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RECENT WORK ON PELLAGRA.[1]

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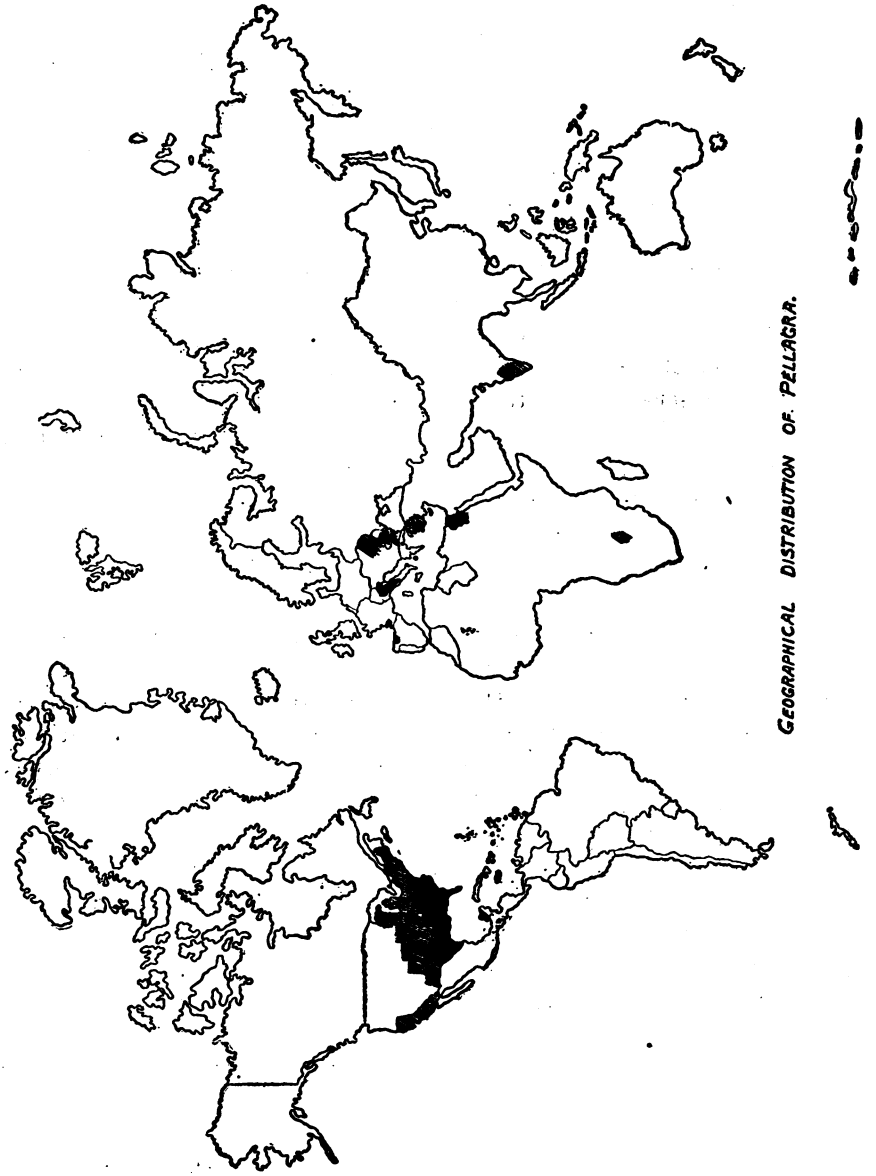
Pellagra was discovered in 1735, nearly two centuries ago, by Gaspar Casal, a physician of Asturia, Spain, who very early recognized the triad of its symptoms, viz., cutaneous, digestive, and nervous. The cutaneous manifestations consist of a bilateral erythema appearing rather suddenly upon the exposed surfaces of the body, and being followed by the peeling off (desquamation) of the affected skin. The digestive symptoms consist of stomatitis, constipation, and diarrhea. The nervous manifestations include changes in reflex irritability and sensation, tremors, psychic abnormalities, and sometimes convulsions. The diagnosis is entirely dependent on the skin lesions, in the absence of which it is always doubtful. Unless properly treated the disease runs a very chronic course and often leads to a fatal outcome.

Time does not permit me to go into detail concerning the numerous theories which have been advanced in the course of the last two centuries to explain the origin of pellagra. It suffices to state that over a hundred years ago Marzari put forth his corn theory, according to which pellagra is due to the consumption of a more or less exclusive diet of corn. This theory was later modified by other Italian students of the disease, who attributed pellagra to the consumption of toxic substances contained in "spoiled" corn, which originate in corn through the growth of certain fungi. This theory held a prominent place in the history of pellagra until very recently. Finally it was claimed by others that pellagra is caused by a specific organism. None of these theories, however, was supported by convincing evidence.

A very significant feature of pellagra is its limited geographical distribution, as may be seen from the accompanying illustration. It was first discovered in northern Spain. About 20 years later its existence was recognized in northern Italy, then in the southwestern

[1] Read before the Harvey Society of New York, Jan. 24, 1920.

part of France, in the Balkans, especially Roumania, and more recently in lower Egypt, Mexico, the West Indies, and the United States, appearing in endemic form in all these countries. A few sporadic cases have been reported from Great Britain, Canada, South Africa, and India.



The history of pellagra in this country shows that previous to 1908 cases had been placed on record; but its unquestioned recognition as an endemic disease dates from 1908. The United States Public Health Service early recognized the seriousness of the situa-

tion and began an extensive study of the epidemiology of the disease. It was shown that up to 1912, 30,000 cases, with a case fatality rate of 40 per cent, had occurred here. (Lavinder, 1913.) Clinical studies were also begun at the hospital of the service in Savannah, Ga., and Drs. Lavinder and Francis (1917) carried out an extensive investigation of the transmissibility of the disease to monkeys by means of various body fluids and excretions obtained from pellagra patients. These investigations led to negative results. In 1909 the governor of Illinois appointed a commission to study the disease in that State; and the Thompson McFadden Commission began its work in South Carolina in 1912. More recently Jobling and Peterson (1916) studied the epidemiology of the disease in Tennessee.

In October, 1913, I was directed by the Surgeon General to investigate the relation between diet and pellagra. During the first three months my efforts were confined mainly to a thorough review of the literature for the purpose of gathering all the available information regarding the characteristics of the diet used by pellagrins. During a visit to the service hospital in Savannah in December, 1913, I was much impressed by the evident beneficial effect of a mixed diet on the course of the disease. After consulting the earlier as well as the recent literature on pellagra I found it contained many very positive statements of physicians with a wide experience to the effect that a mixed diet, including fresh milk, meat, and eggs, was the only efficient method of treatment. Thus Casal, Strambio, and others speak of the good results obtained with a mixed diet. Roussel, in his admirable "Traité de la Pellagre," states that the real treatment of pellagra is a milk diet, and supports this statement by the histories of a number of cases which were evidently cured by a liberal diet. Lussana and Frua (1856), on the basis of over 8,000 cases treated with a liberal mixed diet, claim that the mortality fell from 24.5 to 4.5 per cent, and that the recovery rate increased from 20 to 75 per cent as a result of this treatment. *The value of the dietary treatment was, therefore, well established and almost universally accepted even by adherents of the infectious and "spoiled-corn" theories. This was a most significant fact which gained in importance when it was brought into relation with the characteristics of the diet consumed by persons prior to their attack of pellagra. The striking features of this diet appeared to be its lack in certain animal foods, such as milk, meat, and eggs, the same foods which proved to be so beneficial in the treatment of the disease.*

The most valuable information on this point was obtained from the writings of Roussel (1845 and 1866), Lombroso (1892), and especially from the detailed dietary studies of Wussow and Grindley (Illinois Pellagra Commission, 1911) in several insane hospitals in

Illinois, where, in 1909, an epidemic of pellagra had occurred. These authors called attention, first, to the insignificant part played in these dietaries by corn products, and, second, to the vegetable character of the diet, especially its "low content in animal protein." In the conclusions of their report, the Illinois Pellagra Commission discredited any causal relation between corn and pellagra, as the corn products constituted only a moderate proportion of the general diet of those affected by the disease. The commission, however, regarded the deficiency of the diet in animal proteins as merely a predisposing cause, which might so alter the body that the infecting organism had a better chance to grow.

A critical analysis of these two conclusions in the light of all the other available information led me to assume that there was a causal relation between a mainly vegetable diet and pellagra, and that there was sufficient ground to blame the diet *as such* for the causation of the disease. This idea was especially strengthened by the extensive dietary studies which had been carried out by Atwater and Langworthy (experiment station bulletins) in various sections of the United States, and which plainly revealed the fact that while corn entered into the average American diet, there was a great difference in the diet of the poorer people living in the South as compared with that of the people in the North. The former live on a largely vegetable diet in which cereals and pork fat take a predominant part; the latter consume a mixed diet including a fair amount of milk, meat, and eggs. Pellagra is endemic in the South and occurs only sporadically in the northern States.

The history of pellagra in France added further support to this hypothesis, and from the accounts of Roussel and LeFer (1907), it became very evident that pellagra disappeared from France simultaneously with improved dietary conditions in the affected regions. Here also the available information pointed to a restricted vegetable diet as the cause of pellagra. With the gradual improvement in the economic conditions and a simultaneous change to a diet containing more animal foods, the disease disappeared. In other words, the history of pellagra in France represents a preventive experiment on a large scale, in which diet seemed to play an important rôle.

At the time I formulated my hypothesis (1914), it was difficult to explain satisfactorily the *nature of the defect of the vegetable diet* which could be held responsible for the causation of pellagra, although recent observations on the pathology and physiology of nutrition offered certain definite suggestions. Thus, beriberi and scurvy were considered to be caused by a deficiency in the diet of certain substances of unknown chemical composition called "vitamines." The early stages of the fundamental work of Osborne and Mendel, and of McCollum and his associates, also began to throw new light

on the physiological requirements for proper nutrition. The results obtained by these investigators suggested the possibility that a restricted vegetable diet might be defective on account of (1) a deficiency or absence of certain vitamines; (2) the presence of some toxic substances; and (3) a deficiency in certain essential amino acids (Voegtlin, 1914).

In order to obtain further support for the hypothesis that a restricted vegetable diet is responsible for pellagra, this hypothesis was put to an experimental test. Extensive feeding experiments were begun in January, 1914, with various species of laboratory animals which were kept on a restricted diet of cereals, tubers, or legumes, foods which had been shown to form the bulk of the diet of pellagrins. It was soon found that the animals could not subsist on these diets, and symptoms referable to the digestive and nervous systems were observed. The addition of milk and eggs to this vegetable diet led to proper nutrition and well-being (Voegtlin, 1915). Early in the summer of 1914, the Public Health Service organized a hospital in Spartanburg, S. C., for the purpose of studying the relation of diet and pellagra. It was proposed to study here the following three main subjects in outspoken and uncomplicated cases: First, the comparative value of a mixed diet and a restricted vegetable diet in the treatment; second, the abnormalities of the metabolism; and third, the therapeutic value of extracts made from foods which were supposedly rich in so called "vitamines."

Metabolism in Pellagra.

Modern medicine is relying to a constantly increasing extent on the study of the metabolism for the proper diagnosis and treatment of disease. Metabolic studies have also been of great assistance in clearing up the cause of certain diseases of unknown origin. For these reasons an exhaustive study of the metabolism of pellagra is very desirable. The work so far accomplished in this study has led to very interesting observations. It was found that the *utilization of food* (Hunter, Givens, and Lewis, 1916) is normal, except in cases complicated by an intense diarrhea. A mild degree of diarrhea so often found in this disease does not seem to prevent a satisfactory absorption of the digested food. A nitrogen retention may often be obtained even on a mainly vegetable diet, the type consumed by the patients before their attack of pellagra. These findings are in agreement with the fact that pellagra often occurs in persons who, to all outward appearances, are well nourished. Pellagra must, therefore, not be looked upon as a disease of deficient nutrition in the ordinary sense.

The *digestive secretions* show some definite, although not constant, deviations from the normal. An abundant salivation is often found

in cases with a severe stomatitis. Actual measurements of the rate of flow have shown, however, that most patients exhibit a normal rate of salivary secretion. The specific gravity of the saliva is somewhat higher than that of normal secretion, which accounts also for the increase in the various constituents in the fresh saliva. The diastatic power is unchanged (Sullivan and Jones, 1919). In regard to gastric secretion (Hunter, Givens, and Lewis, 1916), it was found that a large number of pellagrins, though not all, suffer from anacidity and lack of pepsin. Free hydrochloric acid may be increased, normal, decreased, or absent. Pepsin is absent in cases of anacidity. Children are affected in the same way as adults (Givens, 1918). There seems to be no relation between the severity of the disease and the degree of gastric disturbance. In some cases with anacidity and absence of pepsin, the administration of hydrochloric acid by mouth results in the secretion of pepsin. It is interesting to call attention to several cases with anacidity which, as a result of the dietary treatment, had lost all clinical symptoms of the disease, and yet had not shown a return of the gastric secretion to normal, even after several months. This points to a more or less permanent damage to the secretory apparatus, which may possibly find its explanation in a permanent anatomical change either of the nervous inervation of the gastric glands or in the glands themselves. No records are available as to the secretion of trypsin or erypsin; but in view of the fact that even cases with a complete loss of gastric secretion showed a good intestinal digestion, it must be assumed that trypsin and erypsin are present in normal amounts and may take over the function usually performed by pepsin. Trypsin was found in the stomach contents in cases of anacidity, a fact which is probably due to regurgitation of the duodenal contents as a result of the stomach examination.

An examination of the feces and the urine indicates that pellagra is associated with an increase of *intestinal putrefaction;* the feces possessing a foul odor and containing an abnormally high amount of indol and skatol (Myers and Fine, 1913); the urine showing an increase of indican, ethereal sulphates, and hippuric acid. It was shown that certain cases on a vegetable diet excrete indol-acetic or indol-aceturic acid in the urine in the place of indican (Hunter, Givens, and Lewis, 1916). This increased intestinal putrefaction may be due at least in part to gastric anacidity. Whether it may be the cause of some of the manifestations of the disease or whether it is merely the effect of the disease can not be decided. It is highly suggestive, however, that a well-marked indicanuria often shows a decided tendency to decline with the simultaneous improvement in the clinical condition of the patient. In our extensive experience in Spartanburg, we also found that a thorough cleaning out of the intes-

tines in severe cases temporarily led to a marked improvement in the clinical condition of the patients so treated.

The *blood* shows sometimes the changes characteristic of a mild secondary anemia; but often the blood picture is normal (Hillman, 1913). It is probable that a large number of the cases showing evidence of anemia are complicated by hookworm disease or malaria, which are very common in countries where pellagra is endemic. The quantitative determination of the ordinary blood constituents (Lewis, 1920), such as urea, sugar, chlorides, calcium, magnesium, sodium, and potassium, has shown that these substances are present in normal amounts, irrespective of whether the patient is on a mixed or a mainly vegetable diet. The total nonprotein nitrogen of the blood is higher on a mixed diet than on a vegetable diet, a fact that probably has no particular pathological significance. Jobling and Maxwell (1917) found normal values for the alkali reserve of the blood from pellagrins on a mixed diet. The viscosity showed a slight variation from normal. To summarize, it is seen that the blood shows no striking abnormalities, a fact which must be given due consideration in any attempt to explain the causation of the disease.

As to the *composition of the urine*, I have previously called attention to the increase in the indican, hippuric acid (Murlin, 1920), and the ethereal sulphates. The creatinin coefficient is low, this being probably due to a lowered metabolism in this disease. The purin metabolism appears to be practically normal.[1] There are certain indications that the excretion of the amino-acid nitrogen is increased in cases with gastric anacidity (Murlin, 1920), an observation which points to an imperfect cleavage of proteins in the absence of gastric digestion. The neutral sulphur fraction of the urine is also increased. In summing up the results of the urinary findings, it is evident that the abnormalities which have been observed so far may be referred to disturbances in the gastro-intestinal tract.

In view of the fact that pellagra sometimes occurs in breast-fed infants, it is of considerable interest to obtain some information as to the chemical composition and *food value of the human milk in this disease.* A chemical analysis of milk secreted by several well-marked cases on a vegetable or mixed diet led to the following conclusions (Voegtlin and Harries, 1920): The volume may be normal or reduced, depending somewhat on the general nutritional state and food consumption of the patient. Very severe cases often secrete only 100 to 300 cc., or less, of milk per day, whereas we have records of milder cases which yielded approximately one-half to one liter. Lactose, fat, protein-nitrogen, and total solids were found to fall within the normal limits, but considerably below the normal average. The total ash and phosphate content was normal. A slight reduction of

[1] Unpublished observations by M. H. Givens.

calcium, magnesium, and potassium was noted, whereas chlorides and sodium were present in larger amounts. The character of the diet has no influence on the percentage composition of the milk, with the exception that a change from the vegetable diet to a mixed diet is accompanied by a marked increase in total nonprotein nitrogen. The conclusion to be drawn from these observations is that well-marked cases of pellagra yield a milk, which, as far as its composition with respect to the known milk constituents is concerned, does not show a sufficient deviation from the normal to account for the disease in nursing infants. It is interesting to note that the chemical composition of the milk in beriberi, a disease which is definitely regarded as being due to deficiency of the diet in antineuritic vitamine, also reveals no abnormalities in its composition as far as this can be determined by chemical analysis. It remains to be seen whether or not the milk in pellagra ever differs from the normal with regard to its content in so-called vitamines. This important question can only be settled by the determination of the biological food value of such milk by means of feeding experiments on animals.

In closing this chapter, I feel justified in stating that the metabolism in pellagra shows definite deviations from the normal, which may prove to be of value in the diagnosis and prognosis of the disease. In conjunction with the other data to be presented, they may also assist in clearing up the still somewhat obscure etiology.

Influence of Diet on the course of Pellagra.

I have previously called attention to the good results obtained in the treatment of pellagra by means of a diet containing a considerable amount of milk, eggs, and meat. The question arises, Is the diet the essential factor in this treatment? Without some convincing evidence to the contrary, it might be argued that other factors involved in the hospital treatment, rest, and drugs, might account for the improvement in the clinical condition of the patient. This question was put to a test when the pellagra hospital in Spartanburg was opened in the summer of 1914.

Upon admission to the hospital, the patients, with a moderate attack of pellagra, uncomplicated by any other disease, were put on a diet which, in all essential respects, closely resembled the diet which these patients had consumed before being attacked by pellagra. As will be seen from the accompanying table, this diet (A) is mainly composed of vegetable foods, cereals, potatoes, and a small amount of green vegetables, but also containing a very small quantity of lean meat and milk.

TABLE 1.—*Composition of diet A, complete.*

Food.	Amount of food (gms.).	Protein (gms.).	Fat (gms.).	Carbohydrate (gms.).	Calories.	CaO (gms.).	MgO (gms.).	Na_2O (gms.).	K_2O (gms.).	Cl (gms.).	P_2O_5 (gms.).
Wheat bread	300	25.0	10.2	144.7	790	0.075	0.081	0.120	0.438	0.210	0.600
Butter	30	.3	24.8	.....	232	.006	.001	.....	.006	.....	.009
Cabbage	100	.7	.4	3.7	22	.068	.026	.050	.450	.030	.090
Corn meal	50	4.1	1.8	36.5	183	.007	.065	.015	.085	.....	.150
Ham	25	6.0	3.7	.....	59	.008	.010	.....	.....	.....	.....
Hominy	75	6.0	1.0	54.9	262	.010	.097	.022	.128	.....	.225
Corn sirup	30	.....	.....	21.3	84	.....	.....	.....	.....	.....	.....
Pork	50	1.5	45.3	.....	428	.....	.....	.....	.....	.....	.....
Potatoes	150	2.4	.....	21.5	98	.024	.054	.037	.800	.045	.210
Prunes	30	.6	.2	20.8	88	.018	.024	.030	.360	.003	.075
Turnip tops	100	.5	.5	5.7	38	.480	.050	.110	.370	.170	.110
Sugar	40	.....	.....	39.9	158	.....	.....	.....	.....	.....	.....
Milk	40	1.4	1.9	1.8	31	.068	.008	.027	.068	.048	.086
Total	.....	50.5	89.8	350.8	2,473	.764	.416	.713	3.146	.506	2.110

Composition of diet B, complete.

Food.	Amount of food (gms.).	Protein (gms.).	Fat (gms.).	Carbohydrate (gms.).	Calories.	CaO (gms.).	MgO (gms.).	Na_2O (gms.).	K_2O (gms.).	Cl (gms.).	P_2O_5 (gms.).
Wheat bread	300	25.0	10.2	144.7	790	0.075	0.081	0.120	0.438	0.210	0.600
Butter	45	.5	37.2	.....	348	.009	.001	.....	.009	.....	.014
Corn meal	50	4.1	1.8	36.5	183	.007	.065	.015	.085	.....	.150
Eggs	100	13.4	16.8	.....	211	.093	.015	.200	.165	.100	.370
Meat	100	21.1	1.3	.....	98	.011	.040	.090	.420	.050	.500
Orange juice	100	.....	.....	7.9	32	.050	.020	.010	.220	.010	.030
Potatoes	150	2.4	.....	21.5	98	.024	.054	.037	.800	.045	.210
Prunes	30	.6	.2	20.8	88	.018	.024	.030	.360	.003	.075
Sugar	40	.....	.....	39.9	158	.....	.....	.....	.....	.....	.....
Milk	1,000	35.8	47.8	44.9	775	1.680	.190	.680	1.710	1.200	2.150
Total	.....	102.9	115.3	316.2	2,781	1.967	.490	1.182	4.207	1.618	4.099

It contains a fairly great variety of foods, a relatively low protein and high carbohydrate content, a sufficient fuel value, and is representative of the diet consumed by a considerable portion of the population in that section of the country. The patients received the very best medical attention. All drug treatment was omitted. The food was carefully prepared, and the actual food consumption was determined in the case of each patient during the entire period of confinement to the hospital. A careful, detailed clinical record was kept. The results of this treatment on over 100 cases may be briefly summarized as follows:

Almost without exception the general clinical condition of these patients remained either stationary or gradually became more aggravated simultaneously with an increase in the pellagrous manifestations. The skin lesions often spread to parts of the body which had not been affected previously; there was also an increase in the stomatitis and the gastro-intestinal symptoms. The appetite, as a rule, was good for the first few weeks, but diminished gradually. The nervous manifestations, such as disturbances in sensation, reflexes, and mentality either showed no change or increased in severity. A few cases developed an acute psychosis. A careful examination of the dietary

record showed that the patients had consumed sufficient food. The patients were then changed to a diet (B) which differed from the former in containing 1 liter of milk, about 4 eggs, and 100 grams of fresh beef. On this diet the patients gradually improved to a surprising extent, the improvement ending in many cases in the complete disappearance of all recognizable manifestations of the disease. Another group of patients was placed upon this same mixed diet immediately after their admission to the hospital, with the result that most cases began to show definite improvement within two weeks, this improvement finally resulting, in the course of two months or more, in the apparent recovery of the patient. A relatively small number of cases in a far advanced stage of the disease did not improve in spite of the same dietary treatment. This is to be expected, however, in such a disease which is known to lead ultimately to serious anatomical lesions in various organs, especially the central nervous system, the repair of which, if it takes place at all, requires a long period of time. On the whole, these experiences have shown us conclusively that a proper diet containing a sufficient amount of milk, eggs, and meat, is the essential factor in the treatment, and determines the course of the disease.

