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POTENCY OF ANTIMENINGOCOCCIC AND ANTIPNEUMOCOCCIC SERUMS.

Since December, 1917, all lots of serum intended for use against meningococcus infection or pneumococcus infection (Type I), and subject to control by the Treasury Department, have been tested for potency at the Hygienic Laboratory. Tests for potency are made at the manufacturing establishments, but before being released for interstate sale, each lot must pass the official test at the Hygienic Laboratory. Under these provisions, 461 lots of antimeningococcic serum and 781 lots of antipneumococcic serum have been tested. Numerous tests have also been made on serums from other sources.

In addition to the usual tests for sterility, the following are the minimum requirements:

Duplicate samples of 15cc. each are to be submitted of each lot as ready for the final container, after all treatments, such as the mixing in of preservatives and filtration, are completed, and after the lot has passed satisfactory tests at the manufacturing establishment. Protocols of these tests shall be sent to the Hygienic Laboratory.

The serums are to be free from excessive color or turbidity. The maximum intensity of color is that represented by a 0.3 per cent saturated solution of bismarck brown in absolute alcohol, and the maximum turbidity that of 200 parts per million of silica. There should be no gross particles in the serum.

Antimeningococcic serums are considered satisfactory which show an agglutination titer or complement fixation titer against each antigen at least equal to that shown by the control serum furnished by the Hygienic Laboratory.

Antipneumococcic serums are considered satisfactory which show protection of at least as great a percentage of mice as are protected by the control serum furnished by the Hygienic Laboratory. At least two tests of three mice each shall be made of each serum, not less than 24 hours apart, and the total resultant protection shall be compared with the protection of the two sets of mice receiving the control serum. No set of tests shall be considered except those which show some mortality, but not complete, with the control serum.

Method of Performing Agglutination Test for Antimeningococcic Serum.

The antigen.—Strains of meningococci which have been classified by absorption of agglutinin are selected, and are identified in accordance with the following criteria: Gram-negative diplococci which ferment glucose and maltose, but not saccharose, in 24 hours, at 37°; which agglutinate, respectively, with each of four specific rabbit serums, and by preference show no cross-agglutination in a dilution of 1:50 of a serum which will agglutinate homologous cocci in a dilution of 1:400. The strains for antigen production are at present identified as follows:

For Antigen I, H. L. No. 123, originally Rockefeller Institute No. 85.

For Antigen II, H. L. No. 55, originally Rockefeller Institute No. 1.

For Antigen III, H. L. No. 57, originally Rockefeller Institute No. 30.

For Antigen IV, H. L. No. 60, originally Rockefeller Institute No. 81.

Preliminary to preparing an antigen, the strain should be transplanted daily on glucose agar for at least five transfers.

The organism is grown on glucose agar, in Blake bottles, from 12 to 16 hours, at 37° C. The seeding of the glucose agar is made by suspending the 12 to 16 hour growth on a glucose agar slant in 2 cc. of glucose broth, and carrying it over to the Blake bottle with a pipette. The glucose agar used in growing the antigens is of a beef infusion base, 1.5 to 2 per cent agar, 0.5 to 1 per cent glucose, and made to a P_h of 7.5, or 0.3 to 0.5 per cent acid to phenolphthalein by the Fuller scale (hot titration). The agar should, preferably, be cleared without filtration through cotton or paper.

The harvest from the bottles is made by suspending the growth in physiological saline solution, using 10 cc. of saline to suspend the growth of each flask. This suspension is immediately heated at 65° C. for one hour. A purity check by smears stained by Gram's method is made while the stock is heating. After heating, it is diluted with saline (to which phenol is added to make a 0.5 per cent solution) to a turbidity equivalent to that of a silica standard of 1,000 parts per million. To prepare this silica standard, use Pear's precipitated fuller's earth, sift through a 200-mesh sieve, and suspend 1 gram in 1 liter of distilled water, which gives 1,000 parts per million. This turbidity will correspond to approximately 2,000,000,000 meningococci per cc. The turbidity is read in a nephelometer, or can be satisfactorily compared in half-ounce vials (18 by 60 mm.) of uniform thickness. Starting with a small known amount of the suspension to be standardized, the filtered phenolized saline solution is added to bring the suspension to the turbidity of the standard, and the proportional amount then added to the stock.

This diluted antigen can be preserved in the cold room (15° C.) for several weeks with but little autolysis or disintegration.

Antigens giving more than + agglutination with 1:50 dilution of normal horse serum, or less than an average +++ agglutination with 1:100 dilution of the control antimeningococcic serum, should not be used.

The serum.—The dilutions of the serums are made in test tubes of 28 by 150 mm. to permit of thoroughly mixing by blowing dilution and air through a pipette carried to the bottom of the mixture. The lowest dilution tested is 1:50, made by adding 1 cc. of serum to 24 cc. saline, dilution A, and using 0.5 cc. of dilution A and 0.5 cc. of antigen suspension per tube. All dilutions up to 1:400 are made from the first dilution. The dilutions contain 0.02 cc., 0.01 cc., 0.005 cc., 0.0025 cc., 0.00125 cc. (and 0.000625 cc. if necessary) of the serum in 0.5 cc. Dilutions are to be carried high enough to show the extreme titer of the control serum, each dilution being half the strength of the next lower. Intermediate dilutions may be advisable for closer comparison with the control serum.

The test.—All tests are run in parallel series with the control serum, with the two lowest dilutions of normal horse serum and with saline.

The tubes used for the tests are 8 by 75 mm. in size and are set up in metal racks.

The antigen is pipetted into the tubes in 0.5 cc. quantities, followed by the various serum dilutions in equal amount. One pipette is used for delivering all the dilutions of one serum, starting with the most dilute and proceeding toward the lowest dilution. The antigen and serum are mixed by shaking and are incubated for from 16 to 18 hours in a water bath at 56° C.

Readings are made in four degrees of agglutination (indicated by + + + +, + + +, + +, and +, or 4, 3, 2, and 1) and 0 or no agglutination. The degree of clarity of the supernatant fluid after the overnight sedimentation at 56° is taken as the basis for reading these degrees of reaction, and for each day's tests a set of standard tubes is made up for each of the four antigens to serve as criteria for making the readings for that day. To the cloudy supernatant suspension from tubes showing no agglutination (saline or normal serum control tubes) different proportions of saline solution are added to give different degrees of turbidity. Tube A contains 1 cc. of clear saline; tube B (one for each antigen) contains 0.25 cc. of the unagglutinated suspension and 0.75 cc. saline; tube C (one for each antigen) contains 0.5 cc. of the unagglutinated suspension and 0.5 cc. saline; tube D (one for each antigen) contains 0.75 cc. of the unagglutinated suspension and 0.25 cc. saline; tube E (one for each antigen) contains 1 cc. of the unagglutinated suspension; that is, the straight antigen diluted with equal parts of saline or diluted normal serum. A + + + + reaction is complete agglutination, corresponding to tube A—that is, complete sedimentation with water-clear supernatant fluid. A + + + is

any degree of agglutination less than this, but giving a turbidity of the supernatant fluid not greater than in tube B of the corresponding antigen. A ++ is any degree of agglutination definitely less than + + +, but with a turbidity of the supernatant not greater than in tube C. A + includes agglutinations giving a turbidity of the supernatant fluid definitely greater than that in tube C, but not greater than in tube D. No agglutination, indicated by 0, includes all lower degrees of agglutination corresponding to tube E.

To be satisfactory in agglutinin content a serum should give a + + + reaction with each of the four antigens in dilutions as high as the control serum.

Method of Performing Complement Fixation Test for Antimeningococcic Serum.

I. *The cells.*—The cells used in the test and titrations are the red blood cells of the sheep, washed free of coagulable protein, made up with the amboceptor solution to twenty times the volume of defibrinated blood from which the cells were obtained. After the final washing of the cells they are centrifuged and resuspended in saline solution only up to the original volume of defibrinated blood from which they were obtained; the amount of the final suspension of this strength to be used is therefore 5 per cent of the volume of dilute cell suspension required for the day's tests. The blood of sheep whose cells give irregular or bizarre results in the titration should not be used. The cells are sensitized as follows: The saline needed to make up the required volume—that is, nineteen times as much saline as concentrated cell suspension—is divided into two approximately equal portions, half being added to the necessary amount of amboceptor and half to the concentrated suspension. These two dilutions are then rapidly mixed. The unit of cells is contained in 1 cc. of this mixture. One unit of cells is used in the tests.

II. *The amboceptor.*—The amboceptor used is the serum of a rabbit which has been immunized to red blood cells of the sheep. The undiluted rabbit serum is preserved with 0.25 per cent phenol and kept at 5° C. A unit of amboceptor is that amount which gives complete hemolysis of the unit volume of sheep cells with 0.05 cc. of freshly drawn pooled guinea pig complement; the amounts of amboceptor used in this titration are 0.0001 cc., 0.00015 cc., 0.0002 cc., 0.0003 cc., 0.0005 cc., 0.0007 cc., 0.001 cc., 0.0015 cc., 0.002 cc. Amboceptor should be retitrated every two months.

The amboceptor is diluted for use when mixed with cells as above described (Section I) so that 200 units are contained in each 100 cc. of cell-amboceptor dilution. Two units of amboceptor are used in the tests.

III. *The complement.*—The complement used is that of guinea pig serum with the addition of one-tenth of its volume of saturated (30 per cent) sodium chloride solution, and it is kept below 10° C. This is diluted with three parts of distilled water before use, to make 0.9 per cent NaCl solution. The serum of several pigs bled at one time is pooled for uniformity. The unit of complement is that amount of guinea-pig serum which gives complete hemolysis with two units of amboceptor and one unit of the sheep-cell suspension. In titrating, a mixed antigen containing one-fourth of a unit of each of the four antigens (the resulting mixture corresponding to one full unit) and 1/250 cc. normal horse serum are incubated with each amount of complement for one hour, when the amboceptor and cells are added and the titration read after one hour in the 37° water bath. The amounts of complement used in this titration are 0.02 cc., 0.024 cc., 0.03 cc., 0.036 cc., 0.042 cc., 0.05 cc., 0.06 cc. The complement should have a unitage less than 0.05 cc. The complement is titrated before each test. One unit of complement is used in the tests.

IV. *The antigen.*—The four antigens are made in the same manner as for the agglutination test. The unit of antigen selected is the amount next larger than that which gives a + + + fixation with 1/500 cc. of the control antimeningococcic serum; antigens which, in amounts next larger than the unitage chosen, give any fixation with 1/250 cc. normal horse serum should not be used. The amounts of antigen used in titrating the unit value are 0.01 cc., 0.013 cc., 0.016 cc., 0.02 cc., 0.025 cc., 0.03 cc., 0.04 cc., 0.05 cc., 0.06 cc., 0.08 cc., 0.1 cc., 0.13 cc. Antigens should be retitrated every two months. One unit of antigen is used in the tests.

V. *The serum.*—The serum is not inactivated as a routine, but freshly drawn sera should be inactivated without preservative at 56° for 30 minutes. The dilution of the serum is made in tubes 28 by 150 mm. in size to permit thorough mixing by blowing dilution and air through a pipette carried to the bottom of the tube. The lowest amount tested is 1/250 cc., made by adding 0.4 cc. of serum to 19.6 cc. saline (dilution A) and making dilution B by adding 2 cc. of A to 8 cc. of saline. One cc. of this dilution B contains 1/250 cc. serum. All further dilutions are made from dilutions A or B, to obtain in each cubic centimeter 1/500 cc., 1/1000 cc., 1/2000 cc., and 1/4000 cc. of serum. The dilutions should be carried high enough to show the extreme titer of the control serum.

VI. *The test.*—All tests are run in parallel series with the control serum and with a normal horse serum to which preservative has been added. Each serum is tested with each of the four antigens. The tubes used for the tests are 15 by 120 mm. in size and are set up

in metal racks. The final volume used in each tube is 4 cc., allowing 1 cc. each for antigen, serum, and complement, the amboceptor and cells being combined in 1 cc. volume for each tube. The volume in the control tubes is made up to 4 cc. with saline.

A control is used on each serum to determine its anticomplementary value by adding to one tube without antigen the amount of serum used in the lowest test dilution. A control of each antigen is made by setting up a tube with the unit of antigen, without serum. A control is made on the hemolytic system without antigen or serum. A control is made on the sheep cells and amboceptor, without complement, antigen, or serum, to determine the presence of any hemolysis.

Incubation is carried out in a 37° water bath. The antigen-serum-complement mixture is incubated for an hour; then the amboceptor and cells are added and incubation is carried on for a second hour. Readings are made after standing overnight in the cold room at 15°.

Four degrees of positive fixation (++++, +++, ++, and +, or 4, 3, 2, and 1), and 0 fixation or complete hemolysis are recognized. For each day's tests a set of color standards is made up to serve as a criterion for making the readings for that day. These color standards are made up from completely hemolyzed tubes without visible sediment of red cells, mixed with saline solution in varying proportions to give colors representative of 0 per cent, 25 per cent, 50 per cent, 75 per cent, and 100 per cent hemolysis. Tube A is a tube containing 4 cc. of clear saline, without color (0 hemolysis). Tube B contains 1 cc. from a completely hemolyzed tube and 3 cc. of saline (corresponding to 25 per cent hemolysis). Tube C contains 2 cc. from a completely hemolyzed tube and 2 cc. of saline (corresponding to 50 per cent hemolysis). Tube D contains 3 cc. from a completely hemolyzed tube and 1 cc. of saline (corresponding to 75 per cent hemolysis). Tube E is a completely hemolyzed tube, without added saline.

++++, or complete fixation, should give no color in the supernatant fluid after standing overnight, corresponding to tube A; +++ fixation is taken as any amount of fixation, giving some color in the supernatant fluid, but no deeper than that of tube B; ++ fixation corresponds to any degree of hemolysis definitely greater than this but showing no more color than tube C; + includes all slighter degrees of fixation, with an appreciable sediment of red cells; and 0 fixation or complete hemolysis (tube E) should be entirely clear, without sediment.

The titer of a serum is regarded as that dilution at which it gives +++ fixation.

Method of Performing Protection Test for Antipneumococcic Serum.

I. *The culture.*—The culture of Type I pneumococcus should be of such virulence that it is fatal to mice, as a rule, in 0.00,000,001 cc. of an 18-hour beef infusion broth culture. Simultaneously with each day's tests, eight mice are inoculated with the culture alone, receiving no serum, in order to check the virulence of the culture used. These cultural check mice receive 0.00,000,1 cc., 0.00,000,01 cc., 0.00,000,001 cc., and 0.00,000,000,1 cc. of the culture, two mice on each dose. These dilutions are made by adding 1 cc. of the next stronger dilution to 9 cc. broth in tubes 28 mm. in diameter to permit thorough mixing by blowing mixture and air through the pipette which is carried to the bottom of the tube. A separate pipette is used for each dilution. The culture should be checked for purity by plating on blood agar plates previous to each test. At the Hygienic Laboratory the broth for growing the culture is made from beef infused in the ice box, and 2 per cent peptone is used. The culture is passed through mice weekly, 0.5 cc. of an 18-hour broth culture being inoculated intraperitoneally into each of three mice, which are etherized in 5 or 6 hours; about 0.5 cc. of heart's blood is obtained from each mouse and distributed into two tubes of broth and a blood agar plate (for purity test). These tubes are incubated overnight. Three of the six tubes which show a good growth of pneumococcus in pure culture, are selected and stored at 15° as stock cultures. After about 3 days (the day before the test) 0.5 to 1.0 cc. are transplanted from each stock culture to fresh tubes of broth, and plates are made for purity. The stock cultures are quickly put back at 51°, to be used for planting the tubes 18 hours before the next passage through mice. The transplants to be used in the test are incubated for from 16 to 18 hours, and of the 3, those showing a good growth of pure pneumococcus are pooled and diluted for the test. All dilutions of culture are made in broth and should not stand diluted for more than an hour at room temperature.

One-tenth of a cubic centimeter of the culture, diluted so that the dose is contained in 0.5 cc. volume, is given to each mouse, except the cultural check mice.

II. *The serum.*—Two-tenths of a cubic centimeter of each serum (including the control serum), diluted with saline so that this dose is contained in 0.5 cc. volume, is given to each mouse, except the cultural check mice.

III. *The test.*—For each serum tested, at least 3 mice are injected intraperitoneally with 0.2 cc. of the serum, followed within less than 5 minutes by 0.1 cc. of culture, intraperitoneally. Six mice should receive the control serum, 3 at the beginning and 3 at the end of each test. The mice used should weigh 18–22 gms. If there is much

variation in weight, they should be arranged in three weight-groups, and a light, a medium, and a heavy mouse chosen for each serum. The mice are observed for 96 hours. All mice counted as fatalities must be proved, by smear and cultures from the heart's blood, to have died with an uncomplicated pneumococcus septicemia. Survivals of less than 12 hours should be regarded as "contaminations." Mice dying of infections, accidents, or from causes other than pure pneumococcus septicemia, as revealed by necropsy, are regarded as "contaminations." Contaminations should be regarded as neither deaths nor survivals, but should be omitted in reading the tests as though they had not been injected. Tests are read 120 hours after injection, to allow for the obtaining of results of necropsies on mice dying on the fourth day. The control serum should protect at least 50 per cent of the mice, on the average. The following data should be included in the protocols of tests:

Date of test, including month, day, and hour.

Operator's initials.

Period of exposure of diluted culture to room temperature.

Period of time necessary for injection of all mice.

Hours of survival of mice dying up to 96 hours, indicated by number.

Survival of mice for 96 hours, indicated by S.

Contamination to be indicated by enclosing in parentheses the number of hours of survival.

PROTOCOL OF TESTS.

(Sample.)

Three mice are injected for each serum used. The serum dose of 0.2 cc. is followed by 0.1 cc. of culture.

"S" indicates survival of 96 hours; contamination is indicated by parentheses.

Cultures passed through mice October 12, 1919.

Dilution of culture began 11.48 a. m.

Injection of serum began 12.02 p. m.

Injection of culture completed 12.09 p. m.

Serum test.		Culture checks.	
Serum used.	Hours of survival.	Cubic centimeters of culture used—2 mice to each dose.	Hours of survival.
Control serum P ₁ C.....	72 S S	0.00,000,1.....	29 43
Test serum X.....	(11) (41) S S S	0.00,000,01.....	39 41
Test serum Y.....	S S S	0.00,000,001.....	42 43
Test serum Z.....	29 S S	0.00,000,000,1.....	49 S
Control serum P ₁ C.....	(90) 37 S		

Date: Oct 17, 1919.

Operator: A. B. C.

A BRIEF RÉSUMÉ OF VERNES' METHOD FOR SERUM DIAGNOSIS OF SYPHILIS.¹

Biologic and Physical—Chemical Phenomena of the Serum Reaction.

By Dr. DAISY M. O. ROBINSON, Regional Consultant, United States Public Health Service.

(1) Vernes ascertained that a metallic or an organic colloidal suspension in distilled water, or water containing certain electrolytes in varying concentrations, is flocculated when mixed with human-blood serum. This flocculation occurs with a definite rhythm which varies according to the quantities of serum added. There is a zone of flocculation with certain quantities of human serum alternated with a zone of nonflocculation, and one obtains a characteristic picture of interposed zones of flocculation and nonflocculation. This phenomenon ceases to take place when the quantities of serum become too minute to produce any effect upon the equilibrium of the colloidal suspension. Vernes observed this phenomenon first with a colloidal iron suspension of certain concentrations and then with several other inorganic colloids as well as with those of an organic nature.

When these colloidal suspensions were mixed with normal human serum, the flocculation did not occur in the same quantities as it did when the suspensions were mixed with the serum from a syphilitic person; that is, the flocculation zone with normal serum did not occur with the same quantities as it did with syphilitic serum.

