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Influenza a Probable Cause of Fever of Undetermined Nature in Southern States.

Fevers of an undetermined nature were reported during April and May at various points from Norfolk to Louisiana. An examination of the records and reports of the physicians who have treated these cases leads to the belief that these fevers were mainly influenza of mild type.

It is possible, however, that all cases reported were not of the same disease, and in one locality in Louisiana dengue may have occurred.

North Carolina Enforcing Law Requiring Morbidity Reports.

A determined effort is being made by the State Board of Health of North Carolina to secure the reporting of cases of communicable disease by physicians throughout the State and the prompt transmission of the reports to the State Board of Health.

During the week ended June 8, 1918, two physicians were prosecuted and fined for failure to report cases of notifiable diseases as required by the State law. A county quarantine officer was also prosecuted for failure to perform the duties of his office. He pleaded guilty, and the case was dismissed upon his promise to comply with the law in the future.

Some Qualitative and Quantitative Tests for Arsphenamine (3, 3′-Diamino-4, 4′-Dioxy-Arsenobenzene Dihydrochloride) and Neo-Arsphenamine (Sodium-3, 3′-Diamino-4, 4′-Dihydroxy-Arsenobenzene-Methanal-Sulphoxalate).

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Previous to the year 1914, all of the arsphenamine (salvarsan) and neo-arsphenamine (neosalvarsan) on the market was manufactured by a single German firm under the supervision of Paul Ehrlich, one of the patentees. Naturally the products were fairly uniform in their composition and properties.

As a result of the present war in Europe, the protection afforded these products in the allied countries, through licenses or patents, has been temporarily withdrawn, and they are now being manufactured in England, France, Japan, Canada, and the United States.

Examinations made by the authors, as well as evidence presented by clinicians (Martin and others, 1916), have revealed the fact that the products of different manufacturers appearing on the market in this country are not all uniform with respect to either their chemical or their physiological properties. Even the last of the German supplies received are stated to be more toxic than the products obtained before the beginning of hostilities in Europe (Ormsby and Mitchell, 1916).

Tentative standards for these preparations (arsphenamine and neo-arsphenamine) have been adopted by the Federal Trade Commission on the recommendation of the United States Public Health Service, but these do not appear to meet all exigencies. It is for this reason and for the purpose of better defining the properties of good preparations that the following qualitative and quantitative tests have been worked out and compiled.

Arsphenamine—Physical Properties.

Appearance: Arsphenamine is a pale yellow, microcrystalline, hygroscopic powder very unstable in the air. When properly dried, it is free from lumps.

Odor: The pure product is odorless.[1]

Taste: It has a sour astringent taste.

Solubility: Arsphenamine is soluble in water, 1 to 5 parts, methyl alcohol, 1 to 3 parts, and ethyl alcohol, 1 to 12 parts (Wilcox and Webster, 1916). It is readily soluble in ethylene glycol and glycerin, but only slightly soluble in glacial acetic acid, acetone, ether and concentrated hydrochloric acid (Ehrlich and Bertheim, 1912).

The aqueous solution is greenish-yellow[2] in color and reacts strongly acid to litmus.

Moisture content: When dried to constant weight in an atmosphere of dry hydrogen at 105° C., arsphenamine should lose not more than 7.6 per cent of its weight, which corresponds to the loss of 2 molecules of water of crystallization (Gaebel, 1911).

Arsphenamine—Chemical Properties.

Behavior toward acids: Dilute mineral acids, with the exception of dilute sulphuric acid, have no noticeable effect on aqueous solu-

[1] Commercial samples frequently have the odor of ether due to the incomplete removal of this solvent which is used in precipitating and washing the product.

[2] The brownish-yellow or brown color, sometimes observed in solutions prepared from commercial samples, is thought to be an indication of the presence of oxidation products or other impurities.

tions of arsphenamine[1] (distinction from *neo-arsphenamine*, which yields a precipitate with all dilute mineral acids).

The addition of dilute sulphuric acid, however, produces a yellowish-white precipitate.[2]

The addition of any of the concentrated mineral acids, with the exception of phosphoric, to an aqueous solution of arsphenamine causes the formation of a precipitate (distinction from *neo-arsphenamine*, which is precipitated by phosphoric acid).

In the case of concentrated nitric acid, the precipitate dissolves on the addition of an excess of acid yielding a red solution.

Acetic acid (36 per cent) produces no noticeable effect when added to an aqueous solution of arsphenamine (distinction from *neo-arsphenamine*, which yields an orange-yellow precipitate on heating the liquid).

Carbon dioxide immediately precipitates arsphenamine from aqueous solutions.

Behavior toward alkalies: The addition of sodium hydroxide test solution to an aqueous solution of arsphenamine produces a precipitate which dissolves in an excess of the reagent.[3]

Solutions of barium and calcium hydroxides also yield precipitates.

The alkali carbonates produce precipitates which are not soluble in an excess of the reagent.

Behavior toward oxidizing agents: The addition of chlorine or bromine water, ferric chloride, or chromic acid to an aqueous solution of arsphenamine causes the liquid to become red or brownish red in color.

Behavior toward general alkaloidal reagents: An aqueous solution of arsphenamine slowly reduces gold and platinic chloride test solutions in the cold, yielding characteristic precipitates. Reduction is hastened by heating.

Mercuric chloride test solution produces a light-yellow colored precipitate which becomes white on heating.

Mayer's reagent gives a heavy, orange-yellow precipitate.

Picric acid test solution produces a copious yellow precipitate (distinction from *neo-arsphenamine*, aqueous solutions of which become only slightly turbid on the addition of picric acid test solution).

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[1] For carrying out the above tests, or those which follow, a 1 in 1,000 aqueous solution of the product was used, unless otherwise mentioned.

All of the test solutions employed were made according to the U. S. P. IX, unless differently stated.

[2] Precipitation also occurs on the addition of sulphates.

[3] Precipitation first begins when 1 mol of sodium hydroxide has been added for each mol of arsphenamine in solution. If the addition of sodium hydroxide is continued until precipitation is complete, a further addition of alkali will cause the precipitate to go into solution as the phenolate (Ehrlich and Bertheim, 1912).

Phosphotungstic acid test solution [1] produces a dirty gray colored precipitate, insoluble in an excess of the reagent, but which dissolves upon the addition of sodium carbonate, or ammonia water, yielding a deep blue colored solution.

Phosphomolybdic acid test solution gives a similar color reaction if the liquid is made acid with hydrochloric acid after the addition of the alkali (Gaebel, 1911b).

Behavior toward other reagents: The addition of a freshly prepared solution of ferric chloride and potassium ferricyanide to an aqueous solution of arsphenamine immediately produces a copious precipitate of Prussian blue.

Nessler's reagent is instantly reduced.

The addition of silver nitrate test solution first causes a yellow color to appear, then the formation of a gelatinous precipitate which changes to a black powder on heating. The black precipitate is soluble in dilute nitric acid.

Millon's reagent gives a copious yellow precipitate.

If a drop of copper sulphate solution (4 in 100) be added to 5 cubic centimeters of an aqueous solution of salvarsan (1 in 1,000), to which has been added 0.5 cubic centimeter of hydrogen dioxide solution and 0.5 cubic centimeter of ammonia water, an intense bluish-green color will develop. If the blue solution is poured into alcohol (90 per cent), a blue precipitate, which can be separated by centrifugation, will be obtained (Denigès and Labat, 1911).

To 2 or 3 cubic centimeters of an aqueous solution of arsphenamine (1 in 1,000) add 3 or 4 drops of dilute hydrochloric acid (an amount sufficient to cause the disappearance of most of the yellow color), cool the solution by holding the test tube in ice water and add 3 or 4 drops of a solution of sodium nitrite (5 in 1,000). This results in the formation of a diazo compound having a greenish-yellow fluorescence (distinction from *neo-arsphenamine*, which forms a brown solution).

If a small portion of the solution containing the diazo compound be added drop by drop to an alcoholic solution of α-naphthylamine hydrochloride, a beautiful violet color will develop (Gaebel, 1911b).

With an alcoholic solution of β-naphthylamine hydrochloride, a light-brown color develops (distinction from *atoxyl*, which yields a red-colored solution, Wilcox and Webster, 1916).

If some of the diazotized solution be added to a freshly prepared solution of resorcinol (1 part in 20 parts of a 10 per cent sodium hydroxide solution), a deep red color will develop (Abelin, 1911).

The direct addition of Ehrlich and Pauly's (1904) diazo reagent to an aqueous solution of arsphenamine produces a brownish-red color.

[1] The phosphotungstic acid solution used in the above test was prepared according to the method of Folin and Denis (1912).

Tests for arsenic: A positive test for arsenic is obtained by applying the Reinsch test.

The Marsh test gives positive results if the arsphenamine is first decomposed by oxidation with nitric and sulphuric acids and the resulting solution reduced by the addition of potassium metabisulphite (Wilcox and Webster, 1916).

Under the foregoing conditions, the Gutzeit's test also gives positive results.

The biological test with *Penicillium brevicaule*, carried out according to the method of Abel and Buttenberg, gives the characteristic garlic odor (Gaebel, 1911b).

Tests for impurities: An aqueous solution of arsphenamine yields no precipitate with hydrogen sulphide, even after the addition of hydrochloric acid and warming (absence of *inorganic arsenic compounds*).

If 4 cubic centimeters of sodium acetate test solution are added to 5 cubic centimeters of an aqueous solution of arsphenamine (1 in 10), the mixture heated for a few minutes and the precipitate removed by filtration, the filtrate should not yield a precipitate within 12 hours on being made alkaline with 3 cubic centimeters of ammonia water and the addition of magnesia mixture (absence of *inorganic arsenic compounds*, Moeller and Thoms, 1914).

If about 0.1 gram of arsphenamine be placed in a test tube, a small quantity of zinc dust and some dilute hydrochloric acid added,[1] and the mouth of the tube covered with a piece of filter paper moistened with a 5 per cent solution of cadmium chloride, the paper should not be stained yellow within a few minutes (absence of *sulphur compounds*).[2]

Dissolve exactly 1.0 gram of arsphenamine in 10 cubic centimeters of methyl alcohol contained in a 100 cubic centimeter volumetric flask. Dilute the solution with 75 cubic centimeters of distilled water, add 1.5 grams of precipitated calcium carbonate, and shake to precipitate the salvarsan base. Dilute with distilled water to exactly 100 cubic centimeters and filter. To exactly 50 cubic centimeters of the filtrate add 75 cubic centimeters of water, 5 cubic centimeters of N/1 hydrochloric acid volumetric solution, and titrate with N/20 iodine volumetric solution. The amount of iodine volumetric solution consumed, expressed in cubic centimeters, represents the percentage of *amino-oxy-phenyl-arsenoxide* present in the material. The

[1] A drop of platinic chloride test solution may be added to start the reaction.

[2] Arsinsulphide and Arsinsesquisulphide have been suggested as possible impurities in arsphenamine (Schamberg, Kolmer, and Raizies, 1917).

Most of the commercial samples of arsphenamine examined in this laboratory gave a positive test for sulphur by the method described above.

amount of the oxide present in good products varies from 0.5 to 0.8 per cent [1] (Ehrlich and Bertheim, 1912).

Neo-Arsphenamine—Physical Properties.

Appearance: Neo-arsphenamine is an orange yellow, microcrystalline powder which changes rapidly in the air, becoming dark brown in color.

Odor: The pure preparation is odorless.[2]

Taste: It has a taste somewhat resembling that of garlic.[3]

Solubility: Neo-arsphenamine is readily soluble in water or glycerin, but only slightly soluble in methyl alcohol, ethyl alcohol, acetone, and ether.

The aqueous solution, when freshly prepared, is yellow in color and reacts neutral toward litmus. The solution rapidly becomes brown on exposure to the air.

Neo-Arsphenamine—Chemical Properties.

Behavior toward acids: Dilute as well as concentrated mineral acids yield precipitates with an aqueous solution of neo-arsphenamine. Precipitation does not occur immediately, but is first noticeable after several minutes (distinction from *arsphenamine*, which is not precipitated by dilute mineral acids or concentrated phosphoric acid, but yields a precipitate immediately with concentrated hydrochloric, sulphuric, and nitric acids).

The addition of acetic acid (36 per cent) to an aqueous solution of neo-arsphenamine yields a yellow colored precipitate when the liquid is heated (distinction from *arsphenamine*, which is not precipitated).

Behavior toward alkalies: The addition of sodium hydroxide test solution to an aqueous solution of neo-arsphenamine produces no noticeable effect (distinction from *arsphenamine*, a solution of which yields a precipitate).

Solutions of barium and calcium hydroxides yield turbid solutions or faint precipitates.

Solutions of the alkali carbonates do not produce precipitates (distinction from *arsphenamine*).

Behavior toward oxidizing agents: Similar to the reactions with *arsphenamine*.

Behavior toward general alkaloidal reagents: Similar to the reactions with *arsphenamine*, except that the precipitate with picric acid test solution develops slowly and is relatively small in amount.

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[1] The amount of oxide found in the commercial samples examined in this laboratory varied from 0.5 to 2.8 per cent.

[2] Commercial samples sometimes have an odor of garlic, due apparently to slight decomposition.

[3] Commercial samples frequently have a saline taste, probably due to the presence of sodium chloride which is said to be used as a diluent for products high in arsenic content.

Mayer's reagent does not yield a precipitate until the solution has been made acid with dilute hydrochloric acid (distinction from a solution of *arsphenamine*, which yields a precipitate on the direct addition of the reagent).

Behavior toward other reagents: The behavior of an aqueous solution of neo-arsphenamine toward a freshly prepared solution of ferric chloride and potassium ferricyanide, silver nitrate test, and Nessler's reagent is similar to that described under *arsphenamine*.

Millon's reagent yields a copious brown-colored precipitate.

If 5 cubic centimeters of dilute hydrochloric acid be added to 10 cubic centimeters of an aqueous solution of neo-arsphenamine (1 in 100) and the mixture heated, the irritating odor of sulphur dioxide will be developed (New and Nonofficial Remedies, 1917).

If about 0.1 gram of neo-arsphenamine be placed in a test tube, a small quantity of zinc dust and some dilute hydrochloric acid added and the mouth of the tube covered with a piece of filter paper moistened with a 5 per cent solution of cadmium chloride, the paper will be stained yellow within a few minutes (distinction from *arsphenamine*).

If 5 cubic centimeters of an aqueous solution of neo-arsphenamine be boiled with 1 cubic centimeter of dilute hydrochloric acid, a violet color will develop on the addition of a few drops of Schiff's reagent [1] (distinction from *arsphenamine*, Denigès and Labat, 1913).

The diazotized solution [2] of neo-arsphenamine gives color reactions with α-naphthylamine hydrochloride and resorcinol similar to those described under *arsphenamine*. With β-naphthylamine hydrochloride, a brownish-red color develops.

Tests for arsenic: The reactions are similar to those noted under *arsphenamine*.

Tests for impurities: An aqueous solution of neo-arsphenamine [3] yields no precipitate on passing in hydrogen sulphide gas (absence of *inorganic arsenic compounds*).

If 5 cubic centimeters of acetic acid (36 per cent) be added to 5 cubic centimeters of an aqueous solution of neo-arsphenamine, the mixture heated a few minutes and the precipitate removed by filtration, the filtrate should not yield a precipitate within 12 hours on the addition of an excess of ammonia water and some magnesia mixture (absence of *inorganic arsenic compounds*).

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[1] By boiling with hydrochloric acid, the methylene group of the neo-arsphenamine is detached and oxidized to formic aldehyde.

[2] In diazotizing the solution, add the sodium nitrite solution first, then the hydrochloric acid in order to avoid precipitation.

[3] Hydrochloric acid should not be added, as acids produce a precipitate.

The methods for the quantitative determination of arsenic in organic compounds, described in the literature, are both numerous and varied in their manner of execution. Most of them, however, are more or less complicated and are, therefore, not suitable for use in routine work where the number of samples of material to be analyzed is large. They involve, for example, such processes as fusion (methods of La Coste and Michaelis, 1880; of Pringsheim, 1904; of Little, Cahen, and Morgan, 1909; and of St. Warunis, 1912); or distillation (methods of Schneider and Fyfe, 1906; of Jannasch and Seidel, 1910; and of Bohrisch and Kürschner, 1911); and the subsequent estimation of the arsenic by gravimetric or volumetric methods.

Among the simpler and more practical procedures, which have received special mention in connection with the estimation of the arsenic in arsphenamine or neo-arsphenamine, are the methods of Gaebel (1911c) and Denigès and Labat (1911), in which an aqueous solution of the material is titrated directly with iodine or potassium permanganate volumetric solution. In this class are, likewise, the methods of Norton and Koch (1905), Lehmann (1912), and Ewins (1916). In these methods the arsenic is, first, either oxidized or reduced by digesting the material with suitable reagents and then estimated by titration in one of the usual ways.

