

PUBLIC HEALTH REPORTS

VOL. 37

NOVEMBER 17, 1922

No. 46

MORTALITY FROM PULMONARY TUBERCULOSIS IN RECENT YEARS.¹

1. The Variation in Its Course During the War and Its Decline Since 1918.

By ROLLO H. BRITEN, Junior Statistician, and EDGAR SYDENSTRICKER, Statistician, United States Public Health Service.

The course of mortality from pulmonary tuberculosis in the United States during and since the World War becomes clearer since the official statistics for 1920 and provisional data for 1921 and the first four months of 1922 have become available.

The extraordinary decline in the death rate from this disease since 1918 has been the subject of a good deal of speculation and the occasion of much rejoicing. The yearly rates for 1918, 1919, and 1920 from the United States Census Bureau and for 1921 from provisional data supplied the United States Public Health Service by the State health departments are shown for 24 States in Table I.

TABLE I.—Mortality from pulmonary tuberculosis in 24 States, by years, 1918–1921.

State.	Annual rate per 100,000.			
	1918	1919	1920	1921 ^a
California.....	168	156	142	133
Colorado.....	220	201	212	165
Connecticut.....	132	110	104	83
Delaware.....	(b)	153	132	118
Florida.....	(b)	99	96	86
Indiana.....	120	98	93	76
Kansas.....	53	45	41	37
Kentucky.....	179	146	134	110
Louisiana.....	176	135	133	113
Maine.....	98	85	85	65
Maryland.....	189	149	132	117
Massachusetts.....	138	110	97	84
Michigan.....	88	74	72	60
Minnesota.....	90	82	77	65
Mississippi.....	(b)	130	133	101
New York.....	149	125	106	88
Oregon.....	74	74	74	39
Pennsylvania.....	134	104	91	79
South Carolina.....	137	127	112	82
Tennessee.....	186	151	145	125
Vermont.....	88	75	67	56
Virginia.....	168	136	130	119
Washington.....	87	84	82	64
Wisconsin.....	82	73	74	64

^a Provisional data.

^b Not in registration area.

¹ From the Statistical Office, Field Investigations, United States Public Health Service.

But the decrease during the past four years can not be considered as a fact of significance unless it is viewed against the background of previous experience and in relation to possible conditions of an unusual or temporary character. A decrease during a relatively short period first must be established as a significant variation among the different kinds of variations that occur in a continuous series of death rates covering a much longer period. If, after allowing for possible changes in diagnosis and classification of causes of death, it is shown to be a significant variation, then it properly may be analyzed for the purpose of evaluating as far as practicable the effect of various factors.

From this point of view, a brief consideration is given in the following pages to the course of mortality from pulmonary tuberculosis in the United States in recent years in order to describe as accurately as possible what this course has been. A later paper will deal with the changes that have occurred in the death rate from this disease among persons of different sexes and ages, with special reference to the period during which epidemics of influenza occurred.

In the first place, it may be pointed out that a distinct "wave" of unusual magnitude in mortality from pulmonary tuberculosis occurred in this country during the past seven or eight years.² The fact that such a wave occurred at once suggests that at least part of the rapid decline since 1918 may have been simply the return to a normal level or, to put it more exactly, to the line of the trend as determined by the experience of previous years. To determine this point, it is necessary to ascertain what this trend has been and what the course of mortality from the disease would have been had the same trend been maintained.

The mortality records for Massachusetts are the best for this purpose, since they are available for a longer period than are those for any other State. In Table II the pulmonary tuberculosis death rates, as abstracted from the Massachusetts registration reports, are shown by years from 1857 to 1921, inclusive, a period of 64 years:

² The occurrence of such a variation in the pulmonary tuberculosis death rate was suggested in a previous article from this office (Note on the Course of Pulmonary Tuberculosis Mortality since 1914. Public Health Reports, May 27, 1921, 36: 1178-1183) in which it was observed that (1) the more or less steady decline prior to the war was interrupted by a definite rise, which was widespread and lasted through 1918, followed by a marked decline in 1919 and 1920; (2) the high rate for 1918 apparently was due to the two waves of epidemic influenza, and the rate for 1920 was probably somewhat increased by the 1920 epidemic influenza wave; and (3) roughly discounting the effect of the influenza epidemic, the existence of an unusual wave of mortality from pulmonary tuberculosis is still clearly shown, beginning in 1916, reaching its crest in 1917, and declining in 1918, 1919, and 1920.

TABLE II.—Mortality from pulmonary tuberculosis in Massachusetts, by years, 1857–1921.^a

Year.	Annual rate per 100,000.	Year.	Annual rate per 100,000.	Year.	Annual rate per 100,000.	Year.	Annual rate per 100,000.
1857.....	395.0	1874.....	328.0	1891.....	239.6	1908.....	137.4
1858.....	384.2	1875.....	347.4	1892.....	244.8	1909.....	132.8
1859.....	388.6	1876.....	317.6	1893.....	231.0	1910.....	133.2
1860.....	370.2	1877.....	320.4	1894.....	223.4	1911.....	128.2
1861.....	365.2	1878.....	308.4	1895.....	223.4	1912.....	119.9
1862.....	342.8	1879.....	297.4	1896.....	216.4	1913.....	116.8
1863.....	372.6	1880.....	308.1	1897.....	207.4	1914.....	114.5
1864.....	375.7	1881.....	324.5	1898.....	197.4	1915.....	113.3
1865.....	367.9	1882.....	317.9	1899.....	190.4	1916.....	121.2
1866.....	353.0	1883.....	316.0	1900.....	185.3	1917.....	121.1
1867.....	325.5	1884.....	303.6	1901.....	176.7	1918.....	132.5
1868.....	322.0	1885.....	306.6	1902.....	162.1	1919.....	110.0
1869.....	328.8	1886.....	295.1	1903.....	154.7	1920.....	97.3
1870.....	343.3	1887.....	285.6	1904.....	164.1	1921.....	84.2
1871.....	339.3	1888.....	270.8	1905.....	155.9		
1872.....	362.6	1889.....	256.5	1906.....	149.2		
1873.....	353.6	1890.....	258.6	1907.....	150.9		

^a Rates as published in Massachusetts registration reports. These rates differ slightly from those published by the U. S. Census Bureau for the years for which both sources of data are available.

In Figure 1 the yearly Massachusetts data are shown graphically. A logarithmic ordinate scale has been employed to permit a study of the rate of decrease or increase. It will be kept in mind that a straight line on such a scale indicates that a constant rate of rise or fall is being maintained.

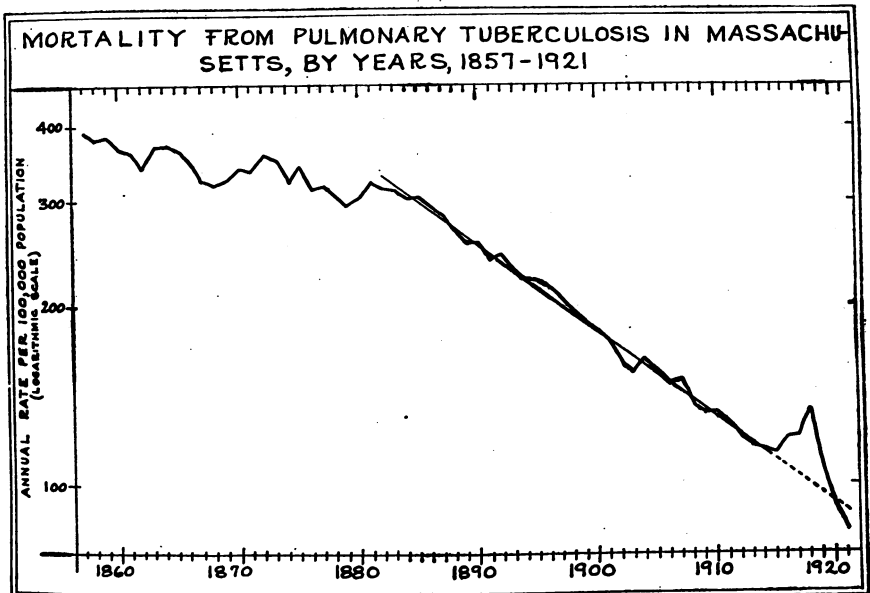


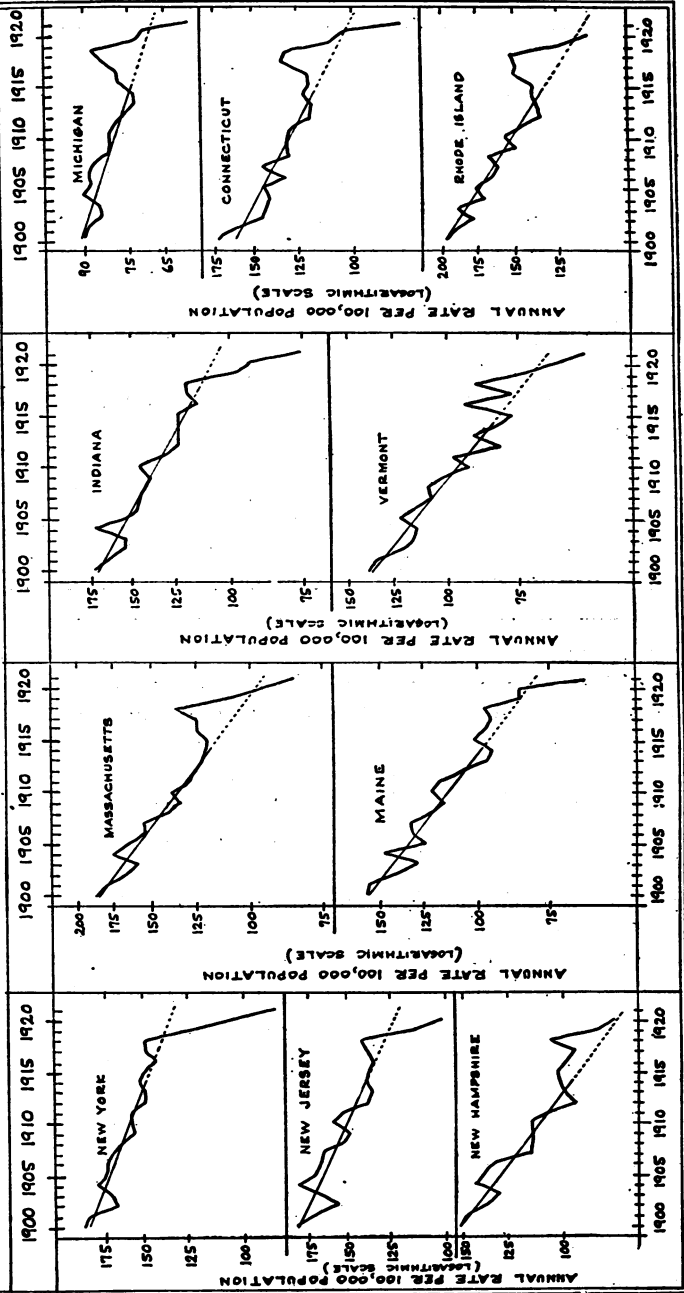
FIG. 1.

The curve for pulmonary tuberculosis mortality in Massachusetts, drawn on such a scale, challenges attention. Previous to about 1882 or 1883 there occurred, apparently, periodic variations of considerable length and magnitude about a trend which was slightly downward. Since then and until 1914 these periodic variations have been very much smaller and the decrease has been much more accelerated. If we fit a straight line to the period 1883–1914, as has been done in Figure 1 by inspection, it becomes quite clear that the same rate of decline, except for relatively slight variations, was maintained during the whole period of 30 years. Against such a background the changes in the rate during the past seven years are striking indeed. No such variation has occurred since 1880, and it is evident that the recent variation is of greater magnitude, considered in relation to the length of the cycle or period of variation, than any other in the entire period for which continuous mortality records are available in Massachusetts.

The further fact is equally evident that if we extend the straight line which was fitted to the rates for 1883–1914 through 1921 (see dotted line in fig. 1), we find that the rate for 1920 was practically on this line and the rate for 1921 not very far under it. In other words, for Massachusetts at least it is clearly suggested that in 1921 the death rate from pulmonary tuberculosis was not very much below what it would have been had there been no "wave" of mortality in the period 1915–1920.

But while Massachusetts affords in this instance an excellent illustration of the possibility of drawing an erroneous conclusion from changes in the death rate—especially when an encouraging drop occurs—unless sufficient attention is given to the trend over a period of considerable length, the course of mortality from pulmonary tuberculosis in one State can not be assumed to be representative of what happened in other sections of the country. Unfortunately, we do not have available similar records for other States over nearly so long a period, but it is possible to utilize the records for the period 1900–1920 and provisional data for 1921 for the 10 "original" registration States. The yearly rates are given in Table III and are plotted in Figure 2 on logarithmic ordinate scales of the same magnitude.

**MORTALITY FROM PULMONARY TUBERCULOSIS IN TEN STATES
BY YEARS, FROM 1900 TO 1921⁽¹⁾**



(1) RATES FOR 1921 PROVISIONAL.

FIG. 2.

TABLE III.—Mortality from pulmonary tuberculosis in 10 "original" States, by years, 1900-1921.

State.	Annual rate per 100,000.										
	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
Connecticut.....	173.1	162.2	145.4	143.2	141.1	144.1	132.6	144.9	129.6	130.7	131.1
Indiana.....	173.2	164.1	153.9	153.6	172.9	152.3	145.6	145.2	142.2	138.6	144.9
Maine.....	157.4	155.1	138.8	128.3	146.2	123.2	130.1	132.3	119.7	114.3	120.9
Massachusetts.....	188.0	170.0	166.4	158.3	173.6	163.1	153.3	153.6	140.4	134.0	137.6
Michigan.....	90.2	88.4	84.1	85.3	91.3	87.6	88.6	85.5	82.3	80.7	82.4
New Hampshire.....	151.1	147.0	135.5	129.6	142.1	137.4	132.1	114.1	112.6	112.8	113.9
New Jersey.....	184.0	171.7	157.1	169.3	181.6	170.7	168.4	165.9	154.1	148.5	158.9
New York.....	191.1	186.8	166.8	170.7	179.7	173.7	173.8	169.0	164.3	155.4	158.2
Rhode Island.....	196.9	192.1	178.8	189.6	170.5	175.6	165.0	161.6	167.8	150.1	156.8
Vermont.....	138.2	133.9	119.6	114.8	114.4	122.0	113.3	103.7	108.3	100.9	92.1

State.	Annual rate per 100,000.										
	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921
Connecticut.....	126.8	120.0	118.9	123.2	119.5	121.3	134.3	131.8	103.8	103.8	83.4
Indiana.....	131.1	123.9	124.3	124.0	121.8	114.3	119.9	120.4	97.7	92.9	76.0
Maine.....	117.0	107.1	97.1	95.4	102.0	97.7	93.3	93.3	84.9	85.1	64.5
Massachusetts.....	150.3	126.1	121.5	119.8	119.3	125.0	125.3	138.1	109.8	93.9	84.1
Michigan.....	79.9	77.3	73.5	74.3	78.2	78.7	83.6	88.2	73.6	72.0	60.0
New Hampshire.....	104.8	95.1	99.4	100.5	102.0	97.8	95.0	107.7	86.6	81.4	.....
New Jersey.....	152.6	137.1	134.6	137.7	136.9	133.6	137.8	141.2	114.2	102.0	.....
New York.....	156.6	148.8	148.7	151.9	148.6	142.0	157.6	148.9	124.6	101.1	87.9
Rhode Island.....	147.2	135.1	137.3	139.8	138.9	150.8	150.4	153.3	124.9	110.6	.....
Vermont.....	97.6	81.4	89.6	82.1	76.5	93.0	76.7	88.7	75.4	67.0	56.6

¹ Provisional data.

In order to determine as nearly exactly as possible the trend of mortality from pulmonary tuberculosis in each State, straight lines were fitted to the rates for the period 1900-1914, inclusive.³ Since a straight line fits the rates very well in each instance it may be assumed to represent the trend of mortality fairly accurately for the period for which calculated. The trends are indicated by straight lines for 1900-1914, and their extensions beyond 1914 by dotted lines.

It is evident that the curves for the various States differ considerably with respect to the positions of the rates for 1920 and 1921 in relation to the trend during the period 1900-1914. For the seven States for which 1921 provisional rates are available, the 1921 rates are below the extended trend lines; that is, the 1921 rates are lower

³ Straight in case of logarithmic scales. The formula for the line is $y=ab^x$, or, expressed in logarithmic form, $\log y = \log a + x \log b$. This is, of course, in the form of the equation for any straight line. If, then, straight lines are fitted to the logarithms of the rates in Table III, the antilogs of the derived constants $\log a$ and $\log b$ can be used in the equation $y=ab^x$. If an odd number of terms is used and x is taken as zero at 1907, the constants can be determined readily from the formulae:

$$\log a = \frac{S \log y}{n}, \log b = \frac{S x \log y}{Sx^2}$$

It may be suggested to those not familiar with the procedure that the only difficulty which will arise will be in regard to the sign of $\log b$. In case of a curve sloping down toward the right it will be minus. That does not mean that the logarithm is minus, but that the equation must be put in the form $\log y = \log a - x \log b$, or, in the case of the antilog equation, $y = \frac{a}{b^x}$. In this case, on the left side of $x=0$, a will be multiplied by b ; on the right side it will be divided by b .

than they would have been had the trend during 1900-1914 been maintained. Without attempting to calculate the probabilities, it is quite evident that most of these deviations are significant, as well as the deviation for 1920 in New Jersey. The percentage of decrease in 1921 over 1920 may be compared with the annual average and maximum percentage of decrease in the period 1900-1914 for each of the seven States, as in Table IV.

TABLE IV.—Average yearly rate of decline of mortality from pulmonary tuberculosis from 1900 to 1914 compared with rate of decline in 1921 over 1920 in certain States.¹

State.	Percentage of decline.		
	1900-1914		1921 over 1920.
	Average per year. ²	Maximum.	
Connecticut.....	2.2	10.5	19.6
Indiana.....	2.3	12.1	18.2
Maine.....	3.2	15.8	24.2
Massachusetts.....	3.2	9.1	13.2
Michigan.....	1.3	5.7	16.7
New York.....	1.6	10.7	17.2
Vermont.....	3.5	17.3	15.5

¹ Shown for States for which data from 1900 to 1921, inclusive, are available. The average rates of decline for the three additional States in Table III were: New Hampshire, 3.3; New Jersey, 1.9; Rhode Island, 2.7.

² Constant *b* of equations for straight lines which are plotted in Fig. 2.

If the 10 States be considered as a single population group, not only is there shown a marked decline from 1918 in the 1919 and 1920 rates, but the 1920 rate is definitely under a trend line that has been fitted to the 1900-1914 rates. The rates, the trend, and the deviations therefrom for the 10 States as a group in the period 1900-1920 are shown in the following table:

TABLE V.—Yearly deviations from the trend of mortality from pulmonary tuberculosis in 10 "original" registration States, 1900-1920.