Utilizing this fact, Vernes proposed a method by which a normal serum could be differentiated from that of a syphilitic. His method consisted in employing such quantities of serum as those which produce a flocculation of colloidal suspension with syphilitic serum only. By using certain quantities any human serum can, of course, induce the same phenomenon; but this is avoided by a careful selection of quantities within which no nonsyphilitic serum can cause a flocculation.

(2) Vernes found after further experiments that an extract from the heart muscles of the horse, as obtained by a thorough extraction of substances that can be dissolved out by means of perchloride of ethyl and alcohol from thoroughly desiccated powder of the muscle (using Soxhlet apparatus at 41°–45° C. under reduced pressure), gives a colloidal suspension more stable than colloidal iron when mixed with saline water. It not only yields a finer suspension, but it enables a differentiation of a syphilitic from a normal serum with greater definition. The substances extracted with perchloride of ethyl and then alcohol, from the dried powder of horse's heart muscle, are called "perethynol," from *per* (chloride of) *ethyl*, and *alcohol*. This mass of substances contains various lipoids.

¹ From L'Institut Prophylactique, Paris.

(3) In a reaction dealing with a colloidal suspension it is of the utmost importance to produce a constant suspension each time, capable of being standardized, to insure a uniform degree of molecular dispersion; otherwise the results obtained could not be compared with each other. The flocculation zone naturally shifts toward one direction or the other, according to the degree of dispersion. For this reason it was prerequisite that a scale of opacity or opalescence should be prepared for standardizing the perethynol suspension on each occasion when one was made.

This scale was devised by Vernes, who utilizes a mixture of tinctures of benzoin and quillaja with certain quantities of glycerinated water, which mixture is fairly stable if kept under certain conditions. Vernes prepared several grades of opalescence, and recommends that one of them, which he designated as grade 3, be used as the standard for the perethynol suspension to be used in the reaction. As a matter of fact a 1/40 dilution in saline solution gives the desired opalescence; if slightly more or less, it is easily adjusted to the exact scale. Particular stress is laid upon the importance of mixing the perethynol with saline solution by dropping the latter from a burette to the former under constant agitation. A special set of apparatus (agitator, burette, etc.) is employed by Vernes.

(4) Vernes conceived the idea of translating the flocculation phenomenon into a color reaction which would be easier to measure. His idea was to find a substance which would indicate the degree of changes in the syphilitic serum by losing one of its activities while counteracting the flocculating effect of the serum upon the colloidal suspension of perethynol.

According to Vernes, a fresh serum of the pig fulfills this purpose as it acts as an antiflocculent toward the syphilitic serum and at the same time loses some of its hemolytic property upon sheep's red blood corpuscles. When mixed with a normal serum, the antiflocculent property of the pig's serum is not used up; hence there is no loss of its hemolytic activity.

According to Vernes, the degree of loss in the hemolytic power of pig's serum when mixed with the syphilitic serum and perethynol suspension corresponds with the degree of the specific changes in the human serum in question. From this he proceeded to set up an accurate determination of the change in human serum, due to syphilis, by introducing a colorimetric scale consisting of eight degrees of intensity. His scale is a series of artificial tints made to approximate those of various dilutions of laked red corpuscles. The grades are divided between 0 (absence of hemolysis) and 8 (complete hemolysis), with intermediary tints. The color scale of Vernes contains acid fuchsin, picric acid, formol, etc., and is comparatively stable in the dark. It may be seen that once a color scale is provided, it is easy to prepare a uniform suspension of sheep's corpuscles on each

occasion by taking that concentration which will give the color scale 8 when laked in a definite (constant) volume of fluid.

(5) Pig's serum is collected at a slaughterhouse and is used within 24 hours; it should be free from red corpuscles and hemoglobin tint. The quantity used is constant in volume and hemolytic power (against washed sheep's red corpuscles). As a rule, a titration carried out in two sets of several tubes (one set with undiluted and the other with diluted serum) shows whether the sample is sufficiently strong or not. The majority of pig's serums contain enough amboceptor and complement.

(6) Sheep's corpuscles should be washed with saline solution and made up to the desired suspension. The patient's serum is heated to 55° C. for 20 minutes just before being used in the test. It must be free from hemoglobin or corpuscles (centrifugalization is employed).

(7) The following is the method of procedure: Every reagent must be contained in a constant volume (0.8 cc.) of saline solution, except the patient's serum (0.2 cc.). Spinal fluid is used unheated in quantity of 1.6 cc. The tubes (11 mm. inner diameter) receive the patient's serum, perethynol suspension, and pig's serum, and are then placed in a thermostat (37° C.) for 75 minutes. At the end of incubation, sheep's corpuscles are added to all and these are once more incubated at 37° for hemolysis which is usually complete in from 28 to 30 minutes. Those tubes which show partial hemolysis are at once centrifugalized, and the intensity of tint in the supernatant fluid is read with the aid of the artificial colorimeter. Appropriate controls are provided.

(8) A chart system of recording the colorimetric determinations on different occasions is kept for every patient and is called by Vernes, "syphilimetrie." The chart is marked with the grades of tints from 0 to 8. It is claimed by him that the absence of the reaction beyond eight months after the treatment ceased indicates a permanent cure of syphilis.

(9) Incidental to this method, Vernes devised a rheometer (for measurement of a definite amount of serum) and an aspiropipeur (a syringe which aspirates a liquid from a container and forces it out by a piston into the test tubes) for distributing a given quantity of reagent to a large number of test tubes in rapid succession.

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CLOSING SCHOOLS AS A MEANS OF CONTROLLING EPIDEMICS.

Closing schools as a means of controlling epidemics of measles, whooping cough, scarlet fever, diphtheria, smallpox, and poliomyelitis should be considered as a last resort to be used only when thorough and systematic application of other measures fails to effect control. As a method it is clumsy, unscientific, and unsatisfactory, for it fails to control and results in the loss of school time and money. The modern method of careful daily inspection of infected schools, isolation of sick children, and quarantine of contacts, is both more effective and economical.

Such is the summary of report made by a committee of the Bureau of Education cooperating with a similar committee of the American Public Health Association. This committee consisted of Dr. W. S. Small, Bureau of Education, chairman; Dr. W. C. Woodward, health officer, Boston; Dr. F. G. Curtis, health officer, Newton, Mass.; Dr. Bernard Kahn, acting director of medical inspection of public schools, Philadelphia; Dr. Taliaferro Clark, United States Public Health Service.

The inquiry of the committee developed that State laws show very few specific statutory references to the matter, rather general authority being vested in an administrative body. The review of literature showed that there has been a progressive abandonment of faith in, and practice of, closing schools as a means of controlling epidemics affecting school children. Such exceptions as were found in the literature related to the following special conditions: Inadequate medical supervision of schools; severity of epidemic that defies all efforts at control; and epidemics in which the etiology of the disease is unknown, such as infantile paralysis, epidemic meningitis, and possibly a few others.

The successful control of epidemic diseases among school children requires—

1. Keeping the schools open, with the possible exception of sparsely settled rural districts when medical inspection can not be obtained and where aggregation takes place only in the schools;
2. Careful daily or frequent periodical inspection of schools;
3. Careful provision for exclusion of cases and contacts, emphasis being placed on clinical data rather than upon fixed periods of exclusion;
4. Systematic home visitation; and
5. Reliance upon natural and physical cleansing rather than upon chemical disinfectants.

DEATHS DURING WEEK ENDED NOV. 8, 1919.

From the "Weekly Health Index," Nov. 11, 1919, issued by the Bureau of the Census, Department of Commerce.

Deaths from all causes in certain large cities of the United States during the week ended Nov. 8, 1919, infant mortality (per cent), annual death rates, and comparison with corresponding week of preceding years.

City.	Population July 1, 1918, estimated.	Week ended Nov. 8, 1919.		Average annual death rate per 1,000. ²	Per cent of deaths under 1 year.	
		Total deaths.	Death rate. ¹		Week ended Nov. 8, 1919.	Previous year or years. ³
Albany, N. Y.	112,565	32	14.8	C12.2	15.6	C 7.7
Atlanta, Ga.	201,732	40	10.3	C19.1	7.5	C16.7
Baltimore, Md.	669,981	169	13.2	A15.4	16.6	A17.8
Birmingham, Ala.	197,670	40	10.6	A14.9	22.5	A10.8
Boston, Mass.	785,245	186	12.4	A14.5	19.4	A16.1
Buffalo, N. Y.	473,229	105	11.6	A13.0	14.3	A17.6
Cambridge, Mass.	111,432	32	15.0	A13.9	18.8	A19.3
Chicago, Ill.	2,596,681	510	10.2	A12.2	14.3	A16.2
Cincinnati, Ohio.	418,022	107	13.3	C14.5	10.3	C10.4
Cleveland, Ohio.	810,306	159	10.2	C11.1	19.5	C14.5
Columbus, Ohio.	225,296	40	9.3	C15.6	17.5	C 3.0
Dayton, Ohio.	180,655	39	15.6	A14.5	20.5	A12.6
Denver, Colo.		64		A13.3	6.3	
Fall River, Mass.	128,392	31	12.6	C12.3	9.7	C33.3
Grand Rapids, Mich.	135,450	28	10.8	C11.4	10.7	C17.2
Indianapolis, Ind.	290,389	62	11.1	C15.3	14.5	C 7.2
Jersey City, N. J.	318,770	73	11.9	C13.7	12.3	C 9.8
Kansas City, Mo.	313,785	87	14.5	C14.7	17.2	C 8.1
Los Angeles, Calif.	568,495	120	11.0	A12.0	9.2	A 7.0
Louisville, Ky.	242,707	45	9.7	C16.5	8.9	C10.5
Lowell, Mass.	102,081	26	12.4	A15.4	23.1	A20.8
Memphis, Tenn.	154,759	21	21.2	C17.9	11.1	C 0.0
Milwaukee, Wis.	453,481	102	11.7	A11.2	19.6	A18.5
Minneapolis, Minn.	383,442	34	11.4	C10.9	6.0	C14.1
Nashville, Tenn.	119,215	31	13.6	C18.1	12.9	C12.2
Newark, N. J.	428,684	102	12.4	A12.8	14.7	
New Haven, Conn.	154,865	41	13.8	C15.4	14.6	C11.1
New Orleans, La.	382,273	109	14.9	A21.8	14.7	A10.3
New York, N. Y.	5,215,879	1,032	10.3	A13.3	15.2	A16.3
Oakland, Calif.	214,206	49	11.9	A10.0	2.0	A12.0
Omaha, Nebr.	180,264	41	11.9	C15.2	9.8	C 4.1
Philadelphia, Pa.	1,761,371	402	11.9	* 14.1	17.2	* 13.8
Pittsburgh, Pa.	593,393	126	11.1	C18.9	24.6	C15.1
Portland, Oreg.		51		C11.8	11.8	C 5.7
Providence, R. I.	263,613	47	9.3	C18.5	19.1	C12.0
Richmond, Va.	160,719	43	14.0	C16.8	20.9	C13.7
Rochester, N. Y.	264,856	66	13.0	C13.9	19.7	C11.6
St. Louis, Mo.	779,951	171	11.4	C14.7	6.4	C11.6
St. Paul, Minn.	257,699	42	8.5	C 9.5	7.1	C19.6
San Francisco, Calif.	478,530	127	13.8	C14.7	6.3	C 9.0
Seattle, Wash.		83		A 6.3	10.8	A 8.5
Spokane, Wash.		20		C 8.3	10.0	C 4.0
Syracuse, N. Y.	161,404	30	9.7	C10.9	16.7	C18.2
Toledo, Ohio.	262,234	50	9.9	A14.0	18.0	A12.2
Washington, D. C.	401,681	98	12.7	A16.4	11.2	A11.3
Worcester, Mass.	173,650	35	10.5	C12.9	11.4	C 7.1

¹ Annual rates per 1,000 estimated population.

² "A" indicates data for the corresponding week of the years 1913 to 1917, inclusive. "C" indicates data for the corresponding week of the year 1917.

³ Population estimated as of July 1, 1919.

⁴ Data are based on statistics of 1915, 1916, and 1917.

Summary of information received by telegraph from industrial insurance companies for week ended Nov. 8, 1919.

Policies in force.....	40,724,628
Number of death claims.....	6,233
Death claims per 1,000 policies in force, annual rate.....	8.0

PREVALENCE OF DISEASE.

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

UNITED STATES.

CURRENT STATE SUMMARIES.

Telegraphic Reports for Week Ended November 15, 1919.

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

ALABAMA.		Cases.	CALIFORNIA—continued.		Cases.
Diphtheria	29		Smallpox—Continued.		
Influenza	3		San Joaquin County	3	
Malaria	9		Shasta County	2	
Scarlet fever	10		Typhoid fever:		
Smallpox	1		Dinuba	1	
Tuberculosis (pulmonary)	8		Fresno County	4	
Typhoid fever	13		Los Angeles	5	
Venereal diseases	45		Napa	1	
Whooping cough	1		Oakland	1	
			Pasadena	1	
			San Fernando	1	
			San Francisco	1	
			Santa Monica	1	
ARKANSAS.			CONNECTICUT.		
Chancroid	8		Cerebrospinal meningitis:		
Chicken pox	15		Waterbury	1	
Diphtheria	37		Chicken pox	26	
Gonorrhea	53		Conjunctivitis (infectious)	3	
Hookworm	1		Diphtheria:		
Influenza	9		Fairfield County—		
Malaria	120		Bridgeport	6	
Measles	1		Fairfield	5	
Ophthalmia neonatorum	1		Stamford	5	
Pellagra	6		Stratford	8	
Scarlet fever	41		Scattering	8	
Smallpox	5		Hartford County—		
Syphilis	24		Bristol	5	
Trachoma	1		Hartford	18	
Tuberculosis	38		New Britain	3	
Typhoid fever	28		Scattering	7	
Whooping cough	16		Litchfield County—		
CALIFORNIA.			Plymouth	1	
Cerebrospinal meningitis:			Watertown	6	
San Francisco	1		New Haven County—		
Red Bluff	1		New Haven	14	
Influenza	13		Waterbury	42	
Smallpox:			Scattering	5	
Dinuba	1		New London County—		
Eureka	3		Stonington	7	
Fullerton	1		Scattering	5	
Jackson	1		Windham County—		
Long Beach	1		Scattering	3	
Los Angeles	4		Gonorrhea	14	
Oakland	1				
Pomona	2				
San Diego County	3				

CONNECTICUT—continued.

Influenza:	Cases.
Hartford County—	
New Britain.....	2
New Haven County—	
Waterbury.....	5
New London County—	
Groton.....	3
Stonington.....	1
Tolland County—	
Mansfield.....	1
Windham County—	
Woodstock.....	1
Lethargic encephalitis:	
Waterbury.....	1
Measles:	
Fairfield County—	
Bridgeport.....	6
Fairfield.....	3
Stamford.....	3
Stratford.....	5
Greenwich.....	1
Litchfield County—	
Scattering.....	2
Middlesex County—	
East Hampton.....	1
New Haven County—	
Milford.....	7
New Haven.....	56
North Haven.....	3
Seymour.....	7
Scattering.....	3
Mumps.....	18
Pneumonia.....	5
Scarlet fever:	
Fairfield County—	
Scattering.....	5
Hartford County—	
Hartford.....	15
New Britain.....	4
Scattering.....	2
Litchfield County—	
Plymouth.....	6
Thomaston.....	3
New Haven County—	
New Haven.....	10
Wallingford.....	4
Waterbury.....	10
Scattering.....	5
New London County—	
Jewett City.....	1
Syphilis.....	13
Tetanus:	
Norwich.....	1
Trachoma:	
New Haven.....	1
Tuberculosis.....	22
Typhoid fever:	
Scattering.....	8
Whooping cough.....	45
DELAWARE.	
Diphtheria:	
Atlanta.....	1
Delaware City.....	2
Selbyville.....	1
Wilmington.....	10

DELAWARE—continued.

Measles:	Cases.
Felton.....	1
Lewes.....	1
Mumps.....	4
Scarlet fever:	
Wilmington.....	6
Smallpox:	
Wilmington.....	4
Georgetown.....	4
Millsboro.....	1
Tuberculosis:	
Delaware City.....	1
Kenton.....	1
Wilmington.....	1
Typhoid fever:	
Delmar.....	1
Middletown.....	1
Selbyville.....	1
Wilmington.....	3
Whooping cough.....	1

FLORIDA.

Cerebrospinal meningitis.....	1
Diphtheria.....	13
Dysentery.....	8
Influenza.....	17
Malaria.....	109
Scarlet fever.....	9
Typhoid fever.....	12

GEORGIA.

Cerebrospinal meningitis.....	1
Conjunctivitis (acute infectious).....	1
Diphtheria.....	48
Dysentery (amebic).....	1
Dysentery (bacillary).....	3
Gonorrhea.....	63
Hookworm.....	10
Influenza.....	17
Malaria.....	79
Measles.....	2
Mumps.....	5
Paratyphoid fever.....	3
Pneumonia (acute lobar).....	13
Poliomyelitis.....	1
Scarlet fever.....	11
Septic sore throat.....	16
Smallpox.....	9
Syphilis.....	44
Tetanus.....	1
Tuberculosis (pulmonary).....	10
Typhoid fever.....	9
Whooping cough.....	6

ILLINOIS.

Cerebrospinal meningitis:	
Chicago.....	3
Chancroid.....	23
Diphtheria:	
Belleville.....	7
Chicago.....	270
Chicago Heights.....	5
Cumberland County.....	8
Decatur.....	7
Granite City.....	12

ILLINOIS—continued.

Diphtheria—Continued.	Cases.
Greenville.....	6
LeRoy.....	3
Lewistown.....	3
Madison.....	3
Millford.....	3
Oak Park.....	3
Parker.....	3
Quincy.....	3
Springfield.....	10
Streator.....	4
Scattering.....	96
Gonorrhea.....	489
Influenza:	
Chicago.....	40
East St. Louis.....	4
Scattering.....	13
Leprosy:	
Chicago.....	1
Poliomyelitis:	
Pekin.....	1
Scarlet fever:	
Buncombe.....	3
Canton.....	3
Chicago.....	200
Fiatt.....	5
Fulton.....	2
Granite City.....	4
Madison.....	4
Maywood.....	3
Oakland.....	3
Peoria.....	18
Springfield.....	33
Scattering.....	18
Smallpox:	
Chicago.....	2
Crisman.....	3
Hillview.....	13
Litchfield.....	5
Roodhouse.....	3
Scattering.....	40
Syphilis.....	306
Typhoid fever:	
Aurora.....	4
Belleville.....	3
Chicago.....	14
Joliet.....	6
Madison.....	3
Scattering.....	13
INDIANA	
Chancroid.....	3
Diphtheria:	
Allen County.....	4
Dubois County.....	5
Grant County.....	5
Jackson County.....	4
Lake County.....	11
Marion County.....	23
Monroe County.....	3
Vigo County.....	3
Warrick County.....	6
Wayne County.....	9
Scattering.....	26
Gonorrhea.....	88

INDIANA—continued.

Influenza:	Cases.
Floyd County.....	10
Marion County.....	3
Martin County.....	10
Scattering.....	5
Poliomyelitis:	
Lawrence.....	1
Rabies in Animals:	
Hamilton County.....	1
Scarlet fever:	
Allen County.....	3
Case County.....	7
Huntington County.....	3
Marion County.....	25
Monroe County.....	3
Porter County.....	3
Ripley County.....	10
Rush County.....	3
Shelby County.....	4
Tippecanoe County.....	5
Vigo County.....	6
Scattering.....	29
Smallpox:	
Grant County.....	13
Howard County.....	32
LaPorte County.....	5
Tippecanoe County.....	4
Warren County.....	8
Scattering.....	9
Syphilis.....	98
Typhoid fever:	
La Porte County.....	3
Marion County.....	1
Owen County.....	3
Putnam County.....	3
Scattering.....	15
IOWA.	
Cerebrospinal meningitis:	
Dubuque.....	1
Chancroid.....	3
Chickea pox.....	8
Diphtheria:	
Ankeny.....	1
Avoca.....	1
Cedar Falls.....	1
Cedar Rapids.....	3
Council Bluffs.....	7
Davenport.....	2
Des Moines.....	6
Dubuque.....	1
Grinnell.....	1
McGregor.....	1
Monona County.....	1
Ottumwa.....	2
Polk County.....	2
Winnebago County.....	1
Gonorrhea.....	125
Influenza:	
Jasper County.....	2
Riceville.....	1
Measles:	
Council Bluffs.....	4
Mumps.....	3

IOWA—continued.