For the purpose of determining which one of these simpler methods is the most accurate, and can be depended upon to give the best results in the hands of different operators, a few preliminary analyses were carried out. The results obtained indicated that the methods of Gaebel, Ewins, and Lehmann offered the greatest possibilities for fulfilling these conditions.[1] A large number of samples of both arsphenamine and neo-arsphenamine were, therefore, subjected to analysis by these methods. For comparison, a number of gravimetric determinations were also made. Detailed descriptions of these methods, together with the data obtained in the analyses, follow:

Gaebel's titration method: Weigh out accurately about 0.2 gram of arsphenamine and dissolve it in 100 cubic centimeters of distilled water contained in an Erlenmeyer flask. Add 1 cubic centimeter of starch test solution and titrate with N/20 iodine volumetric solution to a permanent blue color.[2] One cubic centimeter of N/20 iodine volumetric solution is equivalent to 0.001875 gram of arsenic.

[1] The method of Denigès and Labat was eliminated from the field of possibilities, as the end point obtained in the titration is too indefinite to yield accurate results in the hands of different analysts.

The Ewins method was given preference over that of Norton and Koch, as it is essentially an improved modification of the latter.

[2] As the greenish-yellow color of the arsphenamine solution becomes less and less pronounced and finally vanishes on the addition of iodine solution, the titration may also be carried out without the use of an indicator.

Ewins's method: Weigh out accurately 0.1 to 0.2 gram of the substance and transfer it to a long-necked Kjeldahl flask of 300 cubic centimeters capacity. Add 10 grams of potassium sulphate and 0.2 to 0.3 gram of starch (after a little experience the amount can be sufficiently accurately estimated and need not be weighed). Wash in any solid adhering to the neck of the flask with a little water. Cautiously add 20 cubic centimeters of concentrated sulphuric acid and heat the mixture on wire gauze over a Bunsen flame. As soon as the contents of the flask begin to froth, lower the flame somewhat until the frothing diminishes, which generally takes place within 10 to 15 minutes from the commencement of heating. Again turn on the flame and continue heating until the liquid becomes colorless or of a very pale yellow tint. Shake the flask once or twice during digestion, in order to wash down any material adhering to the walls. The time required for the complete oxidation of the material is usually about 4 hours.

After the liquid has cooled, transfer it quantitatively to an Erlenmeyer flask of 350 cubic centimeters capacity and make it just distinctly alkaline by the addition of sodium hydroxide solution (10 to 12N). A small piece of litmus paper added to the contents of the flask serves as the most convenient indicator. Cool the flask and its contents to about 30° to 40° C. and add concentrated sulphuric acid, drop by drop, until the solution is again distinctly acid (care should be taken that no drops of sodium hydroxide solution remain on the inside of the neck of the flask, which should be well washed down with water, or the flask may be stoppered and shaken). Now add from a burette a saturated solution of sodium hydrogen carbonate, until the solution becomes distinctly alkaline and an excess of 5 to 10 cubic centimeters of the reagent is present.

To this solution, add 2 cubic centimeters of a 1 per cent solution of starch, and titrate the arsenious acid present with N/20 iodine volumetric solution. Toward the end of the reaction, the solution usually develops a reddish-violet tint, which fades on standing. The end-point, however, is reached when the solution acquires the characteristic deep blue color given by free iodine in the presence of starch. From the amount of iodine consumed, the percentage of arsenic present is easily calculated. One cubic centimeter of N/20 iodine volumetric solution is equivalent to 0.001875 gram of arsenic.

Gravimetric method: Weigh out accurately about 0.2 gram of the product and transfer it to a Kjeldahl flask of 300 cubic centimeters capacity. Add 1.5 grams of a mixture of equal parts of sodium nitrate and potassium nitrate, 200 cubic centimeters of distilled water and 5 cubic centimeters of concentrated sulphuric acid. Heat the mixture slowly under a hood to allow the escape of the nitric acid fumes. Add a small quantity of concentrated or fuming nitric

acid from time to time, until oxidation is completed, which is generally indicated by the disappearance of the yellow color.[1] Continue the digestion until the volume of the liquid has been reduced to about 15 cubic centimeters,[2] cool, add 100 cubic centimeters of distilled water and again concentrate to about 15 cubic centimeters, in order to remove the last trace of nitric acid. If the product has been completely oxidized and all traces of nitric acid have been removed, the liquid will be water clear at this point. After cooling, cautiously neutralize the liquid with strong ammonia water and transfer it to a 300 cubic centimeter beaker, using a small quantity of distilled water for rinsing the flask.

To the solution, which will now contain all of the arsenic in the form of arsenate, add 10 to 20 cubic centimeters of 2N ammonium chloride solution for every 50 cubic centimeters of the liquid, then 20 cubic centimeters of magnesia mixture, drop by drop, with constant stirring. Finally add an amount of strong ammonia water, equal to one-third the volume of the liquid, and 2 cubic centimeters of alcohol. After allowing the mixture to stand for 12 hours, collect the precipitate, with the aid of a suction pump, in a Gooch crucible, which has been prepared as follows:

Cover the bottom of the crucible with a thin layer of asbestos, which has previously been washed with ammonia water (2.5 per cent), and dry in an oven at 110° C. Remove the crucible from the oven and place it in a larger porcelain crucible, fitted with an asbestos ring so that the sides and bottom of the two will not touch, put on the cover and heat slowly over an open flame until there is a light red glow on the outer crucible (Treadwell-Hall, 1905). Remove the Gooch crucible, cool in a desiccator and weigh.

After the precipitate has been collected, dry the crucible as described above, but add a crystal of ammonium nitrate before heating over the open flame. Finally cool the crucible and weigh. The weight of the precipitate multiplied by 0.48275 represents the amount of arsenic present in the sample taken for analysis.

Lehmann's method: Weigh out accurately about 0.2 gram of the substance and transfer to a 200 cubic centimeter Erlenmeyer flask.[3] Add 1 gram of finely powdered potassium permanganate and 5 cubic centimeters of dilute sulphuric acid and allow the mixture to stand for about 10 minutes. Rotate the flask frequently during this time to insure the complete mixing of the materials. Now add 10 cubic centimeters of concentrated sulphuric acid, in portions of about 2 cubic centimeters, rotating the flask after each addition.

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[1] Sometimes the liquid may still have a pale yellow tint.

[2] Concentration should be effected in such a manner that the formation of sulphuric acid fumes in large quantities will be avoided.

[3] An Erlenmeyer flask, fitted with a glass stopper, is most suitable for this purpose.

When the reaction has ceased, add a quantity (about 5 to 7 cubic centimeters) of hydrogen dioxide solution sufficient to dissolve all of the brown precipitate. Toward the end, the hydrogen dioxide solution should be added, drop by drop, to avoid any great excess. Dilute the liquid with 25 cubic centimeters of distilled water and boil over wire gauze for about 10 minutes, or until the excess of hydrogen dioxide has been completely removed.[1]

After dilution with 50 cubic centimeters more of distilled water, cool the solution and add 2.5 grams of potassium iodide. Stopper the flask tightly and allow it to stand in a cool place for 1 hour. Finally titrate the liberated iodine with N/10 sodium thiosulphate volumetric solution without the use of starch test solution as an indicator.[2] One cubic centimeter of N/10 sodium thiosulphate solution is equivalent to 0.003748 gram of arsenic.

TABLE 1.—*Arsenic content of commercial samples of arsphenamine.*

Manufacturer.	Name of product.	Lot number.	Per cent of arsenic.			
			Direct titration with N/20 iodine V. S.	Ewins's method.	Gravimetric method.	Lehmann's method.
Dermatological Research Laboratories, Philadelphia, Pa.	Arsenobenzol	630		30.06		
Do	do	652		29.61		
Do	do	721		29.11		
Do	do	740	29.92	30.33	31.58	31.32
Do	do	750	29.24		31.16	31.34
Do	do	755	29.34	29.26	31.13	30.94
Do	do	757	29.43	29.90		
Do	do	767	29.53	29.20		
Do	do	788	29.38	29.27		
Do	do	791	29.19	29.26		
Do	do	799	29.29	29.69	31.52	31.40
Do	do	809	29.95	29.59	30.87	30.46
Do	do	826		29.20		
Do	do	841	29.28	29.19	31.54	31.38
Do	do	845	29.07	29.30		
Do	do	862	29.52	29.91		
Do	do	873	29.53	29.71	31.38	31.22
Do	do	875		29.74		
Do	do	886	29.53	30.22	31.46	31.18
Do	do	890	29.23		31.35	31.22
Do	do	900	29.42	29.70	31.07	30.94
Do	do	914		28.71		
Do	do	928	29.56	30.06	31.17	31.03
Do	do	952	29.62	30.33	31.07	31.03
Do	do	954		31.24		
Do	do	966		29.45		
Do	do	973		30.51		
Do	do	980				30.46 30.52
Do	do	1008				30.56 30.63
Do	do	1013				30.44 30.72
Do	do	1017				31.16 31.00

[1] Experience has shown that it is practically impossible to remove all of the hydrogen dioxide by boiling, unless the solution be evaporated to a very small volume, when it is very liable to become colored brown, due to the further action of the hot concentrated acid. In the analyses made by the authors the last trace of hydrogen dioxide was removed by the addition of a drop or two of permanganate solution (1 per cent) and the resulting pink color removed by the addition of oxalic acid solution in very slight excess.

[2] A blank test should be carried out under exactly the same conditions and the proper corrections made. The blank tests usually consume from 0.1 to 0.3 cubic centimeter of the iodine solution.

TABLE 1.—*Arsenic content of commercial samples of arsphenamine*—Continued.

Manufacturer.	Name of product.	Lot number.	Per cent of arsenic.			
			Direct titration with N/20 iodine V. S.	Ewins's method.	Gravimetric method.	Lehmann's method.
Dermatological Research Laboratories, Philadelphia, Pa.	Arsenobenzol	1020				31.27 31.08
Do	do	1048				30.38 30.40
Do	do	1062				30.41 30.61
Do	do	1072				30.15 30.26
Do	do	1077				30.53
Do	do	1095				30.57
Do	do	1105				30.63
Do	do	1125				30.49
Do	do	1135				30.82 30.73
Do	do	1142				30.53
Farbwerke-Hoechst Co., at H. A. Metz Laboratories (Inc.), New York.	Salvarsan	BDB	29.29	31.10		
Do	do	BFB	30.69	31.30		
Do	do	BJB	29.02	31.38		
Do	do	BLB	29.40			
Do	do	BMB	29.88	29.98		
Do	do	BUB	29.34	30.88		
Do	do	BVB	29.60	31.44		
Do	do	BXB	29.43	30.35		
Do	do	DBB	28.87	29.69	31.16	31.22
Do	do	DFB	29.97	31.30	31.47	31.32
Do	do	DHB	30.05	30.76 31.22		
Do	do	DHB	30.24	30.76		
Do	do	DJB	29.60	31.05		
Do	do	DLB	30.63	31.95		
Do	do	DMB	29.07 29.62	30.72 29.57		31.50
Do	do	DUB	29.16	30.31		
Do	do	FBB	29.52	31.00 31.54	31.85	31.50
Do	do	HBB	30.74	31.64	31.65	31.28
Do	do	JBB		30.43		
Do	do	LBB			31.24	31.20
Do	do	MBB				32.24 32.24 32.06 32.24 32.06
Do	do	UBB				32.19 31.29
Do	do	XBB				31.27 30.92
Do	do	I75			31.15	30.85 30.63
Do	do	I76			31.15	30.72 31.52
Do	do	I77			31.80	31.58 31.58 31.64 31.58
Do	do	I78				30.82 30.82 30.91 30.94
Do	do	I79			31.56	31.36 31.58
Do	do	I81				32.15
Do	do	I82				31.97
Les Etablissements Poulenc Frères, Paris.	Arsenobenzol "Billon."	D632		29.93		30.74
The Diarsenol Co. (Ltd.), Toronto, Canada.	Diarsenol	B87520	28.89	29.92		
Do	do	B87521	29.05			30.18
Do	do	1255				30.73
Sankyo & Co., Tokyo	Arsaminol	68	29.86	31.26		31.94
Do	do	54	29.89	31.20		32.26
Arsemin Co., Tokyo	Neo Neo Arsemin (Salvarsan sod.)	DEIA		21.04		
Do	do	DEIS		20.73	20.47	20.50

TABLE 2.—*Arsenic content of commercial samples of neo-arsphenamine.*

Manufacturer.	Name of product.	Lot number.	Per cent of arsenic.		
			Ewins's method.	Gravimetric method.	Lehmann's method.
Farbwerke vorm. Meister Lucius & Bruning, Hoechst a. M.	Neosalvarsan	HV	18.38	19.82	20.12
Les Etablissements Poulenc Frères, Paris.	Novarsenobenzol "Billon"	B1539	17.80	20.34	19.93
Do	do	B2126	18.98		20.21
Do	do	B2137	18.06	19.96	19.74
Do	do	8750	18.19	20.35	19.93
Do	do	9651	18.24	20.05	20.12
Anglo-French Drug Co. (Ltd.), London.	Ampsalvs		18.28		19.81 19.65
Kokusan Seiyakusho, Tokyo	Neotanvarsan	19	18.26		
Do	do	20	18.15	18.27 18.34	18.40
Do	do	21	18.10	18.19	18.30
Banyu Co., Tokyo	Neoehramisol	CHA	18.82		[a] 17.93
Do	do	CHA	18.47		18.41
Sankyo & Co., Tokyo	Neoarsaminol	N139	16.56	16.96	17.04
Do	do	N153	16.81		16.70
Do	do	N183			17.21 17.44 17.27
Do	do	N185	16.80	16.96	16.89
Synthetic Drug Co., Toronto	Neodiarsenol	180			16.69
Do	do	181			15.50
Do	do	182			16.68
Do	do	183			17.55
Do	do	189		15.79 16.05	[b] 15.33
Do	do	262			16.35
Do	do	264			15.37 15.29
Do	do	267			15.46 15.30

[a] The tube had been opened for a considerable length of time previous to analysis and the product was oxidized to a considerable extent.
[b] The sample was not uniform.

A survey of the preceding tables shows that the results obtained by the Lehmann and the gravimetric methods are nearly identical, while those obtained by direct titration with iodine volumetric solution are relatively low in all cases. With the Ewins method, the results are occasionally of the same magnitude as those obtained by the gravimetric determination, but, as a rule, they are also relatively low.

With respect to the titration method, Gaebel (1911c) states that the reaction between arsphenamine and iodine is a reversible one, viz:

$$C_{12}H_{12}O_2N_2As_2.2HCl.2H_2O + 8I + 4H_2O \rightleftarrows 2C_6H_8O_4NAs.HCl + 8HI.$$

As a consequence a state of equilibrium is reached before all of the arsphenamine has been oxidized and the amount of iodine solution consumed is less than that required by theory. This investigator states further that the reagents (sodium bicarbonate, sodium acetate, borax, etc.) usually employed for overcoming this difficulty in iodometric titrations of arsenious compounds are of no value in this case, a condition which has also been observed by the authors. This method appears, therefore, to be of little value.

The low percentages obtained by the Ewins method are apparently the result of a loss of arsenic through volatilization. It was thought that this loss might be avoided by slowing the rate of digestion. A number of samples were, therefore, digested for some time in the cold and then slowly over a low flame. Samples from the same tubes were also digested rapidly in order to obtain data for comparison. The results obtained follow;

TABLE 3.—*Effect of rate of digestion on the results obtained by the Ewins method.*

Manufacturer.	Name of product.	Lot number.	Per cent of arsenic, Ewins's method.	
			Slow digestion.	Rapid digestion.
Dermatological Research Laboratories, Philadelphia	Arsenobenzol.	740	30.33	28.64
Do	do	750	.....	28.75
Do	do	799	29.69	28.60
Do	do	873	29.71	28.69
Do	do	886	30.22	28.52
Do	do	890	.....	28.65
Do	do	952	30.33	28.62

The above data indicate that the rate at which digestion is allowed to proceed is a factor which influences the final result to a very considerable extent. But they also show that the results are low even when digestion is carried out very slowly. It appears, therefore, that this method in its present form is objectionable. It is possible that greater accuracy might be attained by condensing the fumes which escape during digestion, reuniting the distillate with the contents of the Kjeldahl flask previous to neutralization, and finally titrating the mixture. Work along this line is, however, necessary before a positive statement can be made.

The method of Lehmann, with the slight modifications recommended in the footnotes, is accurate and reliable. It is simple, requires but small quantities of inexpensive reagents, and can be completed in about one and one-half hours. It, therefore, appears to be superior to any of the other methods mentioned for the routine analysis of these products.

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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.

EXTRA-CANTONMENT ZONES—CASES REPORTED WEEK ENDED JUNE 18.

CAMP BEAUREGARD ZONE, LA.