Year.	Rate per 100,000.			Year.	Rate per 100,000.		
	Yearly.	Trend. ¹	Yearly deviations from trend.		Yearly.	Trend. ¹	Yearly deviations from trend.
1900.....	171.6	167.5	4.1	1911.....	135.7	134.7	1.0
1901.....	165.5	164.2	1.3	1912.....	127.9	132.1	-4.2
1902.....	151.0	161.0	-10.0	1913.....	126.3	129.5	-3.2
1903.....	152.3	157.8	-5.5	1914.....	127.8	126.9	.9
1904.....	162.5	154.7	7.8	1915.....	126.5	124.4	2.1
1905.....	154.0	151.7	2.3	1916.....	124.0	122.0	2.0
1906.....	151.4	148.7	2.7	1917.....	128.0	119.6	8.4
1907.....	149.3	145.8	3.5	1918.....	130.7	117.3	13.4
1908.....	142.7	142.9	-.2	1919.....	108.6	115.0	-6.4
1909.....	137.0	140.1	-3.1	1920.....	98.9	112.7	-13.8
1910.....	140.7	137.4	3.3				

¹ Determined by fitting a straight line on logarithmic scale to the yearly rates during the period 1900-1914.

The 1921 rate for seven of these States, as suggested by the graphs in Figure 2, would be well below this trend line. While the rate for the combined States is heavily influenced by New York, with its large population and its very remarkable decline since 1918, there does not seem to be any reason to doubt the occurrence of an unusually rapid drop in the pulmonary tuberculosis death rate in the United States during the last two years. The yearly rates for

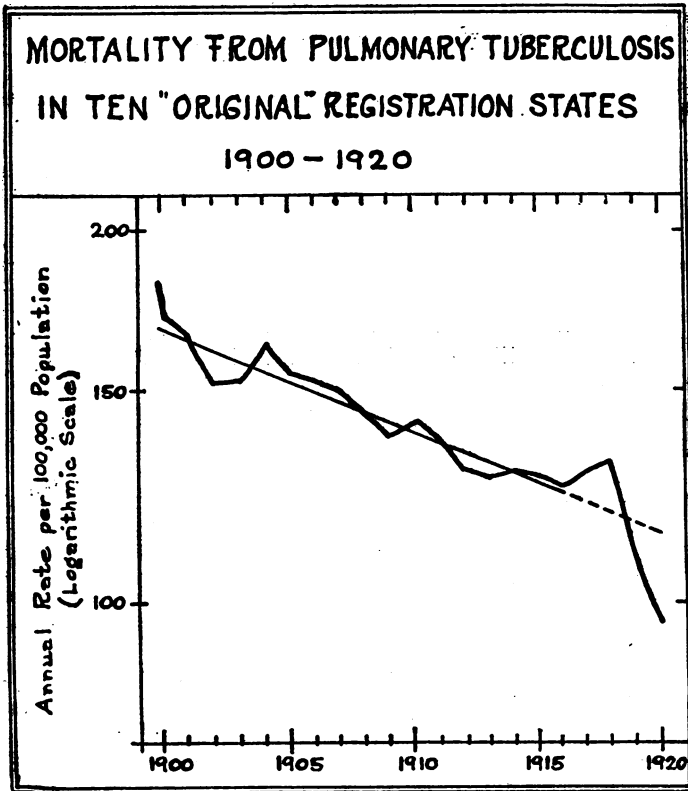


FIG. 3.

1900-1920, as well as the trend for 1900-1914 and its extension (dotted line), are plotted in Figure 3.

In order to describe this unusual wave more accurately, it is necessary to isolate the apparent or actual increase in mortality from pulmonary tuberculosis during the periods when influenza was epidemic. To ascertain, even approximately, the excess of deaths recorded as due to pulmonary tuberculosis over and above the mortality which properly may be considered as disassociated from the epidemics of influenza, it is necessary to use shorter intervals than years, since

each of the waves of epidemic influenza themselves lasted only a few weeks. Weekly data, however, are not available except for a limited number of cities, and recourse must be had to monthly records. The monthly rates are satisfactory for the purpose in view, since we do not wish to measure in exact terms how much excess appeared, but only to determine roughly the nature of the curve of the variation in those months in which epidemic influenza was absent. The annual death rates from pulmonary tuberculosis have been computed, therefore, for 24 States—as large an area as possible—for each month during the period 1915–1920, inclusive, and for 16 of the 24 States in 1921, as well as for Massachusetts. They are given in Tables VI and VII.

TABLE VI.—*Mortality from pulmonary tuberculosis in 24 States, by months, 1915–1921.*

Year.	Annual death rate per 100,000.											
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1915.....	129.6	138.9	150.6	148.7	136.3	122.5	115.6	166.5	104.0	104.7	110.1	120.0
1916.....	134.9	140.5	141.9	140.6	130.9	119.6	105.7	105.3	101.0	102.2	108.5	120.9
1917.....	136.5	145.2	149.2	145.2	138.9	121.4	115.2	100.3	108.4	106.0	110.7	118.0
1918.....	130.0	140.6	157.1	156.8	132.1	120.2	106.5	101.8	101.8	150.2	128.6	129.8
1919.....	142.3	142.2	139.3	135.0	123.1	109.8	104.2	95.6	87.5	88.9	91.2	99.0
1920.....	108.6	144.8	119.7	115.6	109.3	98.4	89.6	82.9	80.1	80.2	81.0	84.7
1921 ¹	89.0	95.0	97.1	100.4	94.9	85.0	76.8	75.4	71.6	72.6	75.8	76.8

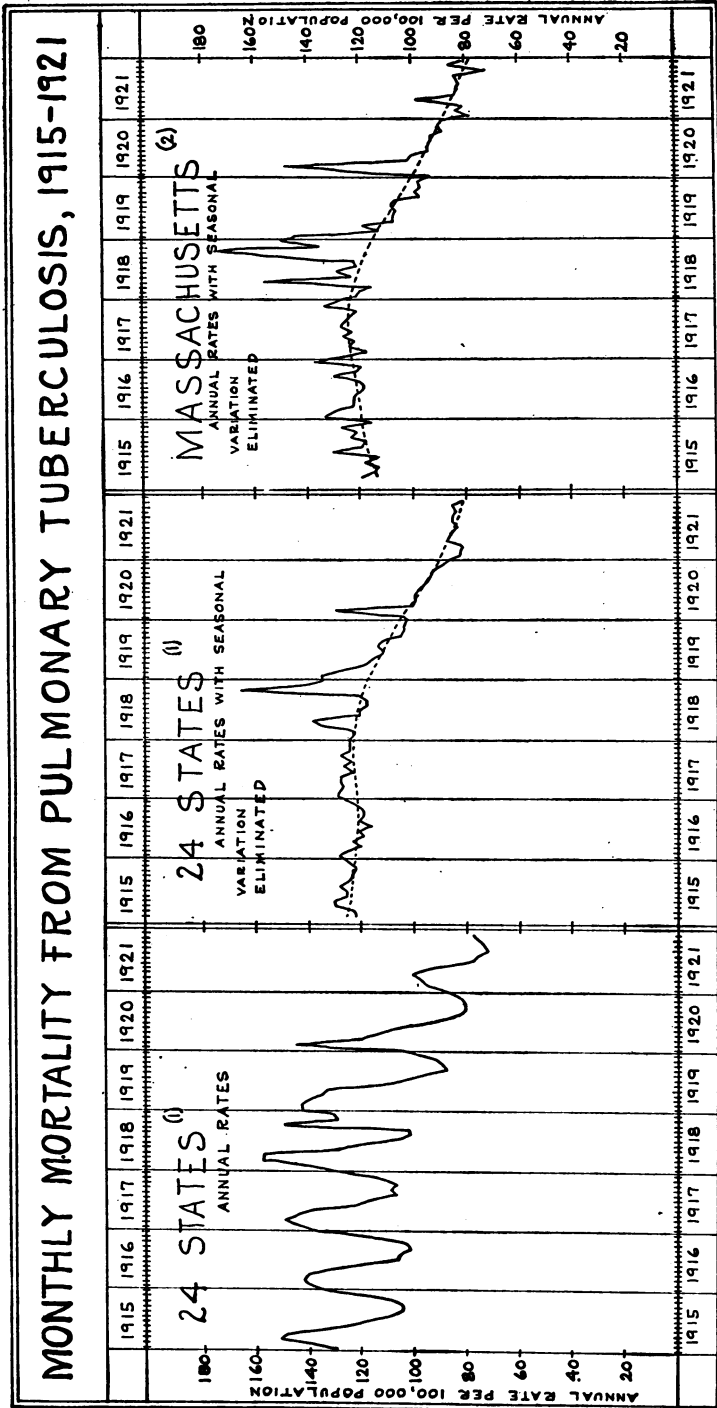
¹ Provisional data for 16 States out of the 24 considered in previous years.

TABLE VII.—*Mortality from pulmonary tuberculosis in Massachusetts, by months, 1915–1921.*

Year.	Annual death rate per 100,000.											
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1915.....	126.9	135.5	137.0	137.9	125.0	127.5	111.7	101.9	108.0	101.9	114.1	106.1
1916.....	139.0	152.4	147.0	142.7	135.8	118.1	111.7	104.0	115.8	102.1	105.5	127.5
1917.....	131.7	142.4	150.1	143.0	139.6	121.4	119.7	109.3	107.1	101.1	118.5	119.1
1918.....	128.4	146.3	142.1	177.2	136.8	127.2	115.6	107.9	135.9	157.4	131.7	141.8
1919.....	150.7	134.9	142.1	127.2	119.1	103.6	102.8	93.5	85.2	81.8	87.1	91.4
1920.....	98.3	145.2	166.6	117.7	111.1	93.4	88.0	81.0	80.5	73.4	79.3	81.0
1921 ¹	81.8	100.2	97.7	113.1	92.6	81.2	78.2	71.6	74.3	60.1	77.8	74.7

¹ Provisional data.

As soon as we use monthly data we introduce another variable, namely, season. Because of the obscuring effect of the normal seasonal variation, the monthly rates (as will be seen by glancing at the first graph in fig. 4) fail to show with any definiteness either the trend or the effect of the epidemic on them. It has been necessary, therefore, to eliminate this variation from the rates. The results for the 24 States and for Massachusetts alone are also shown in Figure 4. The rates plotted are the same as those given in the tables, except



(1) FOR 1921, PROVISIONAL DATA FOR ONLY 16 STATES AVAILABLE.

(2) 1921 DATA PROVISIONAL.

FIG. 4.

that additions and subtractions have been made to eliminate the fluctuation due to season.⁴

The graph presents clear pictures, on the one hand, of the departures from the expected or "normal" mortality from pulmonary tuberculosis at different seasons of the year, and, on the other, of the variations in tuberculosis mortality disentangled from the epidemics of influenza. The high peaks in the spring of 1918, in the fall and winter of 1918-19, and in the spring of 1920, reflect in a striking manner the corresponding peaks of mortality from influenza-pneumonia, and there is even a suggestion of some correspondence between the tuberculosis and influenza-pneumonia mortality rates in 1915, 1916, and 1917.⁵ A discussion of what this association actually means is beyond the limits of this paper, since we merely wish at this time to describe, with greater accuracy than we have done before, the recent variation in the death rate from pulmonary tuberculosis. But the variation itself is quite clear. Taking the 24 States as a unit, the rate ceased to decline in the early part of 1916 and began to increase in the latter part of the same year, rising until the beginning of 1918, and then began its marked decline, passing the trend line (if we may use that determined for the 10 original registration States for the period 1900-1914) in about the middle of 1919. For Massachusetts the wave began considerably earlier, quite definitely in 1915.

What were the conditions that gave rise to this variation, this wave of increased mortality from pulmonary tuberculosis which appears even after the effect of the influenza epidemics has been taken into account?

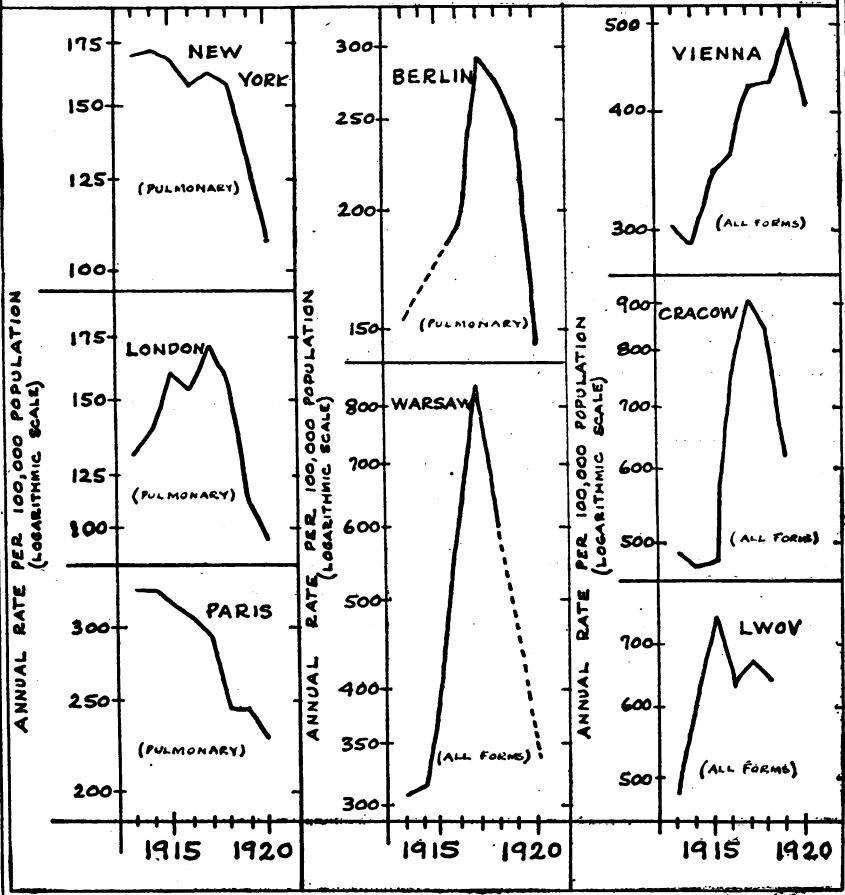
The question can not, of course, be answered by a study of the gross deaths alone. Possible factors may be suggested only. There can be no question as to the effect of conditions arising out of the war, upon the tuberculosis death rate in countries situated within the immediate field of war. One has only to glance at the curves as plotted in Figure 5 for some of the European cities to be impressed by the enormous variation in the rate.⁶ The data are given

⁴ The statistical procedure was to eliminate seasonal variation only and obtain values in terms of death rates that would exhibit the general trend, the cyclical variation (or "wave"), and the more significant deviations from them. A relatively simple graphical method was found to yield sufficiently exact results. The rates for each calendar month were plotted separately on semilogarithmic paper and from them the curve which best represented the trend and wave during the 7-year period was found. This curve was then fitted to the rates as plotted and a different set of values for each calendar month read off. The deviations of the rates from these values were next computed and added to the curve representing trend and "wave" as previously calculated. The resulting items were fairly close approximations to the pulmonary tuberculosis death rate by months with the seasonal fluctuations eliminated.

⁵ So far as 1918, 1919, and 1920 are concerned, the time of occurrence of the epidemic peaks is well known. A discussion of the presence of distinct peaks in the three preceding years is given in a paper on "The Epidemiology of Influenza," by W. H. Frost, Reprint No. 550 from the Public Health Reports of August 15, 1919, vol. 34, No. 33, pp. 1823-1835.

⁶ Attention may be called to a recent article on the increase of tuberculosis in Germany during the war: Kirchner, M.: Die Zunahme der Tuberkulose während des Welt-Krieges und ihre Gründe. *Zeitschr. f. Tuberk.*, May, 1921, xxxiv, 228. The article is abstracted fully in the American Review of Tuberculosis, July, 1922: Abstracts of Tuberculosis, Vol. VI, Abst. No. 3, pp. 141-145.

MORTALITY FROM TUBERCULOSIS IN CERTAIN AMERICAN AND EUROPEAN CITIES, BY YEARS, 1913-1920 ⁽¹⁾



¹ Rates taken from a table compiled by G. J. Drolet, statistician, New York Tuberculosis Association, and published in the bulletin of that association, Jan.-Feb., III, 7.

FIG. 5.

in Table VIII, which also compares the pulmonary tuberculosis death rate in England and Wales with that in 20 States of the United States.⁷ (See fig. 6.)

TABLE VIII.—Mortality from tuberculosis in the United States and in England and Wales, by years, 1910-1920, and in New York City and in certain European cities, by years, 1913-1920.¹

Place.	Form.	Annual death rate per 100,000.										
		1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920
20 States of United States..	Pulmonary....	133	130	122	120	121	121	113	123	129	108	98
England and Wales.....	do.....	101	103	102	99	102	116	118	125	134	160	89
New York.....	do.....				171	173	169	159	164	160	132	109
London.....	do.....				130	133	160	153	171	159	117	106
Paris.....	do.....				328	328	319	307	295	248	248	227
Berlin.....	do.....				153			194	292	276	245	148
Vieenna.....	All forms.....				302	278	322	357	425	427	490	405
Warsaw.....	do.....				305	312	410	601	840	592		338
Loz.....	do.....								1,164	775		604
Cracov.....	do.....				487	473	480	759	908	845		616
Lwow.....	do.....				480	586	741	622	665	635		

¹ Data taken in part from a table compiled by C. J. Drolet, statistician, N. Y. Tuberculosis Association, and published in the Bulletin of that association, January-February, 1922, iii: 7; in part from published reports of Registrar General of England and Wales, and of the Census Bureau of the United States.

² Civilian death rate only.

In England and Wales a marked rise in the rate began as early as 1914, reaching its peak in 1918, and falling rapidly to a low point in 1920. In the United States, while the rate was on a higher level before the war than in England and Wales, there was a quite definite rise in the latter part of 1916 (and in Massachusetts in 1915, as our monthly graphs have indicated), later than in England and Wales, but definitely before our entry into the war. In fact, the crest of the wave was passed in 1917 in this country, and the decline of the wave actually set in prior to the major peaks of the influenza epidemic. Its possible association with the extreme industrial depression which occurred in 1914 and 1915 has already been suggested.

In studying the course of the death rate from this as well as other nonepidemic diseases, however, one can not fail to recognize the fact, already referred to, that periodic variations or "waves" occur with more or less regularity. As a result, the epidemiologist, while having faith in the continued decline in the *trend* of tuberculosis, may seem pessimistic at the very times when the death rate is dropping most rapidly because he has learned to recognize the probability (based on past experience) that a marked acceleration of a decline will be followed by a period of arrested decline or of even increased mortality. Just as at least some of the recent decrease in the tuberculosis death rate properly might be considered as the descending limb of a curve which had its peak in 1917, so it is reason-

⁷ The same area is maintained in the statistics for the whole period in order to render the data for the different years comparable.

able to conceive of the possibility that we are reaching the minimum rate of a cycle—the “trough” of a “wave.”

