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MORBIDITY IN THE INFLUENZA EPIDEMIC OF 1928–29

Preliminary Report on Surveys in Certain Cities

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Immediately following the influenza epidemic of 1918 the United States Public Health Service, in an attempt to secure a reliable record of the resultant morbidity, canvassed large samples of the population in a number of cities. For each individual in the canvassed population a record was obtained of color, sex, age, and history of pneumonia, influenza, or less definitely diagnosed illness during the period of the epidemic. A record was also made of the deaths which had occurred during the epidemic in the canvassed households. The results of this survey, which have been presented in several publications, furnish the most nearly accurate and at the same time the most extensive information that is available concerning the prevalence and distribution of morbidity from influenza in the autumn of 1918.

During the epidemic which prevailed during the latter part of 1928 and the early weeks of 1929 plans were made for a similar survey, to afford, for this outbreak, a record comparable to that already compiled of the epidemic of 1918. This survey has now been completed; and, although full analysis of the data collected will require considerable time, some preliminary tabulations have been made which suffice to show approximately the gross morbidity rates in the several localities studied.

Because of the almost prohibitive difficulties and expense of canvassing rural communities, the surveys were limited to large cities; and these were chosen with a view to representing as many sections of the United States as practicable. Those selected were as follows: San Francisco and Seattle, on the Pacific Coast; Des Moines, Kansas City (Mo.), Cincinnati, and Pittsburgh, representing the Middle West; New Orleans, as a southern city; and, in the northeast, Baltimore, Syracuse, and Boston. It was later found practicable to add a single small city, Farmington, Mo.

In order to afford sufficient numbers for statistical analysis, the sample canvassed in each locality (except Farmington) comprised

not less than 10,000 persons, and in cities of more than 400,000 inhabitants this number was increased to 15,000 or more. To secure a representative sample, a total of 12 to 20 districts were marked off in each city, and in each of these districts a systematic house-to-house canvass was made.

The canvasses were made in different cities under the direction of various medical officers of the Public Health Service, detailed for this purpose by the Surgeon General. However, all the surveys were carried out in accordance with a uniform plan previously drawn up in the statistical office of the service, which included a full explanation of general procedure for the officers in local charge, and detailed instructions to enumerators as to methods of inquiry and record. The persons employed as enumerators in the various localities surveyed were of fairly uniform qualifications for the work, being almost invariably graduate nurses, social workers, or teachers. Moreover, the schedule of inquiries was simple; the survey was made in each city as soon as it was clear that the epidemic had subsided, and the periods of time included in the record did not vary greatly. Hence, it is believed that the data collected for the several cities are fairly uniform.

It is fully recognized, however, that all the records are subject to certain obvious, but practically inevitable, errors, due principally to lack of definitive criteria for the diagnosis of influenza, and to lapses of memory on the part of the householders from whom the information was obtained. These causes tend, respectively, to uncertainty in the diagnostic classification of reported cases, and to omission of a certain proportion of cases, especially those which were not of sufficient severity to leave a lasting impression upon the memory.

As regards diagnostic classification of cases, enumerators were instructed to inquire concerning the occurrence of "influenza," "grippe," "pneumonia," or "colds," and to record for each case the diagnosis given by the householder. Presumably all the cases reported as pneumonia had been so diagnosed by attending physicians; and a preliminary check of the records indicates that this was true also in a large proportion of the cases classed as "influenza" or "grippe." Also, it is probable that the cases so diagnosed were usually of sufficient severity to be remembered by the householders and reported to the enumerators. Therefore, with full recognition of all the probable sources of error in reporting, it is believed that the records as to these classes of cases have a fairly definite qualitative and quantitative significance.

On the other hand, a large majority of the cases reported as "colds" had not been attended by physicians; and it is well known that ordinary colds are likely to be forgotten within a few weeks. Hence, it may be inferred that the record of colds is far from complete, and that it probably includes cases of more or less heterogeneous type.

