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## A REVIEW OF THE WORK OF THE UNITED STATES PUBLIC HEALTH SERVICE IN INVESTIGATIONS OF STREAM POLLUTION<sup>1</sup>

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In March, 1901, Congress provided for the erection of a laboratory by the United States Public Health Service "for the investigation of infectious and contagious diseases and matters pertaining to the public health," and in the same year a division of scientific research was organized in the Bureau of the Public Health Service. Therefore the year 1901 may be said to mark the establishment of systematic and continued scientific investigation as a recognized function of the Public Health Service. Considering the rôle which sewage-polluted drinking water was playing at that time in the spread of typhoid fever and other infectious diseases, and recalling that the membership of the Hygienic Laboratory Advisory Board included the great leader in sanitary science, Prof. William T. Sedgwick, it was inevitable that attention should have been directed at once to the importance of comprehensive studies of stream pollution in relation to disease. That this was true is evidenced by frequently recurring references in the annual reports of the director of the Hygienic Laboratory during its early years, but the number of other urgent problems was so great and the resources of the laboratory were so limited that for several years work in this field was of necessity limited to occasional studies of local water supplies, undertaken usually in connection with investigations into the causes of the epidemic or endemic prevalence of typhoid fever in various localities.

In 1910 the first systematic investigation of the status and effects of sewage pollution in any large area was begun by the assignment of A. J. McLaughlin, surgeon, United States Public Health Service,

<sup>1</sup> Editorial note: This is one of four papers of a symposium on stream pollution presented at the meeting of the sanitary engineering division of the American Society of Civil Engineers at Cincinnati, Ohio, April 23, 1925, and published in the Proceedings, Vol. LI, No. 9, November, 1925. The other papers, which will appear in early issues of Public Health Reports and will later be combined with the present article and issued in pamphlet form, are as follows: "The rate of deoxygenation of polluted waters," by Emery J. Theriault; "The rate of atmospheric reoxygenation of sewage-polluted streams," by H. W. Streeter; and "Quantitative studies of bacterial pollution and natural purification in the Ohio and Illinois Rivers," by J. K. Hoskins.

to make a survey of cities in the Great Lakes region, with instructions to investigate the extent of the pollution of their water supplies and its relation to the prevalence of typhoid fever and other water-borne diseases, and to examine State and municipal ordinances relating to its control. Upon the completion of these surveys and of the reports thereon, which were published as *bulletins* of the Hygienic Laboratory, Doctor McLaughlin was assigned, by request of the health authorities of States bordering on the Missouri River, to make a survey of the sewage pollution of that stream. In this work, which was carried out during the summer of 1912, Doctor McLaughlin for the first time had the assistance of another officer of the service and was enabled, through the cooperation of the health authorities of the States concerned and of certain cities on the river, to establish several laboratories and make a rather extensive series of bacteriological examinations.

By the time this work had been brought to a close the International Joint Commission, established under the treaty between the United States and the Dominion of Canada, had taken up the question of regulating the pollution of international boundary waters, and, on request of the commission, Doctor McLaughlin was granted leave of absence from the service to accept appointment as chief sanitary expert and director of field work in investigations undertaken by the commission. These studies, although undertaken independently by the International Joint Commission, may, in a certain sense, be considered as an extension and continuation of the survey of Great Lakes cities previously undertaken by Doctor McLaughlin for the Public Health Service.

In the meantime, by an act approved August 14, 1912, Congress had extended the function of the Public Health Service to include, among other added duties, that of investigating "the diseases of man and conditions influencing the propagation and spread thereof, including sanitation and sewage and the pollution, either directly or indirectly, of the navigable streams and lakes of the United States," and in 1913 made a special appropriation, which has since been continued annually, for carrying out these provisions. The Public Health Service was thus enabled for the first time, in 1913, to establish field laboratories at such points in the United States as might be most suitable for special purposes and to employ a scientific personnel especially qualified to conduct investigations in various fields of research.

It was under this extended authority that in the summer of 1913 a group of sanitary engineers, chemists, biologists, and bacteriologists was assembled and a beginning made on a concerted plan for investigations relative to stream pollution. As originally organized, the work undertaken comprised the following main divisions:

1. Studies of the biochemistry of sewage and industrial wastes were undertaken at the Hygienic Laboratory under the direction of Earle B. Phelps, affiliate, American Society of Civil Engineers, who was appointed in that year as chief of the division of chemistry in the laboratory. These studies were devoted especially to testing and developing the application of biological oxygen demand determinations to the measurement of the potential polluting effect of sewage and the capacity of streams for its oxidation, a field of research to which Mr. Phelps had already made notable contributions.

2. Intimately connected with these was a series of studies, likewise under the direction of Mr. Phelps but carried on for the most part at various points outside of Washington, D. C., attempting, by means of experimental installations, to devise better methods for the treatment of various important industrial wastes for which economical and effective processes had not previously been evolved.

3. Under the direction of H. S. Cumming, surgeon, United States Public Health Service, the present Surgeon General of the service, a study of the pollution and natural purification of the Potomac River was undertaken. The Potomac was selected as a type of tidal stream, and special attention was paid in this study to the effect of sewage from the city of Washington on the waters near the mouth of the river, where important shellfish beds are situated. This investigation, which was completed in the summer of 1914, was then extended and continued as a survey of the sewage pollution of various coastal waters, with special reference to the contamination of shellfish.

4. At the same time, in the summer of 1913, work was begun on a study of the pollution and natural purification of the Ohio River, which was selected as a typical large inland stream, receiving sewage, usually without treatment, from all cities on its watershed, and at the same time being used by many of these cities as their source of water supply. Headquarters for this work were established in Cincinnati, Ohio, with subsidiary temporary laboratories at five other points along the river.

These several studies although conducted by working parties organized into separate units, were closely knitted together by being all under the direction of the Division of Scientific Research in the Bureau of the Public Health Service and by the intimate relations which were maintained between those in charge of the several organizations. In fact, they were considered and pursued, not as separate studies, but as interdependent parts of a common and general plan. They were all continued, substantially as originally organized in 1913, until 1917, when it was necessary to discontinue

them in order to utilize their personnel in various other more urgent duties during the period of the World War.

By the latter part of 1919, when it was possible to resume the investigations, the original personnel had become much dispersed by necessary assignments to other duties and by resignations. Likewise, the funds available for these investigations, although not actually reduced to any great extent, were relatively diminished by the material increase in all scales of cost, so that in the reorganization it was necessary to discontinue the investigations of coastal waters, which had been brought to a fairly definite conclusion, and to reestablish the other work at a single base in Cincinnati, which has since served as central headquarters for experimental studies of stream pollution and as the base from which parties have been sent out for work in the field.

Shortly after this reorganization the Surgeon General, recognizing the need for authoritative advice in the planning and conduct of these investigations, requested Dr. Stephen A. Forbes, professor emeritus of biology at the University of Illinois and director of the Illinois State Natural History Survey; Dr. Edwin O. Jordan, professor of hygiene and bacteriology at the University of Illinois; Langdon Pearse, member American Society of Civil Engineers, sanitary engineer of the Sanitary District of Chicago; and Earle B. Phelps, affiliate, American Society of Civil Engineers, consulting sanitary engineer, of New York, N. Y., to serve as consultants in studies of stream pollution. These consultants, meeting once or twice each year with the staff engaged in the investigations, and keeping in close touch with the progress made, have rendered generous and valuable assistance in shaping plans, devising methods, and interpreting results. Subsequently Joseph W. Ellms, member American Society of Civil Engineers, consented to serve as special consultant in studies of water-purification processes and has had an active share in the development of investigations along this line.

Since 1919 the principal field investigations undertaken from this base have been—

1. A study of the pollution and natural purification of the Illinois River, undertaken chiefly to check and extend observations previously made on the Potomac and the Ohio Rivers relative to the laws governing natural purification in streams.
2. A survey of representative municipal sewage-disposal plants in various parts of the United States to collect information as to their efficiency and cost in actual operation.
3. A collective study of municipal water-purification plants, chiefly rapid sand filters, as operated in a number of cities on the Ohio River and elsewhere, with a special view to ascertaining more precisely the

relations between pollution of the raw water and quality of the effluent under varying processes and conditions of operation.

Along with these field studies experimental investigations have been consistently pursued in the Cincinnati laboratory, chiefly along the following lines:

(a) An attempt has been and is being made, so far without notable success, to reproduce on a small scale, adapted for intensive experimental study, the phenomena of bacterial purification which are now known to take place in natural streams. This has included as a necessary item rather extensive research into the biology of various plankton forms in relation to bacterial purification.

(b) Studies of the biological oxygen demand of sewage, industrial wastes, and polluted river waters have been continued in the endeavor to establish more definitely the laws governing the natural processes of oxidation in streams and to check and improve the precision of methods for making the determinations required.

(c) As an extension of the collective study of municipal filter plants which was completed in 1924, experimental studies are now being made of the relation of the pollution of raw water to the quality of effluent obtainable by rapid sand filtration and chlorination, utilizing an experimental plant on the laboratory grounds which is designed so that the conditions of loading and of operation can be varied at will through a wide range.

In addition to these studies, which have been pursued at Cincinnati, work has been going on for several years at the Hygienic Laboratory under the direction of Dr. William Mansfield Clark, in a study of the physical chemistry of coagulation, with special reference to applications in water purification.

It would be impossible within a brief space, and is, moreover, not pertinent to this paper, to relate in more detail the history of the various undertakings which have been outlined, nor will any discussion of the results be attempted. As far as they have matured, they have already been made generally available in a considerable number of publications,<sup>2</sup> and some of them, with the addition of some more recent data, have been discussed in the papers by Messrs. Theriault, Streeter, and Hoskins, which follow.

In conclusion, it will be more appropriate to review briefly the broad general considerations which have determined the scope and direction of such studies as the Public Health Service has undertaken in this field since it has been in a position to make and pursue any general plan, that is, since 1913.

The first consideration, of course, has been the limitation of available resources, which have sufficed in most years for the maintenance of a staff not exceeding 6 to 12 workers in the higher grades, enough to

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<sup>2</sup> A list of the more important of these publications is given in the appended bibliography.

form a compact group for consistent work on definite lines, but obviously not sufficient to permit of any wide dispersion. The governing considerations in deciding on the use to be made of these resources have been: The existing status and trend of conditions with respect to sewage pollution in the waterways of this country; the status of sanitary science as applied to devising the remedial measures necessary to meet present and future conditions; and the facilities available through State and municipal organizations, independent institutions for research, and the engineering profession at large for conducting such further investigations as may be required.

With respect to sewage pollution, the status in the United States was, in 1913, and is to-day, that the greater part of the sewage from cities, probably not less than 85 to 90 per cent of it, is discharged without treatment into the most convenient stream. Where the dilution is insufficient for prompt oxidation and removal of the sewage, the result is the establishment of a gross nuisance in the immediate vicinity, offensive to the sense of decency and frequently injurious to the financial interests of the community responsible for the pollution. The remedy for this, however, is at hand, as the ingenuity of sanitary engineers, chemists, and biologists has already devised effective means for the treatment of sewage at reasonable cost, and self-interest may be relied upon to impel cities which suffer nuisance from their own sewage, to avail themselves of this remedy. The abatement of such gross nuisance is usually a local matter, requiring no broad plan of concerted action between widely separated communities, and, as the principles of the required treatment are already well established, such special investigation as is required is usually a matter of detail, to ascertain the particular process or combination of processes which will serve most economically and effectively in the particular case. Obviously, such investigations are the business of the State and local authorities and of the practicing engineers retained by them rather than of a Federal agency.

The more usual and more serious result, where dilution and current are sufficient to prevent immediate gross nuisance from the discharge of untreated sewage, is to contaminate the water supplies of other cities taken from the same river system at downstream points, or, in the case of tidal waters, dangerously to contaminate waters from which shellfish are taken. In the case of public water supplies necessarily taken from such polluted sources the immediate remedy is artificial purification of the supply. For this, again, sanitary science has already provided the means in various processes of treatment, economically practicable and of such efficiency that they may be relied upon to give safe effluents from water which is highly but not indefinitely polluted. In 1913 there were, to be

sure, a number of cities using dangerously polluted water supplies, but in every instance the remedy—installation of adequate water-purification works—was obvious, and such investigations as were required were not general, to ascertain the practicability of a remedy, but local and special, to decide upon the details of the installation best adapted to apply established principles to the problem at hand. It is clear that these local investigations, like those required for local sewage treatment installations, are not the function of the Public Health Service.