There are already evidences of a very definite slowing up of the rapid decline in the tuberculosis death rate, and, in at least some localities, of an increase over the 1921 rate. In New York City, for example, the rate declined from 105.1 per 100,000 in April, 1920, to 84.2 for the same month in 1921, or nearly 20 per cent, whereas the

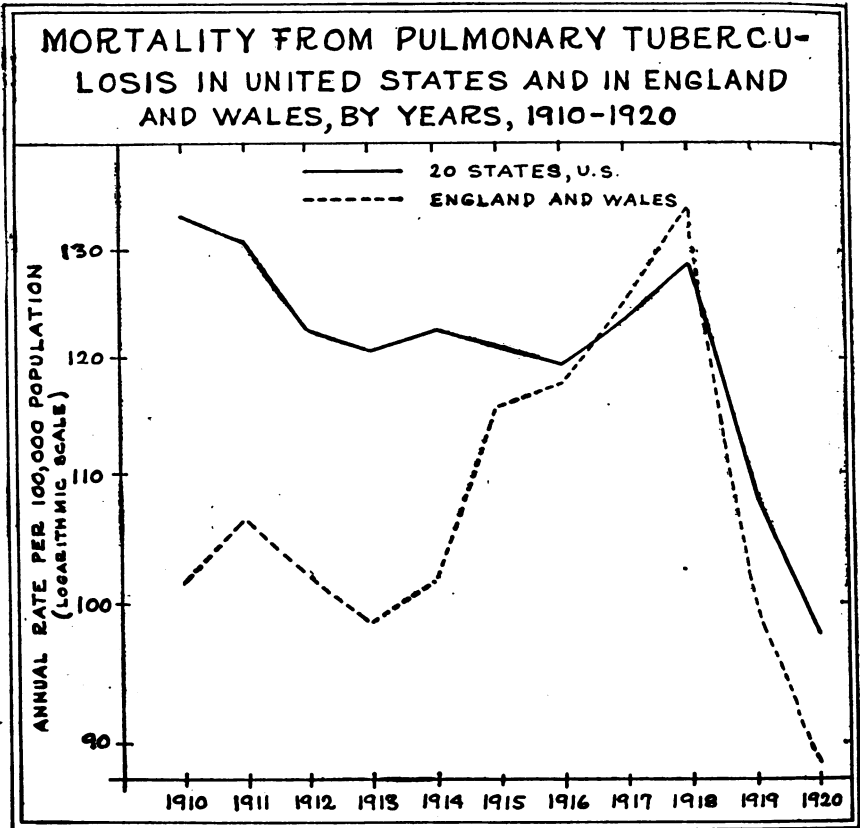


FIG. 6.

rate in April, 1922, was 82.5, a decline over 1921 of only about 2 per cent. In New York State, exclusive of New York City, the April rate declined from 95.5 in 1920 to 76.4 in 1921, or 20 per cent, while the April, 1922, rate was 85.4, an increase of over 10 per cent. The statistical bureau of the Metropolitan Life Insurance Co., in its June, 1922, bulletin, notes that “for the first time in many months the death rate for tuberculosis of the respiratory system shows a slight increase over the rate in the preceding year” among its policy-

holders. From preliminary figures supplied currently to the Public Health Service and published in the Public Health Reports, the annual death rate per 100,000 from all forms of tuberculosis (pulmonary not being given separately in these reports) has been computed for 23 of the largest cities in the United States during the period April 1-June 30, 1922, and for a corresponding period in 1921, as shown in Table IX.

TABLE IX.—*Mortality from tuberculosis (all forms) in 23 large cities of the United States during April, May, and June, 1921 and 1922.*

City.	Number of weeks for which reports were received. ¹	Annual death rate per 100,000.	
		1921	1922
Baltimore.....	10	201	250
Boston.....	12	386	373
Buffalo.....	11	275	220
Chicago.....	12	385	425
Cincinnati.....	11	320	224
Columbus.....	12	67	105
Detroit.....	12	239	251
Indianapolis.....	11	231	84
Jersey City.....	11	147	203
Kansas City, Mo.....	12	60	114
Milwaukee.....	12	190	162
Minneapolis.....	11	309	336
Newark.....	9	356	303
New Orleans.....	12	262	305
New York ²	12	259	254
Philadelphia.....	11	211	202
Pittsburgh.....	8	181	153
Portland, Oreg.....	12	171	124
Rochester.....	9	279	338
St. Louis.....	11	293	290
San Francisco.....	11	284	272
Toledo.....	8	121	140
Washington.....	12	275	335

¹ Data for corresponding weeks only in the two years compared.

² Pulmonary only.

It will be noted that for 12 of the 23 cities the 1922 rate is actually higher than the 1921 rate, and that in at least four more the decline is negligible.

It would be hazardous to prophesy, however, simply upon the basis of the past behavior of figures. One can only point out that, judging from past experience and without attempting to give mathematical expression to the probability, a slowing up of the recent rapid decline of the pulmonary tuberculosis death rate or even the beginning of another upward variation is to be expected.

Whether or not a new trend has set in since 1917 is a question that can not be answered until a sufficient number of years has elapsed to permit proper allowance statistically for the periodic variations which, as we have seen, characterize the course of the disease.

SUMMARY.

1. A period of increased mortality from pulmonary tuberculosis is definitely indicated in the United States during the period 1915-1918. In some States, notably Massachusetts, this wave was quite marked and its magnitude exceeded previously recorded variations of a periodic nature when the trend is taken into account.

2. The rates for 1921 are so far below the trend line, as established by preceding years, in most of the States for which sufficient data are available and for the 10 "original" registration States as a whole, that the decline since 1919 or 1920 appears definitely to be unusual.

3. When the effect of the influenza epidemics in 1918-19 and 1920, in apparently or actually increasing the pulmonary tuberculosis death rate in those years, is taken into account, the wave of increased mortality is more accurately described as beginning in 1915 or 1916, reaching its crest in 1917, and beginning to decline well before the major influenza epidemics occurred. This "wave" occurred in European countries also, but began earlier than in the United States, reached a much greater magnitude, and subsided later. The possibility of an association between the "wave" as it appeared in the United States and the unfavorable economic conditions in 1914 and 1915 has been suggested.

4. Whether or not a new direction or trend of mortality from this disease began about 1918 can not be ascertained until a considerable period of years has elapsed and the magnitude of the shorter periodic variations has been determined.

5. There are indications that a low point has been temporarily reached in mortality from pulmonary tuberculosis in the United States and that either the recent rapid decline will be arrested or an actual increase—possibly another upward variation—will take place. In other words, we may be in the "trough" of a periodic "wave."

DEATHS DURING WEEK ENDED NOVEMBER 4, 1922.

Summary of information received by telegraph from industrial insurance companies for week ended November 4, 1922, and corresponding week 1921. (From the Weekly Health Index, November 7, 1922, issued by the Bureau of the Census, Department of Commerce.)

	Week ended Nov. 4, 1922.	Corresponding week 1921.
Policies in force.....	51, 100, 523	48, 140, 310
Number of death claims.....	8, 367	7, 921
Death claims per 1,000 policies in force, annual rate.....	8.5	8.6

Deaths from all causes in certain large cities of the United States during the week ended November 4, 1922, infant mortality, annual death rate, and comparison with corresponding week of 1921. (From the Weekly Health Index, November 7, 1922, issued by the Bureau of the Census, Department of Commerce.)

City.	Estimated population July 1, 1922.	Week ended Nov. 4, 1922.		Annual death rate per 1,000, corresponding week 1921.	Deaths under 1 year.		Infant mortality rate, week ended Nov. 4, 1922. ³
		Total deaths.	Death rate. ¹		Week ended Nov. 4, 1922.	Corresponding week 1921.	
Total.....	27, 633, 127	6, 468	12.2	11.7	839	829	.....
Akron, Ohio.....	208, 435	42	10.5	8.5	5	10	53
Albany, N. Y.....	116, 223	32	14.4	12.7	3	7	67
Atlanta, Ga.....	220, 047	61	14.5	12.8	4	4	.....
Baltimore, Md.....	762, 222	226	15.5	12.8	29	33	82
Birmingham, Ala.....	191, 017	67	18.3	13.2	8	9	.....
Boston, Mass.....	764, 017	222	15.2	12.1	30	20	80
Bridgeport, Conn.....	143, 555	27	9.8	10.9	2	4	25
Buffalo, N. Y.....	528, 163	112	11.1	12.3	15	20	59
Cambridge, Mass.....	110, 944	37	17.4	14.6	4	1	73
Camden, N. J.....	121, 915	25	10.7	17.4	8	5	122
Chicago, Ill.....	2, 833, 288	551	10.1	10.4	71	92	.....
Cincinnati, Ohio.....	404, 965	111	14.3	13.4	9	11	60
Cleveland, Ohio.....	854, 565	168	10.3	10.1	25	31	64
Columbus, Ohio.....	253, 455	65	13.4	12.4	5	5	53
Dallas, Tex.....	171, 974	38	11.5	16.7	6	9	.....
Dayton, Ohio.....	161, 824	36	11.6	7.6	6	5	102
Denver, Colo.....	267, 591	98	19.1	14.7	7	6	.....
Detroit, Mich.....	963, 678	206	10.8	9.4	49	38	94
Fall River, Mass.....	120, 790	27	11.7	12.1	7	9	98
Fort Worth, Tex.....	114, 717	17	7.7	12.2	0	2	.....
Grand Rapids, Mich.....	143, 572	35	12.7	9.2	1	1	17
Houston, Tex.....	150, 087	33	11.5	11.2	7	3	.....
Indianapolis, Ind.....	333, 257	86	13.5	11.7	15	5	114
Jersey City, N. J.....	305, 911	83	14.1	13.1	16	10	102
Kansas City, Mo.....	343, 988	102	15.5	16.6	16	11	.....
Los Angeles, Calif.....	634, 866	186	15.3	13.6	22	20	91
Louisville, Ky.....	256, 877	75	15.2	10.2	11	2	119
Lowell, Mass.....	114, 423	33	15.0	12.8	4	7	67
Memphis, Tenn.....	167, 862	63	19.6	21.1	4	8	.....
Milwaukee, Wis.....	476, 603	68	7.4	9.1	6	18	29
Minneapolis, Minn.....	400, 970	99	11.6	8.4	12	11	66
Nashville, Tenn.....	122, 832	43	18.3	16.2	3	3	.....
New Bedford, Mass.....	127, 542	27	11.0	10.4	7	5	45
New Haven, Conn.....	169, 987	37	11.4	11.9	1	1	12
New Orleans, La.....	399, 616	148	19.3	17.2	20	18	.....
New York, N. Y.....	5, 839, 746	1, 161	16.4	10.7	151	161	59
Bronx Borough.....	809, 536	128	8.2	7.6	13	7	44
Brooklyn Borough.....	2, 117, 164	337	8.8	16.4	41	49	43
Manhattan Borough.....	2, 271, 883	537	12.8	12.2	85	90	79
Queens Borough.....	516, 757	89	9.0	9.4	10	12	54
Richmond Borough.....	124, 401	30	12.6	13.8	2	3	37
Newark, N. J.....	431, 792	74	8.9	8.8	6	11	27
Norfolk, Va.....	124, 915	23	9.6	11.6	0	2	0
Oakland, Calif.....	233, 279	52	11.6	13.1	6	6	76
Omaha, Nebr.....	200, 739	59	15.3	13.5	7	3	75
Paterson, N. J.....	138, 521	35	13.2	9.5	4	2	62
Philadelphia, Pa.....	1, 894, 500	495	13.6	11.6	73	53	87
Pittsburgh, Pa.....	607, 902	175	15.0	14.0	24	30	77
Portland, Oreg.....	269, 240	66	12.8	10.0	2	3	20
Providence, R. I.....	241, 011	68	14.7	14.1	11	11	87
Richmond, Va.....	178, 365	53	15.5	15.4	6	7	73
Rochester, N. Y.....	311, 548	65	10.9	12.6	9	8	69
St. Louis, Mo.....	795, 008	210	13.8	11.5	17	18	.....
St. Paul, Minn.....	239, 836	48	10.4	10.5	6	3	56
Salt Lake City, Utah.....	123, 918	26	10.9	14.2	5	5	75
San Antonio, Tex.....	178, 056	49	14.3	.....	8	.....	52
San Francisco, Calif.....	529, 792	116	11.4	13.9	9	.....	85
Spokane, Wash.....	104, 445	21	10.5	16.5	4	5	45
Springfield, Mass.....	140, 052	32	11.9	8.1	3	3	48
Syracuse, N. Y.....	181, 012	34	9.8	12.6	4	5	88
Toledo, Ohio.....	260, 717	62	12.4	14.6	9	6	15
Trenton, N. J.....	125, 075	31	12.9	12.7	1	1	86
Washington, D. C.....	437, 571	112	13.3	13.8	15	8	117
Wilmington, Del.....	115, 568	26	11.7	9.7	6	3	54
Worcester, Mass.....	198, 449	49	13.6	11.6	5	4	82
Yonkers, N. Y.....	105, 422	24	11.9	10.6	4	2	82
Youngstown, Ohio.....	144, 970	26	9.4	11.9	6	7	79

¹ Annual rate per 1,000 population.

² Deaths under 1 year per 1,000 births—annual rate based on deaths under 1 year for the week and estimated births for 1921. Cities left blank are not in the registration area for births.

³ Enumerated population Jan. 1, 1920.

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 STATE SUMMARIES.

Reports for Week Ended November 11, 1922.

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

ALABAMA.		COLORADO.	
	Cases.	(Exclusive of Denver.)	Cases.
Dengue.....	23	Chicken pox.....	8
Diphtheria.....	38	Diphtheria.....	32
Hookworm disease.....	38	Impetigo contagiosa.....	1
Malaria.....	16	Influenza.....	1
Ophthalmia neonatorum.....	1	Measles.....	1
Pellagra.....	4	Mumps.....	7
Pneumonia.....	10	Paratyphoid fever.....	6
Scabies.....	15	Pneumonia.....	8
Scarlet fever.....	5	Scarlet fever.....	52
Tuberculosis.....	15	Smallpox.....	16
Typhoid fever.....	19		
ARKANSAS.		CONNECTICUT.	
Cerebrospinal meningitis.....	2	Botulism.....	1
Chicken pox.....	16	Cerebrospinal meningitis.....	1
Dengue.....	17	Chicken pox.....	41
Diphtheria.....	16	Diphtheria.....	26
Influenza.....	15	Dysentery.....	1
Malaria.....	51	German measles.....	2
Pellagra.....	7	Influenza.....	6
Poliomyelitis.....	1	Lethargic encephalitis.....	1
Scarlet fever.....	11	Measles.....	20
Trachoma.....	1	Mumps.....	17
Tuberculosis.....	14	Pneumonia (lobar).....	21
Typhoid fever.....	15	Poliomyelitis.....	2
Whooping cough.....	14	Scarlet fever.....	87
CALIFORNIA.		Septic sore throat.....	1
Cerebrospinal meningitis:		Tetanus.....	1
Fresno.....	1	Tuberculosis (all forms).....	17
Oakland.....	1	Typhoid fever.....	6
Diphtheria.....	134	Whooping cough.....	44
Influenza.....	12	DELAWARE.	
Measles.....	19	Chicken pox.....	3
Scarlet fever.....	126	Diphtheria.....	8
Smallpox.....	8	Malaria.....	1
Typhoid fever.....	17	Measles.....	5

DELAWARE—continued.

	Cases.
Pneumonia.....	2
Scarlet fever.....	14
Tuberculosis.....	1
Typhoid fever.....	5
Whooping cough.....	1

FLORIDA.

Anthrax.....	1
Dengue.....	47
Diphtheria.....	26
Influenza.....	8
Malaria.....	13
Paratyphoid fever.....	2
Pneumonia.....	1
Smallpox.....	1
Trachoma.....	3
Typhoid fever.....	3

GEORGIA.

Chicken pox.....	7
Dengue.....	35
Diphtheria.....	47
Dysentery (bacillary).....	1
Hookworm disease.....	8
Influenza.....	48
Malaria.....	22
Mumps.....	1
Pneumonia.....	9
Poliomyelitis.....	1
Scarlet fever.....	16
Septic sore throat.....	2
Tuberculosis (pulmonary).....	5
Typhoid fever.....	10

ILLINOIS.

Cerebrospinal meningitis—Vermilion County.....	1
Diphtheria:	
Coles County.....	14
Cook County (including Chicago).....	287
Chicago.....	250
Du Page County.....	10
Greene County.....	22
Kane County.....	20
La Salle County.....	12
Madison County.....	22
Morgan County.....	17
Wayne County.....	12
Williamson County.....	8
Scattering.....	137
Influenza.....	17
Pneumonia.....	240
Poliomyelitis:	
Kane County.....	1
Macoupin County.....	1
Sangamon County.....	1
Wayne County.....	1
Scarlet fever:	
Cook County (including Chicago).....	96
Chicago.....	81
La Salle County.....	8
McLean County.....	11
Macon County.....	8
Montgomery County.....	13
Sangamon County.....	8
Winnebago County.....	9
Scattering.....	158

¹ 92 of these cases occurred prior to week ended Nov. 11.

ILLINOIS—continued.

	Cases.
Smallpox:	
Whiteside County.....	19
Scattering.....	7
Typhoid fever.....	41
Whooping cough.....	119

INDIANA.

Diphtheria.....	229
Poliomyelitis—Noble County.....	1
Scarlet fever.....	98
Smallpox.....	3
Typhoid fever.....	7

IOWA.

Diphtheria.....	85
Scarlet fever.....	76
Smallpox.....	2

KANSAS.

Cerebrospinal meningitis.....	1
Chicken pox.....	34
Diphtheria.....	152
German measles.....	1
Measles.....	5
Mumps.....	1
Pellagra.....	1
Pneumonia.....	8
Scarlet fever.....	106
Smallpox.....	2
Tuberculosis.....	24
Typhoid fever.....	11
Whooping cough.....	8

LOUISIANA.

Dengue.....	1264
Diphtheria.....	34
Scarlet fever.....	7
Smallpox.....	3
Typhoid fever.....	17

MARYLAND.²

Cerebrospinal meningitis.....	3
Chicken pox.....	40
Diphtheria.....	92
Dysentery.....	2
German measles.....	1
Influenza.....	20
Lethargic encephalitis.....	1
Malaria.....	5
Measles.....	38
Mumps.....	21
Paratyphoid fever.....	1
Pneumonia (all forms).....	41
Poliomyelitis.....	1
Scarlet fever.....	68
Septic sore throat.....	1
Tetanus.....	1
Tuberculosis.....	44
Typhoid fever.....	33
Whooping cough.....	49

MASSACHUSETTS.

Cerebrospinal meningitis.....	3
Chicken pox.....	75
Conjunctivitis (suppurative).....	9
Diphtheria.....	256

²Week ended Friday.

MASSACHUSETTS—continued.

	Cases.
German measles.....	3
Influenza.....	14
Lethargic encephalitis.....	2
Measles.....	168
Mumps.....	70
Ophthalmia neonatorum.....	15
Pneumonia (lobar).....	62
Poliomyelitis.....	6
Scarlet fever.....	120
Tetanus.....	1
Trachoma.....	1
Tuberculosis (all forms).....	92
Typhoid fever.....	17
Whooping cough.....	228

MICHIGAN.