TABLE 1.—*Summary of localities and populations canvassed for incidence of influenza and other respiratory diseases*

Localities canvassed	Populations estimated as of July 1, 1928	Number of persons included in canvass	Period for which morbidity was recorded		
			Total days	From— (1928)	To— (1929)
All localities	4,859,885	134,953			
San Francisco	585,300	14,856	98	Oct. 15	Jan. 21
Seattle	383,200	11,750	75	Nov. 15	Jan. 29
Kansas City, Mo	391,000	10,142	69	Nov. 20	Jan. 28
Farmington, Mo	[1] 2,685	1,222	70	Dec. 1	Feb. 11
Des Moines	151,900	10,032	77	Nov. 15	Jan. 31
New Orleans	429,400	15,148	95	Nov. 1	Feb. 6
Cincinnati	413,700	11,445	66	Dec. 1	Feb. 4
Pittsburgh	673,800	15,814	66	...do	Do.
Baltimore	830,400	16,449	83	...do	Feb. 20
Syracuse	199,300	10,779	73	...do	Feb. 11
Boston	799,200	17,316	73	Dec. 15	Feb. 26

[1] 1920 census population.

Table 1 shows, for each locality included in the survey, the total population, the number of persons included in the canvass, and the period for which illness was recorded, while Table 2 shows, for each group, the attacks of "influenza or grippe," "pneumonia," and "colds," respectively, per 100 persons canvassed. For purposes of comparison, Table 3 is added, summarizing, in a similar way, the results of the surveys made in November and December, 1918, immediately following the major wave of the influenza epidemic of that year.

TABLE 2.—*Attack rates from influenza and grippe, pneumonia, and colds, during the epidemic of 1928–29, in canvassed populations in various cities*

City	Cases per 100 persons canvassed			
	Influenza and grippe	Pneumonia	Colds [1]	Total, influenza and grippe, pneumonia, and colds
All localities	14.7	0.47	[2] 14.0	[2] 29.7
San Francisco	14.2	0.26	19.6	34.1
Seattle	17.9	0.38	12.6	30.9
Kansas City, Mo	15.0	0.60	11.5	27.1
Farmington, Mo	16.3	0.24	21.2	37.7
Des Moines	28.6	0.60	17.9	47.1
New Orleans	16.0	0.36	13.2	29.6
Cincinnati	13.5	0.38	12.9	27.0
Pittsburgh	13.4	0.77	11.0	25.2
Baltimore	11.3	0.47	[3] 3.3	[3] 15.1
Syracuse	12.6	0.43	13.8	26.8
Boston	9.9	0.53	13.1	23.5

[1] Including so-called "colds" in head or chest, coughs, and similar minor affections of the respiratory tract other than those reported as influenza, grippe, or pneumonia.
[2] Excluding data from Baltimore.
[3] Includes only those colds which confined patient to bed one or more days.

As shown in Table 2, nearly 15 per cent of the population canvassed in all localities surveyed in 1929 gave a history of having suffered attacks of "influenza or grippe," while 0.47 per cent gave a history

of pneumonia, and an additional 14 per cent reported "colds," which may or may not have been directly related to the epidemic.

The influenza attack rate was notably low in Boston, 9.9 per cent, and exceptionally high in Des Moines, 28.6 per cent. With these two exceptions, the incidence rates were remarkably uniform, ranging only from 11.3 per cent in Baltimore to 17.9 per cent in Seattle. As compared with the attack rates found in 1918, those reported in 1928–29 are only about half as high and distinctly more uniform.

TABLE 3.—*Attack rates from influenza and grippe, pneumonia, and "doubtful" during the epidemic of 1918–19 in canvassed populations in various cities*

City	Cases per 100 persons canvassed			
	Influenza and grippe	Pneumonia	"Doubtful" [1]	Total influenza and grippe, pneumonia, and "doubtful"
All localities	24.2	1.64	2.15	28.0
San Francisco	19.2	1.60	.75	21.5
Des Moines	20.5	2.29	1.31	23.1
Baltimore	19.8	1.64	3.19	24.6
New London	16.6	1.63	.24	18.5
Spartanburg	16.5	.53	4.38	21.4
Augusta	30.4	1.46	2.26	34.1
Macon, Ga	18.0	1.20	2.11	21.3
Louisville, Ky	11.7	.84	2.50	15.0
Little Rock	34.3	1.52	.04	35.9
San Antonio	48.2	2.32	2.95	53.5
Minor towns in Maryland	35.4	2.43	2.68	40.5

[1] Including colds not diagnosed as influenza or grippe.