It now becomes a matter of the greatest importance to discover the reason for the therapeutic, and, presumably, the prophylactic, value of these animal foods (Voegtlin, Neill, and Hunter, 1920). For this purpose, patients with a well-marked attack of pellagra were put on the restricted vegetable diet (A) as soon as admitted to the hospital. The general care of the patients and the control of the diet were the same as in the previous series of cases. Other patients were kept under constant observation in their homes in the neighborhood, the diet and other hygienic conditions remaining the same as they had been previous to the patients being attacked with pellagra. A daily record of the foods consumed by these patients was kept by the patient himself or his relatives, and the general character of the diet was verified as far as possible by frequent visits to the home. During a preliminary period of several weeks, the clinical condition of the patient was carefully followed. As soon as it was definitely seen that the case remained stationary, or was getting progressively worse, a fat-free alcoholic extract prepared from yeast, rice polishings, ox liver, or thymus gland, was administered daily for several weeks. The preparations made from yeast and rice polishings were chosen for their high content in antineuritic vitamine, as shown by their efficiency in the treatment and prevention of polyneuritis in pigeons. These preparations do not contain the antiscorbutic or fat-soluble vitamine. The selection of the extracts from liver and thymus was based on the assumption that animal foods, and particularly the liver, in all likelihood would contain at least two different vitamines, viz., the fat-soluble and the antineuritic.[1]

[1] All details of the preparation, analysis, and biological testing of these extracts will be found in Hygienic Laboratory Bulletin No. 116.

For various reasons only 13 cases yielded results which were above criticism. These are highly suggestive, however, and it is hoped that this important branch of the work will be extended by other investigators. Briefly stated, the results were as follows: First, the administration of yeast and rice extracts over a considerable period of time and in large amounts failed to modify the course of the disease, with the possible exception of one case in which this treatment coincided with the disappearance of well-marked nervous symptoms. This clearly indicates that the defect of the so-called pellagrous diet is not due simply to a deficiency in antineuritic vitamine, as it can not be corrected by the administration of relatively large amounts of this substance. Second, the administration of the liver preparations to pellagrins was followed by an improvement in their condition, apparently comparable to that produced by the consumption of a diet containing a considerable amount of milk, eggs, and meat. The evidence so far available, therefore, indicates that the dietary defect presumably responsible for pellagra is distinctly different from, and probably more complex than, the one causing human beriberi.

The Dietary Factor in the Prevention of Pellagra.

The correctness of the dietary theory must, at least in part, be based on the prevention of the disease by means of a proper diet. Very substantial proof of this sort has been furnished in the case of other diseases of dietary origin. Beriberi, for instance, can be prevented by including in the diet a sufficient amount of foods rich in antineuritic vitamine. Scurvy does not occur if the diet contains fresh vegetables, fresh meat, or certain fresh fruits. Xerophthalmia fails to appear if a diet rich in fat-soluble vitamine is consumed. As regards pellagra, I have already referred to the disappearance of this disease from southwestern France, evidently coinciding with a radical change in the diet of the population. It is obvious, however, that in this instance the evidence is by no means above criticism, as the available information in regard to the diet is more of a general nature.

Goldberger, Waring, and Willets (1915) were the first to show conclusively that pellagra can be prevented by means of an appropriate change in diet. Three southern institutions were selected for the execution of this preventive experiment—two orphanages and a hospital for the insane. In each of these institutions a large number of cases of pellagra had occurred for a number of years previous to the beginning of the preventive test. In the autumn of 1914, the diet in these two orphanages and that in two wards of the hospital for the insane was supplemented by the addition of milk, fresh meat, eggs, and dried beans. The general hygienic conditions outside of the diet remained unchanged. In October 1915, or one year after the change in

diet was made, only one out of 244 pellagrins had a recurrence of the disease; whereas, on the basis of previous experience there might have been expected approximately 50 per cent recurrences. Furthermore, there was observed no new case of pellagra among the 168 nonpellagrous residents in the two orphanages. The conclusion to be drawn from this experiment is that pellagra can be prevented by an appropriate diet, without any alteration in the other hygienic conditions.

Experimental Production of Pellagra.

I have now arrived at the crucial phase of the whole pellagra problem, viz., the review of the attempts to reproduce the disease experimentally in the lower animals and in man by means of a defective diet. The Italian school believed that they had produced symptoms resembling pellagra in the lower animals and in man by the administration of extracts of spoiled corn. Raubitschek (1910) on the basis of animal experiments, advanced his very attractive photo-dynamic theory, which assumes that certain cereals contain a substance which renders the skin oversensitive to sunlight. Critically viewed, none of these experiments stands the test of modern medical science. For this reason I began, in January, 1914, an extensive series of feeding experiments on various animals, in the hope of being able to produce symptoms and pathological changes resembling those found in pellagra. The results obtained are of sufficient interest to be presented briefly.

It was found that a restricted vegetable diet composed of cereals and tubers and some fresh vegetables was insufficient to maintain life over a long period of time. The animals developed constipation followed by diarrhea, marked changes in reflex excitability, and convulsions; a stuporous state was noticed in monkeys. In two of these animals the tongue assumed the characteristic denuded and red appearance seen in pellagra, and the dorsal surface of the feet showed a wet dermatitis. A typical pellagrous dermatitis was never observed in any of these animals. At my suggestion, Dr. Sundwall submitted the tissues of these animals to a careful histological examination, from which he concluded that "there was a striking similiarity of cell alterations seen in these animals and in those changes previously observed in the tissues procured from pellagrins. In fact, practically all the changes noted in the latter were observed in these animals." These changes consist of (*a*) passive congestion in practically all tissues; (*b*) various degrees of retrogressive changes in many of the thoracic and abdominal viscera, such as cloudy swelling, hydropic degeneration, fatty infiltration and degeneration, hyaline and ameloid degeneration; congestion, hemorrhage, and ulceration of the gastro-intestinal tract; (*c*) pigmentation, principally hemosiderosis; (*d*) degeneration in the central nervous system affecting

chiefly the reflex arches and the pyramidal nerve tracts (Sundwall, 1917).

Miss Koch and I submitted the various parts of the central nervous system from some of these animals and also those from five uncomplicated cases of pellagra to a detailed chemical analysis. The results showed that both the animal and human tissues differed very markedly in their chemical composition from the normal, and that the changes found in the animal tissues were strikingly similar to those found in the tissues from pellagrins (Hyg. Lab. Bull. 103).

We have therefore demonstrated that it is possible to produce in animals by means of a restricted vegetable diet, both histological and chemical changes which, in all respects, with the exception of the skin lesions, are identical with those found in pellagra. The changes in the spinal chord are of particular significance as the pellagrous dermatitis has been attributed by pathologists to these central lesions (See Mott, 1913, Singer and Pollock, 1913). The absence of the dermatitis in our animals may possibly be due to essential differences in the reaction of the skin of the various species to such changes. As interesting as these findings may be, it should not be forgotten that these histological changes are not specific of pellagra only.

Another attempt at the experimental production of pellagra was reported by Chittenden and Underhill (1917), who found that dogs, when fed over several weeks or months on a diet composed of "crackers" (made from highly milled wheat flour), boiled peas, and vegetable fat, developed symptoms which the investigators considered as resembling those found in pellagra. The animals suffered from diarrhea, loss of appetite, and developed a marked and extensive ulceration of the oral mucous membrane. The same symptoms were produced in dogs by a diet of white bread, lard, and milk. After the addition of fresh meat to the food, the symptoms promptly disappeared. During the last two years, I have observed what was evidently the same condition in dogs fed on a diet of white bread and pasteurized milk, the symptoms disappearing after the addition of fresh meat to the diet. The ulceration of the oral mucous membrane differs, however, considerably from the pellagrous stomatitis, inasmuch as the marked redness of the tongue and oral mucous membrane, so characteristic of pellagra, is absent. The skin lesions described by Chittenden and Underhill consisted of pustules filled with pus organisms and located on the thorax and upper part of the abdomen. These skin lesions bear no resemblance to those found in pellagra as they do not show the characteristic distribution and appearance.

I therefore believe that we are justified in the conclusion that up to the present time unquestionable pellagra has not been produced in animals, although certain symptoms and pathological changes have

been observed in animals on a restricted vegetable diet, which greatly resemble the changes found in pellagra.

I shall now refer briefly to an experiment by Goldberger and Wheeler (1915), aiming at the experimental production of pellagra in the human being. Following the classical example of Fraser and Stanton (1909), who produced beriberi in the human by means of a deficient diet, 11 prisoners of a southern prison camp who volunteered for this experiment, were kept from April, 1915, to October of the same year on a restricted vegetable diet prepared from bolted wheat flour and corn meal of good quality, polished rice, sugar, pork fat, sweet potatoes, and a relatively small quantity of cabbage, collards, and turnip greens. At the end of five months six of the volunteers had developed symptoms which were diagnosed as pellagrous. The dermatitis was first noted on the scrotum, later it appeared on the backs of the hands in two cases, and on the neck in one case. Mild nervous and gastrointestinal symptoms were noted. Although the evidence furnished by this experiment is not very extensive, it appears that pellagra has been produced in the human by means of a restricted vegetable diet.

Nature of the Dietary Defect.

It is seen that I have presented a considerable number of facts in support of the hypothesis that pellagra is principally due to the continuous consumption of a restricted vegetable diet. The question arises, Why should a restricted vegetable diet cause pellagra when we know that certain Eastern races live on a vegetable diet without contracting the disease? At the time when I formulated this hypothesis, I gathered information which would help to explain this evident discrepancy, and in the course of the work I have constantly kept this point in mind. What I have to offer are merely suggestions, which may be of value to others in future work.

The available information regarding the composition of the so-called pellagrous diet shows that it is a restricted vegetable diet in which corn, wheat, and vegetable or animal "depot" fat, play a predominant rôle, with green vegetables forming only a relatively small part of the ration. In the light of the work of Osborne, Mendel, and, especially, McCollum and his associates, it is now evident that such a diet may be deficient in certain essential elements, particularly in protein of adequate composition, vitamines and calcium and sodium. A dietary survey in pellagrous families in South Carolina impressed upon me, furthermore, the fact that both wheat foods and hominy were prepared from highly milled products, which, according to some recent work of Lake, Myers, and myself (1918), are more deficient in respect to antineuritic and fat-soluble vitamines and inorganic salts than the whole cereals. Some time ago we called attention to the fact that the rapid increase in pellagra in this country

during the last 20 years followed soon after the introduction of these highly milled cereal foods (Voegtlin, Sullivan, and Myers, 1916). I do not mean to infer that this change alone might explain the increase in pellagra, but I do believe that it represents one of the important factors which, in conjunction with less favorable economic conditions and abnormal dietary habits, has led to the reduction of the food value of the diet consumed by the pellagrous population of the South.

The further observation brought out by this dietary survey was the fact that corn bread was often made from corn meal, baking soda, water, and salt, a method of cooking which we were able to show destroys the antineuritic vitamine originally present in the corn meal. Hence, it becomes evident that the use of highly milled cereals and the improper preparation of corn bread still further decrease the food value of the already deficient diet. Is it not reasonable, therefore, to assume that such a diet would lead to a very serious dietary deficiency in both the well-recognized factors as well as the so-called vitamines. For instance, a temporary reduction or elimination of the fresh vegetables and milk, which are not as easily procurable during the winter months, might lead to the critical reduction in the consumption of the antiscorbutic, antineuritic, and fat-soluble vitamine, the calcium, and the protein of proper composition, thus gradually preparing the individual for the attack of pellagra in the following spring and summer months. Such seasonal variations in the incidence of pellagra and in the food supply of the nature just indicated have been noted by those who have paid particular attention to this point. On the other hand, it appears from the dietary studies of Capt. McCay (1910), in India, and of Yukawa (1909), in Japan, that the vegetarians of those countries live on a more nutritious diet, including more green foods, a fact which may explain their immunity from pellagra. This view is supported by the recent observations of McCollum that a properly balanced mixture of seeds and the leafy parts of plants may constitute a satisfactory diet. It is very plain that the restricted vegetable diet which is presumably responsible for pellagra is not properly balanced in this respect.

McCollum, Simmonds, and Parsons (1919), have tested on growing rats the diet used by Goldberger and Wheeler in the production of pellagra, and have found that young rats are able to live on this diet for at least 16 months without, however, showing any increase in weight. The animals did not develop any signs of deficiency disease, but looked "very old and rough-haired." On the basis of these and similar experiments, McCollum comes to the conclusion that pellagra is caused by an infectious agent in individuals whose vitality has been lowered by a faulty diet. This conclusion is not necessarily justified. I can not refrain here from sounding a note of warning against the

indiscriminate use of evidence obtained from feeding experiments of one species of animals for the formulation of the dietary requirements of other species. It is to be constantly kept in mind that certain species are more resistant than others to certain dietary deficiencies. Albino rats, for instance, are immune to scurvy; and had it not been that this disease can be produced with the greatest ease in guinea pigs, by a diet lacking in antiscorbutic vitamine, the dietary theory of scurvy might never have been accepted. Furthermore, Lake and I (1919) have been able to show that rats are more resistant than cats and dogs to a dietary deficiency of the antineuritic vitamine. Man, on the other hand, is susceptible to all the dietary deficiency diseases which so far have been clearly recognized.

The conception that pellagra is due to a dietary deficiency is, therefore, not contradicted by the available evidence. This does not imply that the disease is necessarily due to a deficiency of the diet in a specific substance such as the hypothetical pellagra vitamine of Funk (1913). It is more likely that the pellagrous syndrome is caused by a *combination of the deficiencies in some of the well-recognized food factors*, an hypothesis which would account, first, for the resemblance between the symptomatology and histopathology of scurvy, beriberi, and pellagra, and, second, for the great individual variation in the symptom complex observed in different patients. Thus, children often exhibit a marked dermatitis without stomatitis or nervous symptoms. The old and much disputed question of "pellagra sine pellagra," or in other words, the occurrence of pellagra without skin symptoms, would also find its solution. Suggestive evidence in this matter is found in the favorable results obtained in the treatment of pellagrins with extracts of ox liver, which I previously presented. It is very probable that an extension of this work may throw some light upon the nature of the dietary defect. Further attempts should also be made to produce the disease in animals, in view of the fact that the cause of scurvy and beriberi was cleared up largely as a result of the experimental production of these diseases in the lower animals.

Summary.

I regret that time did not permit me to review critically the evidence which has been put forth in support of the infectious theory. It might appear as if I had purposely disregarded the possibility of pellagra being essentially an infectious disease. May it suffice to state that there is no direct proof that pellagra has ever been transmitted experimentally in man or to animals, although a great deal of effort has been spent in this direction. The only evidence which, at first glance, seems to favor the infectious theory is based on

epidemiological data.[1] The infectious agent is supposed to be transmitted either by a fly (Simulium) or through human excreta. The proof for these assumptions is indirect in nature and is therefore subject to erroneous interpretation.

The conclusions to be drawn from the recent work on pellagra are the following:

1. The hypothesis that there is a causal relation between pellagra and a restricted vegetable diet has been substantiated by direct proof to this effect and has led to results of considerable practical and scientific value.

2. The metabolism in pellagra shows certain definite changes from the normal, which point to decreased gastric secretion and increased intestinal putrefaction.

3. In the treatment and the prevention of pellagra, diet is the essential factor. The disease can be prevented by an appropriate change in diet without changing the other sanitary conditions.

4. A diet of the composition used by pellagrins prior to their attack by the disease leads to malnutrition and certain pathological changes in animals, resembling those found in pellagra. A typical pellagrous dermatitis has not been observed in animals. Pellagrous symptoms have been produced in man by the continued consumption of a restricted vegetable diet.

5. The nature of the dietary defect has not been discovered, although certain observations point to a combined deficiency in some of the well-recognized dietary factors as the cause of the pellagrous syndrome.

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[1] For information relating to the infectious theory the reader is referred to an exhaustive article on the subject by Jobling and Peterson, 1916. Jr. Inf. Dis., vol. 18, p. 501, and the reports of the Thompson McFadden Pellagra Commission: Siler, Garrison, and MacNeal, 1914. J. Am. Med. Ass., vol. 62, p. 8. Siler and Garrison, 1913. Am. J. Med. Sc., vol. 146, p. 238.
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CHILD HYGIENE IN MISSOURI.

On request of the acting governor, made in response to a resolution by the State board of health requesting assistance in child hygiene work in the State, the United States Public Health Service is conducting a State-wide study of child hygiene problems in the State of Missouri in cooperation with the State board of health and a number of volunteer organizations. The main object of the investigation is to leave behind it an effective division of child hygiene in the State department of health that will carry on the work which the results of the investigation indicate should be done. One of the expected results is that a number of communities throughout the State will organize at their own expense for the conservation of child life.

The investigations are in charge of a commissioned officer of the Public Health Service, assisted by a staff of seven women physicians, six public-health nurses, and a number of field investigators, all of whom are women.

Conditions in selected urban, town, and rural districts throughout the State, representing typical American life, will be thoroughly studied. Subject to parental consent, the physical condition of children of the school and preschool age in each of the communities will be carefully studied. Such measures as may be necessary to correct defects will be recommended to the parents and the teachers. Where treatment is necessary, communities will be urged to provide local facilities for that purpose. Accurate records are being kept and a follow-up system has been arranged. Much of the work in the State deals with the hygiene of maternity and infancy. The provisions for the supervision of expectant mothers are being studied with a view to making recommendations for improved facilities for medical advice for protection of the expectant mother and the care of her child. In all these activities the aim is to establish in Missouri model modern organizations for dealing with the health of mothers and children.

The accompanying outline summarizes the more important activities now being carried on in connection with this survey and may serve to indicate how thoroughly the work has been coordinated with that of local and State official and unofficial health agencies.

PROJECTS TO BE UNDERTAKEN.

Character of work.	Done by—	Assisted by—	Materials used.	Follow up.
1. FIELD INVESTIGATION:				
Houset-to-house schedule taking in selected communities.	U. S. P. H. S. field investigators.	Public health nurses.	Schedules furnished by U. S. P. H. S., Division of Child Hygiene.	Birth registration test. Enrolling children of preschool age in health center or infant welfare station. Prenatal supervision.
2. SCHOOL HYGIENE:				
Monthly height and weight taking.	School nurses. Teachers.	Field investigators. Home demonstration agents. Local tuberculosis workers. Interested persons.	Height and weight record charts furnished by Missouri Tuberculosis Association. Scales furnished by local organizations.	Nutrition instruction and supervision.
Modern health crusade.	Teachers. School nurses.	Local tuberculosis workers.	Roll of health knighthood charts and chore folders furnished by Missouri Tuberculosis Association and local tuberculosis societies.	
Physical examination of school children.	School physicians. Teachers. Nurses.	Public health nurses. Red Cross nurses. Tuberculosis nurses.	Cards furnished by U. S. P. H. S., Division of Child Hygiene. State Board of Health and Missouri Tuberculosis Association.	Corrective work of local physicians and dentists. Children's clinics in connection with schools or health center.
3. HEALTH CENTER.	Full-time trained health officer. Red Cross nurses. Tuberculosis nurses.	All agencies.	Office, clinic rooms and equipment supplied by local communities.	Full public health program for county.
4. BIRTH REGISTRATION.	Division of Child Hygiene.	All agencies.	Furnished by State Board of Health and Missouri Tuberculosis Association.	Continuous.
5. LITERATURE DISTRIBUTION:	Division of Child Hygiene.	All agencies.		Continuous.
U. S. Public Health Service publication.			U. S. Public Health Service.	
Missouri Baby Book.			Missouri Tuberculosis Association.	
Nutrition for Children.			Agricultural Extension service.	
Miscellaneous.			State Board of Health.	
6. PUBLICITY.	Division of Child Hygiene.	All agencies.	As provided.	Continuous.

DIVISION OF CHILD HYGIENE,
MISSOURI STATE BOARD OF HEALTH
Jefferson City, Mo.

DEATHS DURING WEEK ENDED JUNE 5, 1920.

[From the "Weekly Health Index," June 8, 1920, 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 June 5, 1920, infant mortality (per cent), annual death rate, and comparison with corresponding week of preceding years.

City.	Population Jan. 1, 1920, subject to revision.	Week ended June 5, 1920.		Average annual death rate per 1,000.[2]	Per cent of deaths under 1 year.	
		Total deaths.	Death rate.[1]		Week ended June 5, 1920.	Previous year or years.[2]
Akron, Ohio	208,435	43	10.8	.....	20.9	.....
Albany, N. Y	113,344	36	16.6	C 15.0	16.7	C 3.1
Atlanta, Ga	[3] 201,732	71	18.4	C 18.6	14.1	C 15.3
Baltimore, Md	733,826	179	12.7	A 14.7	18.4	A 14.5
Birmingham, Ala	[3] 197,670	48	12.7	A 20.0	16.7	A 18.9
Boston, Mass	747,923	183	12.8	A 16.1	15.3	A 14.2
Bridgeport, Conn	143,152	26	9.5	.....	11.5	.....
Buffalo, N. Y	505,875	107	11.0	C 23.3	16.8	C 17.3
Cambridge, Mass	[3] 111,432	28	13.1	A 12.8	10.7	A 9.7
Chicago, Ill	[3] 2,596,681	531	10.7	A 13.7	13.9	A 15.4
Cincinnati, Ohio	401,158	106	13.8	C 11.7	10.4	C 11.2
Cleveland, Ohio	[3] 810,306	153	9.8	C 9.8	13.1	C 11.1
Dayton, Ohio	153,830	35	11.9	C 12.0	11.4	C 5.9
Denver, Colo	256,369	54	11.0	A 12.8	11.1	.....
Detroit, Mich	.....	204	.....	.....	19.6	.....
Fall River, Mass	[3] 128,392	25	10.2	C 17.5	16.0	C 18.6
Grand Rapids, Mich	[3] 135,450	28	10.8	C 7.3	17.9	C 5.3
Indianapolis, Ind	[3] 290,389	83	14.9	C 12.2	8.4	C 4.4
Jersey City, N. J	297,864	66	11.6	C 13.7	7.6	C 19.5
Kansas City, Mo	[3] 313,785	89	14.8	C 13.6	7.9	C 4.9
Los Angeles, Calif	[3] 568,495	144	13.2	A 12.6	13.9	A 9.9
Louisville, Ky	234,891	51	11.3	C 13.4	5.9	C 8.3
Lowell, Mass	112,479	29	13.4	A 12.8	24.1	A 21.2
Memphis, Tenn	162,351	70	22.5	C 13.9	10.0	C 11.9
Milwaukee, Wis	457,147	94	10.7	A 11.8	29.8	A 23.3
Minneapolis, Minn	380,498	67	9.2	C 12.6	10.4	C 13.5
Nashville, Tenn	118,342	32	14.1	C 16.0	15.6	C 13.9
Newark, N. J	415,609	104	13.0	C 12.0	21.2	C 18.3
New Haven, Conn	[3] 154,865	50	16.8	C 12.5	16.0	C 10.8
New Orleans, La	387,408	114	15.3	A 21.3	15.8	A 15.7
New York, N. Y	5,621,151	1,266	11.7	C 11.8	16.0	C 16.1
Oakland, Calif	216,361	49	11.8	A 10.4	14.3	A 8.6
Omaha, Nebr	[3] 180,264	48	13.9	C 10.1	16.7	C 14.3
Philadelphia, Pa	[3] 1,761,371	455	13.5	[4] 14.1	15.4	[4] 13.4
Pittsburgh, Pa	588,193	141	12.5	C 13.2	20.6	C 18.4
Portland, Oreg	258,288	68	13.7	C 12.5	7.4	C 11.7
Providence, R. I	[3] 263,613	67	13.3	C 13.5	10.4	C 11.8
Richmond, Va	[3] 160,719	57	18.5	C 19.1	15.8	C 16.9
Rochester, N. Y	[3] 264,856	89	17.5	C 13.6	21.3	C 8.7
St. Louis, Mo	773,000	176	11.9	C 11.4	8.0	C 10.8
St. Paul, Minn	234,595	57	12.7	C 11.3	12.3	C 10.0
San Francisco, Calif	[3] 478,530	124	13.5	C 14.6	8.9	C 6.0
Seattle, Wash	315,652	57	9.4	A 8.2	5.3	A 14.4
Spokane, Wash	104,204	24	12.0	C 11.5	4.2	C 4.3
Syracuse, N. Y	171,647	40	12.2	C 12.5	20.0	C 15.0
Toledo, Ohio	243,109	49	10.5	A 13.5	10.2	A 14.4
Trenton, N. J	119,289	28	12.2	A 17.7	7.1	A 19.4
Washington, D. C	437,571	112	13.3	A 14.9	14.3	A 11.0
Worcester, Mass	179,741	50	14.5	C 9.9	12.0	C 12.1
Youngstown, Ohio	132,358	25	9.8	.....	32.0	.....