Diphtheria.....	322
Measles.....	21
Pneumonia.....	111
Scarlet fever.....	290
Smallpox.....	13
Tuberculosis.....	44
Typhoid fever.....	41
Whooping cough.....	115

MINNESOTA.

Chicken pox.....	22
Diphtheria.....	179
Lethargic encephalitis.....	2
Measles.....	3
Pneumonia.....	4
Poliomyelitis.....	6
Scarlet fever.....	198
Smallpox.....	47
Tuberculosis.....	35
Typhoid fever.....	10
Whooping cough.....	17

MISSISSIPPI.

Dengue.....	59
Diphtheria.....	58
Scarlet fever.....	14
Smallpox.....	3
Typhoid fever.....	16

MISSOURI.

Chicken pox.....	21
Diphtheria.....	99
Epidemic sore throat.....	6
Measles.....	5
Mumps.....	2
Pneumonia.....	1
Scarlet fever.....	83
Smallpox.....	2
Tuberculosis.....	4
Typhoid fever.....	11

MONTANA.

Cerebrospinal meningitis.....	1
Diphtheria.....	11
Scarlet fever.....	7
Smallpox.....	6
Typhoid fever.....	4

NEBRASKA.

Chicken pox.....	23
Diphtheria:	
Omaha.....	30
Scattering.....	18
Measles.....	1
Mumps.....	3

NEBRASKA—continued.

	Cases.
Pneumonia.....	1
Poliomyelitis:	
Bertrand.....	1
Scarlet fever.....	50
Smallpox.....	2
Tetanus.....	1
Tuberculosis.....	10
Typhoid fever.....	7
Whooping cough.....	3

NEW JERSEY.

Cerebrospinal meningitis.....	4
Chicken pox.....	77
Diphtheria.....	207
Influenza.....	15
Malaria.....	1
Measles.....	206
Pneumonia.....	89
Poliomyelitis.....	2
Scarlet fever.....	125
Trachoma.....	1
Typhoid fever.....	11
Whooping cough.....	90

NEW MEXICO.

Chicken pox.....	34
Conjunctivitis.....	2
Diphtheria:	
Raton.....	8
Scattering.....	34
Dysentery.....	1
Influenza.....	7
Measles.....	1
Pneumonia.....	1
Scarlet fever.....	3
Trachoma.....	1
Tuberculosis.....	29
Typhoid fever.....	19

NEW YORK.

(Exclusive of New York City.)

Diphtheria.....	273
Influenza.....	16
Lethargic encephalitis.....	3
Measles.....	107
Pneumonia.....	202
Poliomyelitis.....	11
Scarlet fever.....	261
Smallpox.....	3
Typhoid fever.....	39
Whooping cough.....	206

NORTH CAROLINA.

Cerebrospinal meningitis.....	1
Chicken pox.....	88
Diphtheria.....	374
German measles.....	4
Measles.....	50
Poliomyelitis.....	1
Scarlet fever.....	150
Septic sore throat.....	14
Smallpox.....	22
Typhoid fever.....	16
Whooping cough.....	95

OREGON.

Chicken pox.....	13
Diphtheria:	
Multnomah County.....	11
Scattering.....	7

OREGON—continued.

	Cases.
Measles.....	2
Mumps.....	2
Pneumonia.....	16
Scarlet fever.....	10
Smallpox.....	8
Tuberculosis.....	8
Typhoid fever.....	6
Whooping cough.....	2
SOUTH DAKOTA.	
Chicken pox.....	2
Diphtheria.....	7
Influenza.....	2
Measles.....	1
Pneumonia.....	3
Scarlet fever.....	29
Smallpox.....	6
Tuberculosis.....	7
TEXAS.	
Dengue.....	1,717
Diphtheria.....	60
Influenza.....	14
Pellagra.....	12
Pneumonia.....	8
Scarlet fever.....	39
Typhoid fever.....	18
VERMONT.	
Chicken pox.....	33
Diphtheria.....	5
Measles.....	1
Mumps.....	1
Pneumonia.....	3
Poliomyelitis.....	1
Scarlet fever.....	28
Whooping cough.....	6
WASHINGTON.	
Chicken pox.....	129
Diphtheria.....	15
Measles.....	8
Mumps.....	25
Scarlet fever:	
Seattle.....	8
Tacoma.....	10
Scattering.....	15

WASHINGTON—continued.

	Cases.
Smallpox.....	6
Tuberculosis.....	37
Typhoid fever.....	20
Whooping cough.....	20
WEST VIRGINIA.	
Diphtheria:	
Huntington.....	16
Scattering.....	43
Scarlet fever:	
Parkersburg.....	8
Scattering.....	21
Typhoid fever.....	5
WISCONSIN.	
Milwaukee:	
Chicken pox.....	18
Diphtheria.....	26
Measles.....	465
Ophthalmia neonatorum.....	1
Poliomyelitis.....	1
Scarlet fever.....	37
Tuberculosis.....	11
Whooping cough.....	8
Scattering:	
Cerebrospinal meningitis.....	3
Chicken pox.....	119
Diphtheria.....	84
Influenza.....	46
Measles.....	157
Pneumonia.....	4
Scarlet fever.....	121
Smallpox.....	68
Trachoma.....	1
Tuberculosis.....	32
Typhoid fever.....	14
Whooping cough.....	78
WYOMING.	
Scarlet fever.....	1
Typhoid fever.....	3
Whooping cough.....	1

Reports for Week Ended November 4, 1922.

DISTRICT OF COLUMBIA.

	Cases.
Chicken pox.....	2
Diphtheria.....	32
Influenza.....	2
Measles.....	1
Scarlet fever.....	7
Tuberculosis.....	15
Typhoid fever.....	2
Whooping cough.....	12
KENTUCKY.	
Cerebrospinal meningitis—Clark County.....	1
Chicken pox.....	9
Diphtheria:	
Boyd County.....	15
Christian County.....	15
Jefferson County.....	34
Nelson County.....	9
Scattering.....	40
Influenza.....	6
Malaria.....	1
Measles:	
Henderson County.....	45
Scattering.....	10

KENTUCKY—continued.

	Cases.
Pneumonia.....	18
Scarlet fever:	
Jefferson County.....	8
Scattering.....	31
Septic sore throat.....	3
Tetanus.....	2
Tonsillitis.....	1
Tuberculosis:	
Jefferson County.....	10
Scattering.....	3
Typhoid fever:	
Jefferson County.....	8
Scattering.....	21
Whooping cough.....	2
NORTH DAKOTA.	
Chicken pox.....	6
Diphtheria.....	16
Pneumonia.....	10
Scarlet fever.....	30
Smallpox.....	7
Typhoid fever.....	9
Whooping cough.....	3

¹ Deaths.

SUMMARY OF CASES REPORTED MONTHLY BY 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.
<i>October, 1922.</i>										
Connecticut.....	2	351	18	16	214	.....	11	10	.....	41
District of Columbia.	.....	76	2	.....	2	.....	3	56	.....	20
Florida.....	1	86	25	82	.....	15	1	3	11	32
Massachusetts.....	7	1,026	27	6	686	3	29	554	.....	80
Nebraska.....	.....	290	5	.....	2	.....	6	249	9	28

Cases of Certain Communicable Diseases Reported for the Month of September, 1922, by State Health Officers.

State.	Number of cases reported.								
	Chicken pox.	Diphtheria.	Measles.	Mumps.	Scarlet fever.	Small-pox.	Tuber-culosis.	Typhoid fever.	Whoop-ing cough.
Alabama.....	6	240	2	4	114	0	75	132	8
Arizona ¹.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arkansas.....	5	61	7	.....	26	3	50	80	36
California.....	114	492	25	69	225	38	614	125	165
Colorado.....	16	283	8	6	78	39	65	133	63
Connecticut.....	57	175	49	3	144	2	125	39	162
Delaware.....	1	1	2	.....	28	0	13	28	15
District of Columbia.	9	40	5	.....	19	0	109	18	36
Florida.....	3	80	1	.....	2	7	31	20	1
Georgia ².....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Idaho.....	4	43	.....	.....	13	30	.....	22	10
Illinois.....	105	873	148	112	518	8	1,142	254	740
Indiana.....	.....	363	55	.....	215	23	99	139	.....
Iowa.....	.....	210	3	.....	130	5	.....	(³)	.....
Kansas.....	20	447	26	23	286	6	252	125	58
Kentucky ².....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Louisiana.....	.....	74	4	.....	10	4	166	129	23
Maine.....	.....	41	5	4	89	0	37	30	63
Maryland.....	26	168	29	13	88	0	180	213	190
Massachusetts.....	53	578	269	67	281	0	528	132	637
Michigan.....	42	567	36	15	531	39	309	173	391
Minnesota.....	28	370	17	.....	404	37	287	57	73
Mississippi.....	111	473	48	30	63	8	255	262	572
Missouri ³.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Montana ¹.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Nebraska.....	16	104	10	8	90	2	18	29	20
Nevada ⁴.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Hampshire ⁴.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Jersey.....	32	522	209	.....	189	0	410	105	429
New Mexico ¹.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New York.....	175	916	259	193	643	54	1,916	309	1,147
North Carolina.....	28	1,989	56	.....	476	16	.....	302	270
North Dakota ¹.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ohio.....	86	998	114	51	714	42	446	439	454
Oklahoma.....	4	35	.....	.....	32	7	42	45	.....
Oregon.....	.....	20	5	3	27	45	124	34	13
Pennsylvania.....	194	1,323	823	100	778	0	540	411	889
Rhode Island.....	.....	62	23	1	20	0	24	13	42
South Carolina.....	.....	560	2	.....	46	1	13	36	4
South Dakota.....	2	49	1	.....	135	13	17	25	15
Tennessee ⁴.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Texas ².....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Utah ⁴.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vermont.....	26	56	21	.....	41	0	25	7	70
Virginia.....	61	1,038	60	.....	405	2	267	226	.....
Washington.....	.....	84	8	.....	64	21	.....	83	.....
West Virginia.....	6	281	19	.....	201	14	48	204	30
Wisconsin.....	40	179	142	.....	208	39	161	39	428
Wyoming ¹.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

¹ Report for September not received.
² Reports received weekly.

³ Not notifiable.
⁴ Reports received annually.

SUMMARY OF CASES REPORTED MONTHLY BY STATES—Continued.

Reported Cases per 1,000 Population (Annual Basis) for the Month of September, 1922.

State.	Case rates per 1,000 population.								
	Chicken pox.	Diph- theria.	Measles.	Mumps.	Scarlet fever.	Small- pox.	Tuber- culosis.	Typhoid fever.	Whoop- ing cough.
Alabama	0.03	1.22	0.01	0.02	0.58	0	0.38	0.67	0.04
Arizona ¹									
Arkansas	.03	.41	.05		.18	.02	.40	.54	.24
California	.38	1.62	.08	.23	.74	.13	2.02	.41	.54
Colorado	.20	3.53	.10	.07	.97	.49	.81	1.66	.79
Connecticut	.48	1.47	.41	.03	1.21	.02	1.05	.33	1.28
Delaware	.05	.05	.11		1.49	0	.69	1.49	.80
District of Columbia	.24	1.05	.13		.50	0	2.85	.47	.94
Florida	.04	.95	.01		.02	.08	.37	.24	.01
Georgia ²									
Idaho	.11	1.14			.34	.79		.58	.26
Illinois	.19	1.58	.27	.20	.94	.01	2.07	.46	1.34
Indiana		1.43	.22		.88	.09	.40	.57	
Iowa		1.04	.01		.65	.02		(9)	
Kansas	.14	3.04	.18	.16	2.01	.04	1.71	.85	.39
Kentucky ²									
Louisiana		.49	.03		.07	.03	1.10	.86	.15
Maine		.64	.08	.08	1.40	0	1.58	.47	1.99
Maryland	.21	1.37	.24	.15	.72	0	1.47	1.74	1.55
Massachusetts	.16	1.77	.82	.20	.86	0	1.61	.40	1.95
Michigan	.13	1.77	.11	.05	1.66	.12	1.25	.54	1.22
Minnesota	.14	1.82	.08		1.99	.18	1.42	.28	.36
Mississippi	.75	3.21	.33	.20	.43	.05	1.73	1.78	3.89
Missouri ²									
Montana ¹									
Nebraska	.15	.96	.09	.07	.83	.02	.17	.27	.18
Nevada ⁴									
New Hampshire ⁴									
New Jersey	.12	1.92	.77		.69	0	1.50	.39	1.54
New Mexico ¹									
New York	.20	1.04	.29	.22	.73	.06	2.18	.35	1.30
North Carolina	.13	9.13	.26		2.19	.07		1.39	1.24
North Dakota ¹									
Ohio	.17	2.02	.23	.10	1.44	.08	.90	.89	.92
Oklahoma		.20			.18	.04	.24	.27	
Oregon	.06	.30	.07	.04	1.40	.67	1.86	.51	.19
Pennsylvania	.26	1.79	1.11	.14	1.05	0	.73	.56	1.16
Rhode Island		1.22	.45	.02	.39	0	.47	.25	.32
South Carolina		3.95	.01		.32	.01	.09	.25	.03
South Dakota	.04	.92	.02		2.53	.24	.32	.47	.28
Tennessee ⁴									
Texas ²									
Utah ⁴									
Vermont	.90	1.93	.73		1.42	0	.86	.24	2.42
Virginia	.31	5.32	.31		2.08	.01	1.37	1.16	
Washington		.72	.07		.55	.18		.72	
West Virginia	.05	2.24	.15		1.60	.11	.38	1.63	.24
Wisconsin	.18	.80	.64		.93	.18	.72	.18	1.92
Wyoming ¹									

¹ Report for September not received.² Reports received weekly.³ Not notifiable.⁴ Reports received annually.

CITY REPORTS FOR WEEK ENDED OCTOBER 28, 1922.

ANTHRAX.

City.	Cases.	Deaths.
California: Stockton.....	1	

CEREBROSPINAL MENINGITIS.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Oct. 28, 1922.		City.	Median for previous years.	Week ended Oct. 28, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
California: San Francisco.....	0	1		Massachusetts: Leominster.....	0	1	
Colorado: Pueblo.....	0		1	Somerville.....	0	1	1
Connecticut: New London.....	0		1	Montana: Missoula.....	0	1	1
Georgia: Augusta.....	0		1	New Jersey: Morristown.....	0	2	2
Illinois: Bloomington.....			1	New York: New York.....	4	2	2
Chicago.....	2	1		North Carolina: Raleigh.....	0	1	1
Indiana: Gary.....	0		1	Ohio: Cincinnati.....	0		1
Louisiana: New Orleans.....	0	1	1	Wisconsin: Fond du Lac.....	0		1
				Superior.....	0		1

DIPHTHERIA.

See p. 2872; also Current State summaries, p. 2860, and Monthly summaries by States, p. 2864.

INFLUENZA.

City.	Cases.		Deaths, week ended Oct. 28, 1922.	City.	Cases.		Deaths, week ended Oct. 28, 1922.
	Week ended Oct. 29, 1921.	Week ended Oct. 28, 1922.			Week ended Oct. 29, 1921.	Week ended Oct. 28, 1922.	
California: Los Angeles.....	1	3		Louisiana: Baton Rouge.....	1		
Oakland.....		3		New Orleans.....		3	4
Sacramento.....		1		Maryland: Baltimore.....	13	6	
San Francisco.....		3	1	Cumberland.....		1	
Connecticut: Fairfield.....		1		Massachusetts: Boston.....		1	
New Britain.....	2			Everett.....		1	1
District of Columbia: Washington.....	2	1		Greenfield.....		1	
Florida: Tampa.....	2	3		Lawrence.....		2	1
Georgia: Albany.....	1	1		Saugus.....	1		
Atlanta.....	10			Somerville.....	1		
Brunswick.....	6			Michigan: Detroit.....	3		
Illinois: Chicago.....	10	12	1	Missouri: Independence.....	1		
Danville.....		1	1	Kansas City.....	1	2	
Springfield.....		1	1	St. Louis.....		1	1
Indiana: Terre Haute.....			1	New Jersey: Bloomfield.....		1	
Kansas: Kansas City.....		1		East Orange.....		1	
Kentucky: Louisville.....	1			Newark.....	5	10	
				Trenton.....		1	

CITY REPORTS FOR WEEK ENDED OCTOBER 23, 1922—Continued.

INFLUENZA—Continued.

City.	Cases.		Deaths, week ended Oct. 23, 1922.	City.	Cases.		Deaths, week ended Oct. 23, 1922.
	Week ended Oct. 23, 1921.	Week ended Oct. 23, 1922.			Week ended Oct. 23, 1921.	Week ended Oct. 23, 1922.	
New York:				South Dakota:			
New York.....	29	35	5	Sioux Falls.....	1		
Saratoga Springs.....		2		Texas:			
Schenectady.....			1	Dallas.....	2		
Yonkers.....	1			Virginia:			
Ohio:				Richmond.....			1
Cincinnati.....			2	Rosebush.....	3		
Cleveland.....	1			West Virginia:			
Cleveland Heights.....	1			Bluefield.....	1		
Pennsylvania:				Huntington.....		1	
Philadelphia.....		2	2				

MALARIA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			Louisiana:		
Birmingham.....	9		New Orleans.....	4	
Mobile.....	1		Maryland:		
Montgomery.....		1	Baltimore.....	1	
Arkansas:			Michigan:		
Little Rock.....	1		Detroit.....	1	
California:			New York:		
Sacramento.....	1		New York.....	1	
Florida:			North Carolina:		
Tampa.....	2	2	Salisbury.....		1
Georgia:			Wilmington.....	1	
Savannah.....		2	Tennessee:		
Valdosta.....	1		Memphis.....	10	2
Illinois:			Virginia:		
Pekin.....	1		Richmond.....	1	

MEASLES.

See p. 2872; also Current State summaries, p. 2860, and Monthly summaries by States, p. 2864.

PELLAGRA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			Tennessee:		
Mobile.....		1	Nashville.....		1
Georgia:			Texas:		
Atlanta.....		2	Dallas.....		1
Savannah.....		1	Fort Worth.....	1	1
North Carolina:			Houston.....		1
Rocky Mount.....		1	Virginia:		
			Richmond.....		1

PNEUMONIA (ALL FORMS).

Alabama:			California—Continued.		
Birmingham.....		4	San Francisco.....	7	5
Mobile.....		1	Santa Cruz.....		1
Montgomery.....		1	Stockton.....		1
Arkansas:			Colorado:		
North Little Rock.....		1	Denver.....		8
California:			Pueblo.....		2
Bakersfield.....	1		Connecticut:		
Berkeley.....		1	Bridgeport.....		
Glendale.....		1	Manchester.....	2	
Los Angeles.....	15	14	New Haven.....		4
Oakland.....		3	New London.....		1
Sacramento.....		3	Waterbury.....	3	
San Bernardino.....		1			

CITY REPORTS FOR WEEK ENDED OCTOBER 28, 1922—Continued.