In general, the situation up to the present time has been that, notwithstanding the customary practice of discharging raw sewage into streams, those cities which have had to take their water supplies from the rivers thus polluted have almost invariably been able, by applying established processes of artificial water purification, to secure water supplies of good, safe quality. This has been true because the volume of the larger rivers is such as to afford great dilution, even for the sewage of the larger cities, and because of the distances between the sewer outlets of these cities and the water-supply intakes of other cities downstream are such as to permit of great reduction in pollution by the natural agencies of purification. Similarly, in coastal waters, although they are grossly polluted in the immediate vicinity of cities discharging sewage, there are still great areas sufficiently free from dangerous contamination to be suitable for shellfish culture. Consequently, local measures, namely, the installation of water-purification plants for safeguarding water supplies and the condemnation or local protection of the relatively small areas unfit for shellfish culture, have sufficed for immediate protection against the dangers of sewage pollution. The protection has not been perfect, but it has tended to become progressively better in recent years, as evidenced by the enormous decrease in prevalence of sewage-borne diseases.

Looking to the future, the conditions forseen and the remedies which must eventually be applied become more complex. With the growth of urban population, which still continues at a rapid rate, the sewage pollution of streams and coastal waterways must increase, and sooner or later, in the absence of anticipatory control, it seems inevitable that eventually the pollution will become such that water-purification plants of the highest attainable efficiency will not be able to deliver consistently safe effluents. To guard against this condition it will be necessary, perhaps in the near future, to limit the pollution of such inland streams as are necessary sources of water supply by such measure of sewage treatment as will suffice to keep the pollution at water-works intakes within definite bounds.

This, however, is an extraordinarily complex matter, not only from the administrative point of view, with which this presentation

is not concerned, but equally from the scientific viewpoint. It implies a concerted plan of control applied to an entire river system as a unit, a plan in which, presumably, each community will be required to limit its contribution of sewage pollution, not in the interests of its own citizens but for the protection of other communities downstream, usually including cities in several States. Safety demands that the measure of control exercised be adequate; justice demands that it be distributed among the communities on some definite and equitable principle; and economy demands that it be not more rigid than is actually necessary to insure the requisite protection to health.

The data needed for laying out any such comprehensive plan for controlling the pollution of an entire river system, with due regard for the considerations of safety, equitable distribution of the burden of control, and economy, are as follows:

*First.*—It is necessary to have established some quite definite and objective criterion of the quality which is to be maintained in the water supplies taken from the river as they are delivered to the consumers after artificial purification. This criterion or standard must be in terms of measurable characteristics, determinable by quantitative bacteriological or chemical examinations. It must be rigid enough to insure safety beyond any reasonable question, but not much more rigid than is actually necessary, lest it impose an excessive burden of costs.

*Second.*—It is necessary to have a fairly precise knowledge of the reliability and efficiency of such purification processes as can be applied at a reasonable cost to purification of the raw water available at the best practicable intake, for it is this efficiency, taken in connection with the standards set for the final effluent, that determines the upper limits of the pollution which may be tolerated at the intake.

*Third.*—It is necessary to know what proportionate part each of the sewered communities, situated at varying distances upstream, contributes to the pollution existing at any given intake, for otherwise it is impossible to estimate what effect elimination or reduction of the pollution from any single community will have in reducing the pollution in the intake zone. This, in turn, implies a fairly precise quantitative knowledge of the laws governing the processes of natural purification, and of how they may vary in different types of streams in relation to various climatic, seasonal, and hydrographic conditions, for it is only through such knowledge that these great protective processes which nature has provided may be used most effectively, and not to use them is to waste a natural resource of enormous economic importance.

Unfortunately, sanitary science has not furnished such full and precise knowledge as will be required on any of these points, especially

in regard to the natural agencies which tend so greatly and rapidly to reduce bacterial contamination and which constitute one of the main reliances for protection of health. Moreover, it seems unlikely that it will be possible to borrow this knowledge from the experience of other more densely populated countries, as the writer knows of no other country having similar problems in the control of stream pollution on a comparable scale and for a similar purpose; that will probably have to be studied successfully before a solution becomes necessary for some of the great river systems in the United States.

It is with these considerations in view that the Public Health Service, with the advice of its consultants, has consistently directed its investigations of stream pollution along the lines described, devoting a large part of its effort to such undertakings as the attempt to improve technical methods for laboratory determinations, to evaluate the efficiency of filtration plants under the adverse conditions of loading which may be anticipated in the future, and to add something to the present scanty knowledge of the laws of natural purification. Information of this kind, even if it may seem at this time to be more or less academic, will be essential to sound sanitary engineering practice in the future. Moreover, it appears to be preeminently the kind of information that a Federal agency should collect, because it is of general, not local, application, and because it involves such long-continued and laborious investigations as are not likely to be undertaken by private agencies, or even by State and municipal organizations, busy as they are with more immediate administrative work and with the necessary local studies incident to it.

However, while the Public Health Service is confident that this general policy is sound, it can not, of course, feel equally confident that the sequence which is being followed in the development of these studies is the best possible or that the methods which are being applied are always the most effective. For guidance in such matters the service relies primarily on its special consultants, but, in addition, it always has sought and sincerely desires the criticism and constructive advice of the entire sanitary engineering profession. Therefore, the opportunity of outlining the purposes and present status of the work to the engineers of the country is especially appreciated, in the hope that they will further it by their criticism and advice.

#### Appendix

##### BRIEF BIBLIOGRAPHY RELATING TO STUDIES OF STREAM POLLUTION, SEWAGE, AND WATER SUPPLIES

The following is a list of the publications of the United States Public Health Service relating to studies of stream pollution, sewage, and water supplies. The list includes only publications containing

original data, omitting numerous articles which present general discussions of various topics.<sup>3</sup>

- Sewage Pollution of Interstate and International Waters, with Special Reference to the Spread of Typhoid Fever: I. Lake Erie and the Niagara River. By A. J. McLaughlin. *H. L. B. No. 77* (1912). 169 pp. 25 cents.
- Sewage Pollution of Interstate and International Waters, etc.: II. Lake Superior and St. Marys River; III. Lake Michigan and the Straits of Mackinac; IV. Lake Huron, St. Clair River, Lake St. Clair, and the Detroit River; V. Lake Ontario and the St. Lawrence River. By A. J. McLaughlin. *H. L. B. No. 83* (1912). 296 pp. 30 cents.
- Sewage Pollution of Interstate and International Waters, etc.: VI. The Missouri River from Sioux City to Its Mouth. By A. J. McLaughlin. *H. L. B. No. 89* (1913). 84 pp.
- Investigation of the Pollution and Sanitary Condition of the Potomac Watershed, with Special Reference to Self-Purification and the Contamination of Shellfish in the Lower Potomac River. By Hugh S. Cumming, with Contributions by W. C. Purdy and Homer C. Ritter. *H. L. B. No. 104* (1916). 231 pp.
- Investigation of the Pollution of Tidal Waters of Maryland and Virginia, with Special Reference to Shellfish-Bearing Areas. By Hugh S. Cumming. *H. L. B. No. 74* (1916). 199 pp. 10 cents.
- \*Artificial Purification of Oysters. By William F. Wells. *P. H. R.*, July 14, 1916. Reprint No. 351. 4 pp. Out of print.
- Investigation of the Pollution of Certain Tidal Waters of New Jersey, New York, and Delaware. By Hugh S. Cumming. *P. H. B. No. 86* (1917). 147 pp.
- Stream Pollution: A Digest of Judicial Decisions and a Compilation of Legislation on the Subject. By Stanley D. Montgomery and Earle B. Phelps. *P. H. B. No. 87* (1917). 408 pp.
- Treatment and Disposal of Creamery Wastes. By Earle B. Phelps. *P. H. R.*, December 6, 1918. Reprint No. 496. 5 pp.
- Studies on the Treatment and Disposal of Industrial Wastes: I. The Treatment and Disposal of Strawboard Waste, by Harry B. Hommon; II. The Determination of Biochemical Oxygen Demand of Industrial Wastes and Sewage. By Emery J. Theriault and Harry B. Hommon. *P. H. B., No. 97* (1918). 56 pp.
- Studies on the Treatment and Disposal of Industrial Wastes: III. The Purification of Tannery Wastes. By Harry B. Hommon. *P. H. B. No. 100* (1919). 133 pp.
- Studies of Methods for the Treatment and Disposal of Sewage: Treatment of Sewage from Single Houses and Small Communities. By Leslie C. Frank and C. P. Rhynus. *P. H. B. No. 101* (1919). 117 pp. 25 cents.
- A Further Study of the Excess Oxygen Method for the Determination of the Biochemical Oxygen Demand of Sewage and Industrial Wastes. By Emery J. Theriault. *P. H. R.*, May 7, 1921. Reprint No. 594. 11 pp.

<sup>3</sup> The abbreviations used in the bibliography are as follows: "H. L. B.," *Hygienic Laboratory Bulletin*; "P. H. B.," *Public Health Bulletin*; and "P. H. R.," *Public Health Reports*, U. S. Public Health Service. The reprint number is given when the article appearing in *Public Health Reports* has been reprinted separately.

All but one of these publications are available at the present time either from the Public Health Service or from the Government Printing Office. Where the price is not given, the publication may be obtained free of charge from the Surgeon General, United States Public Health Service. Where the price is stated, remittance should be made to the SUPERINTENDENT OF DOCUMENTS, GOVERNMENT PRINTING OFFICE, WASHINGTON, D. C.

- Studies on the Treatment and Disposal of Industrial Wastes: IV. The Purification of Creamery Wastes. By Harry B. Hommon. *P. H. G. No. 109* (1921). 87 pp. 10 cents.
- Studies on the Treatment and Disposal of Industrial Wastes: V. The Purification of Tomato-Canning Wastes. By Harry B. Hommon. *P. H. B. No. 118* (1921). 58 pp. 10 cents.
- Hypochlorite Process of Oyster Purification (Experimental). By F. A. Carmelia. P. H. R., April 22, 1921. Reprint No. 652. 10 pp.
- The Loading of Filter Plants. By H. W. Streeter. P. H. R., March 24, 1922. Reprint No. 737. 13 pp.
- A Study of the Pollution and Natural Purification of the Ohio River: I. The Plankton and Related Organisms. By W. C. Purdy. *P. H. B. No. 131* (1923). 78 pp.
- Sewage Treatment in the United States: Report on the Study of Fifteen Representative Sewage Treatment Plants. By H. H. Wagenhals, E. J. Theriault, and H. B. Hommon. *P. H. B. No. 132* (1923). 260 pp.
- An Experimental Study of the Relation of Hydrogenion Concentrations to the Formation of Floc in Alum Solutions. By Emery J. Theriault and William Mansfield Clark. P. H. R., February 2, 1923. Reprint No. 813. 20 pp.
- Indicators for pH Control of Alum Dosage. By Barnett Cohen. P. H. R., April 6, 1923. Reprint No. 828. 2 pp.
- On the Composition of the Precipitate from Partially Alkalinized Alum Solutions. By Lewis B. Miller. P. H. R., August 31, 1923. Reprint No. 862. 10 pp.
- A Study of the Pollution and Natural Purification of the Ohio River: II. Report on Surveys and Laboratory Studies. By W. H. Frost, H. W. Streeter, J. K. Hoskins, and R. E. Tarbett. *P. H. B. No. 143* (1924). 343 pp.
- Absorption of Aluminium Hydrate Considered as a Solid Solution Phenomenon. By Lewis B. Miller. P. H. R., June 20, 1924. Reprint No. 932. 14 pp.
- A Study of the Pollution and Natural Purification of the Ohio River: III. Factors Concerned in the Phenomena of Oxidation and Re-aeration. By H. W. Streeter and Earle B. Phelps. *P. H. B. No. 146* (1925). 75 pp.
- The Determination of Dissolved Oxygen by the Winkler Method. By Emery J. Theriault. *P. H. B. No. 151* (1925). 43 pp.
- Some Preliminary Observations from a Study of Water Purification Plants Along the Ohio River. By H. W. Streeter. P. H. R., January 30, 1925. Reprint No. 987. 11 pp.
- A Study of the Effects of Anions Upon the Properties of "Alum Floc." By Lewis B. Miller. P. H. R., February 20, 1925. Reprint No. 992. 18 pp.