Scarlet fever:	Cases.
Atlantic.....	2
Boone.....	8
Boone County.....	4
Buchanan County.....	1
Burlington.....	1
Cedar Rapids.....	1
Cherokee County.....	1
Clarke County.....	7
Council Bluffs.....	9
Davenport.....	4
Des Moines.....	10
Goldfield.....	1
Harlan.....	1
Jasper County.....	4
Madrid.....	1
Polk County.....	1
Quasquion.....	1
Seymour.....	3
Story County.....	1
Taylor County.....	1
Webster County.....	1
Winnebago County.....	1
Woodbury County.....	4
Smallpox:	
Audubon County.....	1
Cedar Falls.....	7
Cedar Rapids.....	3
Council Bluffs.....	2
Davenport.....	12
Dubuque.....	1
Floyd County.....	7
Harlan.....	1
Iowa County.....	1
Jackson County.....	1
Steamboat Rock.....	2
Summer.....	3
Syphilis.....	19
Whooping cough.....	2

KANSAS.

Diphtheria.....	97
Influenza.....	17
Scarlet fever.....	103
Smallpox.....	49

LOUISIANA.

Cerebrospinal meningitis.....	1
Chancreoid.....	18
Diphtheria.....	21
Gonorrhea.....	87
Influenza.....	11
Scarlet fever.....	3
Smallpox.....	3
Syphilis.....	63
Typhoid fever.....	10

MAINE.

Chancreoid.....	1
Chicken pox.....	4
Diphtheria:	
Bangor.....	1
Fort Fairfield.....	1
Lewiston.....	2
Limington.....	1
Paris.....	1

MAINE—continued.

Diphtheria—Continued.	Cases.
Perham.....	7
Portland.....	1
Sanford.....	1
Standish.....	1
Vanburen.....	2
Gonorrhea.....	38
Influenza:	
Camden.....	4
Paris.....	3
Portland.....	1
South Berwick.....	2
Mumps.....	3
Pneumonia:	
Camden.....	1
Poliomyelitis:	
Ashland.....	1
Scarlet fever:	
Augusta.....	10
Bath.....	2
Dexter.....	11
Eddington.....	1
Freeport.....	1
Mapleton.....	1
Norway.....	1
Portland.....	4
Waldoboro.....	5
Smallpox:	
Auburn.....	1
Augusta.....	8
Mexico.....	1
Winslow.....	1
Syphilis.....	20
Trachoma:	
Camden.....	1
Tuberculosis.....	17
Typhoid fever:	
Bath.....	2
Fairfield.....	1
Greenville.....	13
Whooping cough.....	60

MASSACHUSETTS.

Cerebrospinal meningitis.....	4
Chicken pox.....	154
Conjunctivitis (suppurative).....	3
Diphtheria.....	239
Dysentery.....	2
Gonorrhea.....	132
Influenza.....	37
Malaria.....	3
Measles (German).....	11
Measles.....	240
Mumps.....	84
Ophthalmia neonatorum.....	19
Pneumonia (lobar).....	69
Poliomyelitis (anterior).....	2
Scarlet fever.....	251
Septic sore throat.....	1
Syphilis.....	67
Trachoma.....	2
Tuberculosis (pulmonary).....	121
Tuberculosis (other forms).....	8
Typhoid fever.....	23
Whooping cough.....	138

MINNESOTA.

	Cases.
Chancroid.....	1
Gonorrhea.....	68
Smallpox (new foci):	
Battle Lake.....	1
Clay County—	
Highland Grove Township.....	1
Lower County—	
Dexter Township.....	1
Ottertail County—	
Everts Township.....	1
Steele County—	
Aurora Township.....	1
Syphilis.....	38

MONTANA.

Cerebrospinal meningitis:	
Missoula.....	1
Diphtheria.....	5
Influenza.....	4
Poliomyelitis:	
Fergus County.....	1
Scarlet fever.....	36
Smallpox.....	15
Typhoid fever.....	6

NEW JERSEY.

Diphtheria:	
Unusual prevalence, Monmouth County,	
Neptune Township.....	
Influenza.....	39
Pneumonia.....	78
Scarlet fever:	
Unusual prevalence—	
Burlington County, Riverside.....	
Hudson County, Harrison.....	
Morris County, Butler.....	
Somerset County, Bernards Township.....	
Union County, Elizabeth.....	
Typhoid fever:	
Small outbreak, Mercer County, Trenton.....	

NEW YORK.

(Exclusive of New York City.)

Cerebrospinal meningitis:	
Amsterdam.....	2
Binghamton.....	1
Rochester.....	1
Diphtheria:	
Erie County.....	127
Scattering.....	220
Gonorrhea.....	43
Influenza.....	36
Measles.....	119
Pneumonia.....	77
Scarlet fever.....	229
Smallpox:	
Amherst.....	1
Syphilis.....	159
Typhoid fever.....	32
Whooping cough.....	255

NORTH CAROLINA.

Chancroid.....	13
Chicken pox.....	36
Diphtheria.....	180
Dysentery (amebic).....	1
Dysentery (bacillary).....	1

NORTH CAROLINA—continued.

	Cases.
Gonorrhea.....	99
Measles.....	4
Measles (German).....	3
Ophthalmia neonatorum.....	2
Pneumonia (broncho).....	2
Pneumonia (lobar).....	7
Poliomyelitis.....	2
Scarlet fever.....	70
Septic sore throat.....	9
Smallpox.....	6
Syphilis.....	42
Typhoid fever.....	34
Whooping cough.....	128

OHIO.

Diphtheria:	
Cincinnati.....	26
Lima.....	34
Scarlet fever:	
Cincinnati.....	30
Lima.....	27
Smallpox:	
Piqua.....	13

VERMONT.

No outbreak or unusual prevalence.

VIRGINIA.

Poliomyelitis:	
Giles County.....	1
Smallpox:	
Wise County.....	2

WASHINGTON.

Chicken pox.....	84
Diphtheria.....	39
Influenza.....	1
Measles.....	29
Measles (German).....	1
Mumps.....	38
Pneumonia.....	2
Scarlet fever.....	50
Smallpox.....	97
Tuberculosis.....	22
Typhoid fever.....	11
Whooping cough.....	21

WEST VIRGINIA.

Diphtheria:	
Bluefield.....	2
Charleston.....	8
Clarksburg.....	9
Fairmont.....	5
Grafton.....	1
Huntington.....	7
Keyser.....	1
Martinsburg.....	5
Montgomery.....	1
Moorefield.....	1
Morgantown.....	1
Moundsville.....	3
New Martinsville.....	2
Parsons.....	2
Weston.....	1
Wheeling.....	1
Williamson.....	3
Poliomyelitis:	
Bluefield.....	1
Charleston.....	1

WEST VIRGINIA—continued.

	Cases.	Milwaukee:	WISCONSIN.	Cases.
Scarlet fever:		Cerebrospinal meningitis		1
Bluefield	1	Chickenpox		52
Charleston	5	Diphtheria		35
Clarksburg	10	Erysipelas		3
Fairmont	7	Measles		21
Grafton	2	Scarlet fever		34
Huntington	5	Smallpox		9
Montgomery	1	Tuberculosis		17
Morgantown	4	Whooping cough		8
Parsons	1			
Salem	3	Scattering:		
Terra Alta	1	Chancroid		2
Wellsburg	1	Chicken pox		35
Smallpox:		Diphtheria		44
Bluefield	1	Gonorrhea		65
Clarksburg	1	Measles		79
Huntington	2	Poliomyelitis		1
Typhoid fever:		Scarlet fever		77
Koyser	5	Smallpox		92
Morgantown	1	Syphilis		8
Ripley	3	Tuberculosis		12
Sutton	1	Typhoid fever		9
Wheeling	1	Whooping cough		56

Kentucky Report for Week Ended Nov. 8, 1919.

	Cases.		Cases.
Chicken pox	17	Pneumonia:	
Conjunctivitis (suppurative)	1	Grayson County	3
Diphtheria:		Todd County	3
Ballard County	3	Scarlet fever:	
Bath County	7	Carroll County	6
Franklin County	3	Henry County	3
Fulton County	6	Hopkins County	3
Graves County	3	Jefferson County—	
Grasson County	1	Louisville	4
Jefferson County—		Mecklenburg County	3
Louisville	35	Mercer County	5
Kenton County	9	Pendleton County	3
Logan County	12	Scattering	12
Mercer County	5	Septic sore throat:	
Scattering	34	Franklin County	4
Dysentery:		Grayson County	7
Johnson County	4	Logan County	4
Logan County	4	Scattering	3
Scattering	5	Smallpox:	
Gonorrhea	14	Martin County	5
Influenza:		Scattering	4
Barren County	3	Syphilis	11
Bath County	3	Tonsillitis:	
Bell County	9	Bell County	6
Calloway County	5	Todd County	3
Perry County	6	Scattering	5
Todd County	4	Trachoma	7
Scattering	17	Tuberculosis:	
Malaria	2	Jefferson County—	
Measles:		Louisville	7
Graves County	7	Livingston County	4
Marion County	15	Scattering	14
Scattering	2	Typhoid fever:	
Meningitis (tubercular)	1	Adair County	5
Mumps	10	Breckenridge County	6
Ophthalmia neonatorum	2	Cumberland County	25
Paratyphoid fever	1	Fleming County	3

Kentucky Report for Week Ended Nov. 8, 1919—Continued.

Typhoid fever—Continued.		Cases.		Typhoid fever—Continued.		Cases.	
Graves County.....		3		Mercer County.....		3	
Grayson County.....		5		Nelson County.....		4	
Hopkins County.....		4		Oldham County.....		3	
Jefferson County—				Rockcastle County.....		9	
Louisville.....		5		Scattering.....		29	
Jessamine County.....		12		Urethritis.....		1	
Johnson County.....		12		Whooping cough.....		54	
Lawrence County.....		6					

SUMMARY OF CASES REPORTED MONTHLY BY STATES.

Tables showing by counties the reported cases of cerebrospinal meningitis, malaria, pellagra, poliomyelitis, smallpox, and typhoid fever are published under the names of these diseases. (See names of these and other diseases in the table of contents.)

The following monthly State reports include only those which were received during the current week. These reports appear each week as received.

State.	Cerebrospinal meningitis.	Diphtheria.	Malaria.	Measles.	Pellagra.	Poliomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
1919.									
Colorado (September).....		73		6	2	5	23	29	59
Maine (September).....	1	20		4			47	31	18
Maryland (October).....	3	432	33	53	4	22	301	6	202
Massachusetts (October).....	14	993	5	562	1	17	789	2	155
Nebraska (October).....	5	61		9		7	74	91	19
New Mexico (October).....		14	1			2	17	16	15
Wisconsin (October).....	4	346		175		15	473	205	21

RECIPROCAL NOTIFICATION.

Massachusetts.

Cases of communicable diseases referred during October, 1919, to other State health departments by department of health of the State of Massachusetts.

Disease and locality of notification.	Referred to health authority of—	Why referred.
Anterior poliomyelitis—North Adams.	State department of health, Harrisburg, Pa.	Patient arrived from Philadelphia, Pa., Sept. 5. Onset of disease about August 18.
Smallpox:		
Lawrence.....	State department of health, Augusta, Me.	Patient arrived from Auburn, Me., Sept. 16. Onset of case Oct. 10.
Boston.....	Provincial health officer, Halifax, Nova Scotia.	Patient arrived from Salisbury, New Brunswick, Oct. 10. Onset of disease Oct. 10.
Typhoid fever:		
Tewksbury.....	State department of health, Augusta, Me.	Patient arrived from Long Pond, Me. Onset of disease Sept. 20.
Stockbridge.....	City department of health, New York, N. Y.	Patient lived in New York City and came to Stockbridge each week end. Onset of disease, Sept. 15.
Attleboro.....	State department of health, Harrisburg, Pa.	Patient was probably in a late stage of typhoid while in Philadelphia, Pa., in September and October.
Southbridge.....	State department of health, Hartford, Conn.	Patient ill with typhoid went to New London, Conn., Oct. 18. Onset of disease about Oct. 10.
Clinton.....	State board of health, Montpelier, Vt.	Patient was brought from Belkows Falls, Vt. to Clinton Hospital. Onset of disease about Oct. 15.
North Adams.....	State department of health, Albany, N. Y.	Patient ill with typhoid fever came from Hoosick, N. Y. Onset of disease Sept. 15.
Arlington.....	State board of health, Concord, N. H.	Patient had visited Goffton, N. H., each week end where a milk supply was infected by typhoid bacilli carrier. (Carrier was found by New Hampshire board of health.)
Boston.....	City department of health, New York, N. Y.	Patient visited New York City within 3 weeks of onset of case. Onset of disease Oct. 1.
Revere.....	State board of health, Providence, R. I.	Patient arrived from United States training camp, Providence, R. I., ill. Onset of disease Sept. 1.
Springfield.....	State department of health, Hartford, Conn.	Patient arrived from Norwich, Conn., Aug. 31. Onset of disease about Sept. 13.
Brookline.....	State board of health, Montpelier, Vt.	Patient arrived from St. Johnsbury, Vt., on Aug. 29. Onset of disease Sept. 6.
Boston.....	State department of health, Albany, N. Y.	Patient arrived from Whitesboro, N. Y., Sept. 18, ill. Onset of disease about Sept. 5.
Lynn.....	State department of health, Augusta, Me.	Patient visited Freeport, Me., from Sept. 6 to Sept. 15. Onset of disease Sept. 22.
Northampton.....	State board of health, Providence, R. I.	Patient lived in Tiverton, R. I. until Sept. 23. Onset of disease Oct. 4.
Haverhill.....	State department of health, Augusta, Me.	Patient visited Rangeley Lakes, Me., from Sept. 17 to Sept. 24. Onset of disease Sept. 19. Referred as a possible cause of typhoid at Rangeley Lakes.

ANTHRAX.**Concord, N. H., and New York, N. Y.**

During the week ended November 1, 1919, one death from anthrax was reported at Concord, N. H., and one case and one death were reported at New York, N. Y.

CEREBROSPINAL MENINGITIS.**State Reports for September and October 1919.**

Place.	New cases reported.	Place.	New cases reported.
Maine (September):		Massachusetts (October)—Continued.	
York County—		Suffolk County—	
Kittery (town).....	1	Boston.....	7
Maryland (October):		Worcester County—	
Baltimore.....	3	Lunenburg (town).....	1
Massachusetts (October):		Total.....	14
Bristol County—		Nebraska (October):	
Attleboro.....	1	Douglas County.....	2
Fall River.....	1	Scottsbluff County.....	2
Essex County—		Adams County.....	1
Amesbury (town).....	1	Total.....	5
Lynn.....	1	Wisconsin (October):	
Middlesex County—		Milwaukee County.....	2
Lowell.....	1	Sauk County.....	2
Norfolk County—		Total.....	4
Avon (town).....	1		

City Reports for Week Ended Nov. 1, 1919.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alton, Ill.....		1	Milwaukee, Wis.....	1	
Atlanta, Ga.....	1		Moline, Ill.....	1	1
Boston, Mass.....	1		New York, N. Y.....	3	4
Chattanooga, Tenn.....		2	Omaha, Nebr.....	1	
Chicago, Ill.....	4	2	Rochester, N. Y.....	1	
Detroit, Mich.....	1		Toledo, Ohio.....	1	
East Orange, N. J.....	1		Trenton, N. J.....		1
Elgin, Ill.....	1		Wheeling, W. Va.....		2
Fall River, Mass.....		1	Wilmington, N. C.....		1
Lorain, Ohio.....	1		Youngstown, Ohio.....	1	1
Los Angeles, Calif.....	1				

DIPHTHERIA.

See Telegraphic weekly reports from States, p. 2670; Monthly summaries, by States, p. 2676; and Weekly reports from cities, p. 2688.

INFLUENZA.

Cases Reported by State Health Officers, Week Ended Nov. 15, 1919.

Alabama.....	3	Kansas.....	17
Arkansas.....	9	Louisiana.....	11
California.....	13	Maine.....	10
Connecticut.....	13	Massachusetts.....	37
Florida.....	17	Montana.....	4
Georgia.....	17	New Jersey.....	39
Illinois.....	57	New York.....	36
Indiana.....	28	Washington.....	1
Iowa.....	3		

LEPROSY.

Boston, Mass., Los Angeles, Calif., New York, N. Y., and Pueblo, Colo.

During the week ended November 1, 1919, one case of leprosy was reported at Boston and one at Los Angeles, Calif. One death from leprosy was reported at New York, N. Y. During the month of September one case was reported at Pueblo, Colo.

MALARIA.

State Reports for October, 1919.

Place.	New cases reported.	Place.	New cases reported.
Maryland:		Maryland—Continued.	
Baltimore.....	4	Queen Annes County—	
Calvert County—		Queen Anne.....	
Lower Marlboro.....	1	St. Marys County—	
Chaneville.....	1	Leonardtown.....	1
Caroline County—		Tallot County—	
Ridgely (R. D.).....	1	Cordova (R. D.).....	1
Charles County—		Bellvue.....	1
Chaple Point.....	1	Wicomico County—	
Tompkinsville (R. D.).....	1	Salisbury.....	1
Wayside.....	1	Bivalve.....	1
Malcolm.....	1	Nanticoke.....	1
Dorchester County—		White Haven.....	1
Woolford.....	1	Total.....	33
Golden Hill.....	2		
Bishops Head.....	1	Massachusetts:	
Meekins Neck.....	2	Hampden County—	
East New Market.....	1	Springfield.....	1
Harrisville.....	1	Suffolk County—	
Cabin Creek.....	2	Boston.....	3
Kent County—		Worcester County.....	1
Worton (R. D.).....	1	Total.....	5
Sandy Bottom.....	1		
Rock Hall.....	1	New Mexico:	
Prince Georges County—		Sierra County.....	1
Glyndale.....	1		

MALARIA—Continued.**City Reports for Week Ended Nov. 1, 1919.**

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alexandria, La.....	1	.....	Hackensack, N. J.....	1	.....
Atlanta, Ga.....	2	.....	Jacksonville, Fla.....	2	.....
Beaumont, Tex.....	.....	1	New York, N. Y.....	.....	1
Boston, Mass.....	1	.....	Passaic, N. J.....	1	.....
Charleston, S. C.....	3	1	Rome, Ga.....	1	.....
Dallas, Tex.....	16	.....	Savannah, Ga.....	9	2

MEASLES.

See Telegraphic weekly reports from States, p. 2670; Monthly summaries, by States, p. 2676; and Weekly reports from cities, p. 2688.

PELLAGRA.**State Reports for September and October, 1919.**

Place.	New cases reported.	Place.	New cases reported.
Colorado (September):		Maryland (October)—Continued.	
El Paso County.....	2	Somerset County—	
		Lawsonia.....	1
Maryland (October):		Total.....	4
Baltimore.....	2		
Kent County—		Massachusetts (October):	
Chestertown (R. D.).....	1	Suffolk County—	
		Boston.....	1

City Reports for Week Ended Nov. 1, 1919.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md.....	1	.....	New York, N. Y.....	.....	1
Baton Rouge, La.....	2	2	North Little Rock, Ark.....	1	1
Birmingham, Ala.....	1	.....	Pine Bluff, Ark.....	1	.....
Dallas, Tex.....	2	1	Richmond, Va.....	.....	1
Montgomery, Ala.....	.....	1	Waco, Tex.....	1	.....

PNEUMONIA.

City Reports for Week Ended Nov. 1, 1919.