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
District of Columbia:			Michigan—Continued.		
Washington.....		11	Pontiac.....		2
Georgia:			Port Huron.....	2	1
Atlanta.....		5	Sault Ste. Marie.....		1
Augusta.....		3	Minnesota:		
Rome.....	2		Duluth.....	2	
Savannah.....		2	Minneapolis.....		3
Illinois:			St. Paul.....		3
Alton.....	1		Missouri:		
Aurora.....	2	1	Kansas City.....	14	13
Chicago.....	130	43	St. Joseph.....		1
Cicero.....	1		Springfield.....		1
Danville.....		1	Montana:		
Decatur.....	2		Billings.....	1	
East St. Louis.....		1	Nebraska:		
Galesburg.....		1	Lincoln.....		1
La Salle.....	1		Omaha.....		10
Oak Park.....	1		Nevada:		
Peoria.....		4	Reno.....	1	
Rockford.....		1	New Hampshire:		
Springfield.....	5	2	Keene.....		1
Indiana:			New Jersey:		
East Chicago.....		1	Bloomfield.....	2	
Fort Wayne.....		2	East Orange.....	3	
Gary.....		3	Garfield.....	1	
Indianapolis.....		7	Hoboken.....		2
Kokomo.....		1	Jersey City.....	2	
Logansport.....		1	Kearny.....	2	1
Muncie.....		1	Montclair.....	1	
South Bend.....		2	Newark.....	25	2
Terre Haute.....		2	Orange.....	3	
Iowa:			Passaic.....		2
Council Bluffs.....		1	Paterson.....	3	
Kansas:			Summit.....		1
Fort Scott.....	2		Trenton.....	1	
Kansas City.....	3		West New York.....		1
Topeka.....	1		West Orange.....	1	
Wichita.....		1	New Mexico:		
Kentucky:			Albuquerque.....		1
Lexington.....		1	New York:		
Louisville.....		5	Albany.....	12	
Louisiana:			Buffalo.....	14	6
New Orleans.....		9	Cohoes.....	3	1
Maine:			Ithaca.....	1	
Bath.....		1	Little Falls.....		1
Lewiston.....	2		New York.....	162	94
Portland.....		3	Niagara Falls.....		2
Maryland:			North Tonawanda.....		1
Baltimore.....	22	19	Peekskill.....	2	
Cumberland.....	1		Port Chester.....	1	
Massachusetts:			Poughkeepsie.....	2	
Arlington.....	1		Rochester.....	8	4
Attleboro.....	1		Rome.....		2
Boston.....	21	20	Schenectady.....		2
Brookline.....		1	Syracuse.....	7	4
Cambridge.....		1	Troy.....	6	1
Chelsea.....		5	Yonkers.....		2
Everett.....	3		North Carolina:		
Fall River.....		2	Wilmington.....		1
Haverhill.....	1		Ohio:		
Holyoke.....		1	Canton.....	1	
Lowell.....	1		Cincinnati.....		11
Lynn.....	3	2	Cleveland.....	23	15
Malden.....		1	Columbus.....		4
Melrose.....	1		Dayton.....	1	
New Bedford.....		5	Mansfield.....	1	
North Adams.....		1	Newark.....		1
Pittsfield.....		1	Piqua.....		1
Quincy.....	3		Toledo.....		2
Somerville.....	3	2	Zanesville.....		1
Springfield.....	4	1	Oklahoma:		
Waltham.....		2	Oklahoma.....		1
West Springfield.....	1		Oregon:		
Worcester.....		6	Portland.....		3
Michigan:			Pennsylvania:		
Detroit.....	42	24	Philadelphia.....	62	33
Flint.....	1		Rhode Island:		
Grand Rapids.....	4	1	Pawtucket.....		1
Hamtramck.....		4	Providence.....	2	1
Highland Park.....	1		South Carolina:		
Kalamazoo.....	4	1	Charleston.....		1

CITY REPORTS FOR WEEK ENDED OCTOBER 28, 1922—Continued.

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Tennessee:			West Virginia:		
Memphis.....		7	Huntington.....		2
Nashville.....		6	Wheeling.....		4
Texas:			Wisconsin:		
Beaumont.....	2		Beloit.....		2
Dallas.....	3		Eau Claire.....	1	
El Paso.....	6		La Crosse.....	2	
Houston.....	4		Madison.....	1	
Utah:			Milwaukee.....	5	
Salt Lake City.....	4		Racine.....		1
Vermont:			Superior.....		1
Burlington.....	1				
Virginia:					
Alexandria.....		1			
Richmond.....		10			
Roanoke.....	2				

POLIOMYELITIS (INFANTILE PARALYSIS).

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Oct. 28, 1922.		City.	Median for previous years.	Week ended Oct. 28, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
California:				New York:			
Long Beach.....	0		2	Buffalo.....	0	1	
Connecticut:				Hornell.....		1	
New Haven.....	0	1	1	New York.....	4	10	3
District of Columbia:				Syracuse.....	0		2
Washington.....	0	1		White Plains.....	0	1	
Illinois:				Ohio:			
Chicago.....	3	5	1	Cleveland.....	0	2	
Massachusetts:				Toledo.....	0	2	
Boston.....	1	1	1	Pennsylvania:			
Wakefield.....	0	1		Philadelphia.....	1	1	
New Jersey:				Wisconsin:			
Hoboken.....	0	1		Ashland.....		1	

RABIES IN ANIMALS.

City.	Cases.	City.	Cases.
California:		Missouri:	
Los Angeles.....	14	Kansas City.....	2
Kentucky:		Tennessee:	
Louisville.....	1	Memphis.....	1

SCARLET FEVER.

See p. 2872; also Current State summaries, p. 2860, and Monthly summaries by States, p. 2864.

CITY REPORTS FOR WEEK ENDED OCTOBER 28, 1922—Continued.

SMALLPOX.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Oct. 28, 1922.		City.	Median for previous years.	Week ended Oct. 28, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
California:				Montana:			
San Francisco.....	0	1	.....	Great Falls.....	2	2	.....
Colorado:				North Carolina:			
Denver.....	2	57	17	Winston-Salem.....	0	1	.....
Illinois:				North Dakota:			
Freeport.....	0	1	.....	Grand Forks.....	2	2	.....
Indiana:				Ohio:			
Hammond.....	0	1	.....	Toledo.....	1	3	.....
Indianapolis.....	2	1	.....	Oregon:			
Iowa:				Portland.....	3	6	.....
Mason City.....	0	1	.....	Washington:			
Kansas:				Bellingham.....	0	2	.....
Fort Scott.....	0	1	.....	Spokane.....	9	2	.....
Wichita.....	0	1	.....	Wisconsin:			
Minnesota:				Milwaukee.....	3	2	.....
Duluth.....	0	11	.....	Superior.....	0	14	.....
St. Paul.....	5	3	.....			

TETANUS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
California:			Nebraska:		
Los Angeles.....	1	1	Lincoln.....	1	.....
Georgia:			Omaha.....	1	1
Savannah.....	1	1	New Jersey:		
Illinois:			Trenton.....		1
Chicago.....	1	1	Rhode Island:		
Indiana:			Pawtucket.....		1
East Chicago.....		1	Texas:		
			Houston.....		1

TUBERCULOSIS.

See p. 2872; also Current State summaries, p. 2860.

TYPHOID FEVER.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Oct. 28, 1922.		City.	Median for previous years.	Week ended Oct. 28, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Alabama:				Colorado:			
Birmingham.....	4	1	.....	Denver.....	1	9	1
Arkansas:				Pueblo.....	0	5	.....
North Little Rock...	0	2	.....	Connecticut:			
California:				Bridgeport.....	0	1	.....
Eureka.....	0	1	.....	Fairfield.....	0	1	1
Long Beach.....	0	2	.....	New Haven.....	2	2	1
Los Angeles.....	3	4	.....	District of Columbia:			
Oakland.....	1	1	.....	Washington.....	8	4	.....
Sacramento.....	2	1	.....	Georgia:			
San Francisco.....	3	3	.....	Atlanta.....	1	1	1
Santa Ana.....	0	1	.....	Savannah.....	1	1	.....
Stockton.....	0	1	.....			

CITY REPORTS FOR WEEK ENDED OCTOBER 28, 1922—Continued.

TYPHOID FEVER—Continued.

City.	Median for previous years.	Week ended Oct. 28, 1922.		City.	Median for previous years.	Week ended Oct. 28, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Illinois:				New York—Continued.			
Chicago	10	7	1	Middletown	0	1	
Peoria	0	1		New York	33	20	3
Springfield	0	4		Niagara Falls	0	2	
Indiana:				North Tonawanda	0	1	
Anderson	0	1		Poughkeepsie	0		1
La Fayette	0	3		Rochester	1	3	
Iowa:				Syracuse	0	1	
Waterloo	0	1		Watertown	0	1	
Kansas:				Ohio:			
Topeka	0		1	Ashtabula	0	3	
Wichita	1		1	Canton	0	1	
Kentucky:				Cleveland	3	4	
Louisville	1	5	2	Findlay	0		1
Owensboro	2	2		Hamilton	0	1	
Louisiana:				Mansfield	0	1	
New Orleans	6	4	1	Springfield	0	2	
Maryland:				Oregon:			
Baltimore	11	4	2	Portland	1	2	
Cumberland	1		1	Pennsylvania:			
Massachusetts:				Philadelphia	7	5	1
Arlington	0	1		Rhode Island:			
Haverhill	0	2	1	Providence	2	1	
Malden	0	2		South Dakota:			
Medford	0	1		Sioux Falls	0	1	
New Bedford	1	1		Tennessee:			
Newton	0	1		Memphis	3	2	
North Adams	0	1		Nashville	4	2	1
Pittsfield	0		1	Texas:			
Waltham	0	4		Dallas	1	2	
Michigan:				El Paso	1	1	
Detroit	6	6	1	Waco	0		1
Kalamazoo	0	1		Utah:			
Muskegon	0	3		Salt Lake City	2		1
Minnesota:				Virginia:			
Minneapolis	1	1	1	Norfolk	0	1	
Rochester	1	1		Richmond	3	1	
St. Paul	2	2		Roanoke	0	1	1
Missouri:				Washington:			
Kansas City	2	1		Seattle	0	2	
St. Joseph	1	1		Spokane	0	4	
St. Louis	6	5	1	Walla Walla	1	4	
Springfield	0		1	West Virginia:			
Montana:				Bluefield	1	1	
Billings	0	1		Charleston	0	1	
Missoula	0	1		Charlsburg	1		
New Jersey:				Mountsville	0	1	1
Atlantic City	0	1		Wisconsin:			
Newark	1	9		Ashland	0	1	
Trenton	0	1		Green Bay	0		2
New Mexico:				Marquette	0	1	
Albuquerque	0	5	1	Racine	0	1	
New York:				Sheboygan	0	2	
Albany	0	1		Wyoming:			
Buffalo	2	4		Cheyenne	0	1	
Ithaca	0	1					

CITY REPORTS FOR WEEK ENDED OCTOBER 28, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Illinois—Continued.										
Kewanee.....	16,026	5					2			
La Salle.....	13,060	2	7							
Mattoon.....	13,562	3	4				1			
Oak Park.....	39,858	10	4						3	
Pekin.....	78,121	4							1	
Peoria.....	35,978	21	1				13			
Quincy.....	65,651	18						1		1
Rockford.....	69,183	17	2				2			
Springfield.....	69,183	17	1						35	2
Indiana:										
Anderson.....	29,767	5	1			1		3		
Crawfordsville.....	10,139	1	1							1
East Chicago.....	35,937	10						3		1
Fort Wayne.....	86,549	19	1							
Frankfort.....	11,585	1	3							
Gary.....	55,378	19			2		1			2
Hammond.....	36,004	6	3	1			6			
Huntington.....	14,000	2	1				1			
Indianapolis.....	314,194	85	57	5	2		16		8	7
Kokomo.....	30,067	8	2				2			1
La Fayette.....	22,486	8	2	1					1	1
Logansport.....	21,626	6								
Mishawaka.....	15,195	1					2			
Muncie.....	36,524	15	9	2			12		1	1
New Castle.....	14,458	4	1							
South Bend.....	70,983	12	1		18		16			1
Terre Haute.....	66,083	10	4				2			2
Iowa:										
Burlington.....	24,057	7	7						1	1
Cedar Rapids.....	45,566						4			
Council Bluffs.....	36,162	10					4			
Davenport.....	56,727		15	2						
Dubuque.....	39,141		1				1			
Iowa City.....	11,267				1					
Marshalltown.....	15,731			1			1			
Mason City.....	20,665	6	10							
Muscatine.....	16,068	7	5				2			
Ottumwa.....	23,003	1	5	1			1			
Sioux City.....	71,227		13				8			
Waterloo.....	36,230		1				10			
Kansas:										
Atchison.....	12,630		5							
Coffeyville.....	13,452		1				1			
Fort Scott.....	10,663	2	6							
Hutchinson.....	23,298						2		1	
Kansas City.....	101,177		12		6		3		7	
Lawrence.....	12,456	3								1
Leavenworth.....	16,912		3				2			
Parsons.....	16,028	5	2				3			
Salina.....	15,065	4			1		2			
Topeka.....	50,022	8	17				5		2	1
Wichita.....	72,217	23	8				10		1	2
Kentucky:										
Covington.....	57,121	16	5		1		2			2
Lexington.....	41,534		1							2
Louisville.....	234,891	54	20	1			8		13	6
Owensboro.....	17,424		2							
Paducah.....	24,735		4							
Louisiana:										
New Orleans.....	387,219	113	16	1	1		5		20	8
Maine:										
Auburn.....	16,985		1				8			
Bangor.....	25,978								1	
Bath.....	14,731		4							
Biddeford.....	18,008		2		1					
Lewiston.....	31,791		9	1						
Portland.....	69,272		20	5		1				
Sanford (town).....	10,691		1							
Maryland:										
Baltimore.....	733,826	189	35		12		12		27	17
Cumberland.....	29,837		9	1						1

CITY REPORTS FOR WEEK ENDED OCTOBER 28, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Massachusetts:										
Amesbury (town).....	10,036	0	1				1		1	
Arlington (town).....	18,665	6	2		2					
Attleboro.....	19,731	2	1		1				1	
Belmont (town).....	10,749	1							1	
Beverly.....	22,561	4					1			
Boston.....	748,060	223	52	5	41	2	28		32	13
Braintree (town).....	10,580	2					1			
Brookline.....	37,748	16	2						2	
Cambridge.....	109,694	28	5				3			3
Chelsea.....	43,184	19	5		11		2		2	
Chicopee.....	36,214	7	2				2			1
Clinton.....	12,979	2			1					
Danvers.....	11,108		1							
Dedham.....	10,792	2					1		1	
Everett.....	40,120	11	1				1		2	1
Fall River.....	120,485	36	6		58	4	3		6	1
Framingham.....	17,033	4	1		1		1		1	
Gardner.....	16,971	6	2						2	
Greenfield.....	15,462	4								
Haverhill.....	53,884	12	3	1					2	
Holyoke.....	60,203	14	4				2		1	2
Lawrence.....	94,270	26	2	1			1		1	3
Leominster.....	19,744	3					2		2	1
Lowell.....	112,759	26	7	1			2		9	4
Lynn.....	99,148	19	4		5		3		3	3
Malden.....	49,103	13	2	1			5		4	
Medford.....	39,038	7	1		1		5			
Melrose.....	18,204	7					2			
Methuen.....	15,189	2								1
New Bedford.....	121,217				4	1	2	1	6	4
Newburyport.....	15,618	3	2							
Newton.....	46,054	9					4	1	2	1
North Adams.....	22,282	4								
Northampton.....	21,951	14							2	
Pittsfield.....	41,763	7	2				3			1
Plymouth.....	13,045	6								
Quincy.....	47,876	12	1				3		1	1
Salem.....	42,529	6	2		1		1			
Somerville.....	93,091	28	5	1					4	1
Southbridge.....	14,245	1	2				1			
Springfield.....	129,614	25	3				3			2
Taunton.....	37,137	18	1		4				1	2
Wakefield.....	13,025	0							1	
Waltham.....	30,915	11	2				2		2	
Watertown.....	21,457	5	3							
Webster.....	13,258	4								1
West Springfield.....	13,443	3	3	1						
Westfield.....	18,604	3	7		1					1
Winthrop.....	15,455	3							1	
Woburn.....	16,574	1								
Worcester.....	179,754	45	18	2			16			2
Michigan:										
Alpena.....	11,101		5	1			1			
Ann Arbor.....	19,516	8		1			3			1
Battle Creek.....	36,164		11							
Benton Harbor.....	12,233		2				8			
Detroit.....	983,678	217	86	9	3		80	2	33	24
Flint.....	91,599	16	14	1	1		10		2	1
Grand Rapids.....	137,634	28	20		1		7			
Hamtramck.....	48,615	11		1						3
Highland Park.....	46,499	6					1			
Holland.....	12,183		1				1			
Kalamazoo.....	48,487	23	39				2		1	1
Marquette.....	12,718	2					2		1	
Muskegon.....	36,570	9	3							
Pontiac.....	34,273	10	3							
Port Huron.....	25,944	16							1	
Sault Ste. Marie.....	12,096	3					1			
Minnesota:										
Duluth.....	98,917	16	5		1		9		1	2
Faribault.....	11,089	5					2			1
Hibbing.....	15,089	1					11			

CITY REPORTS FOR WEEK ENDED OCTOBER 28, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Minnesota—Continued.										
Minnesota—Continued.										
Minneapolis.....	380,562	72	53	1	1		42		32	7
Rochester.....	13,722	24	3				1			
St. Cloud.....	15,873		1							
St. Paul.....	234,698	42	30				52	1	5	3
Winona.....	19,143		2				2			
Missouri:										
Cape Girardeau.....	10,252		2							
Independence.....	11,686	9		1						
Joplin.....	29,902		1				1			
Kansas City.....	324,410	104	30	5			14	1	6	3
St. Joseph.....	77,939	28	5				5			
St. Louis.....	772,897	188	45	2	1		40		38	12
Springfield.....	39,631	12								
Montana:										
Anaconda.....	11,668	1								
Billings.....	15,100	2	2				6		2	
Great Falls.....	24,121	7								
Missoula.....	12,668	4								
Nebraska:										
Lincoln.....	54,948	11	3							
Omaha.....	191,601	45	15	2			4	1		
Nevada:										
Reno.....	12,016	4								
New Hampshire:										
Berlin.....	16,104	2								
Concord.....	22,167	8								
Dover.....	13,029	5							1	
Keene.....	11,210	3					1			
New Jersey:										
Asbury Park.....	12,400	2								
Atlantic City.....	50,707	12			12		1			
Bayonne.....	76,754		5		1		3		3	
Belleville.....	15,060								2	
Bloomfield.....	22,019	3	1				2			
Clifton.....	26,470	3					2			
East Orange.....	50,710								1	1
Englewood.....	11,627	2								
Garfield.....	19,331	2	2		5					
Hackensack.....	17,667	2					1			
Harrison.....	15,721		4				1			
Hoboken.....	68,166	14	6				1		1	1
Jersey City.....	298,103		24				2		16	
Kearny.....	28,724	10								
Montclair.....	28,810	4	1						1	
Morristown.....	12,548	5	1		2					
Newark.....	414,524	70	9	1	14		8		21	3
Orange.....	33,268	7	3		2		2			1
Passaic.....	63,841	18	9		6		2			
Paterson.....	135,875		5						8	
Perth Amboy.....	41,707	10	5		1		1		1	1
Phillipsburg.....	16,923	2								
Plainfield.....	27,700	5							1	
Summit.....	10,174	1								
Trenton.....	119,289	31	46	2					1	
Union (town).....	26,651		3				3			
West Hoboken.....	40,074	5	1							
West New York.....	29,926	2	1							
West Orange.....	15,573	1	1		19		1			1
New Mexico:										
Albuquerque.....	15,157	5	3				4		2	3
New York:										
Albany.....	113,344		3				1		4	
Auburn.....	36,192	8	4						1	
Buffalo.....	506,775	114	17	2	7		26		24	6
Cohoes.....	22,987	7	1							
Cortland.....	13,294	0								
Geneva.....	14,648	3		1						
Glens Falls.....	16,638	7	1							1
Hornell.....	15,025	3					3			
Hudson.....	11,745	4	2							
Ithaca.....	17,004	7					3		1	
Jamestown.....	38,917	7	1		1		4		2	

