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EXPERIMENTAL ABORTION IN A COW PRODUCED BY INOCULATION WITH *BACTERIUM MELITENSIS*.¹

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Comparative studies of the causative organisms of contagious abortion in cattle and of Malta fever in human beings which have been made in recent years have shown a close relationship between them. None of the several investigators has been able to show distinctions between the two organisms when morphological, cultural, or biochemical characteristics were considered. The organisms have also been shown to be closely related serologically, as determined by agglutinin absorption tests. The pathogenic effect on experimental animals has been found to be the same except for differences in degree of virulence. A review of the literature from which these conclusions were drawn will be given in another paper now in preparation. It is the purpose of this preliminary report to record briefly an experiment which gives further evidence of the close relationship of these two organisms which for many years were never considered together.

On February 9, 1923, a pregnant heifer was inoculated intravenously with *Bacterium melitensis*. The dose was the growth from a 24-hour culture on a serum glucose agar slope suspended in 10 cubic centimeters of physiological saline solution. The heifer was inoculated with a strain isolated in September, 1922, from the blood of a human case of Malta fever which occurred during the epidemic at Phoenix, Ariz. On March 26, 1923, the heifer aborted a fetus of about five and one-half months. *Bact. melitensis* was recovered from the stomach contents, from the contents of the small intestine, and from the peritoneal fluid of the fetus, and from the colostrum. The recovered strain was shown to be serologically identical with the strain used for inoculation, which is unmistakably distinguishable by the agglutination absorption test from the typical *Bact. abortus*.

The agglutinin titer of the serum taken before inoculation and at subsequent intervals of about two weeks is given below in tabular

¹ The writer is indebted to Dr. E. C. Schroeder and Dr. W. E. Cotton, of the Bureau of Animal Industry Experiment Station, United States Department of Agriculture, for providing the experimental animal used in making the inoculation and for the care of the animal.

form. Tests for agglutinin content were made with the homologous strain and with a strain of bovine *Bact. abortus* received from Dr. L. F. Rettger (Yale University).

The presence of agglutinins in low dilutions of the serum previous to inoculation is not considered indicative of an infection, because cow's serum occasionally contains agglutinins for *Bact. abortus* in small quantity. The rise in agglutinins for *Bact. abortus* in about equal titer with agglutinins for *Bact. melitensis* following the inoculation is in accordance with the results of numerous recent investigations which have shown that the two organisms are indistinguishable by the simple agglutination test.

The results of the experiments were similar to those which would have been expected if the inoculation had been made with a virulent strain of *Bact. abortus* of bovine origin.

Agglutinin titer of serum.

Date blood was drawn.	Antigen.	Titer of agglutinins.
Feb. 9, 1923 (before inoculation).....	{ <i>Bact. melitensis</i>	Partial agglutination in 1 : 10.
Feb. 20, 1923.....	{ <i>Bact. abortus</i>	1 : 20.
Mar. 7, 1923.....	{ <i>Bact. melitensis</i>	1 : 320 (partial in 1 : 640).
Mar. 22, 1923.....	{ <i>Bact. abortus</i>	1 : 160 (partial in 1 : 320).
Mar. 27, 1923 (1 day after abortion).....	{ <i>Bact. melitensis</i>	1 : 320.
	{ <i>Bact. abortus</i>	1 : 320.
	{ <i>Bact. melitensis</i>	1 : 320.
	{ <i>Bact. abortus</i>	1 : 320.
	{ <i>Bact. melitensis</i>	1 : 320.
	{ <i>Bact. abortus</i>	1 : 320.

PRESENT STATUS OF SANITARY ENGINEERING.

SUGGESTIONS FOR OBJECTS AND AIMS OF THE SANITARY ENGINEERING DIVISION OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS.¹

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The field occupied to-day by the sanitary engineer is so broad that it is not easy to frame a definition of sanitary engineering which is sufficiently comprehensive to include all of his activities.

"Civil engineering is the art of economic construction; that is, the art of making structures for the public use at the minimum cost for installation and operation," according to Merriman.³ From this basic statement he derives the following definition: "Sanitary engineering is that branch of civil engineering which is concerned with the constructions for promoting the health of the community."

But this definition is not sufficiently comprehensive to include many engineering works which are popularly conceived as coming within the field of sanitary engineering. Thus, an important function of municipal waterworks is that of furnishing adequate

¹ Address made before the Sanitary Engineering Division of the American Society of Civil Engineers, at the meeting held in New York City, January 16, 1923.

² Of Metcalf & Eddy, Boston, Mass.

³ "Elements of Sanitary Engineering," 3d ed., page 8.

fire protection, which can be classed as a health measure only by courtesy. Again, the treatment of industrial wastes, in some cases, is required merely to secure the acceptable appearance of streams, upon the theory that the public is entitled to enjoy the rivers in substantially their natural condition.

Whatever may have been the early conception of the scope of sanitary engineering, its field in recent years has been greatly broadened. It is now common to link together in matters coming under the jurisdiction of health boards and departments, not only the health and comfort of the public, but also its sensibilities. The sanitary engineer is about as frequently called upon for assistance in measures affecting public comfort and sentiment as in those relating directly to the public health. Many alleged nuisances, formerly believed to be detrimental to health, are now recognized to be merely inimical to comfort.

The advance in industrial sanitation has introduced many problems of an engineering nature. The manufacturer consults the sanitary engineer relative to the volume and the quality of the supply of water available for his use, the practicability of discharging the liquid wastes into the neighboring river or lake, or the type and cost of treatment plant which will be capable of rendering his wastes suitable for such discharge. Similar advice may be sought regarding offensive gases which may escape from the factory, for the manufacturer is becoming more and more jealous of the esteem in which his neighbors hold him. Upon the advice of the sanitary engineer may depend the decision of the manufacturer to go forward with a contemplated project or to abandon it for one more favorably situated.

A large proportion of the problems with which the sanitary engineer is dealing to-day may be included in five principal divisions:

Water supply and purification;

Sewerage, drainage, and the disposal of sewage and industrial wastes;

Refuse collection and disposal;

Eradication of the mosquito and other vermin which may carry infection; and

Air supply and purification.

WATER SUPPLY AND PURIFICATION.

The securing and distributing of an adequate supply of pure water is one of the oldest problems of sanitary engineering. It has received more scientific investigation, followed by careful engineering operation, than any of the other problems of this branch of engineering. Records of such investigations and operation have afforded a vast supply of data available for study and comparison.

At the time when the first municipal water supplies were established in this country there was little difficulty in securing pure water. The municipalities were small and the volume of water required was very moderate. The neighboring country was but sparsely populated, and there was little danger of contamination. Later, as the catchment areas became more generally populated, the possibility and in some cases the probability or certainty, of contamination was recognized. Supplies which had been of satisfactory quality had to be abandoned for others more remote.

Some cities adopted the policy of acquiring land on the margin of the reservoirs and along the streams which fed them, thus preventing the establishment of a resident population. This was followed by police measures, such as prohibition of bathing and fishing in the waters, of boating, and cutting ice upon the reservoirs. Sanitary inspection followed; and where the reservoir feeders flowed through populous districts, the water which they carried was filtered before its discharge into the reservoirs.

Coincident with these improvements, there were valuable scientific investigations which afforded much knowledge in support of the measures of protection previously taken, and a basis for further progress of this kind.

The contamination of some readily accessible waters and the great difficulty of securing safe, acceptable supplies in some parts of this country led to the investigation and installation of water filters, first of the slow sand type and later of the rapid or mechanical type.

While the adoption of filtration may fairly be said to have been founded upon the need of a water which would not endanger the public health, a very important consideration has been improvement in the appearance of the water. This is particularly true in those portions of the country where the water is naturally turbid, muddy, or highly colored.

Practice in filter design and operation became comparatively well standardized, and the great accomplishments of the filters, both as a means of protecting the public health and of providing an acceptable water from a very unattractive raw supply, were well demonstrated. Yet it was recognized that filters were not 100 per cent efficient. There were lapses, irregularities in character of output.

The next step was that of disinfection of the water, generally with chlorine, ozone, and the ultra-violet ray being utilized in some of the small installations.

Like filtration, sterilization has had a very important influence upon the problem of providing a safe water supply. In many of the smaller communities, and in some large cities, it has been the sole safeguard between a contaminated supply and the consumers. Other communities have adopted the more dependable and safer course

of adding this treatment to that of filtration, thus affording a very valuable factor of safety.

The efficiency of disinfection has proved to be such that there has been a tendency to substitute it, in cases where the water is reasonably satisfactory in appearance, for filtration or for combined filtration and disinfection. Some have advocated the use of filters of moderate efficiency, with a view to depending upon disinfection as the major protection against pathogenic bacteria. To what extent, other than to meet an emergency, these policies are justified is a matter upon which there is difference of opinion. This is one of the important problems before the profession at the present time.

While the present status of the art of water protection and purification is such that a large measure of protection against typhoid may be assured, there still are irregularities in efficiency which even in well-operated works are occasion for concern. There is also the human element, which is evident in several ways, such as insufficient appropriations for proper operation, absence of moral support from higher officials, unskilled supervision, and the lapses common to operating employees. Such deficiencies, in case the treatment is by disinfection alone, may immediately result in serving a dangerous water. Even with the best management a very brief lapse due to the human element may jeopardize the health of a great community.

Notwithstanding the creditable present status of the art of supplying a safe and attractive water, there are many unsolved problems. While the prevalence of water-borne typhoid has been a criterion for many years, is there reasonable assurance that other diseases are not transmitted by waters now assumed to be safe?

Will not more refined methods of investigation and further knowledge disclose dangers of which little is thought at present? Under what conditions and to what extent does the alum introduced into the water pass through the filters? What are the causes of corrosion of metals and how may they best be counteracted? What will be the effect of the hydrogen ion control of purification plants?

This list might be greatly amplified. Every new discovery opens up a field for research.

SEWERAGE, DRAINAGE, AND THE DISPOSAL OF SEWAGE AND INDUSTRIAL WASTES.

Sewers have become so common in American cities that it is not always recognized that they are very important sanitary works. It is only necessary, however, to recall the history of sewerage in England at the time when cesspools drained into basements of buildings, or to contemplate the modern theory of transmission of disease germs by the house fly, to appreciate that, as a health measure,

sewerage facilities are probably only secondary in importance to waterworks.

Those engineers who have had to do chiefly with separate sewers sometimes fail to realize that drainage, as well as sewerage, is an important sanitary measure. Except in so far as it is a means of mosquito eradication, however, there appears to be no known direct connection of a specific disease with the lack of drainage facilities. Notwithstanding this fact, there can be little doubt that lack of good drainage is deleterious to the public health. Persons who live in localities which are poorly drained are often forced to walk through mud and water and to live in damp quarters. Undoubtedly such exposure has an unfavorable effect upon health, even though not directly responsible for illness.

The early sewers were intended only as a means of carrying away storm water, but they were later used to carry sewage also. It was natural, therefore, that subsequent designs provided for carrying both storm water and sewage in the same conduits. Still later, separate sewers were proposed and built to a limited extent. Their real or apparent advantages have been considered to be so great as to lead to a change from the universal practice of constructing combined sewers.

It is an interesting fact that human thought moves to extremes, like a pendulum. At first sentiment was strongly in favor of combined sewers; later it swung to the other extreme, favoring separate sewers and tending to discourage the construction of combined sewers. But improper use of separate sewers and a restudy of the economics of the two systems indicate that the time may be approaching when the pendulum will swing in the other direction. The selection of the proper system in any case is one of the important duties of the sanitary engineer.

Much progress in the design of combined sewers and storm water drains is indicated by the change from the old empirical formulas to the rational method. But more dependable data are required to make the use of this method entirely satisfactory. While rainfall data have been greatly multiplied and improved during the last 25 years, very little is known as to the distribution of intense precipitation over such districts as are ordinarily considered in sewer design; little attention is paid to the design of inlets and catch basins upon which the flow within the sewers so largely depends; and there is a serious paucity of information relative to the time of flow over the surface of the ground to sewer inlets.

One of the most uncertain problems in connection with the use of the Kutter formula for computing the discharge of pipes and conduits which are to carry sewage is the value to be ascribed to the coefficient "*n*". Conditions within sewers vary so greatly that extreme

accuracy in this respect is not to be hoped for, and it is doubtful to what extent the determination of "n" by measurement will be helpful. It would be a source of satisfaction to engineers, however, and would doubtless aid in the exercise of judgment, if some really good measurements of flow in sewers carrying sewage could be made.

In the field of sewage disposal much experimental work has been done. Here again there are so many variables, and their range of variation is so great, that conclusions should be reached with the greatest care.

The art of sewage treatment has advanced to such an extent that it can be stated with assurance that ordinary municipal sewage can be treated successfully to almost any required extent. The more or less popular impression that the art is in the experimental stage and that, therefore, the construction of treatment plants may well be postponed, and that little progress has thus far been made, is erroneous. Sanitary engineers should take advantage of every opportunity to counteract this impression. The accomplishments in this field have been great, and much credit is due to the investigators and practicing engineers through whose efforts the advance has been made.

With the advent of each new process there is a popular inclination to look upon it as a substitute for those processes which have gone before. Experience has shown, however, that, in general, each problem presents its own peculiar conditions, and that there is a field of usefulness for every process which has proved to be of practical merit.

The most vital difficulty in the field of sewage disposal lies in securing efficient operation. As a rule, sewage is not treated for the benefit of the citizens producing it, but to protect those living in neighboring communities, who are neither citizens nor taxpayers of the city in question. It is unpopular to appropriate funds which are to be expended for the benefit of those living outside the community. The value of operation records and analytical tests is not often appreciated by city officials and too seldom by engineers.

The treatment of industrial wastes in many respects resembles that of municipal sewage. Most of the processes applicable to the latter are useful in the former. Many industrial wastes problems, however, are much more complicated and difficult than the ordinary sewage disposal problem.

This is a comparatively new field of activity for the sanitary engineer, and the opportunity for research and accumulation of knowledge is very great.

REFUSE COLLECTION AND DISPOSAL.

The accumulation of all kinds of refuse in the streets is a menace to the public health. Such refuse may contain pathogenic organisms which, when blown into the air and inhaled, may cause infec-

tion. Street cleaning, therefore, is properly classed as a branch of sanitary engineering, although having to do more largely with operation than with the construction of works. The change from horse-drawn to motor-driven vehicles and the enormous increase in such traffic, with the resultant increase in the use of smooth pavements, has greatly modified the problem of street cleaning.

The practice of periodically sweeping streets and gutters and of sprinkling and sweeping the pavements has been replaced in a measure by street flushing, which is by far the most sanitary of these processes. By this means paved streets can be cleaned thoroughly and generally kept in good sanitary condition. Street flushing, however, involves a number of serious problems, some of which are dependent upon the manner in which the water is applied. Where it is discharged under high pressure and impinges directly upon the surface of the pavement, it may have, under some conditions, a disintegrating effect. Some engineers object to the use of water under any conditions, upon the theory that, directly or indirectly, it is injurious to the pavement.

In some cases street flushing is objectionable because of the material washed into catch basins and sewers. The quantity of such matter also increases the burden upon treatment plants.

Some have advocated a combination of sprinkling, sweeping, and pick-up, with flushing; and much thought has been given to vacuum cleaning, which, perhaps, comes the nearest to being a theoretically ideal method of street cleaning.

The connection between the collection and disposal of rubbish and the public health is possibly not as clear as in the case of street cleaning. There can be no doubt, however, that regular and frequent collection of rubbish aids the householder in the maintenance of sanitary conditions about his premises.

By far the most difficult branch of the refuse collection and disposal problem is that pertaining to garbage. This is primarily because of the unstable character of the organic matter of which it is chiefly composed, which becomes offensive if not disposed of promptly. Difficulties have been overcome, in a measure, at least in many cities, by providing moderately frequent collections and by improved facilities for transportation. Yet the systems and equipment used in many places are far from the ideal.

In the matter of disposal, marked advance has been made within the last 25 years. The principles of engineering science have supplanted in a measure the rule-of-thumb methods of a generation ago. It is possible to-day to prescribe the essential requirements for the successful disposal of garbage in a sanitary manner, whether this be done by burial, incineration, reduction, or feeding to hogs.

The most difficult engineering problem, and one which is connected with practically all methods of garbage disposal, has been the con-

trol of objectionable odors to such an extent as to prevent complaint. The control of dust about incinerators and of flies and rats about garbage fills and hog ranches have also proved to be important problems.

Garbage disposal, like the disposal of sewage, suffers from lack of interest on the part of citizens and officials. Liberal appropriations are not generally forthcoming, either for construction or for operation. Garbage collection and disposal involves operating expenses which must be defrayed directly from the tax receipts. To this fact may be attributed much of the difficulty in the solution of this problem.

This field offers great opportunity for scientific research as well as for the creation of a public attitude which will require that ample funds be provided for the successful accomplishment of the object.

ERADICATION OF THE MOSQUITO AND OTHER VERMIN WHICH MAY CARRY INFECTION.

It has been held for many years that disease may be transmitted by means of insects and other vermin. Positive proof, however, is of comparatively recent date, as in the noteworthy case of the transmission of yellow fever by the mosquito, proved by Dr. Jesse W. Lazear, acting assistant surgeon, United States Army, who suffered himself to be bitten by an infected mosquito for the purpose of demonstrating his theory. No greater sacrifice for sanitary science can be made by anyone than was made by Doctor Lazear. The eradication of yellow fever and malaria from Habana by the late Major General Gorgas was an achievement which demonstrated the value of the application of sanitary science to the benefit of man; so, too, his achievement at Panama, an even more spectacular example.

Since these demonstrations were made there have been many others of similar nature. It is stated that during the World War 2,000,000 American soldiers stationed in various cantonments in the malarious sections of the South were so effectively protected against malaria by sanitary engineering works that not over 40 cases of malaria occurred among the troops.

There is need, however, for further research in this field. Cases are reported where large drainage projects have actually increased, rather than decreased, the prevalence of malaria. Many engineering structures, like railroads and improved highways, have been built in a manner to create breeding places for mosquitoes.

Another important branch in this field, occupied by sanitary engineers, is rat proofing, which is being developed in some seaports by the construction of types of buildings which avoid refuges for rats and prevent their entrance into warehouses and other places where food is stored.