Place.	Lobar.		All forms.		Place.	Lobar.		All forms.	
	Cases.	Deaths.	Cases.	Deaths.		Cases.	Deaths.	Cases.	Deaths.
Akron, Ohio.....	1				Montclair, N. J.....	1			
Alexandria, Va.....				1	Morristown, N. J.....			2	
Alliance, Ohio.....				1	Nashville, Tenn.....		2		
Ansonia, Conn.....				1	Newark, N. J.....	21	2		
Appleton, Wis.....			1	1	New Bedford, Mass.....	2	1		
Arlington, Mass.....	1				New Haven, Conn.....				7
Ashtabula, Ohio.....				2	New Orleans, La.....		7		
Atlanta, Ga.....				4	Newton, Mass.....	1	1		
Baltimore, Md.....			37	20	New York, N. Y.....			53	86
Belleville, N. J.....			2		North Adams, Mass.....	1			
Berkeley, Calif.....				1	North Little Rock, Ark.....	1	1		
Binghamton, N. Y.....	3				Norwood, Ohio.....			1	
Birmingham, Ala.....				1	Oakland, Calif.....	1		1	2
Boston, Mass.....			21	16	Oak Park, Ill.....	1	1		
Bridgeport, Conn.....				7	Oklahoma City, Okla.....				1
Buffalo, N. Y.....			7	4	Omaha, Nebr.....				4
Cambridge, Mass.....	4	2			Oshkosh, Wis.....		1		
Charleston, S. C.....				3	Parsons, Kans.....			1	
Charlotte, N. C.....	1	1			Passaic, N. J.....			1	1
Chelsea, Mass.....	2	1			Paterson, N. J.....			1	
Chicago, Ill.....			109	40	Pawtucket, R. I.....		1		
Chillicothe, Ohio.....				1	Perth Amboy, N. J.....	1			
Cincinnati, Ohio.....		2			Petersburg, Va.....		1		
Cleveland, Ohio.....			12	8	Philadelphia, Pa.....	41	12		
Coffeyville, Kans.....	1				Pittsfield, Mass.....	2	1		
Columbus, Ga.....	2				Plainfield, N. J.....	1	1		
Columbus, Ohio.....				5	Pontiac, Mich.....	1	1		
Dallas, Tex.....			1	2	Portland, Oreg.....				8
Dayton, Ohio.....	1	1			Portsmouth, Va.....				1
Denver, Colo.....		4		8	Providence, R. I.....		2		
Detroit, Mich.....	6	10	10	16	Roanoke, Va.....	1			
Duluth, Minn.....	2	1			Rochester, N. Y.....	1	3		
East Chicago, Ind.....				1	Rock Island, Ill.....		1		
Easthampton, Mass.....	1		1	1	Rocky Mount, N. C.....		1		
East Orange, N. J.....			2		Rome, N. Y.....			2	
Evanston, Ill.....	1				Sacramento, Calif.....				4
Flint, Mich.....		1			St. Joseph, Mo.....		1		
Fort Scott, Kans.....		1			St. Paul, Minn.....		6		
Fort Wayne, Ind.....		1			Salt Lake City, Utah.....	1	1		
Fresno, Calif.....				1	San Bernardino, Calif.....		1		
Galesburg, Ill.....		1			Sanford, Me.....		1		
Galveston, Tex.....				3	San Francisco, Calif.....		4		
Grand Rapids, Mich.....	5	2			Santa Barbara, Calif.....	2			
Great Falls, Mont.....		1			Saugus, Mass.....	1			
Green Bay, Wis.....				2	Sioux Falls, S. Dak.....		2		
Hackensack, N. J.....			1		Somerville, Mass.....	2	3		
Hartford, Conn.....		1			Springfield, Mass.....	1			
Haverhill, Mass.....	1	1			Springfield, Mo.....				2
Ironwood, Mich.....				1	Steuernville, Ohio.....	1			
Irrington, N. J.....	1				Stockton, Calif.....	1			
Jersey City, N. J.....			8		Syracuse, N. Y.....				3
Kankakee, Ill.....	1				Taunton, Mass.....		1		
Kansas City, Kans.....	1				Terre Haute, Ind.....		1		2
Kansas City, Mo.....			10	12	Toledo, Ohio.....	1			
Lawrence, Mass.....	3	1			Trenton, N. J.....	2			
Lincoln, Nebr.....	1				Troy, N. Y.....	2			
Long Branch, N. J.....		1			Tuscaloosa, Ala.....	1	1		
Los Angeles, Calif.....			14	8	Waco, Tex.....	3			
Louisville, Ky.....			2	7	Wakefield, Mass.....	1			
Lowell, Mass.....	1	1			Washington, D. C.....				3
Lynn, Mass.....		1			West Orange, N. J.....			1	
Mankato, Minn.....				1	Winona, Minn.....	1			1
Marquette, Mich.....	1				Worcester, Mass.....	1	1		
Methuen, Mass.....			1		Yonkers, N. Y.....	6	1		
Milwaukee, Wis.....		6			Youngstown, Ohio.....	1	1		
Minneapolis, Minn.....				3					

POLIOMYELITIS (INFANTILE PARALYSIS).**State Reports for September and October, 1919.**

Place.	New cases reported.	Place.	New cases reported.
Colorado (September):		Massachusetts (October)—Continued.	
Clear Creek County.....	1	Worcester County—	
Denver.....	3	Clinton (town).....	1
Jefferson County.....	1	Worcester.....	1
Total.....	5	Total.....	17
Maryland (October):		Nebraska (October):	
Baltimore.....	16	Adams County.....	1
Anne Arundel County—		Buffalo County.....	1
Brooklyn (R. D.).....	1	Douglas County.....	1
Pasadena (R. D.).....	1	Lancaster County.....	2
Chesterfield.....	1	Nance County.....	1
Curtis Bay (R. D.).....	1	Scottsbluff County.....	1
Baltimore County—		Total.....	7
Snarrows Point.....	1	New Mexico (October):	
Carroll County—		Dona Ana County.....	2
Millers Station (R. D.).....	1	Wisconsin (October):	
Total.....	22	Columbia County.....	1
Massachusetts (October):		Eau Claire County.....	1
Essex County—		Green County.....	1
I ynn.....	2	Juneau County.....	1
Methuen.....	1	Marathon County.....	1
Franklin County—		Marquette County.....	1
Warwick (town).....	1	Milwaukee County.....	2
Hampden County—		Outagamie County.....	1
Springfield.....	1	Ra'ine County.....	1
Middlesex County—		Rock County.....	1
Everett.....	1	Sheboygan County.....	1
I owell.....	4	Taylor County.....	2
Plymouth County—		Waupaca County.....	1
Bro'k ton.....	1	Total.....	15
Suffolk County—			
Boston.....	4		

City Reports for Week Ended Nov. 1, 1919.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alpena, Mich.....	1	1	El Paso, Tex.....	2	1
Baltimore, Md.....	6	1	Galesburg, Ill.....	1	1
Birmingham, Ala.....	1	1	Lexington, Ky.....	1	1
Boston, Mass.....	2	1	Lowell, Mass.....	1	1
Chillicothe, Ohio.....	1	1	Lyndeburg, Va.....	1	1
Clinton, Mass.....	1	1	Minneapolis, Minn.....	1	1
Denver, Colo.....	1	1	New Haven, Conn.....	2	1
Duluth, Minn.....	1	1	New York, N. Y.....	4	1
East St. Louis, Ill.....	1	1	Saratoga Springs, N. Y.....	1	1

RABIES IN ANIMALS.**Dallas, Tex.—Week Ended Nov. 1, 1919.**

During the week ended November 1, 1919, one case of rabies in animals was reported at Dallas, Tex.

SCARLET FEVER.

See Telegraphic weekly reports from States, p. 2670; Monthly summaries by States, p. 2676; and Weekly reports from cities, p. 2688.

SMALLPOX.

State Reports for September and October, 1919—Vaccination Histories.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Vaccinated within 7 years preceding attack.	Last vaccinated more than 7 years preceding attack.	Never successfully vaccinated.	History not obtained or uncertain.
Colorado (September):						
Adams County.....	1				1	
Boulder County.....	6				6	
Denver.....	4				4	
El Paso County.....	4				2	2
Huerfano County.....	2				1	1
La Plata County.....	1				1	
Larimer County.....	10				9	1
Weid County.....	1					1
Total.....	29				24	5
Maryland (October):						
Allegany County—						
Vale Summit.....	5				5	
Lonsaconing.....	1				1	
Total.....	6				6	
Massachusetts (October):						
Essex County—						
Lawrence.....	1			1		
Suffolk County—						
Boston.....	1				1	
Total.....	2			1	1	
New Mexico (October):						
Chaves County.....	1		1			
De Baca County.....	1				1	
Lincoln County.....	4				4	
Mora County.....	1				1	
Otero County.....	4				4	
San Juan County.....	2				2	
Torrance County.....	3				3	
Total.....	16		1		15	
Wisconsin (October):						
Barron County.....	9		1		8	
Brown County.....	19					19
Calumet County.....	2			1		1
Chippewa County.....	10					10
Clark County.....	2				2	
Dane County.....	6		6			
Douglas.....	2					
Fond du Lac.....	24			1	2	
Grant County.....	11		5		8	15
Green Lake County.....	1		1		6	
Kinoshia County.....	1					1
La Crosse.....	1				1	
Marathon County.....	17		1		16	
Marinette County.....	3				2	1
Marquette County.....	1			1		
Milwaukee County.....	27					27
Monroe County.....	4				4	
Oneida County.....	2				2	
Outagamie County.....	1				1	
Pepin County.....	1				1	
Portage County.....	5			1	2	
Racine County.....	9		9			
Rock County.....	1					1
St. Croix County.....	1				1	
Shawano County.....	1				1	
Sheboygan County.....	4				4	
Vernon County.....	17		1		5	11
Waukesha County.....	1		1			
Wausara County.....	5				3	
Winnebago County.....	3		1	1	1	2
Wood County.....	14		1	1	12	
Total.....	205		27	6	82	90

SMALLPOX—Continued.

State Reports for September and October, 1919.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Maine (September)			Nebraska (October):		
Aroostook County—			Adams County.....	1	
Presque Isle (town).....	1		Box Butte County.....	17	
Androscoggin County—			Buffalo County.....	1	
Auburn.....	9		Cheyenne County.....	5	
Lewiston.....	1		Custer County.....	13	
Livermore (town).....	1		Douglas County.....	9	
Leeds (town).....	3		Gage County.....	1	
East Livermore (town).....	2		Hitchcock County.....	1	
Kennebec County—			Lancaster County.....	15	
Clinton (town).....	1		Phelps County.....	2	
Monmouth (town).....	11		Redwillow County.....	4	
Franklin County—			Saunders County.....	6	
Jay (town).....	2		Scotts Bluff County.....	1	
Total.....	31		Sheridan County.....	9	
			Stanton County.....	1	
			Thomas County.....	1	
			Thurston County.....	4	
			Total.....	91	

City Reports for Week Ended Nov. 1, 1919.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alameda, Calif.....	1		Lawson, Ind.....	3	
Atlanta, Ga.....	1		Los Angeles, Calif.....	2	
Auburn, Me.....	1		Madison, Wis.....	6	
Beloit, Wis.....	1		Marquette, Wis.....	2	
Boise, Idaho.....	3		Marshalltown, Iowa.....	7	
Buffalo, N. Y.....	2	1	Milwaukee, Wis.....	9	
Butte, Mont.....	1		Minneapolis, Minn.....	4	
Canton, Ohio.....	2		Norfolk, Va.....	3	
Cleveland, Ohio.....	1		Norwood, Ohio.....	1	
Dallas, Tex.....	6		Ogden, Utah.....	2	
Davenport, Iowa.....	6		Oshkosh, Wis.....	2	
Denver, Colo.....	22		Parkersburg, W. Va.....	1	
Detroit, Mich.....	4		Portland, Oreg.....	9	
Duluth, Minn.....	1		Pueblo, Colo.....	1	
El Paso, Tex.....	1		Quincy, Ill.....	4	
Eureka, Calif.....	6		Racine, Wis.....	3	
Fond du Lac, Wis.....	6		Roanoke, Va.....	2	
Fort Worth, Tex.....	1		Rochester, N. Y.....	1	
Grand Rapids, Mich.....	1		St. Cloud, Minn.....	2	
Green Bay, Wis.....	9		St. Joseph, Mo.....	35	
Indianapolis, Ind.....	3		St. Paul, Minn.....	3	
Iowa City, Iowa.....	1		Salt Lake City, Utah.....	1	
Ironwood, Mich.....	1		San Diego, Calif.....	1	
Kansas City, Mo.....	1		Santa Barbara, Calif.....	1	
Kenosha, Wis.....	1		Sioux City, Iowa.....	1	
Knoxville, Tenn.....	2		South Bend, Ind.....	2	
Kokomo, Ind.....	21		Spartanburg, S. C.....	3	
La Crosse, Wis.....	1		Superior, Wis.....	1	
La Fayette, Ind.....	3		Wausau, Wis.....	3	
Leavenworth, Kans.....	3		Youngstown, Ohio.....	9	
Lincoln, Nebr.....	4				

TETANUS.

City Reports for Week Ended Nov. 1, 1919.

During the week ended November 1, 1919, one death from tetanus was reported at each of the following-named places: Cleveland, Ohio, New Orleans, La., Savannah, Ga., and Tuscaloosa, Ala.

TUBERCULOSIS.

See Telegraphic weekly reports from States, p. 2670; and Weekly reports from cities, p. 2688.

TYPHOID FEVER.

State Reports for September and October, 1919.

Place.	New cases reported.	Place.	New cases reported.
Colorado (September):		Maryland (October)—Continued.	
Arapahoe County.....	1	Carroll County—	
Bent County.....	1	Sykesville.....	1
Denver.....	22	Melrose (R. D.).....	1
El Paso County.....	3	Westminster.....	1
Larimer County.....	1	Cecil County—	
Las Animas County.....	3	Parryville.....	2
Montezuma County.....	3	Rowlandville.....	1
Montrose County.....	2	Eder Station (R. D.).....	1
Prowers County.....	4	Childs.....	1
Pueblo County.....	16	Colora.....	1
Saguache County.....	1	Charles County—	
Summit County.....	1	La Plata (R. D.).....	1
Weld County.....	1	Indianhead.....	1
Total.....	59	Pomfret.....	1
Maine (September):		Allens Fresh (R. D.).....	2
Androscoggin County—		White Plains (R. D.).....	1
Auburn.....	1	Dorchester County—	
Aroostook County.....		Cambridge.....	2
Fort Fairfield (town).....	3	Cambridge Hospital.....	1
Cumberland County—		East New Market.....	3
Portland.....	5	Vienna.....	1
Kennebec County—		Vienna (R. D.).....	5
Gardiner.....	1	Hawk Eye.....	2
Hancock County—		Salem.....	1
Winter Harbor (town).....	1	Salem (R. D.).....	1
Somerset County—		Cabin Creek.....	1
Madison (town).....	1	Reids Grove (R. D.).....	1
Long Pond (town).....	1	Thompson Town.....	3
Waldo County—		Aireys (R. D.).....	3
Knox (town).....	1	Hurlock.....	1
Washington County—		Hurlock (R. D.).....	2
Eastport.....	1	Williamsburg.....	2
Machias (town).....	1	Frederick County—	
Lubec (town).....	1	Frederick.....	2
York County—		Walkersville.....	1
Sanford (town).....	1	Flint Hill.....	2
Total.....	18	Braddock Heights.....	1
Maryland (October):		Pearl.....	2
Baltimore.....	42	Keymar (R. D.).....	1
Allegany County—		Thurmont (R. D.).....	2
Cumberland.....	6	Harney (R. D.).....	2
Barton.....	2	Garrett County—	
McCool.....	1	Crellin.....	1
Cumberland (R. D.).....	1	Harford County—	
Anne Arundel County—		Bel Air.....	4
Leon.....	2	Havre de Grace.....	2
Annapolis.....	1	Kent County—	
Eastport.....	1	Chestertown.....	1
Marley Creek.....	1	Montgomery County—	
Laurel (R. D.).....	1	Dickerson.....	1
Baltimore County—		Bethesda (R. D.).....	1
Halethorpe.....	1	Monrovia (R. D.).....	1
Glen Arm.....	1	Prince Georges County—	
Ilchester (R. D.).....	1	Upper Marlboro.....	1
Fullerton.....	1	Seat Pleasant.....	1
Rayville.....	1	Sharpsville.....	1
Woodlawn.....	1	Clinton.....	1
Pikesville (R. D.).....	1	Queen Annes County—	
Calvert County—		Chester.....	1
Barstow.....	1	Chester (R. D.).....	1
Caroline County.....		Stevensville (R. D.).....	1
Preston (R. D.).....	3	Fords Store.....	1
Preston.....	1	Fords Store (R. D.).....	1
Ridgely (R. D.).....	2	Centerville.....	2
Federalburg (R. D.).....	1	Templeville (R. D.).....	2
American Corner.....	1	Somerset County—	
		T. lerton.....	1
		Wenona.....	1
		Chance.....	1
		Dames Quarter.....	1

TYPHOID FEVER—Continued.

State Reports for September and October, 1919—Continued.

Place.	New cases reported.	Place.	New cases reported.
Maryland—Continued.		Massachusetts—Continued.	
Somerset County—Continued.		Middlesex County—Continued.	
Marumscoc.....	1	Newton.....	7
Lawsonia.....	1	Somerville.....	1
Westover (R. D.).....	1	Stoneham (town).....	1
Marion (R. D.).....	4	Tewksbury (town).....	2
St. Marys County—		Waltham.....	4
Valley Lee.....	1	Watertown (town).....	1
Talbot County—		Woburn.....	1
Bozman.....	1	Norfolk County—	
Washington County—		Brookline.....	1
Hagerstown.....	7	Dedham (town).....	1
Hagerstown (R. D.).....	1	Holtrook (town).....	1
Williamsport.....	2	Medway (town).....	1
Hancock.....	1	Milton (town).....	1
Hancock (R. D.).....	1	Quincy.....	1
Indian Spring.....	2	Randolph (town).....	4
Boonsboro.....	1	Wellesley (town).....	2
Trego.....	1	Plymouth County—	
Halfway.....	1	Hull (town).....	1
Sharpsburg (R. D.).....	1	Marshfield (town).....	1
Clear Spring (R. D.).....	1	Middleboro (town).....	1
Wicomico County—		Suffolk County—	
Peninsula General Hospital.....	1	Boston.....	20
Salisbury (R. D.).....	2	Chelsea.....	1
Delmar (R. D.).....	1	Revere.....	1
Worcester County—		Winthrop (town).....	1
Stockton.....	2	Worcester County—	
Pocomoke City (R. D.).....	2	Athol (town).....	1
Pocomoke City.....	2	Dudley (town).....	1
Snow Hill (R. D.).....	2	Fitchburg.....	4
Whaleysville.....	1	Gardner (town).....	4
Berlin.....	1	Holden (town).....	4
Klej Grange (R. D.).....	1	Leominster.....	2
Total.....	202	Millbury (town).....	1
		Princeton (town).....	2
Massachusetts (October):		Southridge (town).....	7
Berkshire County—		Sturbridge (town).....	6
Adams (town).....	1	Webster (town).....	1
Cheshire (town).....	1	Westminster (town).....	1
Great Barrington (town).....	1	Winchendon (town).....	1
North Adams.....	1	Worcester.....	16
Stockbridge (town).....	1	Total.....	155
Bristol County—		Nebraska (October):	
Fall River.....	4	Dawson County.....	1
New Bedford.....	1	Douglas County.....	11
North Attleboro (town).....	1	Lancaster County.....	2
Raynham (town).....	1	Polk County.....	1
Taunton (town).....	1	Saline County.....	1
Essex County—		Scotts Bluff County.....	2
Amesbury (town).....	1	Thomas County.....	1
Haverhill.....	3	Total.....	19
Lynn.....	4	New Mexico (October):	
Newburyport.....	1	Bernalillo County.....	2
Peabody.....	2	Chaves County.....	4
Swampscott (town).....	1	Colfax County.....	2
West Newbury (town).....	1	Lincoln County.....	1
Franklin County—		San Miguel County.....	2
Erving (town).....	1	Taos County.....	2
Montague (town).....	1	Union County.....	2
Hampden County—		Total.....	15
Chicopee.....	1	Wisconsin (October):	
Monson (town).....	1	Brown County.....	2
Springfield.....	3	Columbia County.....	1
Westfield (town).....	1	Douglas County.....	2
Hampshire County—		Kenosha County.....	3
Northampton.....	1	La Crosse County.....	1
Middlesex County—		Milwaukee County.....	6
Arlington (town).....	2	Oneida County.....	2
Belmont (town).....	1	Pierce County.....	1
Cambridge.....	2	Polk County.....	1
Dunstable (town).....	1	Vernon County.....	1
Everett.....	4	Washington County.....	1
Holliston (town).....	1	Total.....	21
Lowell.....	3		
Malden.....	1		
Marlboro (town).....	1		
Melrose.....	1		

TYPHOID FEVER—Continued.