CITY REPORTS FOR WEEK ENDED OCTOBER 28, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
New York—Continued.										
Lackawanna.....	17,918	1	1		2		5			
Little Falls.....	13,029	9								
Lockport.....	21,308	6								
Middletown.....	18,420									
New York.....	5,620,048	1,208	157	11	27		70	1	235	194
Newburgh.....	30,366	11	1							
Niagara Falls.....	50,760	15	3				8		1	
North Tonawanda.....	15,482	6					6			
Olean.....	20,506	8					3			
Peekskill.....	15,868	7								
Port Chester.....	16,573	2								
Poughkeepsie.....	35,000	8	2							
Rochester.....	295,750	66	14		15		3		13	4
Rome.....	26,341	7	1				3			
Saratoga Springs.....	13,181	4							2	1
Schoenectady.....	88,723	19	2		1		18		5	1
Syracuse.....	171,717	36	35				7		5	2
Troy.....	72,013	18	3						4	1
Watertown.....	31,285	11			1		1		1	2
White Plains.....	21,031	7					1			1
Yonkers.....	100,176	25	1							3
North Carolina:										
Charlotte.....	46,338	7								
Durham.....	21,719	3	5				3		2	1
Greensboro.....	15,861	8								
Raleigh.....	24,418	13	3				10			
Rocky Mount.....	12,742	3								
Salisbury.....	13,884	3								
Wilmington.....	33,372	8	5	1			1			
Winston-Salem.....	48,395	14	11	1			3		2	2
North Dakota:										
Fargo.....	21,961	0				2				
Grand Forks.....	14,010						3			
Ohio:										
Akron.....	208,435	32	16		1		3		2	
Ashtabula.....	22,062	8	1						6	
Barberton.....	18,811	4	1				1		8	
Bucyrus.....	10,425	2	1				5			1
Cambridge.....	13,104	3								
Canton.....	87,091	18	3	1	2		4			1
Chillicothe.....	15,831	6	2				2			
Cincinnati.....	401,247	116	18	2	1		17		10	5
Cleveland.....	796,841	172	72	3	2		76		27	11
Cleveland Heights.....	15,236				1		3		2	
Columbus.....	237,031	56	44	1	5		8		2	4
Coshocton.....	10,847						1			
Dayton.....	152,559	43	17				8		1	
East Cleveland.....	27,292	2					1			
East Youngstown.....	11,237	3		1						
Elyria.....	20,474	2					2		1	
Findlay.....	17,021	4								
Fremont.....	12,468	4							1	
Hamilton.....	39,675	6								
Ironton.....	14,007	1	4							
Kenmore.....	12,683						11			
Lancaster.....	14,706	5	1						2	
Lorain.....	37,295	4					3			
Mansfield.....	27,824	8	11	1			3			
Martins Ferry.....	11,634	1	1				1			
Middletown.....	23,594	8							1	1
New Philadelphia.....	10,718									
Newark.....	16,718	8	1				1			
Niles.....	13,060	2								
Norwood.....	24,966	3	1				2			
Piqua.....	15,044	4	1						1	
Salem.....	10,305	2								
Springfield.....	60,840	14	5				1		1	2
Stuebenville.....	28,508	6	1				1			
Tiffin.....	14,375	2	8							
Toledo.....	243,164	60	23	1	68		2		5	3
Zanesville.....	29,599	12	4			1				

¹Pulmonary tuberculosis only.

CITY REPORTS FOR WEEK ENDED OCTOBER 28, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Oklahoma:										
Oklahoma.....	91,295	20	7	1			6			
Tulsa.....	72,075		11		1		6			
Oregon:										
Portland.....	258,288	70	9		3		6		4	7
Pennsylvania:										
Philadelphia.....	1,823,779	446	83	7	434	4	35	1	59	32
Rhode Island:										
Cranston.....	29,407	6	1							
Cumberland (town).....	10,077		2				1			
Newport.....	30,255		7							
Pawtucket.....	64,248	13	1		4				1	
Providence.....	237,595	58	0	1	4		1			4
South Carolina:										
Charleston.....	67,957	18					2			3
Greenville.....	23,127	2	2				1			
South Dakota:										
Sioux Falls.....	23,202	4	4				3			
Tennessee:										
Chattanooga.....	57,895		4				2			
Knoxville.....	77,818		1				2		1	1
Memphis.....	162,351	60	23		1		8		11	3
Nashville.....	118,342	38	12				4		5	3
Texas:										
Beaumont.....	40,422	13								2
Corpus Christi.....	10,522	3								
Dallas.....	158,976	40	13	1			2		9	3
El Paso.....	77,560	23	1		1				17	4
Fort Worth.....	106,482	22	8						1	
Galveston.....	44,255	7	3							1
Houston.....	138,276	47	4	1						4
Waco.....	38,500	8	2							
Utah:										
Salt Lake City.....	118,110	25	4				1			
Vermont:										
Burlington.....	22,779	2								
Rutland.....	14,954	2								
Virginia:										
Alexandria.....	18,060	7								
Lynchburg.....	30,070	5	10				1			
Norfolk.....	115,777		14				1			1
Petersburg.....	31,012	5	3				1		1	1
Portsmouth.....	54,387	11	7	1						1
Richmond.....	171,667	53	32				23		11	2
Roanoke.....	50,842	23	11	1			5			
Washington:										
Bellingham.....	25,585						3			
Seattle.....	315,312		4		1		4		11	
Spokane.....	104,437		8		1		3			
Tacoma.....	96,965		7				7			
Walla Walla.....	15,503		2				1		1	
West Virginia:										
Bluefield.....	15,282	5	6				1		1	
Charleston.....	39,608	13	6							1
Clarksburg.....	27,869	6	4				2	1		
Fairmont.....	17,851		2							
Huntington.....	50,177	13	14							2
Martinsburg.....	12,515	2			1	1				
Morgantown.....	12,127		3				2			
Moundsville.....	10,669	5	4				1			
Parkersburg.....	20,050	4	1	1			9			
Wheeling.....	56,208	19	4		3		2			
Wisconsin:										
Appleton.....	19,561		4		2		1			
Beloit.....	21,284	5	1				20			
Fond du Lac.....	23,427	7	3				2			
Green Bay.....	31,017		6				1			
Janesville.....	18,293	2			1					2
Kenosha.....	40,472	6	4	1			2			
La Crosse.....	30,421		4		6		2			
Madison.....	38,378		4		1		2			1
Manitowoc.....	17,563		1		1		1			
Marinette.....	13,610						2			
Milwaukee.....	457,147		31		283		51		13	

CITY REPORTS FOR WEEK ENDED OCTOBER 28, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Wisconsin—Continued.										
Oshkosh	33,162	6	1				1			1
Racine	58,593	11	17	1	3		5		1	1
Sheboygan	30,955		12							
Superior	39,671	7								
Wausau	18,661		4		1		3		1	
West Allis	13,745		2		11		3			
Wyoming:										
Cheyenne	13,829	3	1		1					

FOREIGN AND INSULAR.

PLAGUE ON VESSEL.

Steamship "Barcelona"—From Spanish Ports—At Habana, Cuba.

A case of plague was reported, November 11, 1922, on the steamship *Barcelona*, which arrived November 10 at Habana, Cuba, from Spanish ports. The patient was stated to have come from the Canary Islands.

The *Barcelona* sailed October 13 from Barcelona, Spain, for Habana and New Orleans, via ports, leaving Alicante, Spain, October 17, and Las Palmas, Canary Islands, October 24, 1922.

HAWAII.

Plague—Plague-Infected Rats—Hamakua Mill Camp.

A fatal case of plague was reported, October 20, 1922, at Hamakua Mill Camp, Hamakua Mill, Hawaii. The finding of two plague-infected rats was reported, one on October 9 and one on October 14, 1922.

JAMAICA.

"Alastrim."

During the two weeks ended October 21, 1922, 64 new cases of "alastrim" were reported in the Island of Jamaica.

Typhoid Fever—Kingston and Vicinity.

During the period under report 13 cases of typhoid fever were reported in Kingston, Jamaica, and 46 cases in the surrounding country.

Vaccination Against "Alastrim"—Portland Parish.

From September 1 to October 25, 1922, about 5,000 vaccinations were stated to have been performed in the affected area in the Parish of Portland. No fatalities from "alastrim" were reported from September 15 to October 25, 1922. On October 25, 71 cases were reported in hospital. This number was stated to represent practically all the cases in the Parish. Outside the zone referred to there were no cases of "alastrim" reported present in the island of Jamaica on October 25, 1922.

MEXICO.

Yellow Fever—Tampico—Tuxpam.

Yellow fever has been reported in Mexico as follows: *Tampico*, November 5, 1922, one case; *Tuxpam*, November 10, 1922, one case.

PERU.

Plague—January—June, 1922.

During the first six months' period of the year 1922, 394 cases of plague with 173 deaths, occurring in 31 localities, were reported in Peru. The largest number of cases was reported at Bambamarca, viz, 44, with 19 deaths. At Pacasmayo and Salaverry one case each was reported. In the Province of Callao-Lima the occurrence was reported as follows: *Lima city*, 30 cases with 16 deaths; *Lima district*, 28 cases with 11 deaths; *Callao city*, 24 cases with 10 deaths; *Callao district*, two cases.

POLAND.

Communicable Diseases—August 20—September 7, 1922.

Communicable diseases were notified in Poland, including Polish Upper Silesia, and Vilna, but exclusive of the district of Minsk, during the period August 20 to September 7, 1922, as follows:

Disease.	New cases.	Deaths.	Locality of highest proportional mortality.
Cerebrospinal meningitis.....	21	12	Lodz.
Cholera.....	2	3	Bialystok.
Diphtheria.....	133	12	Lublin, Posen, Stanislawow.
Measles.....	2,007	18	Kielce, Warsaw.
Scarlet fever.....	467	62	Lwow, Tarnopol, and Warsaw city.
Smallpox.....	21	5	Kielce, Nowogrodek, Stanislawow, Vilna.
Tuberculosis.....	159	313	Lwow, Warsaw city.
Typhoid fever.....	985	58	Lodz, Warsaw city.
Typhus fever.....	225	19	Bialystok, Posen, Stanislawow, Tarnopol, Volhynia.
Typhus fever, recurrent.....	513	14	Lublin, Nowogrodek, Volhynia.
Whooping cough.....	459	19	Pomerania, Stanislawow, Tarnopol.

Botulism.

During the week ended September 7, 1922, four cases of botulism with three deaths were reported in Poland. The cases occurred in the district of Volhynia.

Dysentery.

During the period August 20 to September 7, 1922, 2,980 cases of dysentery with 352 deaths were reported in Poland. The cases occurred in the district of Stanislawow.

Measles—Warsaw.

Of the 2,007 cases of measles notified during the period under report, 1,818 occurred in the city of Warsaw.

SPAIN.

Status of Plague.

On October 18, 1922, 13 cases of plague were reported present in Barcelona.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.**Reports Received During Week Ended November 17, 1922.¹**

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

CHOLERA.

Place.	Date..	Cases.	Deaths.	Remarks.
India.....	Aug. 27-Sept. 2, 1922: Cases, 2,098; deaths, 1,360.
Poland.....	Aug. 20-Sept. 7, 1922: Cases, 2; deaths, 3.

PLAGUE.

Azores:				
St. Michaels Island.....	Sept. 9-Oct. 14....	202	26	Occurring in localities 3 to 9 miles distant from Ponta Delgada.
Ponta Delgada.....	Oct. 1-14.....	3		
Brazil:				
Bahia.....	Sept. 24-30.....	1	1	
China:				
Foochow.....	Sept. 17-23.....			Present.
Ecuador:				
Guayaquil.....	Oct. 1-15.....	1	1	Rats examined, 4,125; found infected, 5.
Hawaii:				
Hamakua Mill.....	Oct. 20.....		1	2 plague-infected rats reported; 1 on Oct. 9; 1 on Oct. 14.
India.....	.....	.....	.....	Aug. 27-Sept. 2, 1922: Cases, 1,099; deaths, 769.
Madagascar:				
Tamatave.....	Sept. 4-10.....		2	
Peru.....	.....	.....	.....	Jan.-June, 1922: Cases, 394; deaths, 173.
Callao.....	Jan.-June.....	24	10	Country district, cases, 2.
Lima.....	do.....	30	16	Country district, cases 28, deaths, 11.
Spain:				
Barcelona.....	.....	.....	.....	Oct. 18, 1922: 13 cases present.
Syria:				
Alexandretta.....	.....	.....	.....	Oct. 8-14, 1922: One plague rat.
Beirut.....	July 31-Aug. 13....	5	1	
On vessel:				
S. S. Barcelona.....	Nov. 11.....	1		At Habana, Cuba, from Barcelona, Spain, via Canary Islands.

SMALLPOX.

Brazil:				
Rio de Janeiro.....	Sept. 24-Oct. 7....	30	9	
British East Africa:				
Kenya Colony— Tanganyika Territory..	Aug. 20-Sept. 2....	27	4	
China:				
Chungking.....	Sept. 17-23.....			Present.
Manchuria— Dairen.....	Sept. 11-17.....	1		
Dominican Republic:				
San Pedro de Macoris.....	Oct. 8-28.....	67		Outside city limits.
Santo Domingo.....	Oct. 22-28.....	2	1	
Ecuador:				
Guayaquil.....	Oct. 1-15.....	4		
Great Britain:				
London.....	Oct. 8-14.....		1	
India.....	.....	.....	.....	Aug. 27-Sept. 2, 1922: Cases, 369; deaths, 196.
Mexico:				
Guadalajara.....	Sept. 11-17.....	1		
Mexico City.....	Sept. 24-Oct. 7....	7		
Poland.....	.....	.....	.....	Aug. 20-Sept. 7, 1922: Cases, 21; deaths, 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 During Week Ended November 17, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Portugal: Lisbon.....				June 25-Oct. 14, 1922: Cases, 224; deaths, 69. (Corrected report.)
Switzerland: Zurich.....	Oct. 8-14.....	3		
Turkey: Constantinople.....	.....do.....	9	3	

TYPHUS FEVER.

Algeria: Algiers.....	Sept. 1-30.....	3	2	Aug. 20-Sept. 7, 1922: Cases, 225; deaths, 19. Typhus fever, recurrent: Cases, 513; deaths, 14.
Egypt: Alexandria.....	Oct. 8-14.....	1		
Cairo.....	Aug. 6-12.....	1		
Port Said.....	.....do.....	1	1
Mexico: Mexico City.....	Sept. 24-Oct. 7....	24		
Poland.....				
Syria: Aleppo.....	Oct. 1-7.....			
Turkey: Constantinople.....	Oct. 8-14.....	2		

YELLOW FEVER.

Mexico: Tampico.....	Nov. 5.....	1	
Tuxpam.....	Nov. 10.....	1	

Reports Received from July 1 to November 10, 1922.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China: Amoy.....	May 14-June 24....	1	4	Prevalent in Chinese city and in settlements along Yalu River.
Antung.....	Sept. 21-Oct. 1.....			
Manchuria— Dalren.....	Sept. 18-24.....	3	2	Present. Stated to have been imported from Shanghai.
Newchwang.....	July 27.....			
Pootung.....	Aug. 3.....			Present.
Shanghai.....	June 25-July 31....	198		Aug. 1-Oct. 1, 1922: Cases, 5, foreign; deaths, 55, Chinese. July 29, 1922: Stated to be 250 cases in Chinese isolation hospital.
Tientsin.....	July 25-Aug. 19....	4	2	
Woosung.....	Aug. 3.....			About 75 deaths reported for previous week.
Greece: Athens.....	June 29.....	1	1	At quarantine station; among passengers from vessel carrying Russian refugees.
Saloniki.....	June 7-17.....	30	11	
India: Bombay.....	Apr. 23-June 17....	12	5	Feb. 25-June 24, 1922: Deaths, 33,979. June 25-Aug. 5, 1922: Deaths, 9,348. Aug. 6-28, 1922: Cases, 5,704; deaths, 3,592. (Report for week ended Feb. 25, 1922, not received.)
Do.....	July 2-Aug. 12....	5	4	

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

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

Reports Received from July 1 to November 10, 1922—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India—Continued.				
Calcutta.....	Apr. 23-June 24...	536	378	
Do.....	June 25-Sept. 16...	70	63	
Madras.....	May 21-June 17...	3	1	
Do.....	July 16-Sept. 23...	5	3	
Rangoon.....	May 7-June 24...	116	65	
Do.....	June 25-Sept. 2...	97	62	
Indo-China:				
Saigon.....	June 25-Aug. 19...	30	28	Including area of 100 square km.
Japan:				
Tokyo.....	Oct. 4.....			Epidemic.
Yokohama.....	Oct. 5.....			Present.
Philippine Islands:				
Manila.....	May 21-June 21...	8		
Do.....	June 25-Sept. 2...	14	3	1 case, 1 death in nonresident, Aug. 27-Sept. 2, 1922.
Province—				
Bataan.....	June 4-10.....	1		
Batangas.....	May 29-June 24...	15	11	
Do.....	June 25-July 22...	7	4	
Bulacan.....	Apr. 30-May 6.....	1	1	
Cagayan.....	Aug. 13-19.....	2	2	
Camarines Sur.....	Mar. 25-Apr. 1.....	1	1	
Laguna.....	Apr. 16-22.....	1		
Marinduque.....	June 25-July 15...	6	6	
Mindoro.....	Apr. 23-29.....	1		
Nueva Ecija.....	June 11-17.....	1	1	
Pampanga.....	Apr. 16-June 24...	6	5	
Do.....	June 25-July 8.....	1	1	
Pangasinan.....	June 18-24.....	3	1	
Do.....	Aug. 27-Sept. 2...	2		
Rizal.....	Apr. 2-June 24...	3	1	
Tarlac.....	May 21-June 10...	4	4	
Union.....	Aug. 6-Sept. 9.....	3	2	
Poland.				
Rovno.....	June 11-24.....	8	3	
Do.....	June 25-Aug. 5.....	33	10	Repatriation station: Cases occurring among persons repatriated from Russia.
Volhynia.....	July 2-8.....	1	1	
Zamosc.....	Aug. 21.....		1	
Rumania:				
Bucharest.....	do.....	1		
Crangasi.....				To July 31, 1922: Cases, 11; deaths, 6. First case in soldier from frontier on Dniester River. Crangasi, a suburb of Bucharest.
Province—				
Bessarabia—				
Cobusea.....	July 21.....	1		
Codaeshti.....		3		Reported Aug. 11.
Orhei.....				Prefecture. Cholera reported Aug. 11 among troops in garrison.
Rascautzi.....		11	1	Reported July 29.
Siam:				
Bangkok.....	Apr. 30-June 17...	15	9	
Do.....	July 2-Sept. 2.....	12	5	
Straits Settlements:				
Singapore.....	July 16-22.....	1	1	
Syria:				
Aleppo.....	May 27-June 3.....			A few cases in interior.
Do.....	June 25-Sept. 2.....			Present in interior.
On vessel:				
S. S. Chios.....	July 16.....	1		At Kavak Quarantine Station: Bosphorus, from Novorossysk, a Russian Black Sea port. Case occurred in a recognized carrier. Vessel carried refugees for Saloniki, Greece. Six bodies buried at sea; 12 cases landed at Kavak during stay.
—.....	Sept. 18-21.....	2	1	At Dairen, Manchuria, China. Name and origin of vessel not stated.