[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, 1918.
[4] Data are based on statistics of 1915, 1916, and 1917.

Summary of information received by telegraph from industrial insurance companies for week ended June 5, 1920.

Policies in force	44,036,467
Number of death claims	7,482
Death claims per 1,000 policies in force, annual rate	8.9

GARBAGE-DISPOSAL ORDINANCE UPHELD.

The Supreme Court of Utah in a recently decided case[1] upholds an ordinance of Salt Lake City regulating the collection and disposal of garbage. Similar ordinances have been considered and held valid by the Supreme Courts of Missouri and Michigan in recent cases published in the Public Health Reports of May 28 and June 4, 1920, respectively.

[1] Salt Lake City *v.* Bernhagen (189 Pac., 583).

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 June 12, 1920.

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

ALABAMA.

	Cases.
Chicken pox	6
Diphtheria	8
Dysentery	6
Malaria	14
Measles	12
Scarlet fever	17
Smallpox:	
Jefferson County	8
Mobile County	10
Scattering	10
Tuberculosis (pulmonary)	20
Typhoid fever:	
Jefferson County	10
Scattering	11
Whooping cough	23

ARKANSAS.

Cerebrospinal meningitis	1
Chicken pox	32
Diphtheria	3
Hookworm	4
Influenza	9
Malaria	151
Measles	41
Pellagra	17
Poliomyelitis	1
Smallpox	23
Scarlet fever	8
Trachoma	6
Tuberculosis	17
Typhoid fever	3
Whooping cough	49

CALIFORNIA.

Influenza	3
Lethargic encephalitis:	
Berkeley	1
Scotia	1
Smallpox	48
Typhoid fever	17

CONNECTICUT.

	Cases.
Cerebrospinal meningitis:	
New Britain	1
New London	1
Chicken pox	34
Diphtheria	29
German measles	4
Lethargic encephalitis	3
Malaria	1
Measles:	
Fairfield County—Darien	9
Hartford County—	
Farmington	11
Hartford	27
Middlesex County—Essex	23
New Haven County—	
New Haven	30
North Haven	10
New London County—Groton	21
Scattering	61
Mumps	47
Pneumonia	4
Scarlet fever:	
Hartford County—New Britain	10
New Haven County—Waterbury	15
Scattering	33
Septic sore throat	1
Trachoma	2
Tuberculosis (all forms)	53
Typhoid fever	4
Whooping cough	39

DELAWARE.

Chicken pox	1
Diphtheria	2
Measles	39
Mumps	5
Scarlet fever:	
Wilmington	7
Scattering	2
Smallpox	1
Tuberculosis	1
Typhoid fever	2
Whooping cough	2

FLORIDA.

	Cases.
Cerebrospinal meningitis	1
Diphtheria	8
Dysentery	2
Malaria	42
Plague (bubonic)—Pensacola	1
Pneumonia	2
Scarlet fever	1
Typhoid fever	15

GEORGIA.

Cerebrospinal meningitis	1
Chicken pox	21
Diphtheria	6
Dysentery (amebic)	3
Dysentery (bacillary)	71
Hookworm	7
Influenza	9
Malaria	69
Measles	70
Mumps	3
Pneumonia	6
Scarlet fever	5
Septic sore throat	2
Smallpox	45
Tuberculosis (pulmonary)	10
Typhoid fever	18
Whooping cough	41

ILLINOIS.

Cerebrospinal meningitis:	
Moline	1
Union County—Saratoga Township	1
Diphtheria:	
Chicago	83
Scattering	16
Influenza	14
Lethargic encephalitis:	
Chicago	2
Peru	1
Pneumonia:	
Chicago	112
Scattering	8
Poliomyelitis:	
Chicago	1
Rend City	1
Scarlet fever:	
Chicago	137
Scattering	53
Smallpox:	
Knox County—Galesburg Township	11
Scattering	46
Typhoid fever	17

INDIANA.

Cerebrospinal meningitis—Marion County	1
Diphtheria	29
Measles:	
Marion County	202
Scattering	198
Scarlet fever	96
Smallpox	97
Typhoid fever	19

IOWA.

	Cases.
Cerebrospinal meningitis—Polk County	1
Chicken pox	7
Diphtheria	16
Measles:	
Cedar Falls	8
Dubuque	24
Ottumwa	19
Scattering	66
Mumps	8
Poliomyelitis—Dyersville	1
Pneumonia	2
Scarlet fever	42
Smallpox:	
Davenport	8
Dubuque	30
Madison County	16
Warren County	9
Scattering	71
Whooping cough	16

KANSAS.

Chicken pox	32
Diphtheria	16
German measles	2
Influenza	1
Malaria	1
Measles	190
Mumps	18
Pneumonia	7
Scarlet fever	26
Smallpox	142
Trachoma	3
Tuberculosis	59
Typhoid fever	9
Whooping cough	113

LOUISIANA.

Diphtheria	6
Malaria	32
Pellagra	15
Smallpox	24
Tuberculosis	28
Typhoid fever	14
Whooping cough	11

MAINE.

Chicken pox	7
Diphtheria	9
German measles	1
Measles:	
Portland	11
Scattering	10
Mumps	29
Scarlet fever:	
Eastport	8
Scattering	14
Smallpox	4
Tuberculosis	57
Typhoid fever	3
Whooping cough	51

MARYLAND.[1]

Cerebrospinal meningitis	1
Chicken pox	30
Diphtheria	22

[1] Week ended Friday.

MARYLAND—continued.

	Cases.
Dysentery	2
German measles	2
Influenza	3
Measles	352
Mumps	12
Paratyphoid fever	1
Pneumonia (all forms)	67
Poliomyelitis	2
Scarlet fever	44
Septic sore throat	8
Smallpox	5
Tuberculosis	73
Typhoid fever	10
Whooping cough	31

MASSACHUSETTS.

Anthrax	1
Cerebrospinal meningitis	3
Chicken pox	114
Conjunctivitis (suppurative)	13
Diphtheria	141
Dysentery	1
German measles	7
Influenza	10
Malaria	5
Measles	1,505
Mumps	209
Ophthalmia neonatorum	34
Pellagra	1
Pneumonia (lobar)	61
Poliomyelitis	1
Scarlet fever	149
Tetanus	1
Trachoma	1
Tuberculosis (all forms)	222
Typhoid fever	11
Whooping cough	209

MINNESOTA.

Smallpox	12

MONTANA.

Cerebrospinal meningitis—Redstone	1
Diphtheria	1
Rocky Mountain spotted or tick fever:	
Billings	1
Bridger	2
Great Falls	2
Hardin	1
Scarlet fever	14
Smallpox	38
Typhoid fever	4

NEBRASKA.

Chicken pox	16
Diphtheria	5
Measles:	
Creighton	7
Omaha	38
Smithfield	20
Scattering	43
Mumps	10
Scarlet fever:	
Omaha	12
Scattering	6

NEBRASKA—continued.

	Cases.
Smallpox:	
Humboldt	8
Lincoln	7
North Platte	8
Omaha	10
Scattering	38
Tuberculosis	1
Whooping cough	9

NEW JERSEY.

Influenza	3
Pneumonia	89
Smallpox:	
Beverly Township	1
Brick Township	1
Harrison Township	1
Logan Township	1
Passaic	1
Swedesboro Township	2

NEW MEXICO.

Chicken pox	5
Diphtheria	7
Food poisoning	3
German measles	1
Malaria	2
Measles	39
Mumps	6
Pneumonia	2
Scarlet fever	4
Smallpox	5
Trachoma	1
Tuberculosis	16
Typhoid fever	4
Whooping cough	16

NEW YORK.

(Exclusive of New York City.)

Anthrax—Endicott	1
Cerebrospinal meningitis:	
Bath	1
Lancaster	1
Niagara Falls	1
Ogdensburg	1
Onconta	1
Stockholm	2
Diphtheria	181
Influenza	3
Measles	1,839
Pneumonia	173
Scarlet fever	155
Smallpox	6
Typhoid fever	23
Whooping cough	215

NORTH CAROLINA.

Cerebrospinal meningitis	3
Chicken pox	42
Diphtheria	15
German measles	1
Measles	205
Scarlet fever	26

NORTH CAROLINA—continued.

	Cases.
Smallpox	57
Typhoid fever	28
Whooping cough	360

TEXAS.

	Cases.
Chicken pox	20
Diphtheria	14
Dysentery:	
Dallas	26
Travis County	1
Influenza	5
Lethargic encephalitis—Dallas	1
Malaria:	
Guadaloupe County	100
Travis	8
Scattering	9
Measles:	
Dallas	20
El Paso	8
Scattering	6
Mumps	4
Pneumonia	8
Scarlet fever	5
Smallpox:	
Cleburne	23
Collins County	10
Denton	9
Fort Worth	17
Marshall	7
Tyler	7
Scattering	25
Trachoma	18
Typhoid fever:	
Waller County	12
Scattering	36
Whooping cough	20

VERMONT.

	Cases.
Chicken pox	19
Diphtheria	4
Measles	225
Mumps	35
Pneumonia	3
Scarlet fever	13
Typhoid fever	1
Whooping cough	46

VIRGINIA.

	Cases.
Poliomyelitis—Augusta County	1
Smallpox—Bedford County	1

WASHINGTON.

	Cases.
Chicken pox	43
Diphtheria	18
Measles	290
Mumps	7
Pneumonia	1
Rocky Mountain spotted or tick fever:	
Spokane County—Marshall	1
Scarlet fever	42
Smallpox	89
Tuberculosis	1
Typhoid fever	3
Whooping cough	26

WEST VIRGINIA.

	Cases.
Diphtheria	10
Measles:	
Parkersburg	16
Sistersville	10
Wellsburg	9
Wheeling	42
Scattering	22
Scarlet fever	7
Smallpox:	
Bluefield	8
Wellsburg	1
Typhoid fever	2

WISCONSIN.

	Cases.
Milwaukee:	
Cerebrospinal meningitis	4
Chicken pox	36
Diphtheria	13
Measles	426
Rubella	1
Scarlet fever	22
Smallpox	7
Tuberculosis	27
Typhoid fever	1
Whooping cough	80
Scattering:	
Cerebrospinal meningitis	1
Chicken pox	77
Diphtheria	17
Influenza	18
Measles	862
Scarlet fever	103
Smallpox	125
Tuberculosis	14
Typhoid fever	5
Whooping cough	44

Kentucky Report for Week Ended June 5, 1920.

Cerebrospinal meningitis:	Cases.
Edmonson County	1
Pike County	1
Chicken pox	15
Diphtheria	9
Influenza	4
Measles:	
Christian County	18
Jefferson County	49
Kenton County	15
Logan County	10
Scattering	68
Pneumonia	18
Scarlet fever	31
Septic sore throat	1
Smallpox	35
Tonsillitis	1
Trachoma	7
Tuberculosis	35
Typhoid fever	20
Whooping cough	38

SUMMARY OF CASES REPORTED MONTHLY, BY STATES.

Tables showing, by counties, the reported cases of cerebrospinal meningitis, influenza, 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.	Influenza.	Malaria.	Measles.	Pellagra.	Poliomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever
1920.										
Alabama (May)	.....	19	10	39	81	6	1	44	154	36
Arizona (May)	.....	6	171	.....	57	.....	.....	22	55	.....
Colorado (April)	.....	60	.....	.....	489	.....	.....	112	359	7
Delaware (April)	4	21	.....	.....	266	.....	.....	16	1	4
Delaware (May)	1	17	4	.....	240	.....	.....	42	2	10
Florida (May)	2	10	195	75	45	14	.....	3	5	45
Hawaii (April)	.....	12	974	.....	73	.....	.....	3	.....	7
Massachusetts (May)	10	477	98	1	5,751	.....	.....	1,218	11	46
Nebraska (May)	2	28	6	.....	758	.....	.....	100	492	14
New Mexico (May)	4	105	21	9	170	1	.....	29	13	15
Oklahoma (May)	1	26	274	4	405	3	.....	81	425	18
Virginia (April)	9	127	.....	172	1,084	15	19	118	329	64
West Virginia (May)	5	82	90	.....	1,539	.....	1	153	341	100

RECIPROCAL NOTIFICATION.

Connecticut—May, 1920.

Cases of communicable diseases referred during May, 1920, to other State health departments by department of health of the State of Connecticut.

Disease and locality of notification.	Referred to health authority of—	Why referred.
Diphtheria:		
Granby, Conn.	Massachusetts Department of Public Health, Boston, Mass.	Three persons from Springfield, Mass., exposed to diphtheria in Granby, Conn.
Typhoid carriers:		
Redding, Conn.	State Department of Health, Albany, N. Y.	Typhoid carrier, with *B. typhosus* in urine and feces, moved to Brooklyn.
Danbury, Conn.	do.	Typhoid carrier isolated by New York City Department of Health moved from Danbury, Conn., to Carmel, N. Y.
Typhoid:		
Meriden, Conn.	do.	Patient taken ill 7 days after arriving in Meriden from New York City; apparently infected on board ship before landing in New York.
Waterbury, Conn.	Massachusetts Department of Public Health, Boston, Mass.	Patient taken ill 10 days after arriving in Waterbury from Boston; apparently infected on board ship before landing.
Tuberculosis:		
Greenwich, Conn.	Department of Health, District of Columbia, Washington, D. C.	Patient left Greenwich Sanitarium to go to brother's home in Washington.
Do.	State Board of Health, Richmond, Va.	Patient left Greenwich Sanitarium to go to Richmond.
Do.	State Department of Health, Albany, N. Y.	Sputum of patient residing in Harrison, N. Y., was positive for tuberculosis bacilli.

ANTHRAX.

Massachusetts—May, 1920.

During May, 1920, three cases of anthrax were reported in Massachusetts.

CEREBROSPINAL MENINGITIS.

State Reports for April and May, 1920.

Place.	New cases reported.
Delaware (April):	
New Castle County—	
Middletown	1
Newark	1
Wilmington	2
Total	4
Delaware (May):	
Sussex County—	
Laurel	1
Florida (May):	
Alachua County	1
Escambia County	1
Total	2
Massachusetts (May):	
Berkshire County—	
North Adams	1
Bristol County—	
Fall River	1
Taunton	1
Essex County—	
Haverhill	1
Middlesex County—	
Cambridge	1
Framingham (town)	1
Hudson (town)	1
Norfolk County—	
Quincy	1
Suffolk County—	
Boston	2
Total	10
Nebraska (May):	
Douglas County	1
Hitchcock County	1
Total	2
New Mexico (May):	
Bernalillo County	1
Colfax County	2
San Miguel County	1
Total	4
Oklahoma (May):	
Blaine County	1
Virginia (April):	
Botetourt County	1
Grayson County—	
Fries	1
Hanover County	1
Loudoun County	1
Mecklenburg County	1
Spottsylvania County—	
Fredericksburg	1
Surry County—	
Claremont	1
Washington County	1
Abingdon	1
Total	9
West Virginia (May):	
Cabell County	1
Greenbrier County	1
Harrison County	1
Marion County	1
Marshall County	1
Total	5

City Reports for Week Ended May 29, 1920.

Place.	Cases.	Deaths.
Aurora, Ill	1	
Baltimore, Md	1	
Bayonne, N. J	1	
Bridgeport, Conn		1
Cambridge, Mass	1	1
Cleveland, Ohio	1	1
Davenport, Iowa	1	
Detroit, Mich	1	
Fort Worth, Tex		1
Huntington, W. Va		1
Hutchinson, Kans	1	
Kansas City, Mo	1	
La Fayette, Ind		1
Leominster, Mass	1	
Marion, Ind		2
Milwaukee, Wis	2	2
Minneapolis, Minn		1
New Haven, Conn	1	1
New York, N. Y	9	4
Norfolk, Va	1	
Pawtucket, R. I		1
Peoria, Ill		1
Philadelphia, Pa	2	3
Rochester, N. Y		1
Sioux Falls, S. Dak	1	
Stockton, Calif		1
Taunton, Mass		1
Wichita, Kans	1	1

DIPHTHERIA.

See Telegraphic weekly reports from States, p. 1457; Monthly summaries by States, p. 1461; and Weekly reports from cities, p. 1475.

INFLUENZA.

Florida, New Mexico, and Oklahoma Reports for May, 1920.

Place.	New cases reported.
Florida (May):	
Alachua County	9
Bay County	6
Bradford County	1
Calhoun County	1
Clay County	1
Columbia County	7
De Soto County	4
Escambia County	4
Pensacola	16
Gadsden County	8
Hillsborough County	5
Tampa	7
Homes County	4
Jackson County	6
Jefferson County	2
Lafayette County	9
Lake County	1
Lee County	1
Leon County	3
Liberty County	9
Madison County	11
Manatee County	2
Marion County	5
Nassau County	8
Okaloosa County	1
Orange County	3
Osceola County	2
Palm Beach County	5
Pasco County	1
Pinellas County	5
Polk County	3
Putnam County	3
St. Lucie County	1
Santa Rosa County	14
Sumter County	3
Suwannee County	10
Taylor County	5
Volusia County	3
Wakulla County	1
Washington County	5
Total	195
New Mexico (May):	
Dona Ana County	12
Otero County	3
San Juan County	3
Sierra County	3
Total	21
Oklahoma (May):	
Blaine County	203
Cherokee County	3
Jefferson County	15
Logan County	28
Ottawa County	8
Pontotoc County	1
Rogers County	3
Stephens County	13
Total	274

City Reports for Week Ended May 29, 1920.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md	3	1	Kearny, N. J	1	.....
Binghamton, N. Y	3	.....	Kenosha, Wis	2	.....
Birmingham, Ala	.....	2	Los Angeles, Calif	3	.....
Boston, Mass	2	1	Mobile, Ala	.....	1
Brockton, Mass	2	.....	New Bedford, Mass	1	.....
Cambridge, Mass	2	1	New Haven, Conn	.....	1
Chicago, Ill	15	4	New York, N. Y	11	13
Cleveland, Ohio	3	4	Oakland, Calif	1	.....
Cohoes, N. Y	9	.....	Paterson, N. J	3	.....
Columbia, S. C	1	.....	Philadelphia, Pa	3	5
Cumberland, Md	1	.....	Richmond, Va	.....	2
Dallas, Tex	1	.....	St. Louis, Mo	1	.....
Detroit, Mich	1	1	San Francisco, Calif	3	.....
Fort Wayne, Ind	.....	1	Stockton, Calif	1	.....
Indianapolis, Ind	.....	1	Washington, D. C	1	1
Kansas City, Mo	1	2	Winthrop, Mass	1	.....

LETHARGIC ENCEPHALITIS.

California, Florida, New Mexico, and New York.

During May, 1920, one case of lethargic encephalitis was reported in Florida and two cases were reported in New Mexico. During the week ended May 29, 1920, one case and one death were reported at Elmira, N. Y., and one case was reported at San Francisco, Calif.

MALARIA.

State Reports for April and May, 1920.

Place.	New cases reported.
Alabama (May):	
Houston County	6
Lauderdale County	2
Madison County	1
Mobile County	1
Talladega County	12
Tuscaloosa County	17
Total	39
Florida (May):	
Baker County	2
Bradford County	2
Citrus County	5
De Soto County	1
Duval County	2
Jacksonville	4
Escambia County	3
Gadsden County	2
Hillsboro County	1
Tampa	3
Jackson County	3
Jefferson County	2
Lafayette County	12
Leon County	14
Levy County	3
Marion County	2
Okeechobee County	3
Orange County	1
Polk County	1
Putnam County	1
St. Johns County	1
Santa Rosa County	1
Suwanee County	3
Taylor County	3
Total	75
Massachusetts (May):	
Suffolk County—	
Boston	1
New Mexico (May):	
Grant County	1
Rio Arriba County	8
Total	9
Oklahoma (May):	
Mayes County	4

Place.	New cases reported.
Virginia (April):	
Accomac County	6
Parksley	2
Brunswick County	10
Caroline County	2
Port Royal	1
Chesterfield County—	
Winterpock	2
Cumberland County	1
Dinwiddie County	1
Elizabeth City County—	
Phoebus	1
Essex County	2
Gloucester County	3
Goochland County	1
Greenesville County	6
Emporia	3
Halifax County	2
South Boston	2
Hanover County	3
Henrico County	2
Isle of Wight County	12
James City County	8
Williamsburg	1
Lancaster County	1
Lunenburg County	3
Victoria	1
Mecklenburg County	4
Chase City	2
South Hill	1
Middlesex County	10
Nansemond County—	
Suffolk	10
Northampton County	3
Northumberland County	8
Pittsylvania County	5
Powhatan County	5
Princess Anne County	8
Prince Edward County	9
Rockbridge County—	
Buena Vista	2
Southampton County	4
Franklin	2
Stafford County	1
Surry County	7
Sussex County	12
Stony Creek	2
York County	1
Total	172

City Reports for Week Ended May 29, 1920.

