

PUBLIC HEALTH REPORTS

VOL. 38

JUNE 15, 1923

No. 24

The Effect of "Arsenic-Fastness" of *Trypanosoma Equiperdum* on the Ratios between the Parasiticial Values of Arsphenamine and Neorsphenamine.

By G. C. LAKE, Passed Assistant Surgeon, and T. F. PROBEY, Junior Pharmacologist, Hygienic Laboratory, United States Public Health Service.

Ratios obtained by various workers between the parasiticial values of arsphenamine and neorsphenamine in the treatment of experimental trypanosomiasis vary from 1.7 to about 2.2 in favor of arsphenamine. References to such work are given by Voegtlin and Miller,¹ who have conducted extensive experiments along this line. So far as we are aware, the ratios reported apply to normal strains of trypanosomes as distinguished from "arsenic-fast" strains.

"Arsenic-fastness" or "arsenic resistance" is an acquired condition whereby a parasite is enabled to withstand several times the dose of an arsenical which originally would have destroyed it. The condition was first recognized and studied by Ehrlich and is one with which all workers with experimental trypanosomiasis are familiar.

In connection with the testing of various arsphenamines for their trypanocidal activity, the strain of trypanosomes used has occasionally become "arsenic-fast," though we could not explain just why the condition developed. To prevent its occurrence, the rats carrying the strain should be completely isolated from rats used in toxicity experiments with arsenicals, and every precaution should be taken to prevent their assimilating arsenic from any source.

Recently, just as we had a series of rats ready for treatment, we discovered that the strain of *Tr. equiperdum* used had become "arsenic-fast." We decided to discard the strain, but thought it would be of interest, and save the experiment from being a total loss, to determine whether the ratio between the minimal effective doses of neorsphenamine and arsphenamine would be the same as for a normal strain of *Tr. equiperdum*. The ratio obtained in this test was 5:4 in favor of neorsphenamine, whereas we had expected to obtain a ratio of about 2:1 in favor of arsphenamine. This result led to the experiments herein described.

The method used in carrying out the tests is essentially that first described by Voegtlin and Smith² and which is also given in the

¹ The Relative Parasiticial Value of Arsphenamine and Neorsphenamine, Public Health Reports, 37, 27, p. 1627. Reprint No. 766.

² Pharmacol. & Exper. Therap., 1920, Vol. XV, 453; *ibid*, 1921, Vol. XVI, 449.

work of Voegtlin and Miller already referred to, except that three rats were used on each dose instead of five. The four strains of *Tr. equiperdum* referred to as "arsenic-fast," Nos. 1, 2, and 3, and "normal" strain, are not separate and distinct strains, but all came from the same common strain. "Arsenic-fast" strains Nos. 1 and 2 had accidentally become arsenic-resistant within a short time, a few weeks at most, while "arsenic-fast" strain No. 3 had been intentionally rendered "arsenic-fast" in the division of pharmacology of the Hygienic Laboratory over two years previously by passing it through rats previously treated with arsenic. "Normal" strain is one obtained about March 15, 1923, from the Department of Agriculture strain, which may be regarded as the parent strain of the several strains used at the Hygienic Laboratory during the past few years.

To obtain uniform results as nearly as possible, a single lot each of arsphenamine and neoarsphenamine, on which we have much experimental data, was selected and used in all experiments except the last four, in which, to check further the comparative value of neoarsphenamine No. 1, three other lots of neoarsphenamine were substituted.

The results obtained are very briefly summarized in the accompanying table. In each of the experiments 18 rats were used, 9 being treated with arsphenamine and 9 with neoarsphenamine. Three doses were employed with three rats on each dose; the intermediate dose being the estimated M. E. D. on the basis of previous experiments, and the other two doses being 50 per cent higher and 50 per cent lower. In all, 270 rats were used. The results are, of course, only approximate. The originators of the method regard a variation of approximately 50 per cent between successive doses as all that can be expected for the accuracy of the test.

Summary of experimental data showing the ratio between minimal effective doses of arsphenamine and neoarsphenamine on "arsenic-fast" and "normal" strains of Trypanosome equiperdum.

Date of test (1923).	Strain of <i>Tr. equiperdum</i> .	Arsphenamine.	Approximate M. E. D. obtained.	Neoarsphenamine.	Approximate M. E. D. obtained.	Approximate ratio of M. E. D. of Arsph.:neo.
Feb. 28.....	Arsenic-fast No. 1.....	No. 1.....	50	No. 1.....	40	5:4
Mar. 6.....	do.....	No. 1.....	50	No. 1.....	40	5:4
Mar. 15.....	do.....	No. 1.....	50	No. 1.....	50	1:1
Mar. 20.....	Arsenic-fast No. 2.....	No. 1.....	50	No. 1.....	40	5:4
Mar. 23.....	do.....	No. 1.....	50	No. 1.....	40	5:4
Mar. 29.....	Arsenic-fast No. 3.....	No. 1.....	40	No. 1.....	40	1:1
Mar. 30.....	do.....	No. 1.....	40	No. 1.....	50	4:5
Apr. 3.....	do.....	No. 1.....	40	No. 1.....	40	1:1
Apr. 13.....	"Normal".....	No. 1.....	4	No. 1.....	15	1:3.75
Apr. 19.....	do.....	No. 1.....	4	No. 1.....	12	1:3
Apr. 24.....	do.....	No. 1.....	4	No. 1.....	12	1:3
Apr. 25.....	do.....	No. 1.....	3	No. 2.....	11	1:3.6
Apr. 26.....	do.....	No. 1.....	3	No. 3.....	12	1:4
May 1.....	do.....	No. 1.....	3	No. 4.....	24	1:8
May 9.....	do.....	No. 1.....	3	No. 4.....	24	1:8

The results obtained from the "arsenic-fast" strains show that if there is any difference between the activity of arsphenamine No. 1 and neoarsphenamine No. 1 it is in the favor of the latter; however, it seems best to regard the ratio between the two as approximately 1 to 1. The minimal lethal dose of this arsphenamine is about 200 mgm. per kilo, and of the neoarsphenamine about 400 mgm. per kilo. Regarding the minimal effective dose of both preparations as 50 mgm. per kilo, the therapeutic ratio $\frac{M. L. D.}{M. E. D.}$ of the arsphenamine would therefore be 4, and of the neoarsphenamine 8. It is rather striking that the degree of "arsenic-fastness" was nearly the same with all three strains. This may be due to chance, or it seems possible that in each case the strain may have reached the maximum degree of fastness.

The results obtained with the normal strain show an average minimal effective dose for arsphenamine No. 1 of about 4 mg. per kilo, and for neoarsphenamine No. 1 of about 12 mgm. per kilo; or, in other words, the arsphenamine is at least three times as effective as neoarsphenamine. Regarding the minimal effective dose of the arsphenamine as 4 and of the neoarsphenamine as 12, the therapeutic ratio $\frac{M. L. D.}{M. E. D.}$ for the arsphenamine would be 50 and for the neoarsphenamine 33. It will be noted that neoarsphenamines No. 2 and No. 3 gave approximately the same results as No. 1. These three lots represent highly effective preparations of neoarsphenamine, whereas No. 4 represents a neoarsphenamine of inferior therapeutic quality, requiring approximately double the amount of drug for the M. E. D. Compared with such a product, the arsphenamine used is about eight times as effective in milligrams per kilogram. It was thought when these experiments were begun that this arsphenamine was an average product, but these results and results obtained in other laboratories indicate that it is an exceptionally active preparation. Comparing the results obtained with the "normal" strain and those obtained with "arsenic-fast" strain, using the same arsphenamine and neoarsphenamine, we find that the neoarsphenamine which was only about one-third as effective as arsphenamine with the "normal" strain is fully as effective as the arsphenamine with the "arsenic-fast" strains. We can offer no explanation for this interesting phenomenon.

SUMMARY.

The minimal effective doses of a single lot each of arsphenamine and neoarsphenamine have been determined for three "arsenic-fast" strains of *Tr. equiperdum* and for one nonarsenic-fast, "normal," or

possibly arsenic-susceptible strain. All four strains were substrains from the same common strain.

With the "arsenic-fast" strains the minimal effective dose for this arsphenamine and neoarsphenamine was found to be about the same and not far from 50 mgm. per kilo, whereas with the "normal" strain the minimal effective dose for the same arsphenamine was found to be between 3 and 4 mgm. per kilo, and for the same neoarsphenamine about 12 mgm. per kilo.

No explanation is apparent as to why an "arsenic-fast" strain should be proportionately less resistant to arsphenamine than to neoarsphenamine.

THE PRINCIPLES UNDERLYING THE MOVEMENT OF *BACILLUS COLI* IN GROUND-WATER, WITH RESULTING POLLUTION OF WELLS.¹

By C. W. STILES, Professor of Zoology, Hygienic Laboratory, and HARRY R. CROHURST, Sanitary Engineer, United States Public Health Service.

The pollution of the ground-water (or phreatic water) by privy wastes, and the possibility and method of extension of this pollution to wells, springs, and other water supplies, have been subjects of discussion, experiment, and public health legislation for many years and in various parts of the world; but the opinions which sanitarians have held on this general subject have been far from uniform, the results of experiments have been largely negative, and legislative policies have been distinctly contradictory.

In connection with investigations by the United States Public Health Service into methods of disposal of privy wastes in rural districts, extensive and rigorously controlled experiments have been made which bear upon the subject at issue and especially upon the movement of bacteria, of fecal origin, in the ground-water. These studies have involved the experimental pollution of the ground-water (namely, the water in the saturated zone, which supplies wells and springs), have been correlated with the rise and fall of the ground-water table, the flow of ground-water, and the rainfall. Natural can material (human excreta from can type privies) was used as pollution material, *Bacillus coli* was taken as the bacterial test, and a dye (uranin) was utilized in tracing the movement of the water from the dosing trenches to the more than 400 experimental pipe wells which were arranged at intervals from the trenches and at various depths into ground-water.

The examination of thousands of water samples from the wells during a period of more than a year has resulted in very definite

¹ Abstract of part of Annual (1922-23) Report of the Board on Excreta Disposal presented to the conference of State health officers, Washington, D. C., May 17, 1923.

data which seem to express practically a natural law as applied to the movement of the bacteria in the field of fine sand in which the experiments were conducted. The results to date may be summarized as follows:

1. Pollution with fecal *Bacillus coli* has up to date been definitely and progressively followed in the ground-water for distances of 3, 6, 10, 15, 25, 35, 45, 50, 55, 60, and 65 feet from the trench in which the pollution was placed; uranin has been recovered from these same wells and has spread to other wells at 70, 75, 80, 85, 90, 95, 100, 110, and 115 feet from the pollution trench. The soil in question is a fine sand with an effective size of 0.13 mm.

2. The pollution has traveled these distances within a period of 187 days, or about 27 weeks, and only in the direction of the flow of the ground-water; no convincing evidence is present that the pollution has traveled against the flow of the ground-water or at right angles to it.

3. The pollution has traveled "only in a thin sheet at the surface of the zone of saturation; there is no evidence at present that it has dispersed radially downward, and even when heavy pollution is recovered at the top, water from lower levels (in near-by deeper wells) is negative both for uranin and for *B. coli*.

4. As the ground-water level falls, owing to dry weather, the pollution tends to remain in the sand above the new (lower) ground-water level, namely, in the new capillary fringe.

5. There is no evidence which would justify a conclusion at present that either the bacteria or the uranin is carried or moves to any appreciable distance in the capillary fringe itself, and there is neither theoretical reason nor experimental evidence to justify a conclusion that either the bacteria or the uranin progresses in the dry, aerated intermediate belt (between the capillary fringe and the upper soil belt). All present evidence is to the effect that when the ground-water level falls the pollution remains practically stranded in the capillary fringe or in the intermediate belt—according to the degree of fall of the ground-water.

6. A rainfall of 1 inch results in a rise of 5 to 6 inches in the ground-water table (in the particular experimental area in question); and if this rise is sufficient to reestablish the zone of saturation up at the level of the stranded pollution, the bacteria and the uranin are again picked up and carried along farther in the direction of the ground-water flow until dry weather again intervenes to cause another fall of the ground-water level.

7. Thus the progressive (passive) movement and the stasis (stranding) of the pollution are intimately connected with, are dependent upon, and alternate with the rise and the fall of the ground-water level, and this latter factor is dependent upon the alternation of wet

weather (rainfall) and dry weather (lack of rain at the intake area of the ground-water table). Experiments are now under way to determine, if possible, whether pollution placed directly into a deeper level of the ground-water will travel up to the surface of the saturated zone.

8. In explaining these results, capillarity, filtration, and gravity seem to come up for special consideration.

9. In one experiment the pollution traveled only 45 feet from September, 1922, to May, 1923, and remained stranded at this distance. Study of the formation of the ground revealed that under the belt of pollution there is an impervious or nearly impervious stratum of peatlike material, which gradually tilts upward distally from the pollution pit and forms a ground-water dam; the pollution traveled out on high ground-water to the dam, the ground-water level fell below the crest of the dam, and the pollution is now stranded, pending a rise of the ground-water table sufficient to produce a ground-water cascade which will carry the pollution over the crest of the dam.

10. The ultimate distance to which the pollution will be carried is dependent upon a number of complex and interlocking factors, namely, wet and dry weather, with resulting rise and fall of the ground-water; the length of each of these periods; the rate of the ground-water flow (depending upon the "head," which, in turn, is dependent upon the rainfall); and, obviously, also the factor of the viability of the organisms under conditions of moisture, pH, food supply, etc., *ad finem*.

11. In another series of experiments human feces were buried in pits, in a locality of high ground-water, and covered with sawdust. Of five samples taken three years and two months after burial all were both macroscopically and microscopically recognizable as feces, but the odor had become somewhat musty; three of these samples were positive and two were negative for *Bacillus coli*; ova of *Ascaris lumbricoides* were recognizable in all five samples, but all 57 ova found were dead.

12. The bearing of the foregoing results upon the intermittent pollution of wells, the location of water supplies, and the location of camps in peace or in war, will be evident to persons who are called upon for technical advice in these matters; the justification of the laws forbidding the use of abandoned wells for the disposal of excreta is self-evident; the possible effect of the custom (in some localities) of digging pits into ground-water (as advised by some persons) is obvious.

13. In protecting wells, special attention should be given not only to surface protection as is now generally recognized but also to a new element, namely, the danger zone which exists from the highest

water level to about a foot below the lowest water level. A leak in the pipe in this region is potentially very dangerous, and all wells unprotected in this danger zone are to be considered as potentially unsafe.

14. In connection with the foregoing references to ground-water, the accompanying table is appended by the kind permission of Geologist Oscar E. Meinzer, of the United States Geological Survey; it is arranged from a manuscript which Professor Meinzer now has in press.

Classification of the subsurface water of the lithosphere.

[Arranged from a manuscript of Oscar E. Meinzer, United States Geological Survey.]

- 1 (13) A. *Interstitial water*, namely, water occurring in interstices or voids (in contrast to water in solid solution and to internal or magmatic water).
- 2 (10) A1. *Suspended subsurface water* (or vadoso water), namely, water that exists in aerated zone.
- 3 (8, 9) I. *Soil water*, namely, water near enough to the surface to be withdrawn by evaporation or to be absorbed and transpired by plants.
- 4 (5) a. *Water available for plant growth*, i. e., water in excess of the *wilting coefficient*.
- 5 (4) b. *Water not available for plant growth*.
- 6 (7) 1. *Water that can be removed by evaporation*.
- 7 (6) 2. *Water that can not be removed by evaporation* (hygroscopic water).
- 8 (3, 9) II. *Intermediate vadoso water*.
- 9 (3, 8) III. *Fringe water*, namely, water in the *capillary fringe*.
- 10 (2) A2. *Ground-water* (or phreatic water), namely, water in the *saturated zone*.
- 11 (12) I. *Gravity ground-water*.
- 12 (11) II. *Retained water*, i. e., ground water not under the control of gravity.
- 13 (1) B. *Internal water*, namely, water that may occur in the interior of the *lithosphere* where the pressure of overlying rocks is so great that voids can not exist.

PROVISIONAL MORTALITY AND BIRTH RATES, 1922.

ANNOUNCEMENT OF PROVISIONAL FIGURES MADE BY THE BUREAU OF THE CENSUS.

Provisional Mortality Figures.

Provisional mortality figures compiled by the Bureau of the Census, Department of Commerce, show slightly higher mortality rates for 1922 than for 1921. For the 33 States that are shown for both years, the 1922 mortality rate was 11.9 against a rate of 11.6 for 1921, the highest 1922 rate being 14.7 for Maine and the lowest 8.1 for Idaho.

Death rates per 1,000 population for certain States.

[The 1922 figures are provisional.]