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

Reports Received from July 1 to November 10, 1922—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria:				
Algiers.....	Aug. 27.....	1		
Oran.....	Aug. 1-31.....	10	3	
Asia Minor:				
Smyrna.....	May 28-June 17...	3	1	
Do.....	June 30-Aug. 26...	8	1	District.
Australia:				
New South Wales—				
Sydney.....	June 1-15.....	2		Apr. 2-June 10, 1922: 19 plague-infected rats found.
Queensland—				
Brisbane.....	July 23-29.....			One plague rat.
Azores:				
Fayal Island.....				
				Jan. 16-Feb. 8, 1922: Cases, 6; deaths, 4.
Horta.....	Feb. 2-8.....	4	2	
St. Michaels Island.....				Jan. 1-May 13, 1922: Cases, 93; deaths, 55. June 25-Oct. 19, 1922: Cases, 265; deaths, 23. In localities 3-9 miles from Ponta Delgada.
Ponta Delgada.....	Oct. 19.....	3		In vicinity; 180 cases.
Brazil:				
Bahia.....				
	June 11-17.....	1		May 7-June 4: Rodent; occurring in one section of the city. Many dead rats found.
Do.....	Aug. 20-26.....	1		
Pernambuco.....	May 7-13.....	1		
Porto Alegre.....	July 30-Sept. 30...	1	5	
British East Africa:				
Kenya Colony				
Nairobi.....	Feb. 1-28.....	15	15	Mar. 1-June 30, 1922: Cases, 371; deaths, 344. July 9-15, 1922: Deaths, 14.
Cape Verde Islands:				
St. Vincent.....				
	Sept. 4.....			Present.
Ceylon:				
Colombo.....				
	May 6-June 24.....	13	10	Plague rats, 5.
Do.....	June 25-Sept. 23...	22	23	Plague rats, 12.
China:				
Amoy.....				
	May 7-June 24.....		87	May 20, 1922: From 10 to 20 deaths reported daily. July 16-Aug. 12, 1922: Present; stated to be decreasing.
Do.....	June 25-July 15.....		76	
Canton.....	May 1-June 30.....	28	23	June 17-24, 1922: Present. June 21: Mildly epidemic; 2 fatal cases in foreign physicians. Aug. 13-Sept. 9, 1922: Present.
Foochow.....				
	May 7-June 10.....	5	4	
Do.....	July 2-Aug. 12.....	3	1	
Hongkong.....				
	June 4-24.....	176	104	
Do.....	June 25-Sept. 16...	146	101	
Ecuador:				
Guayaquil.....				
	June 1-15.....			Rats found infected, 16; examined, 3,400.
Do.....	July 1-Sept. 15.....			Rats examined, 21,600; found infected, 56.
Egypt:				
City—				
Alexandria.....	June 1-28.....	21	6	Jan. 1-June 23, 1922: Cases, 200; deaths, 120. Jan. 1-Aug. 10, 1922: Cases, 439; deaths, 204. (Corrected report.)
Do.....	July 2-Sept. 9.....	18	7	
Port Said.....	June 12-25.....	2	5	Septicemic, 1.
Do.....	July 2-Oct. 5.....	31	22	Foreign, cases, 2; deaths, 2.
Suez.....	May 24-June 25.....	7	6	
Do.....	July 10-Aug. 8.....	3	2	Aug. 5, 1922: One case imported from Mauritius on S. S. Dumbea.
Province—				
Assiout.....				
	May 30-June 23.....	14	8	Septicemic, 1.
Do.....	July 11-Aug. 5.....	6	3	
Benisouef.....	May 26-June 20.....	19	7	
Do.....	July 2-Sept. 2.....	29	13	
Fayoum.....	June 3-29.....	8	4	
Do.....	July 2-20.....	13	3	
Gharbieh.....	May 26-June 30.....	37	13	
Do.....	July 2.....	3		
Menoufieh.....	July 20.....	1	7	
Minieh.....	June 2-29.....	24	1	
Do.....	July 14-Sept. 30...	19	10	
Sinnuris (district).....	Sept. 3-9.....	1		

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

Reports Received from July 1 to November 10, 1922—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
France:				
Paris.....	Aug. 11-18.....	4		
Greece:				
Patras.....	Apr. 24-June 25....	5	3	
Piræus.....	Aug. 1-31.....	3	1	
Hawaii:				
Hamakua.....	June 30-July 4....	1	1	At Kalopa Homesteads. Case Hawaiian.
Do.....	July 8.....			Hamakua Mill Co. One plague rat trapped; found positive, July 14, 1922.
Honokaa.....	Aug. 19-Sept. 10..		4	Japanese and Filipinos; bubonic and septicemic. Oct. 5, 1922: One case, one death. Reported positive Oct. 12. At Honokaa Mill. Family of fatal case reported Aug. 21, 1922. Aug. 12-Sept. 13, 1922; 3 plague rats found.
Honokaa Mill.....	Aug. 21.....	1	1	Japanese; pneumonic.
Kalopa.....	July 13.....	1	1	Contact with case at Kalopa Homesteads, July 4.
Paahau.....	June 30.....			One plague rat trapped at Paahau Gulch, June 29; found positive June 30, 1922.
Paanilo.....	July 7.....		1	At Pohakes; Japanese, Sept. 25, 1922: One plague rat found at Hamakua Mill.
Pohakea.....	Aug. 1-16.....	2	2	Aug. 1, Japanese child; case reported positive for plague Aug. 6, 1922. Form, pneumonic.
Pohakuhaku.....	July 12.....	1	1	Aug. 16, 1 fatal case in Japanese. Hawaiian. Reported positive, July 19.
India.....				Apr. 23-June 21, 1922: Cases, 6,310; deaths, 4,812. June 25-Aug. 26, 1922: Cases, 4,912; deaths, 3,475.
Bombay.....	Apr. 23-June 24....	168	123	Surrounding country, July 2-8, 1922: Cases, 21; deaths, 16.
Do.....	June 25-Sept. 2....	49	38	
Calcutta.....	Apr. 23-June 24....	56	54	
Do.....	June 25-Aug. 19....	16	16	
Karachi.....	May 23-June 24....	59	55	
Do.....	June 25-Sept. 30....	6	5	
Madras Presidency.....	May 21-June 24....	74	36	
Do.....	June 25-Sept. 30....	1,646	1,063	
Rangoon.....	May 6-June 21....	175	161	
Do.....	June 25-Sept. 9....	392	355	
Indo-China:				
Saigon.....	Apr. 23-June 24....	30	21	
Do.....	June 25-Aug. 19....	10	7	Including area of 100 square kilometers.
Italy:				
Catania.....	June 17.....	1		
Naples.....	July 18-Sept. 16..	17		Occurring in suburbs, viz, at Torre Annunziata, July 18-Sept. 10, 1922: 16 cases; San Giovanni a Teduccio, July 25, 1922: 1 case.
Japan:				
Osaka.....	July 11-20.....	7	6	Reported as having occurred during past month: Cases, 9; deaths, 8.
Java.....				Month of April, 1922: Report of the 7 Provinces of Java: Cases, 413; deaths, 495. May 1-31, 1922: Cases, 293; deaths, 310; occurring in 6 Provinces. June 1-30, 1922: Cases, 222; deaths 256; occurring in 5 Provinces. July 1-Aug. 31, 1922: Cases, 416; deaths, 447; occurring in 5 Provinces.
East Java—				
Soerabaya.....	May 7-June 24....	3	3	
Soerakarta—				
Keporen.....	May 20.....			Epidemic.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**Reports Received from July 1 to November 10, 1922—Continued.****PLAGUE—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Madagascar:				
Tananarive Province—				
Anketrina.....	May 4.....		1	Native village; disease stated to have been present since about Apr. 27, 1922. (Name of locality corrected.)
Tamatave.....	June 26-July 2....	2	1	
Do.....	Aug. 21-Sept. 13..			Present. Aug. 17, 1922: 1 case. Aug. 18, 1922: 1 death. Aug. 21-27, 1922: 1 death.
Tananarive.....	May 29-June 18....	2	1	
Do.....	July 10-23.....	2	2	
Mauritius Island.....				Aug. 7-19, 1922: Cases, 2. Oct. 19, 1922: 65 fatal cases reported.
Mesopotamia:				
Bagdad.....	Apr. 1-June 30....	268	188	
Do.....	July 1-Aug. 31....	29		
Mexico:				
Tampico.....				Sept. 24-30, 1922: 1 plague rat.
Vera Cruz.....				June 30, 1922: 1 plague rat.
Palestine:				
Jaffa.....	July 4-Oct 9.....	45	2	In native quarter. Name of locality corrected.
Peru.....				May 1-15, 1922: Cases, 36; deaths, 19. June 1-30, 1922: Cases, 87; deaths, 15. July 1-Aug. 31, 1922: Cases, 95; deaths, 51. Jan. 1-June 30, 1922: Deaths, 13.
Callao.....				
Philippine Islands:				
Manila.....	June 3.....	1	1	From S. S. Taisang from Amoy, China.
Do.....	Aug. 20-26.....	2		
Portugal:				
Lisbon.....	July 23-Sept 2....	4	5	
Portuguese West Africa:				
Angola—				
Loanda.....	Oct. 25.....			Present.
Guinea.....				Reported present Aug. 24, 1922.
Senegal:				
Dakar.....	June 1-30.....	1	1	
Do.....	July 1-31.....	2	2	
Siam:				
Bangkok.....	Apr. 30-June 3....	4	3	
Do.....	July 2-Sept. 2....	8	7	
Spain:				
Barcelona.....	Sept. 24-Oct. 19..	6	6	Stated to be confined to factory in which disease first appeared.
Cartagena.....	Oct. 18.....	2		
Valencia.....	do.....	2		
Straits Settlements:				
Singapore.....	Apr. 30-June 24....	8	9	
Do.....	July 9-Aug. 26....	3	3	
Syria:				
Aleppo.....	Sept. 9-16.....		1	
Beirut.....	July 30.....	2		
Tunis:				
Tunis.....	June 30-Sept. 9....	4	1	
Turkey:				
Constantinople.....	Aug. 20-Oct. 7....	12	8	
Union of South Africa:				
Orange Free State—				
Grootkom Farm.....	May 7-13.....			One dead plague-infected rodent found. Locality adjoins Tru-cart's Berg Farm, on which plague-infected mouse was found preceding week.
Rendezvous Ry. Station.....	May 14-20.....			Plague-infected wild rodent found near.
On vessels:				
S. S. Ardeola.....	June 25-July 8....			At Liverpool. Four plague-infected rats found dead. Vessel from Las Palmas, Canary Islands, June 26, 1922.
S. S. Dumbea.....	Aug. 5.....	1		At Suez, Egypt, from Island of Mauritius. Patient ill two days before arrival. Declared positive Aug. 6.

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

Reports Received from July 1 to November 10, 1922—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
On vessels—Continued. Greek vessel	July 19			At Messina, Italy. Cases on board. Vessel not allowed to enter.
S. S. Legie	July 29			At Hamburg, Germany. Plague rats found. Vessel from Buenos Aires, Argentina.
S. S. Southgate	May 30	1		At Thursday Island quarantine, Australia. Vessel left Calcutta May 2; Rangoon, May 9. Vessel badly rat-infested.
S. S. Taisang	June 1-3	1	1	At Manila, P. I., from Amoy, China. Patient landed at Manila June 1, 1922; The Taisang was 2½ days en route direct from Amoy.

SMALLPOX.

Arabia:				
Aden	May 7-June 24	60	21	
Do	July 2-Oct. 7	49	24	
Argentina:				
Rosario	June 1-30		3	
Asia Minor:				
Smyrna	May 14-June 21	4		In district.
Do	June 25-Aug. 25	13		Do.
Bermuda:				
Hamilton	Sept. 3-30	3		
Bolivia:				
La Paz	Mar. 1-Apr. 30	97	16	
Brazil:				
Bahia	June 25-July 1	1	1	
Para	May 29-June 25	8		
Do	July 3-Sept. 17	141	2	Aug. 22-28, 1922: Cases, 16.
Rio de Janeiro	May 14-June 24	48	12	
Do	June 25-Sept. 23	136	28	
Sao Paulo	Apr. 10-June 11	3	10	
British East Africa:				
Kenya Colony:				
Dar-es-Salaam	Apr. 16-June 10	26		Apr. 1-June 30, 1922: Cases, 15.
Do	July 16-Aug. 12	18	2	July 9-15, 1922: Deaths, 5.
Nairobi	Mar. 1-31	22	2	
Zanzibar	May 1-June 10	36	6	
Do	June 24-July 1	2		
Canada:				
Alberta—				
Calgary	June 18-24	1		
Manitoba—				
Winnipeg	May 6-June 17	3		
Do	Sept. 3-9	1		
New Brunswick—				
Kent County	June 25-July 1	2		
Madawaska County	June 4-17	6		
Do	Sept. 10-Oct. 7	2	1	
Ontario:				
Fort William and Port Arthur	Aug. 6-Sept. 23	3		Sept. 1-30, 1922: Cases, 19; deaths, 1.
Hamilton	July 30-Aug. 12	2		
London	Aug. 26-Sept. 2	1		
North Bay	June 3-17	2		
Do	July 16-Aug. 12	3		
Ottawa	June 11-July 1	17		
Do	July 2-Oct. 21	16		
Toronto	June 18-Sept. 9	10		
Saskatchewan—				
Regina	Sept. 17-23	1		Imported.
Saskatoon	Aug. 20-26	1		
Ceylon:				
Colombo	May 14-20	1		
Do	July 16-Sept. 23	11		
Chile:				
Concepcion	Mar. 14-June 20		71	Prevalent, July 3, 1922, throughout southern Provinces.
Do	June 27-Sept. 4		30	

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

Reports Received from July 1 to November 10, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Chile—Continued.				
Quillon.....				In Concepcion Province: Epidemic in May, 1922, with 60 reported cases. To June 5, epidemic.
Do.....	June 27-July 3.....			Epidemic.
San Patricio.....	May 16-22.....	13		
Talcahuano.....	May 22-June 24.....	33	19	May 16-22, 1922: Present.
Do.....	June 25-July 30.....	5	7	
Temuco.....				Province of Cautin; epidemic in May, 1922.
Valparaiso.....	Mar. 26-June 19.....		115	Incomplete; several districts not reporting.
Do.....	June 25-July 30.....		46	
China:				
Amoy.....	May 7-20.....			Present. June 18-24, 1922: 1 death.
Do.....	July 16-Sept. 16.....			Present.
Antung.....	May 29-June 18.....	4		
Do.....	July 5-16.....	5		
Chungking.....	May 28-June 24.....			Do.
Do.....	June 25-Sept. 2.....			Do.
Foochow.....	May 14-20.....	1		Aug. 13-19, 1922: Present.
Do.....	Aug. 27-Sept. 9.....	1		Present.
Hankow.....	June 25-July 1.....	1		
Hongkong.....	May 14-June 24.....	41	32	
Do.....	July 16-Sept. 16.....	5	2	Aug. 13-26, 1922: Present.
Manchuria—				
Dairen.....	May 15-June 18.....	4	1	
Do.....	June 26-Aug. 20.....	6	1	
Harbin.....	May 22-28.....	1		
Do.....	July 30-Aug. 5.....	1		
Mukden.....	June 18-24.....	1		Present.
Do.....	July 16-Sept. 23.....	1		Do.
Nanking.....	May 7-June 24.....	1		Do.
Do.....	June 25-Sept. 23.....	1		Do.
Shanghai.....	May 22-28.....	1		Native.
Tientsin.....	May 14-26.....			Present.
Tsingtau.....	May 9-June 18.....	4	3	Including leased territory of Kiaochow, Japanese population along Shantung Railway, and Japanese residents, Tsinan.
Do.....	June 26-July 30.....	5	3	Do.
Chosen (Korea):				
Chemulpo.....	May 1-31.....	1		
Fusan.....	May 1-June 30.....	147	60	
Do.....	July 1-31.....	13	9	
Seoul.....	May 1-June 30.....	26	5	
Do.....	July 1-31.....	23	8	
Cuba.....				
City—				
Antilla.....	June 18-24.....	1		
Do.....	Sept. 17-21.....	2		Reported for Preston.
Cienfuegos.....	June 24-July 1.....	1		
Habana.....	July 1-Aug. 31.....	10		
Sagua la Grande.....	Oct. 15-21.....	1		
Santiago.....	June 1-30.....	3		In vicinity, at Rancho Veloz.
Do.....	Sept. 1-30.....	1		
Province—				
Habana.....	Aug. 20-31.....	1		
Matanzas.....	do.....	1		
Oriente.....	do.....	3		
Santa Clara.....	do.....	4		
Domenica.....				
	Aug. 5-Sept. 9.....			Present. Aug. 23: Epidemic. Island in Leeward Islands.
Dominican Republic:				
Puerto Plata.....	Sept. 12-Oct. 14.....	8		
San Pedro de Macoris.....	May 21-June 24.....	167	2	City and country. (Corrected report.)
Do.....	June 25-Oct. 7.....	317	2	City and district. (Corrected report.)
Santo Domingo.....	June 4-24.....	3	9	Including vicinity.
Do.....	June 25-Oct. 7.....	3	5	July 30-Aug. 5, 1922: A few cases city and vicinity.
Ecuador:				
Guayaquil.....	July 16-Sept. 15.....	8		
Milagro.....	Sept. 1-15.....	1		
Nabol.....	do.....	1		

