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SHELLFISH SANITATION *

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For a number of years suspicion has at various times attached to shellfish as a cause of certain diseases, particularly typhoid fever and other intestinal infections. In many instances the evidence has been strikingly conclusive when the circumstances were carefully investigated. The finger of suspicion has so often been pointed by competent independent observers, and conclusive proof has been furnished so frequently, as to warrant the statement that contaminated shellfish must have been responsible in the aggregate for a large number of cases of typhoid fever and other intestinal disorders.

Among the first to incriminate shellfish as a source of infection was the French physician Pasquier. In 1816, long before Pasteur's great work suggested the importance of bacteria in the causation of certain diseases, and before it was known that typhoid fever was a germ disease and that the germ frequently was carried in contaminated water, Pasquier wrote a book on The Oyster From the Medical Point of View. In this book he cited an instance in which a workman laid down some 60,000 oysters in a fattening bed excavated in the moat of an old citadel receiving sewage from a garrison.[1] The first of these oysters were consumed on September 10, and on the 20th and 21st, after a sufficient incubation period had elapsed, cases of typhoid fever made their appearance among the consumers.

Since then numerous other instances have been observed and recorded in which the causal relation was established between contaminated shellfish, usually oysters, and intestinal disease, usually typhoid fever, but occasionally cholera and enteritis. In all probability some of the observed instances have not been recorded; and it is possible that many instances in which contaminated shellfish were responsible for the transmission of disease have remained unnoted, because they did not attract the attention of competent observers, or for the reason that the facilities for carrying out

* Read before the New England Health Institute at Concord, N. H., Sept. 28, 1926.

[1] Fourth Report, Royal Commission on Sewage Disposal (Great Britain), Vol. II, Appendix, p. 313. 1904.

the necessary studies were lacking. It is reasonable to assume that a certain amount of disease has been transmitted by shellfish, unobserved, in places where public health work has been backward. Attention has most frequently been attracted by the observation that a large proportion of persons partaking of contaminated shellfish served at banquets became ill about the same time. If the consumption of this same quantity of contaminated food had been spread over a longer time interval, without the contemporaneous infection of so many people, suspicion would not have attached to oysters as early as it did. The number of cases of illness due to eating contaminated shellfish at banquets probably is only a small proportion of the total amount of illness which has been caused by shellfish, particularly in that portion of the population near the sea coasts where it is customary to eat shellfish more freely than in the interior. The source of infection of isolated cases occurring under such conditions is more difficult to trace than it is in cases occurring in an outbreak of epidemic proportions.

In the table on page 2293 are compiled some of the recorded instances in which contaminated shellfish were held responsible for the spread of disease, taken principally from Fuller's[2] recent book, Solving Sewage Problems, and from an earlier paper by Fuller read before the Franklin Institute in 1905.

Other instances are on record in which shellfish are reported to have caused typhoid fever and other illness, but a systematic search of the literature has not been attempted.

At various times in the past there have been periods when the public has lost confidence in the safety of the use of oysters and other kinds of shellfish as a food supply and has refrained from eating them. During such times the careful, conscientious oysterman, whose product was obtained from safe sources and handled in a clean manner, suffered with the less scrupulous producer who took his product from unsafe sources. This has caused among the shellfish industry generally a realization that something must be done to win back public confidence. In England the industry itself has employed competent laboratory men to study the question of pollution and advise precautionary measures. In the Puget Sound area of the State of Washington the industry has voluntarily placed itself under the competent supervision of laboratory authorities and conducts its business on a high sanitary plane. In fact, the more responsible concerns in the industry generally are following this course, and the leaders in the industry have seen the necessity for action on the part of health officials to protect the shellfish-consuming public from the dangers of a contaminated product.

[2] Solving sewage problems. By Geo. W. Fuller. McGraw, Hill & Co., New York City, 1928, p. 110. Fuller, Journal Franklin Institute, 1905, p. 81.

No.	Place	Date	Disease	Authority	Source of contamination
1	France	1815	Typhoid	Pasquier	Fattening grounds receiving sewage from garrison.
2	England (Dunkirk)	1820	Gastro-enteritis	British Medical Journal.	Coast of Normandy.
3	England (Bridgewater and Taunton).	1849	Cholera	General board of health.	Condemned oysters given to children.
4	Isle of Man	1876	Typhoid		
5	Dublin	1889	do	Sir Chas. Cameron.	Dublin Bay.
6	England	1892	Cholera	Thorne-Thorne	Clethorpes, Grimsby.
7	Wesleyan	1894	Typhoid	T. F. Conn	Fattening beds in mouth of Quinnipic, 300 feet from sewer line on which were two cases of typhoid.
8	England (Southhampton and Winchester).	1902	21 cases typhoid, 118 gastro-enteritis; 267 guests.	Bulstrode	Oysters from Ensworth.
9	Truro, England	1897	Typhoid, 7 of family ill, some with typhoid, some with gastro-enteritis.	City health officer	
10	Andre de Sangonis, France.		14 cases, gastro-enteritis and typhoid fever.	Chantemesse	Sewage-polluted canal at Cette.
11	Villages near Paris	1899		Mosny	Oysters from Cette.
12	Monte Carlo	1895		Johnston-Lavis	
13	Naples	1895		do	
14	Florence	1895		Wilson	
15	Milan	1900		Burdoni-Uffredizzi et al.	
16	Constantinople	1902		Remlinger	
17	New Zealand	1902		Mason	
18	Atlantic City	1902	Typhoid	Atlantic City Academy of Medicine.	Oysters and clams from polluted beach.
19	Lawrence, L. I	1904	31 cases of typhoid	Soper	Jamaica Bay.
20	South-End-on-Sea, England.		Typhoid; 50 per cent of local cases due to shellfish infection.	Nash	Sewage-contaminated areas.
21	Yarmouth, England	[3]	Typhoid	do	
22	Brighton, England	1894-1902	Typhoid; about 37 per cent of cases due to shellfish (158 out of 643 cases).	Newsholm	
23	Manchester, England	1897-1902	About 10 per cent of typhoid cases due to shellfish.	Niven	
24	London, England	1902	Over 8 per cent of typhoid fever due to shellfish.	Murphy	
25	New York, Washington, Chicago, and other cities.	1924	Typhoid	Local and Federal health authorities.	Oysters.
[2]26	Connecticut	1926	do	State health authorities.	Clams from contaminated flats.

[1] A typhoid fever epidemic caused by oyster-borne infection. Supplement No. 50, to the Public Health Reports.
[2] Bulletin, Connecticut State Health Department, June 14, 1926, vol. 80, No. 24.
[3] Prior to 1900.

Why have shellfish suddenly absorbed so much attention from health officials throughout the country, particularly in our large cities? Although the people in this country have been eating oysters since early colonial days, the number of known instances of infection from shellfish has been comparatively small; but the problem of protecting shellfish consumers from infection was bound to become acute sooner or later. Many of the original oyster beds had become exhausted. In order to keep up the supply for the market, it became necessary to cultivate oysters. Naturally the artificial beds were located as close as possible to the labor supply and to the big markets.

Some of the best growing grounds were located in areas receiving an increasing amount of sewage pollution. As the demand for oysters increased, and the area in which oysters could safely be grown decreased, because of the ever expanding pollution areas, the problem became more and more acute and the need for regulation of an effective sort became imperative.

While the attention of vigilant health officials had long been directed to the shellfish problem, public sentiment was not sufficiently aroused until about two years ago (when oyster-borne outbreaks of typhoid fever occurred in New York, Washington, and Chicago [3]), to permit the expenditure of even moderate sums of public money on shellfish sanitation, except in a few localities. Because the consumption of certain shellfish greatly decreased as a result of the publicity attending the outbreak of two years ago, the oyster growers urged that the health officials take action which would restore public confidence in the safety of shellfish as a food. A meeting of the health officials and representatives of the oyster industry was held at Washington in February, 1925. At this meeting the Surgeon General of the Public Health Service was requested to appoint a committee to formulate recommendations for the sanitary control of the shellfish industry in the United States. On this committee were appointed some 18 persons representing the health interests and the commercial interests concerned in shellfish sanitation. This committee submitted a report in September, 1925, which has become the basis of the present policy of the Public Health Service in matters pertaining to shellfish sanitation.

In the language of the committee the essential requirements for insuring the safety and cleanliness of shellfish sold in the market are:

(1) That only those should be marketed which have come from beds which, on careful examination, are found to be free from any justifiable suspicion of dangerous contamination with disease-producing microorganisms, and free from such other contamination as might be deleterious or offensive.

(2) That subsequent to their removal from the water, all the conditions of handling, storage, and distribution should be such as will adequately safeguard the shellfish from—

(*a*) Any dangerous contamination with pathogenic organisms; and

(*b*) Such nonpathogenic contamination, deterioration (spoilage), or adulteration as might render them less fit for food, either hygienically or esthetically.

(3) That thorough epidemiological studies be made of all epidemics where there is ground for any suspicion that shellfish may

[3] Supplement No. 50 to the Public Health Reports contains a full account of the investigations made of these typhoid fever epidemics.

have been responsible, in order that the sources of infection may be promptly and accurately traced and measures taken to prevent further infections.[4]

In making its recommendations the committee assumed that responsibility for control of the shellfish industry should continue to rest chiefly upon the individual States, and that the requisite coordination and uniformity of control would be achieved by mutual agreement between the States, with such assistance and cooperation as existing Federal bureaus could render. It was believed that such a plan would be feasible for immediate operation, since each State had, or might easily provide, the necessary statutes, administrative agencies, and organizations for carrying out, within its own area, all control measures which might reasonably be required.

The States possess the police power to enforce such regulations as are required, and are willing to protect their own citizens and the citizens of other States from contaminated shellfish.

The shellfish sanitation program as now being worked out through the cooperation of the Public Health Service with the various States will ultimately protect all persons, and the shellfish consuming States will be protected against firms who do not meet the minimum requirements as outlined by the committee above referred to, because such firms will not be able to obtain certification for interstate shipment. This plan depends ultimately for its effectiveness upon the vigilance exercised by health officials in the consuming centers, in excluding from their markets shellfish from uncertified shippers, thus depriving such dealers of a place in which to sell their product. Some of the producing States have as yet failed to provide adequate machinery for control and certification of shellfish shippers. As a result, the principal markets are gradually being closed to the firms in these States. Some dealers who have been unable to obtain certificates from their own States have continued, however, temporarily to ship shellfish without a certificate; in this way material that was intended to be kept from the markets has found its way to the consumer. But to bring about completely the result contemplated under the certification scheme, it is necessary for the local health officials in shellfish consuming centers to guard against "dumping" of shellfish upon their markets by shippers who are not certified. Thus the health officials, particularly the local health officials, in all States have a new duty thrust upon them; namely, that of seeing that shellfish from uncertified sources are not "dumped" upon them as a result of having been excluded from other markets. This is true of shellfish producing States as well as for shellfish consuming States, because producing States are also consuming States.

[4] A full report of the committee was printed in Supplement No. 53 to the Public Health Reports, Nov. 6, 1925.

Oysters thrive best in a mixture of fresh and salt water. Consequently, the best oyster-producing grounds are in tidal estuaries into which fresh water streams discharge, bringing quantities of food consisting of minute animal and vegetable forms of life. In order to obtain its food the oyster is obliged to pass large quantities of water through its gills, straining out of the water the small food particles contained therein. It is in this way that contamination from polluted water is introduced into the oyster.

As long as our fresh-water streams remained uncontaminated, the oysters remained uncontaminated and constituted a safe food. However, a common method of disposing of the sewage of both large and small cities and towns located on the sea coast is to discharge it, untreated, or partially treated, into a nearby arm of the sea, in which the quantity of water is sufficiently great to prevent a local nuisance from arising.

This eventually results in contaminating oyster grounds sufficiently close to the point of discharge to be affected. In some localities the treatment of sewage has been undertaken principally to protect local shellfish grounds from pollution. Since sewage treatment works involve the expenditure of considerable sums of money for their construction and operation, it follows that the construction of such works is warranted, from an economical standpoint, only in places where the shellfish industry is of considerable importance and extent. At Providence, R. I., according to Metcalf and Eddy[5] the treatment of sewage with chlorinated lime to destroy disease-producing organisms was instituted to protect the extensive shellfish industry in Providence River. At Baltimore[6] a desire to protect the extensive shellfish industry near that city was one of the reasons that modern sewage treatment works were constructed.

At other places along the coast, treatment of sewage has been brought about, or may in the future be brought about, to protect shellfish grounds, bathing beaches, and harbor waters from gross pollution. While such a procedure may retard the extension of polluted shellfish growing grounds, it probably will not result in reclaiming any considerable areas now closed because of sewage contamination. The shellfish supplies of the future must be obtained from waters now reasonably clean and which can be kept from becoming seriously contaminated.

Under adequate regulation and supervision, preferably administered by State health agencies, the usefulness of sewage-contaminated waters may not be lost entirely to the shellfish industry. Some of these areas are good producers of seed oysters, which may be transplanted to clean areas for development and maturing. Much

[5] Metcalf and Eddy: American Sewage practice, vol. III, p. 751.
[6] Id. p. 29.

danger attends this practice, however, unless the taking of seed oysters from such contaminated areas is carefully controlled by stringent regulations strictly enforced. It also has been found that even mature oysters may be taken from contaminated areas, relayed in clean waters, and, after the elapse of certain periods of time, be taken up and marketed safely. This practice is fraught with even greater danger than the practice of taking seed oysters from sewage contaminated areas, because the oysters may not be allowed to remain in the clean waters sufficiently long or may indeed not be laid down in clean waters at all, but be sent directly to the market by those who do not realize the dangers attending such a practice. In order that the oyster may free itself from acquired impurities, relaying should be limited to a time when the temperature of the water is above or not far below 60° F. When the water is above this temperature the activity of the oyster is much greater than when the water is colder, and the chances that it will free itself in a given time from any pollution it may contain are correspondingly greater.

Experiments by various observers show that contaminated oysters rapidly improve when relaid in clean waters during their active feeding season.[7]

In studying the pollution of shellfish growing areas, some observers have found that, at times, the results of bacteriological examinations of shellfish and of the waters over the shellfish were inconsistent, safe oysters being found at times in polluted waters. Because the oyster must obtain its food material from the water in which it grows, and is therefore liable to pollution at any time, it is believed by some observers that examinations made of the water at frequent intervals furnish a more satisfactory basis for determining the safeness of the oyster growing areas than the same number of examinations of oysters, or oysters and water.

There has grown up in the oyster industry a practice of so-called "fattening" oysters by taking them from the waters in which they have grown and storing them for short periods of time in waters containing less salt than that of the oyster producing areas. When the oyster is placed in the fresher water, osmosis takes place, the fresh water penetrating the oyster tissues so that the oyster becomes plump, or "fat." Serious consequences have resulted from this practice when the "floating" water was contaminated with pathogenic organisms. Probably most of the larger outbreaks of typhoid

[7] Shellfish and the bacilli of typhoid. A note on E. Klein's investigation, for the Fishmongers Co., of the time required by oysters to clean themselves of bacilli. British Food Journal, 7 (1905): 48. Experiments and observations on the vitality of the bacillus of typhoid fever and of sewage microbes in oysters and other shellfish (Review). Lancet, 2 (1905): 1113-1114. Foote, Chas. J.: Report of Connecticut State Board of Health, 1895, p. 189. Phelps, E. B. (1911): Some experiments upon the removal of oysters from polluted to unpolluted waters. Journal American Public Health Association, 1: 305.

fever ascribed to oysters have been due to this practice. Because of this danger, most oyster producing States have prohibited the practice entirely.