### MORTALITY SUMMARY FOR 78 LARGE CITIES

Number of deaths, death rates, and infant mortality in 78 large cities of the United States for 52 weeks of 1925 and comparison with 1924

[From the Weekly Health Index, Bureau of the Census, Department of Commerce]

City <sup>1</sup>	Total deaths	Death rate <sup>2</sup>	Deaths under 1 year	Provisional infant mortality rate, 1925 <sup>3</sup>	Infant mortality rate, 1924	Mortality data for calendar year 1924		
						Total deaths	Death rate	Deaths under 1 year
Total (69 cities).....	369, 142	12.6	45, 384	4 70	4 72	359, 467	12.5	47, 049
Akron <sup>4</sup> .....	1, 867	.....	291	60	61	1, 537	.....	285
Albany.....	1, 826	15.3	174	70	72	1, 827	15.4	172
Atlanta <sup>5</sup> .....	3, 862	.....	518	.....	.....	4, 215	.....	563
Baltimore.....	11, 623	14.6	1, 382	77	85	11, 310	14.4	1, 479
Birmingham <sup>6</sup> .....	3, 473	16.9	493	.....	.....	3, 411	17.0	495
Boston.....	11, 472	14.7	1, 601	87	74	10, 940	14.1	1, 473
Bridgeport <sup>7</sup> .....	1, 535	.....	165	54	56	1, 537	.....	183
Buffalo.....	7, 388	13.4	1, 054	85	84	6, 955	15.3	1, 082
Cambridge.....	1, 429	12.7	183	58	53	1, 435	12.8	168
Camden.....	1, 762	13.7	271	88	91	1, 744	13.8	297
Canton.....	1, 073	10.1	156	67	81	1, 040	10.1	200
Chicago.....	34, 260	11.4	4, 474	76	77	32, 915	11.2	4, 522
Cincinnati.....	6, 494	15.9	635	76	79	6, 218	15.2	694
Cleveland.....	9, 683	10.4	1, 304	65	66	9, 295	10.2	1, 386
Columbus.....	3, 896	14.0	432	76	65	3, 532	13.2	371
Dallas <sup>8</sup> .....	2, 643	13.7	448	.....	.....	2, 462	13.1	415
Dayton.....	1, 947	11.3	178	54	72	1, 837	10.9	239
Denver <sup>9</sup> .....	4, 116	14.7	465	.....	.....	4, 122	14.9	517
Des Moines.....	1, 580	10.6	130	42	57	1, 505	10.4	177
Detroit.....	13, 671	10.9	2, 559	79	79	12, 841	10.7	2, 394
Duluth.....	1, 061	9.6	131	59	64	1, 045	9.6	154
El Paso <sup>6</sup> .....	1, 705	16.3	343	.....	.....	1, 782	17.7	375
Erie <sup>6</sup> .....	1, 280	.....	167	61	67	1, 271	.....	179
Fall River.....	1, 572	13.0	298	83	92	1, 600	13.2	332
Flint.....	991	7.6	216	69	69	951	7.7	227
Fort Worth <sup>6</sup> .....	1, 635	10.1	191	.....	.....	1, 296	8.8	165
Grand Rapids.....	1, 760	11.5	246	69	53	1, 530	10.3	175
Houston <sup>6</sup> .....	2, 576	15.7	349	.....	.....	2, 328	14.5	299
Indianapolis.....	4, 931	13.8	472	68	77	4, 597	13.1	565
Jersey City.....	3, 663	11.7	464	63	77	3, 821	12.2	563
Kansas City, Kans.....	1, 645	13.3	223	78	94	1, 530	12.6	247
Kansas City, Mo. <sup>6</sup> .....	5, 053	13.8	590	.....	.....	4, 825	13.4	590
Los Angeles <sup>6</sup> .....	11, 428	.....	1, 213	65	66	11, 309	.....	1, 250
Louisville <sup>6</sup> .....	4, 198	16.2	442	73	71	3, 947	15.3	441
Lowell.....	1, 534	13.2	227	81	93	1, 548	13.4	279
Lynn.....	1, 149	11.0	135	65	72	1, 159	11.2	149
Memphis <sup>6</sup> .....	3, 441	19.8	434	.....	.....	3, 506	20.4	456
Milwaukee.....	5, 448	10.9	845	75	70	4, 842	9.8	786
Minneapolis.....	4, 902	11.6	566	61	54	4, 689	11.2	522
Nashville <sup>6</sup> .....	2, 310	17.0	295	.....	.....	2, 371	19.2	314
New Bedford.....	1, 389	10.3	241	81	79	1, 360	10.2	250
New Haven.....	2, 143	12.0	239	63	72	2, 153	12.2	290
New Orleans <sup>6</sup> .....	7, 935	19.2	995	.....	.....	7, 600	18.6	846
New York.....	71, 655	11.8	8, 321	65	68	71, 306	11.9	8, 800
Bronx Borough.....	8, 327	9.3	752	48	60	7, 894	9.1	905
Brooklyn Borough.....	23, 689	10.6	2, 959	58	64	24, 577	11.2	3, 216
Manhattan Borough.....	31, 293	13.9	3, 746	80	74	30, 594	13.5	3, 698
Queens Borough.....	6, 129	10.7	692	60	69	6, 513	11.7	778
Richmond Borough.....	2, 217	16.6	172	58	70	1, 728	13.2	203
Newark, N. J.....	5, 271	11.7	737	68	65	4, 982	11.2	740
Norfolk <sup>3</sup> .....	1, 746	.....	235	81	82	1, 741	.....	231
Oakland.....	2, 580	10.1	232	52	66	2, 767	11.2	297
Oklahoma City <sup>4,5</sup> .....	1, 195	.....	149	.....	.....	1, 167	.....	170
Omaha.....	2, 794	13.2	310	62	67	2, 650	12.7	342
Paterson.....	1, 675	11.9	189	63	65	1, 706	12.1	201
Philadelphia.....	26, 028	13.2	3, 030	77	75	25, 263	12.9	3, 105
Pittsburgh.....	9, 366	14.9	1, 254	80	92	9, 720	15.5	1, 440
Portland, Oreg.....	3, 349	11.9	324	46	54	3, 240	11.7	279
Providence.....	3, 262	13.3	385	61	79	3, 492	13.3	517

<sup>1</sup> Cities appearing in the summary are those shown for the 52 weeks in the Weekly Health Index.

<sup>2</sup> Allowance has been made for the extra day, which must be added to the 52 weeks to give a period of 365 days.

<sup>3</sup> Infant mortality rate is based upon deaths under 1 year as returned each week and estimated births, 1925.

<sup>4</sup> Infant mortality rate for the cities in the birth registration area, appearing in the summary.

<sup>5</sup> Mortality rates are omitted, pending the establishment of more satisfactory estimates of population.

<sup>6</sup> Cities with no infant mortality rate are not in the registration area for births.

**Number of deaths, death rates, and infant mortality in 78 large cities of the United States for 52 weeks of 1925 and comparison with 1924—Continued**

City	Total deaths	Death rate	Deaths under 1 year	Provisional infant mortality rate, 1925	Infant mortality rate, 1924	Mortality data for calendar year 1924		
						Total deaths	Death rate	Deaths under 1 year
Richmond.....	2,735	14.7	371	90	88	2,818	15.3	382
Rochester.....	3,808	11.5	417	64	59	3,623	11.1	385
St. Louis <sup>a</sup> .....	11,476	14.0	949	-----	-----	10,993	13.5	1,066
St. Paul.....	2,954	12.0	242	41	57	2,928	12.0	347
Salt Lake City.....	1,521	11.6	159	42	62	1,677	13.0	213
San Antonio <sup>a</sup> .....	3,020	15.3	556	-----	-----	2,995	15.6	612
San Diego.....	1,751	16.6	133	54	55	1,664	17.3	122
San Francisco.....	7,303	13.1	457	52	56	7,484	13.6	504
Schenectady.....	1,050	10.3	124	69	66	1,005	10.0	122
Seattle <sup>a</sup> .....	3,379	-----	223	40	46	3,312	-----	249
Somerville.....	1,113	10.9	145	73	56	981	9.8	110
Spokane.....	1,370	12.6	115	52	52	1,302	12.5	120
Springfield, Mass.....	1,757	11.5	219	61	69	1,691	11.4	241
Syracuse.....	2,269	11.9	278	67	69	2,259	12.0	288
Tacoma.....	1,178	11.3	91	41	57	1,145	11.1	127
Toledo.....	3,475	12.1	434	81	69	3,293	11.7	401
Trenton.....	2,026	15.4	259	83	93	1,872	14.4	294
Utica.....	1,472	13.8	168	71	81	1,572	14.9	197
Washington, D. C.....	7,632	14.2	761	83	76	6,553	13.5	705
Waterbury <sup>b</sup> .....	1,061	-----	178	74	77	1,045	-----	187
Wilmington, Del.....	1,440	11.8	202	91	91	1,407	11.7	209
Worcester.....	2,508	12.6	301	67	63	2,465	12.6	288
Yonkers.....	1,122	10.1	144	62	72	1,088	9.9	172
Youngstown.....	1,685	10.6	286	70	72	1,667	10.7	306

<sup>a</sup> Mortality rate, are omitted, pending the establishment of more satisfactory estimates of population.

<sup>b</sup> Cities with no infant mortality rate are not in the registration area for births.

### DEATHS DURING WEEK ENDED JANUARY 2, 1926

*Summary of information received by telegraph from industrial insurance companies for week ended January 2, 1926, and corresponding week of 1925. (From the Weekly Health Index, January 5, 1926, issued by the Bureau of the Census, Department of Commerce)*

	Week ended Jan. 2, 1926	Corresponding week, 1925
Policies in force.....	62, 530, 137	58, 136, 497
Number of death claims.....	11, 655	10, 615
Death claims per 1,000 policies in force, annual rate	9. 7	9. 5

Deaths from all causes in certain large cities of the United States during the week ended January 2, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the Weekly Health Index, January 5, 1926, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Jan. 2, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate week ended Jan. 2, 1926 <sup>1</sup>
	Total deaths	Death rate <sup>1</sup>		Week ended Jan. 2, 1926	Corresponding week, 1925	
Total (67 cities).....	8,046	14.4	14.3	831	1,010	867
Akron.....	35			8	6	89
Albany <sup>4</sup> .....	43	18.7	15.2	7	2	152
Atlanta.....	105			12	12	
White.....	64			6		
Colored.....	41	( <sup>5</sup> )		6		
Baltimore <sup>4</sup> .....	255	16.7	16.6	27	21	81
White.....	191			20		74
Colored.....	64	( <sup>5</sup> )		7		113
Birmingham.....	70	17.7	20.8	10	15	
White.....	29			3		
Colored.....	41	( <sup>5</sup> )		7		
Boston.....	273	18.2	16.4	25	45	66
Bridgeport.....	36			5	8	80
Buffalo.....	137	12.9	12.8	16	12	65
Cambridge.....	26	12.1	11.1	1	5	17
Camden.....	39	15.8	17.8	1	8	16
Chicago <sup>4</sup> .....	749	13.0	13.6	96	108	85
Cincinnati.....	129	16.4	16.4	7	15	41
Cleveland.....	206	11.5	11.9	19	28	47
Columbus.....	89	16.6	16.8	10	10	62
Dallas.....	57	15.4	15.9	12	4	
White.....	38			9		
Colored.....	19	( <sup>5</sup> )		3		
Dayton.....	42	12.7	11.2	7	1	110
Denver.....	91	16.9	15.4	11	11	
Des Moines.....	25	8.7	10.8	0	0	0
Detroit.....	327	13.7	11.2	46	61	79
Duluth.....	23	10.9	5.2	0	0	0
El Paso.....	31	15.4	14.4	2	4	
Erie.....	28			3	4	58
Fall River <sup>4</sup> .....	47	20.2	15.1	7	4	102
Flint.....	22	8.8	6.8	1	5	16
Fort Worth.....	31	10.6	10.3	2	6	
White.....	24			2		
Colored.....	7	( <sup>5</sup> )		0		
Grand Rapids.....	34	11.5	12.2	6	3	94
Houston.....	65	20.5	19.0	7	7	
White.....	38			4		
Colored.....	27	( <sup>5</sup> )		3		
Indianapolis.....	109	15.8	14.5	4	10	28
White.....	94			1		8
Colored.....	15	( <sup>5</sup> )		3		164
Jersey City.....	88	14.6	14.7	21	14	149
Kansas City, Kans.....	35	14.7	19.4	6	4	119
White.....	29			2		45
Colored.....	6	( <sup>5</sup> )		4		737
Kansas City, Mo.....	108	15.3	14.6	10	12	
Los Angeles.....	233			21	22	57
Louisville.....	103	20.7	18.5	10	10	84
White.....	84			9		86
Colored.....	19	( <sup>5</sup> )		1		68
Lowell.....	37	16.6	10.7	4	5	69
Lynn.....	31	15.4	13.9	6	0	151
Memphis.....	54	16.1	24.5	8	5	
White.....	35			4		
Colored.....	19	( <sup>5</sup> )		4		
Milwaukee.....	113	11.7	10.9	24	29	111
Minneapolis.....	97	11.9	13.6	12	10	64

<sup>1</sup> Annual rate per 1,000 population.