State.	Annual death rate per 1,000 population for—									
	1922					1921				
	The year.	Fourth quarter.	Oct.	Nov.	Dec.	The year.	Fourth quarter.	Oct.	Nov.	Dec.
Total, States shown for both years ¹	11.9	11.7	10.9	11.5	12.8	11.6	11.4	11.2	11.3	11.7
California.....	14.1	13.4	12.8	13.7	14.0	13.2	13.6	12.3	13.8	14.7
Colorado.....	13.5	13.2	12.6	13.6	13.4	11.4	11.8	11.7	11.4	12.3
Connecticut.....	12.0	11.7	10.8	11.3	13.2	11.4	11.2	10.8	11.1	11.8
Delaware.....	13.2	13.1	12.1	12.4	14.8	13.1	11.3	10.9	10.7	12.4
Florida.....	12.2	13.2	12.6	12.9	14.0	11.8	12.0	11.2	12.4	12.6
Georgia.....	10.4	11.2	10.5	10.8	12.4	(²)	(²)	(²)	(²)	(²)
Idaho.....	8.1	8.4	9.3	7.5	8.6	(²)	(²)	(²)	(²)	(²)
Illinois.....	11.3	11.0	10.5	10.6	12.1	11.1	11.0	11.0	10.8	11.1
Indiana.....	11.9	11.7	11.0	11.4	12.8	11.9	11.8	12.0	11.7	12.0
Kansas.....	10.5	9.8	9.4	9.3	10.7	10.2	10.6	10.5	10.3	11.1
Kentucky.....	10.7	10.7	10.0	11.0	11.2	10.5	10.3	10.3	10.3	10.3
Louisiana.....	11.3	11.7	11.4	11.8	12.1	11.0	11.2	11.5	11.5	10.8
Maine.....	14.7	14.6	14.0	14.3	15.7	14.0	13.8	13.5	13.6	14.5
Maryland.....	13.6	13.3	12.6	12.7	14.5	13.6	13.0	13.5	12.6	13.0
Massachusetts.....	12.8	13.1	11.7	13.0	14.6	12.2	12.1	11.5	12.0	12.8
Michigan.....	11.2	11.4	10.7	11.2	12.3	11.6	11.0	10.9	11.0	11.0
Minnesota.....	9.5	9.5	9.1	8.9	10.4	9.4	9.0	9.1	9.0	8.9
Mississippi.....	10.8	10.6	10.4	10.3	11.1	11.1	11.1	11.9	10.7	10.6
Missouri.....	11.2	10.6	9.9	10.3	11.8	10.8	11.1	10.9	11.2	11.4
Montana.....	8.6	8.0	7.5	7.7	8.7	8.2	7.5	7.6	8.1	7.0
Nebraska.....	9.4	9.2	8.5	8.9	10.2	9.2	9.0	9.8	8.8	9.1
New Hampshire.....	14.6	14.4	14.0	14.1	15.3	13.7	13.7	13.8	14.0	13.4
New Jersey.....	12.2	12.1	10.8	12.3	13.4	11.7	11.3	11.0	11.1	12.0
New York.....	13.0	12.4	11.5	12.3	13.6	12.3	12.0	11.5	11.8	12.6
North Carolina.....	11.5	11.3	10.4	10.9	12.6	11.3	10.6	10.8	10.4	10.8
Ohio.....	11.3	11.2	10.6	10.8	12.3	11.3	11.3	11.3	11.3	11.4
Oregon.....	11.5	11.4	10.8	11.4	11.9	10.4	10.6	10.5	10.2	11.2
Pennsylvania.....	12.3	12.6	11.4	12.4	14.1	12.4	12.0	11.6	11.8	12.7
Rhode Island.....	13.1	13.2	12.2	13.5	14.1	12.6	11.9	11.7	11.4	12.8
South Carolina.....	12.0	12.6	11.7	12.2	13.9	11.9	11.4	11.6	11.2	11.5
Tennessee.....	10.8	10.6	10.1	10.3	11.4	10.7	10.9	11.5	10.5	10.8
Utah.....	(³)	(³)	(³)	(³)	(³)	10.4	9.9	9.5	9.5	10.8
Vermont.....	14.6	14.1	13.7	12.9	15.7	14.2	14.0	14.0	13.4	14.7
Virginia.....	12.1	11.9	10.7	12.1	13.1	12.2	11.6	11.3	11.6	12.0
Washington.....	10.1	9.4	8.8	9.6	9.9	9.5	9.8	9.8	9.7	10.0
Wisconsin.....	10.1	9.9	9.2	9.4	11.1	10.5	9.9	10.1	9.9	9.8
Wyoming.....	9.3	9.0	10.0	8.4	8.6	(²)	(²)	(²)	(²)	(²)

¹ Includes District of Columbia.

² Admitted to registration area for 1922.

³ Figures not shown if transcripts of deaths are not received for the quarter.

Provisional Birth Figures.

Provisional birth figures compiled by the Bureau of the Census show lower birth rates for 1922 than for 1921.

For the 24 States that are shown for both years, the 1922 birth rate was 22.7 against a rate of 24.4 for 1921, the highest 1922 rate being 30.2, for North Carolina, and the lowest, 18, for the State of Washington.

Birth rates per 1,000 population for certain States.

[The 1922 figures are provisional.]

State.	Annual birth rate per 1,000 population for—									
	1922					1921				
	The year.	Fourth quarter.	Oct.	Nov.	Dec.	The year.	Fourth quarter.	Oct.	Nov.	Dec.
Total, States shown for both years. ¹	22.7	21.4	22.5	21.1	20.9	24.4	23.3	23.9	23.2	22.9
California.....	19.8	19.8	19.9	18.8	20.9	20.2	20.1	20.0	20.1	20.5
Connecticut.....	21.5	20.0	20.7	19.8	19.6	24.0	22.5	22.0	22.8	22.8
Delaware.....	20.6	18.4	18.7	18.2	18.5	22.4	20.5	20.4	20.0	21.2
Illinois.....	20.0	18.7	19.8	18.3	18.2	(²)	(²)	(²)	(²)	(²)
Indiana.....	21.4	20.6	21.8	19.6	20.5	23.0	21.9	22.3	22.2	21.4
Kansas.....	21.6	20.8	22.1	21.1	19.3	23.3	22.9	23.6	22.7	22.5
Kentucky.....	25.4	23.0	23.3	22.9	20.9	27.6	25.9	26.3	26.0	25.6
Maine.....	22.6	21.0	21.7	21.1	20.2	22.9	21.8	22.3	20.9	22.2
Maryland.....	23.1	21.7	22.7	21.5	21.2	25.1	24.2	25.9	22.8	23.9
Massachusetts.....	(³)	(³)	(³)	(³)	(³)	23.5	22.6	22.4	22.7	22.6
Michigan.....	23.2	21.9	22.5	21.8	21.7	25.3	23.3	23.7	23.3	23.1
Minnesota.....	23.1	21.2	22.4	20.8	20.4	23.6	22.1	22.5	22.2	21.7
Mississippi.....	24.3	24.4	25.7	23.5	24.1	25.8	25.2	26.8	24.8	24.2
Montana.....	18.3	16.8	19.4	16.1	15.1	(²)	(²)	(²)	(²)	(²)
Nebraska.....	22.7	22.3	23.4	21.3	22.2	24.5	24.3	25.0	23.5	24.4
New Hampshire.....	21.8	20.2	22.0	19.8	19.0	22.8	21.3	22.3	21.6	20.1
New Jersey.....	22.5	21.2	22.5	20.8	20.4	24.1	23.2	24.0	23.4	22.5
New York.....	21.6	20.1	20.9	20.2	19.5	22.7	21.5	22.1	21.7	21.0
North Carolina.....	30.2	29.2	32.2	27.9	27.6	33.8	32.5	34.0	32.6	31.3
Ohio.....	20.4	19.5	20.7	19.0	18.9	21.9	20.8	21.5	20.6	20.5
Oregon.....	18.4	16.7	17.2	16.5	16.5	19.3	18.6	19.5	17.8	18.6
Pennsylvania.....	23.8	22.3	22.9	21.9	22.2	25.8	24.8	25.2	25.0	24.4
Rhode Island.....	23.1	21.6	22.9	20.3	21.9	23.6	23.3	24.3	23.1	22.7
South Carolina.....	26.9	25.8	27.8	26.0	23.8	29.5	28.8	30.1	28.9	27.7
Utah.....	(²)	(²)	(²)	(²)	(²)	31.6	29.9	31.0	28.6	30.4
Vermont.....	(²)	(²)	(²)	(²)	(²)	22.5	20.7	21.7	22.3	18.4
Virginia.....	27.3	25.3	26.6	24.8	24.6	29.9	28.9	29.4	28.7	28.8
Washington.....	18.0	16.7	17.0	16.6	16.7	19.6	18.0	18.4	18.3	17.6
Wisconsin.....	21.3	19.6	21.1	19.8	18.2	23.0	21.4	22.1	21.3	20.8
Wyoming.....	25.1	22.4	24.8	21.1	21.4	(²)	(²)	(²)	(²)	(²)

¹ Includes District of Columbia.² Admitted to registration area for 1922.³ Figures not shown if transcripts of births were not received for the quarter.

COURT DECISIONS.

VACCINATION REQUIREMENTS TO BE MET BY PUPILS UPHELD.

Upon the outbreak of two cases of smallpox in a school district in Texas, the school board of the district passed a resolution requiring all pupils to be vaccinated against smallpox by scarification. One of the pupils was immunized by the homeopathic internal method of vaccination, but the school board refused to admit her to school because she had not been vaccinated by scarification.

The Court of Civil Appeals of Texas held ¹ that "the school trustees had the right which they exercised, to prescribe vaccination as a prerequisite to attendance upon the school; and that the term 'vaccination,' as used and intended by that body, meant scarification and the injection of cowpox into the human system, and did

¹ Abney v. Fox et al., 250 S. W. 210.

not include the taking of medicine internally, or any other mode of prevention of smallpox. Taking medicine internally, whatever may be the result, is not vaccination as prescribed by the school board; and therefore, if it be conceded (a question upon which the testimony was in conflict) that medicine may be given internally which will render the person immune from smallpox as effectively as vaccination by scarification, still we hold that the school board had the authority to prescribe the latter method for the prevention of smallpox, and that its action in so doing was neither arbitrary nor unreasonable."

LOCAL REGISTRARS IN ARKANSAS HELD TO BE COUNTY EMPLOYEES.

It has been decided¹ by the Supreme Court of Arkansas that, under the laws of that State, a local registrar is a county employee rather than a State employee, and that his fees should be paid by the county.

DEATHS DURING WEEK ENDED JUNE 2, 1923.

Summary of information received by telegraph from industrial insurance companies for week ended June 2, 1923, and corresponding week of 1922. (From the Weekly Health Index, June 6, 1923, issued by the Bureau of the Census, Department of Commerce.)

	Week ended June 2, 1923.	Corresponding week, 1922.
Policies in force.....	53, 571, 888	49, 972, 984
Number of death claims.....	8, 377	7, 189
Death claims per 1,000 policies in force, annual rate.....	8. 2	7. 5

Deaths from all causes in certain large cities of the United States during the week ended June 2, 1923, infant mortality, annual death rate, and comparison with corresponding week of 1922. (From the Weekly Health Index, June 6, 1923, issued by the Bureau of the Census, Department of Commerce.)

City.	Week ended June 2, 1923.		Annual death rate per 1,000, corre- sponding week, 1922.	Deaths under 1 year.		Infant mortal- ity rate, week ended June 2, 1923. ^b
	Total deaths.	Death rate. ^a		Week ended June 2, 1923.	Corre- sponding week, 1922.	
Total.....	6, 946	12. 3	11. 5	878	779	.....
Akron, Ohio.....	26	6. 5	5. 8	6	6	71
Albany, N. Y ^c	23	10. 2	14. 4	2	5	44
Atlanta, Ga.....	77	18. 0	18. 0	15	11	.....
Baltimore, Mdc.....	210	14. 2	11. 9	26	22	77
Birmingham, Ala.....	54	14. 4	14. 5	10	8	.....
Boston, Mass.....	205	13. 9	13. 2	26	18	74
Bridgport, Conn.....	21	7. 6	13. 1	4	3	55
Buffalo, N. Y.....	156	15. 2	11. 7	18	18	75
Cambridge, Mass.....	28	13. 1	8. 5	2	1	36
Camden, N. J ^c	23	9. 7	12. 8	2	6	33
Chicago, Ill.....	612	11. 1	9. 9	90	85	.....

^a Annual rate per 1,000 population.

^b Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1922. Cities left blank are not in the registration area for births.

^c Deaths for week ended Friday, June 1, 1923.

¹ Burgess v. Johnson County, 250 S. W. 10.

Deaths from all causes in certain large cities of the United States during the week ended June 2, 1923, infant mortality, annual death rate, and comparison with corresponding week of 1922. (From the Weekly Health Index, June 6, 1923, issued by the Bureau of the Census, Department of Commerce)—Continued.

City.	Week ended June 2, 1923.		Annual death rate per 1,000, corresponding week, 1922.	Deaths under 1 year.		Infant mortality rate, week ended June 2, 1923.
	Total deaths.	Death rate.		Week ended June 2, 1923.	Corresponding week, 1922.	
Cincinnati, Ohio.....	135	17.3	10.6	11	7	72
Cleveland, Ohio c.....	206	12.1	9.1	22	19	60
Columbus, Ohio.....	67	13.4	9.5	5	4	52
Dallas, Tex.....	47	13.8	10.3	7	5	.....
Dayton, Ohio.....	35	11.0	8.4	2	2	33
Denver, Colo.....	72	13.8	15.0	6	6	.....
Des Moines, Iowa.....	34	12.6	.....	.....	.....	.....
Detroit, Mich.....	260	13.6	10.0	50	40	100
Duluth, Minn.....	32	15.7	.....	6	.....	137
Erie, Pa.....	32	14.8	9.0	2	2	41
Fall River, Mass. c.....	37	16.0	16.0	3	9	43
Flint, Mich.....	27	11.9	.....	1	.....	20
Fort Worth, Tex.....	21	7.6	11.8	3	4	.....
Grand Rapids, Mich.....	42	15.0	12.7	4	2	63
Houston, Tex.....	49	16.5	13.2	8	7	.....
Indianapolis, Ind.....	105	16.0	8.9	8	7	62
Jacksonville, Fla.....	18	9.4	11.2	2	2	.....
Jersey City, N. J.....	67	11.3	10.4	8	4	54
Kansas City, Kans.....	26	11.7	10.5	3	2	69
Kansas City, Mo.....	101	15.0	14.7	16	4	.....
Los Angeles, Calif.....	179	14.0	14.5	22	11	82
Louisville, Ky.....	80	16.2	13.0	12	4	129
Lowell, Mass.....	22	10.0	7.7	4	2	70
Lynn, Mass.....	19	9.6	.....	2	.....	53
Memphis, Tenn.....	73	22.4	18.0	8	7	.....
Milwaukee, Wis.....	93	10.0	9.3	19	17	94
Minneapolis, Minn.....	89	11.3	10.1	12	11	65
Nashville, Tenn. c.....	30	12.9	14.3	7	4	.....
New Bedford, Mass.....	21	8.4	10.2	1	6	16
New Haven, Conn.....	29	8.7	14.7	2	4	26
New Orleans, La.....	140	18.0	15.7	23	15	.....
New York, N. Y.....	1,209	10.6	11.8	132	177	53
Bronx Borough.....	120	7.4	10.0	11	12	39
Brooklyn Borough.....	411	9.9	10.7	43	68	46
Manhattan Borough.....	554	12.7	13.8	66	84	64
Queens Borough.....	83	8.1	10.9	9	13	48
Richmond Borough.....	41	16.8	10.5	3	0	55
Newark, N. J.....	77	9.2	10.9	5	18	23
Norfolk, Va.....	31	10.2	8.8	8	7	141
Oakland, Calif.....	45	9.8	8.9	6	5	77
Omaha, Nebr.....	52	13.3	9.9	8	4	87
Paterson, N. J.....	35	13.1	13.9	4	5	64
Philadelphia, Pa.....	465	12.6	11.9	56	44	73
Pittsburgh, Pa.....	177	15.0	15.1	28	29	97
Portland, Oreg.....	55	10.5	10.7	5	5	51
Providence, R. I.....	76	16.3	11.0	8	3	65
Richmond, Va.....	33	9.5	11.7	7	4	86
Rochester, N. Y.....	83	13.6	11.4	10	8	79
St. Louis, Mo.....	213	13.8	9.8	22	11	.....
St. Paul, Minn.....	62	13.4	9.8	6	7	55
Salt Lake City, Utah c.....	30	12.4	10.1	9	3	147
San Antonio, Tex.....	54	15.2	.....	13	.....	.....
San Francisco, Calif.....	121	11.7	11.2	5	7	30
Seattle, Wash.....	46	7.6	10.9	7	7	62
Spokane, Wash.....	18	9.0	12.5	5	5	109
Springfield, Mass.....	36	13.0	11.5	3	2	43
Syracuse, N. Y.....	37	10.5	13.5	4	5	52
Tacoma, Wash.....	17	8.7	.....	0	.....	0
Toledo, Ohio.....	53	10.3	8.8	6	9	60
Trenton, N. J.....	37	15.1	12.5	4	4	68
Utica, N. Y.....	26	13.1	.....	3	.....	64
Washington, D. C.....	116	13.8	10.5	16	7	91
Wilmington, Del.....	28	12.4	11.3	3	1	61
Worcester, Mass.....	42	11.4	11.3	2	6	23
Yonkers, N. Y.....	15	7.3	7.9	3	1	65
Youngstown, Ohio.....	34	13.4	12.6	4	5	54

c Deaths for week ended Friday, June 1, 1923.

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.

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

Reports for Week Ended June 9, 1923.