An effort is now being made by some oyster producers to chlorinate the water in which the shellfish are stored before they are shipped to the market. This method of providing clean water in which to store shellfish has advantages to recommend it whenever it is desirable to store shellfish between the time they are taken from the growing beds and the time they are shipped to market. When the oysters are active, or "drinking," a certain cleansing results from their being placed in the chlorinated water.

But the practice of taking oysters from contaminated areas and attempting to make them safe for consumption by placing them in chlorinated water in storage tanks is not yet regarded as a safe procedure. It may be said to have its counterpart in the practice of pasteurizing dirty milk.

As an additional safeguard to be employed in connection with oysters produced in safe growing areas, chlorination has a considerable degree of usefulness, and is somewhat comparable to the pasteurizing of milk under proper sanitary conditions. Further experimentation with the so-called chlorination of oysters may demonstrate a wider usefulness of the practice in the future.

The methods at present employed to safeguard the quality of shellfish intended for consumption are as follows:

Each shellfish-producing State continues to exercise supervision over the shellfish industry within its borders. It enacts such statutes, adopts such regulations, and sets up such administrative machinery as it deems advisable and desirable or necessary. In some States this activity is a function of the State health department; in others, it is a function of some other branch of the State's administrative machinery. In some States the work is carried on by a conservation commission, fish and game commission, shellfish commission, or agricultural department. The State agency having jurisdiction over its shellfish industry examines the waters in which shellfish are grown, prohibits the taking of shellfish from waters it finds to be unsafe, licenses persons who are permitted to take shellfish, inspects the establishments in which shellfish are prepared for the market, examines the personnel engaged in the packing and shipping of shellfish, and issues certificates to shippers who have complied with all the regulations prescribed by the State. It then submits copies of these certificates to the Public Health Service engineer in charge of the Federal interstate sanitary district in which the State is located. An inspection is then made of the plant. If, in the opinion of the public Health Service representative, the State machinery necessary to enforce the States' regulations is adequate and is efficiently administered,

and if the State regulations themselves are sufficiently stringent, it is recommended that the name of the person to whom the certificate has been issued be placed on a list of shippers approved by the Public Health Service. Copies of this list are issued at semimonthly intervals and are sent to the health authorities in the various States for their information. The State health officers are also supplied with an opinion concerning the adequacy and the efficiency of State control measures.

This method of procedure employs no coercive measures on the part of the Public Health Service, and limits its actual control measures to those implied by its refusal to place the name of an unsatisfactory shipper upon its approved list. This results in placing all oyster shippers in one or two classes; first, those shippers who have complied with all the State's regulations and whose certificates have been approved by the Public Health Service, and, second, those who have not complied and have not been approved. It is the obvious duty of health officials in all shellfish-consuming centers to avail themselves of the protection which this system affords by seeing to it that shellfish shipped by uncertified dealers are excluded from their markets.

The present plan, by which it is hoped to prevent contaminated shellfish from getting on the market, depends for its success upon willing cooperation, first, from the State authorities having jurisdiction over the shellfish industry in the respective shellfish-producing States, and, second, from the health authorities in the shellfish consuming States. These must see that shellfish coming only from properly certified shippers are admitted to their markets. This is a very important point. Responsibility in this matter rests principally upon the health authorities of our cities, for our cities are our principal markets for shellfish. If shellfish shipped by uncertified shippers are not excluded from the markets, the unscrupulous shipper will take advantage of the opportunity left open. They will soon discover that they can dispose of their products without obtaining a shipper's certificate and the shellfish that should be excluded will flow freely to market without hinderance. Lasting and substantial growth and development of the shellfish industry must in the end be based upon principles that take the welfare of the consumer into consideration.

The shellfish industry has shown, as a whole, a willingness to cooperate with the requirements laid down by health officials, and it is hoped that this spirit of cooperation will continue indefinitely. The industry should, however, avoid a tendency toward over-capitalization of the protection which is being afforded by sanitary supervision. From advertisements appearing in some of our daily papers recently it seems that there is a tendency among some shellfish producers to take advantage of the present certification scheme by leading the public to believe that the the State and Federal Governments

now certify to the quality of all oysters offered to the public. This is not really the case. In the first place the certificates refer only to the source of the oysters and the manner of their packing for shipment at the point of origin. No responsibility is assumed for what may take place between the time the oysters leave the original shipper and the time they are purchased by the consumer from the retail dealer. The oysters do not reach the consumer in the original unbroken packages filled at the point of origin, except in isolated instances. In the second place, an appreciable quantity of shellfish are consumed without getting into interstate commerce and, therefore, without necessarily coming under the certification plan at all. This is particularly true with reference to clams, but it applies to other shellfish also. Further, some shellfish from unapproved sources may be surreptitiously placed on the market, both locally and in interstate shipments. The public should be advised that the oysters themselves are not inspected and certified, as is the case with meat.

SUMMARY

1. From the evidence submitted by various competent observers it is clear that shellfish have been responsible for the transmission of a considerable amount of typhoid fever and gastroenteritis.

2. In order to safeguard the shellfish-consuming public from contaminated shellfish, effective sanitary control measures must be exercised over the shellfish industry.

3. The responsibility for enforcing the necessary control measures rests primarily upon the individual States in which shellfish are produced. The States issue certificates to shellfish producing concerns.

4. The Public Health Service cooperates with the various State agencies, specifies the minimum requirements for approval of certifications, and advises the State health officials concerning the adequacy and efficiency of State control measures.

5. It is incumbent upon local health officials to see that their communities are protected, by excluding shellfish shipped by firms not holding approved shipper's certificates. The ultimate success of the present certification plan will, in a large measure, depend upon the effectiveness with which it is done.

CURRENT WORLD PREVALENCE OF DISEASE

REVIEW OF THE MONTHLY EPIDEMIOLOGICAL REPORT ISSUED JULY 15, 1927, BY THE HEALTH SECTION OF THE LEAGUE OF NATIONS' SECRETARIAT[1]

Plague.—The plague incidence was unusually low during the spring months of the current year in the great majority of countries in which the disease was more or less prevalent, according to information

[1] From the Office of Statistical Investigations, U. S. Public Health Service.

furnished to the health section of the League of Nations' Secretariat and published in the Monthly Epidemiological Report for July. In India, fewer cases had been reported up to May 14 than in the corresponding season of any previous year. "The maximum was passed during the last week of March in Bihar and in the eastern part of the United Provinces," states the Report, "and during the third week of April in the Punjab and in the western part of the United Provinces." The deaths from plague reported for the whole of India numbered 2,315 in the week ended April 2 (maximum week), but the total declined to 544 in the week ended May 14, as against 7,467 during the week ended May 15, 1926.

In French Indo-China only 21 cases of plague were reported between April 1 and June 20, and in Siam 8 cases were reported in the eight weeks ended May 21.

An outbreak of plague at Kwang-chow-wan resulted in 17 cases in April, 59 cases in May, and 26 cases in the first 10 days of June.

Most of the Asiatic ports were free from plague during the eight weeks ended July 16. Colombo reported 11 cases during this period and Bangkok reported 1 case. Bassein, Bombay, and Rangoon reported, respectively, 35, 31, and 22 deaths.

There were no cases of plague at Suez during the first six months of the current year, and only 4 cases at Port Said. A total of 40 cases was reported in Egypt during the first five months of 1927.

In Tunis, an outbreak of plague occurred in May, and 126 cases were reported during the month, but only 5 cases were reported during the first 10 days of June. One case of plague was notified in Algeria in May, the first since January.

The plague incidence in Madagascar showed a marked decline: 156 cases were notified in April, 78 in May, and 16 in the first half of June.

In Senegal, plague made its usual seasonal appearance in March, and the number of cases increased from 55 in April to 125 in May. In Nigeria, also, the cases increased from 35 in March to 99 in April.

The government of Ouralsk, in the Union of Socialist Soviet Republics, reported 16 cases of plague and 13 deaths as occurring in the autonomous area of Kasakstan between May 22 and June 4.

Cholera.—Marked improvement in the cholera situation as compared with last year is noted in Siam, Cambodia, Cochin-China, and Laos. The disease was epidemic, however, in Tonkin, where there were 1,356 cases in April and 2,904 in May. An outbreak in Annam occurred in May, with 535 cases during the month. In both Annam and Tonkin, the incidence continued to increase during the first half of June.

In India, cholera was more prevalent during April and May than during the corresponding months of the two preceding years, but

much lower than in 1924. The sudden marked outbreak in the southern part of Bombay Presidency, which began in March, decreased slowly after the middle of April, but spread to other districts in the Presidency. An increase in cholera occurred during April in a number of other Provinces, including Bengal, Bihar, the United Provinces, and the Punjab.

TABLE 1.—*Cholera deaths reported in the Provinces of India from March to May, 1926 and 1927*

Province	1926			1927		
	Feb. 21–Mar. 20	Mar. 21–Apr. 17	Apr. 18–May 5	Feb. 20–Mar. 19	Mar. 20–Apr. 16	Apr. 17–May 14
Punjab and Delhi	0	2	0	0	4	201
United Provinces	167	260	354	35	130	1,885
Bihar and Orissa	950	2,269	2,691	358	1,416	3,697
Bengal	2,395	5,151	2,533	1,656	2,096	2,740
Assam	55	290	644	68	361	261
Central Provinces	236	112	137	377	383	301
Madras Presidency	1,723	1,003	421	1,498	1,130	1,367
Bombay Presidency	5	1	1	38	4,713	3,821
States in Bombay Presidency	0	0	0	0	303	535
Burma	125	533	722	250	228	246
Other Indian States	0	1	44	0	35	85
Total	5,656	9,622	7,547	4,280	10,799	15,139

In the five weeks ended June 25, there were five cases of cholera reported at Canton, China, and one case at Shanghai.

Yellow fever.—Five cases of yellow fever were reported in Senegal in May, the first cases since early in January. Concerning the earlier cases in Senegal, the Report gives the following information:

> The reappearance of yellow fever in Senegal and in certain parts of French Sudan which occurred in October, subsequent to the arrival of a convoy of 200 Syrians, seems to have come to an end during the first days of January. Sixteen Syrians and 18 Europeans were attacked; 15 of the former and 14 of the latter died. There were further 19 suspected cases (10 Europeans and 9 Syrians), of which 12 died. All the Syrians and most of the Europeans were fresh arrivals.

Between May 22 and June 26, in the district of Tivaouane, there were 14 fatal cases of yellow fever. Several cases occurred also at M'bour but none at Rufisque during this period.

In Togoland there were six fatal cases at Lome between May 7 and 26 and one at Anecho. In Dahomey, at Porto Novo, there were two deaths from yellow fever, one on May 26 and one on May 29, but no further case had been reported up to June 17.

In the Gold Coast, where there were 69 cases from February to May, inclusive, the disease has been more prevalent than for six or more years.

Smallpox.—There were 62 cases of smallpox notified in France in May, approximately the same as for several months preceding. "From September to May, 591 cases were reported in 15 De-

partments," states the Report. "The prevailing type is very severe; the case mortality rate was 33 per cent among 214 cases treated in a Paris hospital."

The smallpox incidence in Algeria increased during the spring months, and 315 cases were reported in May, compared with 253 in April and 207 in March. Very few cases of smallpox occurred in either Tunis or Egypt.

In England and Wales the seasonal decline in smallpox continued during June, but the incidence remained higher than in preceding years; 462 cases were reported in the two weeks ending June 18.

A severe outbreak of smallpox is reported from northern Nigeria, where there were 928 cases and 180 deaths during April.

Smallpox continued unusually prevalent during the spring in Bengal, and Bihar and Orissa, but its incidence was not above normal in the United Provinces and the Punjab. The total number of cases reported in British India during the two weeks ended May 14 was 15,526.

Typhus and relapsing fever.—The incidence of typhus in the countries west of the Union of Socialist Soviet Republics during the first four or five months of 1927 differed but little from the preceding year. Only in Rumania was the disease more prevalent than at the corresponding season of the preceding two years.

In the Ukraine, both typhus and relapsing fever were distinctly less prevalent than in preceding years. During the first quarter of 1927, 2,376 cases of typhus and 248 cases of relapsing fever were reported, as compared with 4,049 and 418 cases, respectively, during the first quarter of 1926.

In Morocco, 272 cases of typhus were notified in May, a slight increase over April. In Algeria, the cases reported in March, April, and May exceeded any monthly totals since 1923.

A small outbreak of relapsing fever in the Gold Coast in March and April caused 88 cases and 5 deaths.

Enteric fever.—The seasonal increase in enteric fever became apparent in the reports for the month of May for a number of European countries, and the Report makes the following comment:

> The summer rise of enteric fever usually begins in June or occasionally in May, although it attains its full height only in late summer or autumn. This year, the returns for May showed evidence of rising incidence in many countries. More cases were reported in May than during the corresponding month of the two previous years in England, France, Germany, Poland, Czechoslovakia, Austria, and Hungary. In Italy, where enteric fever was exceptionally prevalent in late autumn, the incidence, though decreasing, remained higher than in previous years.

Natality and general mortality.—Statistics on birth and death rates in certain European countries in 1925 and 1926 and for three quin-

quennial periods of the twentieth century are presented in this Epidemiological Report with comment, in part, as follows:

The decrease of the birth rate, which in most countries dates back to the latter part of the nineteenth century, was arrested during a few years subsequent to the war but recommenced about 1921. Such data as are now available for 1926 indicate that this decrease continues and is likely to continue for a number of years. The area of low birth rate—between 17 and 20 per 1,000—now includes almost the whole of northern, western, and central Europe. The rates are considerably higher in southern Europe, while the birth rate is still between 35 and 40 in eastern Europe. The birth rate is now lower in Sweden and in England than in France. In Germany, where a little over 20 years ago the birth rate was about 60 per cent higher than in France, it now exceeds only very slightly the rate for the latter country.

The decrease of the death rate has in a large measure made up for the fall in the birth rate, so that the population continues to increase in all European countries. The natural increase of 14 per 1,000 in the Netherlands, resulting from a birth rate of 23.8 and a death rate of 9.8, is thus nearly as high as the increase of the population in Egypt, where the birth rate is about 43 per 1,000, and is obviously more favorable both from a humanitarian and an economic point of view. The pressure of population growth is beginning to lessen, however, especially in Great Britain, Germany, Switzerland, and in the Scandinavian countries.

The year 1926 was characterized by a low death rate in most European countries; there was no important epidemic outbreak and no disturbance which could affect the death rate.