City Reports for Week Ended Nov. 1, 1919.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio.....	3	.....	Milwaukee, Wis.....	1	.....
Alameda, Calif.....	1	.....	Minneapolis, Minn.....	3	1
Alexandria, Va.....	1	.....	Mobile, Ala.....	1	.....
Alliance, Ohio.....	.....	1	Nashville, Tenn.....	5	.....
Alton, Ill.....	1	.....	Newark, N. J.....	2	.....
Altoona, Pa.....	5	.....	New Britain, Conn.....	1	.....
Ann Arbor, Mich.....	1	.....	Newburgh, N. Y.....	1	.....
Atchison, Kans.....	1	.....	New Haven, Conn.....	4	1
Atlanta, Ga.....	1	2	New Orleans, La.....	3	1
Atlantic City, N. J.....	1	.....	New York, N. Y.....	23	4
Austin, Tex.....	.....	1	Norfolk, Va.....	5	.....
Baltimore, Md.....	14	1	North Adams, Mass.....	1	.....
Beaumont, Tex.....	.....	1	Norwalk, Conn.....	.....	1
Beaumont Harbor, Mich.....	1	.....	Oakland, Calif.....	1	.....
Boston, Mass.....	4	2	Oklahoma City, Okla.....	2	.....
Burlington, Iowa.....	1	.....	Omaha, Neb.....	1	1
Charleston, W. Va.....	2	.....	Philadelphia, Pa.....	16	5
Chester, Pa.....	3	.....	Piqua, Ohio.....	1	.....
Chicago, Ill.....	1	1	Pittsburgh, Pa.....	1	.....
Cincinnati, Ohio.....	1	.....	Pontiac, Mich.....	4	.....
Cleveland, Ohio.....	6	.....	Portland, Me.....	7	1
Coffeyville, Kans.....	1	.....	Portland, Oreg.....	.....	1
Columbia, S. C.....	1	.....	Providence, R. I.....	.....	1
Dallas, Tex.....	2	.....	Pueblo, Colo.....	2	1
Denver, Colo.....	.....	1	Reading, Pa.....	1	.....
Detroit, Mich.....	8	3	Richmond, Va.....	1	.....
Du Bois, Pa.....	1	.....	Rochester, N. Y.....	2	1
Durham, N. C.....	2	.....	Rome, Ga.....	3	.....
El Paso, Tex.....	2	2	Sacramento, Calif.....	4	1
Erie, Pa.....	3	.....	St. Joseph, Mo.....	.....	2
Everett, Mass.....	2	.....	St. Louis, Mo.....	7	.....
Fall River, Mass.....	1	.....	St. Paul, Minn.....	3	.....
Fort Worth, Tex.....	5	.....	Salt Lake City, Utah.....	1	1
Fresno, Calif.....	.....	2	Santa Cruz, Calif.....	1	.....
Galesburg, Ill.....	1	.....	Sault Ste. Marie, Mich.....	2	1
Galveston, Tex.....	1	.....	Savannah, Ga.....	1	2
Green Bay, Wis.....	1	.....	Southbridge, Mass.....	1	.....
Haverhill, Mass.....	1	.....	Springfield, Mass.....	1	.....
Hibbing, Minn.....	1	.....	Springfield, Mo.....	.....	1
Highland Park, Mich.....	1	.....	Springfield, Ohio.....	1	.....
Hoboken, N. J.....	2	.....	Stockton, Calif.....	1	.....
Indianapolis, Ind.....	2	2	Sunbury, Pa.....	2	.....
Jersey City, N. J.....	3	.....	Syracuse, N. Y.....	1	.....
Kankakee, Ill.....	1	.....	Taunton, Mass.....	.....	1
Kansas City, Mo.....	2	.....	Terre Haute, Ind.....	1	.....
Kenosha, Wis.....	1	.....	Tiffin, Ohio.....	1	.....
Long Beach, Calif.....	.....	1	Toledo, Ohio.....	2	.....
Lorain, Ohio.....	1	.....	Uniontown, Pa.....	1	.....
Los Angeles, Calif.....	7	.....	Waco, Tex.....	1	.....
Louisville, Ky.....	2	.....	Waltham, Mass.....	2	.....
Lowell, Mass.....	1	.....	Washington, D. C.....	4	1
Macon, Ga.....	1	.....	West Chester, Pa.....	1	.....
Malden, Mass.....	1	.....	Wilkes-Barre, Pa.....	1	.....
Marquette, Mich.....	1	.....	Worcester, Mass.....	10	.....
Martinsburg, W. Va.....	1	.....	Youngstown, Ohio.....	4	.....

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City Reports for Week Ended Nov. 1, 1919.

City.	Popula- tion as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Aberdeen, S. Dak.	15,926	2								
Adams, Mass.	14,406	4							1	
Akron, Ohio.	93,604	9	15				11		3	
Alameda, Calif.	28,433	6	2						1	1
Alexandria, La.	16,232	6								
Alexandria, Va.	17,939	7					2	1	1	
Allentown, Pa.	65,109		3				2		1	
Alliance, Ohio	19,581						1			2
Alpena, Mich.	13,365		3		1		2		2	
Alton, Ill.	23,783	3	1				1		1	
Altoona, Pa.	59,712				159		3		1	
Amesbury, Mass.	10,200	1								
Anderson, Ind.	24,230	6								1
Ann Arbor, Mich.	15,041	9								2
Anniston, Ala.	14,326		4							
Ansonia, Conn.	16,954	5							1	
Appleton, Wis.	18,005	5								
Arlington, Mass.	13,073	6	4		1				2	3
Asbury Park, N. J.	14,629	2					1			
Ashtabula, Ohio.	22,008	3	2		6					1
Atlanta, Ga.	196,144		27		8		4		1	3
Atlantic City, N. J.	59,515	7			1		1		3	
Attleboro, Mass.	19,776	3	1						2	1
Auburn, N. Y.	37,823	6	1				3		2	
Austin, Tex.	35,612	13	8							
Bakersfield, Calif.	17,543	7			1					
Baltimore, Md.	594,637	195	61	3	5		32		42	15
Bangor, Me.	26,958						2			
Barberton, Ohio.	14,187	2					1			
Baton Rouge, La.	17,544	8							3	
Battle Creek, Mich.	30,159	12	15		1		10			
Bayonne, N. J.	72,204		12				3		1	
Beacon, N. Y.	11,674	4								
Beatrice, Nebr.	10,437	5								
Beaumont, Tex.	28,851	16								
Beaver Falls, Pa.	13,749		1							
Bodford, Ind.	10,613	3								
Belleville, N. J.	12,797								2	
Beloit, Wis.	18,547	3					1			
Benton Harbor, Mich.	11,099	6								
Berkeley, Calif.	60,427	9					3		2	
Berlin, N. H.	13,892	7	2						2	1
Bethlehem, Pa.	14,353		3							
Beverly, Mass.	22,128	0			1		2			
Biddeford, Me.	17,760	4								1
Billings, Mont.	15,123								1	1
Binghamton, N. Y.	54,864	8	2							
Birmingham, Ala.	189,716	55	13	2	1		7		4	8
Bloomfield, N. J.	19,013	6					2		1	
Bloomington, Ind.	11,661	4	3				1			
Boise, Idaho.	35,951	7	1		1		1			
Boston, Mass.	767,813	184	70	4	80		42		55	19
Braddock, Pa.	22,060		1				2			
Bradford, Pa.	14,544						2			
Brazil, Ind.	10,472	1								
Bridgeport, Conn.	124,724	26	22	1	6		2			2
Bristol, Conn.	16,318	1	9				4			
Brockton, Mass.	69,152	19	3	1	17		3		1	1
Brookline, Mass.	33,526	2					2			
Brunswick, Ga.	10,984	6								
Buffalo, N. Y.	475,781	110	101	6	4	1			27	13
Burlington, Iowa.	25,144	4					1			
Burlington, Vt.	21,802	7							1	
Butler, Pa.	28,677		1				1			
Butte, Mont.	44,057		3						10	
Cadillac, Mich.	10,158	2			4		4			
Cairo, Ill.	15,995		3							2
Cambridge, Mass.	114,293		7	1	4		9		7	4
Canton, Ill.	13,674	2								
Canton, Ohio.	62,566	12	14	2			4		1	
Cape Girardeau, Mo.	11,146	1	7				1			
Carbondale, Pa.	19,597		1							
Carlisle, Pa.	10,795		1				3			

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

City Reports for Week Ended Nov. 1, 1919—Continued.

City.	Popula- tion as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Carnegie, Pa.	11,963		1				1			
Cedar Rapids, Iowa.	38,033		1							
Charute, Kans.	12,968	4	2		1					
Charleston, S. C.	61,041	19	3		1		1			
Charleston, W. Va.	31,060		4				3			
Charlotte, N. C.	40,759	13	4				1		2	
Chattanooga, Tenn.	61,575	19	2				1		6	1
Chelsea, Mass.	48,405	12	2		2		1		1	3
Chester, Pa.	41,857		7				4		2	
Cheyenne, Wyo.	11,320		1				3			
Chicago, Ill.	2,547,201	533	201	20	89	1	161		307	41
Chicopee, Mass.	29,950	8	4				2			3
Chillicothe, Ohio	15,625	4	2							
Cincinnati, Ohio	414,248	89	37	1	5		31		26	14
Cleveland, Ohio.	692,259	144	98	3	22		32		23	15
Clinton, Iowa.	27,678	0	1							
Clinton, Mass.	113,075	5								
Coatesville, Pa.	14,998						1			
Coffeyville, Kans.	18,331		8				2		1	
Cohoes, N. Y.	25,292	5							2	
Colorado Springs, Colo.	38,965	12	1						9	5
Columbia, Pa.	11,454		3							
Columbia, S. C.	35,165		4						1	
Columbus, Ga.	26,306	8			1					2
Columbus, Ohio.	220,135	57	4		1		10		4	6
Concord, N. H.	22,858	7	2							1
Connellsville, Pa.	15,876		3							
Council Bluffs, Iowa.	31,838	6	3		1		2			
Covington, Ky.	59,623	16	9	1	1		6		3	5
Cranston, R. I.	26,773	3					1			
Cumberland, Md.	26,786	2	1				7		4	1
Dallas, Tex.	129,738	29	30	3	1		5	1	11	3
Danbury, Conn.	22,931						2			
Danvers, Mass.	10,037	0			10		1			
Danville, Va.	20,183		3						2	
Davenport, Iowa.	49,618						2			
Dayton, Ohio.	128,939	35	2		1				3	
Decatur, Ill.	41,483	12	2							
Dedham, Mass.	10,618	1			3					
Denver, Colo.	268,439	77	17	3	2		8			11
Des Moines, Iowa.	104,052		4		1		15			
Detroit, Mich.	619,648	174	99	5	48	2	61	1	61	18
Dover, N. H.	13,276	3								
Du Bois, Pa.	14,994		4				1			
Dubuque, Iowa.	40,096		3							
Duluth, Minn.	97,077	13	44	1	1		4		5	
Dunmore, Pa.	21,286						3		3	
Durham, N. C.	26,160	6	5				3			1
East Chicago, Ind.	30,286	5								
East Cleveland, Ohio.	13,834		2							
Easthampton, Mass.	10,656	2	2	1			9			
Easton, Pa.	30,854		1						3	
East Orange, N. J.	43,761	4	3						3	3
East Providence, R. I.	18,485		1							
East St. Louis, Ill.	77,312	8	3		3		1			
Eau Claire, Wis.	18,887		1							
Elgin, Ill.	28,562	6			1					1
Elizabeth, N. J.	88,830		2	1			6		4	1
Elmira, N. Y.	38,272	10			15				2	
El Paso, Tex.	69,149	31	2							8
Englewood, N. J.	12,603	0							1	
Erie, Pa.	76,592		23		4		3		5	
Eureka, Calif.	15,142	3								
Evanston, Ill.	29,304	2	1							
Everett, Mass.	40,160	6	12	6			1		1	
Fairmont, W. Va.	16,111		4				2			
Fall River, Mass.	129,828	27			9		2		6	2
Fargo, N. Dak.	17,872	12					2			
Parrell, Pa.	10,190		2				1			

¹ Population Apr. 15, 1910.

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

City Reports for Week Ended Nov. 1, 1919—Continued.

City.	Popula- tion as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Findlay, Ohio.....	114,858	3								1
Flint, Mich.....	57,386	22	14	1	10		11			2
Fond du Lac, Wis.....	21,486	5	1							
Fort Dodge, Iowa.....	21,639	0	1							
Fort Scott, Kans.....	10,564	2								
Fort Wayne, Ind.....	78,014	13								3
Fort Worth, Tex.....	109,597	25	44	2						
Fostoria, Ohio.....	10,959	3								
Framingham, Mass.....	14,149	2	1		1		1		1	
Freeport, Ill.....	19,844	6					1			1
Fresno, Calif.....	36,314	13	7				3		1	2
Galesburg, Ill.....	24,629	6	1				1			2
Galveston, Tex.....	42,650	10					2			
Grand Rapids, Mich.....	132,861	36	1				2		1	
Great Falls, Mont.....	113,948	5	1							1
Green Bay, Wis.....	30,017	11	1						1	
Greenfield, Mass.....	12,251	4					1			
Greensboro, N. C.....	20,171	3		1						
Greensburg, Pa.....	15,881		1				1			
Greenwich, Conn.....	19,594								2	1
Hackensack, N. J.....	17,412	6					1		1	
Hammond, Ind.....	27,016	9	3	1			1			
Harrison, N. J.....	17,345		1				6		2	
Hartford, Conn.....	112,831	39	6	1			16	1	4	1
Haverhill, Mass.....	49,180	18	5	1			1		2	1
Hazleton, Pa.....	28,981		2		30					
Hibbing, Minn.....	17,550				4					
Highland Park, Mich.....	33,859	4	6				4			
High Point, N. C.....	13,439		7						2	
Hoboken, N. J.....	78,324		4	1			2		7	
Holland, Mich.....	12,459	4	8							
Holyoke, Mass.....	66,503	13	1				3		3	1
Homestead, Pa.....	23,071								2	
Hudson, N. Y.....	12,898									
Hutchinson, Kans.....	21,461	4	1							
Indianapolis, Ind.....	283,622	86	3				13		12	6
Iowa City, Iowa.....	11,626	1								
Ironton, Ohio.....	14,079	5								
Ironwood, Mich.....	15,095	5					2			
Irvington, N. J.....	16,710		1				2		1	
Ishpeming, Mich.....	12,448	1					1		1	
Ithaca, N. Y.....	16,017	4					1		8	1
Jamestown, N. Y.....	37,431	6	6				1		1	
Janesville, Wis.....	14,411	9					1	1		1
Jersey City, N. J.....	312,557		27				1		14	
Johnstown, Pa.....	70,473		3		43				2	
Joplin, Mo.....	33,400	4	4				2			
Kalamazoo, Mich.....	50,408	14	9				4		5	
Kankakee, Ill.....	14,270	2	3							
Kansas City, Kans.....	102,096		10		1		6		3	
Kansas City, Mo.....	305,816	94	6	1	24		11	1		9
Kearney, N. J.....	24,325	4		1	2		1			
Keene, N. H.....	10,725									1
Kenosha, Wis.....	32,833	10			3		1			
Knoxville, Tenn.....	59,112		6	1	4		5	1	4	4
Kokomo, Ind.....	21,929	1								
Lackawanna, N. Y.....	16,219	0	5				2			
La Crosse, Wis.....	31,835	4	5				1			
La Fayette, Ind.....	21,481	9					2			1
Lakewood, Ohio.....	23,813	9	1							
Lancaster, Ohio.....	16,086	10								1
Lancaster, Pa.....	51,437		6				1		2	
Laurel, Miss.....	12,313		2	1						
Lawrence, Kans.....	13,477	4	4					1		
Lawrence, Mass.....	102,923	26	6	1					1	
Leavenworth, Kans.....	119,363		4				8		2	3
Leominster, Mass.....	21,365	7			1		9		1	1
Lexington, Ky.....	41,997	10	8				3			3
Lincoln, Nebr.....	46,957	8			1					
Little Rock, Ark.....	58,716		2				4			
Logansport, Ind.....	21,338	4							4	
Long Beach, Calif.....	29,163	20	2				6		2	

¹ Population Apr. 15, 1910.

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

City Reports for Week Ended Nov. 1, 1919—Continued.

City.	Popula- tion as of July 1, 1917 (estimated by U. S. (census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Long Branch, N. J.	15,733	2	1							
Lorain, Ohio	38,266	0					2		1	
Los Angeles, Calif.	535,485	132	16		3		1		18	19
Louisville, Ky.	240,908	61	48	3			12		6	6
Lowell, Mass.	114,356	26	5		1		3	1	5	2
Lufkin, Tex.	10,566	0					4			
Lynchburg, Va.	33,497	9	1				1		1	2
Lynn, Mass.	104,534	23	39		2		20		4	1
McAlesport, Pa.	48,299						3			
Macon, Ga.	46,099	23	24	1	1				1	
Madison, Wis.	31,315		1				1			
Mahonoy City, Pa.	17,709		1				1			
Malden, Mass.	52,243	9	6	1	1		1		1	1
Manchester, Conn.	15,859	1					4		1	
Manchester, N. H.	79,607	14	6						6	
Mantoloking, N. J.	13,131	2								
Marquette, Mich.	10,365	3					5			
Marquette, Wis.	14,610	4			12		2			1
Marion, Ind.	19,923	11	6	1			4			1
Marion, Mass.	15,285	2	1							
Marquette, Mich.	12,555	6	2							
Marshalltown, Iowa	14,519		4				3			
Martinsburg, W. Va.	12,184		7							
Mason City, Iowa	14,138	6								
Medford, Mass.	26,681	7	4				1		1	
Melrose, Mass.	17,724	1					1		1	
Meriden, Conn.	29,431		2				2			
Methuen, Mass.	14,320	6	1						1	
Middletown, N. Y.	15,800		1				1			
Middletown, Ohio	16,384	4								
Milwaukee, Wis.	445,096	72	54	3	26		24	1	16	6
Minneapolis, Minn.	373,448	69	27		1		14	1	5	6
Moline, Ill.	59,201	19	3				3		1	2
Moline, Ill.	27,976	12	2							
Montclair, N. J.	27,057	0	1		1		2		1	
Montgomery, Ala.	44,439	16	5				1		2	1
Morgantown, W. Va.	14,444	3	1				2			1
Morristown, N. J.	13,410	4		1						
Morrisville, W. Va.	11,513	3	2							
Mount Carmel, Pa.	20,709		1				2			
Mount Vernon, N. Y.	37,991	5							3	
Muskogee, Okla.	47,173		2		1		1			
Nanticoke, Pa.	23,811						2			
Nashua, N. H.	27,541	3	11				4		21	3
Nashville, Tenn.	118,136	37	23						3	
Newark, N. J.	418,789	96	39		17		14	1	46	11
New Bedford, Mass.	121,622	33	6	1	7		8		4	6
New Britain, Conn.	55,385	10	7				7		5	1
New Brunswick, N. J.	25,855						1			
Newburgh, N. Y.	29,803	9	1				1			1
Newburyport, Mass.	15,391	2								
New Castle, Pa.	41,915						5			
New Haven, Conn.	162,275	45	12		25		10		5	2
New London, Conn.	21,199	5		1	1		1			
New Orleans, La.	377,010	105	11	1	3		11		17	15
Newport, R. I.	30,585	2					2			
Newton, Mass.	44,345	10	2				4		1	
New York, N. Y.	5,737,492	1,043	196	15	137	2	60	1	322	97
Niagara Falls, N. Y.	38,466	6			10		6		2	1
Norfolk, Va.	91,148		8				4			
Norristown, Pa.	31,969		1							
North Adams, Mass.	122,019	7	2						1	
Northampton, Mass.	20,006	6	5							
North Attleboro, Mass.	11,248	1								
North Braddock, Pa.	15,684		1				1			
North Little Rock, Ark.	15,515	9	2						3	
North Tonawanda, N. Y.	14,060	3					5		1	1
Norwalk, Conn.	27,332								1	
Norwich, Conn.	21,923		2						1	
Norwood, Ohio	23,269	4			34		1			1
Oakland, Calif.	206,405	52	5		41		6		2	5
Oak Park, Ill.	27,816	6					4			

¹ Population Apr. 15, 1910.