Place.	Cases.	Deaths.
Alexandria, La	13	.....
Atlanta, Ga	2	.....
Boston, Mass	1	.....
Dallas, Tex	1	.....
Elgin, Ill	1	.....
Greenwich, Conn	1	.....
Los Angeles, Calif	1	.....
Memphis, Tenn	4	1
Savannah, Ga	2	.....
Sioux Falls, S. Dak	1	.....
Wilmington, N. C	.....	1

MALTA FEVER.

New Mexico—May, 1920.

During May, 1920, one case of Malta fever was reported in New Mexico.

MEASLES.

See Telegraphic weekly reports from States, p. 1457; Monthly summaries by States, p. 1461; and Weekly reports from cities, p. 1475.

PELLAGRA.

State Reports for April and May, 1920.

Place.	New cases reported.	Place.	New cases reported.
Alabama (May):		New Mexico (May):	
Choctaw County	1	Roosevelt County	1
Dallas County	1		
Sumter County	1	Oklahoma (May):	
Walker County	2	Logan County	1
Wilcox County	1	Pontotoc County	1
		Pottawatomie County	1
Total	6		
		Total	3
Florida (May):			
De Soto County	1	Virginia (April):	
Escambia County—		Bedford County	1
Pensacola	1	Chesterfield County—	
Gadsden County	1	Beach	2
Hillsborough County—		Culpeper County	1
Tampa	1	Grayson County	1
Jefferson County	1	Greene County	1
Leon County	2	Hanover County	1
Manatee County	1	James City County	1
Orange County	1	Mecklenburg County	2
Polk County	2	Middlesex County	1
Putnam County	1	Patrick County	1
St. Johns County	1	Pittsylvania County—	
Suwanee County	1	Danville	3
Total	14	Total	15

City Reports for Week Ended May 29, 1920.

During the week ended May 29, 1920, one death from pellagra was reported at Charleston, S. C., and one at Montgomery, Ala. One case was reported at Memphis, Tenn., and one at New York, N. Y.

PLAGUE.

Pensacola, Fla.—Human Plague.

A case of human plague developed in Pensacola, Fla., June 8, 1920, and the diagnosis has been confirmed.

The patient (P. G.) died June 12. He resided and worked 1 mile north of the business section of the city.

A second case was reported June 15. Both patients were residents of Pensacola and had no history of exposure to infection outside or on ships.

PLAGUE—Continued.

California—Rodent Plague.

The following table shows the number of ground squirrels (*Citellus beecheyi*) confirmed as plague infected during the week ended May 29; also the number of squirrels collected for examination during the same period:

County.	Plague infection confirmed during week.	Squirrels collected.	County.	Plague infection confirmed during week.	Squirrels collected.
Alameda	2	628	San Joaquin	1	119
Contra Costa	14	604	Santa Clara	1	380
Merced	1	149	Santa Cruz	(1)	120
Monterey	(1)	162	Stanislaus	(1)	249
San Benito	4	377			
San Mateo	(1)	184	Total	23	2,972

[1] None.

Other animals collected for examination were as follows: Alameda County, 1 weasel; Monterey County, 4 rabbits and 3 wood rats; San Benito County, 5 wood rats; and San Francisco, 59 rats. None was confirmed as plague infected during the week.

New Orleans, La.—Rodent Plague.

During the week ended June 5, 1920, 9,235 rodents were captured and examined for plague infection. None was found to be plague infected. The classification of the rodents is as follows: *Mus norvegicus*, 4,651; *Mus rattus*, 212; *Mus alexandrinus*, 522; *Mus musculus*, 3,623; wood rats, 43; miscellaneous, 3; and putrid, 181.

PNEUMONIA (ALL FORMS).

City Reports for Week Ended May 29, 1920.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Adams, Mass	1		Beverly, Mass	1	
Akron, Ohio	9		Binghamton, N. Y	5	4
Alameda, Calif	2		Birmingham, Ala		3
Albany, N. Y	17		Bloomfield, N. J	1	
Alton, Ill	1	1	Bloomington, Ill		1
Amesbury, Mass	1		Boston, Mass	29	22
Anaconda, Mont		1	Bridgeport, Conn		6
Ann Arbor, Mich	3	1	Bristol, Conn	2	2
Arlington, Mass	2	1	Brockton, Mass	2	1
Ashtabula, Ohio	1	2	Buffalo, N. Y		19
Atlanta, Ga	2	3	Butte, Mont		1
Atlantic City, N. J	4		Cairo, Ill		1
Attleboro, Mass	1		Cambridge, Mass	3	1
Auburn, N. Y	5	1	Charleston, S. C		4
Aurora, Ill	1		Charlotte, N. C		1
Austin, Tex		3	Chelsea, Mass	1	
Baltimore, Md	54	27	Chicago, Ill	227	55
Barberton, Ohio		1	Chillicothe, Ohio	1	1
Battle Creek, Mich	2		Cincinnati, Ohio	6	6
Bedford, Ind		1	Cleveland, Ohio	19	19
Belleville, N. J	1		Cohoes, N. Y	4	1
Berkeley, Calif	2	1	Colorado Springs, Colo		1

PNEUMONIA (ALL FORMS)—Continued.

City Reports for Week Ended May 29, 1920—Continued.

Place.	Cases.	Deaths.
Columbus, Ohio		2
Concord, N. H		2
Covington, Ky	1	1
Cranston, R. I	1	1
Cumberland, Md	4	1
Dallas, Tex	2	
Danville, Ill		2
Dayton, Ohio	3	
Decatur, Ill		2
Denver, Colo		7
Detroit, Mich	62	42
Duluth, Minn	4	3
Durham, N. C	1	
East Chicago, Ind		1
Easthampton, Mass		1
East Orange, N. J	4	1
East St. Louis, Ill		4
Elizabeth, N. J		3
Elkhart, Ind	1	2
Elmira, N. Y	2	
El Paso, Tex		6
Englewood, N. J	1	
Fall River, Mass	3	3
Fort Dodge, Iowa		1
Fort Wayne, Ind		2
Fort Worth, Tex		1
Fresno, Calif	1	2
Galesburg, Ill		1
Gary, Ind		4
Geneva, N. Y	1	
Gloucester, N. J	1	
Grand Rapids, Mich	20	3
Great Falls, Mont	1	3
Greeley, Colo		1
Greensboro, N. C		1
Hackensack, N. J	1	1
Hammond, Ind	2	1
Harrison, N. J	1	
Hartford, Conn		2
Haverhill, Mass		2
Holyoke, Mass	3	2
Hot Springs, Ark		1
Huntington, W. Va		3
Ironton, Ohio	1	2
Jacksonville, Ill		1
Jamestown, N. Y		3
Jefferson City, Mo		1
Jersey City, N. J	5	
Kalamazoo, Mich	6	3
Kansas City, Mo	12	11
Kearny, N. J	1	1
Keene, N. H	1	
Kokomo, Ind		1
Lackawanna, N. Y	6	
La Fayette, Ind		2
Lawrence, Mass	5	1
Leominster, Mass	1	
Lexington, Ky		1
Lima, Ohio		1
Lincoln, Nebr		1
Lockport, N. Y	2	
Logansport, Ind		1
Long Beach, Calif	1	
Lorain, Ohio	1	
Los Angeles, Calif	28	10
Louisville, Ky	2	4
Lowell, Mass	1	1
Lynchburg, Va		1
Lynn, Mass	2	1
Macon, Ga	1	
Manchester, Conn	1	
Manchester, N. H	2	2
Medford, Mass	2	
Melrose, Mass	1	
Memphis, Tenn		4
Meriden, Conn	1	
Middletown, N. Y	1	
Middletown, Ohio		1
Milwaukee, Wis		18
Minneapolis, Minn	4	2
Mishawaka, Ind		1
Missoula, Mont		1
Montclair, N. J	5	
Montgomery, Ala		2
Morristown, N. J	1	
Mount Vernon, N. Y	3	3
Muncie, Ind		1
Muskogee, Okla		2
Nashville, Tenn		1
Newark, N. J	48	10
New Bedford, Mass	2	4
New Britain, Conn	1	1
Newburyport, Mass		1
Newcastle, Ind	1	1
New Haven, Conn		2
New London, Conn		2
New Orleans, La		8
Newton, Mass	2	2
New York, N. Y	279	115
Niagara Falls, N. Y	6	3
North Attleboro, Mass	1	1
North Tonawanda, N. Y	1	
Oakland, Calif		2
Oak Park, Ill	3	1
Oklahoma City, Okla		2
Omaha, Nebr		11
Orange, N. J	1	
Paducah, Ky	1	
Pasadena, Calif		1
Passaic, N. J	2	1
Paterson, N. J	6	
Pawtucket, R. I		4
Peoria, Ill		1
Philadelphia, Pa	44	61
Piqua, Ohio	1	
Plainfield, N. J		1
Plattsburg, N. Y		1
Pontiac, Mich	3	2
Port Huron, Mich	1	
Portland, Me		3
Portland, Oreg		3
Providence, R. I	1	9
Pueblo, Colo		1
Quincy, Ill		2
Richmond, Ind		1
Richmond, Va		7
Riverside, Calif		1
Rochester, N. Y	15	6
Rockford, Ill	1	1
Rock Island, Ill	3	1
Rome, N. Y	2	
Rutland, Vt	2	
St. Joseph, Mo		4
St. Paul, Minn		2
San Diego, Calif	1	1
Sandusky, Ohio	2	1
San Francisco, Calif	8	4
Santa Barbara, Calif		1
Sault Ste. Marie, Mich	2	1
Savannah, Ga		5
Schenectady, N. Y	4	
Somerville, Mass	1	1
South Bend, Ind		2
Springfield, Ill		1
Springfield, Mass	6	1
Springfield, Ohio	1	2
Staunton, Va		1
Stockton, Calif	2	1
Superior, Wis		2
Syracuse, N. Y	2	9
Terra Haute, Ind		1
Toledo, Ohio		3
Topeka, Kans	1	1
Troy, N. Y	2	8
Waltham, Mass	3	1
Washington, D. C		6
Watertown, Mass	3	
Watertown, N. Y		4

PNEUMONIA (ALL FORMS)—Continued.

City Reports for Week Ended May 29, 1920—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Wausau, Wis.	1		Wilmington, N. C.		1
West New York, N. J.		1	Winchester, Mass.	1	
Wheeling, W. Va.		2	Winston-Salem, N. C.	1	
White Plains, N. Y.	2		Worcester, Mass.	9	5
Wichita, Kans.		4	Yonkers, N. Y.	3	3
Willimantic, Conn.		1	Zanesville, Ohio		1
Wilmington, Del.		8			

POLIOMYELITIS (INFANTILE PARALYSIS).

State Reports for April and May, 1920.

Place.	New cases reported.	Place.	New cases reported.
Alabama (May):		Virginia (April)—Continued.	
Madison County	1	Washington County	1
Virginia (April):		Total	19
Lee County	2		
Nottaway County	15	West Virginia (May):	
Pulaski County	1	Pleasants County	1

City Reports for Week Ended May 29, 1920.

During the week ended May 29, 1920, there were reported one case of poliomyelitis at Cumberland, Md., one at Lincoln, Nebr., two cases at Milwaukee, Wis., and one case and one death at New York, N. Y.

RABIES IN ANIMALS.

Fall River, Mass., and Wilmington, N. C.

During the week ended May 29, 1920, one case of rabies in animals was reported at Fall River, Mass., and one was reported at Wilmington, N. C.

SCARLET FEVER.

See Telegraphic weekly reports from States, p. 1457; Monthly summaries of States, p. 1461; and Weekly reports from cities, p. 1475.

SMALLPOX.

State Reports for April and May, 1920—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 (April):						
Arapahoe County	3				1	2
Boulder County	2				1	1
Cheyenne County	1				1	
Delta County	8				7	1
Denver	143		32		110	1

SMALLPOX—Continued.

State Reports for April and May, 1920—Vaccination Histories—Continued.

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 (April)—Continued.						
El Paso County	3				3	
Fremont County	2				2	
Huerfano County	30		10		20	
Jefferson County	2				2	
Kit Carson County	23				16	7
La Plata County	2		1		1	
Larimer County	58				55	3
Las Animas County	16		2		11	3
Logan County	3				1	2
Mesa County	21					21
Moffat County	1				1	
Montezuma County	7		1		5	1
Montrose County	2				2	
Morgan County	7				7	
Phillips County	5				5	
Prowers County	7				6	1
Pueblo County	4				2	2
Washington County	1				1	
Weld County	8				6	2
Total	359		46		266	47
Florida (May):						
Duval County—Jacksonville	3				1	2
Hillsborough County—Tampa	1				1	
Jackson County	1					1
Total	5				2	3
Massachusetts (May):						
Middlesex County—Somerville	1				1	
Norfolk County—Braintree (town)	1			1		
Suffolk County—Boston	9			1	8	
Total	11			2	9	
New Mexico (May):						
Chaves County	1				1	
Colfax County	1				1	
De Baca County	6				6	
Eddy County	2				2	
Mora County	1			1		
Union County	1					1
Valencia County	1				1	
Total	13			1	11	1

State Reports for April and May, 1920.

Place.	New cases reported.	Deaths.	Place.	New cases reported.	Deaths.
Alabama (May):			Alabama (May)—Continued.		
Baldwin County	4		Fayette County	1	
Bullock County	3		Jefferson County	62	
Calhoun County	1		Lauderdale County	1	
Cherokee County	1		Marion County	3	
Cullman County	2		Marshall County	1	
Dallas County	9		Mobile County	38	
Etowah County	7		Montgomery County	7	

SMALLPOX—Continued.

State Reports for April and May, 1920—Continued.

Place.	New cases reported.	Deaths.
Alabama (May)—Continued.		
Pike County	1	
Shelby County	4	
Walker County	5	
Wilcox County	4	
Total	154	
Arizona (May):		
Cochise County	26	
Gila County	2	
Maricopa County	21	
Mohave County	1	
Yavapai County	5	
Total	55	
Delaware (May):		
Sussex County—		
Georgetown	1	
Williamsville	1	1
Total	2	1
Nebraska (May):		
Adams County	6	
Buffalo County	11	
Burt County	5	
Cass County	6	
Cedar County	5	
Cheyenne County	7	
Clay County	30	
Colfax County	2	
Cuming County	20	
Dodge County	6	
Douglas County	48	
Dundy County	9	
Franklin County	13	
Furnas County	11	
Gage County	6	
Grant County	2	
Hamilton County	9	
Harlan County	7	
Hitchcock County	5	
Holt County	11	
Howard County	28	
Johnson County	2	
Lancaster County	35	
Lincoln County	4	
Madison County	3	
Merrick County	29	
Nemaha County	18	
Nuckolls County	5	
Phelps County	14	
Pierce County	1	
Polk County	7	
Redwillow County	5	
Rock County	21	
Saline County	1	
Saunders County	27	
Scotts Bluff County	20	
Seward County	2	
Sheridan County	10	
Stanton County	3	
Thayer County	1	
Thomas County	20	
Webster County	4	
York County	13	
Total	492	
Oklahoma (May):		
Atoka County	8	
Blaine County	36	
Cherokee County	8	
Cimarron County	4	
Craig County	6	
Custer County	20	
Garfield	7	
Garvin County	20	

Place.	New cases reported.	Deaths.
Oklahoma (May)—Contd.		
Haskell County	6	
Jackson County	8	
Jefferson County	28	
Logan County	19	
Mayes County	3	
Muskogee County	13	
Oklahoma County	14	
Ottawa County	28	
Payne County	10	
Pontotoc County	56	
Pottawatomie County	53	
Pushmataha County	1	
Rogers County	21	
Seminole County	20	
Stephens County	30	
Woods County	6	
Total	425	
Virginia (April):		
Alexandria County	1	
Augusta County—		
Staunton	8	
Campbell County—		
Lynchburg	9	
Carroll County	1	
Elizabeth City County—		
Hampton	1	
Giles County	1	
Newport	2	
Grayson County	6	
Greene County	3	
Greensville County	8	
Halifax County	2	
Henrico County—		
Richmond	1	
Henry County	5	
Lee County	9	
St. Charles	2	
Loudoun County	1	
Louisa County	1	
Mecklenburg County	4	
Montgomery County	9	
Norfolk County	15	
Page County	10	
Patrick County	1	
Pittsylvania County	5	
Danville	1	
Pulaski County	2	
Roanoke County—		
Roanoke	5	
Vinton	1	
Rockingham County	18	
Dayton	3	
Harrisonburg	1	
Russell County	15	
Dante	13	
Shenandoah County	2	
Smyth County	2	
Saltville	10	
Stafford County	2	
Tazewell County	6	
Warwick County	5	
Washington County	7	
Clinchburg	5	
Meadow View	2	
Wise County	41	
Appalachia	1	
Inman	2	
Glamorgan	35	
Norton	10	
Stonaga	27	
West Norton	2	
Wythe County	1	
York County	5	
Total	329	

SMALLPOX—Continued.

State Reports for April and May, 1920—Continued.

Place.	New cases reported.	Deaths.
West Virginia (May):		
Barbour County	3	
Brooke County	2	
Cabell County	5	
Fayette County	24	
Greenbrier County	6	
Hancock County	2	
Harrison County	8	
Jackson County	5	
Kanawha County	41	
Lewis County	2	
Logan County	1	
McDowell County	19	
Marion County	2	
Mercer County	80	
Mineral County	1	
Mingo County	12	
Monongalia County	43	
Monroe County	13	
Raleigh County	7	
Randolph County	15	
Roane County	2	
Taylor County	4	
Tucker County	34	
Webster County	1	
Wood County	5	
Wyoming County	4	
Total	341	

City Reports for Week Ended May 29, 1920.

Place.	Cases.	Deaths.
Aberdeen, Wash.	19	
Akron, Ohio	16	
Alliance, Ohio	2	
Ann Arbor, Mich.	2	
Appleton, Wis.	7	
Ashtabula, Ohio	2	
Atlanta, Ga.	6	
Baltimore, Md.	1	
Beatrice, Nebr.	6	
Bellingham, Wash.	1	
Benton Harbor, Mich.	1	
Berkeley, Calif.	1	
Birmingham, Ala.	11	
Bluefield, W. Va.	9	
Boise, Idaho	5	
Boston, Mass.	5	
Canton, Ohio	6	
Cape Girardeau, Mo.	2	
Cedar Rapids, Iowa	6	
Charleston, S. C.	6	
Cheyenne, Wyo.	1	
Chicago, Ill.	4	
Chillicothe, Ohio	1	
Cincinnati, Ohio	7	
Clinton, Iowa	1	
Coffeyville, Kans.	1	
Columbus, Ohio	8	
Council Bluffs, Iowa	14	
Dallas, Tex.	2	
Danville, Ill.	1	
Davenport, Iowa	8	
Dayton, Ohio	1	
Decatur, Ill.	1	
Denver, Colo.	9	
Des Moines, Iowa	17	
Detroit, Mich.	51	
Dubuque, Iowa	8	
Duluth, Minn.	18	
East St. Louis, Ill.	3	
Eau Claire, Wis.	2	
Erie, Pa.	1	
Everett, Wash.	2	
Fargo, N. Dak.	2	
Fort Scott, Kans.	2	
Fort Wayne, Ind.	5	
Forth Worth, Tex.	5	
Galesburg, Ill.	6	
Gary, Ind.	2	
Grand Rapids, Mich.	1	
Great Falls, Mont.	3	
Green Bay, Wis.	2	
Hammond, Ind.	3	
Highland Park, Mich.	4	
Hoquiam, Wash.	1	
Huntington, Ind.	4	
Hutchinson, Kans.	1	
Independence, Mo.	6	
Indianapolis, Ind.	16	
Iowa City, Iowa	1	
Ithaca, N. Y.	1	
Jacksonville, Ill.	12	
Jamestown, N. Y.	1	
Kalamazoo, Mich.	2	
Kansas City, Kans.	4	
Kansas City, Mo.	13	
Kenosha, Wis.	6	
Kewanee, Ill.	5	
Knoxville, Tenn.	9	
Kokomo, Ind.	9	
La Crosse, Wis.	2	
La Fayette, Ind.	2	
Lima, Ohio	2	
Lincoln, Nebr.	12	
Logansport, Ind.	2	
Lorain, Ohio	2	
Los Angeles, Calif.	20	
Lynchburg, Va.	1	
Manitowoc, Wis.	3	
Marion, Ind.	1	
Marion, Ohio	12	
Marquette, Mich.	2	
Marshalltown, Iowa	4	
Memphis, Tenn.	9	
Milwaukee, Wis.	11	
Minneapolis, Minn.	48	
Mishawaka, Ind.	3	
Mobile, Ala.	3	
Monmouth, Ill.	1	
Muncie, Ind.	1	
Muskogee, Okla.	1	
New Orleans, La.	12	1
Niagara Falls, N. Y.	1	
Norfolk, Va.	4	
Norwood, Ohio	1	
Oklahoma City, Okla.	5	
Omaha, Nebr.	8	
Oshkosh, Wis.	4	
Paducah, Ky.	1	
Parkersburg, W. Va.	2	
Parsons, Kans.	2	
Peoria, Ill.	1	
Philadelphia, Pa.	1	
Pontiac, Mich.	1	
Portland, Oreg.	21	
Pueblo, Colo.	2	
Racine, Wis.	4	
Reno, Nev.	9	
Richmond, Ind.	1	

SMALLPOX—Continued.

City Reports for Week Ended May 29, 1920—Continued.

Place.	Cases	Deaths.	Place.	Cases.	Deaths.
Roanoke, Va	2		South Bend, Ind	5	
Rock Island, Ill	6		Spokane, Wash	16	
Sacramento, Calif	2		Springfield, Ohio	1	
St. Cloud, Minn	9		Superior, Wis	24	
St. Joseph, Mo	7		Terre Haute, Ind	1	
St. Louis, Mo	13		Topeka, Kans	9	
St. Paul, Minn	6		Vicksburg, Miss	1	
Salt Lake City, Utah	35		Walla Walla, Wash	3	
Sandusky, Ohio	2		Washington, D. C	1	
Savannah, Ga	1		Wichita, Kans	8	
Seattle, Wash	7		Winona, Minn	2	
Sioux City, Iowa	1		Winston-Salem, N. C	2	
Sioux Falls, S. Dak	1		Yakima, Wash	3	
Somerville, Mass	1				

TETANUS.

City Reports for Week Ended May 29, 1920.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Baltimore, Md		1	Passaic, N. J	1	
Chicago, Ill	1	1	Providence, R. I		1
Colorado Springs, Colo	1		Riverside, Calif	1	1
Corpus Cristi, Tex	1	1	St. Joseph, Mo		1
New York, N. Y	1		Wilmington, N. C		1

TUBERCULOSIS.

See Telegraphic weekly reports from States, p. 1457; and Weekly reports from cities, p. 1475.

TYPHOID FEVER.

State Reports for April and May, 1920.