TABLE 2.—*Birth and death rates per 1,000 of the population in certain European countries, 1901–1926*

Country	Birth rate					Death rate				
	1901–1904	1910–1914	1920–1924	1925	1926	1901–1904	1910–1914	1920–1924	1925	1926
England	28.4	24.3	21.3	18.3	17.8	16.2	13.9	12.2	12.2	11.6
Scotland	29.3	25.9	24.3	21.3	20.9	17.3	15.3	14.0	13.4	13.0
Norway	28.9	25.4	23.5	20.0	19.7	14.5	13.4	11.8	10.9	10.6
Sweden	26.2	23.7	20.3	17.5	16.9	15.4	13.9	12.4	11.7	11.8
Denmark	29.2	26.4	23.1	21.1	20.5	14.8	12.9	11.7	10.9	11.0
Netherlands	31.8	28.2	26.5	24.1	23.8	16.2	13.0	10.8	9.6	9.8
Germany	34.7	28.2	23.1	20.6	------	19.9	16.6	13.9	11.9	------
France	21.4	19.0	20.1	19.1	------	19.6	18.1	17.5	17.7	------
Spain	35.3	31.2	30.3	29.3	29.9	26.2	22.3	21.1	19.4	19.0
Italy	32.6	32.0	29.9	27.5	------	21.9	19.2	17.4	16.6	------
Hungary	37.4	35.0	30.0	28.3	26.7	25.8	23.6	20.7	17.1	16.5
Czechoslovakia	35.5	29.8	27.3	25.1	24.5	24.1	20.2	16.9	15.2	15.6

PUBLIC HEALTH ENGINEERING ABSTRACTS

The Largest European Water-Supply System. How the German Government Furnishes Water for 100 Communities. Translated from the German (*Siemens-Zeitschrift*, October, 1925) by John H. D. Blanke. *Water Works Engineering*, vol. 79, No. 16, August 15, 1926, pp. 1037–1038. (Abstract by Arthur P. Miller.)

The German government-owned water supply system Nieder-Stotzingen is the largest water-supply system on the European Continent. It furnishes water to 100 cities and communities with a population of about one-half million. The system covers 1,700 square miles and the most remote town from the Nieder-Stotzingen pumping station is 65 miles away.

The source of the water is the ground water flow in the bed of the Danube River. From this source the water is taken through two rows of wells, one containing 49 wells and the other 78. The wells are about 164 feet apart with inside diameters of 19.68 inches and 39.37 inches. Some are as deep as 52 feet. Well suction lines are connected to withdrawal lines and they in turn lead to the collecting pumping station. This station forces the water to the Nieder-Stotzingen pumping station, which cares for the distribution over the territory.

The remainder of the article is devoted to pumping equipment and a discussion of lines, pressures, and construction.

Public Water Supplies of Maine. Elmer W. Campbell. *Journal New England Water Works Association*, vol. 41, No. 2, June, 1927, pp. 99–128. (Abstract by Arthur P. Miller.)

This paper is the third of a series presenting statistical information on the public water supplies of the New England States. It covers only such supplies in the State of Maine.

As a sample of the material included, the following quotation concerning the Bethel Water Co. at Bethel, Me., is given: "Supplies a population of around 1,792; water flows by gravity from a mountain brook to two covered concrete reservoirs; total capacity, 650,000 gallons; 7½ miles of mains; color, 10; hardness, 20; chlorides, 4; sanitary quality of water, excellent."

How Water-Supply Improvements Have Reduced Typhoid Fever Rate. H. Burdett. *Water Works Engineering*, vol. 80, No. 12, June 8, 1927, p. 780. (Abstract by Frank Raab.)

In 1908 there were 15 filter plants in New York State. In 1924, 26 supplies were filtered. Besides these, 18 other cities were chlorinating their supplies. During this period the typhoid fever death rate fell from 24.2 to 3.8, a reduction of more than 80 per cent. Since 1924 the typhoid fever death rate has continued downward in all cities which are supplied with purified or chlorinated water. Better milk supplies and other sanitary measures are also given credit for the reduced typhoid fever death rate.

Is the Treatment of Water or Sewage of Greater Importance? Paul Hansen. *Water Works Engineering*, vol. 80, No. 9, April 27, 1927, pp. 565–566. (Abstract by W. L. Havens.)

The aim of this article is to point out that the general problem involves striking a safe and economic balance between sewage treatment and water purification. Reference is made to the tentative standard of the International Joint Commission of 500 *B. coli* per 100 c. c. as the maximum proper for a satisfactory raw water. From the studies of Streeter is drawn the conclusion that the chlorination of filtered water was found necessary when the *B. coli* content of raw water exceeded 100 per 100 c. c. The paper suggests that a water which is offensive esthetically or which is impracticable as a source of supply may be fixed as a water containing 50,000 *B. coli* (or more) per 100 c. c., although such a water may support fish life and the pollution may not be markedly perceptible to the senses.

Filtration and sterilization of water are recommended as the major defense rather than reliance upon sewage treatment.

Dual Water Supplies. A. L. Dopmeyer. Proceedings Ninth Texas Water Works Short School, January 24–29 1927, pp. 120–125. (Abstract by E. S. Tisdale.)

The industrial dual system is demanding increased attention of the public health officials. Reference is made to action taken by several groups, the conference of State sanitary engineers, the American Water Works Association, and the fire protective committee of the Fire Underwriters' Association, against the practice of permitting physical connections between safe and unsafe water supplies. Reference is also made to the comprehensive studies throughout New York State and in the city of Chicago of the cross-connection evil. The improvements which have been brought about since these studies, indicated the extreme prevalence of cross connections in the large cities. The elimination of cross connections is a task which faces the State sanitary engineers in practically every State and still causes much mysterious water-borne typhoid fever.

Each Section of Tennessee has Own Water-Supply Problem. Howard R. Fullerton. *Water Works Engineering*, vol. 80, No. 11, May 25, 1927, pp. 701–702. (Abstract by W. L. Havens.)

From topographical, mineral, agricultural, and geographical standpoints, the State of Tennessee is naturally divided into three divisions, and consequently the water supplies of the State may be grouped under three general classifications. In the eastern section of the State practically all the supplies are from springs or streams, and in some cases a potable supply can be produced with chlorination only, while in others filtration, and even softening, is necessary.

In the limestone formations in middle Tennessee, well supplies are prevalent and chlorination is usually necessary for their protection. Nashville, Columbia, and Shelbyville secure their supplies from rivers and resort to coagulation, sedimentation, filtration, and chlorination.

In western Tennessee most of the municipal supplies are obtained from wells which are impregnated to a more or less degree with sulphur and iron, and therefore require special treatment for the removal of these unsatisfactory materials.

Each of the larger plants in the State is visited twice each year by a sanitary engineer, who instructs the superintendent in the scientific operation of the plant. Although only a few of the plants are now doing bacteriological work, this type of control is being recommended.

A Texas Water-Supply Enlargement Problem Involving a Dual Distribution System. N. T. Veatch, jr. Proceedings Ninth Texas Water Works Short School, January 24–29, 1927, pp. 59–63. (Abstract by E. S. Tisdale.)

The question of the advisability of distributing water to a community by a dual system may arise in certain parts of this country, particularly in the southwest where large quantities of water are used for irrigation purposes.

Wichita Falls, Tex., is cited as a city where the relative economy of dual systems will probably have to be considered seriously as the city grows. Lake Wichita, the source of the present water supply, could furnish a satisfactory soft water for domestic purposes in the future provided another source of supply, possibly Lake Kemp, which furnishes water which is saline and very hard, might be utilized for irrigation and fire fighting purposes.

The relative costs on single and dual systems are set forth in the article and following conclusions drawn: (1) Dual systems are more expensive in first cost and in operation than single systems, because of the duplication of pipe lines, services, pumping plant, and accessories; (2) some unusual situation such as the inadequacy of a suitable water supply, together with an unusually high cost for

an additional supply or excess treatment costs, must exist before a dual supply can be economical.

Treatment of Pea Cannery Wastes. C. M. Baker, L. F. Warrick, and J. P. Smith. Report concerning the cooperative investigation conducted by the Wisconsin Canners' Association, State Conservation Commission, and State Board of Health at Poynette, Wis., June, July, 1926. 50 pages. (Abstract by Arthur P. Miller.)

This report published by the Wisconsin State Board of Health, presents the "details of an experimental investigation concerning the efficiency and practicability of chemical treatment in removing substances from pea cannery wastes that cause local nuisances and objectionable stream pollution."

An experimental plant was constructed and operated at the pea cannery of the Poynette Canning Co., and consisted of a rotary screen, chemical feed devices, mixing facilities, chemical precipitation tank, sludge pumping and drying equipment, and apparatus for flow measurements.

Forty-six pages are devoted to a description of the pea cannery wastes; past investigations and preliminary laboratory studies, experimental plant (including sketches and photographs), operation and analytical control of treatment plant, and the operating results. The effect of the treated wastes on the stream and the proposed design, with a cost estimate, for treatment of these wastes, are discussed in full.

The conclusions from this experimental work are quoted in full: (1) By careful operation and the application of about 3¼ pounds of ferrous sulphate and 7¼ pounds of lime per 1,000 gallons of waste, the oxygen demand can be reduced approximately 75 per cent; (2) if the sludge is allowed to accumulate in the tank, the oxygen demand reduction averages only 34 per cent, because the precipitated organic matter partially goes into solution and is carried through the tank; (3) the sludge may be easily removed from the tank with a gasoline motor-driven diaphragm pump. It will dry rapidly on sludge beds and has a fertilizer value estimated at $3.50 per ton; (4) aeration of the tank effluent will effect a further reduction in the oxygen demand, approximately 50 per cent being indicated by laboratory tests; (5) the chemical treatment will materially reduce stream pollution and prevent local nuisances created by untreated pea cannery wastes; (6) the cost of a complete treatment plant for a two-line cannery, discharging wastes at a maximum rate of 100,000 gallons per day, is estimated at $2,000 to $2,800, with a total daily cost of operation of $13 to $15.

Where pea canneries are causing unsatisfactory conditions, chemical treatment plants are recommended. Further investigations were found desirable along the following lines: (1) A thorough study of operating technique in order to develop practical control tests and methods in operation of such treatment plants; (2) full size plant studies to determine the efficiency and practicability of aeration of the chemically treated wastes; (3) studies in regard to utilization of the wastes, particularly the silage juice and blancher wastes, because of the large amount of carbohydrate present and of the screenings with respect to drying and use as feed for chickens or other fowls, and stock.

Elimination of Pollution. Chapter IV, 1926 Report of Passaic Valley Sewage Commissioners, Newark, N. J., pp. 55–89. (Abstract by J. K. Hoskins.)

The Passaic Valley trunk sewer, extending along the west bank of the Passaic River in New Jersey, from Paterson to New York Bay, a distance of 26.74 miles, was constructed to relieve the excessive pollution of the river and Newark Bay. The works cost over $20,000,000 and were first placed in operation in 1924. The present chapter discusses the improved condition effected in the river and in Newark Bay, and the present degree of pollution of upper New York Bay.

A series of 16 sampling stations was established, from which samples were collected for a year prior to the completion of the sewer and continuously since that time for the purpose of ascertaining changes in the dissolved oxygen content. These analyses are presented in the form of yearly and summer averages. Minimum saturation figures are not given. Many of the data are illustrated by graphs.

The interpretation placed on the data as summarized is as follows: "It does not appear that the discharge of Passaic Valley sewage has, during the two years of operation, lowered the dissolved oxygen content of the whole upper New York Bay.

"Our oxygen determinations show such small and inconsiderable depletions due to the discharge of Passaic Valley sewage that we have completely lived up to the terms of this stipulation (interference with major fish life) regarding dissolved oxygen."

Absence of suspended matter, sewage odors, and grease, and practical absence of color, are also claimed.

The improvement of pollution conditions in Newark Bay and in the Passaic River, as measured by the dissolved oxygen content, is increasing. Thus at the mouth of the river (head of the bay) the average per cent saturation of oxygen has increased from 25.2 in 1924 to 49.3 in 1926. Summarized results of other sampling points are presented. The highly industrial nature of the valley is also briefly discussed.

Eliminating Pollution from the Great Lakes and St. Lawrence Waterways—The Great Lakes. Allan J. McLaughlin. *American Journal of Public Health*, vol. 17, No. 5, May, 1927, pp. 454–457. (Abstract by D. W. Evans.)

In 1910, after several years of intense study of Asiatic cholera, the author was assigned to study the sewage pollution of interstate and international waters and the spread of typhoid fever.

Sanitary surveys, including the mapping of sewer systems and outfalls and their relation to waterworks intakes, the location, type, and efficiencies of filter plants, and the typhoid history of towns, with stress on the seasonal prevalence of typhoid fever, were completed by July, 1911, for all towns on the American side of the Great Lakes drainage basin. Excessive prevalence of typhoid fever occurred in winter and spring, due in large measure to unrestricted discharge of sewage or inefficiency of purification of the water. Remedies for purification called for (1) safe water supplies as shown by bacteriological tests; (2) supervision and control of water supplies by States; (3) control of sewage discharge within permissible limits; (4) prevention of pollution by vessels.

Standards for raw, filtered, or treated waters were recommended in order to secure uniform results.

During the period April to November, 1913, work extended over the entire basin, 19,000 samples being secured from 1,400 points and examined bacteriologically. The report on this survey shows the degree or intensity of pollution. It was shown that the present position of intakes is such that not a single town can be said to possess safe water without treatment.

Relation Between Ripe Sludge and Fresh Solids. Willem Rudolfs. Proceedings of Ninth Texas Water Works Short School, pp. 367–369. (Abstract by H. H. Rashid.)

Under given conditions and when these conditions are not changed artificially, there exists a definite relationship between ripe sludge and fresh solids.

Laboratory experiments under controlled conditions to determine the optimum amount of fresh solids which can be handled by a given quantity of ripe sludge have shown that for proper sludge digestion not more than two per cent of fresh solids should be added to the ripe sludge. The addition of greater amounts

resulted, apparently, in upsetting the biological balance and causing irregularities; moreover, the bacterial numbers became very erratic, acidity increased and decreased rapidly, gas production became spasmodic, and protozoa increased enormously and would disappear over night. When 4 per cent were added, odors became very pronounced, while the addition of 2 per cent of the fresh solids (on dry basis) resulted in a remarkably smooth curve for bacteria when plotted as well as for solids reduction, and a fairly even gas production with no odors attending. When dealing with industrial waste, greater effective sludge capacities are needed, as the waste contains comparatively large amounts of grease, which is difficult to digest with the present means of anerobic tanks. The apparent digestion capacity of a given tank can be increased more than 60 per cent by carefully controlling the sewage flow so that no more than the calculated amount of settleable solids reaches the tank, and by keeping the reaction of the tank at its optimum for digestion which is expressed in pH values from 7.3 to 7.6. Other considerations which require further study are the combination of aerobic and anerobic decomposition, as well as the biophysico-chemical combinations.

Eliminating Pollution from the Great Lakes and St. Lawrence Waterways—Lake Erie and the Niagara River. J. W. Ellms. *American Journal of Public Health*, vol. 17, No. 5, May, 1927, pp. 457–459. (Abstract by D. W. Evans.)

Pollution of Lake Erie involves two phases; namely, pollution at inlet and outlet and pollution opposite centers of dense population on or near its shores. At the inlet, contamination is derived from cities on both sides of Detroit River. At the outlet, pollution is chiefly from sewage of cities on the American side of Niagara River.

Along the shores on the American side, the cities of Toledo, Cleveland, and Akron contribute large volumes of sewage directly or indirectly. The amount of sewage treated is relatively small.