	Cases.
Gonorrhea:	
Alexandria	1
Malaria:	
Alexandria	5
Mumps:	
Alexandria	11
Pineville	1
Tuberculosis:	
Alexandria	2
Rural district	1
Typhoid fever:	
Pineville	1
Whooping cough:	
Alexandria	3

CAMP BOWIE ZONE, TEX.[1]

Fort Worth:	
Chicken pox	1
Erysipelas	1
Gonorrhea	17
Measles	3
Mumps	2
Smallpox	2
Syphilis	18
Typhoid fever	7
Whooping cough	5

CAMP DEVENS ZONE, MASS.

Measles:	
Ayer	1
Littleton	1
Whooping cough:	
Ayer	3

CAMP DODGE ZONE, IOWA.

Des Moines:	
Diphtheria	2
Gonorrhea	10
Measles	2
Scarlet fever	6
Smallpox	4
Syphilis	4

CAMP DODGE ZONE, IOWA—continued.

Grimes:	
Scarlet fever	2
Runnells:	
Diphtheria	1

CAMP DONIPHAN ZONE, OKLA.

Lawton:	
Gonorrhea	6
Mumps	1

CAMP EBERTS ZONE, ARK.

Chancroid:	
Allport	1
Diphtheria:	
Kerr, route 1	1
Dysentery:	
Cabot	1
Kerr, route 1	1
Erysipelas:	
England, route 1	1
Gonorrhea:	
Lonoke	3
England	2
Malaria:	
Lonoke	1
Lonoke, route 1	1
Lonoke, route 2	2
Lonoke, route 3	1
England	9
England, route 2	1
Cabot	1
Keo	2
Carlisle	7
Austin, route 1	3
Ward	4
Kerr, route 1	1
Measles:	
Lonoke, route 1	2
England	4
Keo	1
Mumps:	
Lonoke	1

[1] Report for week ended June 15, 1918.

CAMP EBERTS ZONE, ARK.—continued.

	Cases.
Pellagra:	
Lonoke, route 2	1
England	1
Septic sore throat:	
Ward	1
Smallpox:	
England	1
Kerr, route 1	1
Syphilis:	
England	1
Tuberculosis:	
Lonoke, route 1	1
Ward	1

CAMP FUNSTON ZONE, KANS.

Junction City:	
Mumps	1
Smallpox	1
Tuberculosis	1
Manhattan:	
Measles	1
Mumps	6
Whooping cough	1

CAMP GORDON ZONE, GA.[1]

Cerebrospinal meningitis:	
Atlanta	2
Gonorrhea:	
Atlanta	21
Malaria:	
Atlanta	3
Measles:	
Atlanta	15
Meningitis, tubercular:	
Atlanta	1
Mumps:	
Atlanta	29
Pellagra:	
Atlanta	1
Pneumonia:	
Atlanta	5
Scarlet fever:	
Atlanta	1
Decatur	1
Smallpox:	
Atlanta	3
College Park	1
Decatur	1
Fairburn	1
Orchard Knob	1
Syphilis:	
Atlanta	5
Tuberculosis:	
Atlanta	11
Typhoid fever:	
Atlanta	2
Whooping cough:	
Atlanta	4
Decatur	2

CAMP GREENE ZONE, N. C.

Charlotte Township:	
Gonorrhea	4
Measles	2

[1] Report for June 12 to 15, 1918.

CAMP GREENE ZONE, N. C.—continued.

	Cases.
Charlotte Township—Continued.	
Mumps	1
Scarlet fever	5
Syphilis	16
Typhoid fever	1
Whooping cough	15

GULFPORT HEALTH DISTRICT, MISS.

Gulfport health district:	
Cancer	1
Dysentery	1
Gonorrhea	1
Malaria	17
Measles	1
Mumps	7
Pellagra	5
Tuberculosis	1
Whooping cough	2

CAMP HANCOCK ZONE, GA.

Augusta:	
Chicken pox	3
German measles	1
Malaria	2
Measles	4
Typhoid fever	2
Whooping cough	4

CAMP JACKSON ZONE, S. C.[2]

Columbia:	
Mumps	9
Typhoid fever	6
Whooping cough	28

CAMP JOSEPH E. JOHNSTON ZONE, FLA.

Cerebrospinal meningitis:	
Jacksonville	1
Chancroid:	
Jacksonville	4
Chicken pox:	
Jacksonville	13
Dysentery:	
Fishers Corner	1
Grand Crossing	1
South Jacksonville	1
Gonorrhea:	
Jacksonville	57
Hookworm:	
Grand Crossing	3
Lackawanna	4
Panama	1
Malaria:	
Jacksonville	1
Measles:	
Jacksonville	2
Mumps:	
Jacksonville	2
Pellagra:	
Jacksonville	2
Syphilis:	
Jacksonville	41
Trachoma:	
Jacksonville	1
Tuberculosis:	
Jacksonville	5

[2] Report for week ended June 15, 1918.

CAMP JOSEPH E. JOHNSTON ZONE, FLA.—contd.

	Cases.
Typhoid fever:	
Jacksonville	3
Ortega	1
Riverview	1
Whooping cough:	
Jacksonville	20
St. John Park	1

FORT LEAVENWORTH ZONE, KANS.

Leavenworth:	
Diphtheria	3
Gonorrhea	5
Pneumonia, lobar	1
Scarlet fever	2
Smallpox	2
Tuberculosis	2
Leavenworth County:	
Diphtheria	2

CAMP LEE ZONE, VA.

Chancroid:	
Petersburg	2
German measles:	
Petersburg	1
Gonorrhea:	
Petersburg	3
Hopewell	3
Mumps:	
Hopewell	1
Prince George County	3
Syphilis:	
Petersburg	1
Typhoid fever:	
Hopewell	1
Whooping cough:	
Hopewell	1

CAMP LOGAN ZONE, TEX.

Cerebrospinal meningitis:	
Houston	1
Chancroid:	
Houston	1
Goose Creek	1
Diphtheria:	
Houston	2
Gonorrhea:	
Houston	15
Park Place	1
Syphilis:	
Houston	14
Goose Creek	1
Magnolia Park	1
Tuberculosis:	
Houston	5
Typhoid fever:	
Houston	2

CAMP M'ARTHUR ZONE, TEX.

Waco:	
Mumps	1
Poliomyelitis	3
Tuberculosis	3
Typhoid fever	5
Whooping cough	4

CAMP M'CLELLAN ZONE, ALA.

Malaria:	
Anniston	2
Measles:	
Anniston	1

CAMP M'CLELLAN ZONE, ALA.—continued.

	Cases
Pellagra:	
Anniston	1
Tuberculosis:	
Anniston	2
Blue Mountain	1
Typhoid fever:	
Anniston	1
Blue Mountain	1
Precinct 23	1
Whooping cough:	
Anniston	1

NORFOLK COUNTY NAVAL DISTRICT, VA.

Measles:	
Portsmouth	1
Ocean View	1
Norfolk	1
Mumps:	
Expo	1
Norfolk County	2
Portsmouth	1
Brighton	1
Scarlet fever:	
Norfolk	2
Portsmouth	2
Typhoid fever:	
Portsmouth	2
Pleasant Grove District	1
Ocean View	1
Whooping cough:	
Portsmouth	4
Ocean View	2
Norfolk	1

FORT OGLETHORPE ZONE, GA.

Cerebrospinal meningitis:	
Chattanooga	1
Dysentery:	
Rossville	1
Gonorrhea:	
Chattanooga	11
St. Elmo	1
Whiteside	1
Scarlet fever:	
Chattanooga	2
Syphilis:	
Chattanooga	11
Whooping cough:	
Chattanooga	17

CAMP PIKE ZONE, ARK.

Keo:	
Malaria	4
Little Rock:	
Dysentery	3
Gonorrhea	11
Malaria	8
Measles	2
Mumps	7
Pellagra	1
Pneumonia	1
Poliomyelitis	1
Syphilis	3
Tuberculosis	2
Typhoid fever	2
Whooping cough	1
North Little Rock:	
Gonorrhea	1
Malaria	4
Typhoid fever	2
Whooping cough	6

CAMP PIKE ZONE, ARK.—continued.

	Cases.
Scotts:	
Malaria	3
Mumps	1

CAMP SEVIER ZONE, S. C.

Dysentery:	
Bates Township	1
Malaria:	
Bates Township	2
Mumps:	
Chick Springs Township	3
Smallpox:	
Greenville Township	1
Tuberculosis:	
Toris Mountain Township	2
Bates Township	1
Typhoid fever:	
Bates Township	2
Greenville Township	1
Whooping cough:	
Butler Township	1

CAMP SHELBY ZONE, MISS.

Hattiesburg:	
Chicken pox	1
Dysentery, amebic	1
Hookworm	2
Malaria	14
Pellagra	1
Tuberculosis	1
Typhoid fever	4
Whooping cough	4
McHenry:	
Typhoid fever	1
Sumrall:	
Typhoid fever	1

CAMP SHERIDAN ZONE, ALA.

Montgomery:	
Gonorrhea	6
Mumps	1
Syphilis	2
Tuberculosis, pulmonary	2
Typhoid fever	4
Montgomery County:	
Mumps	1
Typhoid fever	4
Whooping cough	3
United States Government Clinic:	
Chancroid	7
Gonorrhea	28
Syphilis	6

CAMP SHERMAN ZONE, OHIO.

Diphtheria:	
Chillicothe	2
Hallsville	1
Gonorrhea:	
Chillicothe	5
Measles:	
Chillicothe	2
Scioto Township	1
Scarlet fever:	
Chillicothe	2
Tuberculosis, pulmonary:	
Chillicothe	1

CAMP ZACHARY TAYLOR ZONE, KY.

Jefferson County:	
Diphtheria	5
Tuberculosis, pulmonary	2
Typhoid fever	1
Louisville:	
Chicken pox	3
Diphtheria	2
Malaria	1
Measles	5
Mumps	1
Trachoma	1
Tuberculosis, pulmonary	19
Typhoid fever	2
Whooping cough	7
New Albany, Ind.:	
Smallpox	2
United States Government clinic:	
Chancroid	2
Gonorrhea	38
Syphilis	46

TIDEWATER HEALTH DISTRICT, VA.

Hampton:	
Typhoid fever	1
Newport News:	
Cerebrospinal meningitis	1
Chancroid	6
Gonorrhea	22
Measles	1
Mumps	3
Scarlatina	1
Syphilis	9
Tuberculosis	1
Typhoid fever	2
Whooping cough	1
Phoebus:	
Tuberculosis	1
Whooping cough	7

CAMP TRAVIS ZONE, TEX.

San Antonio:	
Chancroid	4
Diphtheria	1
Gonorrhea	30
Mumps	1
Syphilis	9
Tuberculosis	3
Typhoid fever	21

CAMP WADSWORTH ZONE, S. C.

Gonorrhea:	
Spartanburg	22
Measles:	
Spartanburg	1
Duncan	2
Mumps:	
Spartanburg	8
Whitney	12
Syphilis:	
Spartanburg	6
Typhoid fever:	
Glendale	1
Duncan	1
Roebuck	2
Whooping cough:	
White Stone	7

CAMP WHEELER ZONE, GA.[1]

Macon:	
Pneumonia	1
Typhoid fever	2

[1] Report for week ended June 15, 1918.

DISEASE CONDITIONS AMONG TROOPS IN THE UNITED STATES.

The following data are taken from telegraphic reports received in the office of the Surgeon General, United States Army, for the week ended June 7, 1918:

Annual admission rate per 1,000 (disease only):
- All troops 1,056.1
- Divisional camps 1,135.3
- Cantonments 975.6
- Departmental and other troops 1,101.1

Noneffective rate per 1,000 on day of report:
- All troops 37.8
- Divisional camps 36.8

Noneffective rate per 1,000 on day of report—Continued.
- Cantonments 42.2
- Departmental and other troops 33.6

Annual death rate per 1,000 (disease only):
- All troops 3.16
- Divisional camps 3.2
- Cantonments 3.6
- Departmental and other troops 2.58

New cases of special diseases reported during the week ended June 7, 1918.

Camp.	Pneumonia.	Dysentery.	Malaria.	Venereal.		Measles.	Meningitis.	Scarlet fever.	Deaths.	Annual admission rate per 1,000 (disease only).	Noneffective per 1,000 on day of report.
				Total.	New infections.						
Beauregard	4	5	22	129	4	2	2	.....	2	927.3	47.0
Bowie	4	.....	2	52	51	2	.....	.....	1	764.1	25.3
Cody	11	.....	.....	3	3	.....	.....	1	3	967.8	24.5
Doniphan	.....	.....	.....	15	.....	3	.....	1	2	1,579.5	44.0
Fremont	8	.....	2	14	7	6	.....	1	4	1,016.9	38.6
Hancock	.....	.....	.....	74	.....	1	.....	.....	.....	985.8	43.5
Kearny	4	.....	1	4	.....	4	1	1	3	370.7	20.0
Logan	2	.....	.....	44	.....	.....	.....	.....	2	3,198.0	15.0
MacArthur	.....	.....	.....	.....	.....	3	.....	.....	.....	1,032.0	37.2
McClellan	2	.....	4	26	10	3	.....	.....	.....	582.2	25.0
Sevier	10	.....	7	269	4	7	.....	.....	.....	1,346.3	46.5
Shelby	.....	.....	8	15	3	2	.....	1	.....	1,007.3	39.2
Sheridan	.....	.....	1	35	.....	6	.....	.....	.....	613.6	35.0
Wadsworth	2	.....	1	94	.....	18	.....	.....	3	1,257.0	29.9
Wheeler	4	.....	.....	25	5	.....	.....	.....	6	2,846.2	50.9
Custer	4	.....	1	68	9	11	.....	.....	2	509.3	20.5
Devens	16	.....	1	32	7	10	3	.....	6	682.2	36.4
Dix	3	1	1	170	2	8	1	6	2	871.3	34.3
Dodge	4	.....	2	99	.....	14	.....	2	3	1,239.9	59.1
Funston	3	.....	.....	50	4	6	2	.....	2	787.1	55.4
Gordon	14	.....	2	149	5	34	2	.....	7	1,591.5	87.6
Grant	1	.....	.....	34	.....	3	2	.....	2	373.9	17.0
Jackson	9	.....	1	114	.....	58	.....	.....	1	1,412.7	57.7
J. E. Johnston	2	.....	.....	74	64	6	.....	2	.....	1,198.9	41.6
Lee	9	.....	5	272	.....	.....	6	.....	4	626.6	57.5
Lewis	4	.....	3	235	3	3	3	9	5	1,007.9	33.1
Meade	3	.....	.....	18	4	2	1	.....	1	559.7	29.4
Pike	14	4	15	72	12	44	2	.....	5	1,684.2	60.7
Sherman	2	.....	1	74	.....	4	.....	1	.....	1,334.8	88.5
Taylor	7	.....	.....	102	.....	16	.....	.....	.....	1,017.4	42.9
Travis	1	.....	6	69	6	26	1	1	*2	1,366.1	39.3
Upton	8	.....	1	283	34	.....	1	1	5	740.7	27.2
Northeastern Department	2	.....	.....	27	14	3	.....	.....	1	735.5	28.5
Eastern Department	11	.....	4	148	46	8	1	1	3	900.5	23.3
Southeastern Department	.....	.....	3	236	18	5	.....	.....	2	1,614.0	43.3
Central Department	2	.....	.....	78	37	5	.....	2	1	1,591.5	42.2
Southern Department	8	2	1	337	90	13	.....	9	6	1,172.5	34.4
Western Department	5	.....	.....	69	28	15	.....	6	2	915.9	23.0
Aviation, S. C	16	7	4	205	.....	14	.....	3	14	1,055.7	30.8
Alcatraz, Disciplinary Barracks	.....	.....	.....	.....	.....	.....	.....	.....	.....	800.0	12.3
Columbus Barracks	.....	.....	.....	22	1	.....	.....	.....	1	570.0	18.7
Edgewood Arsenal	.....	.....	.....	1	1	.....	.....	.....	1	779.0	20.0
Hoboken	5	.....	7	225	19	37	4	.....	3	802.9	29.5
Jefferson Barracks	3	.....	.....	177	2	4	.....	3	1	1,598.6	77.5
Leavenworth, Disciplinary Barracks	.....	.....	.....	6	.....	1	.....	.....	.....	895.4	38.3
Logan, Fort	.....	.....	.....	10	.....	.....	.....	1	2	1,691.5	50.3
McDowell, Fort	2	1	.....	45	.....	5	.....	1	.....	3,824.5	101.0
Newport News	10	.....	4	328	12	11	2	1	3	1,462.4	61.6
Slocum, Fort	2	.....	.....	160	2	.....	.....	.....	1	2,058.7	47.0
Springfield Armory	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Thomas, Fort	1	.....	1	17	.....	4	.....	.....	.....	985.0	29.0
Watervleit	.....	.....	.....	.....	.....	.....	.....	.....	.....	600.0	25.9
West Point	.....	.....	.....	1	.....	.....	.....	.....	.....	785.4	13.8
Total	222	20	111	4,806	507	425	34	54	114	1,056.1	37.8

Annual rate per 1,000 for special diseases.