AIR SUPPLY AND PURIFICATION.

The need of a supply of pure air has been recognized for more than two centuries. Many problems relating to air supply lie properly in the field of the architect, the physicist, or the heating and ventilating engineer. The sanitary engineer, however, is being called upon more and more frequently to solve problems of air supply, particularly those relating to its quality. Many of these appear to affect the public comfort rather than the public health.

The suppression and control of objectionable odors has assumed considerable importance in connection with sanitary engineering structures such as garbage and refuse disposal plants, sewers, catch basins, and sewage treatment plants. In fact, the principal object of many sewage treatment plants has been to prevent the objectionable odors which have emanated from polluted streams. Similar problems arise in many industrial plants, such as abattoirs, rendering works, fertilizer factories, and oil refineries. These problems naturally fall within the field of the sanitary engineer.

From the assertions of three-quarters of a century ago, that sewer gas was a deadly miasma laden with elements of almost every disease known, and the statement made by Charles Murchison⁴ that typhoid fever was "produced by emanations from decaying organic matter," the accumulation of knowledge has led to the present conception that "the chance of direct bacterial infection through the air of drains and sewers is so slight as to be practically negligible * * *."⁵ The former theory, however, erroneous as it may have been, was not without its beneficial effects, for it undoubtedly resulted in the making of many sanitary improvements.

While present knowledge indicates that sewer air is comparatively free from pathogenic organisms and poisonous gases, it is important that familiarity shall not breed contempt, for danger may lurk in the air within sewers. Under some conditions products of putrefaction, like methane and carbon dioxide, may prevail to such an extent that the air will not support respiration. Hydrogen sulphide may be present in large volume, as at the Los Angeles siphon⁶; illuminating gas may occasionally be encountered; and, with the advent of the modern garage, gasolene has become an almost constant menace in the sewers of large cities. Odors from foul deposits, septic sewage, and industrial wastes may escape from sewers through defective plumbing, manholes, and gutter inlets. Remedies for many such conditions are known, but there are unsolved general

⁴ The Sanitary Significance of Bacteria in the Air of Drains and Sewers. By C-E. A. Winslow. Mass. Inst. Tech., San. Research, Vol..V, p. 39.

⁵ Ibid, p. 85.

⁶ Eng. Record, Aug. 28, 1909, p. 252; American Sewerage Practice, Vol. I, p. 551-2.

and local problems which will make their demands upon the ingenuity of the sanitary engineer of the future.

Objectionable odors about sewage treatment plants have been the cause of complaint and some litigation. Present knowledge enables the sanitary engineer to accomplish much toward their elimination or control. The work of Dr. W. W. Horrocks⁷ indicates that where sewage falls vertically the neighboring air may contain the colon bacillus and various streptococci. He also found that if such an easily recognizable organism as *B. prodigiosus* be introduced into sewage it may be recovered from the sewer air, into which he assumed that it had entered by the bursting of bubbles of gas rising through the sewage, from splashing of falling sewage, or from the drying of the sewage left on the walls of sewers when the depth of flow decreased. The results of such tests lead to interesting speculations regarding the bacterial flora of the atmosphere in the neighborhood of some of the modern sewage-treatment plants, such as fine screens, septic tanks, trickling filters, and aeration tanks of activated-sludge plants.

Probably offensive odors from garbage, both during collection and disposal, have caused more general complaint than those from sewage-treatment plants or industrial plants. Dust-laden air has also been a serious annoyance in some cases. Similar complaints of odor and dust from many industries have become common, have demanded recognition by State and municipal officials, and have been the subject of legal action.

The treatment of air has become as common as the treatment of water and sewage. Air is humidified and its temperature is regulated to make it more agreeable and perhaps more healthful to the consumer. It is washed and subjected to intense heat to remove dust, soluble gases, and odors. For the same reason it is treated with oxidizing agents, like chlorine and sulphurous acid, and it may be treated with deodorants like phenol, creosote oil, and pine-tar oil; for, in a mixture of odors, if one be much stronger than the others, it will completely mask the weaker ones. This last method is particularly worthy of further investigation.

OBJECTS AND AIMS OF THE SANITARY ENGINEERING DIVISION.

There has been a growing feeling among sanitary engineers that the American Society of Civil Engineers should take an active part in the development of the art of sanitary engineering. This feeling has culminated in the formation of the Sanitary Engineering Division.

Sanitary science, or the knowledge of the fundamental truths of nature affecting the health of man, is the foundation upon which

⁷ Proc. Roy. Soc. London, B, 79, 255 (1907).

rests the art of sanitary engineering, or the application of such truths to sanitary engineering works for the health and comfort of the community. Advancement of knowledge may come through original research and the interchange of information acquired through experience.

These considerations suggest that the purpose of this division may be defined as follows:

The objects of this division shall be the increase of knowledge in and the advancement of the sanitary branch of the engineering profession, and the encouragement of social intercourse among sanitary engineers and sanitarians, to the end that sanitary engineers may be of greater service to the community.

In beginning the work of this division, consideration should be given to the fact that other societies are functioning in the field of sanitary engineering. Among these are the American Society for Municipal Improvements, the American Public Health Association, and the American Water Works Association. Duplication of effort is a waste of energy. It should be an aim of this division not to duplicate the work done by other societies, but to deal with underlying principles and with the state of the art rather than with mere descriptions of their practical application.

It should be an aim of this division to record, through papers and discussions, accurate records and conclusions drawn from dependable data. Theories which appear to be sound and are predicated upon known facts may serve a useful purpose. A guide which may be helpful in determining the character of papers and discussions to be formally presented may be found in one of the current rules regarding papers presented to the society, as follows:

Papers containing matter readily found elsewhere, those specially advocating personal interests, those carelessly prepared or controverting established facts, and those purely speculative or foreign to the purposes of the society, shall be rejected.

It is a lamentable fact that many sewage treatment plants have become seriously impaired through the action of natural agencies within a very few years from the date of their completion. It should be recognized that while good engineering requires the accomplishment of the purpose at a minimum cost, the measurement of cost must include, in addition to that of construction, the expense of maintenance and operation. It should be an aim of this division to encourage a high grade of engineering construction. It should also encourage the highest practicable standard of maintenance.

Perhaps the most serious difficulty encountered in sanitary engineering is in securing proper operation of sanitary engineering works. The view is rather generally held by city officials that operation is not a function of the engineer and that after works have been constructed

they should be turned over to operating executives. Many of these have neither the training nor the skill to exercise efficiently the duties involved by these works. On the contrary, the operation of such works should be under the direction of the sanitary engineer, for efficiency in operation depends upon the application of knowledge of sanitary science and of the principles of sanitary engineering.

It should be an aim of this division to render assistance, through cooperation with duly constituted official boards and by any other proper means, in the establishment of suitable methods and standards of operation.

The need of broader knowledge is apparent in every subdivision of sanitary engineering. It should be an aim of this division to foster research through its committees, and, wherever practicable, by cooperating with the operators of existing plants and with other agencies organized for this purpose.

Finally, the most important function of this division will be securing among its members a free interchange of information developed by investigation and experience. It is a creditable fact that the engineers of this country are in the habit of cordially exchanging information and rendering assistance to one another. It should be an aim of this division in every manner possible to foster this spirit of cooperation and the securing of high ethical standards in order best to serve the community. Such service will advance the standing of the profession.

STATE HEALTH COMMISSIONER EMPHASIZES NECESSITY FOR USING DIPHTHERIA ANTITOXIN.

In compliance with a special request of the Public Health Council, Dr. Herman M. Biggs, State commissioner of health of New York, recently sent out a letter to all physicians of New York State, calling attention to the necessity for using antitoxin in the treatment of diphtheria. The following is taken from the Health News Service, dated April 6, 1923, issued by the department of health:

Several tragic occurrences due to absolute failure of physicians to give antitoxin in cases of diphtheria have recently come to the attention of the State department of health. The most striking instance was the death of four out of seven members of one family who contracted this disease, the attending physician stating that he "did not believe in antitoxin." Consequently, none was given until after the death of the fourth child, when another physician was called in. Since then, the physician first referred to has reported still another death from diphtheria, although in this case he offered to give antitoxin if the parents wished it. There was reason to believe, however, that the refusal of the parents in this instance

merely reflected the known attitude of their physician toward antitoxin. Another physician who had attended a fatal case, and who also says that he does not believe in antitoxin, has stated that he would not treat diphtheria at all in the future.

While such extreme examples are fortunately few in number, the State department of health holds that they differ in degree only from the less tragic but more numerous cases in which antitoxin is not given in sufficient dosage or early enough in the course of the disease to be effective.

Believing that the situation demands the serious consideration of the medical profession, the State commissioner of health brought the matter to the attention of the Public Health Council, the members of which included Dr. Simon Flexner, of the Rockefeller Institute; Mr. Homer Folks, of the State Charities Aid Association; Prof. Henry N. Ogden, of Cornell University; Dr. T. Mitchell Prudden, of New York; Dr. Jacob Goldberg, of Buffalo; and Dr. Stanton P. Hull, of Petersburg; with Doctor Biggs as chairman. The council thereupon adopted the following resolutions:

Whereas the Public Health Council has been informed by the commissioner of health of numerous deaths which have occurred from diphtheria in different parts of the State due to the failure to use diphtheria antitoxin or to its administration too late in the course of the disease to be effective; and

Whereas in the opinion of the Public Health Council there can at this time be no justification for any physician holding an adverse opinion as to the specific value of diphtheria antitoxin as a therapeutic agent in the treatment of diphtheria: Be it

Resolved, That the commissioner of health be requested again to direct the special attention of the physicians of New York State to these facts and to the unnecessary deaths which have occurred; and be it

Further resolved, That the commissioner of health request the local health officers immediately upon receipt of a report of a case of diphtheria to ascertain whether the regulations of the sanitary code and of the State department of health are being complied with, and whether diphtheria antitoxin has been administered to the patient; and also whether antitoxin has been administered as a prophylactic measure to other members of the family wherein such case exists.

POLLUTED WATER RESULTS FROM LACK OF COOPERATION BETWEEN WATER BOARD AND HEALTH OFFICER.

According to a statement issued April 5, 1923, by the State Department of Health of New York, more than 1,000 persons in an up-State community have recently been made ill as the result of the action of the water board in temporarily changing the source of the public water supply without taking precautions to insure its safety and without notifying the health officer.

On account of a shortage in the regular source of water supply, the superintendent of the waterworks was instructed by the water commissioners to draw an emergency supply from a lake seriously

polluted by sewage from a number of houses and by surface wash from a large area of the village. Eight or nine days later, after his suspicions had been aroused by the large number of complaints of illness which were reaching him, the local health officer learned of what had been done. Upon ascertaining the facts, he immediately telephoned to the State department of health, and an engineer from the division of sanitation was at once dispatched to install an emergency chlorination apparatus, which rendered safe the temporary use of the lake water.

Dr. Hermann M. Biggs, State commissioner of health, in making public the facts regarding this outbreak, emphasized the danger to the public health involved in any lack of cooperation between local water boards and local health officers. "Other communities," he said, "should assure themselves at once that the officials in charge of their public water supplies make it a practice immediately to notify the local health officer of any change in the source of supply. If the water board in this case had promptly informed the health officer of its plans, the State department of health would have supplied the chlorination facilities immediately, and much illness and serious danger to the community would have been avoided. The practice of treating public water supplies with chlorine is now practically universal, and in many instances it is vitally important to make use of this simple, inexpensive, and harmless expedient for the protection of the public health. The water supplies of New York City and many other communities in this State are already safeguarded in this manner."

In order to minimize the danger of such occurrences in the future, the State commissioner of health has caused to be introduced in the legislature, a bill making local health officers ex officio members of local water boards so that they may be fully informed of all conditions affecting the public water supply. Pending the enactment of such legislation, Commissioner Biggs will request the public health council to amend the State sanitary code so as to require local water boards to report to the health authorities any proposed change in the source of supply.

A slight accident occurred in connection with the installation of the chlorine apparatus mentioned above, and is noted here because of its interest to engineers. During the installation, the connecting tube of the apparatus broke while the engineer was working down in a well from which the water was being pumped, and, as a result of the lack of ventilation, his face was slightly burned with chlorine gas. This occurrence discloses the need of special protection to the engineers handling such apparatus under certain unusual conditions, and the Department of Health of New York has decided to purchase a gas mask to provide this protection.

DEATHS DURING WEEK ENDED APRIL 7, 1923.

Summary of information received by telegraph from industrial insurance companies for week ended April 7, 1923, and corresponding week of 1922. (From the Weekly Health Index, April 10, 1923, issued by the Bureau of the Census, Department of Commerce.)

	Week ended Apr. 7, 1923.	Corresponding week, 1922.
Policies in force.....	52, 175, 718	48, 931, 741
Number of death claims.....	12, 108	10, 113
Death claims per 1,000 policies in force, annual rate.....	12.1	10.8

Deaths from all causes in certain large cities of the United States during the week ended April 7, 1923, infant mortality, annual death rate, and comparison with corresponding week of 1922. (From the Weekly Health Index, Apr. 10, 1923, issued by the Bureau of the Census, Department of Commerce.)

City.	Estimated population July 1, 1923.	Week ended Apr. 7, 1923.		Annual death rate per 1,000, corresponding week, 1922.	Deaths under 1 year.		Infant mortality rate, week ended Apr. 7, 1923. ³
		Total deaths.	Death rate. ¹		Week ended Apr. 7, 1923.	Corresponding week, 1922.	
Total.....	29,087,521	8,388	15.0	14.2	1,064	1,110	.....
Akron, Ohio.....	* 208,435	25	6.3	8.5	2	13	24
Albany, N. Y.....	117,375	48	21.3	20.2	3	6	66
Atlanta, Ga.....	222,963	80	18.7	17.8	13	10	.....
Baltimore, Md.....	773,580	259	17.5	15.5	28	23	82
Birmingham, Ala.....	195,901	65	17.3	12.6	14	5	.....
Boston, Mass.....	770,400	254	17.2	17.3	37	42	106
Bridgeport, Conn.....	* 143,555	52	18.9	10.9	10	6	138
Buffalo, N. Y.....	536,718	185	18.0	17.7	33	39	138
Cambridge, Mass.....	111,444	39	18.2	10.8	2	4	36
Camden, N. J.....	124,157	51	21.4	17.1	8	9	132
Chicago, Ill.....	2,886,121	767	13.9	13.4	115	129	.....
Cincinnati, Ohio.....	406,312	151	19.4	16.0	10	15	66
Cleveland, Ohio.....	888,519	219	12.9	11.3	34	33	93
Columbus, Ohio.....	261,082	82	16.4	16.3	8	8	83
Dallas, Tex.....	177,274	57	16.8	12.4	10	4	.....
Dayton, Ohio.....	165,530	36	11.3	13.9	2	3	33
Denver, Colo.....	272,031	79	15.1	17.3	5	5	.....
Detroit, Mich.....	995,668	275	14.4	12.8	34	45	68
Duluth, Minn.....	106,289	21	10.3	.....	5	.....	114
Erie, Pa.....	112,571	26	12.0	17.6	3	8	61
Fall River, Mass.....	120,912	46	19.8	13.0	8	6	114
Flint, Mich.....	117,968	17	7.5	.....	5	.....	99
Fort Worth, Tex.....	143,821	23	8.3	9.5	1	1	.....
Grand Rapids, Mich.....	145,947	42	15.0	15.6	6	10	95
Houston, Tex.....	154,970	33	11.1	9.7	5	2	.....
Indianapolis, Ind.....	342,718	93	14.1	14.6	11	12	85
Jacksonville, Fla.....	100,046	34	17.7	13.9	4	3	.....
Jersey City, N. J.....	309,034	86	14.5	13.8	16	16	107
Kansas City, Mo.....	351,819	103	15.3	17.6	14	11	.....
Los Angeles, Calif.....	666,853	203	15.9	14.7	18	22	67
Louisville, Ky.....	257,671	101	20.4	12.0	10	9	108
Lowell, Mass.....	115,089	42	19.0	8.7	9	7	156
Lynn, Mass.....	102,683	30	15.2	.....	2	.....	53
Memphis, Tenn.....	170,067	82	25.1	10.6	5	1	.....
Milwaukee, Wis.....	484,585	123	13.2	13.8	22	21	109
Minneapolis, Minn.....	409,125	113	14.4	13.1	17	11	92
Nashville, Tenn.....	121,128	60	25.8	14.7	6	3	.....
New Bedford, Mass.....	130,072	39	15.6	13.1	9	11	134
New Haven, Conn.....	172,967	71	21.4	15.3	10	8	130
New Orleans, La.....	404,575	117	15.1	18.3	10	17	.....
New York, N. Y.....	5,927,625	1,637	14.4	14.5	205	210	82
Bronx Borough.....	840,544	175	10.9	10.1	15	20	53
Brooklyn Borough.....	2,156,687	557	13.5	13.5	62	83	66
Manhattan Borough.....	2,567,001	762	17.5	17.8	115	95	112
Queens Borough.....	535,844	105	10.2	9.8	8	9	43
Richmond Borough.....	127,549	38	15.5	18.0	5	3	91
Newark, N. J.....	438,699	105	12.5	13.0	19	14	89

¹ Annual rate per 1,000 population.

² Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1922. Cities left blank are not in the registration area for births.

³ Enumerated population Jan. 1, 1920.

Deaths from all causes in certain large cities of the United States during the week ended April 7, 1923, infant mortality, annual death rate, and comparison with corresponding week of 1922—Continued.