ALABAMA.		Cases.	ARKANSAS—continued.		Cases.
Cerebrospinal meningitis	.....	1	Tuberculosis	.....	13
Chicken pox	.....	6	Typhoid fever	.....	8
Diphtheria	.....	6	Whooping cough	.....	8
Dysentery	.....	184	CALIFORNIA.		
Influenza	.....	4	Cerebrospinal meningitis—Madera County	.....	1
Malaria	.....	63	Diphtheria	.....	67
Measles	.....	743	Influenza	.....	15
Ophthalmia neonatorum	.....	3	Leprosy—San Francisco	.....	2
Pellagra:			Lethargic encephalitis—San Francisco	.....	2
Bryce Hospital	.....	46	Measles	.....	821
Scattering	.....	17	Scarlet fever	.....	99
Pneumonia	.....	45	Smallpox	.....	12
Scarlet fever	.....	10	Typhoid fever	.....	19
Smallpox	.....	19	COLORADO.		
Tuberculosis	.....	39	(Exclusive of Denver.)		
Typhoid fever	.....	26	Chicken pox	.....	1
Whooping cough	.....	49	Diphtheria	.....	6
ARIZONA.			Measles	.....	65
Chicken pox	.....		Mumps	.....	5
Diphtheria	.....	5	Pneumonia	.....	9
Measles	.....	7	Scarlet fever	.....	14
Scarlet fever	.....	37	Trachoma	.....	2
Tuberculosis	.....	25	Tuberculosis	.....	145
Typhoid fever	.....	10	Whooping cough	.....	3
Typhoid fever	.....	2	CONNECTICUT.		
Whooping cough	.....	1	Cerebrospinal meningitis	.....	2
ARKANSAS.			Chicken pox	.....	43
Chicken pox	.....	10	Diphtheria	.....	26
Diphtheria	.....	3	German measles	.....	53
Hookworm disease	.....	1	Lethargic encephalitis	.....	1
Influenza	.....	8	Malaria	.....	3
Malaria	.....	133	Measles	.....	133
Measles	.....	164	Mumps	.....	40
Mumps	.....	9	Pneumonia (lobar)	.....	23
Pellagra	.....	32			
Scarlet fever	.....	3			
Smallpox	.....	7			

CONNECTICUT—continued		Cases:
Scarlet fever.....	68	
Smallpox.....	1	
Tuberculosis (all forms).....	35	
Typhoid fever.....	3	
Whooping cough.....	73	
DELAWARE.		
Chicken pox.....	2	
Diphtheria.....	5	
Malaria.....	2	
Measles.....	22	
Pneumonia.....	3	
Scarlet fever.....	12	
Tuberculosis.....	4	
Whooping cough.....	5	
FLORIDA.		
Diphtheria.....	4	
Malaria.....	9	
Pneumonia.....	1	
Smallpox.....	2	
Typhoid fever.....	17	
GEORGIA.		
Chicken pox.....	6	
Diphtheria.....	3	
Dysentery (amebic).....	3	
Dysentery (bacillary).....	25	
Hook worm disease.....	6	
Influenza.....	9	
Malaria.....	13	
Measles.....	349	
Mumps.....	1	
Pneumonia.....	2	
Pellagra.....	1	
Scarlet fever.....	1	
Septic sore throat.....	1	
Smallpox.....	10	
Tuberculosis (pulmonary).....	8	
Typhoid fever.....	12	
Whooping cough.....	12	
ILLINOIS.		
Cerebrospinal meningitis—Chicago.....	1	
Diphtheria:		
Cook County (including Chicago).....	84	
Chicago.....	78	
Scattering.....	51	
Influenza.....	6	
Lethargic encephalitis:		
Chicago.....	2	
Fulton County.....	1	
Jackson County.....	1	
Pneumonia.....	242	
Polioomyelitis—Kankakee County.....	1	
Scarlet fever:		
Cook County (including Chicago).....	90	
Chicago.....	72	
Scattering.....	70	
Smallpox:		
Macon County.....	9	
Scattering.....	25	
Whooping cough.....	219	
INDIANA.		
Diphtheria.....	33	
Measles.....	1,163	

INDIANA—continued.		Cases.
Pneumonia.....	2	
Rabies in animals—Marion County.....	1	
Scarlet fever.....	61	
Smallpox.....	68	
Typhoid fever.....	2	
IOWA.		
Diphtheria.....	10	
Scarlet fever.....	53	
Smallpox.....	29	
LOUISIANA.		
Diphtheria.....	5	
Measles.....	82	
Pellagra.....	11	
Scarlet fever.....	2	
Smallpox.....	7	
Typhoid fever.....	13	
Whooping cough.....	54	
MAINE.		
Chicken pox.....	10	
Conjunctivitis (infectious).....	5	
Diphtheria.....	4	
German measles.....	33	
Measles.....	199	
Pneumonia.....	11	
Scarlet fever.....	30	
Smallpox.....	4	
Tetanus.....	1	
Tuberculosis.....	11	
Typhoid fever.....	11	
Whooping cough.....	25	
MARYLAND. ¹		
Chicken pox.....	91	
Diphtheria.....	36	
Dysentery.....	1	
Influenza.....	10	
Lethargic encephalitis.....	1	
Malaria.....	3	
Measles.....	690	
Mumps.....	36	
Pellagra.....	1	
Pneumonia (all forms).....	59	
Scarlet fever.....	119	
Tuberculosis.....	24	
Typhoid fever.....	11	
Whooping cough.....	135	
MASSACHUSETTS.		
Chicken pox.....	185	
Conjunctivitis (suppurative).....	7	
Diphtheria.....	141	
German measles.....	26	
Influenza.....	2	
Lethargic encephalitis.....	2	
Measles.....	863	
Mumps.....	221	
Ophthalmia neonatorum.....	19	
Pneumonia (lobar).....	56	
Scarlet fever.....	295	
Septic sore throat.....	4	
Tetanus.....	1	
Trachoma.....	2	
Tuberculosis (all forms).....	156	

¹ Week ended Friday.

MASSACHUSETTS—continued.	
	Cases.
Typhoid fever.....	7
Whooping cough.....	210
MICHIGAN.	
Diphtheria.....	114
Measles.....	3,662
Pneumonia.....	167
Scarlet fever.....	278
Smallpox.....	37
Tuberculosis.....	335
Typhoid fever.....	10
Whooping cough.....	189
MINNESOTA.	
Cerebrospinal meningitis.....	2
Chicken pox.....	13
Diphtheria.....	42
Measles.....	406
Pneumonia.....	3
Poliomyelitis.....	3
Scarlet fever.....	92
Smallpox.....	29
Tetanus.....	1
Tuberculosis.....	73
Typhoid fever.....	9
Whooping cough.....	7
MISSISSIPPI.	
Diphtheria.....	8
Influenza.....	42
Poliomyelitis.....	1
Scarlet fever.....	1
Smallpox.....	1
Typhoid fever.....	13
MISSOURI.	
(Exclusive of St. Joseph and Cape Girardeau.)	
Cerebrospinal meningitis.....	1
Chicken pox.....	29
Diphtheria.....	41
Influenza.....	14
Measles.....	552
Mumps.....	18
Pneumonia.....	1
Scarlet fever.....	32
Smallpox.....	15
Trachoma.....	3
Tuberculosis.....	83
Typhoid fever.....	3
Whooping cough.....	133
MONTANA.	
Diphtheria.....	6
Rocky Mountain spotted fever:	
Bridger R. D.....	1
Edgar.....	1
Hardin R. D.....	1
Stevensville R. D.....	2
Victor R. D.....	1
Scarlet fever.....	16
Smallpox.....	4
Typhoid fever.....	6
NEBRASKA.	
Chicken pox.....	7
Diphtheria.....	9
German measles.....	1

NEBRASKA—continued.	
	Cases.
Measles.....	14
Mumps.....	36
Pneumonia.....	1
Scarlet fever.....	25
Smallpox.....	1
Whooping cough.....	35
NEW JERSEY.	
Anthrax.....	3
Cerebrospinal meningitis.....	2
Chicken pox.....	233
Diphtheria.....	93
Malaria.....	3
Measles.....	751
Paratyphoid fever.....	1
Pneumonia.....	83
Scarlet fever.....	115
Typhoid fever.....	6
Whooping cough.....	101
NEW MEXICO.	
Diphtheria.....	12
Influenza.....	1
Measles.....	56
Mumps.....	4
Pneumonia.....	4
Scarlet fever.....	6
Smallpox.....	1
Tuberculosis.....	8
Whooping cough.....	6
NEW YORK.	
(Exclusive of New York City.)	
Cerebrospinal meningitis.....	1
Diphtheria.....	98
Influenza.....	6
Lethargic encephalitis.....	2
Measles.....	3,093
Pneumonia.....	242
Poliomyelitis.....	3
Scarlet fever.....	259
Smallpox.....	3
Typhoid fever.....	29
Whooping cough.....	224
NORTH CAROLINA.	
Cerebrospinal meningitis.....	2
Chicken pox.....	55
Diphtheria.....	23
Measles.....	1,519
Scarlet fever.....	20
Septic sore throat.....	3
Smallpox.....	79
Typhoid fever.....	17
Whooping cough.....	409
OREGON.	
Chicken pox.....	28
Diphtheria:	
Portland.....	10
Scattering.....	4
Lethargic encephalitis.....	1
Measles.....	3
Mumps.....	12
Pneumonia.....	1
Rocky Mountain spotted or tick fever.....	1
Scarlet fever.....	15

² Deaths.

OREGON—continued.

	Cases.
Smallpox:	
Portland	9
Scattering	14
Tuberculosis	13
Typhoid fever	4
Whooping cough	18

SOUTH DAKOTA.

Chicken pox	4
Diphtheria	9
Measles	72
Pneumonia	2
Poliomyelitis	1
Scarlet fever	25
Smallpox	1
Trachoma	1
Tuberculosis	8
Typhoid fever	2

TEXAS.

Chicken pox	38
Dengue	7
Diphtheria	33
Influenza	19
Leprosy	1
Measles	72
Mumps	4
Pellagra	5
Pneumonia	9
Poliomyelitis	2
Scarlet fever	14
Smallpox	40
Trachoma	17
Tuberculosis	22
Typhoid fever	49
Whooping cough	102

VERMONT.

Chicken pox	10
Diphtheria	3
Measles	226
Mumps	25
Pneumonia	1
Scarlet fever	7
Smallpox	1
Typhoid fever	1
Whooping cough	20

WASHINGTON.

Chicken pox	30
Diphtheria:	
Tacoma	9
Scattering	14

WASHINGTON—continued.

	Cases.
Measles:	
Seattle	64
Scattering	19
Mumps	21
Pneumonia	1
Scarlet fever:	
Seattle	14
Scattering	17
Smallpox	11
Tuberculosis	39
Typhoid fever	2
Whooping cough	59

WEST VIRGINIA.

Diphtheria	8
Scarlet fever	5

WISCONSIN.

Milwaukee:	
Chicken pox	31
Diphtheria	14
German measles	1
Measles	24
Pneumonia	7
Scarlet fever	112
Tuberculosis	14
Whooping cough	27
Scattering:	
Cerebrospinal meningitis	3
Chicken pox	54
Diphtheria	21
German measles	1
Influenza	21
Lethargic encephalitis	1
Measles	1,221
Ophthalmia neonatorum	1
Pneumonia	14
Scarlet fever	158
Smallpox	32
Tuberculosis	27
Typhoid fever	2
Whooping cough	46

WYOMING.

Diphtheria	1
Measles	15
Pneumonia	2
Rocky Mountain spotted or tick fever:	
Hot Springs County	2
Natrona County	1
Scarlet fever	4
Smallpox	1
Tetanus	1
Tuberculosis	2
Whooping cough	6

Reports for Week Ended June 2, 1923.

ALABAMA.

	Cases.
Anthrax	1
Chicken pox	25
Dengue	3
Diphtheria	10
Dysentery	93
Influenza	34
Malaria	90
Measles	893

ALABAMA—continued.

	Cases.
Pellagra	18
Pneumonia	45
Scarlet fever	8
Smallpox	10
Tuberculosis	40
Typhoid fever	35
Whooping cough	57

DISTRICT OF COLUMBIA.		NORTH DAKOTA.	
	Cases.		Cases.
Chicken pox.....	22	Chicken pox.....	7
Diphtheria.....	4	Diphtheria.....	4
Measles.....	241	Measles.....	56
Scarlet fever.....	27	Pneumonia.....	8
Tuberculosis.....	25	Scarlet fever.....	21
Typhoid fever.....	1	Smallpox.....	15
Whooping cough.....	26	Tuberculosis.....	6
		Typhoid fever.....	1
		Whooping cough.....	20

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.	Polomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
<i>April, 1923.</i>										
Colorado.....		203	16		1,225			224	4	10
Ohio.....	6	477	98	1	10,856		1	1,514	426	56
<i>May, 1923.</i>										
Connecticut.....	10	225	16	2	1,035		1	348	1	12
Florida.....	1	29	120	65	664	13	3	7	21	89
North Carolina.....	4	78			10,791			78	385	54

CITY REPORTS FOR WEEK ENDED MAY 26, 1923.

ANTHRAX.

City.	Cases.	Deaths.
Massachusetts: Webster.....		1

CEREBROSPINAL MENINGITIS.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended May 26, 1923.		City.	Median for previous years.	Week ended May 26, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
California: Los Angeles.....	1	1		Missouri: St. Louis.....	2	1	
Connecticut: New Britain.....	0	1		New Jersey: Jersey City.....	0	1	
Georgia: Atlanta.....	0	1	1	Newark.....	0	1	
Illinois: Chicago.....	1	1	1	New York: Albany.....	0	1	
Peoria.....	0	1	1	Amsterdam.....	0	1	1
Indiana: Michigan City.....		1		Cortland.....		1	
Massachusetts: Boston.....	0	1		New York.....	10	4	3
Newburyport.....	0	1	1	Ohio: Cleveland.....	1	2	1
West Springfield.....	0	1		Pennsylvania: Philadelphia.....	1	2	2
Michigan: Detroit.....	1		1	Texas: El Paso.....	0		1
Flint.....	0	1		Virginia: Portsmouth.....	0		1
Port Huron.....	0	1	1				

CITY REPORTS FOR WEEK ENDED MAY 26, 1923—Continued.

DIPHThERIA.

See p. 1368; also Current State summaries, p. 1358, and Monthly summaries by States, p. 1362.

INFLUENZA.

City.	Cases.		Deaths, week ended May 26, 1923.	City.	Cases.		Deaths, week ended May 26, 1923.
	Week ended May 27, 1922.	Week ended May 26, 1923.			Week ended May 27, 1922.	Week ended May 26, 1923.	
Alabama:				Michigan:			
Birmingham.....		3	1	Detroit.....		1	3
Mobile.....		2		Flint.....		1	1
California:				Saginaw.....			1
Los Angeles.....	6	2	1	Minnesota:			
Oakland.....	1			Minneapolis.....			1
San Diego.....	3			New Jersey:			
San Francisco.....	1			Garfield.....	1		
Connecticut:				Jersey City.....	1	1	
Bridgeport.....	1	1	1	Newark.....		5	1
Florida:				New York:			
Tampa.....	4			Albany.....	1	2	
Georgia:				Buffalo.....	1		
Atlanta.....		3		New York.....	23	16	6
Illinois:				Niagara Falls.....		1	
Chicago.....	4	4	2	Rochester.....			1
East St. Louis.....	1			North Carolina:			
Indiana:				Durham.....			1
Mishawaka.....			1	Ohio:			
Kentucky:				Ashtabula.....			1
Louisville.....	1	1	1	Cambridge.....	1		
Louisiana:				Cleveland.....	2	2	2
Baton Rouge.....	1			Oregon:			
New Orleans.....		2	1	Portland.....			1
Maryland:				Pennsylvania:			
Baltimore.....	3	5	2	Philadelphia.....	1	3	5
Cumberland.....		1	1	South Carolina:			
Massachusetts:				Charleston.....			1
Boston.....	3		1	Tennessee:			
Fall River.....		1		Memphis.....			1
Springfield.....	1			West Virginia:			
				Huntington.....			1

LETHARGIC ENCEPHALITIS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
California:			Nebraska:		
San Francisco.....		1	Omaha.....		1
Connecticut:					
New Haven.....		1			

MALARIA.

Alabama:			New Jersey:		
Birmingham.....	5		Atlantic City.....	1	
Montgomery.....	1		Paterson.....	1	
Tuscaloosa.....	1		New York:		
Arkansas:			New York.....	2	
Little Rock.....	4		Tennessee:		
Florida:			Memphis.....	8	1
Tampa.....	1		Texas:		
Georgia:			Austin.....	1	
Macon.....	1		Dallas.....	1	
Savannah.....	2		Houston.....		1
Kentucky:			Virginia:		
Owensboro.....	1		Norfolk.....	1	
Massachusetts:					
Boston.....	1				

CITY REPORTS FOR WEEK ENDED MAY 26, 1923—Continued.

MEASLES.

See p. 1368; also Current State summaries, p. 1358, and Monthly summaries by States, p. 1362.

PELLAGRA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			South Carolina:		
Montgomery.....	1		Charleston.....		1
Arkansas:			Columbia.....		2
Little Rock.....	1		Tennessee:		
California:			Memphis.....	1	1
Los Angeles.....	1	1	Texas:		
Georgia:			Austin.....	1	
Savannah.....		1	Dallas.....		1
Maryland:			Fort Worth.....	1	1
Baltimore.....		1	San Antonio.....		1

PNEUMONIA (ALL FORMS).