The greatest pollution is found in the Detroit and Niagara Rivers. Detroit and suburbs discharge an estimated volume of 225 m. g. d. of sewage and trade waste into the Detroit River through 50 outfall sewers. Detroit has a comprehensive plan for a sewer system and treatment, but nothing has as yet been done toward construction. Buffalo contributes 100 m. g. d. of sewage into the Niagara River without treatment. Cleveland discharges 115 m. g. d. directly to the lake, only 20 per cent of which is treated. Chlorination is provided during the bathing season.

Depreciation of lake-front property due to gross pollution is awakening the public to the needs for more sewage treatment.

DEATHS DURING WEEK ENDED SEPTEMBER 3, 1927

Summary of information received by telegraph from industrial insurance companies for week ended September 3, 1927, and corresponding week of 1926. (From the Weekly Health Index September 8, 1927, issued by the Bureau of the Census, Department of Commerce)

	Week ended Sept. 3, 1927	Corresponding week 1926
Policies in force	67, 993, 257	65, 208, 233
Number of death claims	10, 382	10, 557
Death claims per 1,000 policies in force, annual rate	8. 0	8. 4

Deaths from all causes in certain large cities of the United States during the week ended September 3, 1927, infant mortality, annual death rate, and comparison with corresponding week of 1926. (From the Weekly Health Index, September 8, 1927, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Sept. 3, 1927		Annual death rate per 1,000 corresponding week 1926	Deaths under 1 year		Infant mortality rate, week ended Sept. 3, 1927 [2]
	Total deaths	Death rate [1]		Week ended Sept. 3, 1927	Corresponding week 1926	
Total (67 cities)	5,934	10.5	[3] 10.9	681	[3] 899	[4] 56
Akron	37			5	6	54
Albany [5]	27	11.7	12.3	4	1	83
Atlanta	51			5	8	
White	26			1	3	
Colored	25	(6)		4	5	
Baltimore [5]	169	10.8	11.7	31	25	93
White	122		10.2	18	18	69
Colored	47	(6)	20.2	13	7	202
Birmingham	58	14.1	14.6	8	14	
White	28		10.2	4	6	
Colored	30	(6)	21.4	4	8	
Boston	206	13.5	12.5	34	39	95
Bridgeport	24			1	3	19
Buffalo	126	11.9	11.4	11	20	46
Cambridge	14	5.9	11.5	3	7	53
Camden	21	8.2	8.8	5	4	86
Canton	21	9.7	9.5	1	2	24
Chicago [5]	594	10.0	10.3	52	73	45
Cincinnati	103	13.0	13.6	13	19	81
Cleveland	156	8.3	9.8	17	31	45
Columbus	66	11.8	14.6	6	12	56
Dallas	37	9.2	9.5	6	10	
White	27		9.8	5	10	
Colored	10	(6)	7.7	1	0	
Dayton	37	10.7	13.8	4	5	66
Denver	78	14.0	14.3	8	7	
Des Moines	26	9.1	11.3	3	4	50
Detroit	232	9.1	9.7	36	42	57
Duluth	18	8.2	7.8	0	3	0
El Paso	35	16.0	11.5	10	5	
Erie	32			3	6	59
Fall River	25	9.8	12.3	6	9	106
Flint	23	8.4	9.2	7	10	114
Fort Worth	35	11.1	7.5	4	4	
White	24		6.7	3	4	
Colored	11	(6)	13.7	1	0	
Grand Rapids	21	6.9	10.4	6	4	88
Houston	65			8	3	
White	39			6	3	
Colored	26	(6)		2	0	
Indianapolis	87	12.1	15.9	7	15	55
White	74		15.3	7	15	63
Colored	13	(6)	20.1	0	0	0
Jersey City	47	7.6	9.7	6	4	45
Kansas City, Kans	30	13.4	11.1	3	4	58
White	19		9.7	2	1	45
Colored	11	(6)	17.8	1	3	152
Kansas City, Mo	75	10.2	12.8	2	7	
Knoxville	32	16.4		2		
White	26			2		
Colored	6	(6)		0		
Los Angeles	196			21	29	60
Louisville	55	9.0	12.6	11	11	94
White	43		11.3	11	10	107
Colored	12	(6)	20.0	0	1	0
Lowell	22	10.4	14.2	8	8	154
Lynn	17	8.4	7.0	4	1	106
Memphis	66	19.2	19.1	8	8	
White	34		17.4	4	5	
Colored	32	(6)	22.3	4	3	
Milwaukee	81	8.0	9.3	7	13	33
Minneapolis	66	7.8	11.8	5	7	28
Nashville [5]	49	18.5	20.2	6	14	
White	19		16.5	3	11	
Colored	30	(6)	29.4	3	3	
New Bedford	25	10.9	7.0	0	1	0
New Haven	35	9.9	10.9	2	5	28

(Footnotes at end of table)

Deaths from all causes in certain large cities of the United States during the week ended September 3, 1927, infant mortality, annual death rate, and comparison with corresponding week of 1926. (From the Weekly Health Index, September 3, 1927, issued by the Bureau of the Census, Department of Commerce)—Contd.

City	Week ended Sept. 3, 1927		Annual death rate per 1,000 corresponding week 1926	Deaths under 1 year		Infant mortality rate, week ended Sept. 3, 1927
	Total deaths	Death rate		Week ended Sept. 3, 1927	Corresponding week 1926	
New Orleans	133	16.4	14.4	11	20	
White	72		11.3	6	12	
Colored	61	(6)	23.4	5	8	
New York	1,104	9.6	9.6	137	165	57
Bronx Borough	116	6.5	8.2	13	9	41
Brooklyn Borough	389	8.9	8.5	59	67	61
Manhattan Borough	457	13.1	12.5	49	71	58
Queens Borough	104	6.7	6.2	13	14	56
Richmond Borough	38	13.5	16.4	3	4	56
Newark, N. J	84	9.4	6.9	14	11	69
Oakland	38	7.4	8.8	2	4	23
Oklahoma City	27			6	3	
Omaha	32	7.6	11.6	4	6	44
Paterson	19	6.9	13.5	2	3	35
Philadelphia	413	10.6	11.6	47	77	63
Pittsburgh	173	14.0	10.8	30	23	105
Portland, Oreg	53			5	1	53
Providence	35	6.5	9.5	3	7	25
Richmond	44	11.9	15.2	3	11	40
White	22		12.8	2	7	40
Colored	22	(6)	20.9	1	4	38
Rochester	76	12.2	9.7	11	11	93
St. Louis	187	11.6	12.8	22	19	
St. Paul	53	11.1	12.0	2	6	18
Salt Lake City [5]	36	13.8	10.6	1	1	15
San Antonio	60	14.8	9.2	8	10	
San Diego	32	14.5	11.9	3	3	64
San Francisco	127	11.5	13.6	4	8	25
Schenectady	16	9.0	9.0	0	2	0
Scattle	50			3	3	31
Somerville	14	7.2	7.3	2	0	72
Spokane	21	10.0	7.7	3	2	75
Springfield, Mass	17	6.0	8.6	5	2	77
Syracuse	52	13.8	12.4	0	5	0
Tacoma	23	11.2	14.8	1	2	24
Toledo	75	12.9	11.5	7	10	67
Trenton	18	6.9	8.6	0	3	0
Washington, D. C	122	11.8	9.8	7	14	40
White	70		7.8	4	9	34
Colored	52	(6)	15.6	3	5	55
Waterbury	11			0	3	0
Wilmington, Del	17	7.0	9.7	1	4	25
Worcester	49	13.1	11.1	3	10	36
Yonkers	18	7.9	9.9	1	4	23
Youngstown	31	9.6	9.2	1	8	14

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.
[3] Data for 66 cities.
[4] Data for 62 cities.
[5] Deaths for week ended Friday, Sept. 2, 1927.
[6] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans., 14; Knoxville, 15; Louisville, 17; Memphis, 38; Nashville, 30; New Orleans, 26; Richmond, 32; and Washington, D. C., 25.

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 WEEKLY STATE REPORTS

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

Reports for Week Ended September 10, 1927

DIPHTHERIA	Cases
Alabama	76
Arkansas	11
California	88
Colorado	11
Connecticut	22
Delaware	3
Florida	19
Georgia	41
Illinois	79
Indiana	22
Iowa [1]	11
Kansas	14
Louisiana	30
Maine	1
Maryland [1]	27
Massachusetts	71
Michigan	48
Minnesota	30
Mississippi	23
Missouri	27
Montana	2
Nebraska	8
New Jersey	70
New Mexico	3
New York [2]	43
North Carolina	80
Oklahoma [3]	48
Oregon	3
Pennsylvania	106
Rhode Island	8
South Carolina	29
South Dakota	2
Tennessee	47
Texas	42
Utah [1]	1
Vermont	3
Washington	10
West Virginia	14
Wisconsin	32

INFLUENZA	Cases
Alabama	10
Arkansas	8
California	5
Georgia	19
Illinois	16
Indiana	25
Louisiana	6
Maryland [1]	4
Massachusetts	3
Missouri	1
New Jersey	1
Oklahoma [3]	17
Oregon	6
South Carolina	259
Tennessee	20
Texas	26
Utah [1]	2
West Virginia	5
Wisconsin	40

MEASLES	Cases
Alabama	39
Arkansas	11
California	23
Colorado	1
Connecticut	8
Florida	4
Georgia	13
Illinois	13
Indiana	7
Iowa [1]	2
Kansas	7
Louisiana	3
Maine	3
Maryland [1]	7
Massachusetts	40
Michigan	8
Minnesota	3
Missouri	4
Montana	1

[1] Week ended Friday. [2] Exclusive of New York City. [3] Exclusive of Oklahoma City and Tulsa.

MEASLES—continued	Cases
New Jersey	5
New Mexico	7
New York [2]	34
North Carolina	90
Oklahoma [3]	15
Oregon	16
Pennsylvania	56
South Carolina	30
South Dakota	3
Tennessee	35
Texas	6
Utah [1]	2
Vermont	16
Washington	8
West Virginia	15
Wisconsin	71
Wyoming	2

MENINGOCOCCUS MENINGITIS	
California	3
Illinois	6
Kansas	1
Massachusetts	2
Michigan	4
New Jersey	2
New York [2]	1
North Carolina	1
Pennsylvania	3
Tennessee	2
Washington	1
Wisconsin	2

POLIOMYELITIS	
Arizona	2
California	49
Colorado	2
Connecticut	11
Florida	4
Illinois	35
Indiana	6
Iowa [1]	7
Kansas	9
Maine	6
Massachusetts	92
Michigan	19
Minnesota	2
Mississippi	1
Missouri	16
Nebraska	5
New Jersey	34
New Mexico	3
New York [2]	29
Ohio [4]	105
Oklahoma [3]	10
Oregon	11
Pennsylvania	41
Rhode Island	3
South Carolina	6
South Dakota	2
Tennessee	5
Texas	20
Vermont	1
Washington	7
West Virginia	17
Wisconsin	10

SCARLET FEVER	Cases
Alabama	44
Arkansas	9
California	47
Colorado	12
Connecticut	13
Delaware	1
Florida	3
Georgia	14
Idaho	2
Illinois	86
Indiana	52
Iowa [1]	8
Kansas	51
Louisiana	2
Maine	16
Maryland [1]	10
Massachusetts	56
Michigan	83
Minnesota	46
Mississippi	16
Missouri	25
Montana	12
Nebraska	20
New Jersey	22
New Mexico	7
New York [2]	55
North Carolina	59
Oklahoma [3]	23
Oregon	4
Pennsylvania	130
Rhode Island	9
South Carolina	15
South Dakota	8
Tennessee	34
Texas	15
Vermont	9
Washington	8
West Virginia	21
Wisconsin	47
Wyoming	2

SMALLPOX	
Alabama	4
Arkansas	1
California	5
Colorado	3
Florida	1
Idaho	1
Illinois	12
Indiana	30
Iowa [1]	16
Kansas	1
Michigan	5
Minnesota	1
Mississippi	1
Missouri	7
Montana	1
Nebraska	2
New Jersey	1
North Carolina	7
Oklahoma [3]	9
Oregon	6
South Carolina	6
Tennessee	2
Washington	4
Wisconsin	3

[1] Week ended Friday. [2] Exclusive of New York City. [3] Exclusive of Oklahoma City and Tulsa.
[4] Includes 20 of the cases reported for the week ended September 6.

TYPHOID FEVER	Cases
Alabama	80
Arizona	7
Arkansas	56
California	10
Colorado	7
Connecticut	6
Delaware	3
Florida	5
Georgia	69
Illinois	63
Indiana	35
Iowa [1]	3
Kansas	24
Louisiana	23
Maine	6
Maryland [1]	20
Massachusetts	16
Michigan	20
Minnesota	5
Mississippi	16
Missouri	32
Montana	8
Nebraska	4
New Jersey	18
New Mexico	17
New York [2]	32
North Carolina	29
Oklahoma [3]	110
Oregon	4
Pennsylvania	51
Rhode Island	9
South Carolina	94
South Dakota	5
Tennessee	111
Texas	54
Washington	6
West Virginia	32
Wisconsin	7
Wyoming	2

[1] Week ended Friday. [2] Exclusive of New York City. [3] Exclusive of Oklahoma City and Tulsa.

Reports for Week Ended September 3, 1927

DIPHTHERIA	Cases
District of Columbia	11
North Dakota	2
INFLUENZA	
District of Columbia	1
MEASLES	
North Dakota	5
POLIOMYELITIS	
North Dakota	2
SCARLET FEVER	
District of Columbia	13
North Dakota	40
TYPHOID FEVER	
District of Columbia	5
North Dakota	4

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	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
July, 1927										
California	19	287	30	9	581	1	215	248	43	80
District of Columbia	1	46	1	-------	14	1	0	33	14	11
Hawaii Territory	5	22	3	-------	40	-------	0	3	0	9
Idaho	1	4	1	-------	72	-------	0	20	38	6
August, 1927										
Connecticut	1	82	5	6	42	-------	52	38	0	13
District of Columbia	0	39	2	-------	1	1	3	17	3	18
Nebraska	1	15	-------	-------	66	-------	6	53	15	22

July, 1927

	Cases
Chicken pox:	
California	367
District of Columbia	17
Hawaii Territory	3
Idaho	11
Conjunctivitis (follicular):	
Hawaii Territory	3
Dysentery:	
California	13
German measles:	
California	51
Leprosy:	
California	4
Hawaii Territory	3
Lethargic encephalitis:	
California	4
Malta fever:	
California	1
Mumps:	
California	152
Idaho	13
Paratyphoid fever:	
California	2
Plague:	
California	1
Rabies in animals:	
California	14
Rocky Mountain spotted or tick fever:	
Idaho	1
Septic sore throat:	
Idaho	1
Tetanus:	
California	8
Hawaii Territory	3
Trachoma:	
California	5
Hawaii Territory	1
Whooping cough:	
California	602
District of Columbia	48
Hawaii Territory	21
Idaho	17

August, 1927

Chicken pox:	
Connecticut	50
District of Columbia	8
Nebraska	12
German measles:	
Connecticut	2
Lethargic encephalitis:	
Connecticut	3
Mumps:	
Connecticut	24
Nebraska	27
Paratyphoid fever:	
Connecticut	3
Rabies in animals:	
Connecticut	2
Septic sore throat:	
Connecticut	5
Nebraska	7
Tetanus:	
Connecticut	3
Whooping cough:	
Connecticut	191
District of Columbia	20
Nebraska	38

PLAGUE PREVENTION WORK IN CALIFORNIA

Los Angeles.—The rodent division of the Los Angeles Board of Health reports 4,470 rodents collected from July 1 to August 20, 1927. None were found plague infected during this period.