City.	Estimated population July 1, 1923.	Week ended Apr. 7, 1923.		Annual death rate per 1,000, corresponding week, 1922.	Deaths under 1 year.		Infant mortality rate, week ended Apr. 7, 1923.
		Total deaths.	Death rate.		Week ended Apr. 7, 1923.	Corresponding week, 1922.	
Norfolk, Va.....	159,089	33	10.8	8.3	6	4	109
Oakland, Calif.....	240,086	48	10.4	11.4	2	3	26
Omaha, Nebr.....	204,382	44	11.2	15.6	4	10	43
Parkerson, N. J.....	139,579	40	14.9	13.6	1	3	16
Philadelphia, Pa.....	1,922,788	622	16.9	14.8	77	70	100
Pittsburgh, Pa.....	613,442	187	15.9	17.0	35	37	122
Portland, Oreg.....	273,621	71	13.5	12.2	6	6	61
Providence, R. I.....	242,378	85	18.3	16.2	12	14	98
Richmond, Va.....	181,044	53	15.3	20.2	6	13	74
Rochester, N. Y.....	317,867	65	10.7	16.2	10	16	79
St. Louis, Mo.....	893,833	221	14.3	14.2	20	33	.....
St. Paul, Minn.....	241,391	67	14.4	11.7	3	6	28
Salt Lake City, Utah.....	126,241	40	16.5	12.6	4	6	65
San Antonio, Tex.....	184,727	79	22.3	.....	10	.....	.....
San Francisco, Calif.....	539,038	146	14.1	14.0	16	3	97
Seattle, Wash.....	* 315,312	61	10.1	10.3	4	14	35
Spokane, Wash.....	104,573	19	9.5	13.5	1	2	22
Springfield, Mass.....	144,227	45	16.3	10.8	3	4	43
Syracuse, N. Y.....	184,511	45	12.7	15.0	7	9	91
Tacoma, Wash.....	101,731	25	12.8	.....	3	.....	75
Toledo, Ohio.....	268,338	62	12.0	12.2	7	7	71
Trenton, N. J.....	127,390	54	22.1	17.9	4	4	68
Washington, D. C.....	* 437,571	155	18.5	14.7	16	16	91
Wilmington, Del.....	117,728	37	16.4	13.5	5	5	102
Worcester, Mass.....	191,927	52	14.1	15.8	6	12	67
Yonkers, N. Y.....	107,520	24	11.6	10.4	2	7	43
Youngstown, Ohio.....	* 132,358	37	14.6	7.9	6	4	81

* Enumerated population Jan. 1, 1920.

PREVALENCE OF DISEASE.

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

UNITED STATES.

CURRENT STATE SUMMARIES.

Reports for Week Ended April 14, 1923.

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

ALABAMA.		Cases.	CALIFORNIA.		Cases.
Chicken pox.....		34	Cerebrospinal meningitis:		
Dengue.....		5	Los Angeles.....		3
Diphtheria.....		18	Santa Rosa.....		1
Influenza.....		547	Sonoma County.....		1
Malaria.....		47	Diphtheria.....		155
Measles.....		919	Influenza.....		63
Pellagra.....		6	Lethargic encephalitis:		
Pneumonia.....		121	Alameda County.....		1
Scarlet fever.....		7	Long Beach.....		1
Smallpox.....		7	Los Angeles.....		1
Tuberculosis.....		43	Merced County.....		1
Typhoid fever.....		16	San Francisco.....		1
Whooping cough.....		49	Measles.....		726
			Poliomyelitis:		
			Chico.....		1
			Scarlet fever.....		120
			Smallpox.....		28
			Typhoid fever.....		7
			COLORADO.		
			(Exclusive of Denver.)		
			Chicken pox.....		18
			Diphtheria.....		10
			Influenza.....		5
			Measles.....		15
			Mumps.....		11
			Pneumonia.....		17
			Scarlet fever.....		24
			Tuberculosis.....		9
			Typhoid fever.....		2
			Whooping cough.....		30
			CONNECTICUT.		
			Cerebrospinal meningitis.....		2
			Chicken pox.....		48
			Conjunctivitis.....		1
			Diphtheria.....		43
			German measles.....		1
			Influenza.....		16
			Lethargic encephalitis.....		1
			Measles.....		246
			Mumps.....		50

CONNECTICUT—Continued.		Cases.	INDIANA—Continued.		Cases.
Pneumonia (lobar).....		41	Diphtheria.....		37
Scarlet fever.....		87	Influenza.....		12
Smallpox.....		2	Measles.....		818
Tuberculosis (all forms).....		43	Pneumonia.....		23
Whooping cough.....		76	Scarlet fever.....		82
			Smallpox.....		32
			Typhoid fever.....		4
FLORIDA.			IOWA.		
Cerebrospinal meningitis.....		2	Diphtheria.....		18
Dengue.....		1	Scarlet fever.....		94
Diphtheria.....		2	Smallpox.....		13
Influenza.....		8	Typhoid fever.....		1
Malaria.....		9			
Pneumonia.....		4	KANSAS:		
Scarlet fever.....		1	Cerebrospinal meningitis.....		2
Smallpox.....		4	Chicken pox.....		72
Typhoid fever.....		8	Diphtheria.....		31
			German measles.....		1
GEORGIA.			Influenza.....		30
Chicken pox.....		16	Lethargic encephalitis.....		4
Diphtheria.....		3	Malaria.....		2
Dysentery (amebic).....		1	Measles.....		404
Dysentery (bacillary).....		1	Mumps.....		101
Hookworm disease.....		7	Pellagra.....		1
Influenza.....		60	Pneumonia.....		30
Malaria.....		5	Scarlet fever.....		53
Measles.....		130	Smallpox.....		18
Mumps.....		2	Tetanus.....		1
Pneumonia.....		9	Tuberculosis.....		83
Pellagra.....		1	Typhoid fever.....		8
Scarlet fever.....		5	Whooping cough.....		176
Smallpox.....		7			
Tuberculosis (pulmonary).....		5	LOUISIANA.		
Typhoid fever.....		1	Cerebrospinal meningitis.....		1
Whooping cough.....		23	Diphtheria.....		15
			Influenza.....		57
ILLINOIS.			Scarlet fever.....		13
Cerebrospinal meningitis:			Smallpox.....		8
Chicago.....		4	Typhoid fever.....		3
Peoria County.....		1			
Diphtheria:			MAINE.		
Cook County (including Chicago).....		123	Cerebrospinal meningitis.....		1
Chicago.....		109	Chicken pox.....		9
Scattering.....		84	Diphtheria.....		2
Influenza.....		183	German measles.....		30
Lethargic encephalitis:			Influenza.....		30
Macon County.....		1	Measles.....		66
Pneumonia.....		654	Mumps.....		2
Poliomyelitis:			Pneumonia.....		13
Chicago.....		1	Scarlet fever.....		27
Kane County.....		1	Septic sore throat.....		2
Sangamon County.....		1	Smallpox.....		20
Scarlet fever:			Tuberculosis.....		10
Cook County (including Chicago).....		111	Typhoid fever.....		3
Chicago.....		95	Whooping cough.....		46
Will County.....		9			
Scattering.....		91	MARYLAND. ¹		
Smallpox.....		6	Chicken pox.....		94
Typhoid fever.....		11	Diphtheria.....		43
Whooping cough.....		347	German measles.....		3
			Influenza.....		80
INDIANA.			Lethargic encephalitis.....		1
Cerebrospinal meningitis:			Malaria.....		2
Blackford County.....		1	Measles.....		845
Greene County.....		1	Mumps.....		65
Marion County.....		1			

¹ Week ended Friday.

MARYLAND—continued.

	Cases.
Ophthalmia neonatorum.....	2
Pneumonia (all forms).....	170
Polomyelitis.....	2
Scarlet fever.....	91
Septic sore throat.....	1
Tuberculosis.....	82
Typhoid fever.....	8
Whooping cough.....	99

MASSACHUSETTS.

Cerebrospinal meningitis.....	2
Chicken pox.....	124
Conjunctivitis (suppurative).....	8
Diphtheria.....	149
German measles.....	18
Influenza.....	15
Lethargic encephalitis.....	4
Malaria.....	1
Measles.....	901
Mumps.....	275
Ophthalmia neonatorum.....	26
Pneumonia (lobar).....	139
Polomyelitis.....	1
Scarlet fever.....	343
Trachoma.....	4
Tuberculosis (all forms).....	157
Typhoid fever.....	9
Whooping cough.....	373

MICHIGAN.

Diphtheria.....	117
Measles.....	477
Pneumonia.....	185
Scarlet fever.....	310
Smallpox.....	36
Tuberculosis.....	77
Typhoid fever.....	14
Whooping cough.....	243

MINNESOTA.

Cerebrospinal meningitis.....	1
Chicken pox.....	7
Diphtheria.....	36
Influenza.....	2
Measles.....	691
Pneumonia.....	21
Scarlet fever.....	162
Smallpox.....	37
Tuberculosis.....	47
Typhoid fever.....	6
Whooping cough.....	13

MISSISSIPPI.

Diphtheria.....	2
Influenza.....	147
Scarlet fever.....	3
Typhoid fever.....	5

MISSOURI.

Anthrax.....	5
Chicken pox.....	58
Diphtheria.....	61
Epidemic sore throat.....	15
Influenza.....	326
Measles.....	1,814
Mumps.....	28
Pneumonia.....	13

MISSOURI—continued.

	Cases.
Scarlet fever.....	72
Smallpox.....	8
Trachoma.....	8
Tuberculosis.....	63
Typhoid fever.....	7
Whooping cough.....	65

MONTANA.

Diphtheria.....	9
Scarlet fever.....	12
Smallpox.....	17
Typhoid fever.....	1

NEBRASKA.

Chicken pox.....	4
Diphtheria.....	17
Influenza.....	2
Measles.....	24
Mumps.....	1
Pneumonia.....	2
Scarlet fever.....	30
Smallpox.....	1
Whooping cough.....	6

NEW JERSEY.

Cerebrospinal meningitis.....	3
Chicken pox.....	177
Diphtheria.....	123
Influenza.....	33
Measles.....	947
Pneumonia.....	164
Scarlet fever.....	171
Typhoid fever.....	8
Whooping cough.....	136

NEW MEXICO.

Chicken pox.....	20
Diphtheria.....	18
Influenza.....	2
Measles.....	30
Mumps.....	6
Pneumonia.....	8
Scarlet fever.....	8
Smallpox.....	3
Tuberculosis.....	15
Typhoid fever.....	1
Whooping cough.....	2

NEW YORK.
(Exclusive of New York City.)

Cerebrospinal meningitis.....	3
Diphtheria.....	84
Influenza.....	98
Lethargic encephalitis.....	5
Measles.....	1,339
Pneumonia.....	353
Scarlet fever.....	306
Smallpox.....	20
Typhoid fever.....	19
Whooping cough.....	270

NORTH CAROLINA.

Cerebrospinal meningitis.....	1
Chicken pox.....	97
Diphtheria.....	23
German measles.....	5

NORTH CAROLINA—continued.		Cases.	VERMONT—continued.		Cases.
Measles.....		2,217	Scarlet fever.....		13
Ophthalmia neonatorum.....		1	Smallpox.....		1
Scarlet fever.....		22	Typhoid fever.....		1
Smallpox.....		91	Whooping cough.....		35
Typhoid fever.....		5	WASHINGTON.		
Whooping cough.....		479	Cerebrospinal meningitis:		
OREGON.			Whitman County.....		1
Chicken pox.....		10	Chicken pox.....		66
Diphtheria.....		5	Diphtheria:		
Influenza.....		11	Seattle.....		8
Measles.....		1	Scattering.....		9
Pneumonia.....		17	Measles.....		8
Scarlet fever.....		13	Mumps.....		15
Smallpox:			Pneumonia.....		1
Portland.....		17	Scarlet fever.....		34
Scattering.....		12	Smallpox:		
Tuberculosis.....		8	Spokane.....		8
Whooping cough.....		6	Scattering.....		33
SOUTH DAKOTA.			Tuberculosis.....		6
Chicken pox.....		12	Typhoid fever.....		6
Diphtheria.....		9	Whooping cough.....		89
Measles.....		20	WEST VIRGINIA.		
Mumps.....		1	Chicken pox.....		12
Pneumonia.....		4	Diphtheria:		
Scarlet fever.....		27	Charleston.....		102
Smallpox.....		6	Scattering.....		8
Tuberculosis.....		1	Scarlet fever.....		13
Whooping cough.....		4	Typhoid fever.....		3
TEXAS.			WISCONSIN.		
Cerebrospinal meningitis.....		1	Milwaukee:		
Chicken pox.....		48	Chicken pox.....		7
Dengue.....		8	Diphtheria.....		15
Diphtheria.....		35	Measles.....		42
Influenza.....		150	Ophthalmia neonatorum.....		1
Measles.....		75	Pneumonia.....		10
Mumps.....		8	Scarlet fever.....		261
Pellagra.....		1	Tuberculosis.....		31
Pneumonia.....		22	Whooping cough.....		31
Scarlet fever.....		10	Scattering:		
Smallpox.....		14	Chicken pox.....		54
Trachoma.....		1	Diphtheria.....		34
Tuberculosis.....		148	German measles.....		1
Typhoid fever.....		5	Influenza.....		182
Whooping cough.....		94	Lethargic encephalitis.....		2
VERMONT.			Measles.....		90
Chicken pox.....		8	Pneumonia.....		20
Diphtheria.....		1	Scarlet fever.....		217
Measles.....		36	Smallpox.....		22
Mumps.....		16	Tuberculosis.....		37
Pneumonia.....		2	Typhoid fever.....		1
			Whooping cough.....		62

Reports for Week Ended April 7, 1923.

DISTRICT OF COLUMBIA.		Cases.	NORTH DAKOTA.		Cases.
Chicken pox.....		39	Diphtheria.....		12
Diphtheria.....		7	Measles.....		12
Influenza.....		6	Pneumonia.....		9
Measles.....		666	Scarlet fever.....		12
Scarlet fever.....		21	Smallpox.....		1
Tuberculosis.....		24	Tuberculosis.....		2
Whooping cough.....		30	Whooping cough.....		15

¹ Deaths.

SUMMARY OF CASES REPORTED MONTHLY BY STATES.

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week.

State.	Cerebrospinal meningitis.	Diphtheria.	Influenza.	Malaria.	Measles.	Pellagra.	Poliomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
February, 1923										
Ohio.....	4	773	2,946	2	5,275		2	1,715	203	33
Oklahoma.....		45	1,877	262	123		1	41	175	6
March, 1923.										
Connecticut.....	9	259	765		1,328		1	372	6	9
Louisiana.....	5	103	1,710	27	50	3	2	29	120	35
Massachusetts.....	11	790	486	1	3,612		5	1,569		42

Cases of Certain Communicable Diseases Reported for the Month of January, 1923, by State Health Officers.

State.	Number of cases reported.								
	Chicken pox.	Diphtheria.	Measles.	Mumps.	Scarlet fever.	Smallpox.	Tuberculosis.	Typhoid fever.	Whooping cough.
Alabama.....	95	108	66	10	71	18	140	38	121
Arizona.....		13			17	14	108	3	
Arkansas.....	231	68	120	9	15	32	50	39	56
California.....	778	924	737	83	756	97	811	57	517
Colorado.....	315	347	30	100	269	47	27	12	166
Connecticut.....	202	191	1,575	270	362	10	107	5	303
Delaware.....	47	21	405	3	53		19	3	18
District of Columbia ¹									
Florida.....	46	48	13	4	13	55	30	38	13
Georgia ²									
Idaho.....	65	13	1		30	28	3	1	6
Illinois.....	1,856	1,697	2,154	733	1,556	367	1,775	65	1,103
Indiana.....		571	800		417	251	90	10	
Iowa ¹									
Kansas.....	476	461	146	177	591	30	149	15	134
Kentucky ²									
Louisiana.....	19	148	17	2	22	86	197	72	71
Maine.....	108	46	221		131	6	42	6	347
Maryland.....	715	397	764	234	395		213	24	530
Massachusetts.....	990	890	3,624	839	1,216		554	38	1,532
Michigan.....	1,149	912	619	124	1,614	443	397	57	762
Minnesota.....	793	466	680		1,239	398	313	15	80
Mississippi.....	369	99	2,303	129	33	41	226	47	702
Missouri ²									
Montana.....	114	62	38		100	47	81	8	12
Nebraska.....	126	131	38	56	277	20	25	7	36
Nevada ²									
New Hampshire ²									
New Jersey.....	994	886	5,674		918		394	21	598
New Mexico ¹									
New York.....	2,714	1,673	3,487	1,615	2,482	64	1,598	142	1,879
North Carolina.....	425	261	1,678		207	351	30	30	909
North Dakota.....	44	57	41		209	48	9	5	35
Ohio.....	1,633	1,293	5,651	164	2,116	226	493	69	836
Oklahoma.....	52	28	21	3	50	97	15	5	53
Oregon.....	147	104	24	13	69	83	79	5	25
Pennsylvania.....		1,661	20,620		1,813	4	616	153	
Rhode Island.....	47	75	819	14	53		46	6	25
South Carolina.....	29	258	81		26	31	32	9	14
South Dakota.....	105	78	62	9	225	56	19	8	
Tennessee ²									
Texas ²									
Utah ²									
Vermont.....	293	23	126	45	83	14	21	6	286
Virginia.....	897	454	1,289		433	22	231	30	
Washington.....	414	116	18	80	250	188	74	36	167
West Virginia.....	223	231	544	13	184	34	37	25	64
Wisconsin.....	936	499	5,715		1,348	226	215	23	660
Wyoming ¹									

¹ Reports not received at time of going to press.

² Reports received weekly.

* Reports received annually.

Reported Cases per 1,000 Population (Annual Basis) for the Month of January, 1923.