<sup>2</sup> Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1924. Cities left blank are not in the registration area for births.

<sup>3</sup> Data for 61 cities.

<sup>4</sup> Deaths for week ended Friday, Jan. 1, 1926.

<sup>5</sup> In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentage of the total population: Atlanta 31, Baltimore 15, Birmingham 39, Dallas 16, Fort Worth 14, Houston 25, Kansas City, Kans. 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D. C., 23.

Deaths from all causes in certain large cities of the United States during the week ended January 2, 1926, infant mortality, annual death rate, and comparison with corresponding week of 1925. (From the Weekly Health Index, January 5, 1926, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Jan. 2, 1926		Annual death rate per 1,000 corresponding week, 1925	Deaths under 1 year		Infant mortality rate week ended Jan. 2, 1926
	Total deaths	Death rate		Week ended Jan. 2, 1926	Corresponding week, 1925	
Nashville <sup>4</sup> .....	61	23.3	18.0	7	8	-----
White.....	37			5	5	-----
Colored.....	24	( <sup>5</sup> )		2		-----
New Bedford.....	36	13.9	12.7	5	4	82
New Haven.....	50	14.6	13.1	3	3	39
New Orleans.....	176	22.1	22.8	14	25	-----
White.....	103			3		-----
Colored.....	73	( <sup>5</sup> )		11		-----
New York.....	1,488	12.7	13.5	153	188	61
Bronx Borough.....	180	10.4	10.1	15	22	52
Brooklyn Borough.....	490	11.4	11.8	56	61	58
Manhattan Borough.....	639	14.8	15.8	61	77	64
Queens Borough.....	139	12.6	14.6	17	23	79
Richmond Borough.....	40	15.6	21.0	4	5	71
Newark, N. J.....	145	16.7	13.0	22	24	100
Norfolk.....	45			2	4	37
White.....	26			0		0
Colored.....	19	( <sup>5</sup> )		2		98
Oakland.....	74	15.2	12.5	6	5	69
Oklahoma City.....	24			1		-----
Omaha.....	64	15.8	13.3	15	15	154
Paterson.....	47	17.3	15.5	4	3	67
Philadelphia.....	553	14.6	15.7	44	89	55
Pittsburgh.....	172	14.2	18.5	19	30	63
Portland, Oreg.....	75	13.8	16.4	2	8	20
Providence.....	92	19.6	15.5	10	3	79
Richmond.....	54	15.1	12.6	6	6	72
White.....	28			0		0
Colored.....	26	( <sup>5</sup> )		6		215
Rochester.....	76	12.0	12.9	7	5	56
St. Louis.....	261	16.6	15.6	18	18	-----
St. Paul.....	59	12.5	12.9	2	7	17
Salt Lake City <sup>4</sup> .....	42	16.7	14.7	2	6	30
San Antonio.....	71	18.7	17.4	10	13	-----
San Diego.....	54	26.6	20.2	6	4	140
San Francisco.....	165	15.4	16.6	2	9	12
Schenectady.....	24	12.2	9.2	0	1	0
Seattle.....	56			4	5	39
Somerville.....	18	9.2	12.3	3	6	79
Spokane.....	41	19.6	13.9	1	1	22
Springfield, Mass.....	39	13.3	9.2	3	3	44
Syracuse.....	43	11.7	12.8	3	11	38
Tacoma.....	32	16.0	11.5	2	2	47
Toledo.....	77	14.0	14.2	7	9	63
Trenton.....	41	16.2	18.6	3	11	49
Washington, D. C.....	170	17.8	14.8	15	8	84
White.....	104			6		49
Colored.....	66	( <sup>5</sup> )		9		165
Waterbury.....	18			5	3	107
Wilmington, Del.....	39	16.7	14.1	3	6	68
Worcester.....	61	16.0	14.9	3	8	34
Yonkers.....	26	12.1	9.3	3	0	66
Youngstown.....	34	11.1	6.5	3	1	37

<sup>4</sup> Deaths for week ended Friday, Jan. 1, 1926.

<sup>5</sup> In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentage of the total population: Atlanta 31, Baltimore 15, Birmingham 39, Dallas 15, Fort Worth 14, Houston 25, Kansas City, Kans., 14, Louisville 17, Memphis 38, Nashville 30, New Orleans 26, Norfolk 38, Richmond 32, and Washington, D. C., 25.





MAINE	Cases
Chicken pox.....	22
Diphtheria.....	7
German measles.....	3
Influenza.....	3
Measles.....	4
Mumps.....	22
Pneumonia.....	17
Poliomyelitis.....	2
Scarlet fever.....	31
Tuberculosis.....	8
Typhoid fever.....	3
Vincent's angina.....	1
Whooping cough.....	8
MARYLAND <sup>1</sup>	
Chicken pox.....	176
Diphtheria.....	26
Dysentery.....	1
German measles.....	3
Influenza.....	82
Lethargic encephalitis.....	1
Malaria.....	1
Measles.....	690
Mumps.....	147
Pneumonia (broncho).....	83
Pneumonia (lobar).....	86
Scarlet fever.....	43
Septic sore throat.....	1
Trachoma.....	1
Tuberculosis.....	68
Typhoid fever.....	7
Vincent's angina.....	1
Whooping cough.....	72
MASSACHUSETTS	
Cerebrospinal meningitis.....	4
Chicken pox.....	280
Conjunctivitis (suppurative).....	15
Diphtheria.....	100
German measles.....	59
Hook worm disease.....	1
Influenza.....	17
Lethargic encephalitis.....	1
Measles.....	1,651
Mumps.....	71
Ophthalmia neonatorum.....	18
Pellagra.....	1
Pneumonia (lobar).....	234
Poliomyelitis.....	2
Scarlet fever.....	295
Septic sore throat.....	1
Tetanus.....	1
Trachoma.....	2
Tuberculosis (pulmonary).....	123
Tuberculosis (other forms).....	26
Typhoid fever.....	5
Whooping cough.....	393
MICHIGAN	
Diphtheria.....	134
Measles.....	1,139
Pneumonia.....	291
Scarlet fever.....	386
Smallpox.....	51
Tuberculosis.....	45
Typhoid fever.....	13
Whooping cough.....	257

MINNESOTA	Cases
Chicken pox.....	188
Diphtheria.....	85
Influenza.....	1
Measles.....	31
Pneumonia.....	3
Poliomyelitis.....	1
Scarlet fever.....	333
Smallpox.....	3
Tuberculosis.....	34
Typhoid fever.....	4
Whooping cough.....	42
MISSISSIPPI	
Diphtheria.....	13
Scarlet fever.....	8
Smallpox.....	8
Typhoid fever.....	3
MISSOURI	
Chicken pox.....	112
Diphtheria.....	80
Influenza.....	39
Measles.....	29
Mumps.....	61
Pneumonia.....	32
Scarlet fever.....	210
Smallpox.....	17
Trachoma.....	1
Tuberculosis.....	51
Whooping cough.....	43
MONTANA	
Chicken pox.....	29
Diphtheria.....	19
Measles.....	1
Mumps.....	90
Scarlet fever.....	20
Smallpox.....	4
Tuberculosis.....	3
Typhoid fever.....	5
Whooping cough.....	24
NEBRASKA	
Chicken pox.....	32
Diphtheria.....	11
Influenza.....	5
Measles.....	3
Mumps.....	5
Pneumonia.....	2
Scarlet fever.....	63
Septic sore throat.....	2
Smallpox.....	20
Tuberculosis.....	1
Whooping cough.....	17
NEW JERSEY	
Anthrax.....	1
Cerebrospinal meningitis.....	1
Chicken pox.....	504
Diphtheria.....	151
Influenza.....	21
Measles.....	1,121
Pneumonia.....	295
Poliomyelitis.....	1
Scarlet fever.....	215
Trachoma.....	1
Typhoid fever.....	15
Whooping cough.....	67

<sup>1</sup> Week ended Friday.



**TEXAS—continued**

	Cases
Mumps.....	8
Pellagra.....	2
Pneumonia.....	27
Scarlet fever.....	66
Smallpox.....	7
Tetanus.....	1
Tuberculosis.....	17
Typhoid fever.....	11
Whooping cough.....	34

**UTAH**

Cerebrospinal meningitis—Salt Lake City....	2
Chicken pox.....	108
Diphtheria.....	24
Measles.....	1
Mumps.....	29
Pneumonia.....	10
Scarlet fever.....	9
Smallpox.....	6
Tuberculosis.....	4
Typhoid fever.....	2
Whooping cough.....	32

**VERMONT**

Chicken pox.....	89
Diphtheria.....	2
Measles.....	7
Mumps.....	3
Scarlet fever.....	11
Whooping cough.....	21

**VIRGINIA**

Smallpox.....	8
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**WASHINGTON**

Cerebrospinal meningitis:	
Lincoln County.....	1
Seattle.....	1
Chicken pox.....	105
Diphtheria.....	22
German measles.....	3
Measles.....	15
Mumps.....	132
Pneumonia.....	1
Scarlet fever.....	72

**WASHINGTON—continued**

	Cases
Smallpox:	
Everett.....	14
Tacoma.....	19
Scattering.....	25
Tuberculosis.....	5
Typhoid fever.....	1
Whooping cough.....	33

**WEST VIRGINIA**

Diphtheria.....	6
Scarlet fever.....	7

**WISCONSIN**

Milwaukee:	
Chicken pox.....	167
Diphtheria.....	17
German measles.....	5
Influenza.....	1
Measles.....	1
Mumps.....	19
Pneumonia.....	19
Scarlet fever.....	33
Tuberculosis.....	8
Whooping cough.....	49

Scattering:

Chicken pox.....	153
Diphtheria.....	19
German measles.....	3
Influenza.....	41
Measles.....	142
Mumps.....	96
Pneumonia.....	12
Poliomyelitis.....	1
Scarlet fever.....	172
Smallpox.....	12
Tuberculosis.....	10
Typhoid fever.....	2
Whooping cough.....	64

**WYOMING**

Chicken pox.....	7
Diphtheria.....	2
Measles.....	1
Mumps.....	1
Pneumonia.....	6
Scarlet fever.....	6
Smallpox—Albany.....	2
Whooping cough.....	17

**Reports for Week Ended January 2, 1926**

**DISTRICT OF COLUMBIA**

	Cases
Chicken pox.....	19
Diphtheria.....	15
Influenza.....	4
Measles.....	9
Pneumonia.....	47
Scarlet fever.....	19
Tuberculosis.....	17
Whooping cough.....	4

**NORTH DAKOTA**

Chicken pox.....	11
Diphtheria.....	5
German measles.....	1
Measles.....	4
Mumps.....	11
Pneumonia.....	3

**NORTH DAKOTA—continued**

	Cases
Scarlet fever.....	86
Smallpox.....	4
Whooping cough.....	7

**SOUTH CAROLINA**

Dengue.....	3
Diphtheria.....	26
Influenza.....	688
Malaria.....	68
Measles.....	6
Poliomyelitis.....	1
Scarlet fever.....	6
Smallpox.....	5
Tuberculosis.....	35
Typhoid fever.....	15
Whooping cough.....	40

## SUMMARY OF MONTHLY REPORTS FROM 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	Cerebro-spinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Polio-myelitis	Scarlet fever	Small-pox	Typhoid fever
<i>May, 1925</i>										
Tennessee.....	2	22	160	69	438	22	1	121	179	100
<i>July, 1925</i>										
Iowa.....		20			5		8	24	13	3
<i>November, 1925</i>										
Hawaii Territory.....	1	29	3		44				1	2
<i>December, 1925</i>										
Arizona.....		11			3		1	49	0	15
Connecticut.....	4	185	38	2	787		2	276	0	30

## PLAGUE-ERADICATIVE MEASURES IN THE UNITED STATES

The following items were taken from the reports of plague-eradicator measures from the cities named:

*Los Angeles, Calif.*

Week ended Dec. 26, 1925:

Number of rats trapped.....	2, 120
Number of rats found to be plague infected.....	0
Number of squirrels examined.....	439
Number of squirrels found to be plague infected.....	0
Number of mice trapped.....	2, 538
Number of mice found to be plague infected.....	0

Date of discovery of last plague-infected rodent, Nov. 6, 1925.