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

City Reports for Week Ended Nov. 1, 1919—Continued.

City.	Population as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Ogdensburg, N. Y.	16,845	5								
Ogden, Utah	32,343	6					1			
Oil City, Pa.	20,162		4							
Oklahoma City, Okla.	97,588	17	12	1			4		3	2
Old Forge, Pa.	15,479		2							
Omaha, Nebr.	177,777	40	8				10	1		3
Orange, Conn.	14,393	5			1					
Orange, N. J.	33,636	17	1						1	
Oshkosh, Wis.	36,549	5					2			
Parkersburg, W. Va.	21,059	6	3							1
Parsons, Kans.	15,952		5							
Pasadena, Calif.	49,620	14					1		2	4
Passaic, N. J.	74,478	12	1							1
Paterson, N. J.	140,512	31	9		1		6		1	
Pawtucket, R. I.	60,666	15	3				3			1
Peekskill, N. Y.	19,034	3								1
Pekin, Ill.	10,973						2			
Peoria, Ill.	72,184	17	16				12			
Perth Amboy, N. J.	42,646	7	5	3			2		6	1
Petersburg, Va.	25,817	13	3						1	2
Philadelphia, Pa.	1,735,514	442	106	10	50		69	1	51	45
Phillipsburg, N. J.	15,879	1	2							
Phoenixville, Pa.	11,871		2							
Pine Bluff, Ark.	17,777		1							
Piqua, Ohio.	14,275	4								1
Pittsburgh, Pa.	586,196		23		4		16		13	
Pittsfield, Mass.	39,678	9							1	2
Pittston, Pa.	18,975		1							
Plainfield, N. J.	24,330	7	3	1	21					
Plattsburg, N. Y.	13,111	3	1							
Plymouth, Mass.	14,001	1								
Plymouth, Pa.	19,439								1	
Pomona, Calif.	13,624	3								
Pontiac, Mich.	18,006	7	13		72	1				1
Portland, Me.	64,720	10	3				1			
Portland, Oreg.	308,399	63	2				13		12	6
Portsmouth, N. H.	11,730		1				1			
Portsmouth, Ohio.	29,356		5				4			
Portsmouth, Va.	40,693	11	6				1		4	1
Pottstown, Pa.	16,987		2							
Providence, R. I.	259,895	71	8	3	1		2	1		7
Fueblo, Colo.	56,084		3							
Quincy, Ill.	36,832	5							1	1
Quincy, Mass.	39,022	1	3		3		2		4	
Racine, Wis.	47,465	15	2				11	1		1
Rahway, N. J.	10,361	2	3							
Raleigh, N. C.	20,274	10	3		1		4			1
Reading, Pa.	111,607		3		1		3		2	
Redlands, Calif.	14,573	0							3	
Reno, Nev.	15,514	2							1	1
Richmond, Va.	158,702	47	16				12		28	5
Riverside, Calif.	20,496	9			1				2	
Roanoke, Va.	46,282	12	1				2			
Rochester, N. Y.	264,714		17	1	8		4		4	4
Rockford, Ill.	55,739	18	4	1						1
Rock Island, Ill.	29,452	28	6		1				2	
Rocky Mount, N. C.	12,673	5	8				1			
Rome, Ga.	15,607		1							
Rome, N. Y.	24,259		3						2	
Rutland, Vt.	15,038	2								
Sacramento, Calif.	68,981	26					3	1	7	3
Saginaw, Mich.	56,469	21		1	2		1			1
Saint Cloud, Minn.	12,013		4							
Saint Joseph, Mo.	86,498	24	2				4			2
Saint Louis, Mo.	768,630	152	107	9	7		18		60	7
Saint Paul, Minn.	252,465	64	25	1			3		10	8
Salem, Mass.	49,346	7	13	1			12			
Salt Lake City, Utah	121,623	30			2		1			4
San Bernardino, Calif.	17,616	8								2
San Diego, Calif.	56,412	23	5						8	
Sandusky, Ohio	20,226	3								

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

City Reports for Week Ended Nov. 1, 1919—Continued.

City.	Popula- tion as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Sanford, Me.	11,217	2								
San Francisco, Calif.	471,023	111		3						14
San Jose, Calif.	39,810						2			
Santa Barbara, Calif.	15,360	1	7							
Santa Cruz, Calif.	15,150	1					1			
Saratoga Springs, N. Y.	13,839	4	1							
Saugus, Mass.	10,210	1	1							
Sault Ste. Marie, Mich.	14,130	2								
Savannah, Ga.	69,250	34	13				1		1	2
Schenectady, N. Y.	103,774	9	1						4	
Scranton, Pa.	149,541						2			
Sharon, Pa.	19,153		1				2			
Shenandoah, Pa.	29,753		2							
Sioux City, Iowa	58,538		1				8			
Sioux Falls, S. Dak.	16,887	11	1				7			
Somerville, Mass.	88,618		5				3		2	
South Bend, Ind.	70,967	8	3				1		1	
Southbridge, Mass.	14,465						2		2	
Spartanburg, S. C.	21,985	5	3				1			
Springfield, Mass.	108,638	29	5		2		3		2	3
Springfield, Mo.	41,169	13		1						
Springfield, Ohio	52,296	12			1		1		2	2
Stamford, Conn.	31,810		5		5				1	
Steubenville, Ohio	28,259	9	3							
Stockton, Calif.	33,209	6					2			1
Sunbury, Pa.	16,631		3							
Superior, Wis.	47,167	12		1	5		1			
Syracuse, N. Y.	158,559	50	8	1			10		10	
Taunton, Mass.	36,610	8	2		1		1			
Terre Haute, Ind.	67,361	8			1		1			
Tiffin, Ohio	12,932	3								
Toledo, Ohio	202,010	55	7		45		22		5	3
Topeka, Kans.	49,538	17		1					2	
Trenton, N. J.	113,974	42	9		1	5			4	3
Troy, N. Y.	78,094	18	4				4		2	2
Tuscaloosa, Ala.	10,824	3	1						1	
Uniontown, Pa.	21,600		1							
Vallejo, Calif.	13,803	5	6	2						
Virginia, Minn.	15,954		1							
Waco, Tex.	34,015	13	8				1			
Wakefield, Mass.	12,947	3	1				4		1	
Waltham, Mass.	31,011	3	1		1		2			
Washington, D. C.	339,282		16	1	2		5		22	12
Washington, Pa.	22,076		2		1					
Watertown, Mass.	15,188	4								
Wausau, Wis.	19,666	4					1		1	
West Chester, Pa.	13,403		1				2		1	
Westfield, Mass.	18,769	4	6				1			
West Hoboken, N. J.	44,386	6	3							
West New York, N. J.	19,613	6	2						1	
West Orange, N. J.	13,934	1	5							
Wheeling, W. Va.	43,657	18	3		1					
White Plains, N. Y.	23,331	4							1	1
Wichita, Kans.	73,597	26	9	1			5		2	
Wilkes-Barre, Pa.	78,334		3							
Wilkinsburg, Pa.	23,899						1			
Williamsport, Pa.	34,123		1				2			
Wilmington, Del.	95,369		5		1		3			3
Wilmington, N. C.	30,400	7	6				1			1
Winchester, Mass.	10,812	2								
Winona, Minn.	18,583	1	1		2		1			
Winston-Salem, N. C.	33,136	14	2						5	3
Winthrop, Mass.	13,105				1					
Woburn, Mass.	16,076	4								1
Worcester, Mass.	166,106	23	14		1	1	13		4	1
Yonkers, N. Y.	105,066	8	10		1		1		12	2
York, Pa.	55,770		3				3		2	
Youngstown, Ohio	112,282	12	13		1		4		1	2
Zanesville, Ohio	31,320	5							2	1

1 Population Apr. 15, 1910.

FOREIGN.

BRAZIL.

Deaths from Communicable Diseases, August, 1919—Porto Alegre.

The following is a report of the deaths from communicable diseases in Porto Alegre, Rio Grande do Sul, Brazil, during the month of August, 1919. The population of Porto Alegre is said to be 160,000.

Disease:	Deaths.
Bubonic plague.....	1
Diphtheria.....	4
Dysentery.....	1
Influenza.....	8
Tuberculosis.....	64
Typhoid fever.....	3
Total.....	81

CANADA.

Outbreak of Smallpox—Toronto.

An outbreak of smallpox, stated to be mild in form, is reported at Toronto, Ontario, Canada. Three hundred and sixty-eight cases are said to have been reported to the city health officer during the first half of November, 1919. Two hundred and four cases of chicken pox were reported during the same period.

CUBA.

Quarantine Against Ports in China and Japan.

Quarantine measures on account of plague were ordered, November 6, 1919, to be enforced at Cuban ports against arrivals from ports in China, especially the ports of Hongkong and Yokohama.

Quarantine Against Arrivals from Marseille, France.

Quarantine measures on account of plague were ordered, October 20, 1919, to be enforced at ports in Cuba, against arrivals from Marseille, France, as follows:

I. *Vessels*.—(a) Vessels leaving Marseille, France, for any of the ports of Cuba, will be deratized immediately before leaving, in the open bay, by means of any of the methods used by the Cuban quarantine service. (b) Vessels that have not complied with this requisite

in the form indicated at the port of departure, will be deratized under the direction of the port physician of the Cuban port at which they arrive, before being permitted to make any operations of loading and unloading.

II. Passengers.—Passengers coming from the port of Marseille, France, will be especially examined, and when from the investigations made, in the judgment of the sanitary authorities, it appears that no danger to the public health will result from putting at liberty a part, or all, of the passengers, these may be given freedom.

Quarantine Against Arrivals from New Orleans.

According to information dated November 3, 1919, quarantine restrictions have been ordered to be enforced at ports in Cuba against arrivals from New Orleans on account of plague.

Smallpox—Correction—Cienfuegos—Cuba—October, 1918.

The report of the occurrence of two fatal cases of smallpox at Cienfuegos, Cuba, during the period October 20 to 26, 1918, appearing in Public Health Reports of November 15, 1918, page 2022, and in subsequent issues, was an error.

GREAT BRITAIN.

Plague Rats—Steamship *Worcestershire*—Liverpool.

The finding of plague rats on the steamship *Worcestershire* arriving at Liverpool from ports in South America, was reported October 23, 1919.

Plague Rats—On Dock—Liverpool.

On October 23, 1919, the finding of several plague rats in the vicinity of the discharging berth, East Brunswick dock, Liverpool, was reported.

JAMAICA.

Influenza.

Influenza in mild form was reported in several localities in the Island of Jamaica, West Indies, during the month of October, 1919.

LAGOS.

Influenza.

Influenza was reported present November 3, 1919, at Lagos, Island of Lagos, West Africa.

MEXICO.

Quarantine Against Arrivals from California Raised.

On November 8, 1919, the quarantine restrictions at ports in Mexico against arrivals from California were raised.

Quarantine Against Arrivals from New Orleans.

According to information dated November 7, 1919, quarantine restrictions have been imposed at ports in Mexico against arrivals from New Orleans on account of plague.

NICARAGUA.

Yellow Fever.

Under date of October 16, 1919, yellow fever was reported present in the cities of Chinandega, Leon, and Managua, Nicaragua.

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

Reports Received During Week Ended Nov. 21, 1919.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Antung.....	Sept. 29-Oct. 12...	35	14	
India:				
Bombay.....	Sept. 14-20.....	1		
Calcutta.....	Aug. 10-Sept. 20.....		45	
Madras.....	Sept. 23-Oct. 4....	4	3	
Java:				
Mid-Java.....				June 1-27, 1919: Cases, 165; deaths, 125.
Samarang.....	June 1-27.....	1	1	
West Java.....				Sept. 6-11, 1919: Cases, 19; deaths, 12.

PLAGUE.

Brazil:				
Ceara.....	Aug. 3-Sept. 13...	84	21	
Ceylon:				
Colombo.....	Sept. 21-27.....	1		
India:				Aug. 16-Sept. 20, 1919: Cases, 7,664; deaths, 5,745.
Bombay.....	Sept. 14-20.....	4	1	
Karachi.....	Sept. 21-Oct. 4....	3	3	
Madras Presidency.....	do.....	242	152	
Rangoon.....	Sept. 14-20.....	28	28	
Java:				
East Java.....				Sept. 3-9, 1919: cases, 19; deaths, 19.
Surabaya.....	Sept. 3-9.....	1	1	
Mid-Java.....				June 1-27, 1919: Cases, 52; deaths, 52.
Samarang.....	June 11-27.....	16	16	
Senegal:				
Dakar.....	Sept. 1-30.....	1	1	Reported present in vicinity.
Straits Settlements:				
Singapore.....	Aug. 1-30.....	1		

SMALLPOX.

Canada:				
New Brunswick—				
Campbelltown.....	Oct. 1-31.....	4		
Nova Scotia—				
Halifax.....	Oct. 28-Nov. 1....	1		Counties: Colchester and Guys-borough.
Ontario—				
Toronto.....				Nov. 7, 1919: 91 cases under treatment. Found in 74 homes.
Prince Edward Island—				Nov. 10: Cases, 169; Nov. 13, Cases, 300.
Charlottetown.....	Oct. 30-Nov. 5....	1		
Quebec—				
Quebec.....	Oct. 28-Nov. 1....	2		

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 Nov. 21, 1919—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Chungking.....	Sept. 14-20.....			Present.
Nanking.....	Sept. 28-Oct. 4.....			Do.
Egypt:				
Alexandria.....	Sept. 24-Oct. 14.....	18	9	
Cairo.....	Aug. 28-Sept. 9.....	33	11	
Port Said.....	do.....	2		
Finland.....				Aug. 1-31, 1919: Cases, 8.
France:				
Paris.....	July 27-Aug. 2.....	2	1	
Greece:				
Drama.....	Sept. 29-Oct. 5.....			Present.
Saloniki.....	Aug. 24-Oct. 5.....		30	
India:				
Bombay.....	Sept. 14-20.....	2	1	
Calcutta.....	Aug. 10-Sept. 20.....		62	
Karachi.....	Sept. 21-Oct. 4.....	19	19	
Madras.....	do.....	17	9	
Rangoon.....	Sept. 14-20.....	10	1	
Italy:				
Genoa.....	Sept. 23-28.....	12		
Messina.....	Sept. 29-Oct. 5.....	42	22	
Trieste.....	Oct. 4-19.....	2		
Java:				
East Java.....				Sept. 3-9, 1919; 1 case.
West Java.....				Sept. 5-11, 1919: Cases, 118; deaths, 20.
Batavia.....	Sept. 5-11.....	1	1	
Newfoundland:				
St. Johns.....	Nov. 1-7.....	2		Outports, 5 cases.
Mexico:				
Vera Cruz.....	Sept. 28-Oct. 4.....	2		
Spain:				
Barcelona.....	Sept. 24-Oct. 7.....		4	
Bilbao.....	Sept. 24-20.....		2	
Vigo.....	Oct. 5-11.....		3	
Sumatra:				
Belawan.....	Aug. 24-Sept. 6.....			Present.
On vessel:				
S. S. Glenaffric.....	Oct. 10.....	1		At Trinidad, West Indies. From Bahia. In person embarked at Bahia.
S. S. Vestris.....				At Barbados. Due at New York Nov. 18, 1919.

TYPHUS FEVER.

China:				
Antung.....	Oct. 6-12.....	2		
Egypt:				
Alexandria.....	Oct. 1-14.....	22	9	
Cairo.....	Aug. 28-Sept. 9.....	57	26	
Port Said.....	Sept. 3-9.....	3	3	
Greece:				
Athens.....	Sept. 16-22.....		1	
Saloniki.....	Aug. 24-Oct. 5.....		17	
Japan:				
Nagasaki.....	Oct. 6-12.....	1		
Mexico:				
Guadalajara.....	Sept. 1-30.....	3		
San Luis Potosi.....	Oct. 5-11.....			Present.
Tunis:				
Tunis.....	Oct. 12-18.....	1		

YELLOW FEVER.

Mexico:				
Merida.....	Sept. 21-27.....	2		
Do.....	Sept. 28-Oct. 4.....	7		
Nicaragua:				
Chinandega.....	Oct. 16.....			Present.
Leon.....	do.....			Do.
Managua.....	do.....			Do.

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

Reports Received from June 28 to Nov. 14, 1919.

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
Ceylon:				
Colombo.....	Apr. 20-26.....	10		
Hambantota.....	July 25.....			Outbreak 148 miles from Colombo. Spread to other places.
China:				
Amoy.....	June 17-30.....		25	
Do.....	July 1-Sept. 13.....		643	
Aantung.....	Aug. 5-Sept. 28.....	1,119	414	
Canton.....	June 8-21.....	10	3	
Do.....	June 29-Aug. 16.....	10	11	
Do.....	Aug. 31-Sept. 6.....	1	1	Present in foreign section, island Shamien, Aug. 8.
Do.....	Sept. 21-27.....	1	1	
Chefoo.....	Aug. 31-Sept. 6.....			Daily average over 50 fatalities.
Foochow.....	July 10-26.....			To July 16: Average of 100 fatalities daily. To July 26: Average of 30 cases daily. Five fatal cases European. July 27-Aug. 9: Epidemic
Hankow.....	Aug. 31-Sept. 6.....	1		Present.
Hongkong.....	July 13-Sept. 27.....	40	37	Foreign.
Mukden.....	Sept. 6-13.....		1	Choleraic disease prevalent from about July 15 with high mortality.
Peking.....	Aug. 24-30.....		1	
Shanghai.....	Aug. 6-31.....	7		
Swatow.....	May 25-June 28.....		90	
Do.....	June 29-Aug. 30.....		120	
Do.....	Sept. 7-13.....	5		
Tientsin.....	Aug. 10-Sept. 20.....	245	4	Cases are from reports of physicians from the foreign concessions and native city. Death are for the British concession.
Tsinanfu.....	do.....	32	3	
Tsingtao.....	July 6-Sept. 21.....	140	83	
Ungkum.....	Aug. 16.....			Present: 30 miles from Swatow.
Chosen (Korea)	Aug. 15.....	3		Aug. 26: 6 cases.
Anyo.....	do.....	1		Keiki Province.
New Wiju.....	Aug. 12.....	1		In a Korean arrived from Aantung, China, where cholera was prevalent.
Seoul.....	Aug. 1-31.....	1	5	North Hean Province.
Shingshu.....	do.....	1		Present.
South Kankyo.....	Aug. 26.....			
Provinces—				
Keiki.....	Sept. 12-Oct. 1.....	96	72	
Kogen.....	do.....	4	3	
Kokai.....	do.....	1,628	892	
North Heian.....	do.....	867	446	
North Kankyo.....	do.....	253	112	
North Keisho.....	do.....	55	24	
North Zenra.....	do.....	184	76	
South Chusel.....	do.....	186	90	
South Heian.....	do.....	851	448	
South Kankyo.....	do.....	239	129	
South Zenra.....	do.....	8	5	
India:				
Bombay.....	Apr. 28-June 28.....	84	55	
Do.....	June 29-Sept. 13.....	195	122	
Calcutta.....	May 4-June 21.....		617	
Do.....	June 29-Aug. 9.....		100	
Karachi.....	July 24-30.....	3	2	
Madras.....	May 18-June 28.....	29	19	Jan. 19-25, 1919: Cases, 113; deaths, 75.
Do.....	July 12-Sept. 6.....	52	31	
Rangoon.....	Apr. 28-June 28.....	108	85	
Do.....	June 29-Sept. 13.....	79	76	
Indo-China:				
Cochin-China—				
Saigon.....	Apr. 21-June 29.....	386	272	City and district.
Do.....	July 28-Sept. 7.....	41	37	
Japan:				
Kobe.....	Sept. 21-27.....	1	1	
Pescadores Islands.....	July 14.....	40		In 1 village.
Taiwan Island.....				July 2-Aug. 12, 1919: Cases, 398; deaths, 245.
Do.....	Aug. 21-31.....	574	419	
Do.....	Sept. 1-20.....	657	621	
Keelung.....	Aug. 8.....			Present in vicinity.
Taihoku.....	do.....			Present.
Tokyo.....	Aug. 18-24.....	4		
Yokohama.....	Sept. 1-7.....	1		Sept. 5, 1 case on fishing vessel near Haneda.