State.	Case rates per 1,000 population.								
	Chicken pox.	Diphtheria.	Measles.	Mumps.	Scarlet fever.	Smallpox.	Tubercu- losis.	Typhoid fever.	Whooping cough.
Alabama.....	0.46	0.52	0.32	0.05	0.34	0.09	0.68	0.18	0.39
Arizona.....		.40			.53	.43	3.34	.69	..
Arkansas.....	1.50	.41	.78	.06	.10	.21	.32	.25	.36
California.....	2.41	2.86	2.58	.26	2.34	.30	2.51	.18	1.60
Colorado.....	3.75	4.13	.36	1.19	3.20	.56	.32	.14	1.97
Connecticut.....	1.61	1.52	12.56	2.15	2.69	.08	.85	.04	2.42
Delaware.....	2.40	1.07	20.69	.15	2.71		.97	.15	.92
District of Columbia ¹									
Florida.....	.52	.54	.15	.05	.15	.62	.34	.43	.15
Georgia ²									
Idaho.....	1.63	.33	.03		.75	.70	.08	.03	.15
Illinois.....	3.22	2.94	3.73	1.27	2.70	.64	3.08	.11	1.91
Indiana.....		2.23	3.13		1.63	.99	.35	.04	..
Iowa ¹									
Kansas.....	3.12	3.02	.96	1.16	3.37	.20	.98	.10	.88
Kentucky ²									
Louisiana.....	.12	.94	.11	.01	.14	.55	1.25	.46	.45
Maine.....	1.61	.70	3.35		2.03	.09	.64	.09	5.26
Maryland.....	5.59	3.11	5.98	1.83	3.10		1.67	.19	4.54
Massachusetts.....	2.89	2.60	10.59	2.45	3.55		1.62	.11	4.48
Michigan.....	3.40	2.70	1.83	.37	4.78	1.31	1.18	.17	2.6
Minnesota.....	3.74	2.20	3.20		5.84	1.87	1.47	.67	.38
Mississippi.....	2.43	.65	15.16	.85	.22	.27	1.49	.31	4.62
Missouri ²									
Montana.....	2.20	1.19	.73		1.93	.91	1.56	.15	.23
Nebraska.....	1.11	1.16	.34	.49	2.45	.18	.22	.06	.32
Nevada ²									
New Hampshire ²									
New Jersey.....	3.46	3.69	19.77		3.20		1.37	.07	2.08
New Mexico ¹									
New York.....	2.95	1.82	3.79	1.75	2.69	.67	1.74	.15	2.04
North Carolina.....	1.86	1.14	7.35		.91	1.54		.13	3.98
North Dakota.....	.77	1.00	.72		3.66	.84	.16	.09	.58
Ohio.....	3.14	2.49	10.88	.32	4.07	.44	.95	.13	1.65
Oklahoma.....	.28	.15	.11	.62	.27	.53	.03	.03	..
Oregon.....	2.10	1.49	.34	.19	.99	1.19	1.13	.07	.36
Pennsylvania.....		2.15	26.68		2.35	.01	.80	.20	..
Rhode Island.....	.88	1.41	15.39	.26	1.00		.86	.11	.47
South Carolina.....	.20	1.74	.55		.18	.21	.22	.06	.09
South Dakota.....	1.89	1.40	1.11	.16	4.04	1.01	.34	.14	..
Tennessee ²									
Texas ²									
Utah ²									
Vermont.....	9.82	.77	4.22	1.51	2.78	.47	.70	.20	9.59
Virginia.....	4.40	2.23	6.33		2.13	.11	1.13	.15	..
Washington.....	3.40	.95	.15	.66	2.05	1.54	.61	.30	1.37
West Virginia.....	1.69	1.75	4.13	.10	1.40	.26	.28	.19	.49
Wisconsin.....	4.02	2.14	24.56		5.79	.97	.92	.10	2.84
Wyoming ¹									

¹ Reports not received at time of going to press.² Reports received annually.² Reports received weekly.

SMALLPOX.

Outbreak at Standish, Me.

An outbreak of mild smallpox was reported April 12, 1923, at Standish, Me. Measures for the control of the disease are being taken.

CITY REPORTS FOR WEEK ENDED MARCH 31, 1923.

ANTHRAX.

City.	Cases.	Deaths.
Pennsylvania: Philadelphia.....	2	..

CITY REPORTS FOR WEEK ENDED MARCH 31, 1923—Continued.

CEREBROSPINAL MENINGITIS.

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

City.	Median for previous years.	Week ended Mar. 31, 1923.		City.	Median for previous years.	Week ended Mar. 31, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
California:				Ohio:			
Los Angeles.....	0	1	1	Akron.....	0	1	.....
Sacramento.....	0	1	.....	Ashtabula.....	0	.....	1
San Bernardino.....	0	.....	1	Cleveland.....	1	1	.....
District of Columbia:	0	.....	.....	Sandusky.....	0	1	.....
Washington.....	0	1	.....	Pennsylvania:			
Illinois:				Harrisburg.....	0	1	.....
Kewanee.....	0	1	1	Reading.....	0	1	.....
Indiana:				Rhode Island:			
Elwood.....	0	1	1	Providence.....	0	1	1
Louisiana:				Tennessee:			
New Orleans.....	0	.....	1	Chattanooga.....	0	2	1
Maine:				Texas:			
Bath.....	0	1	1	Fort Worth.....	0	1	1
Maryland:				San Antonio.....	0	.....	1
Baltimore.....	1	1	.....	Utah:			
Massachusetts:				Salt Lake City.....	0	.....	1
Boston.....	0	1	1	West Virginia:			
Framingham.....	0	.....	1	Huntington.....	0	.....	1
New Jersey:				Wisconsin:			
Jersey City.....	0	1	.....	Milwaukee.....	1	2	2
Morristown.....	0	1	1				
New York:							
Amsterdam.....		1	1				
New York.....	12	8	5				
Rochester.....	0	1	.....			

DIPHTHERIA.

See p. 855; also Current State summaries, p. 842, and Monthly summaries by States, p. 846.

INFLUENZA.

City.	Cases.		Deaths, week ended Mar. 31, 1923.	City.	Cases.		Deaths, week ended Mar. 31, 1923.
	Week ended Apr. 1, 1922.	Week ended Mar. 31, 1923.			Week ended Apr. 1, 1922.	Week ended Mar. 31, 1923.	
Alabama:				Connecticut:			
Anniston.....		3	.....	Bridgeport.....	4	1	.....
Birmingham.....	1	23	2	Greenwich.....		1	.....
Dothan.....		14	.....	Hartford.....	1	.....	.....
Mobile.....		.....	2	Meriden.....	4	.....	.....
Montgomery.....	3	.....	.....	New Britain.....	12	.....	.....
Tuscaloosa.....		1	.....	New Haven.....		1	.....
Arkansas:				Waterbury.....	2	.....	.....
Fort Smith.....		2	.....	District of Columbia:			
Little Rock.....	12	9	.....	Washington.....	6	6	6
California:				Florida:			
Alameda.....	1	.....	.....	Tampa.....	9	.....	.....
Bakersfield.....		.....	1	Georgia:			
Berkeley.....		2	.....	Atlanta.....	43	9	.....
Long Beach.....	1	6	.....	Augusta.....	20	.....	.....
Los Angeles.....	119	29	6	Rome.....	106	1	.....
Oakland.....	13	1	.....	Savannah.....		.....	1
Pasadena.....	3	5	2	Illinois:			
Riverside.....	21	.....	.....	Chicago.....	63	77	11
Sacramento.....		1	2	Decatur.....	3	.....	.....
San Diego.....	23	3	3	East St. Louis.....		1	.....
San Francisco.....	8	.....	.....	Oak Park.....	2	.....	.....
Santa Ana.....	6	7	.....	Quincy.....	4	1	.....
Santa Barbara.....		.....	1	Springfield.....		2	2
Stockton.....	1	6	2	Indiana:			
Colorado:				Fort Wayne.....		.....	1
Denver.....		.....	2	Gary.....		.....	1
Pueblo.....		.....	1	Indianapolis.....		.....	4

CITY REPORTS FOR WEEK ENDED MARCH 31, 1923—Continued.

INFLUENZA—Continued.

City.	Cases.		Deaths, week ended Mar. 31, 1923.	City.	Cases.		Deaths, week ended Mar. 31, 1923.
	Week ended Apr. 1, 1922.	Week ended Mar. 31, 1923.			Week ended Apr. 1, 1922.	Week ended Mar. 31, 1923.	
Indiana—Continued.				New York—Continued.			
Kokomo.....			1	Amsterdam.....		6	
Terre Haute.....			1	Auburn.....	2		
Kansas:				Binghamton.....	30		
Kansas City.....			1	Buffalo.....	19		
Lawrence.....		2		Cohoes.....	2		
Pittsburg.....	2			Dunkirk.....		27	2
Salina.....	63			Elmira.....	2		
Kentucky:				Jamestown.....	3		
Covington.....			1	Lockport.....	1		
Louisville.....	4	1	1	Mount Vernon.....	2	1	
Louisiana:				New York.....	99	169	30
Baton Rouge.....	4			Newburgh.....			1
New Orleans.....	23	3	2	North Tonawanda.....	2		
Maryland:				Poughkeepsie.....	3		
Baltimore.....	47	31	8	Rochester.....		1	1
Cumberland.....	3	8	1	Rome.....	6		
Massachusetts:				Saratoga Springs.....	38	2	
Attleboro.....		2		Schenectady.....	3	3	
Belmont.....	1			Syracuse.....	3		1
Beverly.....	1			Watertown.....		3	
Boston.....	26	5	4	North Carolina:			
Braintree.....	3			Wilmington.....	17		
Cambridge.....	1			Ohio:			
Everett.....	2	8		Akron.....	5	2	
Fall River.....		1		Ashtabula.....		1	
Lawrence.....	1			Cambridge.....	1		
Lynn.....		2	1	Cincinnati.....		4	9
Malden.....	4			Cleveland.....	11	4	6
Newburyport.....	1			Columbus.....	12		3
North Adams.....	1			Dayton.....	1		
Pittsfield.....	2			East Cleveland.....	1		
Saugus.....	4			Ironton.....	1		
Somerville.....		1		Mansfield.....			2
Springfield.....	3	2	2	Tiffin.....		1	
West Springfield.....			1	Toledo.....			4
Winthrop.....	2			Youngstown.....	1	1	3
Worcester.....			2	Oregon:			
Michigan:				Portland.....	2		7
Battle Creek.....		1		Pennsylvania:			
Detroit.....	17	5	3	Philadelphia.....	14	20	22
Flint.....		1		Rhode Island:			
Highland Park.....	1			Cumberland.....		1	1
Kalamazoo.....		6	3	Providence.....	2		1
Marquette.....	6			South Carolina:			
Pontiac.....		1	1	Charleston.....			2
Port Huron.....	2			Greenville.....	37		
Minnesota:				Tennessee:			
Minneapolis.....			1	Memphis.....			6
Rochester.....	1			Nashville.....			4
St. Paul.....			2	Texas:			
Missouri:				Austin.....		12	
Kansas City.....	9	8	5	Dallas.....		1	5
St. Joseph.....	1	1		El Paso.....			4
St. Louis.....	4			Fort Worth.....	3	3	
Springfield.....			2	Houston.....	20		
Montana:				San Antonio.....			1
Missoula.....	1			Utah:			
Nevada:				Provo.....	10		
Reno.....	14	35		Salt Lake City.....			1
New Jersey:				Virginia:			
Clifton.....	1			Charlottesville.....			1
Englewood.....	1			Petersburg.....	8		
Garfield.....	1			Richmond.....			1
Harrison.....		6		Roanoke.....			1
Jersey City.....	3			West Virginia:			
Kearny.....	7	3		Charleston.....	3		
Long Branch.....		1		Fairmont.....	3		
Montclair.....	1			Wisconsin:			
Newark.....	34	26	3	Fond du Lac.....	2		
Orange.....		1		La Crosse.....	1		
Passaic.....	8			Manitowoc.....	7		
Trenton.....	1	1	2	Sheboygan.....			2
West Orange.....	1			Wyoming:			
New York:				Casper.....	28		
Albany.....	36	4					

CITY REPORTS FOR WEEK ENDED MARCH 31, 1923—Continued.

LEPROSY.

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

LETHARGIC ENCEPHALITIS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
West Virginia:			Wisconsin:		
Huntington.....		1	Eau Claire.....	1	
			Racine.....	1	

MALARIA.

Alabama:			Illinois:		
Anniston.....	1		Chicago.....	1	
Dothan.....	4		New York:		
Mobile.....	1		New York.....	1	
Tuscaloosa.....	1				

MEASLES.

See p. 855, also Current State summaries, p. 842, and Monthly summaries by States, p. 846.

PELLAGRA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			Louisiana:		
Birmingham.....	1	1	New Orleans.....	1	1
Mobile.....	1		Maryland:		
Florida:			Baltimore.....		1
St. Petersburg.....		1	Texas:		
Georgia:			Fort Worth.....	1	1
Atlanta.....	1		Virginia:		
			Petersburg.....		1

PNEUMONIA (ALL FORMS).

Alabama:			Connecticut—Continued.		
Anniston.....	5		Milford.....		1
Birmingham.....	20	15	New Haven.....		5
Dothan.....	4		District of Columbia:		
Mobile.....	1		Washington.....		31
Tuscaloosa.....	1		Florida:		
Arkansas:			Tampa.....		1
Little Rock.....	9		Georgia:		
California:			Atlanta.....		9
Bakersfield.....		2	Savannah.....		3
Berkeley.....	3	2	Illinois:		
Long Beach.....	3	1	Alton.....		1
Los Angeles.....	49	22	Aurora.....		2
Oakland.....	8	3	Bloomington.....		1
Pasadena.....		2	Champaign.....	1	
Riverside.....	5	2	Chicago.....	307	102
Sacramento.....	5	2	Cicero.....	2	
San Bernardino.....		2	East St. Louis.....		1
San Diego.....	6	5	Elgin.....	1	
San Jose.....		1	Evanston.....	1	
Santa Barbara.....		1	Galesburg.....		2
Stockton.....		2	Jacksonville.....		2
Colorado:			Kewanee.....	3	
Denver.....		11	Mattoon.....	1	
Fueblo.....	1		Peoria.....		8
Connecticut:			Quincy.....	7	1
Bridgeport.....	3	2	Springfield.....	13	3
Bristol.....		1	Indiana:		
Fairfield.....		1	Anderson.....		2
Hartford.....	7		Crawfordsville.....		1

CITY REPORTS FOR WEEK ENDED MARCH 31, 1923—Continued.

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Indiana—Continued.			Michigan—Continued.		
Fort Wayne		4	Benton Harbor		4
Gary		4	Detroit	84	35
Hammond		3	Flint		5
Indianapolis		14	Grand Rapids	5	2
Kokomo		2	Hamtramck		4
La Fayette	1		Highland Park	8	4
Logansport		1	Jackson		4
Mishawaka		1	Kalamazoo	5	3
Muncie		1	Marquette	1	
New Castle		1	Muskegon	1	
South Bend		1	Pontiac	2	1
Terre Haute		3	Port Huron	2	1
Iowa:			Sault St. Marie		2
Burlington	5	2	Minnesota:		
Marshalltown	2	1	Duluth		6
Muscatine		1	Minneapolis		17
Kansas:			Rochester		1
Atchison	1		St. Paul		11
Coffeyville	2		Missouri:		
Kansas City	7		Cape Girardeau		1
Parsons	1		Independence	1	
Topeka		2	Kansas City	15	10
Wichita		2	St. Joseph		3
Kentucky:			Springfield		6
Covington		3	Montana:		
Henderson	2		Billings	1	
Louisville	18	14	Great Falls		2
Louisiana:			Helena		1
New Orleans	19	13	Missoula	3	2
Maine:			Nebraska:		
Biddeford		3	Lincoln	2	1
Lewiston		2	Omaha		14
Portland		6	New Hampshire:		
Sanford	4	3	Concord		3
Maryland:			Keene		2
Baltimore	74	40	New Jersey:		
Cumberland	4	1	Atlantic City		4
Frederick	1		Belleville	3	
Massachusetts:			Bloomfield	2	
Adams		1	Clifton	1	
Arlington		1	East Orange	3	
Belmont		1	Elizabeth		7
Beverly		2	Englewood		2
Boston		36	Garfield	3	
Braintree		1	Harrison	1	
Brookline	3	1	Hoboken		4
Cambridge	7	4	Jersey City	6	
Chelsea	1		Kearny	3	1
Chicopee		2	Morristown		2
Everett	2		Newark	59	15
Fall River		6	Orange	4	1
Fitchburg		1	Passaic	1	
Frammingham		2	Paterson	7	
Greenfield		1	Perth Amboy		1
Haverhill	2		Plainfield		2
Holyoke	3	2	Trenton	7	6
Lawrence		2	West New York		1
Lowell		7	New York:		
Lynn		4	Albany	19	
Malden		4	Amsterdam	1	
Medford		2	Auburn	4	
Melrose		1	Buffalo	45	17
New Bedford		10	Dunkirk		3
Newburyport	2		Elmira	11	3
Newton		1	Geneva		1
Northridge		1	Hornell	3	
Pittsfield	2	1	Hudson	1	
Plymouth		1	Ithaca	3	
Quincy	4		Jamestown		3
Somerville		4	Lockawanna	2	1
Springfield	12	1	Lockport	2	1
Wakefield		1	Mount Vernon	3	2
Watertown	2		New York	355	203
Woburn		1	Newburgh	1	
Worcester		6	Niagara Falls	8	
Michigan:			North Tonawanda		1
Alpena	1		Olean		1
Ann Arbor		1	Peekskill		2
Battle Creek	2		Port Chester	4	1

CITY REPORTS FOR WEEK ENDED MARCH 31, 1923—Continued.

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
New York—Continued.			Rhode Island—Continued.		
Rochester.....	13	4	Pawtucket.....		1
Rome.....		2	Providence.....		12
Saratoga Springs.....		2	Woonsocket.....		3
Schenectady.....	17	5	South Carolina:		
Syracuse.....	9	7	Columbia.....		6
Troy.....	7	3	Greenville.....		1
Watertown.....	1	1	Tennessee:		
White Plains.....		1	Memphis.....		17
Yonkers.....		3	Nashville.....		13
North Carolina:			Texas:		
Durham.....		1	Beaumont.....		2
Greensboro.....		3	Corpus Christi.....		1
Raleigh.....		1	Dallas.....		7
Wilmington.....		1	El Paso.....		5
Ohio:			Fort Worth.....		5
Akron.....	8		Houston.....		7
Bellaire.....	1		San Antonio.....		6
Bucyrus.....		1	Waco.....		2
Cambridge.....	2		Utah:		
Cincinnati.....		10	Salt Lake City.....		7
Cleveland.....	66	27	Vermont:		
Cleveland Heights.....	1		Burlington.....		1
Columbus.....		9	Virginia:		
Dayton.....	2		Alexandria.....		2
East Cleveland.....	3		Norfolk.....		6
East Youngstown.....		1	Petersburg.....		1
Findlay.....		1	Portsmouth.....		1
Kenmore.....	1		Richmond.....		4
Lima.....		1	Roanoke.....	4	
Lorain.....	2		West Virginia:		
Mansfield.....	3		Charleston.....		1
Middletown.....		1	Clarksburg.....		2
Piqua.....		1	Parkersburg.....		1
Salem.....		3	Wheeling.....		1
Sandusky.....		2	Wisconsin:		
Springfield.....		2	Ashland.....		2
Tiffin.....	1		Beloit.....	1	
Toledo.....		7	Eau Claire.....	1	
Youngstown.....		5	Fond du Lac.....		4
Zanesville.....		3	Janesville.....		2
Oklahoma:			Kenosha.....		1
Oklahoma.....		4	Madison.....	2	1
Oregon:			Milwaukee.....	7	
Portland.....		17	Oshkosh.....		3
Pennsylvania:			Racine.....		2
Philadelphia.....		95	Sheboygan.....		1
Rhode Island:			Wyoming:		
Cumberland.....		1	Cheyenne.....		1

POLIOMYELITIS (INFANTILE PARALYSIS).