The incidence of pneumonia, averaging 4.74 per 1,000 in all the localities, ranges from 2.56 in San Francisco to 7.65 per 1,000 in Pittsburgh. It does not at all closely parallel the incidence of influenza, the ratio of pneumonia to influenza being high in Pittsburgh, Kansas City, and Boston, and relatively low in Seattle and San Francisco. Comparing Tables 2 and 3, the incidence of pneumonia is shown to be about one-third as high in the epidemic of 1928–29 as in that of 1918. It is probable, however, that the disparity between the two epidemics is greater than these figures would indicate, since the periods covered by the 1928–29 record are generally longer than those covered in 1918. Moreover, the 1918 epidemic occurred at a season when the prevalence of pneumonia is normally rather low, whereas the recent epidemic occurred at a season when the prevalence of pneumonia is normally rather high and increasing.

In the canvass of Baltimore, enumerators were instructed to record the occurrence of colds only where the patients had been confined to bed for at least one day. Hence, the records of colds in Baltimore are not comparable with those for the other localities, where no such

limitation was imposed. Excepting Baltimore, the other cities show an incidence of colds ranging from about 11 to 21 per cent. The significance of these so-called colds in relation to the influenza epidemic will probably be clearer when analyses have been made to show chronology and resulting disability. In the meantime, it is hardly profitable to speculate on the subject. Compared with the attack rates which have been found in groups kept under close and continuous observation, an incidence rate of 15 to 20 per cent in a period of two and a half to three months is so low as to indicate that the reports probably include only a fraction of the cases which actually occurred, and that the records afford no sufficient basis for comparisons of different localities.

Acknowledgments.—The following Public Health Service officers conducted the surveys in the respective cities:[1] San Francisco, Surg. R. H. Creel; Seattle, Senior Surg. L. D. Fricks, assisted by Asst. Surg. F. S. Fellows; Kansas City and Farmington, Passed Asst. Surg. E. R. Coffey; Des Moines, Passed Asst. Surg. A. S. Rumreich; New Orleans, Surg. William C. Rucker, assisted by Passed Asst. Surg. W. Y. Hollingsworth; Cincinnati, Surg. R. Olesen; Pittsburgh, Acting Asst. Surg. R. R. Jones; Baltimore, Surg. W. H. Frost; Boston, Surg. J. W. Schereschewsky.

In each city visited, the Public Health Service officers received the full cooperation of the respective city health officers and their associates. It is a pleasure to acknowledge the cordial cooperation shown by them, as well as by the many persons interviewed.

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NOTE ON INFLUENZA IN FOREIGN COUNTRIES

The influenza epidemic which recently occurred in the United States appears to have reached many other parts of the world.

The incomplete reports which are at hand suggest that in some areas influenza was unduly prevalent during the spring and summer of 1928. An appreciable excess over the usual number of cases occurred in certain States of the United States as early as April and May. According to the Epidemiological Report issued by the health section of the League of Nations, influenza caused a considerable mortality in July, 1928, in the Province of Szechuan in the interior of China, and the disease at that time became widespread over large parts of North China. Between June and November, outbreaks, generally of mild type, appeared in the Pacific Islands,

[1] The writer conducted the survey in Syracuse, and assisted in the surveys in Pittsburgh, Baltimore, and Boston.

south and east of China, including the Cook, Tonga, and Solomon Islands, and Hawaii.

Late in October the disease became epidemic on the Pacific coast of the United States, coming to a peak there about December 8. Thence it spread eastward, the mortality coming to a peak in New England about six or seven weeks later, near the end of January, 1929.