San Francisco.—The weekly reports of plague suppressive measures in California during the period May 29 to August 20, 1927, show a total of 9,552 rodents received and 8,232 examined during the 12 weeks. The last case of human plague was reported as occurring on July 17, 1927, in Contra Costa County.

The State board of health reports two ground squirrels in Contra Costa County as being plague infected on August 10, 1927.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 98 cities reporting cases used in the following table are situated in all parts of the country and have an estimated aggregate population of more than 30,460,000. The estimated population of the 92 cities reporting deaths is more than 29,780,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended August 27, 1927, and August 28, 1926

	1927	1926	Estimated expectancy
Cases reported			
Diphtheria:			
41 States	1,042	834	
98 cities	470	374	489
Measles:			
40 States	692	939	
98 cities	150	172	
Poliomyelitis:			
41 States	333	128	
Scarlet fever:			
41 States	885	753	
98 cities	316	314	251
Smallpox:			
41 States	115	103	
98 cities	31	23	21
Typhoid fever:			
41 States	1,228	1,487	
98 cities	186	235	209
Deaths reported			
Influenza and pneumonia:			
92 cities	296	280	
Smallpox:			
92 cities	0	0	

City reports for week ended August 27, 1927

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence the number of cases of the disease under consideration that 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 non-epidemic 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 1918 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, 1925, 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			
NEW ENGLAND									
Maine:									
Portland	75,333	0	0	1	0	0	0	0	0
New Hampshire:									
Concord	22,546	0	0	0	0	0	0	0	0
Manchester	83,097	0	1	0	0	0	0	0	2
Vermont:									
Barre	10,008	0	0	0	0	0	0	0	0
Burlington	24,089	0	0	1	0	0	0	0	1
Massachusetts:									
Boston	779,620	5	27	21	0	0	21	1	11
Fall River	123,993	0	1	0	0	1	0	0	1
Springfield	142,065	0	1	1	0	0	0	3	2
Worcester	190,757	1	3	0	0	0	0	0	1
Rhode Island:									
Pawtucket	69,760	0	0	1	0	0	0	0	1
Providence	267,918	0	3	4	0	0	0	0	1
Connecticut:									
Bridgeport	(1)	0	4	5	0	0	0	0	1
Hartford	160,197	1	3	2	0	0	1	0	3
New Haven	178,927	0	2	2	0	0	3	0	1
MIDDLE ATLANTIC									
New York:									
Buffalo	538,016	3	11	15		0	10	0	1
New York	5,873,356	15	87	83	3	2	10	8	66
Rochester	316,786	0	4	4		0	0	1	2
Syracuse	182,003	2	3	0		0	1	0	2

[1] No estimate made.

City reports for week ended August 27, 1927—Continued

Division, State, and city	Population July 1, 1925, 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			
MIDDLE ATLANTIC—con.									
New Jersey:									
Camden	128,642	0	1	7	0	0	0	0	2
Newark	452,513	4	6	7	1	0	0	5	2
Trenton	132,020	0	2	0	0	0	0	0	2
Pennsylvania:									
Philadelphia	1,979,364	7	32	24	-------	2	3	7	21
Pittsburgh	631,563	6	11	19	-------	1	24	1	14
Reading	112,707	1	1	0	-------	0	0	0	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	409,333	0	5	2	0	0	3	1	5
Cleveland	936,485	5	19	34	0	1	3	15	8
Columbus	279,836	1	2	3	0	0	0	0	3
Toledo	287,380	2	5	3	0	0	0	2	4
Indiana:									
Fort Wayne	97,846	0	1	3	0	0	0	0	1
Indianapolis	358,819	0	3	1	0	0	1	3	3
South Bend	80,091	0	1	0	0	0	2	0	0
Terre Haute	71,071	0	1	0	0	0	0	0	1
Illinois:									
Chicago	2,995,239	14	46	46	3	2	5	10	13
Springfield	63,923	0	0	2	0	0	0	0	0
Michigan:									
Detroit	1,245,824	3	32	23	0	1	2	2	6
Flint	130,316	0	4	2	0	0	1	0	3
Grand Rapids	153,698	3	2	1	0	0	2	2	1
Wisconsin:									
Kenosha	50,891	0	1	0	0	0	0	0	0
Milwaukee	509,192	6	8	5	0	0	1	3	2
Racine	67,707	1	0	0	0	0	0	0	0
Superior	39,671	0	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth	110,502	1	0	1	0	0	1	0	3
Minneapolis	425,435	4	14	5	0	1	4	1	1
St. Paul	246,001	0	11	3	0	0	0	1	4
Iowa:									
Davenport	52,469	0	0	3	0	-------	2	0	-------
Sioux City	76,411	0	0	0	0	-------	0	0	-------
Waterloo	36,771	0	0	0	0	-------	0	0	-------
Missouri:									
Kansas City	367,481	0	3	0	0	0	1	3	4
St. Joseph	78,342	0	0	0	0	0	0	0	1
St. Louis	821,543	2	19	15	0	0	2	5	-------
North Dakota:									
Fargo	26,403	0	0	0	0	0	0	0	1
Grand Forks	14,811	0	0	0	0	-------	0	0	-------
South Dakota:									
Aberdeen	15,036	0	0	0	0	-------	0	0	-------
Sioux Falls	30,127	0	0	0	0	-------	1	0	-------
Nebraska:									
Lincoln	60,941	0	0	0	0	0	0	2	0
Omaha	211,768	1	6	3	0	0	0	1	1
Kansas:									
Topeka	55,411	0	0	0	0	0	0	0	0
Wichita	88,367	0	0	0	0	0	0	0	0
SOUTH ATLANTIC									
Delaware:									
Wilmington	122,049	1	1	2	0	0	0	0	0
Maryland:									
Baltimore	796,296	2	12	24	4	1	1	0	5
Cumberland	33,741	0	1	0	0	0	0	0	0
Frederick	12,035	0	1	0	0	0	0	0	0
District of Columbia:									
Washington	497,906	1	4	2	1	1	0	0	4
Virginia:									
Lynchburg	30,395	0	0	0	0	0	2	0	0
Norfolk	(1)	0	0	1	0	0	0	0	2
Richmond	186,403	0	7	3	0	0	0	0	1
Roanoke	58,208	0	2	2	0	0	1	0	0
West Virginia:									
Charleston	49,019	0	0	1	0	0	0	0	2
Wheeling	56,208	0	1	0	0	0	0	0	0

City reports for week ended August 27, 1927—Continued

Division, State, and city	Population July 1, 1925, 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			
SOUTH ATLANTIC—con.									
North Carolina:									
Raleigh	30,371	0	0	1	0	0	1	0	0
Wilmington	37,061	0	1	0	0	0	2	0	1
Winston-Salem	69,031	0	1	1	0	0	3	0	0
South Carolina:									
Charleston	73,125	0	0	0	10	0	0	0	2
Columbia	41,225	0	0	2	0	-------	5	0	-------
Greenville	27,311	-------	0	-------	-------	-------	-------	-------	-------
Georgia:									
Atlanta	(1)	1	2	7	7	3	1	1	2
Brunswick	16,809	0	0	0	0	0	0	3	0
Savannah	93,134	0	1	2	1	1	0	1	1
Florida:									
Miami	69,754	0	-------	0	0	0	3	3	1
St. Petersburg	26,847	-------	0	-------	-------	0	-------	-------	0
Tampa	94,743	0	1	0	0	0	1	0	0
EAST SOUTH CENTRAL									
Kentucky:									
Covington	58,309	0	0	0	0	0	0	0	0
Lexington	46,895	0	-------	0	0	0	0	0	2
Louisville	305,935	0	3	0	0	0	2	2	3
Tennessee:									
Memphis	174,533	0	3	1	0	1	0	0	2
Nashville	136,220	0	0	3	0	0	0	0	5
Alabama:									
Birmingham	205,670	0	3	4	2	1	3	1	3
Mobile	65,955	0	1	0	0	1	0	5	0
Montgomery	46,481	0	1	4	0	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	31,643	0	0	0	0	-------	0	0	-------
Little Rock	74,216	0	0	1	0	0	2	0	1
Louisiana:									
New Orleans	414,493	0	6	7	5	2	0	0	5
Shreveport	57,857	0	0	0	0	2	0	2	1
Oklahoma:									
Oklahoma City	(1)	0	1	0	3	0	0	0	0
Tulsa	124,478	0	-------	0	0	-------	0	0	-------
Texas:									
Dallas	194,450	0	3	6	0	0	2	0	1
Galveston	48,375	0	0	1	0	0	0	0	2
Houston	164,954	0	2	1	0	1	0	1	1
San Antonio	198,069	0	1	7	0	0	0	0	4
MOUNTAIN									
Montana:									
Billings	17,971	0	0	0	0	0	0	0	0
Great Falls	29,883	2	1	2	0	0	1	0	0
Helena	12,037	-------	0	-------	-------	-------	-------	-------	-------
Missoula	12,668	0	0	0	0	0	1	0	0
Idaho:									
Boise	23,042	0	0	0	0	0	0	0	0
Colorado:									
Denver	280,911	3	9	9	-------	1	0	4	3
Pueblo	43,787	0	2	0	0	0	0	0	0
New Mexico:									
Albuquerque	21,000	0	0	0	0	0	0	0	0
Utah:									
Salt Lake City	130,948	5	2	2	0	0	1	2	1
Nevada:									
Reno	12,665	0	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle	(1)	0	3	5	0	-------	4	1	-------
Spokane	108,897	5	2	1	0	-------	0	0	-------
Tacoma	104,455	2	1	2	0	0	1	0	0
Oregon:									
Portland	282,383	0	4	0	0	0	2	1	1
California:									
Los Angeles	(1)	1	22	23	3	0	3	2	14
Sacramento	72,260	1	2	0	0	1	1	0	0
San Francisco	557,530	8	13	5	1	1	11	5	4

[1] No estimate made.

City reports for week ended August 27, 1927—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine:											
Portland	0	0	0	0	0	0	1	0	0	4	14
New Hampshire:											
Concord	0	0	0	0	0	0	0	0	0	0	7
Manchester	0	1	0	0	0	0	0	0	0	0	16
Vermont:											
Barre	0	1	0	0	0	0	0	0	0	0	1
Burlington	1	0	0	0	0	0	0	0	0	0	3
Massachusetts:											
Boston	14	21	0	0	0	9	4	10	1	21	166
Fall River	1	0	0	0	0	3	1	0	0	0	17
Springfield	1	2	0	0	0	1	0	0	0	0	22
Worcester	2	1	0	0	0	2	1	1	0	8	56
Rhode Island:											
Pawtucket	0	2	0	0	0	0	1	0	0	0	10
Providence	2	5	0	0	0	0	1	3	0	3	59
Connecticut:											
Bridgeport	2	1	0	0	0	0	1	0	0	0	21
Hartford	1	2	0	0	0	2	1	0	0	12	45
New Haven	2	0	0	0	0	2	3	0	0	8	22
MIDDLE ATLANTIC											
New York:											
Buffalo	4	6	0	0	0	8	2	1	0	20	103
New York	24	34	0	0	0	[1] 73	42	27	0	118	1,008
Rochester	2	0	0	0	0	2	1	2	0	8	50
Syracuse	3	5	0	0	0	0	0	0	0	0	39
New Jersey:											
Camden	0	0	0	0	0	3	1	1	0	2	20
Newark	3	4	0	0	0	6	2	0	0	45	89
Trenton	1	0	0	0	0	4	1	0	0	0	31
Pennsylvania:											
Philadelphia	17	19	0	0	0	24	13	7	4	25	359
Pittsburgh	9	8	0	0	0	10	3	5	0	28	134
Reading	0	0	0	0	0	0	1	0	0	4	16
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	3	0	0	0	0	7	2	2	1	0	116
Cleveland	10	9	0	0	0	13	5	1	0	25	164
Columbus	2	4	0	0	0	4	1	0	0	7	70
Toledo	4	2	0	0	0	4	2	3	1	20	48
Indiana:											
Fort Wayne	0	0	0	0	0	2	1	2	0	2	17
Indianapolis	2	8	0	4	0	4	2	3	0	0	74
South Bend	1	0	1	0	0	0	0	0	0	3	7
Terre Haute	0	0	0	1	0	1	0	1	0	0	13
Illinois:											
Chicago	23	25	0	4	0	48	7	2	1	98	568
Springfield	0	0	0	0	0	1	0	0	0	0	17
Michigan:											
Detroit	23	26	1	0	0	22	5	4	2	93	193
Flint	3	15	0	0	0	1	1	0	0	6	24
Grand Rapids	2	2	1	0	0	1	1	0	0	3	21
Wisconsin:											
Kenosha	1	0	0	0	0	0	0	0	0	1	9
Milwaukee	6	2	1	0	0	8	0	2	1	38	98
Racine	1	1	0	0	0	0	0	0	0	17	9
Superior	2	0	1	0	0	0	0	0	0	0	8
WEST NORTH CENTRAL											
Minnesota:											
Duluth	4	0	0	0	0	1	0	0	0	3	16
Minneapolis	12	6	1	0	0	4	1	0	0	0	73
St. Paul	5	6	1	0	0	2	1	0	0	6	41

[1] Pulmonary tuberculosis only.