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

City.	Median for previous years.	Week ended Mar. 31, 1923.	
		Cases.	Deaths.
Maine:			
Portland.....	0	1	
Michigan:			
Kalamazoo.....	0	1	

CITY REPORTS FOR WEEK ENDED MARCH 31, 1923—Continued.

RABIES IN ANIMALS.

City.	Cases.	City.	Cases.
California:		Missouri:	
Los Angeles.....	18	Kansas City.....	1
Pasadena.....	1	Tennessee:	
Kentucky:		Memphis.....	2
Louisville.....	1	Texas:	
Massachusetts:		Dallas.....	2
Braintree.....	1	Virginia:	
Methuen.....	1	Alexandria.....	1

SCARLET FEVER.

See p. 855; also Current State summaries, p. 842, and Monthly summaries by States, p. 846.

SMALLPOX.

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

City.	Median for previous years.	Week ended Mar. 31, 1923.		City.	Median for previous years.	Week ended Mar. 31, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
California:				North Carolina—Contd.			
Los Angeles.....	2	1		Greensboro.....	0	9	
Colorado:				Wilmington.....	0	1	
Denver.....	18	3	2	Winston-Salem.....	1	29	
Florida:				Ohio:			
St. Petersburg.....		4		Columbus.....	0	6	
Georgia:				Dayton.....	2	3	
Atlanta.....	4	3		Middletown.....	0	2	
Illinois:				Toledo.....	5	9	
Chicago.....	4	2		Oklahoma:			
Springfield.....	3	1		Oklahoma.....	6	1	
Indiana:				Tulsa.....	1	5	
Anderson.....	0	2		Oregon:			
Elwood.....	0	1		Portland.....	4	10	
Fort Wayne.....	0	4		Pennsylvania:			
Gary.....	1	18		Pittsburgh.....	0	1	
Indianapolis.....	7	2		Steelton.....	0	1	
Newcastle.....	0	2		South Carolina:			
Iowa:				Greenville.....	0	2	
Burlington.....	1	2		Tennessee:			
Davenport.....	3	3		Chattanooga.....	3	9	
Des Moines.....	3	7		Knoxville.....	2	22	
Kansas:				Memphis.....	3	2	
Atchison.....	2	2		Texas:			
Louisiana:				Beaumont.....	0	1	
New Orleans.....	7	6		Dallas.....	9	1	
Michigan:				Fort Worth.....	2	1	
Battle Creek.....	0	2		Waco.....	1	2	
Detroit.....	3	1		Washington:			
Ironwood.....	0	1		Everett.....	0	1	
Minnesota:				Seattle.....	3	15	
Duluth.....	1	6		Vancouver.....	0	4	
Faribault.....	0	1		Yakima.....	4	1	
Minneapolis.....	13	3		Wisconsin:			
St. Paul.....	8	6		Beloit.....	0	1	
Missouri:				Eau Claire.....	0	1	
St. Louis.....	6	2		Green Bay.....	0	1	
Montana:				Kenosha.....	0	1	
Great Falls.....	1	3		Madison.....	1	2	
Missoula.....	0	1		Oshkosh.....	3	3	
North Carolina:				Racine.....	0	5	
Durham.....	2	6		Superior.....	1	7	

CITY REPORTS FOR WEEK ENDED MARCH 31, 1923—Continued.

TETANUS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			New York:		
Mobile.....		1	New York.....	1	
California:			Syracuse.....		1
Long Beach.....	1	1			

TUBERCULOSIS.

See p. 855; also Current State summaries, p. 842.

TYPHOID FEVER.

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

City.	Median for previous years.	Week ended Mar. 31, 1923.		City.	Median for previous years.	Week ended Mar. 31, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
California:				New Jersey:			
Eureka.....	0	1		East Orange.....	0	1	
Oakland.....	0	2		Jersey City.....	0	1	
Stockton.....	0	3		Trenton.....	0		1
Connecticut:				New York:			
New Haven.....	0	1	1	New York.....	7	9	3
Georgia:				Olean.....	0	1	
Atlanta.....	0		1	Troy.....	0	1	
Brunswick.....	0	1		Watertown.....	0		1
Savannah.....	0	1		North Carolina:			
Illinois:				Greensboro.....	0	1	
Chicago.....	3	1	1	Ohio:			
Quincy.....	0	1		Akron.....	0	1	
Springfield.....	0	1		Alliance.....	0	1	
Indiana:				Cleveland.....	1	2	
Hammond.....	2	3	1	Elyria.....	0		
Kentucky:				Oregon:			
Covington.....	0	11	3	Portland.....	0	1	
Louisville.....	1	2		Pennsylvania:			
Louisiana:				Coatesville.....	0	1	
New Orleans.....	2	2	1	New Kensington.....	0	1	
Maine:				Norristown.....	0	1	
Auburn.....	0	1		Philadelphia.....	6	4	1
Maryland:				Shamokin.....	0	1	
Baltimore.....	4	2		Wilkes-Barre.....	0	1	
Massachusetts:				South Carolina:			
Beverly.....	0	1		Charleston.....	0		
Boston.....	2	5		Virginia:			
Fall River.....	0	1		Alexandria.....	0		1
Lawrence.....	0	4		Portsmouth.....	0	1	
Lowell.....	0		1	West Virginia:			
Newburyport.....	0	1		Charleston.....	0	2	1
Minnesota:				Huntington.....	0	1	1
St. Paul.....	1	2		Wheeling.....	0	1	
Montana:				Wisconsin:			
Helena.....			1	Milwaukee.....	1	1	
				Stevens Point.....	0	1	

CITY REPORTS FOR WEEK ENDED MARCH 31, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Alabama:										
Anniston.....	17,734				2				4	
Birmingham.....	178,806	65	3		80		2		16	10
Dothan.....	10,094	4								2
Mobile.....	60,777	18	1							1
Tuscaloosa.....	11,996		1		12					
Arkansas:										
Little Rock.....	65,142		1		52				4	
North Little Rock.....	14,048				7		1		1	
California:										
Alameda.....	28,806	3	1		2				2	
Bakersfield.....	18,638	13							1	
Berkeley.....	56,036	24			21		6			1
Eureka.....	12,923	7			1		5			1
Glendale.....	13,536	6								2
Long Beach.....	55,593	25	6		36		4			1
Los Angeles.....	576,673	242	60	3	151	1	40	1	55	33
Oakland.....	216,261	50	9		104	1	12		2	4
Pasadena.....	45,354	20			2		7		2	1
Richmond.....	16,843	2					1			
Riverside.....	19,341	16	1				2		4	2
Sacramento.....	65,908	30	3	1			3		2	3
San Bernardino.....	18,721	10	2		7		4		3	2
San Diego.....	74,683	36	2		137		8	1	3	3
San Jose.....	39,042	8			3		1		1	
Santa Ana.....	15,485	3			16					
Santa Barbara.....	19,441	11								
Stockton.....	40,296	21	2		52	1			1	
Colorado:										
Denver.....	256,491	89	20	1	68		14			13
Greeley.....	10,958	3								1
Pueblo.....	43,050	12	1	1					3	1
Trinidad.....	10,906						1			
Connecticut:										
Bridgeport.....	143,555	32	7		14	1	2		7	2
Bristol.....	20,620	3	1						4	
Fairfield (town).....	11,476	1	2		3					
Greenwich (town).....	22,123						3		1	
Hartford.....	138,036	57	14	1			6		3	2
Manchester (town).....	18,370	8							1	
Milford (town).....	10,193	4	1		4		1			
New Haven.....	162,537	41	3		27		5		5	1
New London.....	25,688	5			17				1	
District of Columbia:										
Washington.....	437,571	161	13	1	417	6	31	1	33	16
Florida:										
Key West.....	18,749	3								
St. Petersburg.....	14,237	11							1	
Tampa.....	51,608	15			1					1
Georgia:										
Albany.....	11,555	2	4	2	44					
Atlanta.....	200,616	59	4				8		1	2
Brunswick.....	14,413									
Macon.....	52,995		1		300					
Rome.....	13,252						1			
Savannah.....	83,232	22	1							
Valdosta.....	10,783	0								
Idaho:										
Boise.....	21,383	3					1	1		
Illinois:										
Alton.....	24,682	9	1		19		1			1
Aurora.....	36,397	12	3	1	13		1		3	2
Boonington.....	28,725	12	2		8		1		1	2
Centralia.....	12,491	3			4					
Champaign.....	15,873				8				7	
Chicago.....	2,701,705	751	126	10	793	7	68	5	261	59
Cicero.....	44,995	7	2		12				1	
East St. Louis.....	66,767	20	2		25	1				5
Elgin.....	27,454	4			5		1		2	
Evanston.....	37,234	11	1		53		4		2	
Forest Park.....	10,768				1					
Galesburg.....	23,834	5	1		12				1	
Jacksonville.....	15,713	18	1		1				1	2
Kewanee.....	16,026	9			1		1		1	

CITY REPORTS FOR WEEK ENDED MARCH 31, 1923—Continued.

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

City.	Popu-lation Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber-culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Illinois—Continued.										
Mattoon.....	13,552	2			7					
Oak Park.....	39,858	9	2		5		5		1	1
Peoria.....	76,121	20			56		8			
Quincy.....	35,978	11								
Springfield.....	59,183	26			50	1				
Indiana:										
Anderson.....	29,707	4								
Crawfordsville.....	10,139	3					1			
East Chicago.....	35,967	8	1		1		1			
Elwood.....	10,790	7								1
Fort Wayne.....	86,549	25	4				5			
Frankfort.....	11,585	1	1						1	
Gary.....	55,378	17	1		34		7			1
Hammond.....	36,004	24	1		9	1	4			
Huntington.....	14,000	0								
Indianapolis.....	314,194	116	3	1	88		1		18	10
Kokomo.....	30,067	5					1			
La Fayette.....	22,486	13			1				2	1
Logansport.....	21,626	7			14					
Michigan City.....	19,457	3								1
Mishawaka.....	15,195	5			1		9			1
Muncie.....	36,524	15	2		2					1
Newcastle.....	14,458	4			2		1			
South Bend.....	70,983	7		1	6		6		1	1
Terre Haute.....	66,083	34	1		85	1	3			2
Iowa:										
Burlington.....	24,057	10	3				1		2	
Clinton.....	24,151		1							
Davenport.....	56,727				1		3			
Des Moines.....	126,468		2				50			
Dubuque.....	39,141		2		41		2			
Iowa City.....	11,267						3			
Marshalltown.....	15,731	1	2				4			
Mason City.....	20,065	9	3							
Muscatine.....	16,068	4			7					
Ottumwa.....	23,003		1							
Sioux City.....	71,227	0	4							
Waterloo.....	36,230		1		33		5			
Kansas:										
Atchison.....	12,630		1							
Coffeyville.....	13,452	4			3		1			
Fort Scott.....	10,093	5			1					
Kansas City.....	101,177		4		9		3		3	
Lawrence.....	12,456	3							2	1
Leavenworth.....	16,912								2	2
Parsons.....	16,028	5			3					
Topeka.....	50,022	11	2				4			1
Wichita.....	72,217	28	2		1	1	3			1
Kentucky:										
Covington.....	57,121	21					3			1
Henderson.....	12,169	4							6	
Louisville.....	234,891	83	4	1	40		2		34	5
Louisiana:										
New Orleans.....	387,219	130	11		9		3	1	31	15
Maine:										
Auburn.....	16,985	3			1		7			
Bangor.....	25,978		2		1		2		1	
Bath.....	14,731	2								
Biddeford.....	18,008	7								
Lewiston.....	31,791	15			6		2			1
Portland.....	69,272	24	1		45		2			2
Sanford (town).....	10,691	6								
Waterville.....	13,351						1			
Maryland:										
Baltimore.....	733,826	225	27		279		57	2	18	10
Cumberland.....	29,837	18			92				1	1
Frederick.....	11,066	5	1						1	
Massachusetts:										
Adams (town).....	12,967	2								
Amesbury (town).....	10,036	3	1		2					
Arlington (town).....	18,665	3	2	1	37		1		2	
Attleboro.....	19,731	6			4				2	1
Belmont (town).....	10,749	3			4					1
Beverly.....	22,561	9	1				1			

CITY REPORTS FOR WEEK ENDED MARCH 31, 1923—Continued.

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

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Massachusetts—Continued.										
Boston	748,060	276	73	6	145	1	90	5	42	18
Braintree (town)	10,580	4	2		17		5		1	2
Brookline	37,748	5			4		4			
Cambridge	109,694	29	3		51		10		2	3
Chelsea	43,184	13	3				5		1	
Chicopee	36,214	7								1
Cilnton	12,979	3					3		1	
Danvers	11,103		1						1	1
Dedham	10,792	3								
Everett	40,120	6	2		6		4			
Fall River	120,485	45	2		9	1	6		4	2
Fitchburg	41,029	14	3		1		5		2	3
Frammingham	17,033	8					8			
Gardner	16,971	4	1				1		2	
Greenfield	15,462	3	2				3			
Haverhill	53,884	11	2		14		1		2	
Holyoke	60,203	31	3				20		1	2
Lawrence	94,270	21	7	1	4		1		3	1
Leominster	19,744	2			2					
Lowell	112,759	33	3		72	1	7		2	
Lynn	99,148	26	2		11		4		5	2
Malden	49,103	10	2		17		5		1	2
Medford	39,038	4	1		13		2		1	
Melrose	18,204	7			8		1			
Methuen	15,189	3			1					
Milford	13,471	2			1		7			
Natick	10,907						1			
New Bedford	121,217	36	5		11				6	5
Newburyport	15,618	4			4					
Newton	46,054	10			4		3			
North Adams	22,282	8								1
Northampton	21,951	8	1		1		4		1	2
Northbridge	10,174	3								
Pittsfield	41,763	11	3				5		3	1
Plymouth	13,045	3								
Quincy	47,876	8	2		12		15		2	
Salem	42,529	3					1			
Somerville	93,091	27	9		21		13	1	1	4
Southbridge	14,245	3								1
Springfield	129,614	43	9	2	3		5		6	
Taunton	37,137	15			14	1	4		2	
Wakefield	13,025	6			22		3			
Waltham	30,915	8	9		1		3			
Watertown	21,457	5	2		2		9			1
Webster	13,258	5					5			1
West Springfield	13,443	2								
Westfield	18,604	4		1					1	
Winthrop	15,455	3			29					
Woburn	16,374	5								
Worcester	179,754		4				12		3	4
Michigan:										
Alpena	11,101				1		3			
Ann Arbor	19,516	9			1		1			
Battle Creek	36,164	1	5	1	1		6		2	
Benton Harbor	12,233	4			2		2			
Detroit	993,678	247	34	3	54	2	118	2	75	29
Flint	91,599	29	6		7		21		6	
Grand Rapids	137,634	41	7		6		6		2	2
Hamtramck	48,615	15	5	1			1		2	
Highland Park	46,499	11			26		7			
Holland	12,183	0					1			
Ironwood	15,739	0			1		8			
Jackson	48,374	14			9		5			
Kalamazoo	48,487	28	7						2	
Marquette	12,718	3								
Muskegon	36,570	11					3			
Pontiac	34,273	15	1		2		1			
Port Huron	25,944	14					5			
Sault Ste. Marie	12,066	6							2	
Minnesota:										
Duluth	98,917	24			55		2		1	3
Faribault	11,089	1					4			

CITY REPORTS FOR WEEK ENDED MARCH 31, 1923—Continued.

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

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Minnesota—Continued.										
Hibbing.....	15,089	5			22		4			
Mnneapolis.....	380,582	107	6		102		26	1	10	6
Rochester.....	13,722	14			1					
St. Cloud.....	15,873		1						1	
St. Paul.....	234,698	76	20		224		35		19	10
Missouri:										
Cape Girardeau.....	10,252	4								
Independence.....	11,686				1					
Joplin.....	29,902		1				1			
Kansas City.....	324,410	30	9		110		13		15	9
St. Joseph.....	77,639	31	1		2		5			1
St. Louis.....	772,697	203	26	1	887	6	25		44	11
Springfield.....	39,631	18								2
Montana:										
Anaconda.....	11,668	1								
Billings.....	15,100	3					3			
Great Falls.....	24,121	6	3							
Helena.....	12,037	8					1			1
Misoula.....	12,668	8					5			
Nebraska:										
Lincoln.....	54,948	15			1				1	
Omaha.....	191,601	61	4		4		2			4
Nevada:										
Reno.....	12,016	4			1		1			
New Hampshire:										
Berlin.....	16,104	3								
Concord.....	22,167	9			4		4		1	
Dover.....	13,029	2								
Keene.....	11,210	3	1				1			
New Jersey:										
Asbury Park.....	12,460	6			3				2	
Atlantic City.....	50,707	12			10		4		1	1
Bayonne.....	76,754		3						1	
Belleville.....	15,680				3		2		1	
Bloomfield.....	22,019	13			10		1			
Clifton.....	28,470	1			1					
East Orange.....	50,710	4			13		3		3	
Elizabeth.....	95,783		16	1	12		7		1	2
Englewood.....	11,627	4	3		10		2			
Garfield.....	19,381	7			2		1		2	2
Hackensack.....	17,667	4					4			
Harrison.....	15,721				6				1	
Hoboken.....	68,166	21	1	1					2	1
Jersey City.....	298,103		15		6		10		6	
Kearny.....	26,724	1								
Long Branch.....	13,521	6			32					
Montclair.....	28,810	1			8		1		1	1
Morrisstown.....	12,548	5			2		1			
Newark.....	414,524	102	9	2	191		16		11	9
Orange.....	32,268	7			14		1		3	
Passaic.....	63,841	12	2		16		1		3	2
Paterson.....	135,875		13		13		9		3	
Perth Amboy.....	41,707	8	2				9		4	1
Phillipsburg.....	16,923	3					1			
Plainfield.....	27,700	4			3					
Summit.....	10,174	2			1		1			
Trenton.....	119,289	47	10	1		1	5		3	3
Union (town).....	20,651	2								
West Hoboken.....	40,074	3	1				3		1	1
West New York.....	29,926	4			1				3	
West Orange.....	15,373	2	1		14					
New Mexico:										
Albuquerque.....	15,157	5	1				1		2	3
New York:										
Albany.....	113,344		2		11		4		9	
Amsterdam.....	32,324	10	1		10		2		4	
Auburn.....	36,192	11			13		1			
Buffalo.....	506,775	145	13	1	320	3	75	2	26	14
Dunkirk.....	19,336	10					3			
Elmira.....	45,393	16			2					
Geneva.....	14,648	4								1
Hornell.....	15,025	8								
Hudson.....	11,745	4					1			

CITY REPORTS FOR WEEK ENDED MARCH 31, 1923—Continued.