In Europe, according to the Epidemiological Report of the League of Nations, there was little indication of any oncoming influenza epidemic until the end of December, 1928. The disease seems to have appeared first in epidemic form in Breslau, Germany. It is interesting to note that this city is in the interior, near the southeastern border. In Breslau the death rate from all causes rose from 12.9 per 1,000 (annual basis) during the first week of December to 20.9 in the third week. The peak mortality rate of 29 came during the week ended January 5, 1929.

The epidemic next appeared in other German cities and in some of the Scandinavian countries and Great Britain. In the latter country the disease appeared first in Glasgow. The epidemic seems to have appeared relatively late in the Netherlands, Poland, Austria, and other south European countries. The health commissioner of the Soviet Republics stated that there was no unusual prevalence anywhere in the Union up to the end of January.

The peak mortality rates (all causes) and the dates of their occurrence are shown in the accompanying table for cities in Europe having relatively high rates, with comparative data for cities in the United States.

Peak mortality rates in certain cities in Europe and the United States

Europe			United States		
Country and city	Highest weekly mortality (annual basis)	Week ended	Geographic division and city	Highest weekly mortality (annual basis)	Week ended
Scotland:			East South Central:		
Glasgow	55.2	Jan. 26, 1929	Birmingham, Ala.	61.6	Jan. 12, 1929
			Nashville, Tenn.	43.4	Do.
Ireland:			Memphis, Tenn.	40.4	Jan. 5, 1929
Belfast	52.8	Feb. 2, 1929	Middle Atlantic:		
Spain:			Pittsburgh, Pa.	45.4	Do.
Barcelona	40.1	Feb. 16, 1929	West South Central:		
Seville	34.4	do.	New Orleans, La.	40.1	Do.
France:			Mountain:		
Lille	39.5	do.	Denver, Colo.	33.8	Dec. 15, 1928
Lyon	32.6	Feb. 29, 1929	East North Central:		
Paris	30.4	do.[1]	Columbus, Ohio	29.6	Jan. 12, 1929
Germany:			Detroit, Mich.	21.8	Jan. 5, 1929
Breslau	29.0	Jan. 5, 1929	Chicago, Ill.	20.4	Dec. 29, 1928
Bremen	24.5	Jan. 26, 1929	West North Central:		
Berlin	21.3	do.	Des Moines, Iowa	22.7	Dec. 22, 1928
Leipzig	19.5	Jan. 19, 1929	Middle Atlantic:		
Hungary:			New York	20.6	Jan. 26, 1929
Budapest	26.9	Feb. 16, 1929	Pacific:		
Denmark:			San Francisco	18.0	Dec. 1, 1928
Copenhagen	18.8	Feb. 2, 1929			

[1] 10 days ended Feb. 20.

The latest available reports to the League of Nations—i. e., for the week ended March 30—indicated that the decline then was well under way in all sections of Europe, although the general death rates were still high in some places. For example, in 107 large cities of England and Wales the general death rate for the week ended March 30 was still 17 per 1,000. During the preceding week the rate had been 21.4 in the English cities, 20.1 in Brussels, 19.2 in Madrid, 14.9 in a group of 30 Swiss cities, and 13.5 in 49 German cities.

CURRENT WORLD PREVALENCE OF COMMUNICABLE DISEASES[1]

The United States, March 3–April 6, 1929

The prevalence of certain important communicable diseases as indicated by weekly telegraphic reports from State health departments[2] to the Public Health Service is summarized below. This summary is prepared from the data published weekly in the Public Health Reports under the section entitled "Prevalence of Disease."

Meningococcus meningitis.—The attack rate of this disease during the month of March was the highest in the 16 years for which records are available. For the five weeks ended April 6, the number of cases totaled 1,561, representing a case rate (annual basis) of 17.4 per 100,000 population. The highest rate previously recorded was for March, 1918, when a rate of 13.3 was attained. In California the number of cases increased from 83 during the 5-week period ended March 2 to 120 during the 5-week period ended April 6; in Washington State the cases increased from 26 to 78; in Colorado from 37 to 51; in Idaho from 26 to 43; in Missouri from 97 to 136; in Michigan from 115 to 297; in Wisconsin from 32 to 58; and in Pennsylvania from 55 to 91. Significant decreases were recorded in Arizona, Minnesota, Oklahoma, Texas, and New Jersey.