Diseases.	All troops in United States.[1]	Departmental and other troops.[1]	Divisional camps.[1]	Cantonments.[1]	Expeditionary forces.[2]
Pneumonia	8.07	6.7	8.5	9.1	15.0
Dysentery	.7	1.0	.8	.5	.43
Malaria	4.0	2.38	8.0	3.4	.95
Venereal	174.9	208.0	133.4	167.5	38.3
Typhoid	.14	.....	.3	.17	.08
Measles	15.46	12.2	9.5	21.4	8.6
Meningitis	1.23	.69	.5	2.1	2.5
Scarlet fever	1.96	2.68	.8	1.9	7.2

[1] Week ended June 7, 1918. [2] Week ended May 30, 1918.

CURRENT STATE SUMMARIES.

California.

From the State Board of Health of California, by telegraph, for week ended June 15, 1918:

All communicable diseases less prevalent in State. Smallpox: 17 cases, of which 10 were in the San Joaquin Valley, 4 in Riverside. Typhoid fever considerably reduced, but 10 cases having been reported during week. Measles more prevalent in Los Angeles than in other parts of State. Scarlet fever and mumps more prevalent in the San Francisco Bay region than in other parts of State.

Reported by mail for preceding week (ended June 8):

Cerebrospinal meningitis	3	Measles	390
Chicken pox	108	Mumps	119
Diphtheria	63	Pneumonia	57
Dysentery	2	Poliomyelitis	1
Erysipelas	11	Scarlet fever	60
German measles	79	Smallpox	20
Gonococcus infection	118	Syphilis	51
Hookworm	1	Tuberculosis	160
Leprosy	2	Typhoid fever	26
Malaria	16	Whooping cough	117

Connecticut.

From Collaborating Epidemiologist Black, by telegraph, for week ended June 15, 1918:

Cerebrospinal meningitis: Watertown 1, New Haven 1, New Britain 1. Smallpox: New London 5, East Lyme 1.

Illinois.

From Collaborating Epidemiologist Drake, by telegraph, for week ended June 15, 1918:

Diphtheria: One hundred, of which in Chicago 74. Scarlet fever: Thirty-seven, of which in Chicago 29. Smallpox: Thirty-four, of which in Lawrenceville 3, Eldorado 4, Quincy 3. Meningitis: Chicago 7. Poliomyelitis: Chicago 1.

Indiana.

From the State Board of Health of Indiana, by telegraph, for week ended June 15, 1918:

Measles: Epidemic Flatrock. Smallpox: Epidemic Starke County. Infantile paralysis: One death Evansville. Meningitis: Two cases Spencer Township (Harrison County).

Louisiana.

From Collaborating Epidemiologist Dowling, by telegraph, for week ended June 15, 1918:

Meningitis 2, typhoid 79, smallpox 13, diphtheria 102, malaria 87.

Masssachusetts.

From Collaborating Epidemiologist Hitchcock, by telegraph, for week ended June 15, 1918:

Unusual prevalence. Measles: Manchester 30, Peabody 22, Lawrence 94, Waltham 35, Fitchburg 38.

Minnesota.

From Collaborating Epidemiologist Bracken, by telegraph, for week ended June 15, 1918:

Smallpox, new foci: Carver County, San Francisco Township; Faribault County, Delavan; Renville County, Norfolk Township; Roseau County, Barnett Township; Watonwan County, Antrin Township; each one case. Cass County, Sylvan Township, 2 cases.

Nebraska.

From the State Board of Health of Nebraska, by telegraph, for week ended June 15, 1918:

Smallpox: Gary, Lakeside, Antioch, Scotts Bluff, Giltner. Scarlet fever: Culbertson. Measles: Belgrade.

Vermont.

From Collaborating Epidemiologist Dalton, by telegraph, for week ended June 15, 1918:

Smallpox: Rutland 1. No other outbreak or unusual prevalence.

Virginia.

From the State Board of Health of Virginia, by telegraph, for week ended June 15, 1918:

. Five cases smallpox Essex County, 3 Louisa, 1 Nelson, 1 Bedford, 1 Mecklenburg. One case poliomyelitis Campbell County, 2 Prince William. One case cerebrospinal meningitis Newport News.

Washington.

From Collaborating Epidemiologist Tuttle, by telegraph, for week ended June 15, 1918:

Scarlet fever: Seattle 26, Tacoma 34. One suspected cerebrospinal meningitis, Tacoma. No unusual outbreaks.

CEREBROSPINAL MENINGITIS.

State Reports for May, 1918.

Place.	New cases reported.
District of Columbia	16
Maryland:	
Baltimore	19
Allegany County	4
Cumberland	1
Baltimore County—	
Canton	1
Fort Howard	1
Harford County—	
Whiteford	1
Total	27
Massachusetts:	
Berkshire County—	
Pittsfield	1
Bristol County—	
Fall River	3
New Bedford	1
Taunton	1
Essex County—	
Lynn	1
Newburyport	1
Massachusetts—Continued.	
Hampden County—	
West Springfield (town)	1
Middlesex County	2
Cambridge	2
Lowell	2
Newton	1
Somerville	1
Watertown (town)	1
Norfolk County—	
Braintree (town)	1
Quincy	1
Suffolk County—	
Boston	8
Revere	1
Worcester County—	
Blackstone (town)	1
Fitchburg	2
Northbridge (town)	1
Worcester	3
Total	36

City Reports for Week Ended June 1, 1918.

Place.	Cases.	Deaths.
Aberdeen, S. Dak		1
Abilene, Tex	1	
Baltimore, Md	4	2
Bayonne, N. J	1	
Birmingham, Ala	1	1
Boston, Mass	2	1
Bridgeport, Conn	1	
Chicago, Ill	3	4
Cincinnati, Ohio		1
Cleveland, Ohio	1	1
Detroit, Mich		1
Evansville, Ind	1	
Everett, Wash		1
Flint, Mich		1
Galesburg, Ill		1
Independence, Kans	2	2
Indianapolis, Ind	1	2
Iola, Kans	1	
Kansas City, Mo		1
Louisville, Ky		1
Milwaukee, Wis	2	3
Missoula, Mont		1
Nashville, Tenn		1
Newark, N. J		3
New Orleans, La	2	1
New York, N. Y	18	7
Petersburg, Va	1	
Philadelphia, Pa	2	2
Providence, R. I	2	1
Quincy, Ill	1	
Riverside, Cal	1	1
Rochester, N. Y		1
St. Louis, Mo	2	2
Scranton, Pa	1	
Tacoma, Wash	1	
Troy, N. Y	1	
Washington, D. C	2	1
Wheeling, W. Va	1	
Wichita, Kans	1	1
Winston-Salem, N. C		1

DIPHTHERIA.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 1033.

ERYSIPELAS.

City Reports for Week Ended June 1, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio	2		Milwaukee, Wis	2	
Ann Arbor, Mich	4		Minneapolis, Minn	3	
Bakersfield, Cal	1		Mount Vernon, N. Y	1	
Baltimore, Md	1		Newark, N. J	4	
Battle Creek, Mich	1		Newburgh, N. Y		1
Berkeley, Cal	1		New York, N. Y		3
Boston, Mass		1	Norfolk, Va	1	
Bridgeport, Conn	1		Oakland, Cal	1	1
Buffalo, N. Y	2		Passaic, N. J	2	
Cambridge, Mass		1	Philadelphia, Pa	2	1
Chicago, Ill	10		Sacramento, Cal	1	
Cleveland, Ohio	1		St. Joseph, Mo	1	
Denver, Colo	1		St. Louis, Mo	4	
Detroit, Mich	1	1	St. Paul, Minn	1	1
Kalamazoo, Mich		2	San Francisco, Cal	5	1
Kansas City, Kans	1		Seattle, Wash	1	
Kansas City, Mo	2	1	Sioux City, Iowa	1	
Long Beach, Cal	1		Somerville, Mass		1
Los Angeles, Cal	1		Tacoma, Wash	1	
Louisville, Ky	1	1	Topeka, Kans	2	1
Melrose, Mass	1				

LEPROSY.

California—Rio Vista and San Francisco.

During the month of May, 1918, 2 cases of leprosy were notified in the State of California; 1 at Rio Vista, in the person of R. W., female, aged 14 years, born in Hawaiian Islands, came to the United States 7 years ago, and has lived in Rio Vista 3½ years, and in San Francisco for the same length of time; the other case at San Francisco, in the person of L. J., male, aged 20 years, native of China, came to the United States 8 years ago, has lived in San Francisco 1 month, and before that lived in Portland, Oreg.

Massachusetts—Boston—On Vessel.

On May 7, 1918, a case of leprosy in the person of W. C., native of East Indies, aged 22 years, recently arrived on the steamship *Gunene*, was reported at Boston, Mass. The patient was an alien and was deported on the same vessel on which he arrived.

MALARIA.

State Reports for May, 1918.

Place.	New cases reported.	Place.	New cases reported.
Maryland:		Massachusetts:	
Anne Arundel County	2	Essex County—	
Calvert County—		Lynn	2
Prince Frederick	1	Suffolk County—	
Frederick County—		Boston	2
Walkersville	1	Total	4
Kent County—			
Rock Hall	1		
Chestertown	1		
Total	6		

City Reports for Week Ended June 1, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Albany, Ga	2		Marshall, Tex	2	
Atlanta, Ga	1		Memphis, Tenn	5	1
Beaumont, Tex	1	1	Mobile, Ala		1
Birmingham, Ala	1	1	Montgomery, Ala	30	
Boston, Mass	2		Newark, N. J	1	
Cape Girardeau, Mo	4		New Orleans, La	1	1
Charleston, S. C		2	New York, N. Y		2
Corsicana, Tex	2		North Little Rock, Ark	1	
Hattiesburg, Miss	14		Palestine, Tex	6	
Jersey City, N. J	1		Petersburg, Va	3	
Little Rock, Ark	18		Rahway, N. J	1	
Louisville, Ky	2		Rocky Mount, N. C	1	1
Macon, Ga	3	1			

MEASLES.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 1033.

PELLAGRA.

State Reports for May, 1918.

Place.	New cases reported.	Place.	New cases reported.
District of Columbia	1	Massachusetts:	
Maryland:		Norfolk County—	
Dorchester County—		Foxboro (town)	1
Woolford	1	Suffolk County—	
Madison	1	Boston	1
Total	2	Chelsea	1
		Total	3

City Reports for Week Ended June 1, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Albany, Ga	1		Macon, Ga		1
Albuquerque, N. Mex		1	Memphis, Tenn		2
Atlanta, Ga		1	Mobile, Ala		1
Austin, Tex		2	Nashville, Tenn	5	1
Birmingham, Ala	5	2	New Orleans, La	1	1
Charlotte, N. C		2	New York, N. Y		1
Corsicana, Tex	1	1	Raleigh, N. C	1	1
Dallas, Tex	1	2	Richmond, Va	1	
Durham, N. C	1	2	Rocky Mount, N. C	1	1
Fort Worth, Tex	1	1	Spartanburg, S. C	1	1
Greenville, S. C		1	Washington, D. C	1	
Lexington, Ky		1	Winston-Salem, N. C	1	1
Little Rock, Ark		2			

PLAGUE.

California—Contra Costa County—Plague-Infected Squirrel Found.

On June 8, 1918, a plague-infected squirrel was shot 5 miles west of Martinez, Contra Costa County, Cal.

PNEUMONIA.

City Reports for Week Ended June 1, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Adams, Mass	1	1	Long Beach, Cal	2	.....
Amarillo, Tex	1	.....	Los Angeles, Cal	8	8
Amsterdam, N. Y	2	1	Louisville, Ky	1	8
Atlanta, Ga	1	3	Lowell, Mass	1	2
Baltimore, Md	15	9	Lynn, Mass	2	1
Battle Creek, Mich	1	.....	Malden, Mass	1	1
Beverly, Mass	1	.....	Manchester, N. H	1	1
Binghamton, N. Y	1	.....	Manitowoc, Wis	1	.....
Boston, Mass	6	11	Marshall, Tex	1	.....
Buffalo, N. Y	3	7	Milford, Mass	3	.....
Cambridge, Mass	5	2	Newark, N. J	32	4
Chelsea, Mass	2	.....	Newburgh, N. Y	1	1
Chicago, Ill	64	37	Newport, Ky	1	1
Cleveland, Ohio	13	.....	North Little Rock, Ark	2	1
Clinton, Mass	2	.....	North Tonawanda, N. Y	1	.....
Corsicana, Tex	1	1	Oakland, Cal	1	5
Cumberland, Md	4	.....	Ogden, Utah	3	.....
Dayton, Ohio	1	1	Ossining, N. Y	2	.....
Detroit, Mich	6	13	Oswego, N. Y	1	.....
Elmira, N. Y	4	2	Palestine, Tex	1	.....
Everett, Mass	1	1	Parkersburg, W. Va	1	1
Fall River, Mass	4	.....	Philadelphia, Pa	28	29
Fort Worth, Tex	1	1	Pontiac, Mich	1	1
Grand Rapids, Mich	2	.....	Richmond, Va	1	2
Greenfield, Mass	1	.....	Riverside, Cal	1	1
Hartford, Conn	1	.....	Rochester, N. Y	3	5
Haverhill, Mass	2	.....	St. Cloud, Minn	3	.....
Holyoke, Mass	2	.....	San Francisco, Cal	8	9
Independence, Mo	1	.....	Sault Ste. Marie, Mich	1	.....
Jackson, Mich	1	1	Schenectady, N. Y	2	2
Jamestown, N. Y	1	.....	Springfield, Mass	5	2
Kansas City, Mo	2	9	Toledo, Ohio	1	1
Lackawanna, N. Y	3	.....	Waltham, Mass	1	3
Lawrence, Mass	2	1	Westfield, Mass	1	.....
Lincoln, Nebr	1	1	Worcester, Mass	3	1

POLIOMYELITIS (INFANTILE PARALYSIS).

State Reports for May, 1918.

Place.	New cases reported.	Place.	New cases reported.
Maryland:		Massachusetts:	
Baltimore County—		Middlesex County—	
Lauraville	1	Cambridge	1
Kingsville	1	Framingham (town)	2
Frederick County—		Suffolk County—	
Myersville	1	Boston	1
Howard County—		Braintree (town)	1
Laurel	1	Worcester County—	
		Barre (town)	1
Total	4	Total	6

City Reports for Week Ended June 1, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alton, Ill	2	.....	Natick, Mass	1	.....
Indianapolis, Ind	1	.....	Richmond, Va	1	1
Milwaukee, Wis	1	1	Springfield, Ill	1	.....
Moundsville, W. Va	1	.....	Waco, Tex	4	1

RABIES IN ANIMALS.

City Reports for Week Ended June 1, 1918.

Place.	Cases.	Place.	Cases.
Detroit, Mich	1	Pueblo, Colo	2
Louisville, Ky	1	Schenectady, N. Y	3
Memphis, Tenn	1		

ROCKY MOUNTAIN SPOTTED FEVER.

California.

During the month of May, 1918, 3 cases of Rocky Mountain spotted fever were reported in California; 2 cases in Plumas County and 1 in Lassen County.

Montana.

During the month of May, 1918, 3 cases of Rocky Mountain spotted fever were reported in Montana; 2 cases in Ravalli County and 1 in Yellowstone County.

SCARLET FEVER.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 1033.

SMALLPOX.

State Reports for May, 1918.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Number vaccinated within 7 years preceding attack.	Number last vaccinated more than 7 years preceding attack.	Number never successfully vaccinated.	Vaccination history not obtained or uncertain.
District of Columbia	11				11	
Maryland:						
Baltimore	9				9	
Allegany County—						
Mount Savage	1				1	
Baltimore County—						
Turners Station	1				1	
Sparrows Point	1				1	
Carroll County—						
Westminister	1				1	
Howard County—						
Savage	2				2	
Prince Georges County—						
Laurel	2				2	
Somerset County—						
Tylerton	2				2	
Total	19				19	
Massachusetts:						
Essex County—						
Lynn	1				1	
Suffolk County—						
Boston	2				2	
Total	3				3	

Vermont Report for May, 1918.

During the month of May smallpox was reported in Vermont as follows: Essex County, 1; Rutland County, 3; Windham County, 1.