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

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
New York—Continued.										
Ithaca.....	17,004	3	1				3			1
Jamestown.....	38,917	16	1		2					
Lackawanna.....	17,918	3							1	
Little Falls.....	13,029	3								
Lockport.....	21,308	8								
Mount Vernon.....	42,726	11	4		2		5		3	
New York.....	5,620,048	1,498	170	5	325	4	277	4	1	2
Newburgh.....	30,366	12							2	
Niagara Falls.....	50,760	9			2		1			
North Tonawanda.....	15,482	4			23		7			
Olean.....	20,506	8			41	1	24		4	
Peekskill.....	15,968	7	1		43	1	4		2	1
Port Chester.....	16,573						2			2
Rochester.....	285,750	66	8		61		6		12	4
Rome.....	26,341	11	2		1		3			1
Saratoga Springs.....	13,181	10					1			
Schenectady.....	88,723	26	2		20	1				
Syracuse.....	171,717	44	10	1	38		15		13	2
Troy.....	72,013	24	3				1		5	3
Watertown.....	31,285	10					1			
White Plains.....	21,031	7			1		8		3	
Yonkers.....	100,176	26	3		1		6			1
North Carolina:										
Durham.....	21,719	6	1		62				1	
Greensboro.....	15,861	14	1		2					2
Raleigh.....	24,418	11			163	2	1			2
Rocky Mount.....	12,742	7								
Wilmington.....	33,372	7			1				1	
Winston-Salem.....	48,395	8					1		4	
North Dakota:										
Fargo.....	21,961	0					3			
Ohio:										
Akron.....	208,435	30	3		39		4		20	
Alliance.....	21,603	2			19		1		1	1
Ashtabula.....	22,082	5					2			
Barberton.....	18,811	2			3		3		1	
Bellaire.....	15,061	4			4					
Bucyrus.....	10,425	3			18					
Cambridge.....	13,104	2					1		1	1
Chillicothe.....	15,931	6			15					1
Cincinnati.....	401,247	134	14		15		13		28	13
Cleveland.....	796,841	181	32	4	247	1	132	2	35	8
Cleveland Heights.....	15,236		1		58		3			
Columbus.....	237,031	91	4		139		12	1	4	13
Dayton.....	152,559	44	1		10		12			
East Cleveland.....	27,292	4	1		34		8			
East Youngstown.....	11,237	4								
Elyria.....	20,474	3			35		1		1	1
Findlay.....	17,021	5	1	1	54		2			
Fremont.....	12,468	1			2		2			
Hamilton.....	39,675	12			18				2	1
Kenmore.....	12,683						1			
Lancaster.....	14,706	4			2					1
Lima.....	41,326	10			2		1			1
Lorain.....	37,295		1		46		12			
Mansfield.....	27,824	10	2		25					1
Marion.....	27,891				1		2			
Martins Ferry.....	11,634	3								
Middletown.....	23,594	4			9					
Newark.....	26,718	7	1		10		1		1	
Niles.....	13,060	3	1	1	16					
Norwood.....	24,966	2					1			
Piqua.....	15,044	6								
Salem.....	10,305	8							2	2
Sandusky.....	22,897	6	1		41		1		1	1
Springfield.....	60,840	13	2		175		3		1	2
Steubenville.....	28,508	10					1		1	
Tiffin.....	14,375	4							4	1
Toledo.....	243,164	67	3	1	35	1	29		5	2
Youngstown.....	132,358	36	9	1	34		9			8
Zanesville.....	29,569	11	1		4				1	

1 Pulmonary only.

CITY REPORTS FOR WEEK ENDED MARCH 31, 1923—Continued.
DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Oklahoma:										
Oklahoma.....	91,295	31		1			7			1
Tulsa.....	72,075		1		26					
Oregon:										
Portland.....	256,288	85	9		1		9		5	4
Pennsylvania:										
Allentown.....	73,502		4		85		14		2	
Altoona.....	60,331				46					
Ambridge.....	12,730		1		1					
Beaver Falls.....	12,602				2					
Berwick.....	12,181		1				1			
Bethlehem.....	50,358		2		119		3		4	
Braddock.....	20,879		1		1					
Bradford.....	15,525				3					
Butler.....	28,778		2		50					
Carbondale.....	18,640						1			
Carristie.....	10,916				2					
Chambersburg.....	13,171				14		3			
Charleroi.....	11,516				2					
Chester.....	58,030		4		16					
Coatesville.....	14,515				4					
Connellsville.....	13,804				20					
Donora.....	14,131				4					
Dubois.....	13,681		3		8		1			
Duquesne.....	19,011								1	
Easton.....	33,813		1		38		3			
Erie.....	93,372		6		12		5		11	
Farrell.....	15,566		2		21					
Greensburg.....	15,033		1				1			
Harrisburg.....	75,917		2		83		11			
Hazleton.....	32,277						1			
Homestead.....	20,452		1		15					
Jeanette.....	10,627				58				4	
Johnstown.....	67,327		6		23		14			
Lancaster.....	53,150		2		97		4		1	
McKees Rocks.....	16,713				7				1	
McKeesport.....	46,781		2		2		1			
Meadville.....	14,568				1					
Monessen.....	18,179		2		1		1			
Mount Carmel.....	17,469								1	
Nanticoke.....	22,614		1		13					
New Castle.....	44,938				2					
New Kensington.....	11,987		1		15					
Norristown.....	32,319		1		1		1			
North Braddock.....	14,928				10		2			
OH City.....	21,274				135					
Olyphant.....	10,236				1					
Philadelphia.....	1,823,779	663	70	8	153	4	46		64	59
Pittsburgh.....	588,343		23		577		33		19	
Pittston.....	18,407				7					
Pottstown.....	17,431				18					
Pottsville.....	21,876				7				1	
Reading.....	107,784		4		25		1		2	
Scranton.....	137,783		2		45		3			
Shamokin.....	21,204				2		3			
Sharon.....	21,747				38		6			
Steelton.....	13,428		1						2	
Tamaqua.....	12,363				6					
Uniontown.....	15,692				54		3			
West Chester.....	11,717				6					
Wilkes-Barre.....	73,633		4		17		5		2	
Wilkesburg.....	24,403				43					
Williamsport.....	36,198		2							
Woodlawn.....	12,495				1					
York.....	47,512		3		49		3			
Rhode Island:										
Cranston.....	29,407		5		5					
Cumberland (town).....	10,077		2							
Newport.....	30,255		5	2	7					2
Pawtucket.....	64,248		15	1	10		1			
Providence.....	237,595		83	12	189	6	9			
Woonsocket.....	43,496		8							
South Carolina:										
Charleston.....	67,957		31							2
Columbia.....	37,524		32						1	1
Greenville.....	23,127		7							1

FOREIGN AND INSULAR.

BRAZIL.

Dengue Fever—Nitheroy—Rio de Janeiro.

An outbreak of dengue fever was reported April 6, 1923, at Nitheroy, Brazil, with 70 cases, and at Rio de Janeiro with several cases.

Yellow Fever—Bahia.

During the week ended March 3, 1923, one case of yellow fever, with one death, was reported at Bahia, Brazil.

CANADA.

Communicable Diseases—Ontario—March, 1923—Comparative.

During the month of March, 1923, communicable diseases were reported in the Province of Ontario, Canada, as follows:

Disease.	March, 1923.		March, 1922.	
	Cases.	Deaths.	Cases.	Deaths.
Cerebrospinal meningitis.....	12	10	8	7
Chancroid.....	.....	.....	4	.....
Diphtheria.....	224	29	320	32
Gonorrhoea.....	178	.....	252	.....
Influenza.....	.....	317	.....	.....
Pneumonia.....	.....	540	.....	409
Pneumonia, influenzal.....	.....	66	.....	84
Scarlet fever.....	343	17	446	18
Smallpox.....	26	.....	113	.....
Syphilis.....	161	.....	218	.....
Tuberculosis.....	187	128	172	136
Typhoid fever.....	557	22	21	11
Whooping cough.....	432	24	61	13

Population, estimated, 2,523,200.

Lethargic Encephalitis—Dalhousie Junction.

A case of lethargic encephalitis has been reported as occurring at Dalhousie Junction, 9 miles from Campbellton, New Brunswick, Canada, March 17, 1923.

Lethargic Encephalitis—Winnipeg.

During the three weeks ended March 31, 1923, eight cases of lethargic encephalitis with seven deaths were reported at Winnipeg, Manitoba.

Typhoid Fever—Cochrane, Ontario.¹

Typhoid fever was reported still present at Cochrane, Ontario, Canada, April 9, 1923, with 612 cases and 19 deaths notified to that date. Epidemic outbreaks were reported in small near-by towns, with origin in cases from Cochrane. The epidemic at Cochrane was reported March 21, with 125 cases and no mortality; on March 25, increased prevalence was reported, with 300 cases and no mortality. (Population of Cochrane, 4,000.)

Typhoid Fever—North Bay, Ontario.

On April 9, 15 cases of typhoid fever were stated to have been brought from Cochrane to North Bay, Ontario, for treatment.

CUBA.**Communicable Diseases—Habana.**

Communicable diseases have been notified at Habana as follows:

Disease.	Mar. 1-31, 1923.		Remain- ing under treatment Mar. 31, 1923.
	New cases.	Deaths.	
Cerebrospinal meningitis.....	1	.....	14
Chicken pox.....	11	.....	8
Diphtheria.....	10	1	6
Leprosy.....	.....	.....	11
Malaria.....	19	.....	31
Measles.....	3	.....	2
Scarlet fever.....	5	.....	6
Typhoid fever.....	11	1	22

¹ From abroad, 3.

² From the interior, 26.

³ From the interior, 4.

HAWAII.**Plague-Infected Rats—Honokaa.**

Two plague-infected rats were reported found, one on March 24 and one on March 25, 1923, in the vicinity of Honokaa, Hawaii.

MEXICO.**Epidemic Influenza—Cunduacan, Tabasco.**

Epidemic influenza was reported present at Cunduacan, State of Tabasco, Mexico, March 26, 1923.

¹ Public Health Reports, Apr. 6, 1923, p. 763; Apr. 13, 1923, p. 810.

POLAND.

Communicable Diseases—January 1-21, 1923.

During the period January 1 to 21, 1923, communicable diseases were reported in Poland as follows:

January 1-6, 1923.

Disease.	Cases.	Deaths.	Districts and city showing greatest mortality.
Cerebrospinal meningitis.....	18	8	Congress Poland.
Diphtheria.....	68	9	Lodz, Warsaw city.
Measles.....	546	33	Kielce.
Scarlet fever.....	233	20	Warsaw city.
Smallpox.....	15	1	Stanislawow.
Tuberculosis.....	89	149	Lodz, Lwow, Warsaw city.
Typhoid fever.....	270	20	Krakow, Lodz.
Typhus fever.....	278	20	Krakow, Lwow, Stanislawow.
Typhus fever, recurrent.....	113	1	Bialystok.
Whooping cough.....	104	16	Stanislawow.

January 7-13, 1923.

Cerebrospinal meningitis.....	15	6	Silesia.
Diphtheria.....	45	10	Lodz.
Measles.....	621	24	Do.
Scarlet fever.....	273	24	Lodz, Lwow.
Smallpox.....	6	2	Stanislawow.
Tuberculosis.....	80	211	Lodz, Lwow, Warsaw city.
Typhoid fever.....	304	25	Krakow.
Typhus fever.....	374	23	Stanislawow, Vilna.
Typhus fever, recurrent.....	139	4	Nowogrodek.

January 14-21, 1923.

Cerebrospinal meningitis.....	13	7	Silesia, Warsaw.
Diphtheria.....	65	12	Lwow, Pomerania.
Measles.....	439	29	Warsaw city.
Scarlet fever.....	309	54	Stanislawow.
Smallpox.....	29	3	Do.
Tuberculosis.....	147	194	Lwow, Warsaw city.
Typhoid fever.....	312	35	Lodz.
Typhus fever.....	377	43	Lwow.
Typhus fever, recurrent.....	129	2	Lwow, Upper Silesia.

PORTUGAL.

Lethargic Encephalitis—Lisbon.

During the week ended March 17, 1923, four cases of lethargic encephalitis were reported at Lisbon, Portugal.

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

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

Reports Received During Week Ended April 20, 1923.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Calcutta.....	Feb. 18-Mar. 3.....	64	40	

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 April 20, 1923—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Ceylon:				
Colombo.....	Feb. 18-24.....	10	13	
Hawaii:				
Honolulu.....				Mar. 24-25: 2 plague rats found.
India:				
Calcutta.....	Feb. 18-24.....	1	1	
Karachi.....	Feb. 25-Mar. 3.....	5	5	
Madras Presidency.....	do.....	688	466	
Portuguese West Africa:				
Angola—				
Loanda.....	Dec. 31-Jan. 20.....	2		
Siam:				
Bangkok.....	Jan. 28-Feb. 10.....	6	4	
Straits Settlements:				
Singapore.....	Feb. 11-17.....	1	1	

SMALLPOX.

Arabia:				
Aden.....	Mar. 4-10.....	3		
Brazil:				
Para.....	Feb. 12-Mar. 18.....	7		
Rio de Janeiro.....	Feb. 25-Mar. 10.....	11	8	
Canada:				
British Columbia—				
Fernie.....	Mar. 18-24.....	1		
Manitoba—				
Winnipeg.....	Mar. 18-31.....	35		
Ontario.....				Mar. 1-31, 1923: Cases, 26.
Ottawa.....	Mar. 25-31.....	10	1	
Quebec—				
Sherbrooke.....	Mar. 1-31.....		2	
Ceylon:				
Colombo.....	Feb. 18-24.....	1		
China:				
Amoy.....	Feb. 18-Mar. 3.....			Present. One death.
Canton.....	Feb. 11-17.....			Present.
Chungking.....	do.....			Do.
Foochow.....	Feb. 18-24.....			Do.
Hongkong.....	Feb. 4-17.....	6	4	
Nanking.....	Feb. 18-Mar. 3.....			Do.
Colombia:				
Buenaventura.....	Feb. 16-26.....			From 6 to 9 cases reported 2 miles from town limits.
Great Britain:				
Nottingham.....	Feb. 25-Mar. 10.....	5		
Greece:				
Saloniki.....	Jan. 29-Feb. 18.....	6	1	
India:				
Calcutta.....	Feb. 19-Mar. 3.....	35	18	
Karachi.....	Feb. 25-Mar. 3.....	4	1	
Madras.....	do.....	35	8	
Java:				
West Java—				
Batavia.....	Feb. 17-23.....	1		Province.
Mexico:				
Tabasco, State.....				Present in some localities.
Poland:				Jan. 1-21, 1923: Cases, 50; deaths, 6.
Portugal:				
Lisbon.....	Mar. 4-18.....	17	1	
Oporto.....	Feb. 25-Mar. 17.....	7	3	
Rumania:				
Bucharest.....	Feb. 1-10.....	1		
Christinau.....	Feb. 1-28.....	9		
Galatz.....	Feb. 1-10.....	2		
Sierra Leone:				
Freetown.....	Feb. 16-23.....	1		
Spain:				
Valencia.....	Mar. 11-24.....	11		
Switzerland:				
Berne.....	Mar. 4-10.....	8		
Zurich.....	do.....	8		
Syria:				
Aleppo.....	Mar. 4-17.....	2		
Damascus.....	Feb. 11-20.....	3		
Union of South Africa:				
Cape Province.....	Feb. 18-25.....			Outbreaks.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**Reports Received During Week Ended April 20, 1923—Continued.****TYPHUS FEVER.**

Place.	Date.	Cases.	Deaths.	Remarks.
Chile: Talcahuano.....	Mar. 4-10.....	1		Feb. 15-23, 1923: Cases, 6; recurrent typhus, 1 case.
Finland.....				
Greece: Saloniki.....	Feb. 4-25.....	63	1	Jan. 1-21, 1923: Cases, 1,029; deaths, 86. Recurrent typhus: Cases, 386; deaths, 7.
Hungary: Budapest.....	Feb. 25-Mar. 11.....	2		
Mexico: San Luis Potosi.....	Mar. 25-31.....		1	
Poland.....				
Portugal: Oporto.....	Mar. 11-17.....	3		
Rumania: Bucharest.....	Feb. 1-10.....	133		
Chisinau.....	Feb. 1-23.....	39		
Craiova.....	Feb. 1-10.....	1		
Syria: Aleppo.....	Mar. 4-17.....	38	7	
Union of South Africa: Cape Province.....	Feb. 18-24.....			

YELLOW FEVER.