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

Reports Received from July 1 to November 10, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt:				
Alexandria.....	July 23-Aug. 12...	2	2	
Cairo.....	Apr. 30-June 24...	13	5	
Do.....	July 23-Aug. 5.....	6	1	
Port Said.....	May 7-June 24.....	3	1	
Do.....	July 23-29.....	1		
Finland:				
Do.....	June 1-30.....	2		
Do.....	July 1-15.....	1		
Fiume:				
Do.....	June 13-19.....	1		
Do.....	July 10-16.....	1		
France:				
Paris.....	June 1-10.....	1	1	
Great Britain:				
Halifax.....				Outbreak reported under date of June 17, 1922.
Huddersfield.....				Do.
Liverpool.....	Aug. 13-19.....	1		In port hospital.
London.....	July 30-Oct. 14.....	7	2	
Sheffield.....	May 28-June 17.....	5		
Southampton.....	June 18-24.....	2		
Greece:				
Saloniki.....	May 1-June 25.....	3	1	
Do.....	July 17-23.....	12	1	
Syra Island.....	May 26.....	5		
Haiti:				
Cape Haitien.....	June 11-17.....	1		
Plaine du Nord.....	do.....			Vicinity of Cape Haitien. Present.
India:				
Bombay.....	Apr. 23-June 24.....	38	17	Feb. 26-Mar. 25, 1922: Deaths, 1,162 (date of report corrected).
Do.....	July 2-15.....	4	2	Mar. 26-May 20, 1922: Deaths, 6,015. June 4-24, 1922: Cases, 2,813; deaths, 919. June 25-Aug. 23, 1922: Cases, 7,647; deaths, 2,032.
Calcutta.....	Apr. 23-June 24.....	84	67	
Do.....	June 25-Sept. 16.....	29	22	
Karachi.....	May 23-June 24.....	35	9	
Do.....	July 16-Sept. 30.....	18	5	
Madras.....	May 14-June 24.....	207	94	June 19-25, 1922: Cases, 30; deaths, 15.
Do.....	July 2-Sept. 30.....	477	217	
Rangoon.....	May 7-June 24.....	37	16	
Do.....	July 2-Sept. 9.....	49	23	
Indo-China:				
Saigon.....	June 30-Aug. 19.....	36	26	Including area of 100 square km.
Japan:				
Kobe.....	June 19-25.....	2		
Taiwan Island.....	June 11-30.....	26	3	
Do.....	July 22-Aug. 10.....	27	4	
Yokohama.....	May 29-June 25.....	4	2	
Do.....	June 26-July 20.....	48	8	
Java:				
East Java—Soerabaya.....	Aug. 13-19.....	2		
West Java—Batavia.....	Apr. 28-June 30.....	20	3	City and Province.
Do.....	July 9-Sept. 22.....	45	8	Province.
Luxemburg.....	June 15-30.....	1	1	
Malta.....	May 1-June 15.....	4		June 1-30, 1922: Cases, 2.
Mesopotamia:				
Bagdad.....	Apr. 1-June 30.....	36	40	
Do.....	July 1-Aug. 31.....	57		
Mexico:				
Chihuahua.....	June 22-Sept. 17.....		2	
Guadalajara.....	May 1-June 30.....	13		
Do.....	July 1-31.....	4	1	
Manzanillo.....	June 6-25.....		4	Estimated cases, 4 to 10.
Do.....	June 27-July 3.....	6		Estimated.
Mexico City.....	May 21-June 24.....	129		Including municipalities in Federal District. Report June 11-17, not received.
Do.....	June 25-Sept. 8.....	204		Including municipalities in Federal District.
Nogales.....	July 22-Aug. 5.....	26	3	State of Sonora.
San Luis Potosi.....	July 23-Oct. 7.....		12	
Torreón.....	July 1-31.....		1	
Panama Canal:				
Colon.....	July 1-Oct. 15.....	3		July 1-31, 1922: Cases, 4, of which 1 nonresident and not locally reported. July 23-Sept. 28, 1922: Cases, 3; of these, nonresident, 2.
Panama.....	July 1-Aug. 15.....	2		

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

Reports Received from July 1 to November 10, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Persia:				
Teheran.....	Apr. 23-May 22....	2		
Peru.....				May 1-15, 1922: Cases, 5; deaths, 4. June 1-30, 1922: Cases, 16; deaths, 7. Aug. 1-31, 1922: Cases, 23, deaths, 5.
Callao.....				Jan. 1-June 30, 1922: Deaths, 1.
Lima.....				Jan. 1-June 30, 1922: Deaths, 23.
Poland.....				Mar. 26-June 24, 1922: Cases, 1,210; deaths, 241.
Do.....				June 25-Aug. 19, 1922: Cases, 232; deaths, 49.
Portugal:				
Lisbon.....	May 29-June 25....	6	8	Corrected report.
Do.....	June 26-Sept. 30....	176	62	July 22-Aug. 5: Cases, 19; deaths, 4.
Oporto.....	Aug. 27-Sept. 2....	1		
Portuguese East Africa:				
Lourenco Marques.....	July 23-29.....	1		
Portuguese West Africa:				
Angola—				
Loanda.....	June 25-July 1....		1	
Russia:				
Estonia.....	May 1-June 30....	6		
Do.....	July 1-31.....	1		
Lettonia.....	May 1-June 30....	51		
Do.....	July 1-Aug. 31....	20		
Senegal:				
Dakar.....	June 1-30.....	4	4	
Spain:				
Barcelona.....	June 22-28.....		1	
Do.....	June 29-Sept. 13....		3	
Bilbao.....	Aug. 1-Sept. 30....		5	
Cadiz.....	Aug. 1-30.....		1	
Corunna.....	June 11-17.....		1	
Huelva.....	Apr. 1-June 30....		4	
Do.....	July 1-Aug. 31....		2	
Seville.....	June 11-17.....		36	
Do.....	June 18-Oct. 8....		151	Week ended June 11, 1922: Many cases.
Valencia.....	May 21-27.....	1		
Straits Settlements:				
Singapore.....	Apr. 30-June 5....	11	2	
Do.....	July 30-Aug. 19....	3	1	
Switzerland:				
Basel.....	May 28-June 3....	1		
Do.....	Sept. 17-23.....	1		
Berne.....	May 14-20.....	1		
Do.....	July 9-Sept. 23....	20		
Lucerne.....	July 1-31.....	1		
Zurich Canton.....				Aug. 1-31, 1922: Cases, 74.
Zurich.....	Apr. 23-June 12....	9		
Do.....	June 25-Oct. 7....	77		Aug. 1-31, 1922: Cases, 61.
Syria:				
Aleppo.....	June 4-24.....			Present.
Damascus.....	June 18-24.....		2	
Do.....	June 25-Sept. 30....	21	2	
Tunis:				
Tunis.....	July 17-23.....	1		
Turkey:				
Constantinople.....	May 21-June 24....	21	6	
Do.....	June 25-Oct. 7....	49	12	
Union of South Africa:				
Cape Province.....				Apr. 1-June 30, 1922: Cases, 173; deaths, 12 (colored); white, cases, 36. July 1-31, 1922: Colored—cases, 171; deaths, 3. White—6 cases.
Do.....				Apr. 1-June 30, 1922: Cases, 87; deaths, 3 (colored); white, 6 cases. July 1-31, 1922: Cases, 59; deaths, 2 (colored).
Natal.....	Aug. 20-Sept. 9....			Outbreaks.
Do.....				Apr. 1-May 31, 1922: Cases, 20; deaths, 8 (colored); white, 20 cases. July 1-31, 1922: Cases, 5 (colored).
Orange Free State.....				May 1-31, 1922: Cases, 12; deaths, 1 (colored). July 1-31, 1922: 1 case (colored).
Do.....	Sept. 3-9.....			Outbreaks.

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

Reports Received from July 1 to November 10, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Union of South Africa—Contd.				
Southern Rhodesia.....	May 11-June 28.....	67	4	In natives, 3 cases.
Do.....	June 29-Aug. 23.....	35		
Transvaal.....				Apr. 1-June 30, 1922: Cases, 54 (Colored); white, 10 cases. July 1-31, 1922: Colored—cases, 106; deaths, 1. White, 6 cases. Outbreaks.
Do.....	July 9-Sept. 2.....			
Johannesburg.....	May 1-31.....	1		
Virgin Islands:				
St. Thomas.....	June 5-18.....	1	1	At quarantine. From vessel from Dominican Republic. Sept. 4-24, 1921: Cases, 11; deaths 4.
Yugoslavia.....				
Croatia-Slavonia—				
Zagreb.....	June 4-10.....	1		
Do.....	Aug. 6-12.....	1		
Serbia.....				Oct. 23-29, 1921: Cases, 5.
Belgrade.....	June 11-17.....	1		
Do.....	Aug. 14-Sept. 24..	34	12	
On vessels:				
S. S. Changsha.....	May 11.....	1		At Hongkong, China. Case landed from vessel; patient, intending passenger. Vessel proceeded to Australian ports.
S. S. Comeric.....	do.....	1		At sea, en route to Durban, S. A., from Sydney, Australia. (Public Health Reports, June 23, 1922, p. 1555.)
Schr. Fancy Me.....	May 28.....			At St. Thomas, Virgin Islands. From San Pedro de Macoris, Dominican Republic. One case removed to quarantine June 5; died June 18.
S. S. Montoro.....	July 8.....	1		At Darwin, Australia. Vessel left Singapore June 23 for Darwin via Java ports: Case, Chinese, developed July 4. Case landed at quarantine; vessel proceeded in quarantine to Sydney, via northern ports.
S. S. Shelly.....	Apr. 19.....	1		At sea, en route from Hongkong. Vessel left Hongkong Apr. 17. Arrived Thursday Island quarantine, Australia, Apr. 28, 1922. Case, member of crew; type, confluent hemorrhagic.
S. S. St. Albans.....	May 18.....	1		At Thursday Island quarantine, Australia. Case in person of Chinese steerage passenger. Vessel left Shimonoeki, Japan, for Melbourne via Hongkong and Manila. Left Thursday Island for Australian ports.

TYPHUS FEVER.

Algeria:				
Algiers.....	May 1-31.....	16	4	
Do.....	Aug. 1-31.....	2	1	
Oran.....	June 1-30.....	3	1	
Do.....	July 1-Oct. 10.....	1	4	
Asia Minor:				
Smyrna.....	May 14-June 24..	8		City and district. (Corrected report.)
Do.....	June 25-Aug. 19..	11		District.
Australia:				
Brisbane.....	July 9-Aug. 12.....	2		
Austria:				
Vienna.....	May 7-June 10....	3	1	
Do.....	July 2-Aug. 19....	3	1	
Bolivia:				
La Paz.....	Mar. 1-Apr. 30....	15	8	
Bulgaria:				
Sofia.....	May 28-June 17....	4		
Do.....	Sept. 24-30.....	1	1	

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

Reports Received from July 1 to November 10, 1922—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Chile:				
Concepcion.....	Apr. 11—May 29.....		10	
Do.....	June 27—Sept. 4.....		7	
Valparaiso.....	Apr. 2—22.....		6	
Do.....	July 18—Sept. 30.....		26	
China:				
Antung.....	May 15—21.....	1		
Do.....	July 10—Sept. 17.....	11		
Foochow.....	May 14—20.....	1		
Do.....	Aug. 6—12.....	4		
Hankow.....	July 9—15.....	1	1	
Manchuria—				
Harbin.....	May 8—June 11.....	4		
Do.....	June 26—Sept. 10.....	7		
Tsingtau.....	Sept. 11—18.....		1	
Czechoslovakia:				
Prague.....	June 11—17.....	1		
Do.....	July 1—Aug. 26.....	2	1	
Danzig (Free City).....	June 4—10.....	1		
Egypt:				
Alexandria.....	June 4—24.....	9	6	
Do.....	June 25—Sept. 23.....	26	14	July 22—29, 1922: 1 imported paratyphoid.
Cairo.....	Mar. 19—June 24.....	19	62	Relapsing fever, Mar. 26—Apr. 8; 1 case.
Do.....	June 25—Aug. 5.....	33	25	
Port Said.....	May 28—June 3.....	1		
Do.....	July 2—Sept. 2.....	8	8	
Germany.....				May 1—6, 1922: 5 cases typhus fever at quarantine station of Osternothafen, in persons returning from Russia.
Berlin.....	Apr. 30—June 24.....		7	
Do.....	June 25—Sept. 2.....		17	
Coblenz.....	July 2—Oct. 14.....	23	1	
Königsberg.....	May 28—June 3.....	1		
Do.....	Sept. 3—9.....	1		
Stuttgart.....	July 22—Aug. 26.....	2	1	
Great Britain:				
Glasgow.....	Sept. 17—23.....	1	1	
Greece:				
Piræus.....	Aug. 1—31.....	1		
Saloniki.....	May 1—June 18.....	25	1	2 in Russian refugees.
Indo-China:				
Balgon.....	Aug. 6—19.....	1		
Java:				
East Java—				
Soerabaya.....	July 23—Aug. 5.....	4	2	
Mesopotamia:				
Bagdad.....	Apr. 1—June 30.....	7	2	
Do.....	Aug. 1—31.....	5		
Mexico:				
Mexico City.....	Apr. 23—June 24.....	111		Including municipalities in Federal District.
Do.....	June 25—Sept. 23.....	228		Do.
San Luis Potosi.....	Sept. 10—Oct. 7.....			Present. Oct. 1—7, 1922: Deaths, 2.
Netherlands:				
Amsterdam.....	July 30—Aug. 5.....	1		
Norway:				
Christiania.....	Aug. 15.....	1	1	
Provinca—				
Finmarken.....	July 26—Aug. 5.....	12	2	Occurring in 3 localities.
Palestine:				
Jerusalem.....	June 27—Sept. 4.....	3		
Persia:				
Teheran.....	Mar. 22—June 22.....		8	
Poland.....				Mar. 26—Apr. 22, 1922: Cases, 5,695; deaths, 349. Apr. 23—June 24, 1922: Cases, 9,402; deaths, 631. Recurrent typhus, Mar. 26—Apr. 22, 1922: Cases, 4,515; deaths, 155. Apr. 23—May 6, 1922: Cases, 1,598; deaths, 34. (Corrected report.) May 7—June 24, 1922: Cases, 4,790; deaths, 111. June 25—Aug. 19, 1922: Cases, 2,374; deaths, 174. Recurrent typhus, June 25—Aug. 19, 1922: Cases, 3,280; deaths, 99.

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

Reports Received from July 1 to November 10, 1922—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Poland—Continued.				
Warsaw.....	Apr. 23-June 24...	156		Among transient and permanent residents.
Portugal:				
Oporto.....	May 4-June 24.....	9	4	
Do.....	June 29-Aug. 19.....	2	1	
Seixal.....	Aug. 4.....	1		Village opposite Lisbon.
Rumania:				
City—				Apr. 1-May 31, 1922: Cases, 62.
Bucharest.....	May 1-31.....	14		
Cernauti.....	do.....	5		
Chisinau.....	Apr. 1-30.....	21		
Cluj.....	May 1-31.....	18		
Constanza.....	do.....	1		
Galata.....	do.....	1		
Sulina.....	do.....	2		
Province—				
Bucovina.....	Jan. 1-31.....	35	13	
Chisinau.....	Apr. 1-30.....	14		Recurrent typhus: Cases, 7.
Transylvania.....	Jan. 1-31.....	16	3	
Russia:				
Esthonia.....	Apr. 1-June 30.....	44		
Do.....	July 1-Aug. 31.....	15		
Lettonia.....	Apr. 1-June 30.....	635		Recurrent typhus: Cases, 40.
Do.....	July 1-Aug. 31.....	74		Recurrent typhus: Cases, 21; paratyphus cases, 3.
Siberia:				
Vladivostok.....	July 1-31.....	3		
Spain:				
Barcelona.....	July 13-19.....		1	
Madrid.....	May 1-June 30.....		16	
Do.....	July 1-Aug. 31.....		7	
Seville.....	May 21-June 3.....		1	
Switzerland:				
Lucerne.....	Aug. 1-31.....	2		
Syria:				
Aleppo.....	Aug. 27-Sept. 2.....			Present in interior.
Tunis:				
Tunis.....	June 4-10.....	2		
Turkey:				
Constantinople.....	May 21-June 24.....	16		
Do.....	July 9-Oct. 7.....	36	4	
Union of South Africa:				
Cape Province.....				Apr. 1-June 30, 1922: Cases, 1,220; deaths, 214 (colored); white, 17 cases. July 1-31, 1922: Cases, 629; deaths, 95 (colored); white, 2 cases.
Do.....	Aug. 20-26.....			Apr. 1-June 30, 1922: Cases, 1,037; deaths, 194 (colored); white, 16 cases. July 1-31, 1922: Cases, 591; deaths, 83 (colored); white, 2 cases.
Diamond fields.....				Outbreaks. Sept. 28, 1922: Outbreaks at native locations near Kimberley.
Delpert.....	Sept. 28.....			Outbreak.
Gong-Gong.....	do.....		20	
Winter's Rush.....	do.....		12	Including Longlands.
East London.....	do.....	1		
Natal.....				Apr. 1-June 30, 1922: Cases, 57; deaths, 7 (colored). July 1-31, 1922: Cases, 9; deaths 4 (colored).
Orange Free State.....				Apr. 1-June 30, 1922: Cases, 97; deaths, 10 (colored); white, 1 case. July 1-31, 1922: Cases, 25; deaths, 8 (colored).
Do.....	Aug. 27-Sept. 16.....			Outbreaks.
Transvaal.....				Apr. 1-June 30, 1922: Cases, 29; deaths, 2 (colored). July 1-31, 1922: Cases, 4 (colored).
Do.....	Aug. 27-Sept. 2.....			Outbreaks.
Johannesburg.....	May 1-June 30.....	7	1	
Do.....	July 1-31.....	1		

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

Reports Received from July 1 to November 10, 1922—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Yugoslavia.....				Aug. 7-13, 1921: 2 new cases. (1921.)
Bosnia-Herzegovina.....	Aug. 7-13.....	1.....		
Croatia-Slavonia.....	Sept. 4-10.....	1.....		Do.
Serbia—				
Belgrade.....	May 6-June 3.....	2.....		
Voivodina.....	Aug. 7-13.....	1.....		(1921.)
On vessels:				
S. S. Chios.....	July 18.....	1.....		At Kavak quarantine station, Bosphorus, from Novorossysk, a Russian Black Sea port. Vessel carried refugees for Saloniki, Greece.
S. S. Smolensk.....	June 14.....	1.....	1	From Danzig, May 30, 1922. At embarkation detention camp, Southampton, England. (Public Health Reports, June 30, 1922, p. 1610.)

YELLOW FEVER.

Brazil:				
Bahia.....	July 30-Aug. 26...	3	2	
Mexico:				
Ciudad Victoria.....	Sept. 27.....	1	1	Origin, Tampico.
Tampico.....	July 27-29.....	1	1	From Panuco. Patient brought to Tampico on eighth day of illness.
Do.....	Aug. 30.....		6	Of these, 5 with origin at Panuco, State of Vera Cruz; 1 with origin at Tampico.
Tuxpam.....	Oct. 14.....	1		
On vessel:				
Schr. William E. Burnham.....	Sept. 13.....		1	At sea between Paramaribo and Mobile Quarantine, Ala., where the vessel arrived Sept. 14, 1922. The vessel left Freetown, Sierra Leone, June 25, and touched at Mungo and Paramaribo.