City reports for week ended August 27, 1927—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST NORTH CENTRAL—contd.											
Iowa:											
Davenport	0	0	0	0	----	----	0	0	----	0	----
Sioux City	0	0	1	0	----	----	0	0	----	2	----
Waterloo	0	0	0	0	----	----	0	0	----	2	----
Missouri:											
Kansas City	2	2	0	1	0	3	3	0	0	2	83
St. Joseph	1	0	0	0	0	1	0	1	1	0	23
St. Louis	6	5	0	0	0	11	8	6	0	16	124
North Dakota:											
Fargo	0	1	0	0	0	0	0	0	0	0	5
Grand Forks	0	0	0	0	----	----	0	0	----	0	----
South Dakota:											
Aberdeen	1	0	0	0	----	----	0	0	----	5	----
Sioux Falls	0	0	0	0	----	----	0	0	----	0	----
Nebraska:											
Lincoln	0	1	0	0	0	0	1	0	0	0	13
Omaha	1	4	0	1	0	0	0	3	0	4	47
Kansas:											
Topeka	1	1	0	0	0	0	1	0	0	15	25
Wichita	1	6	0	0	0	0	2	0	0	7	12
SOUTH ATLANTIC											
Delaware:											
Wilmington	0	2	0	0	0	0	0	1	0	0	24
Maryland:											
Baltimore	6	9	0	0	0	12	11	10	1	29	180
Cumberland	1	0	0	0	0	1	0	0	0	0	7
Frederick	0	0	0	0	0	0	0	0	0	0	2
District of Columbia:											
Washington	3	3	0	0	0	14	5	5	0	5	93
Virginia:											
Lynchburg	0	0	0	0	0	0	1	2	0	0	13
Norfolk	0	2	0	0	0	1	2	1	0	0	----
Richmond	3	2	0	0	0	3	2	0	0	0	32
Roanoke	1	0	0	0	0	2	1	0	0	0	17
West Virginia:											
Charleston	0	3	0	0	0	1	2	1	0	0	20
Wheeling	1	0	0	0	0	0	1	0	0	0	16
North Carolina:											
Raleigh	0	1	0	0	0	1	1	0	0	0	7
Wilmington	1	0	0	0	0	0	0	0	0	3	6
Winston-Salem	0	1	1	0	0	0	2	2	0	4	18
South Carolina:											
Charleston	0	1	0	0	0	6	3	2	0	0	24
Columbia	0	0	0	0	----	----	0	0	----	0	13
Greenville	0	----	0	----	----	----	0	----	----	----	----
Georgia:											
Atlanta	3	8	0	0	0	0	4	5	0	5	62
Brunswick	0	0	0	0	0	0	0	1	0	0	8
Savannah	0	1	0	0	0	2	1	1	0	1	27
Florida:											
Miami	----	0	----	0	0	2	----	0	0	3	26
St. Petersburg	0	----	0	----	0	0	0	----	0	----	12
Tampa	0	1	1	0	0	0	1	0	0	0	19
EAST SOUTH CENTRAL											
Kentucky:											
Covington	0	0	0	0	0	0	0	0	0	0	20
Lexington	----	0	----	0	0	3	----	0	1	2	14
Louisville	1	8	1	1	0	5	5	4	0	9	69
Tennessee:											
Memphis	1	4	0	4	0	3	6	4	1	7	63
Nashville	2	0	0	0	0	4	7	9	1	0	38
Alabama:											
Birmingham	3	3	0	0	0	4	5	22	1	4	65
Mobile	0	2	0	0	0	1	1	0	0	0	18
Montgomery	0	0	0	0	0	0	0	1	0	0	----

City reports for week ended August 27, 1927—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	1	0	0	0			1	0		2	
Little Rock	0	0	0	0	0	2	2	0	0	0	
Louisiana:											
New Orleans	1	2	0	0	0	11	5	5	0	4	125
Shreveport	0	0	0	0	0	1	2	2	2	0	30
Oklahoma:											
Oklahoma City	2	2	0	0	0	0	2	4	0	1	25
Tulsa		0		0				0		2	
Texas:											
Dallas	2	5	0	0	0	3	3	5	0	1	24
Galveston	0	1	0	0	0	0	0	2	0	0	12
Houston	0	3	1	0	0	3	1	2	0	0	53
San Antonio	0	3	0	0	0	9	1	2	1	0	61
MOUNTAIN											
Montana:											
Billings	0	0	1	0	0	0	1	0	0	1	4
Great Falls	0	0	0	0	0	0	0	0	0	0	4
Helena	0		0				0				
Missoula	0	0	0	0	0	0	0	0	0	0	8
Idaho:											
Boise	0	0	0	0	0	0	0	0	0	1	7
Colorado:											
Denver	3	5	1	0	0	3	3	0	0	9	77
Pueblo	0	0	0	0	0	1	0	0	0	0	10
New Mexico:											
Albuquerque	1	0	0	0	0	10	0	3	0	0	12
Utah:											
Salt Lake City	1	2	0	3	0	2	1	4	0	11	25
Nevada:											
Reno	0	0	0	0	0	1	0	1	0	0	10
PACIFIC											
Washington:											
Seattle	3	0	1	0			1	3		9	
Spokane	3	1	1	6			0	0		0	
Tacoma	2	1	1	4	0	1	0	1	0	5	18
Oregon:											
Portland	3	1	4	4	0	3	1	0	0	0	
California:											
Los Angeles	6	8	2	0	0	15	4	0	0	4	199
Sacramento	1	0	1	1	0	0	2	3	0	0	19
San Francisco	5	4	1	1	0	9	2	1	0	12	134

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Maine:									
Portland	0	0	0	0	0	0	0	4	0
Massachusetts:									
Boston	2	0	1	0	0	0	2	18	2
Fall River	0	0	0	0	0	0	0	1	0
Worcester	0	0	0	0	0	1	1	2	1
Rhode Island:									
Providence	0	0	1	0	0	0	0	2	0
Connecticut:									
Bridgeport	0	0	0	0	0	0	1	1	0
New Haven	0	0	0	0	0	0	0	0	1

City reports for week ended August 27, 1927—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
MIDDLE ATLANTIC									
New York:									
New York	5	1	6	3	0	0	8	35	6
Rochester	0	0	0	1	0	0	0	2	2
New Jersey:									
Newark	0	0	1	0	0	0	0	4	1
Pennsylvania:									
Philadelphia	0	0	0	0	1	0	1	1	1
Pittsburgh	0	1	0	1	0	0	1	11	1
EAST NORTH CENTRAL									
Ohio: [1]									
Cleveland	1	0	1	0	0	0	1	5	0
Columbus	0	0	0	0	0	0	0	3	0
Illinois:									
Chicago	0	1	2	2	0	0	4	14	2
Michigan:									
Detroit	0	0	1	1	0	0	1	3	0
Flint	0	0	0	0	0	0	0	1	0
Wisconsin:									
Milwaukee	1	0	0	0	0	0	0	1	0
Superior	0	1	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth	0	0	0	0	0	0	0	1	0
Minneapolis	4	1	0	0	0	0	0	0	0
Iowa:									
Waterloo	0	-------	0	-------	0	-------	0	1	-------
Missouri:									
Kansas City	0	0	1	2	0	0	1	1	0
St. Louis	1	0	0	0	0	0	1	1	0
Nebraska:									
Lincoln	0	0	0	0	0	0	0	1	0
Omaha	0	0	0	0	0	0	1	1	0
Kansas:									
Wichita	0	0	0	0	0	0	0	1	0
SOUTH ATLANTIC									
Maryland:									
Baltimore	1	0	0	0	0	0	2	0	0
District of Columbia:									
Washington	0	0	0	0	0	0	1	1	0
West Virginia:									
Wheeling	0	0	0	0	0	0	0	3	1
South Carolina:									
Charleston [2]	0	0	0	0	3	0	0	0	0
Georgia: [3]									
Atlanta	0	0	0	0	0	1	1	0	0
Florida:									
St. Petersburg	0	1	0	0	0	0	0	0	0
EAST SOUTH CENTRAL									
Kentucky:									
Lexington	0	0	0	0	0	0	-------	1	0
Tennessee:									
Memphis	0	0	0	0	1	0	0	0	0
Nashville	0	0	0	0	0	0	0	2	0
Alabama: [3]									
Birmingham	2	0	0	0	1	0	0	0	0

[1] Rabies (human): 1 case and 1 death at Toledo, Ohio.
[2] Dengue: 2 cases at Charleston, S. C.
[3] Typhus fever: 1 case at Savannah, Ga., and 1 case at Mobile, Ala.

City reports for week ended August 27, 1927—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	0	-------	0	-------	1	-------	0	0	-------
Little Rock	0	0	0	0	0	2	0	0	0
Louisiana:									
New Orleans	0	0	1	0	4	0	0	2	0
Shreveport	0	0	0	0	0	1	0	0	0
Oklahoma:									
Oklahoma City	0	0	0	1	0	0	0	1	0
Texas:									
Houston	0	0	0	0	0	0	0	3	2
San Antonio	1	1	0	0	0	0	0	2	1
MOUNTAIN									
Colorado:									
Denver	0	0	0	1	0	0	0	2	0
New Mexico:									
Albuquerque	0	0	0	0	0	0	0	2	2
PACIFIC									
Washington:									
Seattle	1	-------	0	-------	0	-------	0	1	-------
Tacoma	0	0	0	0	0	0	0	0	1
Oregon:									
Portland	2	1	0	0	0	0	0	1	0
California:									
Los Angeles	0	0	0	0	1	0	1	2	0
Sacramento	0	0	0	0	0	0	0	2	2
San Francisco	0	0	0	0	0	0	0	9	2

The following table gives the rates per 100,000 population for 101 cities for the five-week period ended August 27, 1927, compared with those for a like period ended August 28, 1926. The population figures used in computing the rates are approximate estimates as of July 1, 1926 and 1927, respectively, authoritative figures for many of the cities not being available. The 101 cities reporting cases had estimated aggregate populations of approximately 30,445,000 in 1926 and 30,966,000 in 1927. The 95 cities reporting deaths had nearly 29,785,000 estimated population in 1926 and nearly 30,296,000 in 1927. The number of cities included in each group and the estimated aggregate populations are shown in a separate table following.

Summary of weekly reports from cities, July 24 to August 27, 1927—Annual rates per 100,000 population, compared with rates for the corresponding period of 1926 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	July 31, 1926	July 30, 1927	Aug. 7, 1926	Aug. 6, 1927	Aug. 14, 1926	Aug. 13, 1927	Aug. 21, 1926	Aug. 20, 1927	Aug. 28, 1926	Aug. 27, 1927
101 cities	80	[2] 94	78	78	69	90	68	80	65	[2] 80
New England	40	91	40	63	31	70	47	111	50	86
Middle Atlantic	103	104	88	92	62	97	59	94	56	[4] 78
East North Central	83	102	104	80	101	94	87	85	76	81
West North Central	85	56	52	42	56	67	83	44	81	54
South Atlantic	20	89	43	65	48	82	60	62	61	[5] 88
East South Central	21	31	10	31	57	25	21	51	57	61
West South Central	39	71	39	92	26	92	64	75	34	96
Mountain	91	117	118	135	73	180	146	54	73	[6] 119
Pacific	118	[2] 121	102	76	104	107	62	60	91	94

MEASLES CASE RATES

101 cities	108	[2] 58	70	48	59	28	44	32	30	[2] 26
New England	83	160	83	93	68	63	52	84	38	58
Middle Atlantic	63	45	42	43	33	28	27	35	15	[4] 25
East North Central	191	47	113	29	84	19	72	13	43	13
West North Central	93	40	58	34	67	22	28	22	20	16
South Atlantic	114	69	47	38	80	14	35	27	15	[5] 31
East South Central	93	46	41	10	31	15	36	5	36	25
West South Central	9	59	9	55	4	21	9	42	4	17
Mountain	128	63	137	45	64	36	18	18	27	[6] 28
Pacific	121	[2] 65	121	144	94	60	78	71	94	52

SCARLET FEVER CASE RATES

101 cities	73	[2] 63	61	51	51	58	48	50	55	[2] 54
New England	118	107	104	51	68	93	73	51	54	81
Middle Atlantic	52	39	38	36	39	39	29	31	32	[4] 37
East North Central	84	87	79	75	55	73	46	78	55	61
West North Central	143	79	101	62	119	75	119	64	133	62
South Atlantic	34	40	39	27	30	33	39	42	58	[5] 62
East South Central	62	41	31	51	47	36	36	20	62	87
West South Central	39	25	13	25	21	59	17	50	26	59
Mountain	36	153	64	125	36	117	36	81	64	[6] 64
Pacific	86	[2] 65	83	60	86	63	78	42	75	37

SMALLPOX CASE RATES

101 cities	5	[2] 5	8	6	7	4	2	5	4	[2] 5
New England	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	0	0	1	0	0	0	1	0	0	[4] 0
East North Central	6	9	9	9	1	5	2	7	7	6
West North Central	4	6	14	0	4	4	4	10	0	4
South Atlantic	2	4	11	9	11	5	6	4	9	[5] 0
East South Central	21	10	16	5	26	0	5	25	0	25
West South Central	4	13	13	17	21	0	0	4	9	0
Mountain	9	27	9	18	73	9	0	18	0	[6] 28
Pacific	32	[2] 10	24	21	32	24	5	13	13	31

[1] 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, 1926 and 1927, respectively

[2] Seattle, Wash., and Spokane, Wash., not included.

[3] Newark, N. J., Greenville, S. C., and Helena, Mont., not included

[4] Newark, N. J., not included.

[5] Greenville, S. C., not included.

[6] Helena, Mont., not included.

Summary of weekly reports from cities, July 24 to August 27, 1927—Annual rates per 100,000 population, compared with rates for the corresponding period of 1926—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	July 31, 1926	July 30, 1927	Aug. 7, 1926	Aug. 6, 1927	Aug. 14, 1926	Aug. 13, 1927	Aug. 21, 1926	Aug. 20, 1927	Aug. 28, 1926	Aug. 27, 1927
101 cities	30	[3] 21	28	25	35	25	41	37	40	[3] 32
New England	14	9	12	7	17	30	17	30	19	33
Middle Atlantic	23	13	19	13	24	15	34	20	39	[4] 22
East North Central	10	11	12	9	20	14	17	19	20	11
West North Central	22	16	18	26	24	22	48	38	42	20
South Atlantic	54	36	65	58	99	45	93	82	56	[5] 57
East South Central	243	117	181	183	140	97	186	219	233	204
West South Central	47	55	43	50	47	88	43	80	39	75
Mountain	36	72	27	45	73	36	73	27	18	[6] 46
Pacific	11	[3] 24	29	13	29	10	24	31	38	21

INFLUENZA DEATH RATES

95 cities	2	3	2	2	1	3	3	4	3	[3] 5
New England	0	2	0	0	0	2	0	2	0	2
Middle Atlantic	1	4	2	1	1	2	1	2	3	[4] 3
East North Central	1	1	1	0	0	2	3	2	3	3
West North Central	0	0	0	2	2	6	2	0	8	2
South Atlantic	2	2	4	6	0	4	2	6	2	[5] 11
East South Central	5	10	0	5	10	5	0	10	0	15
West South Central	22	9	4	4	13	13	26	30	4	22
Mountain	0	0	9	9	0	0	0	0	18	[6] 9
Pacific	4	3	11	3	0	3	7	0	0	7

PNEUMONIA DEATH RATES

95 cities	48	49	54	47	50	55	54	45	47	[3] 47
New England	33	49	54	33	31	77	40	49	33	51
Middle Atlantic	41	56	56	46	62	57	58	47	56	[4] 57
East North Central	47	42	42	44	35	41	35	35	37	34
West North Central	57	17	51	44	25	44	49	25	42	31
South Atlantic	51	44	68	53	57	72	87	53	59	[5] 37
East South Central	62	46	52	51	52	66	36	66	47	66
West South Central	71	86	97	69	106	56	66	69	71	65
Mountain	55	36	64	54	82	63	82	36	73	[6] 37
Pacific	71	79	57	62	39	55	78	72	21	62

[3] Seattle, Wash., and Spokane, Wash., not included.
[4] Newark, N. J., Greenville, S. C., and Helena, Mont., not included.
[5] Newark, N. J., not included.
[6] Greenville, S. C., not included.
[7] Helena, Mont., not included.