Date of last human case, Jan. 15, 1925.

*Oakland, Calif.*

(Including other East Bay communities)

Week ended Dec. 26, 1925:

Number of rats trapped.....	537
Number of rats found to be plague infected.....	0

Totals:

Number of rats trapped Jan. 1 to Dec. 26, 1925.....	79, 111
Number of rats found to be plague infected.....	21
Number of squirrels examined May 1 to Aug. 1, 1925.....	7, 277
Number of squirrels found to be plague infected.....	0
Number of mice trapped Jan. 1 to Dec. 26, 1925.....	29, 772

Date of discovery of last plague-infected rat, Mar. 4, 1925.

Date of last human case, Sept. 10, 1919.

**GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES**

*Diphtheria.*—For the week ended December 26, 1925, 36 States reported 1,101 cases of diphtheria. For the week ended December 27, 1924, the same States reported 1,391 cases of this disease. Ninety-seven cities, situated in all parts of the country and having an aggregate population of more than 28,500,000, reported 683 cases of diphtheria for the week ended December 26, 1925. Last year for the corresponding week they reported 812 cases. The estimated expectancy for these cities was 1,300 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

*Measles.*—Thirty-three States reported 2,816 cases of measles for the week ended December 26, 1925, and 1,099 cases of this disease for the week ended December 27, 1924. Ninety-seven cities reported 2,385 cases of measles for the week this year, and 583 cases last year.

*Poliomyelitis.*—The health officers of 37 States reported 11 cases of poliomyelitis for the week ended December 26, 1925. The same States reported 36 cases for the week ended December 27, 1924.

*Scarlet fever.*—Scarlet fever was reported for the week as follows: 36 States—this year, 2,395 cases; last year, 2,762 cases. Ninety-seven cities—this year, 1,153 cases; last year, 1,341 cases; estimated expectancy, 1,027 cases.

*Smallpox.*—For the week ended December 26, 1925, 36 States reported 332 cases of smallpox. Last year for the corresponding week they reported 705 cases. Ninety-seven cities reported smallpox for the week as follows: 1925, 89 cases; 1924, 222 cases; estimated expectancy, 57 cases. Four deaths from smallpox were reported by these cities for the week this year—at Los Angeles, Calif.

*Typhoid fever.*—Two hundred and seventy-three cases of typhoid fever were reported for the week ended December 26, 1925, by 35 States. For the corresponding week of 1924, the same States reported 383 cases of this disease. Ninety-seven cities reported 51 cases of typhoid fever for the week this year and 193 cases for the corresponding week last year. The estimated expectancy for these cities was 76 cases.

*Influenza and pneumonia.*—Deaths from influenza and pneumonia were reported for the week by 91 cities, with a population of nearly 28,000,000, as follows: 1925, 820 deaths; 1924, 910.

## City reports for week ended December 26, 1925

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1915 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1923, estimated	Chick-en pox, cases re-ported	Diphtheria		Influenza		Mea-sles, cases re-ported	Mumps, cases re-ported	Pneu-monia, deaths re-ported
			Cases, esti-mated expect-ancy	Cases re-ported	Cases re-ported	Deaths re-ported			
<b>NEW ENGLAND</b>									
<b>Maine:</b>									
Portland	73, 129	1	2	0	0	0	0	2	2
<b>New Hampshire:</b>									
Concord	22, 406	0	0	0	0	0	0	1	2
Nashua	29, 234	1	0	4	0	0	0	0	1
<b>Vermont:</b>									
Barre	10, 008	0	0	0	0	0	0	0	1
Burlington	23, 613	0	1	0	0	0	0	0	0
<b>Massachusetts:</b>									
Boston	770, 400	52	65	15	2	1	116	9	22
Fall River	120, 912	1	5	4	2	0	14	0	4
Springfield	144, 227	7	5	0	0	0	1	0	2
Worcester	191, 927	13	4	5	0	0	160	0	12
<b>Rhode Island:</b>									
Pawtucket	68, 799	2	3	1	0	0	5	0	3
Providence	242, 378	0	15	2	0	0	247	0	10
<b>Connecticut:</b>									
Bridgeport	143, 555	0	9	5	4	3	78	0	2
Hartford	138, 036	4	9	5	0	1	30	0	4
New Haven	172, 967	16	3	0	0	0	8	0	5
<b>MIDDLE ATLANTIC</b>									
<b>New York:</b>									
Buffalo	536, 718	15	31	12	3	0	4	1	14
New York	5, 927, 625	131	218	119	19	10	585	14	151
Rochester	317, 867	15	7	5	0	1	17	0	7
Syracuse	184, 511	7	9	5	0	0	4	11	6
<b>New Jersey:</b>									
Camden	124, 157	12	5	0	1	1	11	1	7
Newark	458, 699	54	19	12	4	0	68	2	10
Trenton	127, 390	3	5	0	1	1	0	0	2
<b>Pennsylvania:</b>									
Philadelphia	1, 922, 788	151	74	50	0	4	56	11	65
Pittsburgh	613, 442	31	29	10	0	1	13	1	24
Reading	110, 917	15	5	1	0	0	0	1	2
<b>EAST NORTH CENTRAL</b>									
<b>Ohio:</b>									
Cincinnati	406, 312	19	16	5	1	2	0	0	13
Cleveland	888, 519	46	49	41	2	2	446	3	15
Columbus	261, 062	15	8	2	0	3	10	0	8
Toledo	268, 338	20	14	7	0	1	19	0	6
<b>Indiana:</b>									
Fort Wayne	93, 573		5						
Indianapolis	342, 718	15	16	16	0	0	30	0	10
South Bend	79, 709	3	2	1	0	0	0	0	0
Terre Haute	68, 939	1	3	3	0	0	1	0	1
<b>Illinois:</b>									
Chicago	2, 886, 121	107	173	59	11	2	29	4	44
Peoria	79, 675	20	2	0	0	0	0	3	5
Springfield	61, 833	7	3	0	1	1	2	2	1
<b>Michigan:</b>									
Detroit	1, 155, 000	61	74	53	6	0	249	2	33
Flint	117, 968	3	12	2	0	0	1	0	1
Grand Rapids	145, 947	1	5	0	1	1	1	0	3

<sup>1</sup> Population Jan. 1, 1920.

City reports for week ended December 26, 1925—Continued

Division, State, and city	Population July 1, 1923, estimated	Chick- en pox, cases re- ported	Diphtheria		Influenza		Mea- sles, cases re- ported	Mumps, cases re- ported	Pneu- monia, deaths re- ported
			Cases, esti- mated expect- ancy	Cases re- ported	Cases re- ported	Deaths re- ported			
<b>EAST NORTH CENTRAL— continued</b>									
<b>Wisconsin:</b>									
Madison.....	42, 519	5	2	0	0	0	1	0	0
Milwaukee.....	484, 595	120	22	28	0	0	1	4	13
Racine.....	64, 393	5	2	5	0	0	0	1	0
Superior.....	<sup>1</sup> 39, 671	0	1	0	0	0	0	0	0
<b>WEST NORTH CENTRAL</b>									
<b>Minnesota:</b>									
Duluth.....	106, 289	8	3	1	0	0	0	0	3
Minneapolis.....	406, 125	45	21	16	0	0	1	2	10
St. Paul.....	241, 891	22	18	13	0	1	2	0	8
<b>Iowa:</b>									
Davenport.....	61, 262	2	1	2	0	0	0	0	0
Sioux City.....	79, 662	4	3	0	0	0	0	0	0
Waterloo.....	39, 667	1	0	0	0	0	2	0	0
<b>Missouri:</b>									
Kansas City.....	351, 819	22	13	5	2	2	25	1	8
St. Joseph.....	78, 232	1	4	0	0	0	1	0	0
St. Louis.....	803, 853	29	64	50	0	0	2	1	0
<b>North Dakota:</b>									
Fargo.....	24, 841	6	1	0	0	0	0	5	0
Grand Forks.....	14, 547	1	0	0	0	0	0	0	0
<b>South Dakota:</b>									
Aberdeen.....	15, 829	0	0	0	0	0	0	10	0
Sioux Falls.....	29, 206	5	1	0	0	0	0	0	0
<b>Nebraska:</b>									
Lincoln.....	58, 761	3	2	0	0	1	0	1	3
Omaha.....	204, 382	3	6	2	0	0	0	0	11
<b>Kansas:</b>									
Topeka.....	52, 555	20	2	1	0	0	0	0	2
Wichita.....	79, 261	9	7	2	0	0	1	0	4
<b>SOUTH ATLANTIC</b>									
<b>Delaware:</b>									
Wilmington.....	117, 728	3	3	7	0	0	0	0	5
<b>Maryland:</b>									
Baltimore.....	773, 580	67	31	10	10	3	112	55	30
Cumberland.....	32, 361	0	2	2	0	0	0	0	3
Frederick.....	11, 301	0	1	0	0	0	0	0	0
<b>District of Columbia:</b>									
Washington.....	<sup>1</sup> 437, 571	18	18	8	0	0	7	0	27
<b>Virginia:</b>									
Lynchburg.....	30, 277	1	1	0	0	0	0	0	3
Norfolk.....	159, 089	16	3	0	0	0	0	0	3
Richmond.....	181, 044	0	9	4	0	2	0	2	9
Roanoke.....	55, 502	3	3	2	0	0	0	2	3
<b>West Virginia:</b>									
Charleston.....	45, 597	1	2	0	0	0	0	0	2
Wheeling.....	<sup>1</sup> 56, 208	4	2	1	0	0	0	0	5
<b>North Carolina:</b>									
Raleigh.....	29, 171	0	1	1	0	0	0	0	0
Wilmington.....	35, 719	0	0	2	0	0	0	1	0
Winston-Salem.....	56, 230	1	1	5	0	0	6	0	3
<b>South Carolina:</b>									
Charleston.....	71, 245	0	1	0	0	1	0	0	1
Columbia.....	39, 688	5	1	0	0	0	0	0	0
Greenville.....	25, 789	1	1	0	0	0	0	0	2
<b>Georgia:</b>									
Atlanta.....	222, 963	3	4	6	15	0	0	0	8
Brunswick.....	15, 937	0	0	0	0	0	0	1	1
Savannah.....	89, 448	2	2	0	12	3	0	0	2
<b>Florida:</b>									
St. Petersburg.....	24, 403	0	1	0	0	0	0	0	3
Tampa.....	56, 050	2	2	0	0	0	0	0	0

<sup>1</sup>Population Jan. 1, 1920.