Place.	New cases reported.	Place.	New cases reported.
Alabama (May):		Delaware (April):	
Barbour County	1	New Castle County—	
Bullock County	1	Brandywine	1
Conecuh County	2	Wilmington	3
Etowah County	1	Total	4
Escambia County	1		
Hale County	3		
Jefferson County	12	Delaware (May):	
Lee County	1	Kent County—	
Lowndes County	1	Kenton	2
Madison County	1	New Castle County—	
Marengo County	3	Wilmington	7
Marshall County	2	Sussex County—	
Montgomery County	1	Milford	1
Morgan County	1	Total	10
Tuscaloosa County	2		
Washington County	1		
Walker County	1	Florida (May):	
Wilcox County	1	Baker County	1
Total	36	Bay County	1
		Broward County	1
Colorado (April):		Dade County—	
Archuleta County	2	Miami	1
Moffat County	3	De Soto County	2
Morgan County	1	Duval County—	
Pueblo County	1	Jacksonville	4
Total	7	Escambia County—	
		Pensacola	5
		Hillsborough County—	
		Tampa	8

TYPHOID FEVER—Continued.

State Reports for April and May, 1920—Continued.

Place.	New cases reported.
Florida (May)—Continued.	
Jefferson County	3
Levy County	1
Madison County	1
Manatee County	4
Marion County	1
Orange County	1
Osceola County	1
Pasco County	2
Polk County	4
Putnam County	1
St. Johns County	1
Taylor County	1
Volusia County	1
Total	45
Massachusetts (May):	
Berkshire County—	
Pittsfield	1
Bristol County—	
Fairhaven (town)	1
Fall River	5
New Bedford	2
Essex County—	
Andover (town)	1
Haverhill	1
Lawrence	6
Lynn	1
Saugus	1
Hampden County—	
Holyoke	1
Springfield	2
Middlesex County—	
Cambridge	1
Everett	1
Somerville	3
Waltham	3
Watertown (town)	1
Norfolk County—	
Braintree (town)	1
Quincy	2
Plymouth County—	
Brockton	1
Plymouth (town)	2
Suffolk County—	
Boston	5
Revere	2
Worcester County—	
Fitchburg	1
Worcester	1
Total	46
Nebraska (May):	
Douglas County	6
Furnas County	1
Harlan County	1
Nemaha County	1
Saunders County	4
Webster County	1
Total	14
New Mexico (May):	
Chaves County	10
Dona Ana County	2
Otero County	1
Taos County	2
Total	15
Oklahoma (May):	
Blaine County	1
Cimarron County	2
Grady County	1
Jefferson County	2
Muskogee County	1
Ottawa County	2
Rogers County	8
Seminole County	1
Total	18
Virginia (April):	
Albemarle County	3
Alexandria County—	
Alexandria	3
Alleghany County	1
Low Moor	2
Augusta County	2
Botetourt County	1
Dickenson County	2
Elizabeth City—	
Hampton	1
Phoebus	2
Fauquier County—	
Upperville	1
Floyd County	1
Hanover County	1
Henrico County—	
Richmond	4
Henry County	1
James City County	1
Loudoun County	5
Montgomery County—	
East Radford	1
Radford	3
Northumberland County	2
Powhatan County	1
Prince Edward County	1
Farmville	1
Rockbridge County	1
Rockingham County	5
Singer Glen	1
Surry County—	
Dendron	3
Sussex County	4
Tazewell County—	
North Tazewell	5
Graham	1
Washington County	1
Bristol	1
Westmoreland County	1
Wise County—	
Inman	1
Total	64
West Virginia (May):	
Brooke County	1
Cabell County	3
Fayette County	3
Greenbrier County	6
Hancock County	2
Harrison County	4
Kanawha County	22
Lewis County	1
Logan County	1
McDowell County	5
Marion County	6
Marshall County	5
Mason County	1
Mercer County	2
Mineral County	2
Monongalia County	1
Ohio County	7
Pendleton County	1
Preston County	18
Raleigh County	2
Randolph County	3
Ritchie County	1
Roane County	1
Taylor County	1
Wetzel County	1
Total	100

TYPHOID FEVER—Continued.

City Reports for Week Ended May 29, 1920.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio	1		Louisville, Ky	2	
Alexandria, Va	3		Lynchburg, Va	1	
Alliance, Ohio	1		Lynn, Mass	1	
Atlanta, Ga	1		Macon, Ga	1	
Auburn, Me	4	1	Manitowoc, Wis	1	
Auburn, N. Y	1		Marion, Ind		1
Baltimore, Md	2		New Orleans, La	3	
Barre, Vt	1		New York, N. Y	6	
Berkeley, Calif	1		Norfolk, Va	2	
Birmingham, Ala	1		Norristown, Pa	1	
Boston, Mass	4		Oakland, Calif	3	
Bridgeport, Conn	1		Omaha, Nebr	1	1
Cadillac, Mich	1		Pasadena, Calif	1	
Charleston, W. Va	1		Paterson, N. J	2	
Chicago, Ill	2		Philadelphia, Pa	13	5
Cincinnati, Ohio	1	1	Pittsburgh, Pa	1	
Cleveland, Ohio	1		Plainfield, N. J	1	
Colorado Springs, Colo	1		Portland, Oreg	1	
Columbia, S. C	1		Providence, R. I	1	
Cumberland, Md	2		Reading, Pa	2	
Dallas, Tex	3		Red Wing, Minn	1	
Denver, Colo	2		Riverside, Calif	1	1
Detroit, Mich	5	2	Sacramento, Calif	2	
Duluth, Minn	6		St. Louis, Mo	5	1
El Paso, Tex	1		Sandusky, Ohio		1
Erie, Pa	1		San Francisco, Calif	2	
Fairmont, W. Va	1		Savannah, Ga	1	
Fall River, Mass	4		Schenectady, N. Y	2	
Fort Wayne, Ind	1	1	Scranton, Pa	1	
Fort Worth, Tex	2		Sharon, Pa	1	
Galveston, Tex	2		Spokane, Wash	1	
Greensboro, N. C		1	Stillwater, Minn	1	
Hammond, Ind	1		Superior, Wis	10	
Huntington, W. Va	2		Tiffin, Ohio	1	
Hutchinson, Kans	1		Toledo, Ohio	1	1
Indianapolis, Ind	3		Washington, D. C		1
Jamestown, N. Y	1		Washington, Pa	1	
Kansas City, Mo		1	Watertown, Mass	1	
Lawrence, Mass	2		Wheeling, W. Va	3	
Logansport, Ind	2	2	Wichita, Kans	1	
Lorain, Ohio	1		Wilmington, Del	1	
Los Angeles, Calif	4		Wilmington, N. C	1	

TYPHUS FEVER.

Cleveland County, N. C.—June 15, 1920.

Under date of June 15, 1920, three cases of typhus fever with two deaths were reported in Cleveland County, N. C.

El Paso, Tex.—June 8, 1920.

On June 8, 1920, two cases of typhus fever were reported in El Paso, Tex.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City Reports for Week Ended May 29, 1920.

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.
Aberdeen, S. Dak.	15,926	9	.....	.....	11	.....	3	.....	.....	.....
Aberdeen, Wash.	21,392	.....	.....	.....	23	.....	.....	.....	.....	.....
Adams, Mass.	14,406	7	.....	.....	.....	.....	.....	.....	.....	2
Akron, Ohio.	93,604	39	6	.....	23	.....	13	.....	6	.....
Alameda, Calif.	28,433	5	1	.....	1	.....	.....	.....	.....	.....
Albany, N. Y.	106,632	.....	1	.....	41	.....	2	.....	8	.....
Alexandria, La.	16,232	.....	1	.....	.....	.....	.....	.....	.....	.....
Alexandria, Va.	17,959	5	.....	.....	1	.....	.....	.....	.....	1
Allentown, Pa.	65,109	.....	2	.....	3	.....	3	.....	3	.....
Alliance, Ohio.	19,581	5	.....	.....	1	.....	4	.....	.....	.....
Alton, Ill.	23,783	7	1	.....	30	.....	.....	.....	.....	.....
Altoona, Pa.	59,712	.....	4	.....	.....	.....	.....	.....	.....	.....
Amesbury, Mass.	10,200	5	1	.....	9	.....	.....	.....	.....	.....
Anaconda, Mont.	10,631	5	.....	.....	10	.....	.....	.....	.....	.....
Ann Harbor, Mich.	15,041	12	4	1	9	.....	2	.....	.....	.....
Anniston, Ala.	14,326	.....	.....	.....	2	.....	.....	.....	.....	.....
Ansonia, Conn.	16,954	4	.....	.....	.....	.....	1	.....	.....	.....
Appleton, Wis.	18,005	.....	.....	.....	49	.....	6	.....	.....	.....
Arlington, Mass.	13,073	7	.....	.....	9	.....	1	.....	1	2
Asbury Park, N. J.	14,629	2	.....	.....	12	.....	.....	.....	.....	.....
Ashtabula, Ohio.	22,008	3	.....	.....	.....	.....	.....	.....	.....	.....
Atlanta, Ga.	196,144	66	1	.....	56	.....	2	.....	.....	8
Attleboro, Mass.	19,776	.....	.....	.....	28	.....	2	1	1	.....
Auburn, Me.	16,607	5	.....	.....	1	.....	.....	.....	.....	.....
Auburn, N. Y.	37,823	10	3	.....	22	.....	2	.....	2	1
Aurora, Ill.	34,795	9	.....	.....	6	.....	7	.....	.....	.....
Austin, Tex.	33,612	26	.....	.....	.....	.....	.....	.....	.....	2
Baltimore, Md.	594,637	212	15	.....	291	5	21	.....	29	31
Bangor, Me.	26,958	.....	1	.....	20	.....	.....	.....	2	.....
Barberton, Ohio.	14,187	4	.....	1	1	.....	4	.....	.....	.....
Barre, Vt.	12,401	.....	.....	.....	7	.....	.....	.....	.....	.....
Baton Rouge, La.	17,544	6	2	.....	.....	.....	.....	.....	.....	.....
Battle Creek, Mich.	30,159	.....	1	1	34	.....	18	.....	.....	.....
Bayonne, N. J.	72,204	.....	.....	.....	76	.....	.....	.....	1	.....
Beatrice, Nebr.	10,437	1	.....	.....	1	.....	.....	.....	.....	.....
Beaumont, Tex.	28,851	5	.....	.....	.....	.....	.....	.....	.....	1
Beaver Falls, Pa.	13,749	.....	.....	.....	8	.....	2	.....	.....	.....
Bedford, Ind.	10,613	2	.....	.....	.....	.....	.....	.....	.....	1
Belleville, Ill.	21,154	.....	.....	.....	8	.....	6	.....	.....	.....
Bellingham, Wash.	34,362	.....	2	.....	4	.....	.....	.....	.....	.....
Beloit, Wis.	18,547	.....	.....	.....	79	.....	3	.....	.....	.....
Benton Harbor, Mich.	11,099	2	.....	1	4	.....	.....	.....	.....	1
Berkeley, Calif.	60,427	10	.....	.....	1	.....	7	.....	.....	1
Berlin, N. H.	13,892	2	.....	.....	.....	.....	.....	.....	.....	.....
Bethlehem, Pa.	14,353	.....	1	.....	11	.....	3	.....	10	.....
Beverly, Mass.	22,128	6	1	.....	1	.....	.....	.....	.....	.....
Billings, Mont.	13,123	7	.....	.....	10	.....	.....	.....	1	1
Binghamton, N. Y.	54,864	13	4	.....	.....	.....	.....	.....	2	.....
Birmingham, Ala.	188,716	44	.....	.....	5	.....	4	1	10	5
Bloomfield, N. J.	19,013	3	1	.....	13	.....	.....	.....	1	.....
Bloomington, Ill.	27,462	7	.....	.....	.....	.....	8	.....	3	.....
Bloomington, Ind.	11,661	1	.....	.....	.....	.....	.....	.....	.....	.....
Bluefield, W. Va.	15,123	.....	.....	.....	3	.....	.....	.....	.....	.....
Boise, Idaho.	35,951	12	.....	.....	5	.....	.....	.....	.....	.....
Boston, Mass.	767,813	217	28	3	253	2	58	.....	63	29
Braddock, Pa.	22,060	.....	1	.....	3	.....	.....	.....	.....	.....
Bradford, Pa.	[1]14,544	.....	.....	.....	1	.....	2	.....	.....	.....
Brazil, Ind.	10,472	3	.....	.....	.....	.....	.....	.....	1	.....
Bridgeport, Conn.	124,724	34	4	.....	2	.....	6	.....	.....	3
Bristol, Conn.	16,318	3	.....	.....	3	1	1	.....	1	.....
Brockton, Mass.	69,152	12	5	.....	2	.....	4	.....	.....	.....
Brookline, Mass.	33,526	6	3	.....	58	1	2	.....	1	.....
Brunswick, Ga.	10,984	5	.....	.....	1	.....	1	.....	.....	2
Buffalo, N. Y.	475,781	125	.....	9	.....	2	.....	.....	.....	5
Burlington, Iowa.	25,144	4	1	.....	12	.....	6	.....	.....	.....
Burlington, Vt.	21,802	6	.....	.....	.....	.....	1	.....	.....	1
Butler, Pa.	28,677	.....	.....	.....	27	.....	.....	.....	.....	.....
Butte, Mont.	44,057	18	.....	.....	1	.....	.....	.....	1	3
Cadillac, Mich.	10,158	3	.....	.....	.....	.....	.....	.....	.....	.....
Cairo, Ill.	15,995	13	.....	.....	.....	.....	.....	.....	.....	4
Cambridge, Mass.	114,293	33	4	.....	69	1	8	.....	6	2
Canton, Ill.	13,674	5	.....	.....	.....	.....	.....	.....	.....	.....

[1] Population Apr. 15, 1910.

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

City Reports for Week Ended May 29, 1920—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.
Canton, Ohio	62,566	25	.....	.....	18	2	5	.....	1	3
Cape Girardeau, Mo.	11,146	1	2	.....	5	.....	.....	.....	.....	.....
Carbondale, Pa.	19,597	.....	.....	.....	2	.....	.....	.....	.....	.....
Carlisle, Pa.	10,795	.....	.....	.....	3	.....	.....	.....	.....	.....
Carnegie, Pa.	11,963	.....	.....	.....	32	.....	.....	.....	1	.....
Cedar Rapids, Iowa	38,033	.....	.....	.....	.....	.....	4	.....	.....	.....
Centralia, Ill.	11,838	3	.....	.....	11	.....	.....	.....	.....	.....
Chambersburg, Pa.	12,475	.....	.....	.....	4	.....	1	.....	.....	.....
Charleston, S. C.	61,041	30	2	.....	.....	.....	.....	.....	.....	2
Charleston, W. Va.	31,060	.....	.....	.....	1	.....	1	.....	.....	.....
Charlotte, N. C.	40,759	15	.....	.....	1	.....	.....	.....	1	3
Chelsea, Mass.	46,405	5	2	.....	27	.....	1	.....	4	.....
Chester, Pa.	41,857	.....	.....	.....	32	.....	1	.....	2	.....
Cheyenne, Wyo.	[1]11,320	4	.....	.....	.....	.....	1	.....	2	2
Chicago, Ill.	2,547,201	600	125	11	385	1	153	4	233	46
Chicopee, Mass.	29,950	5	.....	.....	1	.....	.....	.....	2	.....
Chillicothe, Ohio.	15,625	3	.....	.....	2	.....	.....	.....	.....	.....
Cincinnati, Ohio.	414,248	131	8	.....	94	3	58	.....	26	21
Cleveland, Ohio.	692,259	186	14	1	86	.....	32	.....	36	15
Clinton, Iowa.	27,678	.....	.....	.....	3	.....	.....	.....	.....	.....
Clinton, Mass.	[1]13,075	2	.....	.....	1	.....	.....	.....	1	.....
Coatesville, Pa.	14,998	.....	.....	.....	5	.....	.....	.....	.....	.....
Coffeyville, Kans.	18,331	4	3	.....	2	.....	1	.....	.....	1
Cohoes, N. Y.	25,292	6	.....	.....	2	.....	.....	.....	.....	1
Colorado Springs, Colo.	38,965	14	.....	.....	5	.....	.....	.....	3	5
Columbus, Ohio.	220,135	58	2	.....	68	.....	10	.....	4	6
Concord, N. H.	22,858	12	.....	.....	87	.....	.....	.....	.....	.....
Connellsville, Pa.	15,876	.....	.....	.....	1	.....	.....	.....	.....	.....
Corpus Christi, Tex.	10,789	3	.....	.....	.....	.....	.....	.....	1	1
Coshocton, Ohio.	11,887	.....	.....	.....	2	.....	.....	.....	.....	.....
Council Bluffs, Iowa.	31,838	7	.....	.....	6	1	6	.....	.....	.....
Covington, Ky.	59,623	15	.....	.....	8	.....	7	.....	1	2
Cranston, R. I.	26,773	4	3	.....	.....	.....	.....	.....	.....	3
Cumberland, Md.	26,686	7	1	.....	.....	.....	.....	.....	2	2
Dallas, Tex.	129,738	39	.....	.....	30	.....	3	.....	4	3
Danville, Ill.	32,969	16	.....	.....	3	.....	2	1	.....	4
Davenport, Iowa.	49,618	.....	.....	.....	17	.....	.....	.....	.....	.....
Dayton, Ohio.	128,939	39	1	.....	12	.....	2	.....	2	.....
Decatur, Ill.	41,483	12	.....	.....	2	.....	.....	.....	.....	2
Denver, Colo.	268,439	78	7	.....	182	2	5	1	.....	13
Des Moines, Iowa.	104,052	.....	2	.....	13	.....	5	.....	.....	.....
Detroit, Mich.	619,648	244	84	7	116	2	79	1	62	30
Dover, N. H.	13,276	8	.....	.....	11	.....	.....	.....	.....	1
Du Bois, Pa.	14,994	.....	1	.....	1	.....	1	.....	.....	.....
Dubuque, Iowa.	40,096	.....	1	.....	44	.....	5	.....	.....	.....
Duluth, Minn.	97,077	24	1	.....	4	.....	.....	.....	3	3
Durham, N. C.	26,160	6	.....	.....	1	.....	1	.....	1	3
East Chicago, Ind.	30,286	10	.....	.....	.....	.....	.....	.....	.....	.....
Easthampton, Mass.	10,656	.....	.....	.....	15	.....	1	.....	1	.....
Easton, Pa.	30,854	.....	.....	.....	32	.....	1	.....	.....	.....
East Orange, N. J.	43,761	8	1	.....	85	.....	1	.....	1	.....
East St. Louis, Ill.	77,312	13	.....	.....	2	.....	1	.....	2	.....
Eau Claire, Wis.	18,887	.....	.....	.....	9	.....	3	.....	.....	.....
Elgin, Ill.	28,562	7	.....	.....	33	.....	.....	.....	.....	1
Elizabeth, N. J.	88,830	18	3	.....	39	.....	.....	.....	1	4
Elkhart, Ind.	22,273	11	1	.....	1	.....	10	.....	2	.....
Elmira, N. Y.	38,272	13	.....	.....	28	.....	.....	.....	1	1
El Paso, Tex.	69,149	47	2	.....	.....	2	.....	.....	.....	10
Elwood, Ind.	[1]11,028	5	.....	.....	.....	.....	.....	.....	.....	.....
Englewood, N. J.	12,603	2	.....	.....	8	.....	1	.....	1	1
Erie, Pa.	76,592	.....	8	.....	84	.....	25	.....	1	.....
Eureka, Calif.	15,142	5	.....	.....	.....	.....	.....	.....	3	1
Evanston, Ill.	29,304	15	.....	.....	3	.....	2	.....	.....	.....
Everett, Mass.	40,160	4	3	.....	5	1	2	.....	3	1
Everett, Wash.	37,205	.....	.....	.....	38	.....	.....	.....	1	.....
Fairmount, W. Va.	16,111	.....	.....	.....	.....	.....	3	.....	.....	.....
Fall River, Mass.	129,828	21	2	.....	11	.....	5	.....	5	.....
Fargo, N. Dak.	17,872	7	.....	.....	8	.....	.....	.....	.....	.....
Farrell, Pa.	[1]10,190	.....	1	.....	4	.....	.....	.....	.....	.....
Findlay, Ohio.	[1]14,858	4	.....	.....	32	.....	.....	.....	1	.....

[1] Population Apr. 15, 1910.

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

City Reports for Week Ended May 29, 1920—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.
Fond du Lac, Wis	21,486		1		3					
Fort Dodge, Iowa	21,039	1								
Fort Scott, Kans	10,564	5			2					
Fort Smith, Ark	29,390				4		2			
Fort Wayne, Ind	78,014	17	6		172		9			2
Fort Worth, Tex	109,597	14			4				3	
Fostoria, Ohio	10,959	2					1		2	
Framingham, Mass	14,149	3			5	1	3			
Fremont, Nebr	10,080	3								
Fremont, Ohio	11,034	4			13		4			
Fresno, Calif	36,314	11			4		5			1
Galesburg, Ill	24,629	6								1
Galveston, Tex	42,650	9								
Gary, Ind	56,000	16	1	1	7		3			
Geneva, N. Y	13,915	5			7					
Glens Falls, N. Y	17,160	3								1
Gloucester City, N. J	11,375				16					
Grand Rapids, Mich	132,861	52	7		176		1		5	1
Great Falls, Mont	[1] 13,948	9	2		2		7			
Greely, Colo	11,942	2								
Green Bay, Wis	30,017				2		3			
Greenfield, Mass	12,251	6	1	1	24		1		2	
Greensboro, N. C	20,171	11								
Greensburgh, Pa	13,881						4			
Greenwich, Conn	19,594	6	2		5					1
Hackensack, N. J	17,412	7			17				1	
Hammond, Ind	27,016	12	3	1	3		4			
Harrisburg, Pa	73,276		2		3		4			
Harrison, N. J	17,345		1		22		2			
Hartford, Conn	112,851	36	12	2	35		1		1	1
Haverhill, Mass	49,180	23	4		59	2	1		2	
Hazelton, Pa	28,981				7		1			
Highland Park, Mich	33,859	13	9		4		1		1	1
Hoboken, N. J	78,324	19	1		1		1		3	4
Holland, Mich	13,459	4			41		2		2	1
Holyoke, Mass	66,503	9			11		2		1	1
Hot Springs, Ark	17,690	8								
Hudson, N. Y	12,808	2								
Huntington, Ind	10,982	7	2	1	4		3		1	
Huntington, W. Va	47,686	18			4		3			2
Hutchinson, Kans	21,461				14					
Independence, Mo	11,964	4								
Indianapolis, Ind	283,622	96	4		488	2	17	1	4	9
Iowa City, Iowa	11,626		2		4		1			
Ironton, Ohio	14,079	8			15				1	
Irvington, N. J	16,710				11		1			
Ishpeming, Mich	[1] 12,448	4					1			
Ithaca, N. Y	16,017	4			2		1		1	
Jacksonville, Ill	15,506	7	1		4					1
Jamestown, N. Y	37,431	8	2		13					
Janesville, Wis	14,411				21		3			
Jefferson City, Mo	13,712	4								
Jersey City, N. J	312,557		16		42		6		12	
Johnstown, Pa	70,437		1		3		2			
Joplin, Mo	33,409				2					
Kalamazoo, Mich	50,408	23			132		7	2	3	2
Kankakee, Ill	14,270	5			2		2			1
Kansas City, Kans	102,096		1		45		5		1	
Kansas City, Mo	305,816	81	5	2	16		2	1	3	3
Kearny, N. J	24,325	5	3		41		1		2	
Keene, N. H	10,725	7					2		15	3
Kenosha, Wis	32,323				9		3		1	
Kewanee, Ill	13,607						3			
Knoxville, Tenn	59,112				4		1		4	4
Kokomo, Ind	21,929	8			12				1	1
Lackawanna, N. Y	16,219	2	1							
La Crosse, Wis	31,333		2		29					
La Fayette, Ind	21,481	6			9		2			
Lake Charles, La	14,990	4								1
Lancaster, Ohio	16,086	3					11			

[1] Population Apr. 15, 1910.