Number of cities included in summary of weekly reports, and aggregate population of cities in each group, approximated as of July 1, 1926 and 1927, respectively

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	
			1926	1927	1926	1927
Total	101	95	30,443,800	30,966,700	29,783,700	30,295,900
New England	12	12	2,211,000	2,245,900	2,211,000	2,245,900
Middle Atlantic	10	10	10,457,000	10,567,000	10,457,000	10,567,000
East North Central	16	16	7,650,200	7,810,600	7,650,200	7,810,600
West North Central	12	10	2,585,500	2,626,600	2,470,600	2,510,000
South Atlantic	21	20	2,799,500	2,878,100	2,757,700	2,835,700
East South Central	7	7	1,008,300	1,023,500	1,008,300	1,023,500
West South Central	8	7	1,213,800	1,243,300	1,181,500	1,210,400
Mountain	9	9	572,100	580,000	572,100	580,000
Pacific	6	4	1,946,400	1,991,700	1,475,300	1,512,800

FOREIGN AND INSULAR

CHOLERA ON VESSEL

Oil tanker "War Mehtar"—En route from Abadan, Persia, to Saffagha, Egypt.—Information has been received of the occurrence of a fatal case of cholera in a member of the crew of the oil tanker *War Mehtar*, en route from Abadan, Persia, to Saffagha, Egypt. The *War Mehtar* left Abadan, where a severe outbreak of cholera was reported, July 20, 1927, arriving at Saffagha, August 4, 1927.

THE FAR EAST

Report for week ended August 20, 1927.—The following report for the week ended August 20, 1927, was transmitted by the eastern bureau of the health section of the secretariat of the League of Nations, located at Singapore, to the headquarters at Geneva:

Maritime towns	Plague		Cholera		Smallpox		Maritime towns	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths		Cases	Deaths	Cases	Deaths	Cases	Deaths
Iraq: Basra	0	0	99	79	0	0	Siam: Bangkok	0	0	1	1	0	0
Persia: Mohammerah	0	0	69	60	0	0	French Indo-China:						
British India:							Haiphong	0	0	2	2	0	0
Bombay	----	4	----	3	5	3	Turane	0	0	1	1	0	0
Negapatam	----	0	----	3	2	2	Saigon and Cholon	0	0	0	0	1	0
Calcutta	----	0	----	12	3	3	China:						
Bassein	----	3	----	0	1	1	Amoy	0	0	6	----	0	0
Rangoon	----	3	----	0	2	0	Shanghai	0	0	----	12	0	0
Straits Settlements:							Macao	0	0	----	1	0	0
Singapore	1	1	0	0	0	0	Hong Kong	0	0	0	0	1	1
Dutch East Indies:							Japan: Nagasaki	0	0	0	0	1	0
Banjermasin	0	0	0	0	5	----							

Telegraphic reports from the following maritime towns indicated that no case of plague, cholera, or smallpox was reported during the week:

ASIA

Arabia.—Aden, Perim, Bahrein.

Persia.—Bender-Abbas, Bushire, Lingah.

India.—Karachi, Chittagong, Cochin, Tuticorin, Vizagapatam, Moulmein.

Ceylon.—Colombo.

Portuguese India.—Nova Goa.

Federated Malay States.—Port Swettenham.

Straits Settlements.—Penang.

Dutch East Indies.—Batavia, Surabaya, Pontianak, Semarang, Cheribon, Makassar, Balikpapan, Padang, Belawan-Deli, Tarakan, Sabang, Palembang, Samarinda, Menado.

Sarawak.—Kuching.

British North Borneo.—Sandakan, Jesselton, Kudat, Tawao.

Portuguese Timor.—Dilly.

Philippine Islands.—Manila, Iloilo, Jole, Cebu, Zamboanga.

China.—Tientsin, Tsingtao.

Formosa.—Keelung, Takao.

Chosen.—Chemulpo, Fusan.

Manchuria.—Yingkow, Antung, Harbin, Mukden, Changchun.

Kwantun.—Port Arthur, Dairen.

Japan.—Yokohama, Niigata, Shimonoseki, Moji, Tsuruga, Kobe, Osaka, Hakodate.

AUSTRALASIA AND OCEANIA

Australia.—Adelaide, Melbourne, Sydney, Brisbane, Rockhampton, Townsville, Port Darwin, Broome, Fremantle, Carnarvon, Thursday Island, Cairns, Port Moresby.
New Guinea.—Port Moresby.
New Britain Mandated Territory.—Rabaul and Kokopo.
New Zealand.—Auckland, Wellington, Christchurch, Invercargill, Dunedin.
Western Samoa.—Apia.
New Caledonia.—Nouméa.
Fiji.—Suva.
Hawaii.—Honolulu.
Society Islands.—Papeete.

AFRICA

Egypt.—Alexandria, Suez, Port Said, El Tor.
Anglo-Egyptian Sudan.—Port Sudan, Suakin.
Eritrea.—Massaua.
French Somaliland.—Djibouti.
British Somaliland.—Berbera.
Italian Somaliland.—Mogadiscio.
Kenya.—Mombasa.
Zanzibar.—Zanzibar.
Tanganyika.—Dar-es-Salaam.
Seychelles.—Victoria.
Portuguese East Africa.—Mozambique, Beira, Lourenço-Marques.
Union of South Africa.—East London, Port Elizabeth, Cape Town, Durban.
Reunion.—Saint Denis.
Mauritius.—Port Louis.
Madagascar.—Majunga, Tamatave, Diégo-Suarez.

AMERICA

Panama.—Colon, Panama.

Reports had not been received in time for publication from:

Arabia.—Kamaran.
India.—Madras.
Persia.—Abadan, Ahwaz, Minab.
China.—Canton.
Union of Socialist Soviet Republics.—Vladivostok.

Belated information:

Week ended August 13: *Djibouti*, smallpox, 1 case.

ARGENTINA

Influenza—Plague—July 27–August 6, 1927.—During the period under report general epidemic prevalence of influenza was reported in Argentina. The type of the disease was stated to be mild, but with many cases.

During the same period plague was reported present in the interior of Argentina as follows: Province of Cordoba, 2 cases; Province of Entre Rios, 4 cases, 1 case at Crespo and 3 cases at Espinillo; Province of Pampa Central, 2 cases; Territory of Rio Negro, 1 case. It was stated that active measures of rat destruction were being carried out.

CANADA

Communicable diseases—Week ended August 27, 1927.—The Canadian ministry of health reports cases of certain communicable diseases from seven Provinces of Canada for the week ended August 27, 1927, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Influenza	2			1				3
Poliomyelitis				1				1
Smallpox				15	4	6	1	26
Typhoid fever	2	1	33	36	4	2	3	81

Communicable diseases—Quebec—Week ended August 27, 1927.—The bureau of health of the Province of Quebec reports cases of certain communicable diseases for the week ended August 27, 1927, as follows:

Disease	Cases	Disease	Cases
Chicken pox	3	Smallpox	1
Diphtheria	19	Tuberculosis	32
Measles	3	Typhoid fever	33
Scarlet fever	21	Whooping cough	45

Poliomyelitis—Alberta—British Columbia.—Poliomyelitis has been reported in Canada as follows: At Edmonton, Alberta, from the month of May to August 25, 1927, 11 cases with 1 death. No association was shown to exist among these cases and no two cases occurred in the same family. In some cases the type of the disease was stated to have been severe and in some very mild. In British Columbia, information dated August 24, 1927, shows 2 cases occurring at Rossland, and at Trail an epidemic of the disease with 13 cases and 2 deaths.

Typhoid fever—Montreal—January 2–September 3, 1927.—The following table gives the cases of typhoid fever and deaths from this disease reported at Montreal, Quebec, Canada, since January 1, 1927:

Week ended—	Cases	Deaths	Week ended—	Cases	Deaths
Jan. 8, 1927	3	1	May 14, 1927	367	16
Jan. 15, 1927	4	3	May 21, 1927	770	26
Jan. 22, 1927	1	2	May 28, 1927	353	38
Jan. 29, 1927	3	1	June 4, 1927	239	37
Feb. 5, 1927	1	0	June 11, 1927	128	36
Feb. 12, 1927	0	0	June 18, 1927	86	----
Feb. 19, 1927	1	2	June 25, 1927	75	23
Feb. 26, 1927	1	1	July 2, 1927	66	21
Mar. 5, 1927	9	1	July 9, 1927	52	10
Mar. 12, 1927	203	4	July 16, 1927	39	4
Mar. 19, 1927	383	14	July 23, 1927	22	9
Mar. 26, 1927	568	22	July 30, 1927	23	10
Apr. 2, 1927	649	48	Aug. 6, 1927	16	5
Apr. 9, 1927	386	40	Aug. 13, 1927	20	5
Apr. 16, 1927	175	38	Aug. 20, 1927	14	4
Apr. 23, 1927	125	43	Aug. 27, 1927	8	3
Apr. 30, 1927	105	23	Sept. 3, 1927	27	----
May 7, 1927	106	19			

HAWAII

Plague—Kukuihaele—August 12, 1927.—A fatal case of plague was reported, August 12, 1927, at Kukuihaele, island of Hawaii.

JAPAN

Dysentery—Tokyo, city and prefecture—July 17–30, 1927.—During the two weeks ended July 30, 1927, dysentery was reported at Tokyo and in the prefecture as follows: Tokyo City—cases, 170; deaths, 69. Population, 1,995,567. Tokyo prefecture (outside city)—cases, 407; deaths, 164. Population, 2,489,577.

MADAGASCAR

Plague—June 16–30, 1927.—During the two weeks ended June 30, 1927, 20 cases of plague with 19 deaths were reported in the island of Madagascar. The occurrence was distributed according to Provinces as follows: Ambositra—1 case; Moramanga—3 cases: Tananarive—16 cases. The distribution according to type was; Bubonic, cases, 6; pneumonic, 12; septicemic, 2 cases.

UNION OF SOUTH AFRICA

Plague—Orange Free State—July 17–23, 1927.—During the week ended July 23, 1927, three cases of plague, of which two cases were fatal, were reported in the Orange Free State, Union of South Africa. The cases occurred in natives and in one family, and followed the handling and eating of the flea-infested carcass of a meerkat. The occurrence was on a farm in the Edenburg district.

Plague conditions—Cape Province.—Conditions found to exist in the vicinity of the Vaarsche River, about 5 miles north of Van Rhynsdorp, Cape Province, indicate plague infection among the veld rodents. Two gerbille carcasses were reported found, but not in a condition for bacteriological examination.

Smallpox—Typhus fever.—Outbreaks of smallpox were reported in Flagstaff district, Cape Province, and of typhus fever in three districts of the Cape Province and in one district (Vredefort) in the Orange Free State.

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 lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended September 16, 1927 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China:				
Canton	July 17–23	4	2	
Hong Kong	do	2	2	Imported.
Shanghai	July 31–Aug. 6		3	In international settlement and French concession.
Swatow	July 24–30	10	1	
India:				
Bombay	July 17–23	13	6	
Calcutta	July 17–30	48	23	
Madras	July 31–Aug. 6	170	92	
Rangoon	July 24–30	1	1	
Japan:				
Yokohama	July 31–Aug. 6	1	1	To Aug. 10, 1927: Cases, 2; deaths, 1.
Siam				July 17–23, 1927: Cases, 18; deaths, 12. April 1–July 23, 1927: Cases, 600; deaths, 410.
Bangkok	July 17–23	4		District.
On vessel		1	1	Oil tanker War Mehtar, en route from Abadan, Persia, July 20, 1927; arrived Aug. 4, 1927, at Saffagha, Egypt.

[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 September 16, 1927—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
Argentina				July 27–Aug. 2, 1927: Cases, 9.
Province—				In the interior.
Cordoba	Aug. 6	2		
Entre Rios—				
Crespo	July 27–Aug. 2	1		
Espinillo	do	3		Mild.
Pampa Central—	do	2		
General Acha.				
Rio Negro Territory	Aug. 6	1		
Hawaii:				
Kukuihaele	Aug. 12	1	1	
India:				
Bombay	July 17–23	2	2	
Madras Presidency	July 10–16	62	27	
Rangoon	July 24–30	10	9	
Java:				
East Java and Madura	June 26–July 2	1		
Batavia	July 17–23	4	4	Province.
Madagascar				June 16–30, 1927: Cases, 20; deaths, 19.
Province—				
Ambositra	June 16–30	1	1	Bubonic.
Moramanga	do	3	3	Bubonic, 2; septicemic, 1.
Tananarive	do	16	15	Bubonic, cases, 3; deaths, 2; pneumonic, 12; septicemic, 1.
Siam				Apr. 1–July 23, 1927: Cases, 10; deaths, 7.
Union of South Africa:				
Orange Free State—				
Edenburg District	July 17–23	3	2	Natives; on farm.

SMALLPOX

Algeria:				
Oran	Aug. 1–10	9		
Brazil:				
Rio de Janeiro	July 24–30	2	1	
Canada:				
Alberta	Aug. 21–27	1		
Manitoba	do	4		
Ontario	do	15		
Quebec	do	1		
Saskatchewan	do	6		
Regina	Aug. 21–27	7		
China:				
Hong Kong	July 17–30	2	2	
Manchuria—				
Dairen	June 27–July 3	1		
Tientsin	July 24–30	1		In mission hospital.
Egypt:				
Cairo	Apr. 2–8	2		
France:				
Lille	July 24–30	1		
Great Britain:				
England and Wales	Aug. 14–20			Cases, 103.
Birmingham	do	1		
Leeds	do	3		
India:				
Bombay	July 17–23	17	10	
Calcutta	July 17–30	29	15	
Karachi	July 31–Aug. 6	1		
Rangoon	July 24–30	13	6	
Japan:				
Nagasaki	Aug. 1–7	1		
Java:				
Batavia	July 17–23	1		
East Java and Madura	June 26–July 9	7		
Poland	July 3–9	3	1	
Portugal:				
Lisbon	July 24–Aug. 6	3		
Siam				July 17–23, 1927: Cases, 14; deaths, 4.
				Apr. 1–July 23, 1927: Cases, 168; deaths, 40.
Bangkok	July 17–23	1		
Union of South Africa:				
Cape Province	do			Outbreaks.

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

Reports Received During Week Ended September 16, 1927—Continued

TYPHUS FEVER

Place	Date	Cases	Deaths	Remarks
Algeria:				
Oran	Aug. 1-10	1		
China:				
Harbin	July 25-31	3		
Palestine				June 14-27, 1927: 1 case. June 28-Aug. 8, 1927: Cases, 12.
Poland				July 3-9, 1927: Cases, 33; deaths, 2.
Union of South Africa:				
Cape Province	July 17-23			Outbreaks in 3 districts.
Orange Free State	do			Outbreak in Vredevort district.

YELLOW FEVER

Senegal:				
St. Louis	Reported Aug. 21		1	European.

Reports Received from June 25 to September 9, 1927 [1]

CHOLERA

Place	Date	Cases	Deaths	Remarks
China:				
Amoy	May 22-July 23	1	1	
Canton	May 1-July 16	12	5	
Kulangsu	June 21	1		
Shanghai	June 19-25	2		
Do	Reported Aug. 19			Present.
Swatow	May 15-July 23	86	12	
India	Apr. 17-July 9			Cases, 89,569; deaths, 52,631.
Bombay	May 8-July 16	14	5	
Calcutta	do	516	324	
Karachi	May 29-June 4	1	1	
Madras	June 19-July 30	213	108	
Rangoon	May 8-July 16	16	12	
India, French settlements in	Mar. 30-June 30	15	8	
Indo-China (French)	Apr. 1-July 10			Cases, 11,145.
Annam	do	1,467		
Cambodge	do	235		
Cochin-China	do	1,354		
Saigon	June 4-July 14	9	4	
Tonkin	Apr. 1-June 30	8,089		
Iraq:				
Basra	Reported July 25	9	7	
Persia:				
Abadan	July 19-31		166	
Mohammerah	do		61	
Nasseri	do		10	
Philippine Islands:				
Manila	July 17-23	1		
Bulacan Province	June 7-July 8	3	2	
Leyte Province—				
Barugo	June 29	1	1	
Carigara	June 23	1	1	Final diagnosis not received.
Palo	May 18	1		
Siam	May 1-July 16			Cases, 208; deaths, 118.
Bangkok	do	39	12	
On vessel:				
Steamship Adrastus	Reported Aug. 6	1	1	At Yokohama, Japan.