## City reports for week ended December 26, 1925—Continued

Division, State, and city	Population July 1, 1923, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
<b>EAST SOUTH CENTRAL</b>									
<b>Kentucky:</b>									
Covington.....	57, 877	0	2	0	0	0	1	0	0
Louisville.....	257, 671	0	9	3	2	0	5	0	11
<b>Tennessee:</b>									
Memphis.....	170, 067	1	8	4	0	3	0	0	6
Nashville.....	121, 128	3	4	1	0	1	16	0	2
<b>Alabama:</b>									
Birmingham.....	195, 901	0	4	3	4	1	0	0	7
Mobile.....	63, 858	6	1	1	1	1	0	0	1
Montgomery.....	45, 383	1	0	2	0	0	0	3	0
<b>WEST SOUTH CENTRAL</b>									
<b>Arkansas:</b>									
Fort Smith.....	30, 635	0	2	0	0	-----	1	0	-----
Little Rock.....	70, 916	0	2	2	0	-----	0	0	-----
<b>Louisiana:</b>									
New Orleans.....	404, 575	2	13	4	8	10	1	0	7
Shreveport.....	54, 590	0	2	2	0	0	0	0	5
<b>Oklahoma:</b>									
Oklahoma City.....	101, 150	0	2	4	12	0	0	0	3
<b>Texas:</b>									
Dallas.....	177, 274	8	13	4	0	0	0	0	5
Galveston.....	46, 877	0	1	1	0	0	0	0	5
Houston.....	154, 970	-----	4	-----	-----	-----	-----	-----	-----
San Antonio.....	184, 727	0	3	5	0	0	0	0	7
<b>MOUNTAIN</b>									
<b>Montana:</b>									
Billings.....	16, 927	14	0	0	0	0	0	7	0
Great Falls.....	27, 787	7	2	0	0	0	0	48	0
Helena.....	112, 037	0	0	0	0	0	0	0	2
Missoula.....	112, 668	0	0	4	0	0	0	0	0
<b>Idaho:</b>									
Boise.....	22, 806	0	1	0	0	0	0	0	0
<b>Colorado:</b>									
Denver.....	272, 031	20	12	3	0	3	3	1	14
Pueblo.....	43, 519	0	4	6	0	0	0	0	1
<b>New Mexico:</b>									
Albuquerque.....	16, 648	4	1	1	0	0	0	0	0
<b>Arizona:</b>									
Phoenix.....	33, 899	0	-----	0	0	0	0	0	0
<b>Utah:</b>									
Salt Lake City.....	126, 241	73	2	5	0	0	0	17	3
<b>Nevada:</b>									
Reno.....	12, 429	0	0	0	0	0	0	0	2
<b>PACIFIC</b>									
<b>Washington:</b>									
Seattle.....	1 315, 685	27	7	2	0	-----	4	17	-----
Spokane.....	104, 573	21	5	1	0	-----	0	0	-----
Tacoma.....	101, 731	-----	3	-----	-----	-----	-----	-----	-----
<b>Oregon:</b>									
Portland.....	273, 621	2	7	18	0	0	0	6	0
<b>California:</b>									
Los Angeles.....	666, 853	20	38	10	8	2	4	2	12
Sacramento.....	69, 950	4	2	1	3	0	0	1	5
San Francisco.....	539, 038	22	24	15	7	2	3	3	7

1 Population Jan. 1, 1920.

City reports for week ended December 26, 1925—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culo- sis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths, all causes
	Cases, esti- mated expect- ancy	Cases re- ported	Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		
<b>NEW ENGLAND</b>											
<b>Maine:</b>											
Portland.....	2	7	0	0	0	0	1	3	0	3	20
<b>New Hampshire:</b>											
Concord.....	0	0	0	0	0	0	0	0	0	0	10
Nashua.....	1	0	0	0	0	1	0	0	0	0	8
<b>Vermont:</b>											
Barre.....	2	0	0	0	0	0	0	0	0	0	2
Burlington.....	1	2	0	0	0	0	0	0	0	0	8
<b>Massachusetts:</b>											
Boston.....	39	46	0	0	0	13	2	1	0	43	214
Fall River.....	3	2	0	0	0	4	0	0	0	0	37
Springfield.....	8	9	0	0	0	2	0	0	0	0	35
Worcester.....	11	13	0	0	0	2	0	0	0	12	66
<b>Rhode Island:</b>											
Pawtucket.....	1	1	0	0	0	0	0	0	0	0	15
Providence.....	8	7	0	0	0	1	1	0	0	6	64
<b>Connecticut:</b>											
Bridgeport.....	6	11	0	0	0	1	0	0	0	2	41
Hartford.....	7	4	0	0	0	1	0	0	0	0	15
New Haven.....	8	0	0	0	0	6	1	0	0	7	43
<b>MIDDLE ATLANTIC</b>											
<b>New York:</b>											
Buffalo.....	23	24	0	0	0	7	1	4	1	15	112
New York.....	164	108	0	0	0	182	12	17	1	52	1,281
Rochester.....	12	7	0	0	0	5	1	0	0	10	76
Syracuse.....	12	3	0	0	0	2	0	0	0	25	50
<b>New Jersey:</b>											
Camden.....	3	13	1	0	0	2	1	0	0	2	37
Newark.....	16	15	0	0	0	8	2	0	0	15	101
Trenton.....	3	6	0	0	0	3	1	0	0	0	31
<b>Pennsylvania:</b>											
Philadelphia.....	57	61	0	0	0	37	4	0	0	23	521
Pittsburgh.....	32	47	0	0	0	9	1	1	0	9	180
Reading.....	1	6	0	0	0	3	1	0	0	2	38
<b>EAST NORTH CENTRAL</b>											
<b>Ohio:</b>											
Cincinnati.....	13	15	0	0	0	4	0	0	0	5	125
Cleveland.....	31	31	1	0	0	21	2	1	0	28	161
Columbus.....	10	22	1	6	0	4	0	0	0	10	78
Toledo.....	14	7	1	0	0	1	0	2	0	1	57
<b>Indiana:</b>											
Fort Wayne.....	2		0				0				
Indianapolis.....	9	9	4	22	0	10	0	0	0	8	92
South Bend.....	4	3	1	5	0	0	0	0	0	2	8
Terre Haute.....	2	4	0	0	0	1	0	0	0	0	21
<b>Illinois:</b>											
Chicago.....	115	124	1	0	0	44	6	7	1	12	590
Peoria.....	6	6	0	3	0	0	0	0	0	6	20
Springfield.....	2	1	0	0	0	1	1	0	0	3	25
<b>Michigan:</b>											
Detroit.....	77	91	3	3	0	23	3	1	0	32	259
Flint.....	8	9	0	0	0	1	0	0	0	12	13
Grand Rapids.....	8	11	0	0	0	2	1	0	0	25	23
<b>Wisconsin:</b>											
Madison.....	2	4	0	0	0	0	0	0	0	4	5
Milwaukee.....	29	6	1	0	0	3	1	0	0	23	76
Racine.....	5	0	1	0	0	1	0	0	0	2	9
Superior.....	2	2	2	0	0	0	0	0	0	0	5
<b>WEST NORTH CENTRAL</b>											
<b>Minnesota:</b>											
Duluth.....	5	9	1	0	0	1	1	0	0	3	21
Minneapolis.....	40	51	6	0	0	5	1	0	0	0	79
St. Paul.....	19	32	4	0	0	5	1	0	1	3	63

1 Pulmonary tuberculosis only.



City reports for week ended December 26, 1925—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culosis, deaths re-ported	Typhoid fever			Whoop- ing cough, cases re-ported	Deaths, all causes
	Cases, esti- mated expect-ancy	Cases re-ported	Cases, esti- mated expect-ancy	Cases re-ported	Deaths re-ported		Cases, esti- mated expect-ancy	Cases re-ported	Deaths re-ported		
<b>WEST SOUTH CENTRAL</b>											
<b>Arkansas:</b>											
Fort Smith.....	1	0	1	0			0	0		0	
Little Rock.....	2	2	1	0			0	0		0	
<b>Louisiana:</b>											
New Orleans.....	5	5	0	0	0	13	3	1	0	1	152
Shreveport.....	0	1	1	0	0	0	0	0	0	0	23
<b>Oklahoma:</b>											
Oklahoma City.....	2	2	0	0	0	0	0	0	0	0	19
<b>Texas:</b>											
Dallas.....	3	11	0	0	0	1	1	1	0	10	40
Galveston.....	1	0	0	0	0	1	0	0	0	0	27
Houston.....	2		0				0				
San Antonio.....	1	0	0	0	0	4	0	0	0	0	47
<b>MOUNTAIN</b>											
<b>Montana:</b>											
Billings.....	1	8	0	0	0	0	0	1	1	2	7
Great Falls.....	1	1	0	0	0	0	1	0	0	7	3
Helena.....	1	0	0	0	0	0	0	0	0	0	8
Missoula.....	0	1	0	0	0	1	0	0	0	0	4
<b>Idaho:</b>											
Boise.....	1	0	0	1	0	0	0	0	0	1	2
<b>Colorado:</b>											
Denver.....	10	8	5	0	0	5	0	0	0	29	62
Pueblo.....	3	2	0	0	0	0	0	0	0	0	7
<b>New Mexico:</b>											
Albuquerque.....	0	3	0	0	0	3	0	0	0	7	10
<b>Arizona:</b>											
Phoenix.....		3		0	0	13		0	0	0	24
<b>Utah:</b>											
Salt Lake City.....	4	3	2	0	0	0	0	1	0	5	31
<b>Nevada:</b>											
Reno.....	1	0	0	0	0	0	0	0	0	0	5
<b>PACIFIC</b>											
<b>Washington:</b>											
Seattle.....	7	18	2	2			0	0		2	
Spokane.....	5	27	4	2			0	0		0	
Tacoma.....	2		1				0				
<b>Oregon:</b>											
Portland.....	7	19	6	4	0	1	0	0	0	0	
<b>California:</b>											
Los Angeles.....	18	8	2	28	4	14	3	2	1	0	133
Sacramento.....	2	3	1	5	0	1	0	0	0	0	19
San Francisco.....	12	8	1	0	0	11	2	1	0	0	43

## City reports for week ended December 26, 1925—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Polioomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
<b>NEW ENGLAND</b>									
Massachusetts:									
Boston.....	0	0	1	2	0	0	0	0	0
<b>MIDDLE ATLANTIC</b>									
New York:									
Buffalo.....	0	0	0	0	0	0	0	2	0
New York.....	3	1	5	4	0	0	1	0	0
Pennsylvania:									
Philadelphia.....	0	0	3	1	1	1	0	0	0
Pittsburgh.....	0	0	0	0	0	0	0	1	0
<b>EAST NORTH CENTRAL</b>									
Ohio:									
Columbus.....	1	1	0	0	0	0	0	0	0
Michigan:									
Detroit.....	0	0	1	1	0	0	0	0	0
<b>WEST NORTH CENTRAL</b>									
Missouri:									
Kansas City.....	0	0	0	0	0	0	0	0	1
St. Louis.....	1	1	0	0	0	0	0	0	0
<b>SOUTH ATLANTIC</b>									
District of Columbia:									
Washington.....	0	0	0	0	1	1	0		0
North Carolina:									
Winston-Salem.....	0	0	0	0	1	1	0	0	0
South Carolina:									
Charleston.....	0	0	0	0	0	1	0	0	0
Greenville.....	0	0	0	0	0	1	0	0	0
Georgia:									
Atlanta.....	0	0	0	0	0	1	0	0	0
Savannah.....	0	0	0	0	0	1	0	0	0
<b>EAST SOUTH CENTRAL</b>									
Alabama:									
Birmingham.....	0	1	0	0	0	0	0	0	0
<b>WEST SOUTH CENTRAL</b>									
Louisiana:									
New Orleans.....	0	0	0	0	1	1	0	0	0
Oklahoma:									
Oklahoma City.....	0	0	0	0	0	1	0	0	0
Texas:									
Dallas.....	0	0	0	0	0	1	0	0	0
<b>MOUNTAIN</b>									
Utah:									
Salt Lake City.....	1	2	0	0	0	0	0	0	0
<b>PACIFIC</b>									
Oregon:									
Portland.....	1	0	0	0	0	0	0	0	0
California:									
San Francisco.....	0	1	0	0	0	0	0	0	0

The following table gives the rates per 100,000 population for 103 cities for the 10-week period ended December 26, 1925. The population figures used in computing the rates were estimated as of July 1, 1923, as this is the latest date for which estimates are available.

The 103 cities reporting cases had an estimated aggregate population of nearly 29,000,000, and the 96 cities reporting deaths had more than 28,000,000 population. The number of cities included in each group and the aggregate populations are shown in a separate table below:

Summary of weekly reports from cities, October 18 to December 26, 1925—Annual rates per 100,000 population <sup>1</sup>

DIPHTHERIA CASE RATES

	Week ended—									
	Oct. 24	Oct. 31	Nov. 7	Nov. 14	Nov. 21	Nov. 28	Dec. 5	Dec. 12	Dec. 19	Dec. 26
103 cities.....	168	182	166	174	181	159	171	164	163	125
New England.....	97	137	97	127	144	104	124	107	137	92
Middle Atlantic.....	129	149	126	141	143	150	137	139	147	108
East North Central.....	189	195	187	194	189	162	172	166	161	159
West North Central.....	259	282	267	240	226	178	280	243	180	188
South Atlantic.....	268	228	211	252	289	221	221	205	205	102
East South Central.....	109	97	137	69	132	120	126	132	97	80
West South Central.....	102	264	199	213	176	181	278	185	253	97
Mountain.....	372	176	286	248	315	134	239	172	181	172
Pacific.....	142	187	148	146	186	165	128	200	186	89

MEASLES CASE RATES

	93	105	154	174	229	212	353	441	531	436
103 cities.....	93	105	154	174	229	212	353	441	531	436
New England.....	599	604	852	937	1,130	827	1,583	2,025	2,159	1,637
Middle Atlantic.....	87	110	159	171	256	239	339	453	520	384
East North Central.....	47	57	74	88	103	124	255	307	503	571
West North Central.....	10	12	15	10	15	31	19	25	37	71
South Atlantic.....	40	59	154	232	289	353	552	576	609	265
East South Central.....	40	17	17	17	51	34	40	23	86	126
West South Central.....	14	5	9	9	9	5	5	5	10	11
Mountain.....	29	20	38	47	29	10	10	38	29	29
Pacific.....	12	15	17	20	32	26	58	55	81	34

SCARLET FEVER CASE RATES

	132	160	170	191	175	205	220	231	240	211
103 cities.....	132	160	170	191	175	205	220	231	240	211
New England.....	130	201	271	246	209	214	224	194	199	248
Middle Atlantic.....	96	106	111	142	144	149	166	173	190	146
East North Central.....	142	194	167	189	196	220	273	302	300	246
West North Central.....	296	305	384	400	421	454	433	463	471	450
South Atlantic.....	134	193	185	172	123	144	127	162	164	166
East South Central.....	132	80	109	183	137	183	177	120	126	183
West South Central.....	42	42	102	121	93	139	111	148	93	102
Mountain.....	115	195	172	181	162	172	248	182	286	219
Pacific.....	133	148	162	206	197	249	226	194	258	197

<sup>1</sup> The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1923.