Brazil: Bahia.....	Feb. 25-Mar. 3....	1	1	
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Reports Received from December 30, 1922, to April 13, 1923.¹**CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
China: Tientsin.....	Sept. 22.....	60	20	Sept. 22, 1922: 30 deaths reported. Sept. 24-Dec. 30, 1922: Cases, 14,837; deaths, 8,833. Dec. 31, 1922-Jan. 20, 1923: Cases, 2,631; deaths, 1,553.
Chosen (Korea): Yalu River Region.....				
India: Bombay.....	Oct. 27-Dec. 23.....	2	1	
Do.....	Feb. 4-10.....	2	2	
Calcutta.....	Nov. 12-Dec. 30.....	102	60	
Do.....	Dec. 31-Feb. 17.....	184	124	
Madras.....	Nov. 19-Dec. 16.....	4	2	
Do.....	Jan. 21-Feb. 24.....	9	4	
Rangoon.....	Nov. 12-Dec. 23.....	17	10	
Do.....	Dec. 31-Feb. 17.....	4	3	
Philippine Islands: Province— Laguna.....	Oct. 12-18.....	1		Jan. 1-Oct. 7, 1922: Cases, 83,367. Turkestan Republic: 3 cases reported on waterways. Sept. 1-30, 1922: Cases, 119.
Russia: Archangel (Government).....	Oct. 1-7.....	7		
Moscow.....	Jan. 1-31.....	1		
Tashkent.....	Oct. 1-7.....	27		
Ukraine: Donetz (Government).....	Sept. 1-30.....	29		
Tchernigov (Government). Do.....	.....do.....	36	
Siam: Bangkok.....	Oct. 20-Dec. 23.....	4	1	
Do.....	Dec. 31-Jan. 27.....	3		

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

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

Reports Received from December 30, 1922, to April 13, 1923—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Argentina:				
Rosario.....	Feb. 10-27.....	8	3	
Azores:				
Fayal Island—				
Castelo Branco.....	Dec. 2-31.....		3	Vicinity of Horta. Dec. 30, 1922: Several cases.
Do.....	Mar. 12-18.....	2		Actual occurrence about Mar. 6, 1923.
Horta.....	Mar. 23.....	1		
Pico Island—				
Lages.....	Nov. 27-Dec. 15.....		8	1 case present Dec. 15, 1922.
St. Michaels Island.....				Nov. 12-Dec. 30, 1922: Cases, 100; deaths, 35. At localities 3-9 miles from Ponta Delgada.
Ponta Delgada.....	Nov. 26-Dec. 9.....	3		Dec. 31, 1922-Feb. 24, 1923: Cases, 126; deaths, 52. From 6 to 20 miles distant from port of Ponta Delgada.
Brazil:				
Bahia.....	Oct. 29-Dec. 30.....	5	5	
Do.....	Jan. 28-Feb. 3.....	1	1	
Pernambuco.....	Jan. 14-20.....	3	2	
Porto Alegre.....	Nov. 19-25.....	1		
British East Africa:				
Kenya Colony—				
Tanganyika Territory..	Oct. 15-Dec. 16.....	12	7	
Do.....	Jan. 14-20.....	7	6	
Uganda.....	Dec. 1-31.....	141	129	
Entebbe.....	Nov. 24-30.....	211	202	
Celebes:				
Macassar.....	Feb. 15.....			Present, bubonic; epidemic, pneumonic.
Ceylon:				
Colombo.....	Nov. 12-Dec. 30.....	46	38	Plague rodents, 16.
Do.....	Dec. 31-Feb. 17.....	51	40	Plague rodents, 17.
Chile:				
Antofagasta.....				Quarantine. Year, 1922. March, 1 case; May, 1 case.
China:				
Hongkong.....	Nov. 5-Dec. 23.....	14	12	
Do.....	Dec. 31-Jan. 6.....	1		
Manchuria—				
Harbin.....	Jan. 29-Feb. 4.....	7		
Ecuador:				
Guayaquil.....	Nov. 1-Dec. 31.....	9	3	Rats examined, 16,600; found infected, 72.
Do.....	Jan. 1-Feb. 28.....	18	5	Rats examined, 17,900; found infected, 83.
Egypt:				
City—				
Alexandria.....	Nov. 19-25.....	2		Jan. 1-Dec. 28, 1922: Cases, 485; deaths, 228. Jan. 1, 1922-Jan. 4, 1923: Cases, 487; deaths, 228.
Do.....	Jan. 8-10.....	1	1	Jan. 1-Mar. 8, 1923: Cases, 27; deaths, 17.
Port Said.....	Nov. 19-27.....	4	2	
Do.....	Jan. 26-Mar. 5.....	2	1	
Suez.....	Nov. 18-Dec. 5.....	3	4	
Do.....	Mar. 2.....	1	1	
Province—				
Assiout.....	Nov. 19-Dec. 29.....	4	1	Septicemic: 1 case, 1 death.
Do.....	Jan. 26-Mar. 8.....	14	9	Pneumonic: 6 cases, 4 deaths; septicemic, 1 case, 1 death.
Dakahlieh.....	Dec. 3.....	1	1	Pneumonic.
Kena.....	Mar. 8.....	1	1	Pneumonic, 1 death.
Minieh.....	Nov. 18-27.....	2	1	
Do.....	Feb. 24.....	1	1	
Hawaii:				
Honokaa.....				Feb. 8-9, 1923: Plague rats, 3.
India:				
Bombay.....	Oct. 27-Dec. 30.....	41	32	Oct. 1-Dec. 30, 1922: Cases, 25,007; deaths, 18,803. (Report for Nov. 19-25, 1922, not received.)
Do.....	Dec. 31-Feb. 10.....	44	34	Dec. 31, 1922-Feb. 10, 1923: Cases, 31,619; deaths, 24,706.
Calcutta.....	Feb. 11-17.....	1	1	
Karachi.....	Dec. 10-16.....	1	1	
Do.....	Dec. 31-Feb. 24.....	13	10	
Madras Presidency.....	Nov. 19-Dec. 30.....	2,269	1,448	
Do.....	Dec. 31-Feb. 24.....	3,366	2,544	
Madras.....	Nov. 19-25.....	1	1	
Do.....	Jan. 21-27.....	1	1	
Rangoon.....	Nov. 12-Dec. 30.....	52	49	
Do.....	Dec. 31-Feb. 17.....	122	108	

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

Reports Received from December 30, 1922, to April 13, 1923—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Iraq (Mesopotamia):				
Bagdad.....	Oct. 1-Nov. 30.....	16		
Do.....	Jan. 1-31.....	3		
Japan:				
Osaka.....				July 1-Nov. 30, 1922: Cases, 70.
Java:				Oct. 1-Nov. 3, 1922: Cases, 800; deaths, 763. Jan. 1-31, 1923: Cases, 490; deaths, 549.
				Dec. 1-31, 1922: Deaths, 990.
East Java				
Residences—				
Pekalongan.....	Dec. 1-31.....	56		
Samarang.....	do.....	202		
Soerabaya.....	Oct. 22-Dec. 31.....	34	14	
Do.....	Jan. 14-20.....	2	2	Jan. 17-23, 1923: Cases, 5; deaths, 3.
Toelung-Agoeng.....	Oct. 29-Dec. 16.....	18	18	Not a seaport.
Soerakarta—				
Klaten.....	Nov. 4.....			Present in epidemic form.
Madagascar				Jan. 1-Dec. 10, 1923: Cases, 143.
Province—				Jan. 1-15, 1923: Cases, 22.
Diego Suarez.....	Jan. 1-31.....	2		
Moramanga.....				To Nov. 12, 1922: Cases, 24; deaths, 21. Cases reported to Oct. 30, pneumonic.
Amparafara region.....	Sept. 18-Nov. 5.....	21		Bubonic, 18; septicemic, 3 (doubtful, 2).
Moramanga.....	Dec. 6-9.....	3		Bubonic.
Tamatave.....	Feb. 10-Sept. 12.....	10		Do.
Miarinarivo.....				Dec. 14, 1922-Jan. 1, 1923: 1 case (European).
Tananarive.....				Jan. 1-Dec. 10, 1922: Cases, 73 (bubonic, 37; pneumonic, 8; septicemic, 28). Jan. 1-15, 1923: Cases, 19.
Ambohimangakeley.....	Nov. 19-Dec. 9.....	9		Bubonic, 3; pneumonic, 3; septicemic, 3.
Anketrina.....	Mar. 27-May 9.....	11		Bubonic, 4; pneumonic, 2; septicemic, 5 (3 doubtful).
Fenoarivo region.....	Oct. 7-Nov. 28.....	16		Bubonic, 3; pneumonic, 8; septicemic, 5.
Tananarive.....	Oct. 23-Dec. 10.....		5	1 septicemic.
Do.....	Dec. 14-Jan. 15.....	13		
Mexico:				
Tampico.....	Mar. 23.....	2	1	Plague rodent found, Mar. 14, 1923.
Palestine:				
Jaffa.....	Nov. 27-Dec. 4.....	1		
Peru				
Do.....				Nov. 1-Dec. 31, 1922: Cases, 199; deaths, 93.
				Jan. 1-31, 1923: Cases, 151; deaths, 59.
Localities—				
Canete.....	Nov. 16-Dec. 31.....	56	19	Including vicinity.
Do.....	Jan. 1-31.....	22	7	Do.
Casma.....	do.....	1		At Campina.
Catacaos.....	do.....	4	1	
Chepen.....	Dec. 16-31.....	2	1	Present Nov. 9-15, 1922.
Do.....	Jan. 1-31.....	1		
Chiclayo (city and country). Do.....	Nov. 16-Dec. 15.....	17	7	
Do.....	Jan. 1-31.....	18	9	
Eten.....	Nov. 16-Dec. 15.....	4		
Guadeloupe.....	Nov. 1-Dec. 31.....	22	12	
Do.....	Jan. 1-31.....	4	1	
Huacho.....	Nov. 16-Dec. 31.....	4	2	
Do.....	Jan. 1-31.....	4	1	
Huara.....	do.....	6		
Huara.....	Nov. 16-30.....	1		Country.
Do.....	Jan. 1-31.....	3	1	
Huarmey.....	Dec. 1-31.....	2	2	
Jayanca.....	Nov. 16-Dec. 31.....	10	8	
Lambayeque.....	do.....	7	3	
Do.....	Jan. 1-31.....	9	7	
Lima (city).....	Nov. 1-Dec. 31.....	11	8	
Do.....	Jan. 1-31.....	1	1	
Lima (country).....	Nov. 1-Dec. 31.....	14	5	
Do.....	Jan. 1-31.....	4	2	

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

Reports Received from December 30, 1922, to April 13, 1923—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Peru—Continued.				
Localities—Continued.				
Lurin	Dec. 1-15.....	1	.....
Magdalena del Mar.	Nov. 16-30.....	1	.....
Do.	Jan. 1-31.....	1	1	
Magdalena Vieja.	Dec. 16-31.....	1	1	
Mala.	Dec. 1-31.....	2	.....
Do.	Jan. 1-31.....	4	.....
Miraflores.	Jan. 1-23.....	3	.....
Mochumi.	Dec. 16-31.....	3	3	
Mosche.	Nov. 16-30.....	2	1	
Paita.	Dec. 16-31.....	2	2	
Do.	Jan. 1-31.....	10	7	
Piura.	Nov. 16-Dec. 31.....	12	7	
Do.	Jan. 1-31.....	14	4	
Pueblo Nuevo.	Dec. 1-31.....	7	4	
Do.	Jan. 1-31.....	10	6	
San Pedro.	Nov. 1-Dec. 31.....	8	4	
Do.	Jan. 1-31.....	6	3	
Sullana.	Nov. 16-30.....	3	3	
Do.	Jan. 1-31.....	1	1	
Trujillo.	Nov. 1-Dec. 31.....	3	1	
Do.	Jan. 1-31.....	25	7	District.
Tuman.	Nov. 16-30.....	3	.....
Portugal:				
Lisbon	Nov. 10-29.....	4	2	
Oporto.	Jan. 21-27.....	.....	1	
Portuguese West Africa:				
Angola—				
Loanda.	Oct. 1-Dec. 30.....	.....	45	Fatal cases among white population.
Russia:				
Kirghiz Republic.	.....	.....	.....	Dec. 2, 1922—Feb. 16, 1923: Cases, 116 (pneumonic), occurring in 2 out of 6 governments.
Siam:				
Bangkok.	Nov. 12-Dec. 23.....	5	5	
Do.	Dec. 31-Jan. 27.....	8	7	
Spain:				
Barcelona.	Nov. 15-Dec. 18.....	1	.....	Sept. 24—Nov. 14, 1922: Cases, 23; deaths, 9.
Malaga.	Jan. 27.....	3	.....	17 suspected cases.
Straits Settlements:				
Singapore.	Dec. 17-23.....	2	2	
Do.	Jan. 21-27.....	1	1	
Syria:				
Beirut.	Nov. 6-30.....	4	3	
Turkey:				
Constantinople.	Nov. 22-28.....	2	.....
Do.	Jan. 28-Feb. 10.....	2	.....
Union of South Africa:				
Transvaal—				
Klipfontein Farm.	Dec. 16.....	2	1	Natives. Jan. 25, 1923: Plague-infected wild rodent found in vicinity.
West Africa:				
Senegal—				
Dakar.	Feb. 1-28.....	2	2	
On vessels:				
S. S. Helcion.	Dec. 1.....	1	.....	At Thursday Island Quarantine, Australia, from Singapore, Straits Settlements. In Chinese firemen.
S. S. —.	Dec. 30.....	.....	.....	At port of London; plague-infected rats and cats found in grain cargo on vessel from South America.

SMALLPOX.

Algeria:				
Algiers	Dec. 1-10.....	1	.....
Do.	Jan. 1-Feb. 20.....	2	.....
Arabia:				
Aden.	Nov. 19-Dec. 23.....	7	3	
Do.	Jan. 7-Mar. 3.....	18	2	

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

Reports Received from December 30, 1922, to April 13, 1923—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Bolivia:				
La Paz.....	Jan. 1-31.....	6	4	
Brazil:				
Bahia.....	Nov. 5-11.....	1		
Para.....	Feb. 12-Mar. 4.....	6		
Pernambuco.....	Jan. 21-27.....	1	1	
Rio de Janeiro.....	Nov. 25-Dec. 30.....	40	15	
Do.....	Dec. 31-Feb. 10.....	31	14	
Sao Paulo.....	Oct. 16-22.....	1	1	
British East Africa:				
Kenya Colony—				
Tanganyika Territory.....	Oct. 8-Dec. 23.....	193	10	
Do.....	Jan. 7-20.....	17		
Uganda.....	Sept. 1-Dec. 31.....	3	1	
Entebbe.....	Nov. 24-30.....	3	3	
Canada:				
Alberta—				
Calgary.....	Mar. 4-10.....	1		
Manitoba—				
Winnipeg.....	Dec. 10-30.....	14		
Do.....	Jan. 21-27.....	1		
New Brunswick—				
Northumberland County.....	Jan. 21-Feb. 17.....	8		
Restigouche.....	Mar. 11-17.....	1	1	
Ontario.....				
Hamilton.....	Dec. 31-Feb. 24.....	7		
Niagara Falls.....	Dec. 3-30.....	10		
Do.....	Dec. 31-Jan. 12.....	12		
Ottawa.....	Dec. 10-23.....	6		
Do.....	Jan. 7-Mar. 24.....	11		
Toronto.....	Dec. 10-30.....	2		
Do.....	Feb. 4-10.....	1		
Quebec—				
Quebec.....	Jan. 14-20.....	3		
Saskatchewan—				
Regina.....	Dec. 3-23.....	2		
Ceylon:				
Colombo.....	Nov. 12-Dec. 24.....	9	4	1 case, 1 death outside city.
Chile:				
Concepcion.....	Oct. 30-Dec. 25.....		7	
Do.....	Feb. 6-26.....		5	
Valparaiso.....	Oct. 2-Dec. 26.....	4	54	In hospital, 83 cases.
Do.....	Jan. 9-Feb. 10.....		90	Dec. 31, 1922-Jan. 27, 1923: Deaths, 66. Feb. 16, 1923: 80 cases present (estimated).
China:				
Amoy.....	Nov. 5-Dec. 23.....		3	Nov. 26-Dec. 30, 1922: Present.
Do.....	Jan. 7-Feb. 3.....		5	
Antung.....	Nov. 13-Dec. 10.....	2		
Do.....	Feb. 26-Mar. 4.....	1		
Canton.....	Oct. 1-Nov. 30.....			Prevalent.
Do.....	Jan. 21-Feb. 10.....			Present.
Changsha.....	Feb. 11-17.....	1		
Chungking.....	Nov. 5-Dec. 30.....			Do.
Do.....	Dec. 31-Feb. 10.....			Do.
Foochow.....	Nov. 12-Dec. 30.....			Do.
Do.....	Dec. 31-Feb. 17.....			Do.
Hankow.....	Dec. 31-Jan. 20.....	4	1	
Hongkong.....	Nov. 5-11.....		1	
Do.....	Dec. 31-Jan. 20.....	3	1	
Manchuria—				
Harbin.....	Nov. 20-Dec. 31.....	13		
Do.....	Jan. 8-Feb. 11.....	7		
Mukden.....	Nov. 19-Dec. 16.....			Do.
Do.....	Jan. 7-Feb. 3.....			Do.
Nanking.....	Nov. 5-Dec. 23.....			Do.
Do.....	Jan. 7-20.....			Do.
Shanghai.....	Jan. 15-Feb. 25.....	3	1	Foreign. Death, Chinese.
Tientsin.....	Feb. 18-24.....	1		Reported from foreign office.
Chosen (Korea):				
Chemulpo.....	Oct. 1-Dec. 31.....	135	84	
Do.....	Jan. 1-31.....	26	17	
Fusan.....	Nov. 1-Dec. 31.....	4		
Do.....	Jan. 1-31.....	5		
Gensan.....	Dec. 1-31.....	6	2	
Seoul.....	Oct. 1-Dec. 31.....	19	1	
Do.....	Jan. 1-31.....	25	11	