City Reports for Week Ended June 1, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Aberdeen, Wash	1		Kansas City, Mo	21	
Abilene, Tex	6		Knoxville, Tenn	2	
Akron, Ohio	3		Kokomo, Ind	3	
Alton, Ill	1		La Crosse, Wis	3	
Ann Arbor, Mich	1		Leavenworth, Kans	7	
Atlanta, Ga	8		Lebanon, Pa	2	
Baltimore, Md	2		Lexington, Ky	1	
Battle Creek, Mich	1		Lincoln, Nebr	5	
Beaumont, Tex	3		Little Rock, Ark	1	
Benton Harbor, Mich	2		Los Angeles, Cal	2	
Billings, Mont	1		Louisville, Ky	3	
Birmingham, Ala	9		Macon, Ga	2	
Bloomington, Ind	1		Madison, Wis	2	
Boise, Idaho	1		Marshall, Tex	1	
Buffalo, N. Y	5		Mason City, Iowa	8	
Burlington, Iowa	1		Memphis, Tenn	2	
Canton, Ill	1		Michigan City, Ind	2	
Chanute, Kans	3		Middletown, Ohio	5	
Charleston, W. Va	1		Milwaukee, Wis	4	1
Chicago, Ill	2		Minneapolis, Minn	17	1
Cincinnati, Ohio	10		Muscatine, Iowa	2	
Cleveland, Ohio	19		Muskegon, Mich	1	
Coffeyville, Kans	12		Muskogee, Okla	7	
Columbus, Ohio	5		Nashville, Tenn	3	
Corsicana, Tex	1		New Albany, Ind	3	
Council Bluffs, Iowa	7		New Castle, Pa	3	
Dallas, Tex	1		New Orleans, La	3	
Danville, Ill	1		Oklahoma City, Okla	23	
Davenport, Iowa	2		Omaha, Nebr	24	
Denver, Colo	17		Oshkosh, Wis	1	
Des Moines, Iowa	11		Peoria, Ill	7	
Detroit, Mich	12		Philadelphia, Pa	1	
Dubuque, Iowa	5		Pontiac, Mich	7	
Duluth, Minn	2		Provo, Utah	2	
Elgin, Ill	1		Quincy, Ill	8	
Erie, Pa	4		Roanoke, Va	1	
Evansville, Ind	1		St. Joseph, Mo	17	
Fairmont, W. Va	1		St. Louis, Mo	26	
Flint, Mich	4		St. Paul, Minn	3	
Fond du Lac, Wis	1		Salt Lake City, Utah	5	
Fort Collins, Colo	1		San Francisco, Cal	4	
Fort Scott, Kans	7		Santa Ana, Cal	6	
Fort Wayne, Ind	1		Seattle, Wash	3	
Fort Worth, Tex	24		Sioux City, Iowa	6	
Grand Rapids, Mich	2		Sioux Falls, S. Dak	1	
Granite City, Ill	4		Spartanburg, S. C	1	
Greeley, Colo	7		Spokane, Wash	6	
Greenville, S. C	1		Springfield, Ill	14	
Harrisburg, Pa	1		Springfield, Mo	3	
Hartford, Conn	1		Steelton, Pa	1	
Hattiesburg, Miss	1		Tacoma, Wash	1	
Houston, Tex	1		Terre Haute, Ind	1	
Independence, Kans	2		Toledo, Ohio	3	
Independence, Mo	2		Topeka, Kans	4	
Indianapolis, Ind	25		Trinidad, Colo	1	
Iola, Kans	15		Utica, N. Y	5	
Iowa City, Iowa	4		Washington, D. C	3	
Jacksonville, Ill	2		Waterloo, Iowa	3	
Kalamazoo, Mich	34		Wichita, Kans	11	
Kansas City, Kans	7		Winston-Salem, N. C	4	

TETANUS.

City Reports for Week Ended June 1, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Cleveland, Ohio	1	1	New York, N. Y	1	1
Louisville, Ky		1	Richmond, Va		1
Mobile, Ala		1	Worcester, Mass		1

TUBERCULOSIS.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 1033.

TYPHOID FEVER.

Florida—Pensacola.

During the period from May 1 to June 14, 1918, 28 cases of typhoid fever, with 5 deaths, were reported at Pensacola, Fla.

State Reports for May, 1918.

Place.	New cases reported.
District of Columbia	7
Maryland:	
Baltimore	13
Anne Arundel County—	
Shady Side	1
Baltimore County—	
Woodlawn	1
Sparrows Point	1
Rossville	1
Roland Park	2
Highlandtown	2
Arlington	1
Calvert County—	
Willows	2
Wallsville	1
Poplars	1
Carroll County—	
New Windsor	2
Tyrone	1
Cecil County—	
Chesapeake City	1
Cayotts Corner	1
Union Hospital	1
Charles County—	
Indian Head	1
Dorchester County—	
Secretary	1
Bishops Head	1
Maryland Hospital	1
Frederick County—	
Brunswick	1
Walkersville	4
Daysville	1
Garrett County—	
Friendsville	1
Howard County—	
Ellicott City	1
Montgomery County—	
Rockville	1
Prince Georges County—	
Aquasco	3
Laurel	1
Takoma Park	1
Queen Annes County—	
Centerville	1
Stevensville	1
Washington County—	
Hagerstown	1
Worcester County—	
Pocomoke City	1
Sinepuxent	1
Stockton	4
Total	59

Place.	New cases reported.
Massachusetts:	
Berkshire County—	
Adams (town)	1
Lanesboro (town)	1
North Adams	3
Bristol County—	
Easton (town)	1
Fall River	10
New Bedford	2
Taunton	1
Westport (town)	1
Essex County—	
Haverhill	3
Lawrence	1
Lynn	3
Saugus (town)	1
Franklin County—	
Orange (town)	1
Hampden County—	
Chicopee	1
Springfield	3
Middlesex County—	
Arlington (town)	1
Cambridge	1
Malden	6
Stoneham (town)	1
Sudbury (town)	1
Watertown (town)	1
Woburn	1
Norfolk County—	
Brookline (town)	1
Sharon (town)	1
Weymouth (town)	1
Plymouth County—	
Brockton	1
East Bridgewater (town)	1
Lakeville (town)	1
Plymouth (town)	1
Suffolk County—	
Boston	12
Chelsea	4
Revere	1
Worcester County—	
Northbridge (town)	1
Total	70
Vermont:	
Caledonia County	1
Chittenden County	2
Orleans County	4
Rutland County	1
Washington County	5
Total	13

TYPHOID FEVER—Continued.

City Reports for Week Ended June 1, 1918.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Aberdeen, S. Dak.	.....	1	Marquette, Mich.	1	.....
Allentown, Pa.	1	.....	Marshall, Tex.	1	.....
Arlington, Mass.	1	.....	Martinsburg, W. Va.	.....	1
Austin, Tex.	2	.....	Memphis, Tenn.	1	.....
Baltimore, Md.	7	1	Milwaukee, Wis.	1	.....
Beaumont, Tex.	.....	1	Minneapolis, Minn.	1	.....
Billings, Mont.	2	.....	Mobile, Ala.	2	1
Birmingham, Ala.	5	1	Montgomery, Ala.	2	.....
Boise, Idaho.	1	.....	Morgantown, W. Va.	1	.....
Boston, Mass.	1	.....	Nashville, Tenn.	3	.....
Braddock, Pa.	1	.....	New Castle, Pa.	1	.....
Brockton, Mass.	1	1	New Orleans, La.	4	2
Buffalo, N. Y.	2	.....	New York, N. Y.	14	2
Cambridge, Mass.	1	.....	Norfolk, Va.	1	.....
Camden, N. J.	1	.....	Norristown, Pa.	1	.....
Cape Girardeau, Mo.	1	1	Oakland, Cal.	1	.....
Chanute, Kans.	1	.....	Ogden, Utah.	1	.....
Charleston, S. C.	.....	1	Peoria, Ill.	1	1
Charleston, W. Va.	2	.....	Petersburg, Va.	1	.....
Chelsea, Mass.	1	1	Philadelphia, Pa.	7	2
Chicago, Ill.	1	.....	Pittsburgh, Pa.	1	.....
Coatesville, Pa.	2	.....	Portland, Me.	1	.....
Columbia, S. C.	1	.....	Redlands, Cal.	1	.....
Dallas, Tex.	1	.....	Richmond, Ind.	1	.....
Des Moines, Iowa.	5	.....	Richmond, Va.	6	.....
Detroit, Mich.	5	1	Saginaw, Mich.	1	.....
Duluth, Minn.	1	.....	St. Louis, Mo.	3	1
Durham, N. C.	1	.....	Salt Lake City, Utah.	1	.....
Fairmont, W. Va.	2	.....	San Diego, Cal.	1	.....
Fall River, Mass.	3	.....	San Francisco, Cal.	2	.....
Fremont, Ohio.	1	.....	Saratoga Springs, N. Y.	1	.....
Galveston, Tex.	2	.....	Sault Ste. Marie, Mich.	3	1
Greenville, S. C.	1	.....	Sheboygan, Wis.	1	.....
Hammond, Ind.	.....	1	Somerville, Mass.	.....	1
Hattiesburg, Miss.	1	.....	Springfield, Mass.	2	.....
Homestead, Pa.	1	.....	Terre Haute, Ind.	.....	1
Houston, Tex.	5	.....	Toledo, Ohio.	5	1
Independence, Kans.	2	1	Trenton, N. J.	3	.....
Indianapolis, Ind.	3	.....	Uniontown, Pa.	1	.....
Jacksonville, Ill.	1	.....	Waco, Tex.	2	.....
Kansas City, Mo.	1	1	Wheeling, W. Va.	5	1
Little Falls, N. Y.	1	1	Wichita, Kans.	1	.....
Los Angeles, Cal.	6	.....	Wilmington, Del.	2	.....
Louisville, Ky.	1	.....	Winston-Salem, N. C.	2	.....
Lynchburg, Va.	1	1	York, Pa.	3	.....
Macon, Ga.	4	.....	Youngstown, Ohio.	5	.....
Malden, Mass.	1	.....	Zanesville, Ohio.	.....	1

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

State Reports for May, 1918.

State.	Cases reported.			State.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.		Diphtheria.	Measles.	Scarlet fever.
District of Columbia	72	865	91	Massachusetts	663	6,334	487
Maryland	91	3,294	144	Vermont	8	161	27

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

City Reports for Week Ended June 1, 1918.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md	589,621	.....	16	.....	287	4	10	.....	45	35
Boston, Mass	756,476	188	47	4	269	5	25	.....	65	23
Chicago, Ill	2,497,722	539	98	11	100	3	18	.....	497	74
Cleveland, Ohio	674,073	170	10	.....	80	.....	9	.....	40	.....
Detroit, Mich	571,784	172	39	2	77	8	22	2	57	22
Los Angeles, Cal	503,812	129	26	.....	72	.....	10	.....	39	22
New York, N. Y	5,602,841	1,181	245	30	716	19	92	3	141	158
Philadelphia, Pa	1,709,518	458	36	4	918	6	32	.....	80	57
Pittsburgh, Pa	579,090	.....	7	.....	119	.....	5	.....	15	.....
St. Louis, Mo	757,309	207	31	.....	62	.....	16	.....	60	12
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y	468,558	120	11	.....	162	3	14	.....	41	11
Cincinnati, Ohio	410,476	136	13	1	123	1	10	.....	23	19
Jersey City, N. J	306,345	.....	14	.....	31	.....	7	.....	19	.....
Milwaukee, Wis	436,535	94	5	.....	217	3	23	1	17	14
Minneapolis, Minn	363,454	.....	15	1	85	.....	31	3	8	12
Newark, N. J	408,894	94	18	1	328	3	11	.....	28	17
New Orleans, La	371,747	144	40	.....	3	1	.....	.....	23	22
San Francisco, Cal	463,516	137	6	.....	43	.....	11	.....	45	13
Seattle, Wash	348,639	.....	3	.....	25	.....	25	.....	11	.....
Washington, D. C	363,980	114	9	1	89	.....	17	.....	25	12
From 200,000 to 300,000 inhabitants:										
Columbus, Ohio	214,878	68	.....	.....	12	1	15	.....	5	9
Denver, Colo	260,800	70	19	.....	23	1	25	.....	.....	10
Indianapolis, Ind	271,708	.....	17	4	9	.....	24	.....	13	.....
Kansas City, Mo	297,874	80	5	.....	10	.....	8	1	4	12
Louisville, Ky	238,910	89	3	1	4	.....	.....	.....	12	13
Portland, Oreg	295,463	72	3	1	90	.....	9	.....	12	6
Providence, R. I	254,960	73	13	1	114	2	7	2	.....	4
Rochester, N. Y	256,417	71	9	1	73	2	8	.....	18	4
St. Paul, Minn	247,232	54	19	.....	7	.....	29	1	4	4
From 100,000 to 200,000 inhabitants:										
Atlanta, Ga	190,558	71	.....	.....	11	.....	1	.....	4	13
Birmingham, Ala	181,762	57	.....	.....	7	.....	2	.....	10	7
Bridgeport, Conn	121,576	29	4	2	13	.....	2	.....	16	3
Cambridge, Mass	112,981	24	10	.....	51	4	.....	.....	4	5
Camden, N. J	106,233	.....	3	.....	12	.....	3	.....	4	.....
Dallas, Tex	124,527	8	.....	.....	1	1	.....	.....	10	4
Dayton, Ohio	127,224	.....	2	.....	3	.....	4	.....	3	3
Des Moines, Iowa	101,598	.....	2	.....	.....	.....	6	.....	3	.....
Fall River, Mass	128,366	24	3	.....	6	.....	1	.....	9	3
Fort Worth, Tex	104,562	23	.....	.....	.....	.....	.....	.....	4	4
Grand Rapids, Mich	128,291	31	2	.....	12	.....	5	.....	6	.....
Hartford, Conn	110,900	.....	4	.....	15	.....	1	.....	4	3
Houston, Tex	112,307	28	1	.....	.....	.....	2	.....	.....	5
Lawrence, Mass	100,560	37	6	1	133	6	.....	.....	4	5
Lowell, Mass	113,245	36	2	1	28	.....	.....	.....	7	7
Lynn, Mass	102,425	16	3	.....	65	.....	2	.....	3	4
Memphis, Tenn	148,995	55	2	.....	6	.....	12	.....	23	10
Nashville, Tenn	117,057	47	1	.....	8	.....	.....	.....	5	3
New Bedford, Mass	118,158	22	.....	.....	.....	.....	.....	.....	6	2
New Haven, Conn	149,685	42	.....	.....	2	.....	.....	.....	6	4
Oakland, Cal	198,604	34	1	.....	15	.....	4	.....	7	2
Omaha, Nebr	165,470	36	20	2	10	.....	19	1	.....	2
Reading, Pa	109,381	.....	.....	.....	20	.....	1	.....	1	.....
Richmond, Va	156,687	66	1	.....	48	.....	2	.....	12	8
Salt Lake City, Utah	117,399	.....	4	1	19	.....	17	.....	.....	1
Scranton, Pa	146,811	.....	2	.....	3	.....	1	.....	5	.....
Spokane, Wash	150,323	.....	2	.....	.....	.....	3	.....	.....	.....
Springfield, Mass	105,942	27	3	1	25	1	1	.....	3	.....
Syracuse, N. Y	155,624	43	1	.....	48	1	2	.....	6	5
Tacoma, Wash	112,770	.....	1	.....	10	.....	28	.....	.....	.....
Toledo, Ohio	191,554	48	2	1	8	1	4	.....	1	6
Trenton, N. J	111,593	25	2	1	11	.....	.....	.....	4	2
Worcester, Mass	163,314	43	2	.....	6	.....	2	.....	8	6
Youngstown, Ohio	108,385	35	.....	.....	7	.....	1	.....	2	2