<sup>2</sup> Two cities not included.  
<sup>3</sup> Helena, Mont., not included.  
<sup>4</sup> Shreveport, La., not included.  
<sup>5</sup> Fort Wayne, Ind., Grand Forks, N. Dak., Lynchburg, Va., Tampa, Fla., Houston, Tex., and Tacoma, Wash., not included.  
<sup>6</sup> Barre, Vt., not included.  
<sup>7</sup> Fort Wayne, Ind., not included.  
<sup>8</sup> Grand Forks, N. Dak., not included.  
<sup>9</sup> Winston-Salem, N. C., not included.  
<sup>10</sup> Lynchburg, Va., and Tampa, Fla., not included.  
<sup>11</sup> Houston, Tex., not included.  
<sup>12</sup> Tacoma, Wash., not included.

Summary of weekly reports from cities, October 18 to December 26, 1925—Annual rates per 100,000 population—Continued

## SMALLPOX CASE RATES

	Week ended—									
	Oct. 24	Oct. 31	Nov. 7	Nov. 14	Nov. 21	Nov. 28	Dec. 5	Dec. 12	Dec. 19	Dec. 26
103 cities.....	7	10	10	8	17	16	13	21	21	16
New England.....	7	0	0	0	0	0	0	0	0	0
Middle Atlantic.....	0	0	0	0	0	0	0	0	1	0
East North Central.....	4	17	12	13	32	32	14	34	27	27
West North Central.....	4	27	12	4	17	10	19	19	37	21
South Atlantic.....	0	6	12	6	21	2	4	8	12	11
East South Central.....	6	6	20	34	11	11	11	6	11	0
West South Central.....	0	0	0	0	0	9	14	9	24	11
Mountain.....	10	10	19	19	19	10	0	105	38	10
Pacific.....	78	46	49	44	78	99	110	131	119	114

## TYPHOID FEVER CASE RATES

103 cities.....	33	26	28	12	17	14	20	20	16	9
New England.....	15	17	22	2	32	17	22	22	10	10
Middle Atlantic.....	25	21	12	8	20	14	26	25	17	11
East North Central.....	9	16	19	9	3	4	8	12	14	7
West North Central.....	33	19	31	17	15	8	10	12	15	6
South Atlantic.....	78	27	64	10	31	29	21	25	18	13
East South Central.....	160	109	183	46	34	23	57	29	29	6
West South Central.....	83	83	51	60	32	32	42	32	29	11
Mountain.....	67	88	38	10	19	19	0	19	10	19
Pacific.....	32	20	9	3	6	15	15	15	17	9

## INFLUENZA DEATH RATES

96 cities.....	8	11	13	12	8	9	12	13	14	13
New England.....	2	12	5	7	2	12	10	10	15	12
Middle Atlantic.....	8	10	14	14	6	8	10	12	8	9
East North Central.....	9	7	12	10	6	5	7	12	18	8
West North Central.....	7	11	7	13	2	2	7	7	4	7
South Atlantic.....	2	6	18	2	14	10	18	8	10	19
East South Central.....	6	29	40	29	46	29	46	51	57	34
West South Central.....	20	41	15	31	10	36	41	46	38	60
Mountain.....	38	10	10	0	19	10	19	19	0	29
Pacific.....	4	4	15	4	19	4	4	4	19	16

## PNEUMONIA DEATH RATES

96 cities.....	96	122	141	138	151	130	149	134	153	140
New England.....	87	112	139	137	144	161	186	137	164	171
Middle Atlantic.....	104	137	153	144	160	145	161	132	148	146
East North Central.....	83	119	125	137	146	100	149	121	139	105
West North Central.....	63	90	88	83	103	83	55	85	136	101
South Atlantic.....	124	134	207	162	156	144	170	185	213	221
East South Central.....	132	114	166	177	240	194	143	200	234	154
West South Central.....	117	138	163	122	163	158	163	219	194	174
Mountain.....	115	78	105	181	229	162	162	181	124	210
Pacific.....	79	53	95	114	91	102	102	79	102	98

<sup>1</sup> Two cities not included.

<sup>2</sup> Helena, Mont., not included.

<sup>3</sup> Shreveport, La., not included.

<sup>4</sup> Fort Wayne, Ind., Grand Forks, N. Dak., Lynchburg, Va., Tampa, Fla., Houston, Tex., and Tacoma, Wash., not included.

<sup>5</sup> Barre, Vt., not included.

<sup>6</sup> Fort Wayne, Ind., not included.

<sup>7</sup> Grand Forks, N. Dak., not included.

<sup>8</sup> Winston-Salem, N. C., not included.

<sup>9</sup> Lynchburg, Va., and Tampa, Fla., not included.

<sup>10</sup> Houston, Tex., not included.

<sup>11</sup> Tacoma, Wash., not included.

*Number of cities included in summary of weekly reports and aggregate population of cities in each group, estimated as of July 1, 1925*

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases	Aggregate population of cities reporting deaths
Total.....	103	96	23,977,311	23,321,626
New England.....	12	12	2,098,746	2,098,746
Middle Atlantic.....	10	10	10,304,114	10,304,114
East North Central.....	16	16	7,135,899	7,135,899
West North Central.....	14	11	2,515,330	2,381,454
South Atlantic.....	21	21	2,542,498	2,542,498
East South Central.....	7	7	911,885	911,885
West South Central.....	8	6	1,124,564	1,023,013
Mountain.....	9	9	546,445	546,445
Pacific.....	6	4	1,797,830	1,377,572

# FOREIGN AND INSULAR

## THE FAR EAST

*Report for week ended December 12, 1925.*—The following report for the week ended December 12, 1925, was transmitted by the far eastern bureau of the health section of the League of Nations' secretariat, located at Singapore, to the headquarters at Geneva:

Port	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Bombay.....		1		0	7	6
Madras.....		0		13	6	2
Rangoon.....		1		0	2	1
Karachi.....		0		0	0	0
Negapatam.....		0		0	0	0
Colombo.....	0	0	0	0	1	0
Basra.....	0	0	0	0	5	5
Singapore.....	0	0	0	0	0	0
Port Swettenham.....	0	0	0	0	0	0
Penang.....	0	0	0	0	0	0
Batavia.....	0	0	0	0	0	0
Soerabaya.....	0	0	0	0	1	1
Samarang.....	0	0	0	0	0	0
Belawan Deli.....	0	0	0	0	0	0
Pedang (Sumatra).....	0	0	0	0	0	0
Sabang (Rho).....	0	0	0	0	0	0
Macassar.....	3	2	0	0	0	0
Pontianak (Borneo).....	0	0	0	0	0	0
Sandakan (North Borneo).....	0	0	0	0	0	0
Kuching (Sarawak).....	0	0	0	0	1	0
Manila.....	0	0	0	0	0	0
Bangkok.....	0	0	93	62	0	0
Saigon and Cholon.....	0	0	0	0	0	0
Hongkong.....	0	0	0	0	0	0
Shanghai.....	0	0	0	0	4	4
Amoy.....	0	0	0	0	0	0
Nagasaki.....	0	0	0	0	0	0
Yokohama.....	0	0	0	0	0	0
Simonoseki.....	0	0	0	0	0	0
Moji.....	0	0	0	0	0	0
Kobe.....	0	0	0	0	0	0
Osaka.....	0	0	0	0	0	0
Keelung.....	0	0	0	0	0	0
Fusan.....	0	0	0	0	0	0
Dairen.....	0	0	0	0	1	0
Adelaide.....	0	0	0	0	0	0
Brisbane.....	0	0	0	0	0	0
Fremantle.....	0	0	0	0	0	0
Melbourne.....	0	0	0	0	0	0
Sydney.....	0	0	0	0	0	0
Rockhampton.....	0	0	0	0	0	0
Townsville.....	0	0	0	0	0	0
Port Darwin.....	0	0	0	0	0	0
Broome.....	0	0	0	0	0	0
Port Moresby.....	0	0	0	0	0	0
Honolulu.....	0	0	0	0	0	0
Suez.....	0	0	0	0	0	0
Alexandria.....	0	0	0	0	0	0
Port Said.....	0	0	0	0	0	0
Mombassa (Kenya).....	0	0	0	0	0	0
Zanzibar.....	0	0	0	0	0	0
Massowah.....	0	0	0	0	0	0
Djibuti.....	0	0	0	0	0	0
Lourenco-Marques.....	0	0	0	0	0	0
Durban.....	0	0	0	0	0	0
East London.....	0	0	0	0	0	0
Port Elizabeth.....	0	0	0	0	0	0
Cape Town.....	0	0	0	0	0	0
Port Louis (Mauritius).....	7	6	0	0	0	0
Seychelles.....	0	0	0	0	0	0

## CUBA

*Malaria—Santiago.*—During the period November 29 to December 19, 1925, 119 cases of malaria with 7 deaths were reported at Santiago de Cuba. Under date of December 22, 1925, 197 cases of malaria were reported present.

## ECUADOR

*Plague—Guayaquil—December 1–15, 1925.*—During the period December 1 to 15, 1925, five cases of plague with two deaths were reported at Guayaquil, Ecuador. During the same period, of 11,958 rats taken at Guayaquil, 71 were found plague infected.

## MADAGASCAR

*Plague—September 16–30, 1925.*—During the period September 16 to 30, 1925, 46 cases of plague with 43 deaths were reported in the island of Madagascar. Of these the urban occurrence was reported as follows: Miarinarivo, Province of Itasy, 3 cases (bubonic, 2; pneumonic, 1); Tananarive, 2 cases, 1 bubonic and 1 septicemic; Tamatave (port), 3 cases (bubonic).

*October 1–31, 1925.*—During the month of October, 1925, 177 cases of plague with 161 deaths were reported in the island of Madagascar. The urban occurrence was reported as follows: Miarinarivo, Province of Itasy, cases 17, deaths 17 (bubonic, pneumonic, and septicemic); Tananarive, cases 7, deaths 6 (bubonic, pneumonic, and septicemic). For distribution according to Provinces, see page 109.

## MALTA

*Communicable diseases—November, 1925.*—During the month of November, 1925, communicable diseases were notified in the island of Malta as follows:

Disease	Cases	Disease	Cases
Broncho-pneumonia.....	3	Measles.....	7
Chicken pox.....	10	Pneumonia.....	1
Diphtheria.....	11	Poliomyelitis.....	1
Influenza.....	2	Smallpox.....	14
Malta (undulant) fever.....	52	Typhoid fever.....	51

Population, civil (estimated), 223,083.

## MAURITIUS

*Plague—September, 1925.*—During the month of September, 1925, a fatal case of plague was reported in the island of Mauritius.

## UNION OF SOUTH AFRICA

*Plague—Typhus fever—October, 1925.*—Plague and typhus fever have been reported in the Union of South Africa as follows: *Plague*—Cape Province, week ended November 21, 1925, one case occurring in a native on a farm in the Steynsburg District. *Typhus fever*—Month of October, 1925, 88 cases with 7 deaths occurring among the colored population and 7 cases in the European population. For distribution of occurrence according to locality see pages 109, 110.