[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 June 25 to September 9, 1927—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
Argentina	Jan. 1–June 30			Cases, 71; deaths, 44.
Buenos Aires	Apr. 10–May 7	4	3	
Cordoba	Jan. 11–Mar. 23	50	29	
Corrientes	June 1	1	1	
Entre Rios	Mar. 29–Aug. 1	3	1	
Santa Fe	Apr. 28–May 16	4	3	
Territory—				
Chaco—				
Barranqueras	May 29	2	2	
Formosa	June 25	3	2	
Pampa	Reported July 6	2		
City—				
Merou	Reported July 14			Present.
Rosario	May 7	1	1	
Santa Fe	May 16	4	2	
Azores:				
Ribeira Grande	June 12–18			9 miles from port.
St. Michaels Island	May 15–July 30	3		
British East Africa:				
Kenya	Apr. 24–July 2	60	14	
Nairobi	May 22–28	6		
Tanganyika	Mar. 29–May 28		37	
Uganda	Jan. 1–Feb. 28	138	121	
Do	Mar. 27–June 18	366	300	
Canary Islands:				
Laguna district—				
Tejina	June 17	1		
Ceylon:				
Colombo	May 1–July 2	17	11	Plague rats, 4.
China:				
Amoy	July 3–23			Present in surrounding country.
Ecuador:				
Guayaquil	June 1–July 31			Rats taken, 48,290; found infected, 34.
Egypt	May 1–July 8			Cases, 7; deaths, 2.
Alexandria	June 4–10	1		
Biba	do	1		At Nana.
Beni-Souef	June 4–July 13	5	2	
Dakhalia	June 24–July 9	6	1	
Minia	Aug. 8–9	4		
Port Said	June 24–July 21	4	1	
Tanta district	June 4–10	1		
Greece	May 1–June 30	4	3	
Athens	June 1–Aug. 6	2		Including Piraeus.
Mytilene	Aug. 9	1		
Patras	May 30–Aug. 6	6	1	
Hawaii Territory:				
Hamakua	July 15			1 plague rodent.
Honokaa	May 17–23	2	2	
Paauilo	July 26–Aug. 1		4	
India	Apr. 17–July 9			Cases, 21,700; deaths, 8,253.
Bombay	May 8–July 16	78	65	
Madras	May 1–July 16	205	95	
Rangoon	May 8–July 23	38	35	
Indo-China (French)	Apr. 1–July 10	32		
Kwang-Chow-Wan	May 21–July 10	68		
Iraq:				
Baghdad	Apr. 8–May 28	12	1	
Java:				
Batavia	May 1–July 16	178	179	Province.
East Java and Madura	May 22–June 18	23	23	
Pasoeroean Residency	May 9			Outbreak reported at Nagdiwono.
Surabaya	Apr. 17–May 7	24	24	
Madagascar				Mar. 16–Apr. 30, 1927: Cases, 256; deaths, 135.
Province—				
Ambositra	Mar. 16–June 15	73	67	
Antisrabe	Mar. 16–May 15	8	8	
Miarinarivo (Itasy)	Mar. 16–May 31	45	45	
Moramanga	May 16–June 15	20	19	
Tananarive	Mar. 16–May 31	196	170	
Tananarive Town	do	22	20	
Nigeria	Mar. 1–May 31	228	177	

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

Reports Received from June 25 to September 9, 1927—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Peru	Apr.-May 31			Cases, 22; deaths, 8.
Departments—				
Ica	Apr. 1-30	1		
Lambayeque	do	1		
Libertad	Apr. 1-May 31	7	4	
Lima	do	13	4	
Lima City	Apr. 1-30	5	1	
Senegal	May 23-July 17			Cases, 442; deaths, 259.
Baol	June 2-July 31	45	23	
Cayor Frontier	July 4-31	126	74	
Dakar	June 20-July 30	80	50	
Facel	July 6	17	8	
Guindel	June 20-26	11	2	
M'Bour	July 6-10	28	23	
Medina	June 13-19	2	2	
Pout	July 4-10	1		
Rufisque	May 23-July 30	163	117	
Thies district	do	27	9	
Tivaouane	June 2-July 17	50	32	
Siam	Apr. 1-June 25			Cases, 10; deaths, 7.
Bangkok	May 8-June 11	2	1	
Syria:				
Beirut	June 11-July 10	3		
Tunisia	Apr. 21-July 10	144		
Tunis	July 25-Aug. 1	1		
Turkey:				
Constantinople	May 13-19	1		
Union of South Africa:				
Cape Province—				
Maraisburg district	May 1-14	2	2	Native.
On vessel	July 10-16	3		On Norwegian vessel at Gavle, 125 miles north of Stockholm.
Steamship Avoroff	June 24-30	1		On Greek war ship at port of Athens.
Steamship Ransholm	Aug. 5	3		At Gefle, Sweden, from Rufisque, Senegal.

SMALLPOX

Algeria	Apr. 21-July 10			Cases, 648.
Algiers	May 11-June 30	8		
Oran	May 21-July 31	38		
Arabia:				
Aden	July 17-Aug. 1	2	1	
Brazil:				
Rio de Janeiro	May 22-July 29	7	8	
British East Africa:				
Kenya	Apr. 24-May 14	7	14	
Tanganyika	Mar. 29-June 18	2	22	
Zanzibar	Apr. 1-May 31	19	7	
British South Africa:				
Northern Rhodesia	Apr. 30-July 23	106	2	
Canada	June 5-Aug. 20			Cases, 368.
Alberta	June 12-Aug. 20			Cases, 92.
Calgary	do	9		
British Columbia—				
Vancouver	May 23-29	2		
Manitoba	June 5-Aug. 20			Cases, 25.
Winnipeg	June 12-Aug. 27	17		
Ontario	June 5-Aug. 20			Cases, 162.
Ottawa	June 12-Sept. 2	100		
Sarnia	Aug. 7-13	1		
Toronto	June 19-July 23	9		
Quebec	June 19-Aug. 20	14		
Saskatchewan	June 12-Aug. 20			Cases, 52.
Moose Jaw	Aug. 14-20	5		
Regina	July 17-Aug. 6	3		
Ceylon	May 1-7			Cases, 3; deaths, 1.
China:				
Amoy	May 8-28	1		
Do	July 3-16			Present in surrounding country.
Antung	July 4-31	3		
Cheefoo	May 8-14			Present.
Foochow	May 8-July 16			Do.

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

Reports Received from June 25 to September 9, 1927—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
China—Continued				
Hong Kong	May 8-July 9	17	16	
Manchuria—				
Anshan	May 22-28	1		
Changchun	May 15-July 30	8		
Dairen	May 2-June 26	9	5	
Fushun	May 15-July 30	10		
Harbin	June 13-July 10	4		
Kai-Yuan	July 3-9	2		
Mukden	May 22-July 30	6		
Pensihu	July 3-9	1		
Ssupingkai	May 8-July 9	3		
Tientsin	May 8-July 16	17		
Chosen	Feb. 1-May 31			Cases, 451; deaths, 195.
Chinnampo	Apr. 1-May 31	2		
Fusan	Apr. 1-30	1		
Gensan	May 1-31	1		
Seishin	Apr. 1-30	1		
Curaçao	May 29-June 4	1		Alastrim.
Ecuador:				
Guayaquil	June 1-30	2		
Egypt	May 7-July 29			Cases, 21; deaths, 3.
Alexandria	May 21-June 17	4	1	
Cairo	Jan. 22-Apr. 15	12	3	
France	Apr. 1-June 30			Cases, 178.
Paris	May 21-June 30	11	2	
Gold Coast	Mar. 1-May 31	33	7	
Great Britain:				
England and Wales	May 22-Aug. 13			Cases, 2,488.
Bradford	May 29-June 11	2		
Cardiff	June 19-July 2	4		
Leeds	July 17-30	2		
Liverpool	do	1		
London	May 15-June 18	2		
Newcastle on Tyne	June 12-Aug. 13	5		
Sheffield	June 12-Aug. 6	25		
Scotland—				
Dundee	May 29-July 2	5		
Greece	June 1-30	14		
Saloniki	July 12-18		1	
Guatemala:				
Guatemala City	June 1-30		9	
Guinea (French)	June 4-10	9		
India	Apr. 17-July 9			Cases, 60,217; deaths, 15,704.
Bombay	May 28-July 16	182	121	
Calcutta	May 8-July 16	343	261	
Karachi	May 15-July 16	9	5	
Madras	May 22-July 30	18	6	
Rangoon	May 8-July 23	156	46	
India, French Settlements in	Mar. 20-June 18	174	111	
Indo-China (French)	Mar. 21-July 20			Cases, 314.
Saigon	May 14-20	1	1	
Iraq:				
Baghdad	Apr. 10-16	2		
Basra	Apr. 10-July 16	2	1	
Italy	Apr. 10-May 21	13		
Jamaica	May 29-July 30	24		Reported as alastrim.
Japan	Apr. 3-May 7			Cases, 19.
Nagasaki City	June 20-July 31	24	6	
Taiwan Island	May 21-31	1		
Java:				
Batavia	May 22-July 16	2		
East Java and Madura	Apr. 24-30	1		
Latvia	Apr. 1-30	1		
Mexico	Mar. 1-31			Deaths, 162.
Durango	June 1-30		1	
La Oroya	Apr. 1-June 30			Present.
Monterey	July 1-31	6	4	
San Luis Potosi	May 29-Aug. 13		11	
Tampico	June 1-July 31	1	2	
Torreon	Aug. 7-13		1	
Morocco	Apr. 1-June 30	154		
Netherlands India:				
Borneo—				
Holoe Soengei	Apr. 21			Epidemic in two localities.
Pasir Residency	Apr. 30-May 6			Epidemic outbreak.
Samarinda Residency	May 21-27			Do.

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

Reports Received from June 25 to September 9, 1927—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Nigeria	Mar. 1–May 31	2,077	513	
Persia:				
Teheran	Feb. 21–Apr. 20		5	
Poland	Apr. 19–July 2	14	1	
Portugal:				
Lisbon	May 29–July 23	14	1	
Senegal:				
Modina	July 4–10	7		
Siam	May 1–July 16			Cases, 103; deaths, 22.
Bangkok	May 15–July 16	11	4	
Spain:				
Valencia	May 29–June 4	2		
Straits Settlements	June 12–18			Cases, 3.
Singapore	Apr. 1–May 28	4	2	
Sumatra:				
Medan	June 5–11	2		
Switzerland:				
Berne	June 26–July 2	1		
Tunisia	Apr. 1–June 10			Cases, 10.
Tunis	June 1–10	1		
Union of South Africa:				
Cape Province—				
Elliott district	May 11–June 10			Outbreaks.
Idutywa district	July 3–9			Do.
Kalanga district	May 11–June 10			Do.
Transvaal—				
Barberton district	May 1–7			Do.
Venezuela:				
Maracaibo	July 12–18		1	

TYPHUS FEVER

Algeria	Apr. 21–July 20			Cases, 399; deaths, 39.
Algiers	May 11–July 31	26		
Oran	May 21–July 31	32		
Bulgaria	Mar. 1–June 20			Cases, 206; deaths, 18.
Sofia	June 4–Aug. 5	2		
Chile:				
Antofagasta	Apr. 16–May 31	1		
Concepcion	May 29–June 4		1	
La Calera	Apr. 16–May 31	1		
Ligua	Mar. 16–31	2		
Puerto Montt	Apr. 16–May 31	1		
Santiago	do	5	1	
Talcahuano	July 10–16		1	
Valparaiso	Apr. 16–Aug. 6	4	1	
China:				
Manchuria—				
Mukden	May 29–June 4	1		
Tientsin	July 10–16	1		
Chosen	Feb. 1–May 31			Cases, 512; deaths, 42.
Chemulpo	May 1–June 30	15	1	
Gensan	do	2		
Seoul	Apr. 1–June 30	30	2	
Czechoslovakia	do			Cases, 49.
Egypt	May 28–July 29			Cases, 120; deaths, 18.
Alexandria	May 21–Aug. 5	13	5	
Cairo	Jan. 15–Apr. 22	30	8	
Estonia	Apr. 1–30			Case, 1.
Greece	June 1–30	2		
Athens	do		9	
Iraq:				
Baghdad	Apr. 24–30	1		
Irish Free State:				
Cork County	July 3–9	1		In urban district.
Latvia	Apr. 1–May 31	17		
Lithuania	Feb. 1–June 30	303	37	
Mexico	Feb. 1–Mar. 31			Deaths, 88.
Mexico City	May 29–Aug. 6	26		Including municipalities in Federal District.
San Luis Potosi	July 31–Aug. 6		1	
Morocco	Apr. 1–July 10	815		

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

Reports Received from June 25 to September 9, 1927—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Palestine	May 24–June 6			Cases, 3.
Haifa	May 24–Aug. 8	6		
Jaffa	Aug. 2–8	1		
Jerusalem	June 28–July 4	1		
Mahnaim	May 17–23	1		In Safad district.
Nazareth	July 19–25	1		
Safad	May 17–Aug. 8	8		
Peru:				
Arequipa	Apr. 1–30		1	
Poland	Apr. 10–July 25	976	98	
Portugal:				
Lisbon	May 29–June 4	1		
Rumania	Apr. 3–June 25	923	61	
Tunisia	Apr. 22–July 20			Cases, 158.
Tunis	July 5–11	1		
Turkey:				
Constantinople	May 13–19		2	
Union of South Africa	Apr. 1–30			Cases, 55; deaths, 8, native.
Cape Province	Apr. 1–July 9	42	5	In Europeans, cases, 2.
Albany district	June 5–11			Outbreaks.
East London	May 22–28	1		Do.
Glen Grey district	May 1–7			Do.
Kentani district	June 26–July 2			Do.
Qumbu district	May 1–7			Do.
Umzimkulu district	June 26–July 2			Do.
Natal	Apr. 1–July 9	7	3	
Impendhle district	June 5–11			Do.
Orange Free State	Apr. 1–May 28	5		
Transvaal	Apr. 1–30	1		
Johannesburg	July 3–16	18	5	
Yugoslavia	May 1–July 31			Cases, 15; deaths, 4.

YELLOW FEVER

Dahomey (West Africa):				
Porto Novo	July 1	1	1	In Syrian woman.
Gold Coast	Apr. 1–May 31	45	20	
Liberia:				
Monrovia	May 29–July 8	4	5	
Senegal	May 27–July 31			Cases, 5; deaths, 2.
Dakar	July 9	1		
Do	Aug. 8	2	2	
M'Bour	May 27–June 19	5	5	
Ouakam	June 2–Aug. 8	2	1	
Thies	July 10	1	1	In European.
Tivaouane	May 27–June 8	5	5	

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