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

Reports Received from December 30, 1922, to April 13, 1923—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Colombia:				
Buenaventura.....	Jan. 25-Feb. 20....	48		Estimated, 50 cases present; type mild; among colored population.
Cuba:				
Province—				
Camaguey.....	Nov. 11-Dec. 31....	20		
Matanzas.....	Jan. 1-31.....	2		
Oriente.....	Nov. 21-Dec. 31....	22		
Do.....	Jan. 1-Feb. 10....	10		
Santa Clara.....	Dec. 21-31.....	1		
Czechoslovakia.				
Province—				
Bohemia.....	Oct. 1-31.....	1		
Moravia.....	do.....	1		
Slovakia.....	Oct. 1-Nov. 30....	2		
Domenica (West Indies).....				Oct. 1-31, 1922: Cases, 3.
Dominican Republic:				
Puerto Plata.....	Dec. 14-30.....	2		
Santo Domingo.....	Dec. 3-16.....			Present.
Do.....	Feb. 28-Mar. 6....	3		
San Pedro de Macoris.....	Jan. 13-19.....	2		
Ecuador:				
Guayaquil.....	Dec. 1-31.....	10		
Do.....	Jan. 1-Feb. 28....	11		
Egypt:				
Alexandria.....	Feb. 19-25.....	1		
Port Said.....	Jan. 21-27.....	1		
Estonia.				
Do.....				Oct. 1-Dec. 31, 1922: Cases, 61.
France:				Jan. 1-31, 1923: Cases, 16.
Paris.....	Dec. 1-10.....	1		
Germany:				
Bremen.....	Dec. 3-9.....	1		
Great Britain:				
Liverpool.....	Dec. 11-17.....	1		From vessel.
London.....	Nov. 26-Dec. 23....	3		
Nottingham.....	Nov. 19-Dec. 13....	4		
Do.....	Jan. 7-Feb. 24....	11		
Greece:				
Kalamata.....	Jan. 13-Feb. 13....		1	
Patras.....	Jan. 21-Feb. 17....		84	
Saloniki.....	Nov. 6-Dec. 31....	6	5	
Do.....	Jan. 15-23.....	3		
Zante.....				Epidemic, Jan. 17, 1923.
Do.....	Jan. 7-14.....	13	4	
Guadeloupe (West Indies).....				Feb. 26, 1923: Present. Reported as alastrim.
Guatemala:				
Guatemala City.....	Feb. 23.....			Present.
India:				
Bombay.....	Nov. 5-Dec. 30....	22	10	Nov. 5-Dec. 30, 1922: Cases, 5,783; deaths, 333. Dec. 31, 1922-Jan. 20, 1923: Cases, 4,316; deaths, 1,033.
Do.....	Dec. 31-Feb. 10....	56	25	
Calcutta.....	Nov. 12-Dec. 30....	46	23	
Do.....	Dec. 31-Feb. 17....	91	52	
Karachi.....	Nov. 25-Dec. 30....	6		
Do.....	Dec. 31-Feb. 24....	34	15	
Madras.....	Nov. 12-Dec. 30....	71	23	
Do.....	Dec. 31-Feb. 24....	169	49	
Rangoon.....	Nov. 5-Dec. 30....	27	6	
Do.....	Jan. 7-Feb. 17....	92	36	
Iraq (Mesopotamia):				
Bagdad.....	Oct. 1-Nov. 30....	568	361	
Do.....	Jan. 1-31.....	32	20	
Jamaica.....				Dec. 31, 1922-Mar. 10, 1923: Cases, 393. Previously reported as alastrim.
Japan:				
Kobe.....	Jan. 13-Feb. 16....	6	2	
Yokohama.....	Jan. 22-28.....	1		
Java:				
East Java—				
Soerabaya.....	Nov. 5-11.....	4		
Do.....	Feb. 4-10.....	2		
West Java—				
Batavia.....	Nov. 11-Dec. 22....	25	1	City and Province.
Do.....	Jan. 27-Feb. 16....	6	1	Province.

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

Reports Received from December 30, 1922, to April 13, 1923—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Latvia.....				Oct. 1-Dec. 31, 1922: Cases, 7.
Martinique.....				Mar. 31, 1923: Present. Re- ported as alastrim.
Mexico:				
Chihuahua.....	Dec. 4-17.....		4	
Do.....	Jan. 1-Mar. 15.....	38	17	
Guadalajara.....	Dec. 1-31.....	4		
Do.....	Jan. 1-Feb. 28.....	54		
Mexico City.....	Nov. 12-Dec. 23.....	43		
Do.....	Dec. 31-Mar. 3.....	168		Including municipalities in Fed- eral district.
Nogales.....	Dec. 10-19.....		1	Do.
Do.....	Dec. 31-Feb. 10.....		2	
Saltillo.....	Jan. 28-Feb. 3.....		1	
San Luis Potosi.....	Jan. 14-20.....		1	
Sonora, State.....				Nov. 1-30, 1922: Present in north- ern section.
Empalme.....	Nov. 1-30.....	4	1	
Torreon.....	Dec. 1-31.....		1	
Vera Cruz.....	Feb. 26-Mar. 11.....	9	4	
Palestine.....				Jan. 23-Feb. 19, 1923: Cases, 8. Northern district.
Persia:				
Tabriz.....	Dec. 18-31.....		2	
Teheran.....	Oct. 24-Dec. 22.....		139	
Peru:				
Callao.....	Nov. 1-15.....	2		
Lima (city).....	Dec. 1-15.....	3	1	
Lima (country).....	Nov. 1-15.....	2	1	
Poland.....				Oct. 1-Dec. 23, 1922: Cases, 132; deaths, 26.
Portugal:				
Lisbon.....	Nov. 19-Dec. 30.....	143	34	
Do.....	Dec. 31-Feb. 24.....	135	73	Dec. 25-31, 1922: Deaths, 12. Feb. 19-Mar. 3, 1923: Cases, 17; deaths, 3.
Oporto.....	Oct. 15-Dec. 30.....	24	12	
Do.....	Dec. 31-Feb. 24.....	15	8	Jan. 5-20, 1923: Cases, 22; deaths, 6.
Portuguese, West Africa:				
Angola—				
Loanda.....	Oct. 27-Nov. 11.....		10	
Rumania:				
Chisinau.....	Jan. 1-31.....	17		
Russia:				
City—				
Moscow.....				Jan. 1-31, 1923: Cases treated in hospital, 10.
Province—				
Ukraine.....				Jan.-Sept., 1922: Cases, 8,744.
Spain:				
Corunna.....	Nov. 26-Dec. 2.....		1	
Huelva.....	Nov. 24-Dec. 31.....		4	
Madrid.....	Dec. 1-31.....		1	
Do.....	Jan. 1-31.....		1	
Seville.....	Nov. 27-Dec. 31.....		32	
Do.....	Jan. 1-Mar. 11.....		16	
Valencia.....	Nov. 26-Dec. 23.....	3		
Do.....	Dec. 31-Mar. 10.....	22	2	
Switzerland:				
Basel.....	Feb. 23-Mar. 3.....	3		
Berne.....	Nov. 19-Dec. 30.....	85		
Do.....	Dec. 31-Mar. 3.....	158		
Lucerne.....	Jan. 1-31.....	6		
Zurich.....	Nov. 19-Dec. 30.....	19		
Do.....	Jan. 14-Mar. 3.....	7		
Syria:				
Aleppo.....	Nov. 19-Dec. 23.....	38	20	
Do.....	Dec. 31-Feb. 24.....	26	6	
Beirut.....	Dec. 11-20.....	1		
Damascus.....	Nov. 1-Dec. 31.....	97	16	
Do.....	Jan. 1-31.....	19		
Tunis:				
Tunis.....	Dec. 1-22.....	2	1	
Do.....	Jan. 22-Feb. 4.....	1	1	
Turkey:				
Constantinople.....	Nov. 19-Dec. 16.....	122	34	
Do.....	Dec. 31-Feb. 23.....	416	144	

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

Reports Received from December 30, 1922, to April 13, 1923—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Union of South Africa.....				Oct. 1-Dec. 31, 1922: Cases—Colored, 64; deaths, 1; white, cases, 4.
Do.....				Jan. 1-31, 1923: Cases, 22 (colored, 18, white, 4; deaths, 1 (colored)).
Cape Province.....				Oct. 1-Dec. 31, 1922: Cases—Colored, 48; deaths, 1; white, 4 cases.
Do.....				Jan. 1-31, 1923: Cases, 14 (colored, 10, white, 4).
Do.....	Dec. 31-Feb. 10.			Outbreaks.
East London.....	Jan. 7-13	2		
Natal.....				Dec. 1-31, 1922: Cases, 6 (colored).
Do.....				Jan. 1-31, 1923: Cases, 4; deaths, 1 (colored).
Do.....	Feb. 4-10			Outbreaks.
Orange Free State.....				Dec. 1-31, 1922: Cases, 2 (colored).
Do.....				Jan. 1-31, 1923: Cases, 3 (colored).
Do.....	Jan. 14-Feb. 3.			Outbreaks.
Southern Rhodesia.....				
Transvaal.....	Nov. 9-15	3		
Do.....				Oct. 1-Dec. 31, 1922: Cases, 10.
Do.....				Jan. 1-31, 1923: Cases, 1 (colored).
Johannesburg.....	Dec. 31-Feb. 10.			Outbreaks.
Do.....	Nov. 1-30		1	
Do.....	Jan. 1-31	1		
Yugoslavia.....				Aug. 1-31, 1922: Cases, 30; deaths, 12.
Serbia.....				Aug. 1-31, 1922: Cases, 26.
Belgrade.....	Nov. 12-Dec. 31	10	4	
On vessel:				
S. S. Huntress.....	Nov. 11	1		At Fremantle, Australia: from Cape Town, South Africa.
S. S. Junin.....	Jan. 13	1		At Antofagasta, Chile. Vessel proceeded to Arica, Chile, with patient on board.
S. S. —.....	Dec. 17-23	1		At Liverpool.

TYPHUS FEVER.

Algeria:				
Algiers.....	Nov. 11-Dec. 31	2	1	
Do.....	Jan. 1-31	7	2	
Oran.....	Jan. 11-20	1	1	
Austria:				
Vienna.....	Jan. 7-17	1		
Bolivia:				
La Paz.....	Jan. 1-31	17	9	
Brazil:				
Pernambuco.....	Dec. 3-9	2	2	
Porto Alegre.....	Nov. 19-Dec. 16	3		
Do.....	Feb. 25-Mar. 3		3	
Bulgaria:				
Sofia.....	Feb. 4-10	1		Paratyphus, 2 cases.
Chile:				
Antofagasta.....	Nov. 12-Dec. 30	24	5	Nov. 11-Dec. 5, 1922: Cases, 10; deaths, 2. Quarantine station: October, 1922—1 fatal case.
Do.....	Dec. 31-Feb. 24	3		On vessel from Valparaiso;
Concepcion.....	Oct. 17-Dec. 18		9	November, 1922—cases, 7; December, 1922—cases, 9; remaining, Dec. 31, 3 cases.
Do.....	Dec. 26-Jan. 15		7	
Iquique.....	Jan. 14-20		1	
Talcahuano.....	Nov. 12-Dec. 23	10	6	
Do.....	Jan. 7-Feb. 11	5	2	
Valparaiso.....	Dec. 3-30		9	
Do.....	Dec. 31-Feb. 10		23	Daily hospital average, 25 cases.
China:				
Antung.....	Nov. 13-Dec. 10	7		
Manchuria—				
Harbin.....	Nov. 20-26	7		
Do.....	Jan. 1-Feb. 18	7		
Cuba:				
Matanzas.....	Dec. 25-31	1	1	

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

Reports Received from December 30, 1922, to April 13, 1923—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Czechoslovakia:				
City—				
Prague	Nov. 19-25	1		
Province—				
Bohemia	Nov. 1-30	1		
Ruthenia	Oct. 1-Dec. 31	25		
Slovakia	Nov. 1-30	2		
Danzig (Free City)	Jan. 7-Feb. 24	2		Including one from Poland.
Egypt:				
Alexandria	Nov. 19-Dec. 31	2	1	
Do	Jan. 22-Mar. 4	2		
Cairo	Oct. 1-Dec. 31	19	9	
Do	Jan. 1-7	3	1	
Estonia:				
Do				Oct. 1-Dec. 31, 1922: Cases, 6. Recurrent typhus: Cases, 10. Year 1922: Cases, 159; recurrent typhus, 91 cases.
Libau	Dec. 24-30	1		Jan. 1-31, 1923: Cases, 2. Recurrent typhus, cases, 4.
Narva				Year 1922: Cases, 140; recurrent typhus cases, 83.
Germany:				
Berlin	Nov. 26-Dec. 2		1	
Coblenz	Dec. 10-16	1		
Dresden	do	1		
Great Britain:				
Glasgow	Jan. 7-Feb. 17	4	1	
Greece:				
Corfu Island	Feb. 8			Present.
Leucadia	Jan. 17			Do.
Patras	Nov. 19-25		1	
Do	Jan. 1-17	3	5	
Piræus	Feb. 8			Do.
Prevesa	Jan. 17			Do.
Saloniki	Dec. 18-21	3		Among refugees.
Do	Jan. 7-28	16	3	Refugees.
Zante	Jan. 17			Present.
Guatemala:				
Guatemala City	Jan. 1-31		1	
Hungary:				
Budapest	Jan. 14-Feb. 17	13	3	
Ireland:				
Belmullet	June 15-Dec. 14	20		In county Mayo.
Italy:				
Trieste	Feb. 26-Mar. 3	1		
Latvia:				
Do				Oct. 1-Dec. 31, 1922: Cases, 74. Recurrent typhus cases, 8.
Mexico:				
Mexico City	Nov. 12-Dec. 30	90		Including municipalities in Federal District.
Do	Dec. 31-Mar. 3	112		Do.
San Luis Potosi	Jan. 28-Feb. 10		2	
Palestine:				
Jaffa	Dec. 12-18	2		Dec. 5-25, 1922: Cases, 3; in northern section. Feb. 27-Mar. 5, 1923—1 case in northern section
Do	Jan. 16-Feb. 26	4		
Jerusalem	Dec. 26-Jan. 1	1		
Paraguay:				
Asuncion	Jan. 1-27		1	
Persia:				
Tabriz	Dec. 18-31		3	
Teheran	Sept. 24-Nov. 24		3	
Poland:				
Do				Oct. 1-Dec. 23, 1922: Cases, 1,916; deaths, 130. Recurrent typhus: Cases, 2,071; deaths, 56.
Portugal:				
Oporto	Oct. 15-Dec. 2	1	1	
Rumania:				
Bucharest				To Jan. 31, 1923: Cases, 96; deaths, 13.
Chisinau	Nov. 1-30	5		Recurrent typhus: Cases, 33.
Do	Jan. 1-31	71		July 30-Sept. 23, 1922: Cases, 23,803.
Russia:				
Moscow	Jan. 1-31	290		Undetermined cases, 38.
Ukraine	Jan.-Sept.	307,329		Provisional figures.
Ukraine, Tartar Republic, and Siberia.	June 1-30	35,925		
Do	July 1-31	17,262		Do.
Do	Aug. 1-31	6,864		Do.
Do	Sept. 1-30	2,388		Do.

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

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

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Siberia:				
Vladivostok.....	Nov. 1-Dec. 31....	5		Remittent, 1 case; indefinite, 6 cases.
Do.....	Jan. 1-31.....	43		Remittent, 1 case; indefinite, 10.
Spain:				
Barcelona.....	Nov. 30-Dec. 27...		3	
Do.....	Jan. 11-17.....		1	
Madrid.....	Dec. 1-31.....		1	
Syria:				
Aleppo.....	Dec. 10-16.....	1	1	
Do.....	Jan. 7-Feb. 17.....	37	9	Generally among refugees.
Beirut.....	Oct. 1-22.....	1		
Turkey:				
Constantinople.....	Nov. 27-Dec. 2....	3		
Do.....	Dec. 31-Feb. 17...	70	5	Mar. 6, 1923: Present.
Union of South Africa.				Oct. 1-Dec. 31, 1922: Colored—cases, 3,097; deaths, 298; white—cases, 11; deaths, 2.
Do.....				Jan. 1-31, 1923: Total—cases, 597; deaths, 66. (Colored—cases, 537; deaths 65; white—cases, 10; 1 death.)
Cape Province.				Oct. 1-Dec. 31, 1922: Colored—cases, 2,799; deaths, 250; white—cases, 6; deaths, 1.
Do.....				Jan. 1-31, 1923: Colored—cases, 513; deaths, 54; white—10 cases, 1 death.
Do.....	Dec. 31-Feb. 17...			Outbreaks.
Port Elizabeth.....	Jan. 28-Feb. 3....	1		
Natal.				Oct. 1-Dec. 31, 1922: Colored—cases, 143; deaths, 32; white—cases, 2.
Do.....				Jan. 1-31, 1923: Colored—cases, 19; deaths, 1; white—1 case.
Do.....	Feb. 4-17.....			Outbreaks.
Orange Free State.				Oct. 1-Dec. 31, 1922: Colored—cases, 81; deaths, 8; white—cases, 3; deaths, 1.
Do.....				Jan. 1-31, 1923: Colored—cases, 37; deaths, 5; white—1 case.
Do.....	Jan. 7-Feb. 3....			Outbreaks.
Transvaal.				Oct. 1-Dec. 31, 1922: Colored—cases, 64; deaths, 8.
Do.....				Jan. 1-31, 1923: Colored—cases, 18; deaths, 6; white—cases, 2.
Do.....	Jan. 14-Feb. 17...			Outbreaks.
Johannesburg.....	Nov. 1-30.....	3	6	
Do.....	Jan. 1-31.....	4	2	
Venezuela:				
Maracaibo.....	Jan. 21-27.....		1	
Yugoslavia:				
Bosnia-Herzegovina.....	Aug. 1-31.....	1		
Serbia.....				Aug. 1-31, 1922: Recurrent typhus fever, cases, 4.

YELLOW FEVER.

Brazil:				
Bahia.....	Dec. 31-Feb. 24...	40	10	
Mexico:				
Ciudad Victoria.....	Dec. 17-23.....	1		
Tampico.....	Jan. 15.....	1		Reported on bills of health.
West Africa:				
Gold Coast—				
Saltpond.....				Reported present Dec. 21, 1922.
Nigeria—				
Warral.....				Do.