## CHOLERA, PLAGUE, SMALLPOX, AND TYPHUS FEVER

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

Reports Received During Week Ended January 15, 1926<sup>1</sup>

## CHOLERA

Place	Date	Cases	Deaths	Remarks
<b>India:</b>				
Calcutta.....	Nov. 15-21.....	22	22	
Madras.....	Nov. 22-28.....	1	1	
<b>Philippine Islands:</b>				
Manila.....	Nov. 9-22.....	4	3	
Province—				
Bulacan.....	Oct. 18-Nov. 7....	92	64	As currently reported; subject to later correction.
Pampanga.....	Nov. 1-7.....	1	1	
Rizal.....	Sept. 27-Oct. 24..	70	21	
<b>Siam:</b>				
Bangkok.....	Nov. 8-14.....	23	17	Do.

## PLAGUE

Ceylon.....	Nov. 15-21.....	2	2	
<b>China:</b>				
Nanking.....	Nov. 15-Dec. 5....			Prevalent.
<b>Ecuador:</b>				
Guayaquil.....	Dec. 1-15.....	5	2	Rats taken, 11,958; found infected, 71.
<b>India:</b>				
Madras Presidency.....	Oct. 25-31.....	42	25	
<b>Java:</b>				
Batavia.....	Nov. 14-20.....	107	100	Province.
Soerabaya.....	Oct. 25-Nov. 7....	8	7	
<b>Madagascar:</b>				
Fort Dauphin Province.....	Sept. 16-30.....	2	1	Sept. 16-30, 1925: Cases, 46; deaths, 43.
Itasy Province.....	do.....	3	3	Bubonic.
Moramanga Province.....	do.....	1	1	Bubonic, 2; pneumonic, 1. At Miarinarivo.
Tamatave (port).....	do.....	3	2	Bubonic.
<b>Madagascar:</b>				
Fort Dauphin.....	Oct. 1-15.....	3	1	Do.
Itasy Province.....	Oct. 1-31.....	17	17	October, 1925: Cases, 177; deaths, 161. Bubonic, pneumonic, and septicemic.
Moramanga Province.....	do.....	16	16	
Tamatave (port).....	Oct. 16-31.....	4	4	
Tananarive Province.....	Oct. 1-31.....	137	123	
<b>Mauritius:</b>				
Union of South Africa:				September, 1925: One fatal case.
Cape Province—				
Steynsburg District....	Nov. 15-21.....	1		Native. On farm.

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

## CHOLERA, PLAGUE, SMALLPOX, AND TYPHUS FEVER—Continued

## Reports Received During Week Ended January 15, 1926—Continued

## SMALLPOX

Place	Date	Cases	Deaths	Remarks
Arabia:				
Aden.....	Nov. 29-Dec. 5.....	1		Imported.
Brazil:				
Rio de Janeiro.....	Nov. 15-28.....	63	32	
British South Africa:				
Southern Rhodesia.....	Nov. 13-19.....	1		Native.
Canada:				
Alberta—				
Calgary.....	Dec. 13-19.....	1		From Drumheller, vicinity of Calgary.
China:				
Amoy.....	Oct. 25-Nov. 21.....			Present.
Antung.....	Dec. 7-13.....	1		
Chungking.....	Nov. 15-21.....			Do.
Manchuria—				
An-shan.....	Dec. 6-12.....	1		
Dairen.....	Oct. 26-Nov. 15.....	2	3	
Mukden.....	do.....	1		
Tieh-ling.....	do.....	2		
Nanking.....	Nov. 21-Dec. 5.....			Do.
Shanghai.....	Nov. 15-21.....	2	1	
Swatow.....	Nov. 22-Dec. 5.....			Prevalent.
Great Britain:				
England and Wales.....	Nov. 15-Dec. 12.....	432		
Hull.....	Dec. 6-12.....	6		
India:				
Bombay.....	Nov. 15-21.....	4	1	
Calcutta.....	do.....	9	5	
Madras.....	Nov. 22-28.....	2		
Japan:				
Taiwan.....	Nov. 11-20.....	1		
Malta.....	Nov., 1925.....	14		
Mexico:				
Aguaascalientes.....	Dec. 20-26.....		2	
Persia:				
Teheran.....	July 23-Aug. 23.....		68	
Portugal:				
Lisbon.....	Nov. 16-Dec. 6.....		31	

## TYPHUS FEVER

China:				
Antung.....	Nov. 29-Dec. 6.....	4	1	
Mexico:				
Guadalajara.....	Dec. 22-28.....		1	
Mexico City.....	Dec. 6-12.....	12		Including municipalities in Federal district.
Palestine:				
Safad.....	Nov. 24-30.....	1		
Tel-Aviv.....	do.....	1		
Union of South Africa:				
Cape Province.....				October, 1925: Cases, 88; deaths, 7 (colored); cases, 7 (European population).
Natal.....				Oct. 1-31, 1925: Cases, 63; deaths, 5 (colored).
Orange Free State.....				Oct. 1-31, 1925: One case (colored).
Transvaal.....				Oct. 1-31, 1925: Cases, 23; 1 death (colored).
				Oct. 1-31, 1925: One case, 1 death.

**CHOLERA, PLAGUE, SMALLPOX, AND TYPHUS FEVER—Continued****Reports Received from December 26, 1925, to January 8, 1926<sup>1</sup>****CHOLERA**

Place	Date	Cases	Deaths	Remarks
India.....				Oct. 18-31, 1925: Cases, 3,027; deaths, 1,735.
Calcutta.....	Nov. 1-14.....	36	25	
Madras.....	Nov. 15-21.....	2	2	
Rangoon.....	Nov. 8-14.....	2	2	
Japan.....	Aug. 30-Sept. 19.....	121		
Russia.....	May-June.....	7		
Siam:				
Bangkok.....	Oct. 4-31.....	60	30	Infection stated to have been imported on vessel.
Do.....	Nov. 1-7.....	25	31	
On vessel:				
Steamship.....	Oct. 3.....	9		Arrived at Bangkok, Siam; 9 cases in coolie passengers.

**PLAGUE**

Brazil:				
Bahia.....	Nov. 8-14.....	2		
Santos.....	Dec. 8-21.....		2	
Ecuador:				
Guayaquil.....	Nov. 1-30.....	10	6	Rats taken, November, 1925: 24,618; rats found infected, 143. January 1-November 18, 1925: Cases, 137. Corresponding period, 1924: Cases, 360.
Egypt.....				
Beni Suef.....	Nov. 18, 1925.....	1	1	
Greece:				
Athens.....	Nov. 1-30.....	18	4	Including Piraeus.
Patras.....	Nov. 13.....	1		
India.....				Oct. 18-31, 1925: Cases, 2,584; deaths, 1,696.
Karachi.....	Nov. 1-14.....	3	2	
Rangoon.....	Oct. 25-Nov. 14.....	9	3	
Java:				Province.
Batavia.....	Oct. 24-Nov. 6.....	94	89	
Cheribon.....	Sept. 27-Oct. 17.....		166	
Pekalongan.....	do.....		42	
Soerabaya.....	Oct. 11-24.....	13	13	
Tegal.....	Sept. 27-Oct. 17.....	6	6	
Madagascar:				
Province—				
Tananarive.....	Sept. 16-28.....	37	36	
Town—				
Tananarive.....	do.....	2	2	
Mauritius Island.....	Sept. 20-Oct. 17.....	5	5	
Russia.....	May-June.....	67		
Senegal.....	September, 1925.....	22	12	
Siam.....	Aug. 23-Sept. 5.....	23	20	
Syria:				
Beirut.....	Nov. 11-20.....	1		

**SMALLPOX**

Argentina:				
Rosario.....	October, 1925.....		1	
Brazil:				
Rio de Janeiro.....	Nov. 1-14.....	71	40	
Canada:				
Manitoba—				
Winnipeg.....	Dec. 13-19.....	2		
New Brunswick—				
Northumberland.....	Dec. 6-13.....	1		
Ontario—				
Ottawa.....	Dec. 6-12.....	2		
China:				Present.
Foochow.....	Nov. 1-14.....			
Hankow.....	Nov. 14-21.....	3		
Manchuria—				
Dairen.....	Oct. 19-25.....	3	1	
Shanghai.....	Oct. 25-Nov. 14.....	4	3	
Tientsin.....	Nov. 1-7.....	1		
France.....				September, 1925: Cases, 25.

<sup>1</sup> From medical officers of the Public Health Service, American consuls, and other sources. For reports received from June 27 to Dec. 25, 1925, see Public Health Reports for Dec. 25, 1925. The tables of quarantinable diseases are terminated semiannually and new tables begun.

**CHOLERA, PLAGUE, SMALLPOX, AND TYPHUS FEVER—Continued**  
**Reports Received from December 26, 1925, to January 8, 1926—Continued**

**SMALLPOX—Continued**

Place	Date	Cases	Deaths	Remarks
<b>Great Britain:</b>				
<b>England—</b>				
Hull.....	Nov. 29-Dec. 5.....	2		
Newcastle-on-Tyne.....	do.....	4		
Sheffield.....	Nov. 22-28.....	5		
<b>Greece</b> .....				Oct. 1-31, 1925: Cases, 16.
Athens.....	Nov. 1-30.....	17	1	
<b>India</b> .....				Oct. 18-31, 1925: Cases, 2,303; deaths, 530.
Bombay.....	Nov. 8-14.....	5	3	
Calcutta.....	do.....	1		
Karachi.....	Nov. 1-21.....	23		
Madras.....	Nov. 15-21.....	1	1	
Rangoon.....	Oct. 25-31.....	1		
<b>Iraq</b> .....				Sept. 6-19, 1925: Cases, 41; deaths, 24.
Bagdad.....	Nov. 1-14.....	4	4	
<b>Italy</b> .....				Aug. 2-Sept. 30, 1925: Cases, 26.
Rome.....	Oct. 12-25.....	1		
<b>Java:</b>				
Batavia.....	Oct. 24-30.....	1		
Kraksaan.....	Oct. 11-17.....	11		
Malang.....	do.....	2		
North Bantam.....	Oct. 4-17.....	4		
Probolingo.....	Oct. 11-17.....	1		
South Bantam.....	do.....	1		
Soerabaya.....	Oct. 11-24.....	158	18	
Tegal.....	Oct. 4-10.....	9	1	
<b>Mexico</b> .....				July-August, 1925: Deaths, 905.
Aguascalientes.....	Dec. 13-19.....	4		
Mexico City.....	Nov. 28-Dec. 5.....	1		
Torreon.....	Nov. 1-30.....		15	
<b>Peru:</b>				
Arequipa.....	Oct. 1-31.....		1	
<b>Portugal:</b>				
Lisbon.....	Oct. 4-31.....	124		
Do.....	Nov. 14-28.....	70		
Oporto.....	Nov. 22-Dec. 5.....	1	2	
<b>Russia</b> .....				May-June, 1925: Cases, 1,336
<b>Siam</b> .....				July 12-Sept. 5, 1925: Cases, 21; deaths, 6.
<b>Spain:</b>				
Malaga.....	Nov. 29-Dec. 5.....		2	
<b>Switzerland</b> .....				June 28-Oct. 24, 1925: Cases, 36.
Lucerne.....	Oct. 1-31.....	6		
<b>Tunisia:</b>				
Tunis.....	Nov. 21-30.....	2		

**TYPHUS FEVER**

<b>Algeria:</b>				
Algiers.....	October, 1925.....	2		
<b>Argentina:</b>				
Rosario.....	Oct. 1-31.....	1		
<b>Egypt:</b>				
Port Said.....	Nov. 19-25.....	1		
<b>Finland</b> .....				October, 1925: One case.
<b>Greece:</b>				
Athens.....	Nov. 1-30.....	11	2	
<b>Latvia</b> .....	October, 1925.....	2		
<b>Lithuania</b> .....				September, 1925: Cases, 8; deaths, 1.
<b>Mexico</b> .....				July-August, 1925; deaths, 65.
Aguascalientes.....	Dec. 14-19.....	1		
Guadalajara.....	Dec. 8-14.....		1	
Mexico City.....	Nov. 22-Dec. 5.....	27		
Torreon.....	November, 1925.....		1	
<b>Palestine:</b>				
Nazareth.....	Nov. 3-9.....	1		
<b>Peru:</b>				
Arequipa.....	October, 1925.....		2	
<b>Poland:</b>				
Warsaw.....	Oct. 11-17.....	17	3	
<b>Rumania</b> .....				July, 1925: Cases, 74; deaths, 9.
<b>Russia</b> .....				May-June, 1925: Cases, 7,609.
<b>Union of South Africa:</b>				
Orange Free State.....	Nov. 1-7.....			Outbreaks.