Typhoid fever.—As usual, the incidence of typhoid fever increased slightly during the month of March. The rate, however, compared very favorably with the rate for the corresponding period in 1928 and was considerably lower than that for 1927. For the five weeks ended April 6 there were 782 cases reported.

Poliomyelitis.—Poliomyelitis incidence was at the seasonal low level during the month of March. Of the 77 cases reported, 12 occurred in California, 7 in New York, 6 each in Illinois and Michigan, and the remainder were scattered widely over the country. The rate for the five weeks ended April 6 was almost the same as the rate for the corre-

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

[2] The numbers of States reporting for the various diseases are as follows: Typhoid fever, 41; poliomyelitis, 43; meningococcus meningitis, 42; smallpox, 42; measles, 38; diphtheria, 42; scarlet fever, 41; influenza, 31.

sponding period in 1926 and 1927, but was slightly higher than that for 1928.

Scarlet fever.—This disease apparently reached its maximum seasonal prevalence during the first two weeks of March. Reports indicated a slight decrease during the latter part of the month, which may be expected to continue through the summer months. During the five weeks ended April 6, the reported number of cases totaled 25,602, which was somewhat higher than the incidence during the corresponding period in 1926 and 1928, but was lower than in 1927.

Diphtheria.—The diphtheria rate showed little change during the month of March. Approximately 6,900 cases were reported during the five weeks ended April 6. For the corresponding periods in 1928 and 1927, the number of cases totaled approximately 8,000 and 8,700, respectively. The incidence of the disease is usually lowest during the summer months.

Measles.—The usual seasonal increase of measles continued through the month of March, although the disease was still considerably less prevalent than during any of the three preceding years. The increase over the preceding 5-week period was not confined to any particular section of the country, but was widespread. Reports showed the greatest increases in the Middle Atlantic and New England States and East and West North Central States.

Smallpox.—An unusual prevalence of smallpox still persisted in Maine during the month of March. For the week ended April 6 there were 14 cases, which was the largest number that had been reported since its second appearance in February, 1929. The disease was unusually prevalent during the latter part of 1928, but had apparently died out at the beginning of the year. In Vermont, likewise a State usually free from the disease, 34 cases were reported during the five weeks ended April 6. The disease continued quite prevalent in Arizona, Oklahoma, Arkansas, Illinois, and North Carolina. For the five weeks ended April 6 the number of cases in 42 States totaled 4,615 as against 5,991 cases in 1928, and 4,807 in 1927.

Influenza.—Influenza was less prevalent during the month of March than it had been at any time since the beginning of the outbreak in October. The total number of cases reported for the week ended April 6 was 8,566. As influenza in recent years has usually reached its peak in March or April, the recent low level stands out in striking contrast with the previous years.

Mortality from all causes.—The mortality rate from all causes in large cities as shown by the Bureau of the Census dropped gradually through the month of March, rose slightly in the first week of April, and then dropped again. For the week ended April 13, the rate (annual basis) was 13.5 per 1,000 inhabitants, as against 14.7 for the corresponding week in 1928, 13.6 in 1927, and 15.5 in 1926. It was

apparent that by this time the deaths from influenza and pneumonia had decreased to such a small number that the total death rate was not materially affected by them.

Foreign Countries [1]

Influenza.—A review of the influenza epidemic in foreign countries is given elsewhere in this issue of PUBLIC HEALTH REPORTS.

Typhoid Fever.—At Lyon, France, and the surrounding communities on the banks of the Rhone River, 2,430 case of typhoid fever were reported between November 10, 1928, and January 7, 1929. Investigation showed that a leaking waste water outlet running between two filter beds of the Vassieux Waterworks was responsible for the outbreak. Chlorination of the water supply was begun and constructional improvements are now under way. Six antityphoid vaccination centers were established. It is reported, however, that the number of persons availing themselves of vaccination was very small. Supervision was also begun of the preparation and sale of contaminable foods.