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

City Reports for Week Ended June 1, 1918—Continued.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 50,000 to 100,000 inhabitants:										
Akron, Ohio	85,625	34	3	.....	14	.....	2	.....	4	.....
Allentown, Pa	63,505	.....	2	.....	102	.....	3	.....	.....	.....
Atlantic City, N. J	57,660	7	.....	.....	5	.....	.....	.....	6	.....
Bayonne, N. J	69,893	.....	3	.....	5	.....	1	.....	3	.....
Berkeley, Cal	57,653	6	4	.....	11	.....	1	.....	2	.....
Binghamton, N. Y	53,973	20	3	.....	42	.....	3	.....	4	1
Brockton, Mass	67,449	13	1	.....	20	.....	5	.....	5	1
Canton, Ohio	60,852	15	1	.....	.....	.....	.....	.....	2	.....
Charleston, S. C	60,734	41	.....	.....	.....	.....	.....	.....	.....	5
Chattanooga, Tenn	60,075	3	.....	.....	.....	.....	4	.....	1	2
Covington, Ky	57,144	16	2	.....	10	1	.....	.....	3	2
Duluth, Minn	94,495	19	1	.....	.....	.....	.....	.....	4	.....
Erie, Pa	75,195	.....	1	.....	70	.....	1	.....	9	.....
Evansville, Ind	76,078	.....	2	1	8	.....	.....	.....	5	2
Flint, Mich	54,772	9	1	.....	1	.....	5	.....	1	1
Fort Wayne, Ind	76,183	26	6	.....	48	.....	.....	.....	3	1
Harrisburg, Pa	72,015	.....	.....	.....	1	.....	.....	.....	.....	.....
Hoboken, N. J	77,214	17	6	.....	1	.....	.....	.....	5	3
Holyoke, Mass	65,286	9	1	.....	2	.....	1	.....	5	2
Johnstown, Pa	68,529	.....	2	.....	8	.....	1	.....	.....	.....
Kansas City, Kans	99,437	.....	2	.....	13	.....	5	.....	2	.....
Lancaster, Pa	50,853	.....	2	.....	3	.....	1	.....	.....	.....
Little Rock, Ark	57,343	6	3	.....	2	.....	2	.....	4	.....
Malden, Mass	51,155	9	1	.....	42	.....	2	.....	.....	.....
Manchester, N. H	78,283	21	1	.....	.....	.....	1	.....	7	4
Mobile, Ala	58,221	24	.....	.....	5	.....	.....	.....	2	3
New Britain, Conn	53,794	13	2	.....	5	.....	1	.....	5	2
Norfolk, Va	89,612	.....	.....	.....	1	.....	1	.....	.....	3
Oklahoma City, Okla	92,943	21	.....	.....	2	.....	1	.....	.....	3
Passaic, N. J	71,744	18	3	.....	65	1	1	.....	2	2
Pawtucket, R. I	59,411	18	3	.....	26	2	1	.....	.....	1
Peoria, Ill	71,458	36	.....	.....	5	.....	.....	.....	.....	1
Portland, Me	63,867	21	.....	.....	1	.....	.....	.....	.....	2
Rockford, Ill	55,185	12	1	1	23	.....	1	.....	.....	2
Sacramento, Cal	66,895	19	1	.....	3	.....	3	.....	1	2
Saginaw, Mich	55,642	16	1	.....	1	.....	1	.....	.....	2
St. Joseph, Mo	85,236	24	1	1	1	.....	1	.....	1	1
San Diego, Cal	53,330	34	.....	1	3	.....	2	.....	.....	4
Schenectady, N. Y	99,519	10	2	.....	13	.....	3	.....	4	.....
Sioux City, Iowa	57,078	.....	.....	.....	.....	.....	3	.....	.....	.....
Somerville, Mass	87,039	16	4	.....	22	.....	1	.....	8	1
Springfield, Ill	61,120	29	.....	.....	19	.....	.....	.....	.....	2
Springfield, Ohio	51,550	11	1	.....	11	.....	1	.....	5	.....
Terre Haute, Ind	66,083	26	1	.....	5	.....	4	.....	1	.....
Troy, N. Y	77,916	24	2	.....	7	.....	1	.....	1	4
Utica, N. Y	85,692	24	1	.....	38	.....	1	.....	5	3
Wichita, Kans	70,722	.....	.....	.....	4	.....	1	.....	1	.....
Wilkes-Barre, Pa	76,776	.....	1	.....	13	.....	.....	.....	5	.....
Wilmington, Del	94,265	18	.....	.....	10	.....	1	.....	3	3
Yonkers, N. Y	99,838	16	14	1	130	.....	2	.....	.....	1
York, Pa	51,656	.....	.....	.....	.....	.....	1	.....	6	.....
From 25,000 to 50,000 inhabitants:										
Alameda, Cal	27,732	4	.....	.....	37	.....	1	.....	.....	1
Austin, Tex	34,814	26	2	.....	.....	.....	.....	.....	.....	1
Battle Creek, Mich	29,480	.....	2	.....	22	.....	2	.....	.....	.....
Beaumont, Tex	27,711	18	.....	.....	.....	.....	.....	.....	.....	4
Boise, Idaho	33,846	1	.....	.....	3	.....	1	.....	.....	.....
Brookline, Mass	32,730	6	.....	.....	13	.....	2	.....	.....	.....
Burlington, Iowa	25,030	1	.....	.....	.....	.....	1	.....	.....	.....
Butler, Pa	27,632	.....	1	.....	1	.....	.....	.....	.....	.....
Butte, Mont	43,425	.....	2	.....	1	.....	13	.....	.....	.....
Central Falls, R. I	25,636	.....	.....	.....	1	.....	.....	.....	.....	.....
Charleston, W. Va	29,941	8	1	.....	2	.....	1	.....	.....	2
Charlotte, N. C	39,823	.....	.....	.....	4	.....	.....	.....	.....	1
Chelsea, Mass	46,192	15	.....	.....	16	.....	1	.....	.....	.....
Chester, Pa	41,396	.....	.....	.....	6	.....	.....	.....	1	.....
Chicopee, Mass	29,319	10	3	.....	9	.....	1	.....	1	4
Clinton, Iowa	27,386	.....	.....	.....	17	.....	.....	.....	.....	.....
Cohoes, N. Y	25,211	.....	.....	.....	.....	.....	.....	.....	.....	2
Colorado Springs, Colo	32,971	11	8	.....	5	.....	3	.....	34	4

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

City Reports for Week Ended June 1, 1918—Continued.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabitants—Continued.										
Columbia, S.C.	34,611				2				4	
Council Bluffs, Iowa	31,484	10			2		7			1
Cranston, R. I.	25,987	8			6				1	
Cumberland, Md.	26,074	6			10		1		1	1
Danville, Ill.	32,261	10								
Davenport, Iowa	48,811				4		3			
Dubuque, Iowa	39,873		3		1					
Durham, N.C.	25,061	8			3					1
Easton, Pa.	30,530		1		6					
East Orange, N.J.	42,458	2			24				3	1
Elgin, Ill.	28,203	9	1							1
Elmira, N.Y.	38,120				67					
Evanston, Ill.	28,591	4					1			
Everett, Mass.	39,233	6	3		4		2			
Everett, Wash.	35,486	10			3					
Fitchburg, Mass.	41,781	13			16	1			1	1
Galveston, Tex.	41,863	12	1							1
Green Bay, Wis.	29,353	10								2
Hammond, Ind.	26,171	7	1	1						
Haverhill, Mass.	48,477	9	2		9	1	1		2	
Hazelton, Pa.	28,491		2		21					
Jackson, Mich.	35,396	10			10		9	1	1	1
Jamestown, N.Y.	36,580				88				7	2
Kalamazoo, Mich.	48,886				1				3	1
Kenosha, Wis.	31,576	3			16					
Knoxville, Tenn.	38,676				3					
La Crosse, Wis.	31,677	6	2	1					1	
Lexington, Ky.	41,097	16			1					3
Lima, Ohio	35,384	2			3		1			
Lincoln, Nebr.	46,515	12			1					
Long Beach, Cal.	27,587	9	1		16		2		1	
Lorain, Ohio	36,946		1						1	
Lynchburg, Va.	32,940	9								1
Macon, Ga.	45,757	13			2				2	
Madison, Wis.	30,699	11			3					1
McKeesport, Pa.	47,521		1		7					
Medford, Mass.	26,234	8	1		23		3			2
Moline, Ill.	27,451				44		2			
Montclair, N.J.	26,318	3			1				2	
Montgomery, Ala.	43,285	12							3	
Mount Vernon, N.Y.	37,009	12			9					
Muncie, Ind.	25,424	7	2	1					1	1
Muskogee, Okla.	44,210				1					
Nashua, N.H.	27,327	9								
Newburgh, N.Y.	29,603	11	1		1					1
New Castle, Pa.	41,133		2		8					
Newport, Ky.	31,927								3	3
Newport, R.I.	30,108	8	1				1			
New Rochelle, N.Y.	37,759	6	1		4					
Newton, Mass.	43,715	5	1		10				2	
Niagara Falls, N.Y.	37,353	17	1		1		1		2	
Norristown, Pa.	31,401		3		2		1			
Norwalk, Conn.	26,899						1	1		
Oak Park, Ill.	26,654	10	2		9					1
Ogden, Utah	31,404	10			18		3			
Orange, N.J.	33,080	12	1		32	1			3	2
Oshkosh, Wis.	36,065	8								
Pasadena, Cal.	46,450	13			40		3		5	
Perth Amboy, N.J.	41,185	12			2					1
Petersburg, Va.	25,582	9							1	1
Poughkeepsie, N.Y.	30,390	9	2	1	14		1		1	
Quincy, Ill.	36,798	7	3		7					1
Quincy, Mass.	38,136	7			14		2		6	1
Racine, Wis.	46,486	11			21		4		13	
Roanoke, Va.	43,284	14			13		1		1	
San Jose, Cal.	38,902				8					
Sheboygan, Wis.	28,559	3								
Shenandoah, Pa.	29,201								5	
Springfield, Mo.	40,341	8								
Steubenville, Ohio	27,445	12	2		1				1	
Superior, Wis.	46,266	6			8		2			

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

City Reports for Week Ended June 1, 1918—Continued.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabitants—Continued.										
Taunton, Mass.	36,283	6					1		1	1
Topeka, Kans.	48,726		1		5		4			
Waco, Tex.	33,385	19							2	2
Walla Walla, Wash.	25,136		1				2			
Waltham, Mass.	30,570	9			60				2	
Waterloo, Iowa.	35,559	14			3		6			
Watertown, N. Y.	29,894	4				1				1
West Hoboken, N. J.	43,139	11	1		13		2		1	1
Wheeling, W. Va.	43,377	8	1		3					1
Wilmington, N. C.	29,892	15			2					1
Winston-Salem, N. C.	31,155	22			2				3	6
Zanesville, Ohio.	30,863	15								2
From 10,000 to 25,000 inhabitants:										
Aberdeen, S. Dak.	15,218	3								
Abilene, Tex.	14,238							4		
Adams, Mass.	14,214	2								1
Albany, Ga.	10,604				6					
Albuquerque, N. Mex.	14,025	7								2
Alton, Ill.	22,874	7	6							
Amarillo, Tex.	19,124	10	1							
Ann Arbor, Mich.	15,010	13	3		5					
Ansonia, Conn.	16,704	3								
Appleton, Wis.	17,834	7								
Arlington, Mass.	12,811	5			3					3
Asbury Park, N. J.	14,007	5			3					
Astoria, Oreg.	10,363	5			3					1
Attleboro, Mass.	19,282	2			1					
Bakersfield, Cal.	16,874	5			2				2	
Barre, Vt.	12,169	4								1
Beacon, N. Y.	11,555	2								
Beatrice, Nebr.	10,287	4			1					
Bedford, Ind.	10,349	3							1	1
Bellaire, Ohio.	14,348				6				3	
Belleville, N. J.	12,393		1		1					
Beloit, Wis.	18,072	5			17					3
Benton Harbor, Mich.	10,833	4			10					
Berlin, N. H.	13,599	1								
Bethlehem, Pa.	14,142		1		19					
Beverly, Mass.	21,645	3							2	
Billings, Mont.	14,422		1		9					
Bloomfield, N. J.	18,466				1					
Bloomington, Ind.	11,383	3	1				1		1	2
Braddock, Pa.	21,685		1		3					
Bristol, Conn.	15,927								1	
Burlington, Vt.	21,617	2								
Cairo, Ill.	15,794	2	1							1
Cambridge, Ohio.	13,483	5			2					
Canton, Ill.	13,262	5			4					
Cape Girardeau, Mo.	10,775								2	
Carbondale, Pa.	19,242								1	
Carlisle, Pa.	10,726		3							
Carnegie, Pa.	11,692				2					
Centralia, Ill.	11,538				2					
Chanute, Kans.	12,445				14		1			
Cheyenne, Wyo.	[1] 11,320		3				2			
Chillicothe, Ohio.	15,470		1		1		2			
Clinton, Mass.	[1] 13,075	6			2					
Coatesville, Pa.	14,455				4					
Coffeyville, Kans.	17,548				3		4		1	
Concord, N. H.	22,669	5								
Connellsville, Pa.	15,455						1		6	
Corpus Christi, Tex.	10,432	5								
Corsicana, Tex.	10,022	5							2	
Cortland, N. Y.	13,069	4							1	
Cumberland, R. I.	10,848		1		2		1			
Dedham, Mass.	10,433	1								1
Dover, N. H.	13,272	6								
Dunmore, Pa.	20,776				1					
East Providence, R. I.	18,113		2							
Eau Claire, Wis.	18,807				29		2		2	
Englewood, N. J.	12,231	3			13					

[1] Population April 15, 1910; no estimate made.

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

City Reports for Week Ended June 1, 1918—Continued.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 10,000 to 25,000 inhabitants—Continued.										
Enid, Okla.	20,307	2								
Fairmont, W. Va.	15,506				1					
Fargo, N. Dak.	17,389	3					1			
Farrell, Pa.	[1] 10,190				1					
Findlay, Ohio	[1] 14,858	3			32					
Fond du Lac, Wis.	21,113	8					3	1		1
Fort Collins, Colo.	11,451	6			1					
Fort Dodge, Iowa	20,648						1			
Fort Scott, Kans.	10,559	2								
Fostoria, Ohio	10,770	4								
Frederick, Md.	11,112	3			8		1			1
Fremont, Ohio	10,882				2		3			
Fulton, N. Y.	11,908	6			6					
Galesburg, Ill.	24,276	11			4					1
Gardner, Mass.	17,140		5		4				2	
Geneva, N. Y.	13,711	3			8					
Granite City, Ill.	15,142	6			1		1			
Greeley, Colo.	11,420		1		2					
Greenfield, Mass.	11,998	5			2		1			
Greensboro, N. C.	19,577	7			1					3
Greenville, S. C.	18,181	4			1					1
Greenwich, Conn.	19,159				7					
Hackensack, N. J.	16,945	6	1		16					
Hancock, Mich.	12,079	1								
Harrison, N. J.	16,959				9					
Hattiesburg, Miss.	16,482								2	
Henderson, Ky.	12,192	1								
Homestead, Pa.	22,466				5		3			
Hornell, N. Y.	14,685	1			59					
Hoquiam, Wash.	11,666						5			
Hudson, N. Y.	12,705								3	
Independence, Kans.	14,506	6			1					1
Independence, Mo.	11,672	2							1	
Iola, Kans.	11,068				2				2	
Iowa City, Iowa.	11,413				1					
Ishpeming, Mich.	[1] 12,448		1	1	1					
Ithaca, N. Y.	15,848	5							3	
Jacksonville, Ill.	15,481	11								
Janesville, Wis.	14,339	1					1			
Kankakee, Ill.	14,230				3					
Kearny, N. J.	23,539	8			6		2		2	1
Kokomo, Ind.	20,930	6			1				2	
Lackawanna, N. Y.	15,987	1							1	
La Fayette, Ind.	21,286	10	1							
Laurel, Miss.	11,779						1			
Leavenworth, Kans.	[1] 19,363	9	1		1		1		3	
Lebanon, Pa.	20,779		1				3			
Little Falls, N. Y.	13,451	7					1			
Long Branch, N. J.	15,395	4			34				2	
Mahanoy City, Pa.	17,463		1		1					
Manchester, Conn.	15,551	2			1				4	2
Manitowoc, Wis.	13,805	4	1						1	1
Marinette, Wis.	[1] 14,610	4			2					1
Marlboro, Mass.	15,187	3								
Marquette, Mich.	12,409	4					3			
Marshall, Tex.	13,712	6							1	
Martinsburg, W. Va.	12,666	1								
Mason City, Iowa.	14,457	4					2			
Massillon, Ohio.	15,310		2							
Mattoon, Ill.	12,582	4			15					
McKees Rocks, Pa.	19,949		1		26					
Melrose, Mass.	17,445	2					1		1	
Middletown, N. Y.	15,810	1			2				3	1
Middletown, Ohio.	15,625	6			5		1			
Milford, Mass.	14,110	4								
Mishawaka, Ind.	16,385	3								
Missoula, Mont.	18,214	4	8							
Monessen, Pa.	21,630		1							
Morgantown, W. Va.	13,709	3					6		1	1
Morristown, N. J.	13,284	2			4					
Moundsville, W. Va.	11,153	1								

[1] Population Apr. 15, 1918; no estimate made.

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

City Reports for Week Ended June 1, 1918—Continued.

