sept. 30		4	
Tunisia	Oct. 1-Dec. 27	30		
Turkey:				
Constantinople	Dec. 12-25	3		
Union of South Africa	Oct. 1-30			Cases, 71; deaths. 8.
Cape Province	do	47	7	
Do	Nov. 14-Dec. 18			Outbreaks.
Do	Jan. 2-8			Do.
East London	Nov. 21-27	1		Native. Imported.
Port St. Johns district	Dec. 5-11			Outbreaks. On farm.
Natal	Oct. 1-31	1		
Orange Free State	do	22	1	
Transvaal	do	1		
Yugoslavia	Nov. 1-Dec. 31	30	2	

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

Reports Received from January 1 to March 4, 1927—Continued

YELLOW FEVER

Place	Date	Cases	Deaths	Remarks
French Sudan	Dec. 19-25	1	1	
Gold Coast	Aug. 1-Sept. 30	8	3	
Nigeria	Sept. 1-30	1		
Senegal	Dec. 19-25	3	3	
Diourbel	Dec. 6	1	1	
Do	Jan. 1-20	1	1	At N'Bake.
Guinguineo	Dec. 7	1	1	
Rufisque	Nov. 27-Dec. 29	2	1	In European.
Do	Jan. 2-8	3	3	
Upper Volta:				
Gaoua district	Oct. 25	2		