Alabama:			Indiana—Continued.		
Birmingham.....	21	7	Mishawaka.....		1
Mobile.....		1	Muncie.....		1
Montgomery.....		4	Terre Haute.....		1
California:			Iowa:		
Alameda.....		1	Council Bluffs.....		1
Los Angeles.....	40	22	Kansas:		
Pasadena.....	3	2	Kansas City.....	7	
Sacramento.....		3	Parsons.....	1	
San Bernardino.....		3	Topeka.....	1	
San Diego.....		1	Wichita.....		1
San Francisco.....		8	Kentucky:		
Santa Ana.....		1	Covington.....		1
Santa Barbara.....		1	Lexington.....		2
Stockton.....		4	Louisville.....	8	6
Colorado:			Louisiana:		
Denver.....		4	New Orleans.....		7
Pueblo.....		1	Maine:		
Connecticut:			Auburn.....		1
Bridgeport.....	3	2	Portland.....		3
Bristol.....	3	2	Sanford.....		2
Fairfield.....	1		Maryland:		
Greenwich.....	2		Baltimore.....	42	20
Hartford.....		2	Cumberland.....	1	
New Britain.....		2	Massachusetts:		
New Haven.....		5	Amesbury.....		1
Stonington.....		1	Arlington.....		1
District of Columbia:			Attleboro.....		1
Washington.....		14	Beverly.....		1
Florida:			Boston.....	14	10
Tampa.....		2	Brockton.....		3
Georgia:			Cambridge.....		4
Atlanta.....		4	Chelsea.....		1
Macon.....		1	Chicopee.....		2
Savannah.....		3	Everett.....	3	2
Illinois:			Fall River.....		4
Aurora.....		1	Framingham.....		1
Blue Island.....		1	Gardner.....		2
Chicago.....	191	85	Haverhill.....	2	
Elgin.....	1		Holyoke.....		2
Evanston.....	1		Lawrence.....		1
Freeport.....		1	Lowell.....		7
Galesburg.....		1	Malden.....	3	1
Jacksonville.....		2	Medford.....		1
La Salle.....	1		Melrose.....		1
Mattoon.....	3		New Bedford.....		6
Oak Park.....	1		Newburyport.....		1
Pekin.....	3		Newton.....		1
Peoria.....		2	North Adams.....		1
Quincy.....	3	1	Northbridge.....		1
Rockford.....	3	2	Pittsfield.....		2
Rock Island.....	1		Salem.....		1
Springfield.....		1	Somerville.....	2	1
Indiana:			Springfield.....	2	1
East Chicago.....		3	Taunton.....		1
Frankfort.....		1	Webster.....	2	
Gary.....		2	West Springfield.....		1
Indianapolis.....		11			

CITY REPORTS FOR WEEK ENDED MAY 26, 1923—Continued.

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Michigan:			New York—Continued.		
Ann Arbor.....	2	..	Saratoga Springs.....	1	..
Detroit.....	115	47	Schenectady.....	2	1
Flint.....	12	2	Syracuse.....	11	2
Grand Rapids.....	6	2	Troy.....	5	1
Hamtramck.....	3	3	White Plains.....	1	..
Highland Park.....	3	2	Yonkers.....	..	3
Jackson.....	5	1	North Carolina:		
Kalamazoo.....	2	..	Raleigh.....	..	2
Muskegon.....	1	1	Wilmington.....	..	2
Pontiac.....	3	..	Winston-Salem.....	..	1
Port Huron.....	4	2	Ohio:		
Saginaw.....	1	1	Akron.....	1	..
Minnesota:			Ashtabula.....	..	1
Duluth.....	1	1	Barberton.....	..	1
Faribault.....	4	..	Bellaire.....	..	1
Hibbing.....	2	2	Cincinnati.....	..	11
Minneapolis.....	1	..	Cleveland.....	42	12
Rochester.....	1	1	Columbus.....	..	4
St. Paul.....	10	10	Dayton.....	1	..
Missouri:			East Cleveland.....	2	..
Cape Girardeau.....	1	1	East Youngstown.....	..	1
Kansas City.....	13	6	Mansfield.....	..	1
St. Joseph.....	6	..	Niles.....	1	..
Springfield.....	1	1	Norwood.....	..	1
Montana:			Piqua.....	..	2
Great Falls.....	1	1	Tiffin.....	..	3
Helena.....	1	1	Toledo.....	..	2
Missoula.....	2	..	Zanesville.....	..	3
Nebraska:			Oklahoma:		
Omaha.....	1	1	Oklahoma.....	..	3
New Hampshire:			Oregon:		
Berlin.....	1	1	Portland.....	..	4
New Jersey:			Pennsylvania:		
Asbury Park.....	..	2	Philadelphia.....	65	49
Atlantic City.....	..	1	Rhode Island:		
Bloomfield.....	1	..	Cranston.....	..	1
Clifton.....	1	..	Newport.....	..	2
East Orange.....	1	..	Pawtucket.....	..	2
Englewood.....	1	..	Providence.....	..	3
Garfield.....	1	..	South Carolina:		
Harrison.....	2	..	Charleston.....	..	3
Hoboken.....	..	6	Columbia.....	..	3
Jersey City.....	3	..	Tennessee:		
Kearny.....	2	..	Memphis.....	..	5
Montclair.....	..	2	Nashville.....	..	1
Newark.....	57	9	Texas:		
Orange.....	5	1	Dallas.....	2	1
Paterson.....	3	..	El Paso.....	..	1
Perth Amboy.....	..	2	Fort Worth.....	..	2
Phillipsburg.....	..	1	Galveston.....	..	1
Plainfield.....	3	1	San Antonio.....	..	1
Summit.....	2	..	Waco.....	..	1
Trenton.....	4	..	Utah:		
West Hoboken.....	..	3	Provo.....	..	1
West Orange.....	..	1	Salt Lake City.....	..	3
New Mexico:			Vermont:		
Albuquerque.....	1	1	Burlington.....	..	1
New York:			Virginia:		
Albany.....	6	..	Alexandria.....	..	2
Buffalo.....	24	15	Lynchburg.....	..	1
Cohoes.....	1	1	Norfolk.....	..	1
Cortland.....	1	1	Petersburg.....	..	1
Dunkirk.....	5	1	Portsmouth.....	..	1
Geneva.....	1	1	Richmond.....	..	4
Ithaca.....	3	..	Roanoke.....	1	..
Jamestown.....	3	1	West Virginia:		
Lackawanna.....	3	..	Huntington.....	21	7
Middletown.....	..	1	Wisconsin:		
Mount Vernon.....	..	2	Eau Claire.....	2	..
New York.....	238	131	Madison.....	..	1
Newburgh.....	4	1	Oshkosh.....	..	1
Niagara Falls.....	1	1	Racine.....	..	3
Olean.....	2	..	Sheboygan.....	..	1
Peekskill.....	1	..	Superior.....	..	2
Poughkeepsie.....	1	1	Wyoming:		
Rochester.....	22	3	Cheyenne.....	..	1
Rome.....	1	..			

CITY REPORTS FOR WEEK ENDED MAY 26, 1923—Continued.

POLIOMYELITIS (INFANTILE PARALYSIS).

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended May 26, 1923.		City.	Median for previous years.	Week ended May 26, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
Illinois:				New York:			
Chicago.....	0	1	.....	New York.....	1	2	1
Massachusetts:				Pennsylvania:			
Cambridge.....	0	1	.....	Pittsburgh.....	0	1	.....
Quincy.....	0	1	.....	Wisconsin:			
Minnesota:				Madison.....	0	1	.....
Mankato.....	0	1	.....			

RABIES IN ANIMALS.

City.	Cases.	City.	Cases.
California:		Missouri:	
Los Angeles.....	21	Kansas City.....	1
Kentucky:		Texas:	
Louisville.....	2	Austin.....	3

RABIES IN MAN.

City.	Cases.	Deaths.
California:		
Los Angeles.....	1	1

SCARLET FEVER.

See p. 1368; also Current State summaries, p. 1358, and Monthly summaries by States, p. 1362.

SMALLPOX.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended May 26, 1923.		City.	Median for previous years.	Week ended May 26, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
Arkansas:				Iowa:			
North Little Rock.....	0	1	.....	Burlington.....	0	7	.....
California:				Davenport.....	6	19	.....
Los Angeles.....	1	16	.....	Des Moines.....	2	1	.....
Colorado:				Marshalltown.....	5	1	.....
Trinidad.....	0	1	.....	Kansas:			
Georgia:				Wichita.....	5	3	.....
Atlanta.....	10	9	.....	Maine:			
Illinois:				Auburn.....	0	2	.....
Kewanee.....	1	2	.....	Lewiston.....	0	1	.....
Pekin.....	1	3	.....	Michigan:			
Indiana:				Detroit.....	5	1	.....
Frankfort.....	0	1	.....	Jackson.....	0	4	.....
Gary.....	2	2	.....	Minnesota:			
Huntington.....	0	1	.....	Duluth.....	2	5	.....
Indianapolis.....	17	2	.....	Minneapolis.....	33	9	.....
Michigan City.....	5	5	.....	St. Paul.....	6	5	.....
South Bend.....	0	18	.....			

CITY REPORTS FOR WEEK ENDED MAY 26, 1923—Continued.

SMALLPOX—Continued.

City.	Median for previous years.	Week ended May 26, 1923.		City.	Median for previous years.	Week ended May 26, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
Missouri:				South Carolina:			
St. Joseph.....	10	1	.....	Columbia.....	0	1	.....
St. Louis.....	8	1	.....	Tennessee:			
New York:				Chattanooga.....	0	2	.....
Buffalo.....	0	1	.....	Knoxville.....	2	11	.....
Syracuse.....	0	1	.....	Texas:			
North Carolina:				Amarillo.....		1	.....
Greensboro.....	0	3	.....	Fort Worth.....	0	3	.....
Winston-Salem.....	1	23	.....	Houston.....	0	1	.....
Ohio:				Waco.....	0	1	.....
Cincinnati.....	2	3	.....	Virginia:			
Columbus.....	1	1	.....	Richmond.....	0	1	.....
Dayton.....	0	5	.....	Roanoke.....	1	1	.....
Lancaster.....	0	3	.....	Washington:			
Middletown.....	0	2	.....	Seattle.....	7	19	.....
Newark.....	0	2	.....	Spokane.....	5	5	.....
Toledo.....	2	2	.....	Tacoma.....	2	1	.....
Oklahoma:				Wisconsin:			
Oklahoma.....	6	6	.....	Kenosha.....	0	9	.....
Tulsa.....	3	3	.....	Madison.....	1	1	.....
Oregon:				Milwaukee.....	7	1	.....
Portland.....	3	6	.....	Racine.....	0	2	.....
Pennsylvania:				Superior.....	1	10	.....
Erie.....	0	1	.....			
Farrell.....	0	2	.....			
Philadelphia.....	0	9	.....			

TETANUS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
California:			Missouri:		
San Francisco.....	1	1	St. Joseph.....		1
Georgia:			St. Louis.....	1	2
Savannah.....	1	2	New York:		
Illinois:			New York.....	1	.....
Chicago.....	1	.....	Virginia:		
Indiana:			Petersburg.....	1	.....
Indianapolis.....		1	Wisconsin:		
Massachusetts:			Oshkosh.....		1
Boston.....	1	1			

TUBERCULOSIS.

See p. 1368; also Current State summaries, p. 1358.

CITY REPORTS FOR WEEK ENDED MAY 26, 1923—Continued.

TYPHOID FEVER.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended May 26, 1923.		City.	Median for previous years.	Week ended May 26, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
California:				Montana:			
Los Angeles.....	2	1		Helena.....		1	
San Francisco.....	0	1		New Hampshire:			
Colorado:				Dover.....	0	1	
Denver.....	0		1	New Jersey:			
Connecticut:				Montclair.....	0	2	
New Haven.....	0	2		Newark.....	0	2	
District of Columbia:				Trenton.....	1	1	
Washington.....	4	3		New York:			
Florida:				Albany.....	0	1	
Tampa.....	0	1		Amsterdam.....	0	1	
Georgia:				Lackawanna.....	0	1	
Atlanta.....	1		1	New York.....	9	5	
Brunswick.....	0	1		North Carolina:			
Illinois:				Wilmington.....	0	1	
Aurora.....	0	1		Ohio:			
Chicago.....	4	4	1	Cleveland.....	1	1	
Indiana:				Elyria.....	0	1	
Hammond.....	0	1		Pennsylvania:			
Kansas:				Allentown.....	0	1	
Kansas City.....	0	1		Hazleton.....	0	1	
Kentucky:				Philadelphia.....	8	3	
Covington.....	0	3		Pittsburgh.....	1	1	
Louisville.....	2	1		Pottsville.....	0	1	
Louisiana:				South Carolina:			
New Orleans.....	3	9	3	Charleston.....	1	1	1
Maine:				Columbia.....	1	1	
Portland.....	1	1		Tennessee:			
Maryland:				Memphis.....	1	4	
Baltimore.....	3	7		Nashville.....	1	1	1
Massachusetts:				Texas:			
Boston.....	2	4		Amarillo.....		1	
Brookline.....	0	1		Beaumont.....	0	1	
Chelsea.....	0		1	Dallas.....	1	1	
Melrose.....	0	1		El Paso.....	0	2	
Newton.....	0	1		Houston.....	0	1	
North Adams.....	0	2		Virginia:			
Quincy.....	0	2		Norfolk.....	1	1	
Michigan:				Wisconsin:			
Detroit.....	2		1	Eau Claire.....	0	1	
Saginaw.....	0	1		Janesville.....	0	1	
Minnesota:				Sheboygan.....	0	1	
Duluth.....	0	1	1	Superior.....	0	1	
Missouri:							
Kansas City.....	1	2	2				
St. Louis.....	3	4	2				

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Alabama:										
Birmingham.....	178,806	57	2		273	1			17	2
Mobile.....	60,777	20	1		12	1	1		1	
Montgomery.....	43,464	16			91					2
Tuscaloosa.....	11,996				18					
Arkansas:										
Fort Smith.....	28,870				6					
Little Rock.....	65,142				23				1	
North Little Rock.....	14,048				45					

CITY REPORTS FOR WEEK ENDED MAY 26, 1923—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.
California:										
Alameda.....	28,806	2			37		2		1	
Bakersfield.....	18,638	3	4							
Berkeley.....	56,036	9	6		52		4		3	
Glendale.....	13,536	5								1
Long Beach.....	55,593	19	3		14		3			1
Los Angeles.....	576,673	205	51	2	164	4	37		53	21
Pasadena.....	45,354	18			17		10			1
Richmond.....	16,843	5			5				1	
Riverside.....	19,341	6					4		1	1
Sacramento.....	65,908	15			63		8		2	3
San Bernardino.....	18,721	14	1		8		8	1	1	1
San Diego.....	74,683	28	12	1	15		4		4	2
San Francisco.....	506,676	143	29	1	103		16	1	22	19
Santa Ana.....	15,485	6			7					
Santa Barbara.....	19,441	9								
Santa Cruz.....	10,917	4								
Stockton.....	40,296	17	2		5		1	1		
Vallejo.....	21,107	2					1			
Colorado:										
Denver.....	256,491	84	30	2	401	6	12			12
Greeley.....	10,958	2								
Pueblo.....	43,050	10	4		4		1		1	1
Trinidad.....	10,906		1		9					
Connecticut:										
Bridgeport.....	143,555	30	7	1	9		20		8	1
Bristol.....	20,620	4	1						1	
Fairfield (town).....	11,475	3	1		3					2
Greenwich (town).....	22,123				1		2		1	
Hartford.....	138,036	46	6	1	1		1		3	3
Manchester (town).....	18,370	2	1							
Meriden (city).....	29,967		1		1					
Milford (town).....	10,193	3								
New Britain.....	59,316	12	5		3		6		6	2
New Haven.....	162,537	34	2		31		2		7	
New London.....	25,688	9								
Stonington (town).....	10,236	3								
District of Columbia:										
Washington.....	437,571	115	5		357	1	24		26	20
Florida:										
St. Petersburg.....	14,237	4			1					
Tampa.....	51,608	15	2		7		1		3	
Georgia:										
Atlanta.....	200,616	50	3	1	33	1	5		4	5
Brunswick.....	14,413	2							1	1
Macon.....	52,995				55					
Rome.....	13,252				35		2			
Savannah.....	83,252	32			8				1	3
Idaho:										
Boise.....	21,393	6					2			
Illinois:										
Alton.....	24,682	10			34				4	1
Aurora.....	36,397	12	1		32				2	
Bloomington.....	28,725	5			22		3		5	
Blue Island.....	11,424	2			6					
Centralia.....	12,491	3			21					
Champaign.....	15,873				6				1	
Chicago.....	2,701,705	656	83	3	656	11	59	2	177	52
Cicero.....	44,995	8	1		74					
Danville.....	33,776	9	1		30				1	
East St. Louis.....	66,767	15	2	1	3				1	4
Elgin.....	27,454	7			48		1		1	
Evanston.....	37,234				108		2		1	
Forest Park.....	10,768				4					
Freeport.....	19,669	4	1		76		1		1	1
Galesburg.....	23,834	11			6		2			1
Jacksonville.....	15,713	8	1						3	1
Kewanee.....	16,026	6			3					
La Salle.....	13,050	1								
Mattoon.....	13,552				19					
Oak Park.....	39,858	11	1		106		3		3	
Peoria.....	76,121	16	1		7		6			
Quincy.....	35,978	13	1		34		1		1	