City.	Population as of July 1, 1916 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 10,000 to 25,000 inhabitants—Continued.										
Mount Carmel, Pa.	20,268	1							2	
Nanticoke, Pa.	23,126				1					
Natick, Mass.	10,102		3	1	12				2	
New Albany, Ind.	23,629	7							2	2
Newburyport, Mass.	15,243	4			4				2	
New Castle, Ind.	13,241	2								
New London, Conn.	20,985	9	2				3			1
North Adams, Mass.	22,019	5	1						2	2
Northampton, Mass.	19,926	6	1		6				1	
North Attleboro, Mass.	11,014				3					
North Braddock, Pa.	15,148				1					
North Little Rock, Ark.	14,907	2			1				2	1
North Tonawanda, N. Y.	13,768	5								
North Yakima, Wash.	20,951				18					
Ossining, N. Y.	13,705		1		33				2	
Oswego, N. Y.	24,101				4				2	
Palestine, Tex.	11,854	2							2	1
Parkersburg, W. Va.	20,612	5							1	1
Peabody, Mass.	18,360	4			8				2	
Peekskill, N. Y.	18,530	6								
Piqua, Ohio.	14,152	3			1					
Pittston, Pa.	18,599				3					
Plainfield, N. J.	23,805	5			2		1			
Plattsburgh, N. Y.	12,837	3								1
Pontiac, Mich.	17,524	9			12		8			2
Port Chester, N. Y.	16,183	2			5				1	
Portsmouth, N. H.	11,666		1							
Pottsville, Pa.	22,372		1		5					
Provo, Utah.	10,645	1								
Rahway, N. J.	10,219	5			4					
Raleigh, N. C.	20,127	17		1	2		1		1	1
Redlands, Cal.	14,000	2	1		7					
Richmond, Ind.	24,697	7								
Riverside, Cal.	19,763	10			1					
Rocky Mount, N. C.	12,067	6							1	1
Rome, N. Y.	23,737								1	
Rutland, Vt.	14,831	4			3	1				
St. Cloud, Minn.	11,817	8							1	
San Bernardino, Cal.	16,945				4					
Sandusky, Ohio.	20,193	6			2				2	
Santa Ana, Cal.	10,627	7			18		1			1
Santa Barbara, Cal.	14,846	10								2
Santa Cruz, Cal.	14,594	3			3					
Saratoga Springs, N. Y.	13,821	5			9					
Sault Ste. Marie, Mich.	13,919	2								
Sharon, Pa.	18,616				34					
Sioux Falls, S. Dak.	16,499	3								
Southbridge, Mass.	14,205	2								
Spartanburg, S. C.	21,365	7	1		3					1
Steelton, Pa.	15,548						1		1	
Streator, Ill.	14,304	5								
Tiffin, Ohio.	12,867	2								
Trinidad, Colo.	13,875				2					
Vallejo, Cal.	13,461	3			1					
Vancouver, Wash.	13,180				2					
Wakefield, Mass.	12,733		1		1				2	
Warren, Ohio.	13,059	12			3					
Warren, Pa.	14,737				2					
Washington, Pa.	21,618		3							
Watertown, Mass.	14,867	2	1		1				1	
Wausau, Wis.	19,239	4								
West Chester, Pa.	13,176		1		7					
Westfield, Mass.	18,391	8			3		1			3
West Orange, N. J.	13,550	1			20				1	
West Warwick, R. I.	15,782	4	1							
Wilkinsburg, Pa.	23,228				6		1			
Winchester, Mass.	10,603	1			1					
Winona, Minn.	[1] 18,583	3								
Winthrop, Mass.	12,692		3		4				1	
Woburn, Mass.	15,969	5								

[1] Population Apr. 15, 1910; no estimate made.

FOREIGN.

Plague on Vessel.

Two cases of plague were reported, May 9, 1918, on the steamship *Quilpue,* at Callao, Peru.

CUBA.

Communicable Diseases—Habana.

Communicable diseases have been notified at Habana as follows:

Disease.	May 11–20, 1918.		Remaining under treatment May 20, 1918.	Disease.	May 11–20, 1918.		Remaining under treatment May 20, 1918.
	New cases.	Deaths.			New cases.	Deaths.	
Cerebrospinal meningitis	2		[1] 3	Measles			6
Diphtheria	4		16	Paratyphoid fever	3		[3] 3
Leprosy			13	Scarlet fever	3		[3] 5
Malaria	9		[2] 26	Typhoid fever	42	3	[4] 118
				Varicella	3		13

[1] Foreign, 3.
[2] From the interior, 25.
[3] From the interior, 1.
[4] From the interior, 61; from Regla, 3; foreign, 1.

ECUADOR.

Yellow Fever—Guayaquil.

Yellow fever was reported present at Guayaquil, June 8, 1918.

GREAT BRITAIN.

Examination of Rats—Liverpool.

During the period from March 10 to May 4, 1918, 1,332 rats were examined at Liverpool, England. No plague infection was found.

PERU.

Plague—February 16–March 31, 1918.

During the period from February 16 to March 31, 1918, 113 cases of plague were notified in Peru. The cases were distributed according to departments as follows: Ancachs, 5 cases; Callao, 1 case; Junin, 1 case; Lambayeque, 16 cases; Libertad, 68 cases; Lima, 22 cases.

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

Reports Received During Week Ended June 21, 1918.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Rangoon	Mar. 17-23	2	2	
Indo-China:				
Saigon	Apr. 15-28	13	10	
Philippine Islands:				
Provinces				Apr. 14-20, 1918: Cases, 165; deaths, 105.
Bohol	Apr. 14-20	14	14	
Capiz	do	11	8	
Cebu	do	18	14	
Misamis	do	103	55	
Surigao	do	19	14	

PLAGUE.

India:				
Bassein	Feb. 17-23		12	
Henzada	do		12	
Karachi	Mar. 24-Apr. 6	167	118	
Moulmein	Feb. 17-23		9	
Myingyan	Feb. 10-16		16	
Pegu	Feb. 17-23		1	
Prome	do		5	
Rangoon	Mar. 17-23	70	65	
Toungoo	Feb. 17-23		11	
Indo-China:				
Saigon	Apr. 15-28	25	11	
Peru				Feb. 16-Mar. 31, 1918: Cases, 113.
Departments—				
Ancachs	Feb. 16-Mar. 31	5		
Callao	do	1		
Junin	do	1		
Lambayeque	do	16		
Libertad	do	68		
Lima	do	22		
Siam:				
Bangkok	Apr. 7-20	22	17	
On vessel:				
S. S. Quilpue	May 9	2		At Callao, Peru.

SMALLPOX.

Arabia:				
Aden	Apr. 4-10		1	
Canada:				
Nova Scotia—				
Halifax	May 26-June 1	3		
Sydney	do	1		
Prince Edward Island—				
Charlotte Town	May 30-June 5	1		
China:				
Antung	Apr. 7-20	1	1	
Tientsin	May 5-11	1		
Colombia:				
Cartagena	May 21			Present in suburbs.
India:				
Karachi	May 24-Apr. 6	53	35	
Rangoon	Mar. 17-25	10	4	
Indo-China:				
Saigon	Apr. 15-28	159	45	
Newfoundland:				
Badger	May 25-31	2		
Conche	do			Present.
Englee	do			Do.
Philippine Islands:				
Manila	Apr. 14-May 4	141	76	
Siam:				
Bangkok	Apr. 7-20	5	4	
Straits Settlements:				
Penang	Apr. 7-13	5		
Singapore	Mar. 31-Apr. 20	16	11	

[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 21, 1918—Continued.

TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Antung	Apr. 7-13	1		
Great Britain:				
Glasgow	May 12-18	4		
Spain:				
Lira	Apr. 6	11	3	Vicinity of Corcubion, Province of Coruna.
Tunisia:				
Tunis	May 4-17	2	2	

YELLOW FEVER.

Ecuador:				
Guayaquil	June 8			Present.

Reports Received from Dec. 29, 1917, to June 14, 1918.

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Antung	Nov. 26-Dec. 2	3	1	
India:				
Bombay	Oct. 28-Dec. 15	19	14	
Do	Dec. 30-Mar. 9	219	194	
Calcutta	Sept. 16-Dec. 15		135	
Do	Dec. 30-Mar. 16		155	
Karachi	Dec. 30-Feb. 23	25	6	
Madras	Nov. 25-Dec. 22	2	2	
Do	Dec. 30-Mar. 16	47	26	
Rangoon	Nov. 4-Dec. 22	5	5	
Do	Dec. 30-Mar. 16	11	6	
Indo-China:				
Provinces				Sept. 1-Dec. 31, 1917: Cases, 168; deaths, 95.
Anam	Sept. 1-Dec. 31	24	15	
Cambodia	do	74	54	
Cochin-China	do	58	24	
Saigon	Nov. 22-Dec. 9	4	3	
Do	Feb. 4-Apr. 14	15	8	
Kwang-Chow-Wan	Sept. 1-30	10	2	
Java:				
East Java	Oct. 28-Nov. 3	1	1	
West Java				Oct. 19-Dec. 27, 1917: Cases, 102; deaths, 56. Dec. 28, 1917-Feb. 21, 1918: Cases, 38; deaths, 7.
Batavia	Oct. 10—Dec. 27	49	23	
Do	Dec. 28-Feb. 21	35	1	
Palestine				Dec. 28, 1917-Feb. 24, 1918: Cases, 121.
Deir Seneid	Dec. 28-Feb. 24	65		
Jaffa	Feb. 17-24	4		
Ludd	Mar. 22	1		
Sukkarieh	Dec. 28-Mar. 22	24		
Persia				July 30-Sept. 3, 1917: Cases, 384; deaths, 276.
Achraf	July 30-Aug. 16	90	88	
Astrabad	July 31			Present.
Barfrush	July 1-Aug. 16	39	25	
Bender Bouchir				Present. On Persian Gulf.
Chahmirzad				25 cases reported July 31, 1917.
Chahrastagh	June 15-July 25	10	8	
Chroud	Aug. 26-Sept. 3	4	2	
Damghan	Aug. 26			Present.
Kharek	May 28-June 11	21	13	
Meched	Aug. 18-Sept. 2	174	82	
Ouzoun Dare	Aug. 8			Do.
Sabzevar	Aug. 24			Do.
Sari	July 3-29	273	144	
Semman	Aug. 31-Sept. 2	14	5	
Yekchambe Bazar	June 3	6		

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

Reports Received from Dec. 29, 1917, to June 14, 1918—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands:				
Provinces				July 1-Dec. 29, 1917: Cases, 5,964; deaths, 3,655. Dec. 30, 1917-Apr. 13, 1918: Cases, 1,791; deaths, 1,285.
Antique	Nov. 18-Dec. 1	48	32	
Do	Feb. 3-9	4	4	
Bohol	Nov. 18-Dec. 29	169	111	
Do	Dec. 30-Apr. 13	567	446	
Capiz	Nov. 25-Dec. 29	27	21	
Do	Dec. 30-Mar. 23	219	182	
Cebu	Dec. 23-29	3		
Do	Dec. 30-Mar. 30	100	54	
Davao	Mar. 10-Apr. 13	12	11	
Iloilo	Nov. 25-Dec. 29	179	135	
Do	Dec. 30-Mar. 2	97	63	
Leyte	Nov. 25-Dec. 22	13	12	
Do	Feb. 3-Mar. 16	50	38	
Mindanao	Nov. 25-Dec. 29	337	196	
Do	Dec. 30-Feb. 9	341	220	
Misamis	Feb. 24-Apr. 6	154	98	
Occidental Negros	Nov. 25-Dec. 22	177	123	
Do	Jan. 13-Apr. 6	146	88	
Oriental Negros	Nov. 25-Dec. 29	99	62	
Do	Dec. 30-Mar. 30	23	15	
Romblon	Nov. 25-Dec. 1	1	1	
Surigao	Feb. 24-Apr. 13	43	38	
Zamboanga	Feb. 24-Apr. 6	35	29	
Russia:				
Tashkentnine	May 13			Present.
Tzaritsin	do			Do.
Siam:				
Bangkok	Sept. 16-22	1	1	
Turkey in Asia:				
Bagdad	Nov. 1-15		40	

PLAGUE.

Brazil:				
Bahia	Nov. 4-Dec. 15	4	4	
Do	Dec. 30-Feb. 23	4	3	
Rio de Janeiro	Dec. 23-29	1		
Do	Jan. 6-12	1	1	
British East Africa:				
Mombasa	Oct. 1-Dec. 31	31	18	
British Gold Coast:				
Axim	Jan. 8			Present.
Ceylon:				
Colombo	Oct. 14-Dec. 1	14	13	
Do	Dec. 30-Mar. 23	37	33	
China				Present in North China in January, 1918; pneumonic form.
Anhwei Province—				
Fengyanghsien	Feb. 27		9	Pneumonic.
Pengpu	do		1	Do.
Chili Province—				
Kalgan				Vicinity. Present in February, 1918.
Fukien Province—				
Amoy	Mar. 11-31			Present in vicinity.
Hongkong	Apr. 14-20	1	1	
Kiangsu Province—				
Nanking	Mar. 17-Apr. 5	19	15	
Shanshi Province				Present in February, 1918; 116 cases estimated.
Ecuador:				
Babahoyo	Feb. 1-15	1		
Duran	Feb. 16-Mar. 30	2	1	
Guayaquil	Sept. 1-Nov. 30	68	24	Reported outbreak occurring about Jan. 17, 1918.
Do	Feb. 1-15	44	18	
Do	Mar. 1-30	37	14	
Egypt				Jan. 1-Nov. 15, 1917: Cases, 728; deaths, 398.
Alexandria	Jan. 14-28	1	2	
Cairo	Dec. 17-23	2		
Port Said	July 2-Dec. 23	13	7	
Suez	July 2-Oct. 20	62	38	
Hawaii:				
Laupahoehoe	May 5	1	1	

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

Reports Received from Dec. 29, 1917, to June 14, 1918—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India				July 1-Dec. 29, 1917: Cases, 280,258; deaths, 212,022. Dec. 30, 1917-Feb. 23, 1918: Cases, 276,768; deaths, 221,858.
Bassein	Dec. 9 29		8	
Do	Dec. 30-Mar. 16		181	
Bombay	Oct. 28-Dec. 29	147	123	
Do	Dec. 30-Mar. 9	275	213	
Calcutta	Sept. 16-29		2	
Do	Dec. 30-Feb. 2		4	
Henzada	Oct. 21-27		1	
Do	Jan. 5-Mar. 16		117	
Karachi	Oct. 21-Dec. 29	27	20	
Do	Dec. 30-Mar. 14	94	72	
Madras	Feb. 3-Mar. 9	3	3	
Madras Presidency	Oct. 31-Nov. 24	5,786	4,519	
Do	Jan. 6-Mar. 16	11,649	9,012	
Mandalay	Oct. 14-Nov. 17		89	
Do	Dec. 30-Mar. 16		1,065	
Moulmein	Feb. 17-Mar. 16		74	
Myingyan	Dec. 30-Mar. 16		480	
Pegu	Feb. 10-Mar. 16		5	
Prome	Jan. 5-12		1	
Rangoon	Oct. 21-Dec. 22		56	
Do	Dec. 30-Mar. 16	697	639	
Toungoo	Dec. 9-29		5	
Do	Dec. 30-Mar. 16		69	
Indo-China:				
Provinces				Sept. 1-Dec. 31, 1917: Cases, 171; deaths, 128.
Anam	Sept. 1-Dec. 31	45	28	
Cambodia	do	95	83	
Cochin-China	do	31	17	
Saigon	Oct. 31-Dec. 23	17	6	
Do	Dec. 31-Apr. 14	173	96	
Java:				
East Java				Oct. 8-Dec. 31, 1917: Cases, 196; deaths, 193.
Do				Jan. 1-Feb. 4, 1918: Cases, 82; deaths, 81.
Residences—				
Kediri	Oct. 8-Dec. 31	1	1	
Madioen	do	49	49	
Samarang	do	110	109	
Surabaya	do	25	23	
Do	Jan. 15-Feb. 4	17	17	
Surakarta	Oct. 8-Dec. 31	11	11	
West Java				Nov. 25-Dec. 9, 1917: Cases, 45; deaths, 45. Dec. 1, 1917-Jan. 15, 1918: Cases, 106.
Peru:				
Ancachs Department—				
Casma	Dec. 1-Jan. 15	2		
Lambayeque Department	do	22		At Chiclayo, Ferrenafe, Jayanca, Lambayeque.
Libertad Department	do	72		At Guadalupe, Mansiche, Pacasmayo, Salaverry, San Jose, San Pedro, and country district of Trujillo.
Lima Department	do	9		City and country.
Piura Department—				
Catacaos	do	1		
Senegal:				
St. Louis	Feb. 2			Present.
Siam:				
Bangkok	Sept. 16-Dec. 23	13	9	
Do	Jan. 13-Mar. 16	37	27	
Straits Settlements:				
Penang	Mar. 17-23	1		
Singapore	Oct. 28-Dec. 29	5	7	
Do	Jan. 6-Mar. 23	81	72	

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

Reports Received from Dec. 29, 1917, to June 14, 1918—Continued.

SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria:				
Algiers	Nov. 1-Dec. 31	3	2	
Do	Jan. 1-Apr. 23	249	6	
Australia:				
New South Wales				July 12-Dec. 20, 1917: Cases, 36; Jan. 4-17, 1918: Case, 1.
Abermain	Oct. 25-Nov. 29	3		
Cessnock	July 12-Oct. 11	7		Newcastle district.
Eumangla	Aug. 15	1		
Kurri Kurri	Dec. 5-20	2		
Mungindi	Aug. 13	1		
Warren	July 12-Oct. 25	22		
Do	Jan. 1-17	1		
Brazil:				
Bahia	Nov. 10-Dec. 8	3		
Pernambuco	Nov. 1-15	1		
Rio de Janeiro	Sept. 30-Dec. 29	703	190	
Do	Dec. 30-Mar. 23	251	84	
Sao Paulo	Oct. 29-Nov. 4		2	
British East Africa:				
Mombasa	Oct. 1-Dec. 31	9	5	
Canada:				
British Columbia—				
Vancouver	Jan. 13-Mar. 9	5		
Victoria	Jan. 7-Feb. 2	2		
Manitoba—				
Winnipeg	Dec. 30-May 25	5		
New Brunswick—				
Kent County	Dec. 4			Outbreak. On main line Canadian Ry., 25 miles north of Moncton.
Do	Jan. 22	40		In 7 localities.
Northumberland County	do	41		In 5 localities.
Restigouche County	Jan. 18	60		
St. John County—				
St. John	Mar. 3-May 25	27		May 13, 1918: Cases present, 14.
Victoria County	Jan. 2	10		At Limestone and a lumber camp.
Westmoreland County—				
Moncton	Jan. 29-May 25	22		
York County	Jan. 22	8		
Nova Scotia—				
Cape Sable Island				Present May 8 at Clarks Harbor.
Halifax	Feb. 24-May 25	25		
Sydney	Feb. 3-May 25	27		
Ontario—				
Arnprior	Mar. 31-Apr. 6		1	
Hamilton	Dec. 16-22	1		
Do	Jan. 13-19	2		
Ottawa	Mar. 4-24	5		
Sarnia	Dec. 9-15	1		
Do	Jan. 6-May 18	34		
Toronto	Feb. 10-Apr. 6	2		
Windsor	Dec. 30-Jan. 5	1		
Prince Edward Island—				
Charlottetown	Feb. 7-13	1		
Quebec—				
Montreal	Dec. 16-Jan. 5	5		
Do	Jan. 6-Apr. 6	12		
Quebec	Apr. 21-May 11	3		
China:				
Amoy	Oct. 22-Dec. 30			Present.
Do	Dec. 31-Apr. 15			Do.
Antung	Dec. 2-23	14	2	
Do	Jan. 7-Apr. 27	13	3	
Changsha	Jan. 28-Mar. 10	6	1	
Chefoo	Jan. 27-Feb. 9			Do.
Chungking	Nov. 11-Dec. 29			Do.
Do	Dec. 30-Apr. 6			Do.
Dairen	Nov. 18-Dec. 22	3	1	
Do	Dec. 30-Apr. 27	99	12	
Hankow	Feb. 25-Mar. 3	1		
Harbin	May 14-June 30	20		Chinese Eastern Ry.
Do	July 1-Dec. 2	7		Do.
Hongkong	Dec. 23-29	1		
Do	Jan. 26-Apr. 13	22	10	
Hungtahotze Station	Oct. 28-Nov. 4	1		Do.

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

Reports Received from Dec. 29, 1917, to June 14, 1918—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
China—Continued.				
Manchuria Station	May 14–June 30	6		Chinese Eastern Ry.
Do	July 1–Dec. 2	3		Do.
Mukden	Nov. 11–21			Present.
Do	Feb. 10–Mar. 30			Do.
Nanking	Feb. 3–Apr. 6			Do.
Shanghai	Nov. 18–Dec. 23	41	91	Cases, foreign; deaths among natives.
Do	Dec. 31–Apr. 1	38	119	Do.
Swatow	Jan. 18			Unusually prevalent.
Tientsin	Nov. 11–Dec. 22	13		
Do	Dec. 30–Apr. 27	49		
Tsingtau	Feb. 4–Apr. 28	11	2	
Cuba:				
Habana	Jan. 7	1		Nov. 8, 1917: 1 case from Coruna; Dec. 5, 1917, 1 case.
Marianao	Jan. 8	1		6 miles distant from Habana.
Ecuador:				
Guayaquil	Sept. 1–Nov. 30	26	2	
Do	Feb. 1–Mar. 31	4	3	
Egypt:				
Alexandria	Nov. 12–18	2	1	
Do	Jan. 8–Apr. 15	11		
Cairo	July 23–Nov. 18	6	1	
France:				
Lyon	Nov. 18–Dec. 16	6	3	
Do	Jan. 7–Feb. 17	11	2	
Marseille	Jan. 1–31		2	
Paris	Jan. 27–Apr. 20	11	5	
Rouen	Mar. 31–Apr. 27	43	10	Including varioloid.
Great Britain:				
Cardiff	Feb. 3–9	4		
Hull	Mar. 17–30	3		
Greece:				
Saloniki	Jan. 27–Mar. 16		9	
Honduras:				
Santa Barbara Department	Jan. 1–7			Present in interior.
India:				
Bombay	Oct. 21–Dec. 29	50	12	
Do	Dec. 31–Mar. 9	918	381	
Calcutta	Jan. 27–Mar. 16		34	
Karachi	Nov. 18–Dec. 29	4	2	
Do	Jan. 27–Mar. 14	56	31	Nov. 11–16, 1917: 10 cases with 4 deaths; imported on s. s. Menesa from Basreh.
Madras	Oct. 31–Dec. 29	20	8	
Do	Dec. 30–Mar. 16	157	140	
Rangoon	Oct. 28–Dec. 22	6	1	
Do	Dec. 30–Mar. 16	80	19	
Indo-China:				
Provinces				Sept. 1–Dec. 31, 1917: Cases, 690; deaths, 180.
Anam	Sept. 1–Dec. 31	210	30	
Cambodia	do	19	11	
Cochin-China	do	440	133	
Saigon	Oct. 20–Dec. 30	120	26	
Do	Dec. 31–Apr. 14	1,407	437	
Laos	Oct. 1–Dec. 31	8	1	
Tonkin	Sept. 1–Dec. 31	18	5	
Italy:				
Castellamare	Dec. 10	2		Among refugees.
Florence	Dec. 1–15	17	4	
Genoa	Dec. 2–31	11	3	
Do	Jan. 2–Apr. 15	52	9	
Leghorn	Jan. 7–Apr. 7	33	7	
Messina	Jan. 3–19	1		
Milan				Oct. 1–Dec. 31, 1917: Cases, 32.
Naples	To Dec. 10	2		Among refugees.
Taormina	Jan. 20–Feb. 9	6		
Turin	Oct. 29–Dec. 29	123	120	
Do	Jan. 21–Apr. 7	96	10	
Japan:				
Kobe	Apr. 21–27	1		
Nagasaki	Jan. 14–May 5	18	4	
Nagoya	Mar. 24–Apr. 13	3		
Taihoku	Dec. 15–21	1		Island of Taiwan (Formosa).
Do	Jan. 8–Apr. 22	76	21	Do.
Tokyo	Feb. 11–Apr. 22	40		City and suburbs.
Yokohama	Jan. 17–Feb. 3	63		

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

Reports Received from Dec. 29, 1917, to June 14, 1918—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Java:				
East Java	Oct. 7-Dec. 23	50		Dec. 25-31, 1917: Cases, 7. Jan. 1-Feb. 4, 1918: Cases, 14.
Surabaya	Dec. 25-31	1		
Do	Jan. 29-Feb. 4	1		
Mid-Java				Oct. 10-Dec. 26, 1917: Cases, 86; death, 1. Dec. 28, 1917-Feb. 13, 1918: Cases, 41.
Samarang	Nov. 6-Dec. 12	4	1	
West Java				Oct. 19-Dec. 27, 1917: Cases, 231; deaths, 36. Dec. 28, 1917-Feb. 21, 1918: Cases, 257; deaths, 60.
Batavia	Nov. 2-8	1		
Do	Feb. 1-7	1		
Mesopotamia:				
Bagdad	Jan. 1-31		10	
Mexico:				
Aguascalientes	Feb. 4-17		2	
Ciudad Juarez	Mar. 3-June 1	4	2	
Guadalajara	Mar. 1-Apr. 30	24	5	
Mazatlan	Dec. 5-11		1	
Do	Jan. 29-Apr. 2	4	4	
Mexico City	Nov. 11-Dec. 29	16		
Do	Dec. 30-May 11	146		
Piedras Negras	Jan. 11	200		
Vera Cruz	Jan. 20-Apr. 28	16	3	
Newfoundland:				
St. Johns	Dec. 8-Jan. 4	29		
Do	Jan. 5-May 24	108		
Trepassey	Jan. 4			Outbreak with 11 cases reported.
Philippine Islands:				
Manila	Oct. 28-Dec. 8	5		
Do	Feb. 3-Apr. 20	215	94	Varioloid, 224.
Porto Rico:				
San Juan	Jan. 28-Apr. 7	37		Of these, 36 varioloid.
Portugal:				
Lisbon	Nov. 4-Dec. 15	2		
Do	Dec. 30-May 6	38		
Portuguese East Africa:				
Lourenço Marquez	Aug. 1-Dec. 31		16	
Do	Jan. 1-31		6	
Russia:				
Archangel	Sept. 1-Oct. 31	7		
Moscow	Aug. 26-Oct. 6	22	2	
Petrograd	Aug. 31-Nov. 18	76	3	
Vladivostok	Apr. 19-24	6	2	
Siam:				
Bangkok	Nov. 25-Dec. 1	1	1	
Do	Jan. 6-Mar. 16	26	14	
Spain:				
Coruna	Dec. 2-15		4	
Do	Jan. 20-Apr. 6		19	
Madrid	Jan. 1-Mar. 31		16	Jan. 1-Dec. 31, 1917: Deaths, 77.
Malaga	Oct. 1-31		19	
Seville	Oct. 1-Dec. 30		66	
Do	Jan. 1-31		20	
Valencia	Jan. 27-Feb. 2	1		
Straits Settlements:				
Penang	Feb. 24-Mar. 2	1	1	
Singapore	Nov. 25-Dec. 1	1	1	
Do	Dec. 30-Mar. 23	4		
Tunisia:				
Tunis	Dec. 14-20	1		
Do	Mar. 16-Apr. 12	2		
Turkey in Asia:				
Bagdad				Present in November, 1917.
Union of South Africa:				
Cape of Good Hope State	Oct. 1-Dec. 31	28		
East London	Jan. 20-26	1		Varioloid.
Transvaal—				
Johannesburg	Jan. 1-31	4		
Venezuela:				
Maracaibo	Dec. 2-8		1	

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

Reports Received from Dec. 29, 1917, to June 14, 1918—Continued.

TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria:				
Algiers	Nov. 1-Dec. 31	2	1	
Argentina:				
Rosario	Dec. 1-31		1	
Austria-Hungary:				
Hungary				Nov. 26, 1917-Jan. 20, 1918: Cases, 16; deaths, 2. Jan. 21-Feb. 24, 1918: Cases, 21.
Budapest	Nov. 26-Jan. 20	2		
Do	Jan. 21-Feb. 24	14		
Brazil:				
Pernambuco	Mar. 16-31	1		
Rio de Janeiro	Oct. 28-Dec. 1	7		
Canada:				
Ontario—				
Kingston	Dec. 2-8	3		
Quebec—				
Montreal	Dec. 16-22	2	1	
China:				
Antung	Dec. 3-20	13	1	
Do	Dec. 31-Mar. 30	3	2	
Chosen (Korea):				
Seoul	Nov. 1-20	1		
Do	Feb. 1-28	3	2	
Egypt:				
Alexandria	Nov. 8-Dec. 28	57	15	
Do	Jan. 8-Apr. 22	1,377	310	
Cairo	July 23-Dec. 23	143	74	
Port Said	July 30-Nov. 11	5	5	
France:				
Marseille	Dec. 1-31		1	
Germany				Dec. 23, 1917-Mar. 23, 1918: Cases, 106, deaths, 9.
Berlin	Mar. 2-23	1		
Breslau District	Feb. 3-23	4		
Konigsberg District	do	1		Prisoner of war.
Lorraine				Dec. 23, 1917-Feb. 23, 1918: Cases, 77; deaths, 4. Of these, 59 cases 1 death, in workmen's camps at Pontingen and Werningen.
Metz	Dec. 23-Feb. 2	17	3	
Posen District	Feb. 3-23	7		
Great Britain:				
Belfast	Feb. 10-May 11	22	3	
Dublin	Mar. 24-Apr. 27	4		
Glasgow	Dec. 21	1		
Do	Jan. 20-May 4	18		
Manchester	Dec. 2-8	1		
Greece:				
Arta	Feb. 19	2		
Janina	Feb. 14	110		Jan. 27, epidemic.
Saloniki	Nov. 11-Dec. 29		72	
Do	Dec. 30-Apr. 6		42	
Italy:				
Bagnasco	Mar. 18-Apr. 7	4		Province of Cuneo.
San Remo	Mar. 10-16	2		
Japan:				
Nagasaki	Nov. 23-Dec. 16	5	5	
Do	Jan. 7-Apr. 21	19	8	
Java:				
East Java				Oct. 15-Dec. 31, 1917: Cases, 39; deaths, 7. Jan. 1-Feb. 11, 1918: Cases, 34; deaths, 7.
Surabaya	Dec. 17-31	9	1	
Do	Jan. 1-Feb. 11	29	4	
Mid-Java				Oct. 10-Dec. 26, 1917: Cases, 63; deaths, 2. Dec. 28, 1917-Feb. 13, 1918: Cases, 24; deaths, 2.
Samarang	Oct. 9-Dec. 26	20	2	
Do	Dec. 27-Feb. 6	20		
West Java				Oct. 19-Dec. 27, 1917: Cases, 94; deaths, 17. Dec. 28, 1917-Feb. 21, 1918: Cases, 56; deaths, 1.
Batavia	Oct. 1-Dec. 27	50	15	
Do	Dec. 28-Feb. 21	47	2	
Lithuania				Dec. 30, 1917-Mar. 2, 1918: Cases, 1,878.
Mexico:				
Aguascalientes	Dec. 15		3	
Do	Jan. 21-May 12		22	
Durango State—				
Guanacevi	Feb. 11			Epidemic.
Guadalajara	Apr. 1-30	2	2	
Mexico City	Nov. 11-Dec. 29	476		
Do	Dec. 30-May 21	848		
Newfoundland:				
St. Johns	Mar. 30-Apr. 5	1	1	

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

Reports Received from Dec. 29, 1917, to June 14, 1918—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Norway:				
Bergen	Feb. 1–16	3		
Poland				Nov. 18–Dec. 8, 1917: Cases, 2,568; deaths, 218. Dec. 23, 1917–Mar. 9, 1918: Cases, 8,403; deaths, 315.
Lodz	Nov. 18–Dec. 8	219	25	
Do	Feb. 10–Mar. 9	292	35	
Warsaw	Nov. 18–Dec. 8	1,461	141	
Do	Feb. 10, Mar. 9	2,747	331	
Portugal:				
Lisbon	Mar. 3–30	18		Feb. 21: Present.
Oporto	Dec. 1–31	23	4	
Do	Jan. 1–Mar. 8	1,811	161	
Russia:				
Archangel	Sept. 1–14	7	2	
Moscow	Aug. 26–Oct. 6	49	2	
Petrograd	Aug. 31–Nov. 18	32		
Do	Feb. 2			Present.
Vladivostok	Oct. 29–Nov. 4	12	1	
Do	Apr. 19–25	3		
Spain:				
Almeria	Apr. 1–15	1	1	
Corcubion	Apr. 11			Present. Province of Coruna.
Madrid	Jan. 1–Mar. 31		2	
Sweden:				
Goteborg	Nov. 18–Dec. 15	2		
Switzerland:				
Basel	Jan. 6–19	1	1	
Zurich	Nov. 9–15	2		
Do	Jan. 13–19	2		
Tunisia:				
Tala	Mar. 18			Epidemic.
Tozer	....do			Do.
Tunis	Nov. 30–Dec. 6		1	
Do	Feb. 9–May 3	46	20	Of these, 26 in outbreak in prison.
Union of South Africa:				
Cape of Good Hope State				Sept. 10, 1917–Mar. 17, 1918: Cases 4,444 (European, 34); deaths, 902 (European, 15).
Natal				Dec. 1, 1917–Mar. 17, 1918: Cases, 50; deaths, 11.

YELLOW FEVER.

Brazil:				
Bahia	Mar. 10–16	1	1	
Ecuador:				
Babahoyo	Feb. 1–15	1	1	
Guayaquil	Sept. 1–Nov. 30	5	3	
Do	Feb. 1–15	1		
Do	Mar. 1–31	12	7	
Milagro	Feb. 1–15	1	1	
Yaguachi	Nov. 1–30	1		
Guatemala:				
Retalhuleu	Apr. 22–May 23			Present. About 25 miles from Champerico, Pacific port. Disease spreading along Pacific coast.
Honduras:				
Tegucigalpa	Dec. 16–22		1	
Do	Jan. 6–19		1	