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

Reports Received from June 28 to Nov. 14, 1919—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Java:				
East Java.....				Apr. 2-June 20, 1919: Cases, 613; deaths, 507. June 25-July 15, 1919: Cases, 16; deaths, 18.
Surabaya.....	Apr. 23-June 20.....	97	79	
Do.....	June 25-July 15.....	15	13	
Do.....	July 30-Aug. 5.....	1	1	
Do.....	Aug. 13-19.....	1	1	
Mid-Java.....				Mar. 28-May 30, 1919: Cases, 1,914; deaths, 1,525.
Samarang.....	Mar. 28-May 30.....	89	84	
West Java.....				May 2-June 26, 1919: Cases, 100; deaths, 67. July 18-Aug. 2, 1919: Cases, 10; deaths, 5.
Batavia.....	May 2-June 5.....	12	5	
Do.....	Aug. 2-28.....	6		
Buitenzorg.....	Aug. 15-21.....	1		
Tjiandjoer.....	do.....	2	2	
Manchuria:				
Darien.....	Aug. 12.....			Present.
Harbin.....	Aug. 7.....			Present and in surrounding country. Aug. 14: Epidemic, with an estimated number of from 150 to 200 deaths.
Mesopotamia:				
Bassorah.....	July 20-26.....	1		
Persia:				
Arbedil.....	May 2.....			Present.
Enzeli.....	Apr. 23.....	1		
Khorram-Ahab.....	May 3.....			Outbreak.
Mianedge.....	Apr. 28.....			Do.
Zindjan.....	Apr. 21-May 4.....		49	
Philippine Islands:				
Manila.....	Apr. 26-June 28.....	11	5	
Do.....	June 29-Aug. 2.....	261	133	
Do.....	Aug. 10-Sept. 6.....	259	121	
Do.....	Aug. 17-Sept. 20.....	290	127	
Provinces.....				May 4-24, 1919: Cases, 567; deaths, 383.
Batangas.....	May 4-24.....	25	23	
Bulacan.....	do.....	48	25	
Cebu.....	do.....	162	84	
Laguna.....	do.....	20	15	
Mindoro.....	do.....	19	14	
Misamis.....	do.....	9	2	
Pampanga.....	do.....	166	131	
Tayabas.....	do.....	118	89	
Provinces.....				June 1-28, 1919: Cases, 615; deaths, 435.
Batangas.....	June 1-28.....	79	61	
Bohol.....	June 15-28.....	11	8	
Bulacan.....	June 1-28.....	63	27	
Cavite.....	June 8-28.....	23	14	
Cebu.....	June 22-28.....	24	11	
Laguna.....	June 8-21.....	16	13	
Iloos Sur.....	June 15-21.....	1		
Nueva Ecija.....	June 1-28.....	60	39	
Pampanga.....	do.....	105	79	
Pangasinan.....	June 8-28.....	113	81	
Tayabas.....	do.....	108	81	
Union.....	June 22-28.....	7	7	
Provinces.....				June 29-Sept. 20, 1919: Cases, 14,409; deaths, 10,280.
Albay.....	Aug. 31-Sept. 20.....	30	12	
Ambos Camarines.....	July 27-Aug. 23.....	145	90	
Do.....	Sept. 14-20.....	74	55	
Bataan.....	July 6-Aug. 9.....	8	7	
Do.....	Sept. 7-13.....	5	4	
Batangas.....	June 29-Sept. 20.....	1,061	812	
Bohol.....	do.....	78	60	
Bulacan.....	do.....	500	369	
Capiz.....	Aug. 24-Sept. 20.....	56	30	
Cavite.....	June 29-Aug. 16.....	174	115	
Do.....	Aug. 24-Sept. 20.....	107	71	
Cebu.....	June 29-July 26.....	81	41	
Do.....	Aug. 17-Sept. 20.....	796	486	
Davao.....	Sept. 7-13.....	3	1	
Iloos Norte.....	Aug. 10-Sept. 20.....	407	301	
Iloos Sur.....	July 20-Aug. 9.....	177	120	
Do.....	Aug. 17-30.....	211	146	
Do.....	Sept. 14-20.....	397	265	
Iloilo.....	July 6-Sept. 20.....	325	242	
Laguna.....	do.....	415	310	
Leyte.....	Aug. 24-30.....	41	18	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**Reports Received from June 28 to Nov. 14, 1919.****CHOLERA—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands—Continued.				
Provinces—Continued.				
Mindoro.....	July 20-26.....	125	45	
Do.....	Aug. 21-30.....	79	45	
Misamis.....	July 20-26.....	6	4	
Do.....	Aug. 17-23.....	5	4	
Mountain.....	July 6-12.....	9	2	
Do.....	Aug. 31-Sept. 20.....	111	53	
Nueva Ecija.....	June 29-Sept. 20.....	544	381	
Occidental Negros.....	July 27-Sept. 20.....	123	83	
Oriental Negros.....	July 27-Sept. 6.....	173	100	
Pampanga.....	June 27-Sept. 6.....	568	461	
Pangasinan.....	June 27-Sept. 20.....	6,093	4,462	
Rizal.....	July 13-Aug. 23.....	420	282	
Do.....	Aug. 31-Sept. 20.....	359	211	
Sorsogon.....	July 27-Aug. 16.....	23	21	
Do.....	Sept. 14-20.....	34	19	
Tarlac.....	do.....	10	8	
Tayabas.....	June 29-Sept. 20.....	391	320	
Union.....	July 6-Sept. 20.....	1,205	867	
Zambales.....	July 13-19.....	1	1	
Do.....	Aug. 31-Sept. 13.....	28	116	
Siam:				
Bangkok.....	Apr. 12-June 28.....		697	
Do.....	June 30-Aug. 30.....		55	
Straits Settlements:				
Singapore.....	July 14-27.....	80	69	Sept. 30: Present.
Sumatra:				
Medan.....	June 29-Aug. 23.....	46	25	Present in neighboring villages, June-July, 1919.
Turkey:				
Constantinople.....	July 28.....			Present.
On vessel:				
Steamship.....	Aug. 17.....	1		At Yokohama, from Shanghai, Aug. 12, 1919.

PLAGUE.

Azores:				
Fayal Island.....	Sept. 6-19.....			Present.
Terceira Island.....	do.....			Do.
Brazil:				
Ceara.....	Sept. 8.....			Do.
Pernambuco.....	May 26-June 1.....		1	
British East Africa:				
Kisumu.....	May 18-June 28.....			Present. Zanzibar Island.
Do.....	June 29-July 26.....			Do.
Do.....	Aug. 3-6.....			Present in vicinity. Zanzibar Island.
Nairobi.....	June 15-21.....	1		Native inspectors' reports, cases 52; deaths 52; native chiefs' reports, deaths 27.
Do.....	Aug. 17-23.....	5	2	Native inspectors' reports, cases 25; deaths 25; native chiefs' reports, deaths 27.
Ceylon:				
Colombo.....	Aug. 10-16.....	2	2	Town cases.
Chile:				
Antofagasta.....	Aug. 18-23.....	3		
China:				
Amoy.....	June 17-23.....		1	
Do.....	Aug. 18-Sept. 13.....		1	Present.
Canton.....	May 25-June 28.....			Present. Apr. 27-May 10, 1919.
Foochow.....	May 18-24.....			Present. Cases, 3; present May 24-June 7, 1919.
Hongkong.....	June 15-28.....	42	33	
Do.....	June 29-Sept. 3.....	36	31	
Ecuador:				
Guayaquil.....	June 16-30.....	2	1	
Posorja.....	June 1-30.....	3	1	Bathing place 65 kilometers from Guayaquil.
Egypt.....				
				Jan. 1-Aug. 6, 1919: Cases, 710; deaths, 405.

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

Reports Received from June 28 to Nov. 14, 1919.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt—Continued.				
Cities—				
Alexandria.....	July 23-29.....	1	.....
Do.....	Sept. 3-9.....	3	2	
Ismailia.....	July 29.....	2	.....
Cairo.....	May 1.....	.....	1	
Kantarah.....	June 19-20.....	4	2	Two European. Septicemic.
Do.....	July 31-Aug. 3.....	2	3	
Port Said.....	May 1-June 28.....	9	10	
Do.....	July 2-Aug. 19.....	21	17	
Suez.....	June 5-11.....	3	3	
Provinces—				
Assiout.....	May 17-June 24....	89	41	
Do.....	July 3-Aug. 6.....	7	3	
Beni-Souef.....	May 19-June 21.....	6	5	
Fayoum.....	May 18-July 5.....	10	7	
Girgeh.....	May 15-July 8.....	32	10	
Menoufia.....	June 8-24.....	5	1	
Minieh.....	May 24-June 25....	29	11	
Do.....	July 5-7.....	3	1	
France:				
Marseille.....	Aug. 16-Sept. 2....	5	3	Total number of cases reported to Aug. 27, 11; deaths, 3.
Great Britain:				
Liverpool.....	July 30.....	1	1	In dock laborer.
Greece:				
Athens.....	Oct. 20.....	5	3	
Piræus.....	Oct. 23.....	2	1	
Hawaii:				
Ah Poi Camp.....	Aug. 9.....	1	1	
Paauihan.....	July 19.....	1	.....
Kukuiaian.....	Sept. 23.....	3	3	
Paauiho.....	Sept. 25.....	2	1	
India.....				
Bombay.....	Apr. 28-June 28.....	278	202	Apr. 27-June 28, 1919: Cases, 8,645; deaths, 6,933. June 29-Aug. 9, 1919: Cases, 2,623; deaths, 1,974.
Do.....	June 29-Sept. 13....	56	38	
Calcutta.....	May 18-June 14.....	.....	38	
Do.....	June 28-Aug. 2.....	.....	22	
Karachi.....	May 18-June 28.....	145	132	
Do.....	June 29-Sept. 6.....	61	53	
Madras.....	.....	.....	.....	Jan. 19-25, 1919: Cases, 2; deaths, 1.
Madras Presidency.....	July 6-Aug. 16.....	381	237	Jan. 19-25, 1919: Cases, 586; deaths, 347. May 30-June 5: Cases, 37; deaths, 28.
Do.....	Aug. 31-Sept. 6.....	154	80	
Rangoon.....	Apr. 28-June 28.....	75	63	
Do.....	July 6-Sept. 13.....	223	101	
Indo-China:				
Cochin China—				
Saigon.....	Apr. 21-June 29.....	31	23	City and district.
Do.....	July 28-Aug. 24.....	8	4	
Do.....	Aug. 31-Sept. 7.....	3	3	
Japan:				
Yokohama.....	June 9-15.....	1	1	
Java:				
East Java.....				
Saratiga.....	Aug. 20-26.....	1	1	Apr. 8-June 28, 1919: Cases, 130; deaths, 130. July 23-29, 1919: Cases, 34; deaths, 34.
Surabaya.....	Apr. 23-June 3.....	7	7	
Do.....	July 30-Sept. 2.....	6	5	
Temangoeng.....	July 30-Sept. 2.....	43	43	
Mid-Java.....	.....	.....	.....	Apr. 26-May 30, 1919: Cases, 23; deaths, 23.
Samarang.....	Apr. 26-May 20.....	10	10	
Malta.....	Aug. 1-31.....	.....	5	
Mesopotamia:				
Bagdad.....	Apr. 19-June 20.....	346	269	
Do.....	July 19-25.....	2	1	
Do.....	Aug. 2-8.....	1	.....
Basra.....	May 3-10.....	108	89	Including suburb of Ashar. Total from date of outbreak, March, 1919, to June 24, 1919: Cases, 396; deaths, 256.
Bassorah.....	July 20-26.....	2	1	
Siam:				
Bangkok.....	Apr. 27-May 17....	2	2	
Spain:				
Barcelona.....	Sept. 15.....	5	.....
Straits Settlements:				
Singapore.....	Apr. 13-26.....	2	1	
Do.....	July 14-Aug. 30....	12	7	

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

Reports Received from June 28 to Nov. 14, 1919.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Syria:				
Beirut.....	Oct. 11.....	24		Present.
Turkey:				
Constantinople.....	Oct. 9.....			Bubonic and pneumonic.
On vessels:				
S. S. City of Sparta.....	Apr. 19-21.....	1	1	From Bombay, Apr. 3, 1919; Case, a soldier at sea.
Do.....	May 13-17.....	1	1	At Liverpool: Case, a native member of the crew. (Public Health Reports, June 27, 1919, p. 1463.)
S. S. Clan Lamont.....	Aug. 19.....	1		In dock in port of London, England. Vessel left Calcutta Mar. 23; arrived Buenos Aires May 9; sailed June 20; arrived Montevideo and sailed June 21; arrived St. Vincent, Cape Verde Islands, July 10.
S. S. Framlington Court....	July 25.....	1		From Alexandria, May 30; from Montreal, July 4; from Sydney, Nova Scotia, July 9; at Avonmouth, England, July 22, 1919.

SMALLPOX.

Alaska:				
Petersburg.....	Oct. 27.....			Present.
Algeria:				
Algiers.....	June 1-30.....	1	1	
Do.....	July 1-Aug. 31.....	16	5	
Arabia:				
Aden.....	May 13-19.....		1	
Austria:				Mar. 9-Apr. 5, 1919: Cases, 92.
Salzburg.....	Mar. 9-Apr. 5.....	50		
Vienna.....	do.....	17		
Azores:				
St. Michaels.....	June 7-20.....	1		
Brazil:				
Bahia.....	Apr. 20-June 7.....	4		
Para.....	Sept. 21-27.....		1	
Pernambuco.....	May 4-25.....	5		Jan. 1-May 3, 1919: Cases, 10.
Rio de Janeiro.....	May 11-June 21.....	61	20	
Do.....	June 30-Sept. 27.....	457	115	
British East Africa:				
Kisumu.....	Mar. 2-8.....	1	1	Zanzibar Island.
Mombasa.....	Mar. 1-June 7.....	275	37	
Mtebba.....	Mar. 24-Apr. 6.....			Present: In Uganda.
Nairobi.....	Mar. 1-May 31.....	3		
Do.....	Aug. 4-Sept. 13.....	18	2	
Prison Island Quarantine Station.		1	1	Zanzibar Island. In February, 1919. From vessel from India.
British West Indies:				
Granada.....	Sept. 27.....			1 case reported from Carriacou.
Canada:				
British Columbia—				
Vancouver.....	June 15-Sept. 11.....	8		
New Brunswick—				
Antigonish County.....	Sept. 28-Oct. 4.....			Present.
Campbellton.....	June 15-21.....	1		
Do.....	Aug. 1-Sept. 6.....	1		
Gloucester County.....				July 1-Sept. 30, 1919: Cases, 12.
Moncton.....	July 6-12.....	1		
St. John.....	July 27-Aug. 2.....	1		
Nova Scotia—				
Cities—				
Bridgenorth.....	July 27-Aug. 9.....			A few cases; mild.
Halifax.....	June 28-Sept. 20.....	65		June 15-28, 1919: Cases, 82.
Do.....	Oct. 19-25.....	2		
Sydney.....	June 8-21.....	3		
Do.....	Aug. 1-Sept. 6.....	4		
Counties—				
Antigonish.....	June 28-Sept. 6.....			Present.
Colchester.....	Aug. 3-8.....			Do.
Cumberland.....	Aug. 30-Sept. 6.....			Do.

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

Reports Received from June 28 to Nov. 14, 1919.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Canada—Continued.				
Nova Scotia—Continued.				
Counties—Continued.				
Guysborough.....	Aug. 18-30.....	.....	.....	Present.
Do.....	Sept. 21-27.....	.....	.....	Do.
Halifax.....	June 28-Sept. 27.....	.....	.....	Do.
Hants.....	.....do.....	.....	.....	Do.
Kings.....	Aug. 10-16.....	.....	.....	Do.
Lunenburg.....	July 13-Aug. 16.....	.....	.....	Do.
Pictou.....	July 20-Sept. 13.....	.....	.....	Present. Also on Cape Breton Island, July 27-Aug. 21.
Richmond.....	Aug. 24-Sept. 20.....	.....	.....	Present.
Shelbourne.....	Aug. 24-30.....	.....	.....	Do.
Victoria.....	Aug. 3-9.....	.....	.....	Do.
Ontario—				
Province.....				May 1-June 30, 1919: Cases, 166; deaths, 4. July 1-31, 1919: Cases, 51; death, 1.
Hamilton.....	June 29-Aug. 2.....	2		Township in Kent County.
Harwich.....	May 1-31.....	14	2	
North Bay.....	Sept. 21-27.....	1		
Ottawa.....	June 15-21.....	2		
Do.....	June 29-Sept. 6.....	3		
Peterborough.....	June 15-21.....	4		
Toronto.....	Aug. 31-Sept. 6.....	1		
Do.....	Sept. 21-27.....	1		
Do.....	Oct. 12-18.....	2		
Walpole Island.....	May 1-31.....	42		Kent County, Island in Lake St. Clair. Among Indians.
Prince Edward Island—				
Charlottetown.....	July 16-Aug. 9.....	8		
Quebec.....				In Bonaventure and Gaspé Counties, Aug. 1-31, 1919: 2 cases.
Montreal.....	June 8-28.....	18		
Do.....	Aug. 24-Nov. 1.....	19		
Quebec.....	June 8-28.....	18		June 8-14, 1919; 1 case on incoming vessel.
Do.....	July 5-Oct. 25.....	42		Estimated. On Indian reserve.
Restigouche.....	June 15-July 31.....	40		
Saskatchewan—				
Regina.....	Oct. 26-Nov. 1.....	1		
Ceylon:				
Colombo.....	May 1-31.....	4		June 17-23.
Do.....	July 13-Aug. 23.....	3	3	
China:				
Amoy.....	May 20-June 16.....	.....	13	
Do.....	July 8-21.....	.....	.....	Present.
Do.....	July 29-Sept. 13.....	.....	3	Do.
Canton.....	May 18-June 21.....	.....	.....	Do.
Do.....	July 1-Aug. 16.....	.....	.....	Do.
Do.....	Aug. 31-Sept. 6.....	.....	.....	Do.
Do.....	Sept. 21-27.....	.....	.....	Do.
Cheloo.....	June 8-21.....	.....	.....	Do.
Chungking.....	May 4-June 28.....	.....	.....	Do.
Do.....	June 29-Aug. 23.....	.....	.....	Do.
Foochow.....	May 18-Aug. 23.....	.....	.....	Do.
Hankow.....	Aug. 31-Sept. 6.....	3		
Hongkong.....	May 18-June 28.....	5	5	Do.
Do.....	Aug. 31-Sept. 13.....	.....	.....	Do.
Nanking.....	May 25-June 28.....	.....	.....	Do.
Do.....	June 29-Aug. 30.....	.....	.....	Do.
Chosen (Korea):				
Chemulpo.....	Apr. 1-June 30.....	22	4	
Do.....	July 1-31.....	1	1	
Fusan.....	.....do.....	336	96	
Do.....	.....do.....	4	.....
Seoul.....	Apr. 1-May 31.....	3	1	
Do.....	Aug. 1-31.....	1	.....
Cuba:				
Habana.....	Aug. 2-Oct. 23.....	35	.....	First case from S. S. Venezia, from Spanish ports; arrived Habana about July 20, 1919.
Czecho-Slovakia:				
Prague.....	May 18-June 21.....	11	2	
Denmark:				
Copenhagen.....		.....	.....	Apr. 2-26, 1919: Cases, 11.
Egypt:				
Alexandria.....	May 14-June 24.....	233	95	
Do.....	June 25-Sept. 9.....	226	118	
Do.....	Sept. 17-23.....	8	2	
Cairo.....	Jan. 2-May 20.....	544	124	
Do.....	June 18-Aug. 19.....	389	150	
Port Said.....	July 9-Aug. 19.....	3	.....