CITY REPORTS FOR WEEK ENDED MAY 26, 1923—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.										
Rock Island.....	35,177	4	1		13				2	
Rockford.....	65,651	20	1		154		2			
Springfield.....	59,183	15			15		4			
Urbana.....	10,244				84					
Indiana:										
Anderson.....	29,767	9	1		18		2			1
Bloomington.....	11,595	3	1		21				1	1
Crawfordsville.....	10,139	3								
East Chicago.....	35,967	8	2		53					
Elwood.....	10,790	5			3					1
Frankfort.....	11,585	5			21					
Gary.....	55,378	10			6	1	15			
Hammond.....	36,004	8			3		1			
Huntington.....	14,000	3			1		1			
Indianapolis.....	314,194	96	6	2	720		3		6	4
Kokomo.....	30,067	7			37		1			1
La Fayette.....	22,486	6	1		12		1			
Logansport.....	21,626	6			4					
Michigan City.....	19,457	8			2					1
Mishawaka.....	15,195	10					2			1
Muncie.....	36,524	8			28					1
South Bend.....	70,983	4			7		5		6	
Terre Haute.....	66,083	18	2		28					3
Iowa:										
Burlington.....	24,057	6			9					
Cedar Rapids.....	45,566		1				3			
Council Bluffs.....	36,162	8	4							
Davenport.....	56,727				6					
Des Moines.....	126,468		2				24			
Dubuque.....	39,141				3		1			
Iowa City.....	11,267						1			
Marshalltown.....	15,731				1		1			
Muscatine.....	16,068	6			2		1			
Sioux City.....	71,227	0	2		1		1			
Waterloo.....	36,230				131		3			
Kansas:										
Coffeyville.....	13,452	1	1		22					
Fort Scott.....	10,693	4	1		2					
Kansas City.....	101,177		2		292		3		5	
Lawrence.....	12,456	7			3					
Parsons.....	16,028				20				4	
Topeka.....	50,022	10	2		16		1		4	1
Wichita.....	72,217	18	1		55		2		2	
Kentucky:										
Covington.....	57,121	18	1		14		1		1	1
Henderson.....	12,169	3								
Lexington.....	41,534	17			5					2
Louisville.....	234,891	81	2		43		1		20	8
Owensboro.....	17,424								3	
Paducah.....	24,735								2	
Louisiana:										
New Orleans.....	387,219	134	6		14	2	1		24	14
Maine:										
Auburn.....	16,985	7			30					
Bangor.....	25,978				42					
Bath.....	14,731	0			4					
Biddeford.....	18,008	2								
Lewiston.....	31,791	14			22	1	10		4	2
Portland.....	69,272	21	3		8		2			2
Sanford (town).....	10,691	6			15					
Waterville.....	13,351				3					
Maryland:										
Baltimore.....	733,826	208	29	1	620		132		20	25
Cumberland.....	29,837	14			7		1		2	1
Frederick.....	11,066	4							1	
Massachusetts:										
Adams (town).....	12,967	1							2	
Amesbury (town).....	10,036	2								
Arlington (town).....	18,665	4	2		2		2		1	
Attleboro.....	19,731	5							1	1
Belmont (town).....	10,749	1			26		2			
Beverly.....	22,561	7							1	
Boston.....	748,060	193	61	4	270		117		48	11

CITY REPORTS FOR WEEK ENDED MAY 26, 1923—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—Continued.										
Braintree (town).....	10,580	1	1		6		5			1
Brockton.....	66,254	14			42		3		2	
Brookline.....	37,748	6	1		25		5			2
Cambridge.....	109,694	34	5	1	45		23		6	6
Chelsea.....	43,184	15	3		4		3		2	
Chicopee.....	36,214	8	1							1
Clinton.....	12,979	4	1							
Dedham.....	10,792	1								
Everett.....	40,120	6	3		21		2		3	2
Fall River.....	120,485	30	4		6		3		10	3
Frammingham.....	17,033	5					1		1	1
Gardner.....	16,971	9								
Greenfield.....	15,462	6								
Haverhill.....	53,884	8	1		90				2	1
Holyoke.....	60,203	19	2		3		12		5	2
Lawrence.....	91,270	17	1		46		2		1	1
Leominster.....	19,744	5	1		1		1			
Lowell.....	112,759	28	1		17		1		1	5
Lynn.....	99,148	27	4				5		5	5
Malden.....	49,103	2	4		25		7			
Medford.....	39,638	13	2		4		5			
Melrose.....	18,204	4			1		2		1	
Methuen.....	15,189	3			8	1				1
New Bedford.....	121,217	44	2		2		3		10	5
Newburyport.....	15,618	10			12		1			
Newton.....	46,054	6	1		2		2			
North Adams.....	22,282	3			1				1	
Northampton.....	21,931	15			1		3			
Northbridge.....	10,174	8								
Pittsfield.....	41,763	10			1		5		1	
Plymouth.....	13,045	1								
Quincy.....	47,876	5	4		6		8			
Salem.....	42,529	1	4		2		3			
Somerville.....	93,091	16	6		8		9		2	1
Southbridge.....	14,243	5			2					
Springfield.....	129,614	26	2				6		7	1
Taunton.....	37,137	23			6	1	7			1
Wakefield.....	13,025	3	1		15		2		2	
Watertown.....	21,457	1	2		4		3		1	
Webster.....	13,258	3	1				1			
West Springfield.....	13,443	3	2				2		2	
Westfield.....	18,604	6					4		2	1
Winthrop.....	15,455				2		2			
Michigan:										
Alpena.....	11,101	1	1				1			
Annis Arbor.....	19,516	14	1		15		1		1	1
Battle Creek.....	36,164	0	2		135		7			
Benton Harbor.....	12,233	1	1		5				2	
Detroit.....	993,678	265	21	7	376	8	94	2	37	17
Flint.....	91,599	28	10		43	1	6	1		
Grand Rapids.....	137,034	35	3	1	461		3		6	3
Hamtramck.....	48,615	15				2				2
Highland Park.....	46,499	15			59				4	2
Holland.....	12,183	14					5			1
Jackson.....	48,374	14			158		2			
Kalamazoo.....	48,487	18			14				5	3
Marquette.....	12,718	3					1		1	1
Muskegon.....	36,570	5	1		43		9			1
Pontiac.....	34,273	12			69		2		7	1
Port Huron.....	25,044	12			37		2			1
Saginaw.....	61,903	21	2		45		8		4	1
Sault Ste. Marie.....	12,096	2					2			
Minnesota:										
Duluth.....	98,917	22			7		7			2
Faribault.....	11,089	8			9	1				
Hibbing.....	15,080	4					3			
Mankato.....	12,460				8					
Minneapolis.....	380,582	99	6		287	4	31	1	9	13
Rochester.....	13,722	26	2		3					
St. Cloud.....	15,873						4		1	
St. Paul.....	234,698	70	16	1	188	5	25		13	5

CITY REPORTS FOR WEEK ENDED MAY 26, 1923—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.
Missouri:										
Cape Girardeau	10,252	5			9					
Joplin	29,902				4					
Kansas City	324,410	105	7	2	197	6	14		7	10
St. Joseph	77,839	40		1	37		2			2
St. Louis	772,897	231	28	2	203	1	24		19	13
Springfield	39,631	13								
Montana:										
Billings	15,100	4			1					1
Great Falls	24,121	8	3				1			1
Helena	12,037	6			3				1	1
Missoula	12,668	2					6			
Nebraska:										
Lincoln	54,948	8			1					
Omaha	191,601	44	2		12		3			4
Nevada:										
Reno	12,016	4			2		1			
New Hampshire:										
Berlin	16,104	7								
Dover	13,029	4			1					
Keene	11,210	4								
New Jersey:										
Asbury Park	12,400	7	30				1			
Atlantic City	50,707	12			5		1		2	
Bayonne	76,754		2				2		8	
Belleville	15,660				4					
Bloomfield	22,019	1			3		1			
Clifton	26,470	5	1		1				1	1
East Orange	50,710	10			43		1		3	1
Englewood	11,627				30		1			
Garfield	19,381	1	3				2			
Harrison	15,721				4					
Hoboken	68,166	19	2		2		1			
Jersey City	298,103	4	10		19		9		10	6
Kearny	26,724	2	1		27					
Long Branch	13,521	2			1				1	
Montclair	28,810	9			46		3		2	1
Morristown	12,548	4			1				1	
Newark	414,524	101	13		245		11			8
Orange	33,268	8			6				2	1
Passaic	63,841	10	2		5	1	3			
Paterson	135,875	3			95		2		3	
Perth Amboy	41,707	6	2		6					
Phillipsburg	16,923	4								
Plainfield	27,700	8			6		1			
Summit	10,174	3			25				1	1
Trenton	119,289	27	9		3	1	7		2	2
Union (town)	20,651		1							
West Hoboken	40,074	6								1
West New York	29,926	3	4		12		2			
West Orange	15,573	5	1		6		2			
New Mexico:										
Albuquerque	15,157	11	1		13				7	3
New York:										
Albany	113,344				168		5		5	
Amsterdam	33,524	3	1		1		2			
Auburn	36,192	9	1		108					1
Buffalo	506,775	164	6		156	6	28	1	21	19
Cohoes	22,987	10			3					1
Cortland	13,294	4			2					
Dunkirk	19,336	4			19			1		
Geneva	14,648	2								
Hornell	15,025	1			3					
Hudson	11,745	4					1			
Ithaca	17,004	3	1		20					
Jamestown	38,917	7	1		16		1			
Lackawanna	17,918	3	1		25		2		1	
Little Falls	13,029	1								
Lockport	21,303	9								1
Middletown	18,420	2			45					1
Mount Vernon	42,726	10	1		1		2			2
New York	5,620,048	1,230	211	14	818	18	230	2	286	181
Newburgh	30,366	6	1		1					

1 Pulmonary tuberculosis only.

CITY REPORTS FOR WEEK ENDED MAY 26, 1923—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.
New York—Continued.										
Niagara Falls	50,760	10			8		5		3	
North Tonawanda	15,482	2			2					
Olean	20,506	8			5		17		1	
Peekskill	15,868	4	1		8		1			1
Poughkeepsie	35,000	9			4		1		2	1
Rochester	285,750	56	11	1	72		10		12	
Rome	23,341	8	3		2		5			1
Saratoga Springs	13,181	2					1		2	
Schenectady	83,723	22	1		64		4		7	1
Syracuse	171,717	48	5	2	257	1	26	1	7	4
Troy	72,013	18			6				4	
Watertown	31,285	11	1				1		2	2
White Plains	21,031	5			3		8		1	
Yonkers	100,176	19	2		14		18			1
North Carolina:										
Durham	21,719	7	1		37				2	2
Greensboro	43,525	6			177					
Raleigh	24,418	12			28					1
Rocky Mount	12,742	6								
Wilmington	33,372	11	1		1		2			1
Winston-Salem	48,395	12	1	1	66				9	1
North Dakota:										
Fargo	21,961	0								
Grand Forks	14,010				1		2			
Ohio:										
Akron	208,435	34	2		46		10		6	
Alliance	21,603	1	1		6		2			
Ashtabula	22,082	8			7		1			
Barberton	18,811	6	1		13				4	
Bellaire	15,061	3	1		2					1
Bucyrus	10,425	3			4					
Cambridge	13,104	3								
Chillicothe	15,831	6								
Cincinnati	491,247	120	6		123		14		21	13
Cleveland	796,841	174	20	2	415	2	82		39	20
Cleveland Heights	15,238				29		1			
Columbus	237,081	61	4		35		4		2	1
Coshocton	10,847				1					
Dayton	152,559	32	4		29		11		3	
East Cleveland	27,292	2			61		3		2	
East Youngstown	11,237	2								
Elyria	20,474	7			15					
Findlay	17,021	7	3		2					
Fremont	12,468				3					
Hamilton	39,675	9			17		1			
Kenmore	12,683				130				2	
Lancaster	14,706	4			1		1			
Lorain	37,295		2	1	10		7		2	
Mansfield	27,824	6	1		20					1
Marion	27,891	1	1		1		3			
Martins Ferry	11,634	4							1	
Middletown	23,594	3			10	1			1	
New Philadelphia	10,718				8					
Nowark	26,718	4			53					
Nilos	13,080	1	2		10					1
Norwood	24,966	2			20					
Piqua	15,044	7	1		2					
Salem	10,305	2			6					
Sandusky	22,897	5								
Springfield	60,840	20	3		7		4			
Staubenville	28,508	8			3		1		3	
Tiffin	14,375	9			22					
Toledo	243,164	56	6	1	36		36		6	8
Zanesville	29,569	13								2
Oklahoma:										
Oklahoma	91,295	27	1		10		6			4
Tulsa	72,075		2				1			
Oregon:										
Portland	258,288	42	14		2		4		7	4
Pennsylvania:										
Allentown	73,502		8		11		7		1	
Altoona	60,331		3		4				3	
Ambridge	12,730				3		1			

CITY REPORTS FOR WEEK ENDED MAY 26, 1923—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.
Pennsylvania—Continued.										
Berwick	12, 181						1			
Bethlehem	50, 358		4		63		3		4	
Braddock	20, 879		1							
Bradford	15, 525				29					
Bristol	10, 273				1					
Butler	23, 778		3		6		1			
Carbondale	18, 640		1		3				1	
Carrick	10, 504									
Chambersburg	13, 171		1		12		3			
Charleroi	11, 516				2					
Chester	58, 030				1		1			
Coatesville	14, 515						1			
Connellsville	13, 804				4					
Dunmore	20, 250				20					
Easton	33, 813				6					
Erie	93, 372		1		154		4		12	
Farrell	15, 586				3					
Harrisburg	75, 917		2		7		2			
Hazleton	32, 277		1		4					
Homestead	20, 452		2		3				1	
Jeannette	10, 627				2					
Johnstown	67, 327		4		35		8			
Lancaster	53, 150		2		16		1		2	
Lebanon	24, 643		5		1		1			
McKee's Rocks	16, 713						1			
McKeesport	46, 781				4					
Mahanoy City	15, 599		1							
Meadville	14, 568				32					
Nanticoke	22, 614				18					
New Castle	44, 938						2		2	
New Kensington	11, 987				2					
Norristown	32, 319			2			1			
North Braddock	14, 928			1						
Oil City	21, 274		2		18					
Philadelphia	1, 823, 779	470	57	5	67	2	67	1	72	41
Pittsburgh	588, 343		29		91		30		8	
Plymouth	16, 500				1					
Pottstown	17, 431				6					
Pottsville	21, 876				10					
Punxsutawney	10, 311		1							
Reading	107, 784				2					
Shamokin	21, 204		1		4					
Sharon	21, 747				7					
Steelton	13, 428				1				1	
Sunsbury	15, 721		4							
Swissvale	10, 908		2		1					
Tamaqua	12, 363		1		10					
Uniontown	15, 692				5					
Warren	14, 272		2		337					
Washington	21, 480						1			
Wilkes-Barre	73, 833		3		16		1		1	
Wilkesburg	24, 403		1		4		1			
Williamsport	36, 198		1		10		2			
Woodlawn	12, 495		1							
York	47, 512				26					
Rhode Island:										
Cranston	29, 407	7			3		5			
Cumberland (town)	10, 077	0								
Newport	30, 255	8	2				2			1
Pawtucket	64, 248	20	5		3		2			
Providence	237, 595	66	7		40	2	11			9
South Carolina:										
Charleston	67, 957	22			3		1			2
Columbia	37, 524	23			4				5	
Greenville	23, 127	13								1
South Dakota:										
Sioux Falls	25, 202	4			1		1			
Tennessee:										
Chattanooga	57, 895	0	2				1			
Knoxville	77, 818				43				4	4
Memphis	162, 351	58	4		37	1	2		14	8
Nashville	118, 342	33			18	3			8	3

CITY REPORTS FOR WEEK ENDED MAY 26, 1923—Continued.

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

City.	Popu- lation Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Texas:										
Amarillo.....	15,494				5				1	
Austin.....	34,876	5								
Beaumont.....	40,422	8							1	1
Dallas.....	158,976	42	2		27		2		2	4
El Paso.....	77,560	55	1	1	14	2	3		13	10
Fort Worth.....	106,432	17	1		3		2			
Galveston.....	44,255	12								1
Houston.....	138,276	32	5				2			3
San Antonio.....	161,379	59	4	1	8	1	2			13
Waco.....	38,500	8	2						2	
Utah:										
Provo.....	10,303	3			8					
Salt Lake City.....	118,110	32	7				1			
Vermont:										
Barre.....	10,008				42					
Burlington.....	22,779	5			157					
Virginia:										
Alexandria.....	18,060	5			23			1		
Lynchburg.....	30,070	5	1		14					1
Norfolk.....	115,777		1		40		1		6	3
Petersburg.....	31,012	11			81					1
Portsmouth.....	54,387	18			64	1				3
Richmond.....	171,667	50	1		353	3	4		10	5
Roanoke.....	50,842	11			37	1				
Washington:										
Seattle.....	315,312		2		42		3			
Spokane.....	104,437		4		2		3		15	
Tacoma.....	96,965		2				7			
Vancouver.....	12,637		2							
West Virginia:										
Bluefield.....	15,282	5	1		7					
Clarksburg.....	27,869	5			158					
Fairmont.....	17,851		4		8		1			
Huntington.....	50,177	22			49	2			3	2
Martinsburg.....	12,515		1		12					
Morgantown.....	12,127		2		3					
Moundsville.....	10,669	5								
Parkersburg.....	20,050	7			46					
Wheeling.....	56,208	10			6		1		4	1
Wisconsin:										
Appleton.....	19,561	5			5					
Ashland.....	11,334				6		2		1	
Bellot.....	21,284	6	1		96		9		1	
Bau Claire.....	20,906				3				1	
Fond du Lac.....	23,427	5			11					
Green Bay.....	31,017		2		25		11			
Janesville.....	18,293	7	1		3		2			
Kenosha.....	40,472	6	1		1		6		2	
Madison.....	38,378	5			89	1				1
Manitowoc.....	17,533				24		1		1	
Marquette.....	13,610				9		2			
Milwaukee.....	457,147		13		28		150		8	
Oshkosh.....	33,162	17			81				1	4
Racine.....	58,593	10	2		6		6		5	2
Sheboygan.....	30,955	11	5		8		1			
Stevens Point.....	11,371				10		3			
Superior.....	39,671	6			27		1			
Waukesha.....	12,558		1		27		6			
Wausau.....	18,661		2		22		5			
West Allis.....	13,745		1		103		3		3	
Wyoming:										
Cheyenne.....	13,829	2			1					

FOREIGN AND INSULAR.

AZORES.

Plague.