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

City Reports for Week Ended May 29, 1920—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.
Lancaster, Pa.	51,437		9		24				4	
Lawrence, Kans.	13,477	2			5					1
Lawrence, Mass.	102,923	14	6		48		4		5	
Leavenworth, Kans.	[1] 19,363	8					1			
Lebanon, Pa.	20,947		1				6		1	
Leominster, Mass.	21,365	5								1
Lexington, Ky.	41,997	14			1					1
Lima, Ohio.	37,145	9			22				1	1
Lincoln, Nebr.	46,957	14	1		9					
Lockport, N. Y.	20,028	3					1			
Logansport, Ind.	21,338	8			2		1			
Long Beach, Calif.	29,163	11	1		23		1			
Long Branch, N. J.	15,733	5								1
Lorain, Ohio.	38,266				3		2		2	1
Los Angeles, Calif.	535,485	159	52	1	172		14		88	22
Louisville, Ky.	240,808	63	5		30		7		10	4
Lowell, Mass.	114,366	24	4	2	25	1	5		2	
Lynchburg, Va.	33,497	10			21				1	1
Lynn, Mass.	104,534	22	4		8		11	1	4	
McKeesport, Pa.	48,299				5				4	
McKees Rocks, Pa.	20,795		2		6					
Macon, Ga.	46,099				5		1		1	
Madison, Wis.	31,315				9					
Mahanoy City, Pa.	17,709		1							
Malden, Mass.	52,243	10	1		24		2		2	
Manchester, Conn.	15,859	2			7		1			
Manchester, N. H.	79,607	30	2		21			1	6	3
Manitowoc, Wis.	13,931		1				7			
Mankato, Minn.	[1] 10,365	4			2					1
Marinette, Wis.	[1] 14,610		1		3					
Marion, Ind.	19,923	11	2		2					
Marion, Ohio.	24,129				5					
Marquette, Mich.	12,555	6			40					
Marshalltown, Iowa.	14,519				1					
Martinsburg, W. Va.	12,984				3					
Mattoon, Ill.	12,764				3					
Meadville, Pa.	13,968				34		1			
Medford, Mass.	26,681	6	1		18		2			1
Melrose, Mass.	17,724	8			9					
Memphis, Tenn.	151,877	55			3		10		14	2
Meriden, Conn.	[1] 29,431				8		4		1	
Methuen, Mass.	14,320	7	3		13					1
Middletown, N. Y.	15,890						2		1	
Middletown, Ohio.	16,384	6			4		4		3	1
Milwaukee, Wis.	445,008	114	12	1	627	3	31		21	7
Minneapolis, Minn.	373,448	95	12	1	147	2	16		24	10
Mishawaka, Ind.	17,083	2	1		1		1			
Missoula, Mont.	19,075	8			9					1
Mobile, Ala.	59,201	19	2							2
Monessen, Pa.	23,070		1				1		1	
Monmouth, Ill.	10,346	1					3			
Montclair, N. J.	27,087	8	2		8		1		1	
Montgomery, Ala.	44,039	21	1				1		3	2
Morgantown, W. Va.	14,444	1			5		1			
Morristown, N. J.	13,410	8			1		2			
Moundsville, W. Va.	11,513	2			4					
Mount Carmel, Pa.	20,709		1							
Mount Vernon, N. Y.	37,991	14	1		16					1
Muncie, Ind.	25,653	5	2		2		2		2	
Muscatine, Iowa.	17,713	2								1
Muskogee, Okla.	47,173	7			14					1
Nanticoke, Pa.	23,811				5		1			
Nashville, Tenn.	118,136	43							5	5
Newark, N. J.	418,789	95	11		249	4	14		37	7
New Bedford, Mass.	121,622	23	5		3		18		12	2
New Britain, Conn.	55,385	16	3	1	8		7	4		
New Brunswick, N. J.	25,855								1	
Newburgh, N. Y.	29,893	12			3		4		3	
Newburyport, Mass.	15,291	4			14					
New Castle, Ind.	14,144	4							1	1

[1] Population Apr. 15, 1910.

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

City Reports for Week Ended May 29, 1920—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.
New Castle, Pa	41,915				2		3			
New Haven, Conn	152,275	35	5		27		10	2	10	2
New London, Conn	21,199				9				2	
New Orleans, La	377,010	108	5		6		2		36	12
Newton, Mass	44,343	15	1		142		4		3	
New York, N. Y	5,757,492	1,261	362	21	743	17	140	3	205	123
Niagara Falls, N. Y	38,466	13	2	2	16		10	1	1	
Norfolk, Va	91,148		1		17				4	2
Norristown, Pa	31,969		2		2		2			
North Adams, Mass	[1] 22,019	1			6				1	
Northampton, Mass	20,006	8			5					
North Attleboro, Mass	11,248	2								
North Braddock, Pa	15,684				3		1			
North Tonawanda, N. Y	14,060	6								
Norwalk, Conn	27,332	8			1		1		3	2
Norwood, Ohio	23,269	5			3		1			1
Oakland, Calif	208,405	43	2	1	1		13			10
Oak Park, Ill	27,816	5	1		8		2			
Ogdensburg, N. Y	16,845	5								
Oil City, Pa	20,162				2		7		1	
Oklahoma City, Okla	97,588	18			4	1	2		2	1
Olean, N. Y	16,927	8				2				
Omaha, Nebr	177,777	41	1		46		5			2
Orange, N. J	33,636	13	3	1	15				1	
Oshkosh, Wis	36,549				2					
Paducah, Ky	25,178				2		2			
Parkersburg, W. Va	21,059	4			11					
Parsons, Kans	15,952				2		2			
Pasadena, Calif	49,620	12			28		1		1	
Passaic, N. J	74,478	13	6	2	34	1	2		2	
Paterson, N. J	140,512	3	3		179					
Pawtucket, R. I	60,666	19								1
Peekskill, N. Y	19,034	3								
Pekin, Ill	10,973				1					
Peoria, Ill	72,184	23	3		38		7			2
Perth Amboy, N. J	42,646	9	1		17					
Petersburg, Va	25,817	9			4		1		2	2
Philadelphia, Pa	1,735,514	467	61	8	465	7	73		74	53
Phillipsburg, N. J	15,879	4								
Piqua, Ohio	14,275	6			1		1		1	
Pittsburgh, Pa	585,196		24		587		31		22	
Pittsfield, Mass	39,678	8	1		7				4	
Plainfield, N. J	24,330	7			22					
Plattsburg, N. Y	13,111	6								1
Plymouth, Mass	14,001	7				2				1
Pontiac, Mich	18,006	15	1		1		1		2	1
Port Chester, N. Y	16,727	2			1		2			
Port Huron, Mich	[1] 18,863	4	1							
Portland, Me	64,720	16			9		7			
Portland, Oreg	308,399	53	5		112		3		10	4
Portsmouth, N. H	11,730				24				1	
Pottstown, Pa	16,987				4					
Pottsville, Pa	22,717		1						3	
Poughkeepsie, N. Y	30,786	5	1		25		4		3	1
Providence, R. I	259,895	55	7	2	58	2	15			6
Pueblo, Colo	56,084	10			48				1	
Quincy, Ill	36,832	8					1			
Quincy, Mass	39,022	9	3		10		1		1	
Racine, Wis	47,465				56		10		2	
Rahway, N. J	10,361	2			14		2			
Raleigh, N. C	20,274	8			31		1			2
Reading, Pa	111,607		1		2				1	
Redlands, Calif	14,573	4								
Reno, Nev	15,514	4			5					
Richmond, Ind	25,080	8	1							1
Richmond, Va	158,702	53	2		166		2		17	6
Riverside, Calif	20,496	9	3		3					
Roanoke, Va	46,282	14					6			
Rochester, N. Y	264,714	85	27	1	31	1	11	1	8	4
Rockford, Ill	56,739	12			17		6			1

[1] Population Apr. 15, 1910.

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

City Reports for Week Ended May 29, 1920—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.
Rock Island, Ill	29,452	5			53		1			1
Rocky Mount, N. C	12,673	4								
Rome, Ga	15,607	1	3	1	1					
Rome, N. Y	24,259				23		3			
Rutland, Vt	15,038	3			21		1			
Sacramento, Calif	68,984	23	2		14				2	
St. Cloud, Minn	12,013		1		6					
St. Joseph, Mo	86,498	30	4	1	6	1	1			2
St. Louis, Mo	768,650	177	52	2	231	2	32	1	35	10
St. Paul, Minn	252,465	62	8		113	2	11		4	9
Salem, Mass	49,346	16	2		23		2		3	3
Salt Lake City, Utah	121,623	35	4		28		2			4
San Angelo, Tex	[1] 10,321	5								2
San Diego, Calif	56,412	25	1		1		1		4	1
Sandusky, Ohio	20,226	11			14					
Sanford, Me	11,217	2							1	
San Francisco, Calif	471,023	136	14	2	10		21		33	13
Santa Barbara, Calif	15,360	6								
Santa Cruz, Calif	15,150	2			3					
Saratoga Springs, N. Y	13,839	2							1	
Sault Ste. Marie, Mich	14,130	5			1		2		1	
Savannah, Ga	69,250	28	1		9		2		1	1
Schenectady, N. Y	103,774	17			96	1	1			
Scranton, Pa	149,541		2		31		2		7	
Seattle, Wash	366,445		10		66		24			
Shamokin, Pa	21,274				2		1			
Sharon, Pa	19,156		2		18					
Sheboygan, Wis	28,907		2		43		6			
Sioux City, Iowa	58,568						4			
Sioux Falls, S. Dak	16,887	6			12		4			
Somerville, Mass	88,618	21			43		4		2	3
South Bend, Ind	70,967	11			9		8		3	
Southbridge, Mass	14,465	1			3					
Spokane, Wash	157,656				79		2			
Springfield, Ill	62,623	24	2	1	22		7			
Springfield, Mass	108,668	26	2		71	1	5		4	2
Springfield, Mo	41,169	5								
Springfield, Ohio	52,296	12	1	1	31		8		5	1
Staunton, Va	11,823	5	1							1
Steelton, Pa	15,759								1	
Steubenville, Ohio	28,259	8			4		2			
Stockton, Calif	36,209	14								1
Sunbury, Pa	16,661		2		13		4			
Superior, Wis	47,167	7					1		5	
Syracuse, N. Y	158,559	54	3		184	1	12		4	2
Taunton, Mass	36,610	15	1				1			2
Terre Haute, Ind	67,361	19			23		6			1
Tiffin, Ohio	12,962	4			1					
Toledo, Ohio	202,010	54	2		16		6	1	4	4
Topeka, Kans	49,538	14			66		6		1	
Traverse City, Mich	14,090	7								
Troy, N. Y	78,094	23					1		3	1
Tucson, Ariz	17,324	21								
Tuscaloosa, Ala	10,824				1					
Uniontown, Pa	21,600				15		1			
Vallejo, Cal	13,803		1							
Vancouver, Wash	13,805				3		6			
Vicksburg, Miss	23,179				5					
Virginia, Minn	15,954				8					
Wakefield, Mass	12,947	5	2							
Walla Walla, Wash	26,067				6		4			
Waltham, Mass	31,011	7	2		41		1		2	
Warren, Pa	15,083						1			
Washington, D. C	369,282	99	7		13		21		33	12
Washington, Pa	22,076		1		2				14	
Waterbury, Conn	89,201		6	1	5		12	2	2	1
Watertown, Mass	15,188	3			10		4		2	
Watertown, N. Y	30,404		1		1		2			
Wausau, Wis	19,666	7			5		4			
Webster, Mass	13,484	4			4					2

[1] Population Apr. 15, 1910.

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

City Reports for Week Ended May 29, 1920—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.
West Chester, Pa	13,403	.....	5	.....	18	.....	.....	.....	.....	.....
Westfield, Mass	18,769	4	.....	.....	.....	.....	.....	.....	2	.....
West Hoboken, N. J	44,386	5	2	.....	10	.....	.....	.....	1	1
West New York, N. J	19,613	11	1	.....	2	.....	1	.....	1	2
West Orange, N. J	13,964	1	3	.....	20	.....	1	.....	2	.....
Wheeling, W. Va	43,657	13	1	.....	44	.....	2	.....	.....	2
White Plains, N. Y	23,331	5	.....	.....	16	.....	2	.....	2	.....
Wichita, Kans	73,597	30	2	.....	3	.....	.....	.....	2	1
Wilkes-Barre, Pa	78,334	.....	2	.....	4	.....	5	.....	2	.....
Wilkinsburg, Pa	23,899	.....	.....	.....	9	.....	2	.....	1	.....
Williamsport, Pa	34,123	.....	4	.....	64	.....	.....	.....	.....	.....
Willimantic, Conn	12,902	4	.....	.....	.....	.....	.....	.....	.....	.....
Wilmington, Del	95,369	41	1	1	11	.....	16	1	.....	7
Wilmington, N. C	30,400	11	.....	.....	.....	.....	.....	.....	1	1
Winchester, Mass	10,812	1	.....	.....	17	.....	1	.....	.....	.....
Winona, Minn	[1] 18,583	.....	.....	.....	1	.....	2	.....	1	.....
Winston-Salem, N. C	33,136	16	.....	.....	6	1	2	.....	9	3
Winthrop, Mass	13,105	.....	1	.....	10	.....	.....	.....	.....	.....
Woburn, Mass	16,076	4	.....	.....	.....	.....	.....	.....	.....	.....
Worcester, Mass	166,106	68	5	1	9	.....	17	1	2	6
Yakima, Wash	22,058	.....	.....	.....	41	.....	5	.....	.....	.....
Yonkers, N. Y	103,066	21	2	1	23	.....	.....	.....	14	2
York, Pa	52,770	.....	5	.....	.....	.....	16	.....	.....	.....
Zanesville, Ohio	31,320	8	1	.....	2	.....	1	.....	.....	.....

[1] Population Apr. 15, 1910.

FOREIGN AND INSULAR.

CHINA.

Cholera—Province of Sze-chuen.

Information was received under date of June 11, 1920, of the presence of cholera in the Province of Sze-chuen, China.

CUBA.

Communicable Diseases—Habana.

Communicable diseases have been notified at Habana as follows:

Disease.	May 11-20, 1920.		Remaining under treatment May 20, 1920.	Disease.	May 11-20, 1920.		Remaining under treatment May 20, 1920.
	New cases.	Deaths.			New cases.	Deaths.	
Cerebrospinal meningitis	7	.....	[1] 5	Malaria	6	.....	[2] 21
Chicken pox	.....	.....	13	Measles	26	2	86
Diphtheria	2	.....	5	Scarlet fever	6	.....	15
Leprosy	.....	.....	10	Typhoid fever	12	3	[3] 44

[1] From abroad, 4. [2] From the interior, 9; from abroad, 1. [3] From the interior, 21.

Quarantine Against Arrivals From Vera Cruz, Mexico.

Under date of June 1, 1920, quarantine measures were ordered to be enforced at Habana, Cuba, against arrivals from Vera Cruz, Mexico, to prevent the importation of plague. Vessels sailing from Vera Cruz for Cuba were made subject to the following regulations:

A. Vessels and their cargo will be deratized in the open bay before leaving, by any of the methods used by the quarantine service of Cuba, preference being given to the use of hydrocyanic acid.

B. The cargo carried in said vessels must be found disposed in such a manner as to permit efficient deratization.

C. Vessels that have not complied with this requirement at the port of departure shall be deratized by the quarantine service of Cuba either at the port at which they arrive or at the quarantine station to which they shall be ordered.

D. The operations of loading and unloading in Cuban ports of vessels from Vera Cruz shall be done in open bay and by daylight only, all smaller vessels removing from the side of said vessels when their operations are terminated.

E. Passengers carried to Cuba on said vessels shall be detained in quarantine for observation during a period of seven days.

F. Passengers in transit and crews shall be disembarked at the quarantine station if it is judged convenient to do so for the efficacy of the deratization of the vessel and its cargo.

G. Soiled clothing of persons coming from Vera Cruz will be fumigated by the disinfecting plant of the quarantine service.

Ports in Cuba Closed Against Vera Cruz.

According to information dated June 8, 1920, all ports of the Republic of Cuba except Habana are closed against arrivals from Vera Cruz, Mexico.

INDIA.

Mortality—April-June, 1919.

The Abstract of Vital Statistics for British India for the quarter ended June 30, 1919, gives the following figures relative to general mortality and mortality from certain diseases registered in the towns and districts of the Provinces of British India. Similar statistics for the quarter ended March 31, 1919, were published in Public Health Reports, May 7, 1920, page 1134.

Assam.—In 24 towns, having an aggregate population of 140,699, 1,067 deaths were reported (annual rate, 30.3 per 1,000). In districts having a population of 6,105,631, 79,288 deaths were reported (annual rate, 51.9 per 1,000). Mortality for the corresponding period of the year 1918 was, for towns, 806, and for districts 39,874. The principal causes of death were:

	Towns.	Districts.		Towns.	Districts.
Cholera	144	18,551	Fevers (not specified)	210	35,179
Smallpox	3	653	Respiratory diseases	185	9,870

Bengal Presidency.—In 72 towns having an aggregate population of 2,618,159, there were registered 22,458 deaths (annual rate per 1,000, 34.3). In districts 353,695 deaths (annual rate, 33.1 per 1,000). The corresponding figures for the second quarter of 1918 were 15,525 and 305,764, respectively, and for the preceding quarter, 26,083 and 480,202, respectively. The principal causes of death were: Towns—Cholera, 4,672 against 2,016 in 1918; smallpox, 2,159 against 479 in 1918; fevers (not specified), 5,751 against 4,323 in 1918; and respiratory diseases, 2,999 against 2,002 in 1918. Districts—Cholera, 47,962 against 25,461 in 1918; smallpox, 17,795 against 4,128 in 1918; fevers (not specified), 244,644 against 224,795 in 1918; and respiratory diseases, 1,171 against 1,037 in 1918.

Bihar and Orissa.—In 56 towns having an aggregate population of 1,194,785, there were registered 8,769 deaths (annual rate, 29.3 per 1,000), against 8,889 in the preceding quarter. In districts,

having a population of 33,295,061, 295,482 deaths were registered (annual rate, 35.5 per 1,000) against 353,178 in the preceding quarter. The principal causes of death were:

	Towns.	Districts.		Towns.	Districts.
Cholera	942	49,298	Plague	202	3,225
Dysentery and diarrhea	668	8,621	Fevers (not specified)	4,033	183,505
Smallpox	335	3,932	Respiratory diseases	225	1,765

There was a considerable rise in mortality from cholera and smallpox during the quarter, the figures for the preceding quarter being, respectively, 574 and 9,222 for cholera,[1] and 105 and 1,726 for smallpox.[1]

Bombay Presidency.—In 57 towns, having an aggregate population of 1,992,464, there were registered 22,390 deaths (annual rate, 45 per 1,000), of which number 16,130 were registered in Bombay City. In the districts, having an aggregate population of 16,723,883, there were registered 109,657 deaths (annual rate, 26.2 per 1,000). The principal causes of death were:

	Bombay City.	Other towns.	Districts.		Bombay City.	Other towns.	Districts.
Cholera	107	639	14,287	Fevers (not specified)	1,526	2,334	52,517
Smallpox	392	138	1,447	Dysentery and diarrhea	1,087	318	5,651
Plague	338	174	338	Respiratory diseases	6,533	738	11,117

Burma.—In 62 towns, having an aggregate population of 1,134,948, 12,381 deaths were registered (annual rate, 43.6 per 1,000). In districts there were registered 53,828 deaths, equal to an annual death rate of 24.7 per 1,000. The principal causes of death were:

	Towns.	Districts.		Towns.	Districts.
Cholera	659	3,374	Fevers (not specified)	2,155	21,350
Smallpox	895	963	Dysentery and diarrhea	957	2,820
Plague	441	222	Respiratory diseases	1,803	768

Central Provinces.—In 110 towns, having an aggregate population of 1,277,721, there were registered 12,661 deaths (annual rate, 39.6 per 1,000) against 11,446 in the preceding quarter and 11,081 in 1918. In the districts, having a population of 12,638,587, there were registered 137,447 deaths (annual rate, 43.5 per 1,000) against 123,901 in the preceding quarter and 111,559 in 1918. The main feature of the quarter was the severe epidemic of cholera. The month of June was the month of maximum intensity. The mortality from smallpox fell considerably in June. The principal causes of death were:

[1] Public Health Reports, May 7, 1920, p. 1134.

	Towns.		Districts.	
	1918	1919	1918	1919
Cholera	35	1,832	491	31,092
Smallpox	158	550	638	3,168
Plague	152	94	302	296
Fevers (not specified)	3,779	4,184	61,774	60,844
Respiratory diseases	1,645	1,309	10,095	7,590

Coorg.—In Coorg, the smallest of the Provinces of British India, 2,051 deaths were registered during the period under report (annual rate, 46.9 per 1,000) against 1,012 in the preceding quarter. June was the month of maximum mortality. During this month the number of deaths recorded as from fevers exceeded the number recorded during the whole of the preceding quarter under that head. The principal causes of death during the quarter were: Cholera, 104; smallpox, 272; fevers (not specified), 1,382.

Delhi.—In Delhi City, having a population of 225,471, there were registered 3,135 deaths (annual rate, 55.6 per 1,000) against 2,227 in the preceding quarter and 3,908 in the second quarter of 1918. In Delhi district, 1,839 deaths (annual rate, 38.4 per 1,000) were registered, against 1,350 in the preceding quarter and 2,179 in the second quarter of 1918. (Population of the district, 191,185.) The principal causes of death were:

	City.	District.		City.	District.
Smallpox	3	27	Fevers (not specified)	1,963	1,414
Cholera	1	6	Respiratory diseases	775	287

An epidemic of relapsing fever was associated with the high mortality from fevers during the months of May and June.