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

Reports Received from June 28 to Nov. 14, 1919—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Finland.				Apr. 16-June 30, 1919: Cases, 469. July 1-15, 1919: Cases, 44.
Provinces—				
Abo Och Bjorneborg.	Apr. 16-June 30.	13		
Kuopio.	do.	88		
Do.	July 1-15.	1		
Finland.	Apr. 16-June 30.	17		
St. Michael.	do.	73		
Do.	July 1-15.	2		
Travastchus.	Apr. 16-June 30.	63		
Do.	July 1-15.	5		
Vasa.	Apr. 16-June 14.	12		
Viborg.	Apr. 16-June 30.	340		
Do.	July 1-15.	36		
France:				
Havre.	May 23-30.	1		
Marseille.	May 1-June 30.		5	
Paris.	May 11-June 23.	17	28	
Do.	June 29-Sept. 6.	61	13	
Do.	Sept. 14-20.	6	1	
Gibraltar.	June 28-Aug. 16.	1	2	One from Bay.
Great Britain:				
Bradford.	Sept. 21-27.	3		
Cardiff.	June 15-Sept. 20.	10		
Durdee.	June 1-7.	1		
Do.	Aug. 18-23.	9	6	
Glasgow.	June 8-21.	5		
Liverpool.	June 22-28.	1		
Do.	June 29-Sept. 6.	6		
London.	May 25-June 28.	13		
Do.	June 23-Aug. 9.	18	2	
Manchester.	July 27-Sept. 6.	11		
Greece:				
Saloniki.	May 15-June 28.		48	
Do.	June 29-Aug. 23.		43	
India:				
Bombay.	Apr. 28-June 28.	712	283	
Do.	July 6-Sept. 13.	97	62	
Calcutta.	May 4-June 21.		444	
Do.	June 29-Aug. 9.		109	
Karachi.	May 4-June 21.	28	17	
Madras.	May 18-June 24.	171	55	Jan. 19-25, 1919: Cases, 29; deaths, 25.
Do.	July 6-Aug. 16.	236	107	
Do.	Aug. 18-Sept. 13.	66	26	
Rangoon.	Apr. 28-June 23.	188	92	
Do.	July 6-Sept. 13.	67	24	
Indo-China:				
Cochin China—				
Saigon.	Apr. 21-May 18.	11	4	City and district.
Do.	Aug. 11-Sept. 7.	6	1	
Italy:				
Genoa.	July 7-Aug. 31.	8		
Leghorn.	June 16-29.	2		
Messina.	June 1-21.	13		
Do.	June 29-Sept. 28.	569	233	Province, June 8-21, 1919: Cases, 23; deaths, 3.
Milan.	Mar. 1-June 30.	50	8	
Milazzo.	June 1-7.	1	1	
Naples.	June 2-29.	103	91	
Do.	June 30-Aug. 17.	122	119	
Palermo.	May 2-June 20.	39	5	
Do.	June 28-July 5.	37	9	
Trieste.	Sept. 28-Oct. 4.	1		
Turin.	May 18-June 29.	5	1	
Do.	July 6-Sept. 7.	8		
Venice.	May 26-June 1.	2		
Japan:				
Kobe.	May 4-Sept. 7.	173	78	
Nagoya.	June 1-7.	1	1	
Taiwan Island.	May 21-Aug. 12.	20	6	Entire island.
Tokyo.	May 1-June 5.	2		
Yokohama.	May 26-June 1.	1		
Java:				
East Java				Apr. 9-June 3, 1919: Cases, 3. July 9-15, 1919: Cases, 2.
Surabaya.	May 27-June 3.	2		
Do.	July 30-Sept. 2.	6		
Mid-Java.	Apr. 26-May 16.	7		

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

Reports Received from June 28 to Nov. 14, 1919—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Java—Continued.				
West Java.....				May 2-June 26, 1919: Cases, 615; deaths, 148. June 27-Aug. 25, 1919: Cases, 235; deaths, 58.
Batavia.....	Apr. 18-June 5.....	4	1	
Do.....	July 25-31.....	3	2	
Do.....	Aug. 8-28.....	64	12	
Buitenzorg.....	Aug. 15-21.....	5	.....
Garoet.....	do.....	41	6	
Meester Cornelis.....	Aug. 15-28.....	11	4	
Pandeglang.....	Aug. 22-28.....	4	.....
Tasikmalaya.....	Aug. 15-21.....	3	3	
Malta.....	May 1-31.....	1	.....
Valetta.....	Aug. 1-31.....	4	1	
Do.....	Sept. 17-30.....	1	.....
Manchuria:				
Dairen.....	May 13-June 2.....	3	2	Present.
Mukden.....	July 6-Sept. 13.....	.....	.....
Mesopotamia:				
Bagdad.....	May 29-30.....	1	.....
Mexico:				
Cananea.....	Feb. 1-23.....	7	.....	State of Sonora.
Do.....	Apr. 1-30.....	1	.....
Guadalaajara.....	June 1-30.....	1	.....
Mexico City.....	June 1-23.....	20	1	
Do.....	June 29-Sept. 6.....	4	.....
Do.....	Sept. 28-Oct. 4.....	2	.....
Piedras Negras.....	June 22-23.....	2	2	
Salina Cruz.....	Sept. 1-15.....	1	.....
Do.....	Sept. 17-30.....	2	.....
San Jeronimo.....	June 17-30.....	5	.....
San Luis Potosi.....	Sept. 7-13.....	.....	1	
Do.....	Sept. 21-Oct. 23.....	.....	4	
Tehuantepec.....	Sept. 16.....	2	.....	In State of Oaxaca.
Vera Cruz.....	July 6-19.....	4	.....
Do.....	June 29-Aug. 30.....	2	9	
Do.....	Sept. 23-Oct. 4.....	2	.....
Newfoundland:				
St. Johns.....	June 13-Sept. 26.....	6	.....	June 13-27, 1919: Outports, 372 cases. June 23-Sept. 5, 1919: Cases, 58. Sept. 20-Oct. 3, 1919: Cases, 6. Oct. 11, 1919: Cases, 2. Present on Pilley's Island. At Shoal Arm, Oct. 24.
Do.....	Oct. 11-24.....	2	.....
Palestine:				
Jaffa.....	Jan. 30-Feb. 5.....	2	.....
Philippine Islands:				
Manila.....	May 11-17.....	1	.....
Portugal:				
Lisbon.....	July 26-Oct. 4.....	85	.....
Oporto.....	June 1-28.....	25	33	
Do.....	June 29-Sept. 13.....	77	45	
Portuguese East Africa:				
Lourenco Marques.....	Apr. 1-May 31.....	2	1	
Russia:				
Riga.....	June 1-30.....	.....	.....	Present.
Siberia:				
Vladivostok.....	June 8-30.....	45	.....
Do.....	July 1-31.....	12	3	
South Africa:				
Johannesburg.....	Aug. 1-31.....	4	1	
Spain:				
Almeria.....	May 18-June 30.....	68	6	
Barcelona.....	May 15-June 19.....	3	6	
Do.....	June 26-Sept. 24.....	.....	43	
Bilbao.....	May 1-10.....	1	.....
Do.....	Aug. 1-10.....	1	.....
Do.....	Aug. 21-31.....	3	.....
Cadiz.....	Apr. 1-May 31.....	.....	5	
Do.....	July 1-31.....	.....	2	
Madrid.....	May 1-31.....	3	.....
Do.....	Aug. 1-31.....	2	.....
Malaga.....	do.....	.....	1	
Seville.....	do.....	.....	1	
Valencia.....	May 11-June 29.....	233	15	
Do.....	July 14-Sept. 13.....	90	13	
Do.....	Sept. 21-27.....	2	1	
Do.....	Sept. 29-Oct. 14.....	8	2	

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

Reports Received from June 23 to Nov. 14, 1919—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Spain—Continued.				
Vigo.....	Apr. 12.....	2	.....
Do.....	July 6-19.....	37	8	
Do.....	Sept. 7-20.....	.....	2	
Do.....	Sept. 23-Oct. 4.....	1	.....
Straits Settlements:				
Singapore.....	Mar. 24-May 17.....	6	3	From vessel, Mar. 22, 1919;
Do.....	July 8-27.....	5	1	Present in villages in vicinity.
Sumatra:				
Medan.....	June 26-Aug. 23.....	2	.....	Present in surrounding country
Tunis:				
Tunis.....	June 15-28.....	2	1	June 26-July 12, 1919.
Do.....	June 29-July 5.....	3	2	June 22-July 12, 1919: Present in
Union of South Africa:				surrounding country.
Johannesburg.....	May 1-31.....	1	.....
On vessels:				
S. S. Eastern.....	Apr. 25-26.....	2	1	Death at sea. Second case land-
				ed at Woodmans Quarantine
				Station, Fremantle, Australia,
				Apr. 29. Vessel from England
				via Egypt and Colombo.
S. S. Karoa.....	Apr. 19.....	1	.....	Landed at Colombo. Vessel
				from the United Kingdom via
				Egypt and Colombo.
S. S. Khyber.....	Apr. 10-May 4.....	4	.....	From Liverpool, via Port Said,
				Suez, and Colombo. One case
				landed at Port Said Apr. 10,
				2 cases at Colombo Apr. 22, 1 at
				quarantine, Fremantle, Aus-
				tralia, May 4, 1919.
S. S. Rio Negro.....	Oct. 4.....	1	.....	At Port of Spain, Trinidad, from
				Bahia. From Montevideo,
				Aug. 31; Santos, Sept. 8; Rio
				de Janeiro, Sept. 15. Arrived
				Port of Spain, Oct. 4, 1919.
S. S. War Armour.....		7	.....	En route from Naples to Aden
				and Colombo. Vessel arrived at
				Fremantle, Australia, June 22,
				1919: Cases landed at Colombo.

TYPHUS FEVER.

Algeria:				
Algiers.....	May 1-June 30.....	82	11	
Do.....	July 1-Aug. 31.....	4	.....
Austria:				Mar. 23-Apr. 5, 1919: Cases, 118.
Vienna.....	Mar. 23-Apr. 5.....	9	.....
Brazil:				Mar. 30-Apr. 5, 1919: Cases, 2.
Rio de Janeiro.....	May 4-June 21.....	3	.....
Do.....	July 6-Sept. 20.....	9	.....
China:				
Changsha.....	May 11-17.....	1	1	
Antung.....	July 6-30.....	2	.....
Chosen (Korea):				
Chemulpo.....	Apr. 1-June 30.....	85	10	
Do.....	July 1-31.....	1	.....
Fusan.....	May 1-June 30.....	5	2	
Do.....	July 1-31.....	1	.....
Seoul.....	Apr. 1-June 30.....	147	28	
Do.....	July 1-31.....	1	.....
Colombia:				
Barranquilla.....	July 12-19.....	.....	1	
Czecho-Slovakia:				
Prague.....	May 18-24.....	1	.....
Egypt:				
Alexandria.....	May 14-June 29.....	474	248	
Do.....	June 28-Sept. 23.....	474	153	
Cairo.....	Jan. 2-Aug. 5.....	4,091	2,270	
Port Said.....	Jan. 2-June 10.....	11	7	
Do.....	July 16-Aug. 12.....	8	2	
Finland:				Apr. 16-June 30, 1919: Cases, 25.
Provinces—				
Abo Och Bjorneborg... ..	May 15.....	1	.....
Nyland.....	Apr. 16-May 31.....	4	.....
St. Michael.....	Apr. 16-June 30.....	15	.....
Viborg.....	Apr. 16-June 14.....	3	.....

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

Reports Received from June 23 to Nov. 14, 1919—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Germany.....	Jan. 12-Feb. 22....	344	.....	Military.
Do.....	Feb. 22-Mar. 22....	220	.....	Civil.
Do.....	Mar. 23-Apr. 12....	333	.....	Civil; military, prisoners of war, deserters.
Do.....	Apr. 13-26.....	62	.....	55 cases among German troops and among prisoners of war.
Do.....	Apr. 27-May 17....	126	.....	Of these, 90 among Polish workmen and Russians; during same period, 105 cases among German troops and prisoners of war. In addition, Apr. 1-26, 41 cases were notified among Polish workmen and refugees.
Great Britain:				
Glasgow.....	June 8-July 5.....	13	2	
Dublin.....	Aug. 17-30.....	3	.....	June 15-21, 1919: 1 case.
Dundee.....	June 30-July 5....	3	.....
Greece:				
Athens.....	July 21-27.....	.....	1	
Saloniki.....	May 15-June 14....	.....	5	
Do.....	July 6-Aug. 23....	.....	18	
Hungary.....				Feb. 24-May 9, 1919: Cases, 258.
Budapest.....	Sept. 24-May 9....	124	6	
Dubreezin.....	do.....	42	.....
Italy.....				Apr. 28-June 8, 1919: Cases 3,470—Austrian prisoners, 3,321; Italian soldiers, 82; civil population, 67.
Do.....				June 9-15, 1919: Present in 14 Provinces, with 761 cases, viz, Austrian prisoners, 631; Italian soldiers, 23; Roumanian soldiers, 97; civil population, 10.
Do.....				June 16-22, 1919: Present in 12 Provinces, with 127 cases, viz, Austrian prisoners, 102; Italian soldiers, 8; civil population, 12; Roumanian soldiers, 5.
Do.....				June 23-29, 1919: Present in 14 Provinces, with 117 cases, viz, Austrian prisoners, 107; Italian soldiers, 3; civil population, 7.
Do.....				July 6-13, 1919: Cases, 14, occurring in 7 Provinces—7 prisoners of war, 5 civilians, 2 Italian soldiers.
Do.....				July 21-27, 1919: Cases, 5 occurring in 4 Provinces—1 Austrian prisoner; 4 civil population.
Do.....				July 28-Aug. 3, 1919: 6 cases in 3 Provinces; civil population.
Genoa.....	June 25-July 1....	91	.....
Naples.....	May 12-June 22....	50	16	
Do.....	June 30-Aug. 17....	17	6	
Palermo.....	July 21-27.....	2	.....
Venice.....	Apr. 27-June 14....	58	9	
Do.....	June 30-Sept. 14....	42	6	
Trieste.....	June 6-12.....	1	.....
India:				
Rangoon.....	July 1-31.....	.....	21	
Japan:				
Nagasaki.....	June 16-July 1....	3	.....
Do.....	July 14-Sept. 14....	10	5	
Do.....	Oct. 6.....	4	2	
Java:				
East Java—				
Paserocean.....	Aug. 6-12.....	2	.....
Do.....	Aug. 20-Sept. 2....	2	1	
Surabaya.....	July 20-Aug. 19....	5	1	
West Java—				
Bandoeng.....	Aug. 15-21.....	5	.....
Batavia.....	Aug. 8-14.....	12	2	
Buitenzorg.....	Aug. 22-28.....	3	.....
Mesopotamia:				
Bagdad.....	Apr. 19-June 6....	34	22	
Do.....	July 26-Aug. 1....	2	.....

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

Reports Received from June 28 to Nov. 14, 1919—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Mexico:				
Guadalajara.....	May 1-31.....	1	.....
Do.....	Sept. 24-30.....	3	.....
Mexico City.....	May 4-June 28.....	216	.....
Do.....	June 29-Sept. 13.....	272	.....
Do.....	Sept. 21-Oct. 4.....	41	.....
San Luis Potosi.....	July 27-Oct. 4.....	.....	.....	Present and in surrounding country.
Newfoundland:				
St. Johns.....	June 21-27.....	1	.....	From vessel.
Palestine:				
Jaffa.....	.....	.....	.....	Oct. 22-Dec. 22, 1918: Cases, 8; deaths, 3.
Portugal:				
Lisbon.....	June 22-28.....	1	.....
Do.....	July 28-Aug. 23.....	13	2	
Oporto.....	June 1-15.....	52	.....
Do.....	June 30-Sept. 13.....	94	42	
Russia:				
Archangel.....	May 15-June 1.....	9	2	
Riga.....	May 1-June 30.....	2,826	.....
Siberia:				
Vladivostok.....	June 9-30.....	104	9	
Do.....	July 1-31.....	56	13	
Spain:				
Barcelona.....	May 15-21.....	.....	1	
Madrid.....	May 1-31.....	.....	1	
Do.....	Aug. 1-31.....	1	.....
Sumatra:				
Medan.....	June 26-Aug. 23.....	35	4	
Switzerland:				
Zurich.....	Sept. 7-20.....	9	.....
Syria:				
Mersina.....	Feb. 13-19.....	.....	.....	Present.
Smyrna.....	Sept. 20.....	.....	.....	Do.
Tunis:				
Tunis.....	May 24-June 21.....	3	1	
Do.....	July 20-Oct. 11.....	2	4	

YELLOW FEVER.

Brazil:				
Bahia.....	Apr. 12-June 14.....	48	15	Jan. 12-May 17, 1919: Cases, 43; deaths, 25. July 29, 1919, reported seriously prevalent in States of Bahia and Pernambuco.
Pernambuco.....	Sept. 15-21.....	1	1	
Canal Zone.....	Aug. 10-12.....	1	1	Patient at Corinto, Nicaragua, at quarantine from S. S. Salvador.
Ecuador:				
Guayaquil.....	May 1-31.....	1	1	July 31, 1919: At Leon, Nicaragua; Aug. 2, 1919. Embarked Aug. 6 at Corinto.
Naranjito.....	May 1-June 15.....	2	1	
Honduras:				
Amapala.....	Aug. 28-Sept. 6.....	9	1	
Mexico:				
Merida.....	June 30-Sept. 20.....	22	9	State of Yucatan.
Temax.....	Sept. 14-20.....	2	2	Do.
Nicaragua:				
Leon.....	Sept. 1.....	.....	.....	Present, and in vicinity.
Do.....	Sept. 5.....	.....	.....	Present.
Corinto.....	do.....	.....	.....	Do.
Peru:				
Department of Piura—				
Palta.....	July 10-22.....	8	5	June 1-Aug. 12, 1912: Cases, 10; deaths, 6.
Piura.....	do.....	46	10	June 1-Aug. 12, 1919: Cases, 90; deaths, 20.
Salvador:				
La Union.....	July 6.....	2	.....
St. Miguel.....	June 24-July 6.....	4	.....
San Salvador.....	do.....	1	1	75 miles from city of San Salvador.