During the period February 25 to April 28, 1923, 53 cases of plague with 22 deaths were reported in the Island of St. Michael, Azores.

COLOMBIA.

Yellow Fever—Bucaramanga.

Under date of May 20, 1923, the epidemic disease previously reported prevalent at Bucaramanga, Colombia,¹ was declared by the Government of the Republic of Colombia to be yellow fever, with 39 cases and 2 deaths reported from May 3 to 19, 1923.

CUBA.

Communicable Diseases.

Communicable diseases have been notified in Cuba as follows:

Provinces.

NEW CASES REPORTED MARCH 21-31, 1923.

Province.	Cerebrospinal meningitis.	Chicken pox.	Diphtheria.	Infantile tetanus.	Malaria.	Measles.	Paratyphoid fever.	Scarlet fever.	Typhoid fever.
Camaguey.....		2					2		7
Habana.....	1	23	12		21	9	2	5	16
Matanzas.....									3
Oriente.....		14			45				6
Pinar del Rio.....					1		2		5
Santa Clara.....		24	5		1		3		7
Total.....	1	63	17		68	9	9	5	44

NEW CASES REPORTED APRIL 1-10, 1923.

Camaguey.....		1	2		4		1		11
Habana.....	1	14	5		20	5	3	1	23
Matanzas.....		1					2		3
Oriente.....		18			48				19
Pinar del Rio.....					1		1		8
Santa Clara.....		30	7	1	3		9	1	8
Total.....	1	64	14	1	76	5	16	2	72

¹ Public Health Reports, Mar. 23, 1923, p. 650; May 11, 1923, p. 1045; June 1, 1923, p. 1222.

Provinces—Continued.

NEW CASES REPORTED APRIL 11-23, 1923.

Province.	Cerebro spinal meningitis.	Chicken pox.	Diphtheria.	Infantile tetanus.	Malaria.	Measles.	Paratyphoid fever.	Scarlet fever.	Typhoid fever.
Camaguey.....		1	1		10				5
Habana.....		21	4		31			1	27
Matanzas.....		2	1				1		5
Oriente.....		22			59				21
Pinar del Rio.....									4
Santa Clara.....		18	1		1		4		17
Total.....		64	7		101		5	1	79

NEW CASES REPORTED APRIL 21-30, 1923.

Camaguey.....		2			10				6
Habana.....	1	6	2	1	14	3	2	2	15
Matanzas.....		5	1						15
Oriente.....		11			76		2		16
Pinar del Rio.....					1				2
Santa Clara.....		1	5		2		1		11
Total.....	1	25	8	1	103	3	5	2	65

Quarantine Against Arrivals from Venezuela.

Under date of May 26, 1923, quarantine on account of plague was declared to be in force at Cuban ports against vessels arriving from Venezuela.

NEW GUINEA.

Ordinance for Suppression of Leprosy.

An ordinance for the suppression of leprosy in the territory of New Guinea was adopted March 21, 1923, by the Government of the Commonwealth of Australia. The ordinance provides for the examination, by a medical officer, of any person suspected of being affected with leprosy, and authorizes detention of a person so affected in a leper station. Penalty is provided for a leper leaving a leper station without authorization, for a person concealing leprosy or suspected leprosy in his own person or the person of another, for harboring a person living in concealment of leprosy, and for a person refusing to permit himself to be examined for the purpose of ascertaining whether he is affected with leprosy.

SYRIA.

Leprosy—Damascus.

During the week ended April 22, 1923, a case of leprosy was reported at Damascus, Syria.

UNION OF SOUTH AFRICA.

Plague—Klipfontein—Transvaal.

On April 23, 1923, an outbreak of plague was reported at Klipfontein, Transvaal, Union of South Africa.

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

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

Reports Received During Week Ended June 15, 1923.¹**CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay.....	Apr. 8-14.....	1	1	
Rangoon.....	Apr. 8-21.....	9	6	

PLAGUE.

Azores:				
St. Michael Island.....	Feb. 25-Apr. 28...	53	22	
Ceylon:				
Colombo.....	Apr. 15-21.....	5	4	Plague rodents, 7.
India:				Nov. 19-25, 1922: Cases, 1,871;
Bombay.....	Apr. 8-14.....	118	89	deaths, 1,292. (Received out
Karachi.....	Apr. 22-28.....	38	28	of date.) Apr. 8-14, 1923:
Madras Presidency.....	do.....	354	149	Cases, 7,927; deaths, 6,122.
Rangoon.....	Apr. 8-21.....	70	68	(Additional cases, Mar. 25-
Straits Settlements:				Apr. 1, 1923: Cases, 1,406;
Singapore.....	Apr. 22-28.....	1		deaths, 1,214. Reported out
Union of South Africa:				of date.)
Transvaal—Klipfontein.....	Apr. 23.....			Outbreak.
Venezuela:				
Victoria.....	May 23.....	4	2	

SMALLPOX.

Brazil:				
Rio de Janeiro.....	Apr. 15-28.....	5	1	
Chile:				
Concepcion.....	May 1-7.....		1	
China:				
Amoy.....	Apr. 15-21.....		1	
Antung.....	Apr. 30-May 6.....	1		
Shanghai.....	do.....	2	3	Cases, foreign; deaths, Chinese.
Finland:				Apr. 16-30, 1923: Case, 1.
India:				
Bombay.....	Apr. 8-14.....	56	33	
Karachi.....	Apr. 22-28.....	7	5	
Madras.....	do.....	18	6	
Rangoon.....	Apr. 8-21.....	83	45	
Italy:				
Turin.....	Apr. 6-13.....	1		
Mexico:				
Mexico City.....	Apr. 15-21.....	35		
Persia:				
Teheran.....	Mar. 1-14.....		2	
Portugal:				
Lisbon.....	May 6-12.....	4		
Straits Settlements:				
Singapore.....	Apr. 22-28.....	1		
Switzerland:				
Berne.....	Apr. 29-May 5.....	3		
Turkey:				
Constantinople.....	Apr. 22-May 5.....		31	Apr. 21-27, 1923: Many cases re
Union of South Africa:				ported.
Cape Province.....	Apr. 15-21.....			Outbreaks.
Transvaal.....	do.....			Do.
Yugoslavia:				
Serbia—				
Belgrade.....	Apr. 15-28.....	1	1	

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

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

Reports Received During Week Ended June 15, 1923—Continued.

TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Antung	Apr. 30-May 13..	9		
Egypt:				
Cairo	Feb. 18-Mar. 11..	3	1	Feb. 26-Mar. 4, 1923: One case relapsing fever.
Port Said	May 6-12	1		
Finland	Apr. 16-30	3		
Mexico:				
San Luis Potosi	May 20-26		1	
Palestine:				
Jaffa	May 1-7	2		
Turkey:				
Constantinople	Apr. 22-May 5		75	
Union of South Africa:				
Cape Province	Apr. 15-21			Outbreaks.
Yugoslavia:				
Serbia—				
Belgrade	Apr. 8-May 5	8		

YELLOW FEVER.

Colombia:				
Bucaramanga	May 3-19	39	2	Declared epidemic by Colombian Government, May 20, 1923.

Reports Received from December 30, 1922, to June 8, 1923.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Liutaoku	Sept. 22	60	20	
Chosen (Korea):				
Yalu River Region				Sept. 22, 1922: 30 deaths reported.
India				Sept. 24-Dec. 30, 1922: Cases, 14,637; deaths, 8,833. Dec. 31, 1922-Apr. 7, 1923: Cases, 18,401, deaths, 11,816.
Bombay	Oct. 27-Dec. 23	2	1	
Do	Feb. 4-Mar. 31	5	5	
Calcutta	Nov. 12-Dec. 30	102	60	
Do	Dec. 31-Apr. 28	395	280	
Madras	Nov. 19-Dec. 16	4	2	
Do	Jan. 21-Apr. 7	13	6	
Rangoon	Nov. 12-Dec. 23	17	10	
Do	Dec. 31-Apr. 7	16	10	
Philippine Islands:				
Province—				
Laguna	Oct. 12-18	1		
Zamboanga	Feb. 11-17	1	1	
Russia				Jan. 1-Oct. 7, 1922: Cases, 83,367.
Archangel (Government)	Oct. 1-7	7		
Moscow	Jan. 1-31	1		
Tashkent	Oct. 1-7	27		Turkestan Republic: 3 cases reported on waterways.
Ukraine				Sept. 1-30, 1922: Cases, 119.
Donetz (Government)	Sept. 1-30	29		
Tchernigov (Government)	do	36		
Siam:				
Bangkok	Oct. 29-Dec. 23	4	1	
Do	Dec. 31-Apr. 14	10	3	

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

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

Reports Received from December 30, 1922, to June 8, 1923—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Argentina:				
Rosario.....	Feb. 10-27.....	8	3	
Azores:				
Fayal Island—				
Castelo Branco.....	Dec. 2-31.....		3	Vicinity of Horta. Dec. 30, 1922.
Do.....	Mar. 12-18.....	2		Several cases.
Horta.....	Mar. 23.....	1		Actual occurrence about Mar. 6, 1923.
Pico Island—				
Lages.....	Nov. 27-Dec. 15.....		8	
St. Michael Island.....				
Ponta Delgada.....	Nov. 26-Dec. 9.....	3		Nov. 12-Dec. 30, 1922: Cases, 100; deaths, 35. At localities 3-9 miles from Ponta Delgada. Dec. 31, 1922-Feb. 24, 1923: Cases, 128; deaths, 52. From 6 to 20 miles distant from port of Ponta Delgada.
Brazil:				
Bahia.....	Oct. 29-Dec. 30.....	5	5	
Do.....	Jan. 28-Feb. 3.....	1	1	
Pernambuco.....	Jan. 14-20.....	3	2	
Porto Alegre.....	Nov. 19-25.....	1		
British East Africa:				
Kenya Colony—				
Tanganyika Territory..	Oct. 15-Dec. 16.....	12	7	
Do.....	Jan. 14-Feb. 10.....	11	10	
Uganda.....				
Entebbe.....	Nov. 24-30.....	211	202	Dec. 1-31, 1922: Cases, 141; deaths, 129. Jan. 1-31, 1923: Cases, 73; deaths, 73.
Canary Islands.....				Jan. 15-Mar. 17, 1923: Cases, 8; deaths, 7. Apr. 13, 1923: Present. Rodent plague present, Feb.-Mar., 1923.
Celebes:				
Macassar.....	Feb. 15.....			Present, bubonic; epidemic, pneumonic.
Ceylon:				
Colombo.....	Nov. 12-Dec. 30.....	46	38	Plague rodents, 16.
Do.....	Dec. 31-Apr. 14.....	85	72	Plague rodents, 31.
Chile:				
Antofagasta.....				Quarantine. Year, 1922: March, 1 case; May, 1 case.
China:				
Hongkong.....	Nov. 5-Dec. 23.....	14	12	
Do.....	Dec. 31-Mar. 3.....	3	2	
Manchuria—				
Harbin.....	Jan. 29-Feb. 4.....	7		
Ecuador:				
Guayaquil.....	Nov. 1-Dec. 31.....	9	3	Rats examined, 21,000; found infected, 90.
Do.....	Jan. 1-Apr. 15.....	25	11	Rats examined, 26,900; found infected, 134.
Sabanilla.....	Mar. 1-15.....	1		Country estate.
Egypt:				
City—				
Alexandria.....	Nov. 19-25.....	2		Jan. 1-Dec. 28, 1922: Cases, 488; deaths, 228. Jan. 1, 1922-Jan. 4, 1923: Cases, 437; deaths, 228.
Do.....	Jan. 2-10.....	1	1	Jan. 1-Mar. 26, 1923: Cases, 134; deaths, 69. Mar. 19-25, 1922: Cases, 50—Assiout, 26; Fayoum, 4; Girgeh, 17.
Port Said.....	Nov. 19-27.....	4	2	
Do.....	Jan. 26-Mar. 5.....	2	1	
Suez.....	Nov. 18-Dec. 5.....	3	4	
Do.....	Mar. 2.....	1	1	
Province—				
Assiout.....	Nov. 19-Dec. 29.....	4	1	Septicemic: 1 case, 1 death.
Do.....	Jan. 26-Mar. 29.....	56	28	Pneumonic, 8 cases, 4 deaths; bubonic, 36 cases; septicemic, 5 cases, 1 death.
Dakahlieh.....	Dec. 3.....	1	1	Pneumonic.
Fayoum.....	Mar. 25-28.....	3	1	Bubonic.
Girgeh.....	Mar. 24-27.....	6	4	Bubonic, 4; septicemic, 2.
Kena.....	Mar. 8.....	1	1	Pneumonic: 1 death.
Mtanieh.....	Nov. 18-27.....	2	1	
Do.....	Feb. 24.....		1	
Hawaii:				
Honokaa.....				Feb. 8-9, 1923: Plague rats, 3.
Do.....				Mar. 24-25, 1923: Plague rats, 2. In vicinity Pacific Sugar Co., near Honokaa.
Pohakea.....				Apr. 15, 1923: Plague rat.

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

Reports Received from December 30, 1922, to June 8, 1923—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India				Oct. 1-Dec. 30, 1922: Cases, 25,007; deaths, 18,803. (Report for Nov. 19-25, 1922, not received.) Dec. 31, 1922-Mar. 31, 1923: Cases, 88,530; deaths, 77,594.
Bombay.....	Oct. 27-Dec. 30.....	41	32	
Do.....	Dec. 31-Apr. 7.....	576	456	
Calcutta.....	Feb. 11-Apr. 28.....	39	39	
Karachi.....	Dec. 10-16.....	1	1	
Do.....	Dec. 31-Apr. 21.....	144	114	
Madras Presidency.....	Nov. 19-Dec. 30.....	2,260	1,448	
Do.....	Dec. 31-Apr. 21.....	5,769	5,162	
Madras.....	Nov. 19-25.....	1	1	
Do.....	Jan. 21-27.....	1	1	
Rangoon.....	Nov. 12-Dec. 30.....	52	49	
Do.....	Dec. 31-Apr. 7.....	428	391	
Iraq (Mesopotamia):				
Bagdad.....	Oct. 1-Nov. 30.....	16		
Do.....	Jan. 1-Mar. 31.....	21		
Sumaichah.....	Mar. 14.....		30	Among Beni-Tenim tribes in vicinity. Locality about 30 miles from Bagdad.
Japan:				
Osaka.....				July 1-Nov. 30, 1922: Cases, 70.
Java				Oct. 1-Nov. 3, 1922: Cases, 900; deaths, 763. Jan. 1-Mar. 31, 1923: Cases, 1,993; deaths, 2,052. Dec. 1-31, 1922: Deaths, 990.
East Java				
Residences—				
Pekalongan.....	Dec. 1-31.....	56		
do.....	.....do.....	202		
Soerabaya.....	Oct. 22-Dec. 31.....	34	14	
Do.....	Jan. 14-20.....	2	2	Jan. 17-23, 1923: Cases, 5; deaths, 3.
Toelong-Agoeng.....	Oct. 29-Dec. 16.....	18	18	Not a seaport.
Soerakarta—				
Klaten.....	Nov. 4.....			Present in epidemic form.
Madagascar				Jan. 1-Dec. 10, 1922: Cases, 143. Jan. 1-Mar. 31, 1923: Cases, 185; deaths, 130.
Provinces—				
Antsirabe.....	Jan. 16-Feb. 15.....	2	2	Bubonic and septicemic.
Diego Suarez.....	Jan. 1-Mar. 31.....	6	4	Do.
Moramanga.....				To Nov. 12, 1922: Cases, 24; deaths, 21. Cases reported to Oct. 30, pneumonic.
Amparafara region.....	Sept. 18-Nov. 5.....	21		Bubonic, 18; septicemic, 3 (doubtful, 2).
Moramanga.....	Dec. 6-9.....	3		Bubonic.
Tamatave.....	Feb. 10-Sept. 12.....	10		Do.
Do.....	Mar. 1-15.....	1	1	Septicemic.
Miarinarivo.....				Dec. 14, 1922-Jan. 1, 1923: 1 case (European).
Tananarive.....				Jan. 1-Dec. 10, 1922: Cases, 73 (bubonic, 37; pneumonic, 8; septicemic, 28). Jan. 1-Mar. 31, 1923: Cases, 152; deaths, 113. Bubonic, pneumonic, septicemic.
Ambohimangakeley.....	Nov. 19-Dec. 9.....	9		Bubonic, 3; pneumonic, 3; septicemic, 3.
Anketrina.....	Mar. 27-May 9.....	11		Bubonic, 4; pneumonic, 2; septicemic, 5 (3 doubtful).
Fenoarivo region.....	Oct. 7-Nov. 28.....	16		Bubonic, 3; pneumonic, 8; septicemic, 5.
Tananarive.....	Oct. 23-Dec. 10.....		5	1 septicemic.
Do.....	Dec. 14-Mar. 31.....	26	10	Bubonic and septicemic.
Mauritius				Year 1922: Cases, 98; deaths, 73. January, 1923: Cases, 18.
Mexico:				
Tampico.....	Mar. 23.....	2	1	Plague rodent found, Mar. 14, 1923.
Palestine:				
Jaffa.....	Nov. 27-Dec. 4.....	1		
Peru				
Do.....				Nov. 1-Dec. 31, 1922: Cases, 199; deaths, 93.
Localities—				
Barranco.....	Feb. 1-15.....	1		Jan. 1-Apr. 15, 1923: Cases, 418; deaths, 194.
Callao.....	Mar. 1-31.....	1		
Caneta.....	Nov. 16-Dec. 31.....	56	19	Including vicinity.