Madras Presidency.—In 73 towns, having an aggregate population of 2,783,373, there were registered 23,292 deaths (annual rate, 33.4 per 1,000), against 30,031 in the preceding quarter and 24,355 in the second quarter of 1918. In districts having a population of 37,263,178, 185,137 deaths (annual rate, 19.8 per 1,000) were registered, against 248,564 in the preceding quarter and 219,207 in 1918. The principal causes of death were:

	Towns.		Districts.	
	1918	1919	1918	1919
Cholera	1,121	856	21,725	12,029
Dysentery and diarrhea	3,466	2,849	13,742	12,274
Smallpox	1,889	1,598	15,106	10,706
Plague	118	19	607	151
Fevers (not specified)	2,774	3,846	64,134	68,028
Respiratory diseases	2,228	2,307	10,545	8,005

Northwest Frontier Province.—In 13 towns and areas of notification, having an aggregate population of 191,245, there were registered 1,930 deaths (annual rate, 40.3 per 1,000), against 1,316 in the preceding quarter and 1,481 in the corresponding quarter of 1918. In the districts, with a population of 1,849,832, there were registered 10,536 deaths (annual rate, 22.7 per 1,000), against 14,194 in the preceding quarter and 10,104 in the same quarter of 1918. The principal causes of death were:

	Towns.	Districts.		Towns.	Districts.
Cholera	394	1,266	Fevers (not specified)	883	7,530
Smallpox	56	224	Respiratory diseases	158	85

Punjab.—In 17 towns, having an aggregate population of 899,275, there were registered 8,530 deaths (annual rate, 37.9 per 1,000) against 6,543 in the preceding quarter and 11,575 in 1918. In districts, having a population of 18,437,871, there were registered 121,870 deaths (annual rate, 26.4), against 123,059 in the preceding quarter and 188,344 in 1918. The principal causes of death were:

	Towns.		Districts.	
	1918	1919	1918	1919
Cholera	6	43	61	1,697
Smallpox	35	223	599	6,044
Plague	3,154	255	54,583	7,710
Fevers (not specified)	3,959	3,901	93,202	76,160
Respiratory diseases	1,872	1,558	10,186	7,941

The increase as compared with the preceding quarter was stated to be due to a sharp rise in the deaths from fevers in June.

United Provinces.—In 83 towns, having an aggregate population of 2,872,132, there were registered 33,226 deaths (annual rate, 46.2 per 1,000), as compared with 52,434 in 1918. In the districts, having a population of 43,948,424, there were registered 397,385 deaths (annual rate, 36.1 per 1,000), against 663,059 in 1918. The principal causes of death were:

	Towns.		Districts.	
	1918	1919	1918	1919
Cholera	881	1,242	55,784	42,752
Smallpox	213	1,833	700	4,171
Fevers (not specified)	22,944	16,236	500,347	295,440
Plague	4,002	274	33,959	4,650
Dysentery and diarrhœa	3,706	2,270	3,543	1,740
Respiratory diseases	4,304	3,349	2,578	1,739

JAPAN.

Cholera.

Information dated June 14, 1920, shows the presence of cholera in Japan.

MEXICO.

Further Relative to Plague—Vera Cruz.

From April 25 to June 15, 1920, 30 cases of plague with 23 fatalities were notified at Vera Cruz, Mexico.

Plague—Tampico.

Information was received under date of June 14, 1920, of the occurrence of a fatal case of plague at Tampico, Mexico.

PERU.

Plague—Summary, 1919.

During the year 1919 there were notified in Peru 654 cases of plague, of which 340 ended fatally. The following tables show the distribution of cases and deaths according to months and departments:

Distribution according to months.

Month.	Cases.	Deaths.	Month.	Cases.	Deaths.
January	111	59	August	24	7
February	99	53	September	36	19
March	95	48	October	23	11
April	78	46	November	48	28
May	29	17	December	77	35
June	22	14			
July	12	3	Total	654	340

Distribution according to departments.

Department.	Cases.	Deaths.	Department.	Cases.	Deaths.
Ancachs	16	.....	Lima	204	113
Arequipa	47	27	Moquegua	1	.....
Cajamarca	12	9	Piura	128	66
Callao	10	4			
Lambayeque	25	18	Total	654	340
Libertad	211	103			

At the beginning of the year 1919 there remained under treatment from the preceding year 52 cases of plague; at the close of the year 1919, 36 cases remained under treatment, 275 had been discharged cured, and in 55 cases the final results were not recorded.

INFLUENZA.

The following information was taken from reports received during the week ended June 18, 1920:

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria:				
Departments—				
Algiers	May 1-10	3		
Constantine	Apr. 2-30	3		
Oran	May 1-10	2		
Bolivia:				
La Paz	Apr. 18-24	8		
Canada:				
Manitoba—				
Winnipeg	May 16-22	1	2	
Ontario—				
Toronto	May 23-29		2	Acute primary pneumonia, 30 deaths.
Quebec—				
Quebec	Apr. 23-29	2		From vessel; at Grosse Isle Quarantine.
Ceylon:				
Colombo	Apr. 11-17		6	
China:				
Antung	Apr. 19-25	3		
Czecho-Slovakia				Jan. 4-31, 1920: Cases, 3,652; deaths, 248.
Bosnia-Herzegovina	Jan. 4-31	1,195	111	
Croatia-Slavonia	do	302	11	
Dalmatia	do	12		
Montenegro	do	282	1	
Serbia	do	1,827	125	
Vaivodine (Wallachia and Moldavia).	do	34		
Czecho-Slovakia				Feb. 1-7, 1920: Cases, 2,426; deaths, 134.
Bosnia-Herzegovina	Feb. 1-7	540	32	
Croatia-Slavonia	do	203	7	
Dalmatia	do	242	11	
Montenegro	do	95	2	
Serbia	do	1,104	70	
Slovenia	do	242	11	
Vaivodine (Wallachia and Moldavia).	do		1	
Denmark:				
Aarhus	Apr. 19-May 8			Present.
Copenhagen	May 2-8	111	4	
Great Britain:				
Scotland	May 2-22		19	With complications, 112; in 16 principal towns, population 2,416,900.[1]
Iceland	Apr. 4			Present as slight epidemic.
India:				
Rangoon	Apr. 4-17		43	
Sweden:				
Gottenborg	May 8-15	38		
Malmo	May 2-8	32		
Switzerland:				
Zurich	do	10		
Tunis:				
Tunis	May 9-15		1	

[1] For Scotland, Public Health Reports, May 28, 1920, p. 1301, Apr. 11-17 should read Apr. 11-24.

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

Reports Received During Week Ended June 18, 1920.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Amoy	Apr. 18-24		2	
Sze-chuen (Province)	June 11			Present.
India				Mar. 28-Apr. 3, 1920: Deaths, 901.
Calcutta	Apr. 4-24	226	213	
Madras	Apr. 25-May 1	1	1	
Rangoon	Apr. 4-17	4	5	
Japan				Reported present June 14, 1920.

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

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

Reports Received During Week Ended June 18, 1920—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Bahia	Apr. 18-24	1		
British East Africa				Jan.-Feb., 1920: Cases, 76; deaths, 67.
Mombasa	Apr. 11-24	4	3	
Ceylon:				
Colombo	Apr. 18-24	2	1	
Egypt:				
Cities—				
Suez	Apr. 8-14	8	10	
Provinces—				
Assiout	Apr. 9-14	8	3	
India				Apr. 11-17, 1920: Cases, 4,310; deaths, 3,468.
Bombay	Apr. 11-17	23	22	
Calcutta	Apr. 4-24	24	22	
Karachi	Apr. 18-24	62	42	
Madras Presidency	Apr. 25-May 1	20	15	
Rangoon	Apr. 4-17	74	70	
Mexico:				
Vera Cruz	Apr. 25-June 15	30	23	
Peru				Jan. 1-Dec. 31, 1919: Cases, 654; deaths, 340.
City—				
Trujillo	Apr. 19-25	6	5	
Departments—				
Ancachs	January-December	16		
Arequipa	do	47	27	
Cajamarca	do	12	9	
Callao	do	10	4	
Lambayeque	do	25	18	
Libertad	do	211	103	
Lima	do	204	113	
Moquegua	do	1		
Piura	do	128	66	
Russia:				
Odessa	Apr. 17			Present.

SMALLPOX.

Algeria:				
Departments—				
Algiers	Apr. 21-May 10	26		
Constantine	May 1-10	3		
Oran	Apr. 21-May 10	36		
Austria	Jan. 11-31	4		
Belgium:				
Brussels	Mar. 3-27		2	
Bolivia:				
La Paz	Apr. 18-24	5	4	
Brazil:				
Bahia	do	6		
British East Africa				January-February, 1920: Cases, 7; deaths, 2.
Canada:				
Manitoba—				
Winnipeg	May 16-22	4		
Nova Scotia—				
Sydney	May 23-29	1		
Ontario—				
Cornwall	May 18-24	3		
Hamilton	May 30-June 5	1		
North Bay	May 9-15	2		
Ottawa	May 23-29	8		
Toronto	do	5		
Ceylon:				
Colombo	Apr. 18-24	3		
China:				
Amoy	Apr. 4-24		9	
Foochow	Apr. 11-24			Present.
Nankin	Apr. 18-May 10			Do.
Tsinanfu	Apr. 18-May 2	2		
Egypt:				
Cairo	Mar. 5-25	16	8	
Port Said	Mar. 12-25	3	3	

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

Reports Received During Week Ended June 18, 1920—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Germany				Jan. 19–Feb. 17, 1920: Cases, 298.
Great Britain:				
Glasgow	May 16–22	21	6	
Greece:				
Saloniki	Mar. 29–Apr. 4	1	1	
India:				
Bombay	Apr. 11–17	52	16	
Calcutta	Apr. 4–17	187	177	
Karachi	Apr. 18–24	9	3	
Madras	Apr. 25–May 1	11	4	
Rangoon	Apr. 4–17	47	17	
Italy:				
Messina	Apr. 26–May 2	32		Province.
Naples	May 3–9	4	1	
Palermo	Apr. 23–29	1		
Japan:				
Nagoya	May 2–8	2		
Java:				
West Java				Apr. 2–8, 1920: Cases, 44; deaths, 8.
Batavia	Apr. 2–8	1	1	
Jugo-Slavia				Jan. 1–31, 1920: Cases, 143.
Districts—				
Freideck	Jan. 1–31	14		
Freistadt	do	116		
Ostran	do	13		
Newfoundland:				
St. Johns	May 22–23	4		
Portuguese East Africa				Mar. 31–Apr. 24, 1920: Present in interior.
Lourenço Marques	Mar. 31–Apr. 24	5		
Spain:				
Valencia	May 9–15	6	2	
Tunis:				
Tunis	do		1	
On vessels:				
S. S. Karapara	Apr. 4–10	1		At Mombasa, British East Africa. Vessel left for Port Natal Apr. 1, arriving Apr. 19, 1920.

TYPHUS FEVER.

Algeria:				
Departments—				
Algiers	Apr. 21–May 10	12		
Constantine	do	13		
Oran	do	132		
Austria				Jan. 4–Feb. 7, 1920: Cases, 6.
Vienna	Jan. 4–Feb. 6	4		
Bolivia:				
La Paz	Apr. 13–24	3	1	
Czecho-Slovakia				Jan. 4–Feb. 7, 1920: Cases, 225; deaths, 21.
Egypt:				
Cairo	Mar. 4–25	114	39	
Port Said	Mar. 19–25	1		
Germany				Jan. 19–Feb. 21, 1920: Cases, 69; of these, 40 among troops.
Greece:				
Saloniki	Mar. 29–Apr. 11	84	7	Among Russian refugees.
Hungary				Dec. 18, 1919–Jan. 18, 1920: Cases, 49.
Budapest	Dec. 18–Jan. 18	19		
Mexico:				
San Luis Potosi	May 24–29			Present.
Tunis:				
Tunis	May 9–15		3	

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

Reports Received from Dec. 27, 1919, to June 11, 1920.

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Amoy	Nov. 4-17		2	
Chosen (Korea)				Aug. 15-Nov. 16, 1919: Cases: 15,192; deaths, 9,823.
Chemulpo	Oct. 1-31	6	4	
Fusan	do	34	30	
Provinces—				
Keiki	Aug. 15-Nov. 16	224	135	
Kogen	do	64	38	
Kokai	do	4,015	2,770	
North Chusei	do	1	1	
North Heian	do	3,196	2,434	
North Kankyo	do	497	275	
North Keisho	do	63	35	
North Zenra	do	1,326	692	
South Chusei	do	930	590	
South Heian	do	3,031	1,858	
South Kankyo	do	870	551	
South Keisho	do	318	156	
South Zenra	do	657	288	
Greece:				
Saloniki	Oct. 10	1		
India				Oct. 19-Dec. 27, 1919: Deaths, 23,388. Jan. 4-Mar. 27, 1920: Deaths, 21,450.
Bombay	Nov. 2-8	1	1	
Do	Jan. 11-Apr. 10	4	2	
Calcutta	Oct. 26-Dec. 27	181	166	
Do	Dec. 28-Apr. 3	481	370	
Madras	Nov. 23-Dec. 27	14	5	
Do	Dec. 28-Apr. 24	39	17	
Rangoon	Nov. 30-Dec. 27	12	9	
Do	Dec. 28-Mar. 27	12	10	
Indo-China:				
Saigon	Oct. 27-Nov. 23	5	4	
Japan:				
Kobe	Nov. 24-30	2		
Taiwan				For entire island: Oct. 29-Nov. 30, 1919: Cases, 651; deaths, 385. May 26, 1920: Present with threatened epidemic difusion.
Tokyo	Nov. 10-20	1	1	
Java:				
East Java				Oct. 5-11, 1919: One case; 1 death. At Pasoeroean.
Surabaya	Feb. 9-14	1	1	
West Java				Nov. 5-Dec. 25, 1919: Cases, 17.
Batavia	Nov. 5-Dec. 25	17		Jan. 24-Apr. 1, 1920: Cases, 8; deaths, 3.
Do	Jan. 21-Apr. 1	3	1	
Philippine Islands:				
Manila	Nov. 2-Dec. 27	20	10	
Provinces				Nov. 2-Dec. 27, 1919: Cases, 1,574; deaths, 1,151.
Albay	Nov. 2-Dec. 27	339	240	
Ambos Camarines	Nov. 2-Dec. 20	66	34	
Antique	Nov. 2-Dec. 27	160	113	
Batangas	do	39	28	
Bohol	do	34	27	
Cagayan	Nov. 3-15	35	20	
Capiz	Nov. 2-8	6	5	
Cavite	Nov. 2-Dec. 6	25	16	
Cebu	Nov. 2-Dec. 30	23	14	
Davao	Nov. 9-15	6	4	
Ilocos Norte	Nov. 2-29	42	40	
Ilocos Sur	Nov. 2-22	18	15	
Iloilo	Nov. 2-Dec. 20	55	33	
Isabela	Nov. 2-Dec. 13	167	77	
Laguna	Nov. 2-Dec. 20	23	17	
Mindoro	Nov. 2-Dec. 6	81	30	
Mountain	Nov. 2-Dec. 13	6	4	
Occidental Negros	Nov. 2-Dec. 27	100	53	
Pangasinan	Nov. 30-Dec. 20	60	46	
Rizal	do	41	15	
Sorsogon	Nov. 2-Dec. 13	208	139	
Tarlac	Nov. 2-22	11	11	
Tayabas	Nov. 2-Dec. 27	60	35	
Union	Nov. 9-15	5	5	
Manila	Feb. 3-May 1	5	1	

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

Reports Received from Dec. 27, 1919 to June 11, 1920—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands—Continued.				
Provinces				Dec. 28, 1919–Apr. 10, 1920: Cases, 912; deaths, 506.
Albay	Dec. 28–Apr. 10	78	53	
Ambos Camarines	Dec. 28–Apr. 3	298	593	
Antique	do	219	60	
Batangas	Dec. 28–Feb. 14	19	12	
Cagayan	Apr. 25–May 1	108	95	
Cavite	Jan. 11–17	1	1	
Iloilo	Dec. 28–Jan. 3	9	2	
Ilocos Norte	Mar. 7–13		1	
Isabela	Jan. 11–17	6	3	
Laguna	Dec. 22–Jan. 3	2	2	
Mindoro	Jan. 4–24	24	11	
Mountain	Dec. 28–Jan. 10	11	6	
Occidental Negros	Jan. 4–Mar. 20	22	19	
Palawan	Jan. 11–Feb. 28	59	37	
Pangasinan	Dec. 28–Jan. 3	1		
Rizal	Feb. 1–7	3		
Samar	Jan. 4–Apr. 10	66	37	
Sorsogon	Jan. 1–24	51	40	
Tayabas	Jan. 4–Feb. 28	33	19	
Poland:				
Garwelin				Present in November, 1919.
Kowal				Do.
Stryi				Do.
Russia:				
Novorossisk	Nov. 8–11	3		
Odessa	Oct. 25–Nov. 7	93		
Siam:				
Bangkok	Dec. 7–27	163	57	Oct. 5–Dec. 15, 1919: Deaths, 1,080.
Do	Dec. 28–Apr. 3	393	189	
Straits Settlements:				
Singapore	Oct. 5–Dec. 27	15	14	
Do	Dec. 28–Mar. 13	8	5	
Sumatra:				
Deli	Oct. 1–31	1	1	
Medan	Nov. 1–30	1	1	

PLAGUE.

Argentina:				
Rosario	Dec. 1–31		7	
Do	Mar. 1–31		2	
Brazil:				
Bahia	Nov. 9–15	1	1	
Do	Jan. 25–Apr. 17	19	14	
Porto Alegre	Nov. 1–30		3	
Rio de Janeiro	Nov. 2–Dec. 27	9	4	
Do	Jan. 11–17	1		
British East Africa				Sept. 1–Dec. 31, 1919: Deaths, 33, reported by native inspectors; 601 reported by native chiefs.
Kisumu	Sept. 28–Nov. 1	6	6	Dec. 14–20, 1919: Present in vicinity. Feb. 15–21, 1920: Present in vicinity.
Do	Feb. 1–7	1	1	
Mombasa	Feb. 1–21	14	14	
Nairobi	Mar. 21–27	2	2	
Ceylon:				
Colombo	Oct. 26–Dec. 27	36	35	
Do	Dec. 28–Apr. 3	48	24	
Chile:				
Antofagasta	Dec. 8–14	1		
Do	Feb. 8–14	1		
China:				
Hongkong	Dec. 7–13	1		
Do	Feb. 1–7	1	1	
Ecuador:				
Guayaquil	Nov. 1–30	2		
Do	Jan. 1–Apr. 15	45	8	
Egypt				Jan. 1–Dec. 25, 1919: Cases, 867; deaths, 469. Jan. 1–Apr. 29, 1920: Cases, 195; deaths, 106.
Cities—				
Alexandria	Dec. 3	1	1	From vessel Rachid Pacha from Constantinople, Saloniki, and Smyrna.
Do	Feb. 18	1	1	
Port Said	Feb. 13	1		
Suez	Feb. 1–Apr. 29	22	14	

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

Reports Received from Dec. 27, 1919, to June 11, 1920—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt—Continued.				
Provinces—				
Assiout	Nov. 15–21	30	17	
Do	Jan. 13–Apr. 29	80	41	
Assouan	Mar. 31	1	1	
Fayoum	Mar. 2–Apr. 2	2	1	
Girgeh	Mar. 4–Apr. 27	11	3	
Keneh	Mar. 26	1	1	
Minieh	Mar. 1–Apr. 26	17	9	
Greece				Present, Apr. 28.
Canea	May 28	6		Island of Crete.
Saloniki	Oct. 6–Dec. 21	19	7	
Piræus	Apr. 25–May 20	7		
Hawaii:				
Kaloha	Feb. 23–Mar. 23	1	2	
India				Oct. 19–Dec. 27, 1919: Cases, 31,542; deaths, 23,443. Dec. 28, 1919–Mar. 20, 1920: Cases, 76,475; deaths, 70,320. Mar. 28–Apr. 10, 1920: Cases, 9,479; deaths, 7,615.
Bombay	Oct. 19–Dec. 27	6	6	
Do	Jan. 4–Apr. 10	90	57	
Calcutta	Jan. 25–Mar. 20	9	5	
Karachi	Nov. 9–29	3	2	
Do	Jan. 11–Apr. 17	103	78	
Madras Presidency	Nov. 9–Dec. 27	1,068	704	
Do	Dec. 28–Apr. 24	4,713	3,451	
Madras	Jan. 25–Feb. 14	4	2	
Rangoon	Nov. 2–Dec. 27	29	27	Oct. 19–Nov. 1, 1919: Cases, 10; deaths, 7.
Do	Dec. 28–Apr. 3	594	560	
Indo-China:				
Saigon	Oct. 27–Dec. 7	11	9	
Do	Jan. 26–Feb. 7	1	1	
Java:				
East Java				Sept. 28–Dec. 31, 1919: Cases, 1,500; deaths, 1,499. Surabaya Residency, Jan. 1–Mar. 20, 1920: Cases, 93; deaths, 92.
Surabaya	Jan. 1–Mar. 20	70	68	
Mesopotamia:				
Bagdad	Jan. 3–9	1	1	
Mexico:				
Vera Cruz	May 31	8	4	
Peru:				
Callao	Nov. 1–30		3	
Paita	Dec. 29–Jan. 17	23	17	
Salaverry (Trujillo)	Nov. 23–Dec. 21	9	1	Present in surrounding country and in vicinity.
Do	Dec. 29–Apr. 18	55	24	
Senegal:				
Dakar	Nov. 1–30		146	Including Dakar and vicinity.
Siam:				
Bangkok	Dec. 14–20	4	2	
Do	Feb. 1–Apr. 3	41	37	
Straits Settlements:				
Singapore	Oct. 26–Dec. 27	7	6	
Do	Jan. 4–Apr. 17	27	18	
Syria:				
Beirut	Dec. 22	29		
Turkey:				
Constantinople	Nov. 14–Dec. 20	11		Present Dec. 11, 1919. Nov. 14–20, 1919: Present in vicinity.
Union of South Africa:				
Orange Free State—				
Hoopstad District	Apr. 24	8	3	Among natives on a farm.
On vessel:				
S. S. Alps Maru	Feb. 28–Mar. 5	2	2	At port of London, England. Vessel left Yokohama, Japan, Dec. 3, 1919; arrived Suez Jan. 21, 1920. Destination, Hamburg.
S. S. Espana	Mar. 22			Reported at Las Palmas, Canary Islands; quarantined for plague which occurred on board en route. Vessel left Buenos Aires Feb. 16. Arrived at Malaga, Spain, Mar. 16. Destination, Mahon, Island of Minorca.
S. S. Kaisar-i-Hind	Nov. 28	3		At Port Said, Egypt. From Bombay, Nov. 15, for London.

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

Reports Received from Dec. 27, 1919, to June 11, 1920—Continued.

SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria:				
Department—				
Algiers	Nov. 11-Dec. 31	65		City of Algiers: Cases, 2. Apr. 1-30, 1920: One case.
Do	Jan. 1-Apr. 20	115		
Constantine	Nov. 11-Dec. 31	15		
Do	Jan. 1-Apr. 20	51		
Oran	Nov. 11-Dec. 31	90		
Do	Jan. 1-Apr. 20	211		
South Territories	do	12		
Arabia:				
Aden	Dec. 24-30	1	1	
Do	Jan. 6-20		3	
Argentina:				
Rosario	Jan. 1-31		1	
Austria				Nov. 23, 1919-Jan. 3, 1920: Cases, 13.
Vienna	Nov. 23-Jan. 3	10		
Belgium:				
Brussels	Dec. 28-Mar. 6		5	
Bolivia:				
La Paz	June 29-Dec. 27		216	Dec. 29, 1918-June 28, 1919: Cases, 86; deaths, 44. Dec. 14-20, 1919: Cases, 7; deaths, 5.
Do	Dec. 28-Apr. 17		80	
Brazil:				
Bahia	Oct. 26-Nov. 22	1,704	1,022	
Do	Dec. 28-Apr. 17	546	392	
Ceara	Mar. 21-27		1	
Para	Feb. 8-Apr. 17	8	9	
Pernambuco	Nov. 10-Dec. 28	123	9	
Do	Dec. 28-Mar. 28	278	17	
Rio de Janeiro	Sept. 28-Dec. 27	429	119	
Do	Dec. 28-Apr. 10	42	34	
Santos	Nov. 24-30		1	
Do	Jan. 5-18		2	
Sao Paulo	Feb. 23-29		1	
British East Africa				Sept. 1-Dec. 31, 1919: Cases, 851; deaths, 327.
Zanzibar	Feb. 1-29	3	1	From s. s. Karapara from Bombay and s. s. Roma from Suez.
Bulgaria:				
Sofia	Feb. 22-Mar. 20	5		
Canada:				
Alberta—				
Calgary	Apr. 4-May 22	11		
British Columbia—				
Vancouver	Nov. 30-Dec. 6	1		
Do	Jan. 4-17	1		
Victoria	May 9-15	3		
Manitoba—				
Winnipeg	Jan. 11-May 8	14	1	
New Brunswick—				
Gloucester County				Jan.-Mar., 1920: Cases, 14. May 15: Outbreak reported at Shippigan Island.
St. John	Jan. 29-May 1	10		
Nova Scotia—				
Halifax	Dec. 21-27	2		
Do	Jan. 4-Feb. 14	4		
Sydney	Dec. 7-13	1		
Do	Dec. 28-May 23	27		
Counties—				
Cumberland	Dec. 14-20			Present.
Gloucester				Oct.-Nov., 1919: Cases, 3.
Inverness	Dec. 14-20			Present.
Pictou	do			Do.
Ontario				Nov. 1-29, 1919: Cases, 1,67 Nov. 30-Dec. 6, 1919: Cases, 125, in 45 localities, exclusive of Dysart and Toronto. Dec. 1-31, 1919: Cases, 1,414; deaths, 2. Dec. 28, 1919-Mar. 27, 1920: Cases, 2,330; deaths, 35.
Fernie	Apr. 11-May 1	4		
Fort Williams and Port Arthur	Jan. 25-May 29	23		
Hamilton	Dec. 14-20	3		
Do	Jan. 4-May 8	36		
Kingston	Dec. 21-27	1		
Do	Dec. 28-May 22	26		
Moncton	Apr. 25-May 1	1		
North Bay	Jan. 11-May 1	10		
Ottawa	Dec. 14-20	1		
Do	Dec. 28-May 22	55	1	
Peterborough	Dec. 21-27	3		
Do	Dec. 28-Apr. 10	57	2	

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

Reports Received from Dec. 27, 1919, to June 11, 1920—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Canada—Continued.				
Ontario—Continued.				
Prescott	Jan. 4–10	1		
Sault Ste. Marine	Dec. 7–27	1		
Do	Dec. 28–Jan. 3	1		
Toronto	Dec. 7–27	727		
Do	Dec. 28–May 22	895	7	
Windsor	Dec. 14–27	2		
Do	Mar. 21–May 1	3		
Prince Edward Island—				
Summerside	Feb. 14–May 7	4		
Quebec—				
Bonaventure and Gaspe	Jan. 1–Apr. 30	46		Counties.
Montreal	Dec. 7–27	3		
Do	Jan. 18–May 1	30		
Quebec	Dec. 7–27	4		
Do	Jan. 4–Apr. 24	20		
Saskatchewan—				
Moosejaw	Dec. 28–May 22	11		
Saskatoon	Dec. 14–20	1		
Do	Mar. 28–May 15	3		From Toronto.
Regina	Mar. 27–Apr. 24	2		
Ceylon:				
Colombo	Nov. 16–Dec. 13	10	9	
Do	Dec. 28–Apr. 3	11	3	
China:				
Amoy	Nov. 4–Dec. 22			Present. Dec. 22: Four deaths.
Do	Dec. 30–Apr. 20		28	
Canton	Nov. 2–Dec. 27			Present.
Do	Dec. 28–Apr. 30			Do.
Chungsha	Jan. 4–10	55		
Chungking	....do			Do.
Do	Dec. 28–Apr. 24			Do.
Foochow	Nov. 16–Dec. 27			Do.
Do	Feb. 28–Apr. 10			Do.
Hankow	Feb. 29–Apr. 17	2	1	
Hongkong	Jan. 25–Mar. 20	12		
Nankin	Dec. 6–27			Do.
Do	Dec. 28–Apr. 17			Do.
Shanghai	Dec. 22–28	2		
Do	Mar. 29–Apr. 4	1		
Swatow	May 1			Reported in Wuhu district.
Tientsin	Feb. 1–7	1		
Chosen (Korea):				
Chemulpo	Dec. 1–31	1	1	
Do	Jan. 1–Feb. 29	10	3	
Fusan	Oct. 1–Dec. 31	12	1	
Do	Feb. 1–29	1		
Seoul	Oct. 1–Dec. 31	19	4	
Do	Jan. 1–Feb. 29	162	44	
Colombia:				
Barranquilla	Nov. 16–Dec. 20	50	2	
Do	Jan. 11–May 8		9	Stated to be epidemic, Jan. 18–24, and Apr. 11–17, 1920. About 200 cases, Feb. 1–14.
Santa Marta	May 16–22			Becoming more general.
Costa Rica:				
Limon	Mar. 28–Apr. 3		1	
Cuba:				
Habana	Jan. 31	4		Children living in same house.
Czecho Slovakia				Apr. 29, 1920: Prevalent. In
Prague	Feb. 8–Mar. 20	4	2	northern Bohemia, estimated number of cases, 6,000. In Greater Prague, estimated number cases, from 300 to 400.
Danzig				Apr. 18–24, 1920: In Danzig district, 2 cases.
Egypt:				
Alexandria	Nov. 12–Dec. 16	32	22	
Do	Jan. 1–May 6	251	166	
Cairo	Oct 1–Dec. 23	64	31	
Do	Jan. 1–Mar. 3	59	15	
Port Said	Oct. 1–Dec. 23	13	6	
Do	Jan. 1–Mar. 3	35	11	

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

Reports Received from Dec. 27, 1919, to June 11, 1920—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Finland:				
Provinces				July 16–Dec. 31, 1919: Cases, 83: Jan. 15–31, 1920: Cases, 14.
Abo Och Borneborg	Nov. 1–15	1		
Nyland	July 16–Dec. 15	29		
St. Michael	Dec. 1–15	7		
Tavastehus	July 16–Dec. 31	15		
Do	Jan. 15–31	6		
Vasa	Dec. 1–31	4		
Do	Jan. 25–31	8		
Viborg	July 16–Dec. 31	37		
France:				
Brest	Apr. 24–30	1		
Paris	Jan. 1–Mar. 20	4	2	
Germany				Oct. 5–15, 1919: Cases, 32. In addition to previously reported cases: Sept. 28–Dec. 6, 1919. Cases, 175 (exclusive of Prussia). Dec. 7, 1919–Jan. 17, 1920: Cases, 217.
Prussia	Oct. 20–Nov. 20	1,100	323	
Great Britain:				
Birmingham	Mar. 28–Apr. 24	15		
Glasgow	Feb. 29–May 8	96	7	
Liverpool	Mar. 14–May 1	5	1	
London	Feb. 22–May 1	16		
Greece:				
Patras	Dec. 29–Mar. 14		5	
Saloniki	Nov. 10–Dec. 28	26	26	
Do	Dec. 9–Mar. 21	52	43	In vicinity; Drama, cases, 2: Zagoritzani, 9 cases, 1 death: Serres, 1 case.
Haiti:				
Port au Prince	Apr. 10–May 8			Present.
Hungary				Nov. 3–Dec. 7, 1919: Cases, 15.
India				Oct. 19–Dec. 27, 1919: Deaths, 3,421. Jan. 4–Mar. 27, 1920: Deaths, 18,154.
Bombay	Oct. 12–Dec. 20	46	11	
Do	Dec. 28–Mar. 20	284	114	
Calcutta	Oct. 26–Dec. 27	186	260	
Do	Dec. 28–Apr. 3	2,155	1,847	
Karachi	Dec. 21–27	6	2	
Do	Jan. 18–Apr. 17	139	48	
Madras	Nov. 2–Dec. 27	31	13	
Do	Dec. 28–Apr. 24	154	44	
Rangoon	Oct. 19–Dec. 27	51	18	
Do	Dec. 28–Mar. 27	247	61	
Indo-China:				
Saigon	Oct. 27–Nov. 23	2		
Do	Jan. 19–25	2		
Italy:				
Genoa	Jan. 5–Mar. 7	26		Province: Nov. 17–Dec. 28, 1919: Cases, 15; deaths, 3. Jan. 12–Apr. 4, 1920: Cases, 24.
Leghorn	Jan. 4–Mar. 15	8		
Messina	Nov. 10–Dec. 28	55	8	Province of Messina: Dec. 14–28, 1919: Cases, 68. Jan. 5–Apr. 4, 1920: Cases, 179; 2 deaths.
Do	Dec. 29–Apr. 24	42	8	
Milan	Oct. 1–Dec. 31	15	2	
Do	Jan. 1–Feb. 29	28	8	
Naples	Dec. 28–May 2	16	17	
Palermo	Dec. 27–Mar. 30	6	5	
San Fratello	Dec. 1–28	49	5	
Do	Dec. 29–Mar. 7	29	1	
Trieste	Jan. 3–May 1	4	1	
Turin	Dec. 28–Feb. 15	6		
Japan:				
Kobe	Dec. 15–21	1		
Do	Feb. 23–Apr. 25	16		
Nagasaki	Feb. 2–8	1	1	
Nagoya	Apr. 11–17	1		
Taiwan	Nov. 1–31	36	7	Entire island.
Do	Jan. 1–Apr. 30	773	213	Do.
Tokyo	Mar. 15–31	20		
Yokohama	Feb. 1–Mar. 26	32	8	
Java:				
East Java				Sept. 28–Dec. 18, 1919: Cases, 34. Jan. 1–Feb. 14, 1920: Cases, 2.
Residency—				
Surabaya	Oct. 25–Dec. 18	26		
Do	Jan. 1–Mar. 20	2		
West Java				Oct. 17–Dec. 25, 1919: Cases, 659 deaths, 151. Jan. 2–Apr. 1, 1920: Cases, 542; deaths, 104.
Batavia	Oct. 17–Dec. 12	49	22	
Do	Jan. 2–Apr. 1	23	14	

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

Reports Received from Dec. 27, 1919, to June 11, 1920—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Luxemburg	Feb. 15-Apr. 11	9	.....	
Malta	Feb. 1-Mar. 31	8	2	
Manchuria:				
Dairen	Feb. 3-Apr. 19	7	1	
Mukden	Jan. 18-Mar. 13	.....	.....	Present.
Mesopotamia:				
Bagdad	Jan. 10-30	5	.....	
Mexico:				
Acapulco	Nov. 9-15	2	.....	
Chihuahua	Dec. 21-27	3	3	
Do	Jan. 11-Mar. 20	.....	3	
Ciudad Juarez	Jan. 11-Feb. 7	.....	2	
Guadalajara	Dec. 1-31	1	.....	
Do	Jan. 1-31	1	.....	
Mexico City	Nov. 16-Dec. 20	11	.....	
Do	Feb. 15-28	2	.....	
Salina Cruz	Feb. 1-29	18	.....	
San Luis Potosi	Dec. 14-20	.....	1	
Do	Jan. 18-May 8	4	9	
Tehuantepec	Dec. 25-31	6	.....	
Do	Jan. 1-Feb. 27	73	.....	
Vera Cruz	Apr. 12-18	1	.....	
Newfoundland:				
St. Johns	Dec. 20-26	3	.....	Dec. 13-26, 1919, at outports, 6 cases. Present at 8 other localities.
Do	Dec. 27-May 21	18	.....	Outports, Dec. 27, 1919-Mar. 12, 1920: Cases, 25. Present at other localities. Mar. 25-Apr. 30: Present at outports.
Panama:				
Colon	Dec. 15-21	1	.....	
Peru:				
Callao-Lima	Feb. 1-29	4	.....	
Philippine Islands:				
Manila	Feb. 15-Mar. 13	3	3	
Portugal:				
Lisbon	Nov. 30-Dec. 27	.....	55	
Do	Dec. 28-May 1	.....	139	
Oporto	Dec. 7-20	5	5	
Do	Dec. 28-Mar. 1	4	3	
Portuguese East Africa		.....	.....	Present in interior, in 5 districts.
Towns—				Nov. 9-Dec. 20, 1919, with 56 reported cases. In interior, Dec. 28, 1919-Mar. 27, 1920, Present.
Chai-Chai	Feb. 1-7	1	.....	
Chinde	Dec. 28-Jan. 25	21	.....	
Inhambane	Dec. 7-27	7	.....	
Do	Jan. 4-Feb. 28	11	.....	
Lourenco Marques	Nov. 23-Dec. 20	9	.....	
Do	Feb. 15-Mar. 6	8	.....	
Mozambique	Dec. 7-27	2	.....	
Quelimane	....do	4	.....	
Do	Jan. 4-Feb. 28	12	.....	
Tete	Dec. 7-27	1	.....	
Roumania:				
Bucharest	Jan. 1-31	1	.....	
Russia:				
Riga	Feb. 16-Apr. 15	34	.....	
Siam:				
Bangkok	Mar. 21-27	1	.....	
Siberia:				
Vladivostok	Dec. 19-31	17	3	Aug. 1-Dec. 15, 1919: Cases, 10; deaths, 3.
Do	Jan. 1-31	8	8	
Spain:				
Barcelona	Nov. 6-Dec. 27	26	.....	
Do	Dec. 8-May 6	.....	57	
Bilbao	Nov. 1-Dec. 20	.....	4	
Do	Feb. 10-20	1	.....	
Cadiz	Oct. 1-Nov. 30	.....	6	
Gihon	.....	.....	.....	Jan.-Mar., 1920: Cases, 67; deaths, 10.
Madrid	Feb. 1-29	.....	9	
Valencia	Nov. 10-Dec. 27	39	9	
Do	Dec. 28-May 8	172	29	
Vigo	Nov. 18-Dec. 27	14	.....	
Do	Dec. 28-Apr. 25	2	7	Jan. 11-17, 1920: Present in vicinity.
Straits Settlements:				
Singapore	Mar. 7-13	1	1	

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

Reports Received from Dec. 27, 1919, to June 11, 1920—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Sumatra:				
Medan	Oct. 1-31	8		
Tunis:				
Tunis	Dec. 23-29	1		
Do	Jan. 19-May 9	11	10	
Turkey:				
Constantinople	Nov. 9-Dec. 14	27		
Do	Feb. 18-Mar. 27	6	3	
Union of South Africa:				
Cape Town	Jan. 31-Feb. 27	1		
Johannesburg	Oct. 1-Dec. 31	21		
Do	Jan. 1-Feb. 28	7		
On vessel:				
S. S. Roggeveen		1		Vessel from Java. At Noumea, New Caledonia. Case left at Noumea. Vessel arrived at Sydney, Jan. 2, 1920.
S. S. Sarcoxie	Dec. 23	1		At Ponta Delgada, Azores, from Rotterdam for New York.
S. S. Vestnorge	Jan. 15	1		Mild. At Kingston, Jamaica, from Philadelphia, via Norfolk.
S. S. Kamapara	Feb. 1-29	1		At Zanzibar, from Bombay.
S. S. Roma	do	2		At Zanzibar, from Suez.

TYPHUS FEVER.

Algeria:				
Departments—				
Algiers	Dec. 11-31	2		Algiers (city), Jan. 1-31, 1920: Cases, 1; deaths, 1. Apr. 1-30 1920: Cases, 12; deaths, 6.
Do	Jan. 11-Apr. 20	19		
Constantine	Nov. 11-Dec. 31	2		
Do	Jan. 1-Apr. 20	35		
Oran	Nov. 21-Dec. 11	5		
Do	Jan. 21-Apr. 20	256		
South Territories	Mar. 21-31	43		
Austria				Sept. 7, 1919-Jan. 3, 1920: Cases, 59.
Vienna	Sept. 7-Jan. 3	38		
Belgium:				
Ghent	Jan. 25-31		2	
Bolivia:				
La Paz	June 29-Dec. 20	30	31	Dec. 29, 1918-June 28, 1919: Deaths, 52.
Do	Jan. 4-Apr. 27	33	24	
Brazil:				
Ceara	Jan. 4-10	1		
Porto Alegre	Feb. 1-7		1	
Bulgaria:				
Sofia	Dec. 21-31	2	1	
Do	Jan. 1-Apr. 3	27	1	
Varna	Feb. 2-8	110		To Feb. 21: Present.
Vratza	Jan. 25-31			Present. Also in vicinity.
Canada:				
Ontario Province				Dec. 1-31, 1919: One case.
Chile:				
Antofagasta	Nov. 17-Dec. 14	14		
Santiago				Jan. 12-Sept. 30, 1919: Cases, 5,153; deaths, 1,023. Outbreak in October, 1918.
Valparaiso	Nov. 9-Dec. 27	955	114	Dec. 1-13, 1919: Cases, 700; deaths, 18.
Do	Dec. 28-Apr. 24	243	108	
China:				
Antung	Nov. 3-Dec. 14	2		
Tientsin	Feb. 1-7	1		
Czecho-Slovakia:				
Prague	Dec. 21-27	1		
Do	Jan. 25-Feb. 7	2	1	
Danzig	Apr. 4-May 8	2		
Egypt:				
Alexandria	Nov. 12-Dec. 16	6	1	
Do	Jan. 1-May 6	387	98	
Cairo	Oct. 1-Dec. 23	113	46	
Do	Jan. 1-Mar. 4	89	67	
Port Said	Oct. 1-Dec. 16	3	1	
Do	Jan. 15-28	1	1	

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

Reports Received from Dec. 27, 1919, to June 11, 1920—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Finland:				
Province—				
Viborg	July 16–31	2		
Germany				Oct. 5–Dec. 6, 1919: Cases, 10—Civil population, 3; military, 4; repatriated soldiers, 3. Dec. 7, 1919–Jan. 17, 1920: Cases, 73, of which 28 in civil population, including 10 Polish workmen; 45 among German troops.
Great Britain:				
Belfast	Dec. 28–May 8	3	1	
Dublin	Apr. 25–May 8	5	1	
Glasgow	Nov. 30–Dec. 6	2		
Greece:				
Cavalla	Nov. 17–Dec. 28	4		
Drama	Nov. 24–Dec. 28	6		
Saloniki	Oct. 6–Dec. 31		43	
Do	Dec. 28–Mar. 28	116	10	In vicinity, at Cavalla, 1 case; Prani, 1; Vertekep, 6 cases; Zagoritzani, 3.
Thassos Island	Dec. 22–28	1		
Zihna	do	1		
Hungary				Aug. 25–Dec. 7, 1919: Cases, 36.
Budapest	Nov. 3–Dec. 7	18		
Italy:				
Brindisi	Dec. 22–28	1		
Naples	Jan. 19–25	2	1	
Trieste	Dec. 14–27	3		
Do	Dec. 28–May 1	13	2	
Venice	Nov. 17–Dec. 21	6	1	
Japan:				
Nagasaki	Dec. 1–28	4	2	
Do	Jan. 12–Mar. 28	6	1	
Mexico:				
Chihuahua	Dec. 21–27	2		
Do	Jan. 11–May 9	1	1	
Mexico City	Nov. 16–Dec. 27	129		
Do	Dec. 28–Feb. 28	188		
Saltillo	Nov. 1–30	2	1	
Do	Mar. 28–Apr. 3	1		
San Luis Potosi	Dec. 14–27			Present.
Do	Dec. 28–May 8			Present. Mar. 29–Apr. 4, 1920: 1 death.
Paraguay:				
Asuncion	Nov. 30–Dec. 6	1		
Peru:				
Callao	Nov. 1–30		1	Callao-Lima: Jan. 1–Feb. 29, 1920: Cases, 2.
Cerro de Pasco	Dec. 7–13	1		
Poland				Nov. 1–30, 1919: Cases, 11,264; deaths, 942. Including Province of Posen.
Galicia (Province)	Nov. 1–30	5,716	616	
Warsaw	do	107	19	Oct. 1–31, 1919: Cases, 129; deaths, 12.
Portugal:				
Lisbon	Dec. 6–12		2	
Oporto	Dec. 21–27	1		
Roumania:				
Braila	Jan. 1–31	18	3	
Bucharest	do	59	7	
Constantza	do	59	7	
Galatz	do	10	3	
Russia				Mar. 4, 1920: Reported present in nearly all Black Sea ports.
Esthonia				Feb. 16, 1920: Cases, 7,500 to 8,000. Estimated mortality, 40 per cent.
Narva	Feb. 16	2,500		
Reval	do	2,500		
Siberia:				
Vladivostok	Dec. 25–31	23	13	Aug. 1–Dec. 15, 1919: Cases, 402; deaths, 42.
Do	Jan. 1–31	279	22	
Spain:				
Barcelona	Nov. 20–26	7		
Bilbao	Dec. 22–31		1	
Corunna	Nov. 24–Dec. 7	2		
Madrid	Feb. 1–Mar. 31		2	
Tunis:				
Tunis	Dec. 14–20	1		
Do	Dec. 29–May 9	25	6	

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

Reports Received from Dec. 27, 1919, to June 11, 1920—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Turkey:				
Constantinople	Nov. 14–Dec. 27	49		
Do	Feb. 8–Mar. 27	122	7	Increase reported due to influx of Russian refugees.
Princes Islands	do	50		About 15 miles distant from Constantinople. In Sea of Marmora.
Samsoun	Feb.–Mar.	15		
Union of South Africa:				
Cape Province				Mar. 9, 1920: Present in 20 districts.
Districts—				
Mount Frere	Feb. 22–28			Present.
Transkei	do			Do.
Natal				Mar. 9, 1920: Present in 5 districts.
Districts—				
Camperdown	Feb. 22–28			Present.
Ixopo	do			Do.
Newcastle	do			Do.
Vryheid	do			Do.
Transvaal—				
Johannesburg	do	1		Present in mining districts.
On vessels:				
S. S. Panama	Jan. 1–31	37		At Malta. Troops from Russia landed for treatment and segregated.

YELLOW FEVER.

Brazil:				
Bahia	Oct. 26–Nov. 8	1	2	
Do	Feb. 29–Apr. 17	2	1	
Mexico:				
Campeche	Dec. 20	1		
Merida	Dec. 7–27	4	2	The cases were sent from Opichen, vicinity of Muna. One death in case from Muna. Total to Dec. 27: Cases, 47; deaths, 21.
Do	Dec. 28–Mar. 20	2		
Salvador:				
Sonsonate	May 26		1	