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

Reports Received from December 30, 1922, to June 8, 1923—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Peru—Continued.				
Localities—Continued.				
Canete	Jan. 1-Apr. 15	37	18	Including vicinity. At Campina.
Casma	Jan. 1-31	1		
Catacaos	Jan. 1-Mar. 31	10	3	Present, Nov. 9-15, 1922.
Cerro Azul	Apr. 1-15	1		
Chepen	Dec. 16-31	2	1	
Do	Jan. 1-Mar. 31	2		
Chiclayo (city and country).	Nov. 16-Dec. 15	17	7	
Do	Jan. 1-Apr. 15	37	19	
Cutervo	Feb. 16-Apr. 15	67	49	
Eten	Nov. 16-Dec. 15	4		
Guadalupe	Nov. 1-Dec. 31	22	12	
Do	Jan. 1-31	4	1	
Huacho	Nov. 16-Dec. 31	4	2	
Do	Jan. 1-Apr. 15	29	6	
Huancabamba	Apr. 1-15	1		Country.
Huara	Jan. 1-Feb. 15	8		
Huaral	Nov. 16-30	1		
Do	Jan. 1-Feb. 28	4	2	
Huarmey	Dec. 1-31	2	2	
Do	Feb. 1-Apr. 15	10		
Jayanca	Nov. 16-Dec. 31	10	8	
Lambayeque	Jan. do.	7	3	
Do	Jan. 1-Feb. 15	10	7	
Lima (city)	Nov. 1-Dec. 31	11	8	
Do	Jan. 1-Apr. 15	11	4	
Lima (country)	Nov. 1-Dec. 31	14	5	
Do	Jan. 1-Apr. 15	12	4	
Lurin	Dec. 1-15	1		
Magdalena del Mar	Nov. 16-30	1		
Do	Jan. 1-31	1	1	
Magdalena Vieja	Dec. 16-31	1	1	
Mala	Dec. 1-31	2		
Do	Jan. 1-31	4		
Miraflores	Jan. 1-Feb. 15	5	2	
Mochumi	Dec. 16-31	3	3	
Do	Feb. 1-Mar. 31	6	2	
Mollendo	Mar. 1-31	1		
Monsefu	Feb. 1-15	5	3	
Mosche	Nov. 16-30	2	1	
Faita	Dec. 16-31	3	2	
Do	Jan. 1-Mar. 31	17	12	
Piura	Nov. 16-Dec. 31	12	7	
Do	Jan. 1-Mar. 31	23	10	
Pueblo Nuevo	Dec. 1-31	7	4	
Do	Jan. 1-31	10	6	
Salaverry	Apr. 1-15	2	1	
San Pedro	Nov. 1-Dec. 31	8	4	
Do	Jan. 1-Feb. 28	7	4	
Santa Cruz (Hualgayoc)	Feb. 16-28	19	15	
Sullana	Nov. 16-30	3	3	
Do	Jan. 1-31	1	1	
Trujillo	Nov. 1-Dec. 31	3	1	
Do	Jan. 1-Mar. 31	66	17	District.
Tuman	Nov. 16-30	3		
Viru	Apr. 1-15	1		
Portugal:				
Lisbon	Nov. 10-29	4	2	
Oporto	Jan. 21-27		1	
Portuguese West Africa:				
Angola—				
Loanda	Oct. 1-Dec. 30		45	Fatal cases among white population.
Do	Dec. 31-Feb. 3	2	2	
Russia:				
Kirghiz Republic				Dec. 2, 1922-Feb. 16, 1923: Cases, 116 (pneumonic), occurring in 2 out of 6 governments.
Siam:				
Bangkok	Nov. 12-Dec. 23	5	5	
Do	Dec. 31-Apr. 14	110	92	
Spain:				
Barcelona	Nov. 15-Dec. 18	1		Sept. 24-Nov. 14, 1922: Cases, 23; deaths, 9. 17 suspected cases.
Malaga	Feb. 27	3		

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

Reports Received from December 30, 1922, to June 8, 1923—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Straits Settlements:				
Singapore.....	Dec. 17-23.....	2	2	
Do.....	Jan. 21-Apr. 14.....	15	13	
Syria:				
Beirut.....	Nov. 6-30.....	4	3	
Tunis:				
Ben-Gardane.....	Apr. 21.....	21		
Turkey:				
Constantinople.....	Nov. 22-28.....	2		
Do.....	Jan. 28-Feb. 10.....	2		
Union of South Africa:				
Transvaal—				
Klipfontein Farm.....	Dec. 16.....	2	1	Natives. Jan. 25, 1923: Plague-infected wild rodent found in vicinity.
Do.....	Apr. 23.....			Present.
West Africa:				
Senegal—				
Dakar.....	Feb. 1-Apr. 30.....	3	3	
On vessels:				
S. S. Helcion.....	Dec. 1.....	1		At Thursday Island Quarantine, Australia, from Singapore, Straits Settlements. In Chinese firemen.
S. S. —.....	Dec. 30.....			At port of London: Plague-infected rats and cats found in grain cargo on vessel from South America.

SMALLPOX.

Algeria:				
Algiers.....	Dec. 1-10.....	1		
Do.....	Jan. 1-Mar. 31.....	4		
Arabia:				
Aden.....	Nov. 19-Dec. 23.....	7	3	
Do.....	Jan. 7-Mar. 31.....	23	2	
Barbados (West Indies).....	Apr. 26.....			Present. (Reported as alastrim.)
Bolivia:				
La Paz.....	Jan. 1-Mar. 31.....	17	15	
Brazil:				
Bahia.....	Nov. 5-11.....	1		
Do.....	Mar. 4-31.....	2	1	
Para.....	Feb. 12-Mar. 25.....	14		
Pernambuco.....	Jan. 21-Apr. 21.....	19	2	
Rio de Janeiro.....	Nov. 25-Dec. 30.....	40	15	
Do.....	Dec. 31-Apr. 14.....	56	25	
Sao Paulo.....	Oct. 16-22.....	1	1	
Do.....	Jan. 8-Feb. 18.....	5	1	
British East Africa:				
Kenya Colony—				
Mombasa.....	Mar. 25-31.....	1		
Tanganyika Territory.....	Oct. 8-Dec. 23.....	193	10	
Do.....	Jan. 7-Mar. 17.....	56	2	
Uganda.....	Sept. 1-Dec. 31.....	3	1	Jan. 1-31, 1923: Cases, 3; deaths, 1.
Entebbe.....	Nov. 24-30.....	3	3	
Canada:				
Alberta—				
Calgary.....	Mar. 4-10.....	1		
British Columbia—				
Fernie.....	Mar. 18-24.....	1		
Manitoba—				
Winnipeg.....	Dec. 10-30.....	14		
Do.....	Jan. 21-May 12.....	68		
New Brunswick—				
Northumberland County.....	Jan. 21-Feb. 17.....	8		
Restigouche County.....	Mar. 11-17.....	1	1	
Ontario.				
Hamilton.....	Dec. 31-Feb. 24.....	7		Dec. 1-31, 1922: Cases, 51; deaths, 1. Jan. 1-Apr. 30, 1923: Cases, 121.
Niagara Falls.....	Dec. 3-30.....	10		
Do.....	Dec. 31-May 5.....	17		

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

Reports Received from December 30, 1922, to June 3, 1923—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Canada—Continued.				
Ontario—Continued.				
Ottawa	Dec. 10-23.....	6		
Do	Jan. 7-Mar. 31.....	21	1	
Toronto	Dec. 10-30.....	2		
Do	Feb. 4-10.....	1		
Quebec—				
Quebec	Jan. 14-20.....	3		
Sherbrooke	Mar. 1-31.....		2	
Saskatchewan—				
Regina	Dec. 3-23.....	2		
Ceylon:				
Colombo	Nov. 12-Dec. 24...	9	4	1 case, 1 death outside city.
Do	Feb. 18-Apr. 14.....	5		
Chile:				
Antofagasta	Apr. 1-7.....	1		
Concepcion	Oct. 30-Dec. 25.....		7	
Do	Feb. 1-Apr. 9.....	3		Mar. 1-Apr. 30, 1923: Deaths, 9.
Valparaiso	Oct. 2-Dec. 30.....		153	In hospital Dec. 26, 1922, 85 cases.
Do	Jan. 9-Feb. 10.....		90	Dec. 31, 1922-Jan. 27, 1923: Deaths, 66. Feb. 16, 1923: 80 cases present (estimated). Jan. 29-Mar. 18, 1923: Deaths, 106.
China:				
Amoy	Nov. 5-Dec. 23.....		3	Nov. 26-Dec. 30, 1922: Present.
Do	Jan. 7-Apr. 14.....		13	
Antung	Nov. 13-Dec. 10.....	2		
Do	Feb. 26-Mar. 4.....	1		
Canton	Oct. 1-Nov. 30.....			Prevalent.
Do	Jan. 21-Feb. 17.....			Present.
Changsha	Feb. 11-17.....	1		
Chungking	Nov. 5-Dec. 30.....			Do.
Do	Dec. 31-Apr. 14.....			Do.
Foochow	Nov. 12-Dec. 30.....			Do.
Do	Dec. 31-Apr. 7.....			Do.
Hankow	Dec. 31-Jan. 20.....	4	1	
Hongkong	Nov. 5-11.....		1	
Do	Dec. 31-Mar. 31.....	38	28	
Manchuria—				
Dairen	Apr. 2-22.....	4		
Harbin	Nov. 20-Dec. 31.....	13		
Do	Jan. 8-Apr. 8.....	9		
Mukden	Nov. 19-Dec. 16.....			Do.
Do	Jan. 7-Feb. 3.....			Do.
Nanking	Nov. 5-Dec. 23.....			Do.
Do	Jan. 7-Apr. 14.....			Do.
Shanghai	Jan. 15-29.....	8	10	Cases, foreign: deaths, Chinese.
Tientsin	Feb. 18-Apr. 7.....	2		Reported from foreign office.
Chosen (Korea):				
Chemulpo	Oct. 1-Dec. 31.....	135	92	
Do	Jan. 1-Mar. 31.....	40	21	
Fusan	Nov. 1-Dec. 31.....	4		
Do	Jan. 1-Mar. 31.....	15	2	
Gensan	Dec. 1-31.....	6	2	
Do	Mar. 1-31.....	2	1	
Seoul	Oct. 1-Dec. 31.....	19	1	
Do	Jan. 1-Mar. 31.....	91	34	
Colombia:				
Buenaventura	Jan. 25-Feb. 20.....	48		Estimated, 50 cases present; type mild; among colored population. Feb. 16-26, 1923: 6 to 9 cases 2 miles from town limits. Mild outbreak.
Santa Marta	Apr. 18.....			
Cuba:				
Province—				
Camaguey	Nov. 11-Dec. 31.....	20		
Matanzas	Jan. 1-31.....	2		
Oriente	Nov. 21-Dec. 31.....	22		
Do	Jan. 1-Feb. 10.....	10		
Santa Clara	Dec. 21-31.....	1		
Czechoslovakia:				
Province—				
Bohemia	Oct. 1-31.....	1		Oct. 1-31, 1922: Cases, 3. Jan. 1-31, 1923: Cases, 3.
Moravia	.....do.....	1		
Slovakia	Oct. 1-Nov. 30.....	2		

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

Reports Received from December 30, 1922, to June 8, 1923—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Dominica (West Indies).....				Feb. 26-May 7, 1923: Present with several thousand cases (estimated) reported Feb. 26. Reported as alastrim.
Dominican Republic:				
Puerto Plata.....	Dec. 14-30.....	2		
Santo Domingo.....	Dec. 3-16.....			Present.
Do.....	Feb. 28-Mar. 6.....	3		
San Pedro de Macoris.....	Jan. 13-19.....	2		
Ecuador:				
Babahoyo.....	Apr. 1-15.....	1		
Guayaquil.....	Dec. 1-31.....	10		
Do.....	Jan. 1-Feb. 28.....	11		
Egypt:				
Alexandria.....	Feb. 19-May 5.....	2		
Port Said.....	Jan. 21-27.....	1		
Cairo.....	Jan. 29-Feb. 13.....	3		
Estonia.....				Oct. 1-Dec. 31, 1922: Cases, 61. Jan. 1-Mar. 31, 1923: Cases, 34.
France:				
Paris.....	Dec. 1-10.....	1		
Do.....	Mar. 4-10.....	1		
Germany:				
Bremen.....	Dec. 3-9.....	1		
Great Britain:				
Liverpool.....	Dec. 11-17.....	1		From vessel.
Do.....	Apr. 22-May 12.....	4		From S. S. Oak Branch, from South American ports, 2 cases.
London.....	Nov. 26-Dec. 23.....	3		May 6-12, 1923: On vessels, of which one from Antwerp, one coastwise, 2 cases.
Nottingham.....	Nov. 19-Dec. 13.....	4		
Do.....	Jan. 7-Apr. 14.....	17		
Greece:				
Kalamata.....	Jan. 13-Feb. 13.....		1	
Patras.....	Jan. 21-Mar. 31.....		93	
Sajoniki.....	Nov. 6-Dec. 31.....	6	5	
Do.....	Jan. 15-Apr. 1.....	12	5	
Zante.....				Epidemic, Jan. 17, 1923.
Do.....	Jan. 7-14.....	13	4	
Guadeloupe (West Indies).....				Feb. 26, 1923: Present. Reported as alastrim.
Guatemala:				
Guatemala City.....	Feb. 23.....			Present.
Honduras.....				Apr. 17, 1923: Outbreak in interior.
India.....				Nov. 5-Dec. 30, 1922: Cases, 5,783; deaths, 333. Dec. 31, 1922-Apr. 7, 1923: Cases, 29,041; deaths, 6,948.
Bombay.....	Nov. 5-Dec. 30.....	22	10	
Do.....	Dec. 31-Apr. 7.....	397	176	
Calcutta.....	Nov. 12-Dec. 30.....	46	23	
Do.....	Dec. 31-Apr. 28.....	192	99	
Karachi.....	Nov. 26-Dec. 30.....	6		
Do.....	Dec. 31-Apr. 21.....	76	33	
Madras.....	Nov. 12-Dec. 30.....	71	23	
Do.....	Dec. 31-Apr. 21.....	342	113	
Rangoon.....	Nov. 5-Dec. 30.....	27	6	
Do.....	Jan. 7-Apr. 7.....	397	166	
Iraq (Mesopotamia):				
Bagdad.....	Oct. 1-Nov. 30.....	568	361	
Do.....	Jan. 1-Mar. 31.....	36	50	
Italy:				
Catania.....	Apr. 16-22.....	1		
Turin.....	Jan. 29-Apr. 29.....	23		
Genoa.....	Apr. 1-10.....	1		From vessel.
Jamaica.....				Dec. 31, 1922-Apr. 28, 1923: Cases, 746. Previously recorded as alastrim.
Kingston.....	Mar. 11-Apr. 28.....	10		
Japan:				
Kobe.....	Jan. 13-May 4.....	8	2	
Taiwan Island.....	Mar. 4-10.....	1	1	
Yokohama.....	Jan. 22-Mar. 25.....	2		
Java:				
East Java—				
Soerabaya.....	Nov. 5-11.....	4		
Do.....	Feb. 4-Mar. 24.....	8	1	
West Java—				
Batavia.....	Nov. 11-Dec. 22.....	25	1	City and Province.
Do.....	Jan. 27-Apr. 13.....	67	6	Province.
Latvia.....				Oct. 1-Dec. 31, 1922: Cases, 7. Mar. 1-31, 1923: Cases, 5.

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

Reports Received from December 30, 1922, to June 8, 1923—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Martinique.....				Mar. 25-Apr. 21, 1923: Present. Reported as alastrim.
Fort de France.....	Mar. 25-Apr. 21.....			Present.
Mexico:				
Chihuahua.....	Dec. 4-17.....		4	
Do.....	Jan. 1-May 20.....	77	29	
Guadalajara.....	Dec. 1-31.....	4		
Do.....	Jan. 1-Apr. 30.....	129	47	
Mexico City.....	Nov. 12-Dec. 23.....	43		Including municipalities in Federal District.
Do.....	Dec. 31-Apr. 28.....	362		Do.
Nogales.....	Dec. 10-19.....		1	
Do.....	Dec. 31-Feb. 10.....		2	
Saltillo.....	Jan. 28-Feb. 3.....		1	
San Luis Potosi.....	Jan. 14-20.....		1	
Do.....	Apr. 29-May 19.....		2	
Sonora, State.....				Nov. 1-30, 1922: Present in northern section.
Empalme.....	Nov. 1-30.....	4	1	
Tabasco, State.....				Present in some localities, Mar. 26, 1923.
Torreón.....	Dec. 1-31.....		1	
Vera Cruz.....	Feb. 26-May 6.....	12	6	
Palestine.....				Jan. 23-Feb. 19, 1923: Cases, 8; northern district.
Persia:				
Tabriz.....	Dec. 18-31.....		2	
Do.....	Jan. 15-Feb. 28.....		5	
Teheran.....	Oct. 24-Dec. 22.....		139	
Do.....	Dec. 20-Jan. 20.....		56	
Peru.....				Feb. 1-28, 1923: Cases, 8; deaths, 1.
Callao.....	Nov. 1-15.....	2		
Lima (city).....	Dec. 1-15.....	3	1	
Do.....	Mar. 1-31.....	2	2	
Lima (country).....	Nov. 1-15.....	2	1	
Do.....	Feb. 16-28.....	2		City and country.
Poland.....				Oct. 1-Dec. 23, 1922: Cases, 132; deaths, 26. Jan. 1-27, 1923: Cases, 109; deaths, 19.
Portugal:				
Lisbon.....	Nov. 19-Dec. 30.....	143	34	
Do.....	Dec. 31-May 5.....	83	88	Dec. 25-31, 1922: Deaths, 12; Mar. 26-May 5, 1923: Cases, 97; deaths, 26.
Oporto.....	Oct. 15-Dec. 30.....	24	12	
Do.....	Dec. 31-May 12.....	21	12	Jan. 5-20, 1923: Cases, 22; deaths, 6.
Portuguese West Africa:				
Angola—				
Loanda.....	Oct. 27-Nov. 11.....		10	
Rumania:				
Bucharest.....	Feb. 1-10.....	1		
Chisinau.....	Jan. 1-Feb. 28.....	26		
Galatz.....	Feb. 1-10.....	2		
Russia:				
City—				
Moscow.....				Jan. 1-31, 1923: Cases treated in hospital, 10.
Province—				Jan.-Sept. 1922: Cases, 8,744.
Ukraine.....				Present.
St. Lucia Island.....	Apr. 26.....			
Siberia:				
Vladivostok.....	Mar. 1-31.....	1		Present in Nikolsk, Slassk, and Ussurisk Counties.
Sierra Leone:				
Freetown.....	Feb. 16-28.....	1		
Spain:				
Corunna.....	Nov. 26-Dec. 2.....		1	
Huelva.....	Nov. 24-Dec. 31.....		4	
Madrid.....	Dec. 1-31.....		1	
Do.....	Jan. 1-31.....		1	
Seville.....	Nov. 27-Dec. 31.....		32	
Do.....	Jan. 1-Mar. 11.....		16	
Valencia.....	Nov. 26-Dec. 23.....	3		
Do.....	Dec. 31-May 12.....	80	3	
Switzerland:				
Basel.....	Feb. 23-Apr. 7.....		5	
Berne.....	Nov. 19-Dec. 30.....		85	
Do.....	Dec. 31-Apr. 28.....	186		

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

Reports Received from December 30, 1922, to June 8, 1923—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks
Switzerland—Continued.				
Lucerne.....	Jan. 1-Mar. 31.....	22		
Zurich.....	Nov. 19-Dec. 30.....	19		
Do.....	Jan. 14-May 5.....	68		
Syria:				
Aleppo.....	Nov. 19-Dec. 23.....	38	20	
Do.....	Dec. 31-Apr. 14.....	30	6	
Beirut.....	Dec. 11-20.....	1		
Damascus.....	Nov. 1-Dec. 31.....	97	16	
Do.....	Jan. 1-Feb. 20.....	22		
Tunis:				
Tunis.....	Dec. 1-22.....	2	1	
Do.....	Jan. 22-Feb. 4.....	1	1	
Turkey:				
Constantinople.....	Nov. 19-Dec. 16.....	122	34	
Do.....	Dec. 31-Apr. 21.....	416	465	
Union of South Africa.....				
Do.....				Oct. 1-Dec. 31, 1922: Cases—Colored, 64; deaths, 1; white, cases, 4.
Cape Province.....				Jan. 1-Feb. 28, 1923: Cases, 31; colored, 30; white, 4; deaths, 3 (colored).
Do.....				Oct. 1-Dec. 31, 1922: Cases—Colored, 48; deaths, 1; white, 4 cases.
Do.....				Jan. 1-Feb. 28, 1923: Cases, 22 (colored, 18; white, 4). Deaths, colored, 2.
Do.....	Dec. 31-Mar. 17.....			Outbreaks.
East London.....	Jan. 7-13.....	2		
Natal:				
Do.....				Dec. 1-31, 1922: Cases, 6 (colored).
Do.....				Jan. 1-Feb. 28, 1923: Cases, 7; deaths, 1 (colored).
Do.....	Feb. 4-10.....			Outbreaks.
Orange Free State:				
Do.....				Dec. 1-31, 1922: Cases, 2 (colored).
Do.....				Jan. 1-31, 1923: Cases, 3 (colored).
Do.....	Jan. 14-Feb. 3.....			Outbreaks.
Southern Rhodesia:				
Do.....	Nov. 9-15.....	3		
Transvaal:				
Do.....				Oct. 1-Dec. 31, 1922: Cases, 10.
Do.....				Jan. 1-Feb. 28, 1923: Cases, 2 (colored).
Do.....	Dec. 31-Mar. 31.....			Outbreaks.
Johannesburg.....	Nov. 1-30.....		1	
Do.....	Jan. 1-31.....	1		
Uruguay:				
Montevideo.....	do.....	8		
Yugoslavia:				
Do.....				Aug. 1-31, 1922: Cases, 30; deaths, 12.
Do.....				Dec. 31, 1922-Mar. 24, 1923: Cases, 567; deaths, 100.
Bosnia-Herzegovina:				
Croatia—				Dec. 31, 1922-Mar. 24, 1923: Cases, 266; deaths, 35.
Zagreb.....	Apr. 1-7.....	1		
Serbia:				
Belgrade.....	Nov. 12-Dec. 31.....	10	4	
Do.....	Mar. 18-24.....	1	1	
On vessels:				
S. S. Bahia.....	Mar. 4-10.....	1		At Pernambuco, Brazil.
S. S. Craftsman.....	May 6-12.....	1		At Liverpool from Antwerp. Left, May 19, for Glasgow; left, May 25, for San Francisco.
S. S. Hedsley.....	do.....	1		At Liverpool. Coastwise.
S. S. Huntress.....	Nov. 11.....	1		At Fremantle, Australia; from Cape Town, South Africa.
S. S. Junin.....	Jan. 13.....	1		At Antofagasta, Chile. Vessel proceeded to Arica, Chile, with patient on board.
S. S. —.....	Dec. 17-23.....	1		At Liverpool.
S. S. Oak Branch.....	Apr. 22-28.....	2		At Liverpool, from South American ports. (Iquique, Chile, Mar. 17; Balboa, Apr. 1, 1923.)
S. S. Tenyo Maru.....	Mar. 20.....	1		At Shanghai, China, from Japan. In steerage passenger.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.
Reports Received from December 30, 1922, to June 8, 1923—Continued.
TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria:				
Algiers.....	Nov. 11-Dec. 31...	2	1	
Do.....	Jan. 1-Apr. 30.....	76	25	
Oran.....	Jan. 11-20.....	1	1	
Austria:				
Vienna.....	Jan. 7-17.....	1		
Bolivia:				
La Paz.....	Jan. 1-Mar. 31.....	31	24	
Brazil:				
Pernambuco.....	Dec. 3-9.....	2	2	
Porto Alegre.....	Nov. 19-Dec. 16.....	3		
Do.....	Feb. 25-Mar. 3.....		3	
Bulgaria:				
Sofia.....	Feb. 4-Apr. 14.....	7		Paratyphus, 4 cases; 1 death.
Chile:				
Antofagasta.....	Nov. 12-Dec. 30.....	24	5	Nov. 11-Dec. 5, 1922: Cases, 10; deaths, 2. Quarantine station: October, 1922—1 fatal case on vessel from Valparaiso; November, 1922—cases, 7; December, 1922—cases, 9; remaining, Dec. 31, 3 cases. Apr. 1-30, 1923: Deaths, 4.
Do.....	Dec. 31-Apr. 7.....	4	2	
Concepcion.....	Oct. 17-Dec. 18.....		9	
Do.....	Dec. 26-Apr. 23.....		16	
Iquique.....	Jan. 14-Mar. 31.....		3	
Talcahuano.....	Nov. 12-Dec. 23.....	10	6	
Do.....	Jan. 7-Mar. 17.....	7	2	
Valparaiso.....	Dec. 3-30.....		9	
Do.....	Dec. 31-Mar. 18.....		37	
China:				
Antung.....	Nov. 13-Dec. 10.....	7		
Do.....	Apr. 2-22.....	3		
Manchuria—				
Harbin.....	Nov. 20-26.....	7		
Do.....	Jan. 1-Apr. 1.....	8		
Cuba:				
Matanzas.....	Dec. 25-31.....	1	1	
Czechoslovakia:				
City—				
Prague.....	Nov. 19-25.....	1		Jan. 1-Feb. 28, 1923: Cases, 121; deaths, 5.
Province—				
Bohemia.....	Nov. 1-30.....	1		
Russia.....	Oct. 1-Dec. 31.....	25		
Slovakia.....	Nov. 1-30.....	2		
Danzig (Free City).....	Jan. 7-Feb. 24.....	2		Including 1 from Poland.
Egypt:				
Alexandria.....	Nov. 19-Dec. 31.....	2	1	
Do.....	Jan. 22-May 5.....	10	5	Imported, 1.
Cairo.....	Oct. 1-Dec. 31.....	19	9	
Do.....	Jan. 1-Feb. 11.....	10	5	
Port Said.....	Mar. 25-31.....	1		
Estonia:				
				Oct. 1-Dec. 31, 1922: Cases, 6. Recurrent typhus: Cases, 10. Year 1922: Cases, 159; recurrent typhus, 91 cases.
Do.....				Jan. 1-Mar. 31, 1923: Cases, 16. Recurrent typhus, Jan. 1-31, cases, 4.
Libau.....	Dec. 24-30.....	1		
Narva.....				Year 1922: Cases, 140. Recurrent typhus: Cases, 83.
Finland:				
				Feb. 16-Mar. 15, 1923: Cases, 7; recurrent typhus, 1.
France:				
Marseille.....	Mar. 1-31.....		1	
Germany:				
Berlin.....	Nov. 26-Dec. 2.....		1	
Coblenz.....	Dec. 10-16.....	1		
Do.....	Mar. 25-31.....	1		
Dresden.....	Dec. 10-16.....	1		
Königsberg.....	Mar. 24-Apr. 7.....	2		
Great Britain:				
Glasgow.....	Jan. 7-Feb. 17.....	4	1	
Greece:				
Athens.....	Mar. 1-20.....		4	
Corfu Island.....	Feb. 8.....			Present.
Leucadia.....	Jan. 17.....			Do.
Patras.....	Nov. 19-25.....		1	
Do.....	Jan. 1-Mar. 31.....	3	16	
Piræus.....				Jan. 13-Mar. 31, 1923: Deaths, 12.
Prevesa.....	Jan. 17.....			Present.

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

Reports Received from December 30, 1922, to June 8, 1923—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Greece—Continued.				
Saloniki.....	Dec. 18-24.....	3		Among refugees. Refugees. Recurrent typhus fever, Mar. 12-Apr. 1, 1923: Cases, 4; deaths, 1.
Do.....	Jan. 7-Apr. 1.....	95	6	
Zante.....	Jan. 17.....			Present.
Guatemala:				
Guatemala City.....	Jan. 1-31.....		1	
Hungary:				
Budapest.....	Jan. 14-Apr. 21.....	37	8	
Iraq (Mesopotamia):				
Bagdad.....	Feb. 1-Mar. 31.....	2		
Ireland:				
Bejmullet.....	June 15-Dec. 14.....	20		In County Mayo.
Italy:				
Trieste.....	Feb. 25-Mar. 3.....	1		
Latvia:				
Libau.....	Apr. 25-May 1.....	2		Oct. 1-Dec. 31, 1922: Cases, 74. Recurrent typhus: Cases, 10. Feb. 1-Mar. 31, 1923: Cases, 93. Recurrent typhus, 2 cases; paratyphus, 2 cases.
Mexico:				
Guadalajara.....	Mar. 1-Apr. 30.....	2	1	Including municipalities in Federal District.
Mexico City.....	Nov. 12-Dec. 30.....	90		
Do.....	Dec. 31-Apr. 28.....	189		
San Luis Potosi.....	Jan. 28-Apr. 7.....		4	Do.
Netherlands:				
Rotterdam.....	Apr. 29-May 12.....	3		
Palestine:				
Jaffa.....	Dec. 12-18.....	2		Dec. 5-25, 1922: Cases, 3; in northern section. Feb. 27-Mar. 5, 1923—1 case in northern section. Apr. 17-23, 1923: One case relapsing fever
Do.....	Jan. 16-Apr. 30.....	8		
Jerusalem.....	Dec. 26-Jan. 1.....	1		
Samaria.....	Apr. 24-30.....	1		
Paraguay:				
Asuncion.....	Jan. 1-27.....		1	
Persia:				
Tabriz.....	Dec. 18-31.....		3	
Do.....	Jan. 15-28.....		1	
Teheran.....	Sept. 24-Nov. 24.....		3	
Do.....	Feb. 14-29.....		4	
Poland:				
				Oct. 1-Dec. 23, 1922: Cases, 1,916; deaths, 130. Recurrent typhus: Cases, 2,071; deaths, 56. Jan. 1-Feb. 24, 1923: Cases, 3,101; deaths, 253. Recurrent typhus: Cases, 897; deaths, 22.
Portugal:				
Lisbon.....	Mar. 26-Apr. 1.....		1	
Oporto.....	Oct. 15-Dec. 2.....	1	1	
Do.....	Mar. 11-May 12.....	13	2	
Rumania:				
Bucharest.....				To Jan. 31, 1923: Cases, 96; deaths, 13.
Do.....	Feb. 1-10.....	133		
Chisinau.....	Nov. 1-30.....	5		Recurrent typhus: Cases, 33.
Do.....	Jan. 1-Feb. 28.....	110		
Craiova.....	Feb. 1-10.....	1		
Russia:				
Moscow.....	Jan. 1-31.....	290		July 30-Sept. 23, 1922: Cases, 23,803. Undetermined cases, 38. Provisional figures.
Ukraine.....	Jan.-Sept.....	307,329		
Ukraine, Tartar Republic, and Siberia.....	June 1-30.....	35,926		
Do.....	July 1-31.....	17,262		Do.
Do.....	Aug. 1-31.....	6,864		Do.
Do.....	Sept. 1-30.....	2,388		Do.
Siberia:				
Vladivostok.....	Nov. 1-Dec. 31.....	5		Remittent, 1 case; indefinite, 6 cases.
Do.....	Jan. 1-Mar. 31.....	215		Remittent, 1 case; indefinite, 33.
Spain:				
Barcelona.....	Nov. 30-Dec. 27.....		3	
Do.....	Jan. 11-Mar. 28.....		2	
Madrid.....	Dec. 1-31.....		1	
Do.....	Feb. 1-28.....		1	
Syria:				
Aleppo.....	Dec. 10-16.....	1	1	Generally among refugees.
Do.....	Jan. 7-May 5.....	113	24	

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

Reports Received from December 30, 1922, to June 8, 1923—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Syria—Continued.				
Beirut.....	Oct. 1-22.....	1		
Do.....	Mar. 1-31.....	83		
Tunis:				
Tunis.....	Apr. 16-May 13....	1	1	
Turkey:				
Constantinople.....	Nov. 27-Dec. 2.....	3		
Do.....	Dec. 31-Apr. 21....	199	281	Mar. 31-Apr. 6, 1923: Many cases reported.
Union of South Africa.....				Oct. 1-Dec. 31, 1922: Colored—cases, 3,097; deaths, 298; white—cases, 11; deaths, 2.
Do.....				Jan. 1-Feb. 28, 1923: Total cases, 1,050; deaths, 93. (Colored—cases, 1,037; deaths, 92; white—cases, 13; 1 death.)
Cape Province.....				Oct. 1-Dec. 31, 1922: Colored—cases, 2,799; deaths, 250; white—cases, 6; death, 1.
Do.....				Jan. 1-Feb. 28, 1923: Colored—cases, 853; deaths, 72; white—7 cases, 1 death.
Do.....	Dec. 31-Mar. 31.....			Outbreaks.
Port Elizabeth.....	Jan. 28-Feb. 10....	3		
Natal.....				Oct. 1-Dec. 31, 1922: Colored—cases, 143; deaths, 32; white—cases, 2.
Do.....				Jan. 1-Feb. 28, 1923: Colored—cases, 38; deaths, 3; white—1 case.
Do.....	Feb. 4-Mar. 31.....			Outbreaks.
Orange Free State.....				Oct. 1-Dec. 31, 1922: Colored—cases, 91; deaths, 8; white—cases, 3; deaths, 1.
Do.....				Jan. 1-Feb. 28, 1923: Colored—cases, 93; deaths, 7; white—2 cases.
Do.....	Jan. 7-Mar. 31.....			Outbreaks.
Transvaal.....				Oct. 1-Dec. 31, 1922: Colored—cases, 64; deaths, 8.
Do.....				Jan. 1-Feb. 28, 1923: Colored—cases, 53; deaths, 11; white—cases, 2.
Do.....	Jan. 14-Mar. 17....			Outbreaks.
Johannesburg.....	Nov. 1-30.....	3	6	
Do.....	Jan. 1-Feb. 28.....	38	8	
Venezuela:				
Maracaibo.....	Jan. 21-27.....		1	
Yugoslavia.....				Dec. 31, 1922-Mar. 24, 1923: Cases, 106; deaths, 20.
Bosnia-Herzegovina.....	Aug. 1-31.....	1		
Do.....	Dec. 31-Mar. 24.....	51		Recurrent fever, 1 case.
Croatia—				
Zagreb.....	Apr. 1-7.....	2		
Serbia.....				Aug. 1-31, 1922: Recurrent typhus fever: Cases, 4. Dec. 31-Mar. 24, 1923: Cases, 25.
Belgrade.....	Mar. 18-Apr. 7.....	2		

YELLOW FEVER.

Brazil:				
Bahia.....	Dec. 31-Apr. 14....	82	25	
Colombia:				
Bucaramanga.....				Outbreak of epidemic reported Mar. 12, 1923; information showing diagnosis of yellow fever received under date of May 16, 1923.
Mexico:				
Ciudad Victoria.....	Dec. 17-23.....	1		
Tampico.....	Jan. 15.....	1		Reported on bills of health.
West Africa:				
Gold Coast—				
Saltpond.....				Reported present Dec. 21, 1922.
Nigeria—				
Warral.....				Do.