Smallpox.—Almost everywhere on the European Continent the smallpox situation was very favorable during the year 1928. Many of the countries were entirely free from the disease, and in others only one to three cases were reported during the year. The incidence fell markedly in France and was lower in Poland and the western, northern, and central parts of the United Socialist Soviet Republics, as well as in the Ukraine and Caucasus, than for any previous year on record.

For the first time since 1921 the number of cases of smallpox in England and Wales showed a decline. The smallpox outbreak in Algeria finally declined in 1928 and marked decreases occurred in Morocco, Tunis, and Egypt. In Northern Rhodesia there was a serious outbreak during the year 1928; a total of 4,235 cases and 69 deaths were reported, as compared with 1,079 cases and 182 deaths in 1927. Reports indicate that the epidemic was most severe in November and December and would probably extend into the present year.

In India the improvement in the smallpox situation was most marked at the end of the year. Significant decreases occurred in the Province of Bihar and Orissa, and in the United and Central Provinces. An increase occurred in Assam, Burma, and the Bombay Presidency. Fatality rates are usually lower in southern than northern India. In Indo-China an excess incidence over the preceding year occurred at the end of 1928. For the month of December the cases totaled 243, as compared with 47 cases in December, 1927.

[1] Data from the Monthly Epidemiological Report of the Health Section of the League of Nations' Secretariat, Jan. 15, 1929, supplemented by information published in the Public Health Reports.

The incidence of smallpox in Java, Dutch East Indies, has continually decreased during the last four years. In 1924 there were 5,994 cases; in 1927, 308 cases and 8 deaths; and in 1928 only 158 cases and 11 deaths. Outbreaks of smallpox were reported in Japan during the first half of the year, but they all came to an end before the year was over. In Chosen, smallpox was less prevelant than in any other year for which records are available.

In Italy and Spain slight increases in the prevalence of smallpox were apparent during 1928. The disease remained widespread in Portugal. Smallpox was at one time or other fairly widespread in the Provinces of China, but the mortality does not seem to have been excessive during the year. During the months of November and December a marked increase of smallpox occurred at Hong.Kong and Shanghai, China.

For the first time since 1922, smallpox appeared in the Panama Canal Zone. One case occurred at Colon on December 31, 1928. There were five subsequent cases in January, 1929. Two cases were reported in Panama City, the first of which was imported from Colombia, South America. A small outbreak of the disease occurred at Guayaquil, Ecuador, during the year. One death was reported at Rio de Janeiro and one at Callao, Peru.

In Canada the total number of cases for the first 11 months of 1928 was 3,069, as against 2,301 for the corresponding period in 1927. Only three deaths were reported for the year, giving a fatality rate of about 1 per 1,000. The disease was most prevalent in Quebec. The Atlantic coast Provinces were little affected, and the situation in Ontario improved markedly during the year.

The incidence of smallpox increased considerably in Iraq during the past year. In 1927 there were 743 cases and 339 deaths reported, and in 1928 there were 1,950 cases and 855 deaths. Reports did not indicate an unusual prevalence of the disease in any other countries in western Asia.

Plague.—The plague situation was relatively favorable everywhere during the year 1928. India remains the chief plague center; but even there the disease is milder than heretofore, and is not the important cause of mortality that it was in earlier years. During the closing months of the year the fatality rates in the United Provinces, Burma, Bihar and Orissa, and the Bombay Presidency were still high; but, on the other hand, in the Punjab, Madras Presidency, and Central Provinces the rates were very low. The epidemic in the Satara and Dharwar districts of the Bombay Presidency, which had been very severe and had continued unusually late in the season, had declined. The deaths from plague in the United Provinces during the last four weeks of December totaled 1,454 in 1928 as against 1,138 in 1927. The incidence was widespread there, but the eastern districts (Azam-

garth, Basti, and Ghazipur) have been more persistently infected than perhaps any other part of India.

During the month of January, 7 cases of plague occurred at Colombo, Ceylon; 1 fatal case at Makassar, Dutch East Indies; 3 cases at Bangkok, Siam; and 4 from 2 provincial towns of Siam. Thirteen cases of plague were reported from Pnompenh, the capital of Cambodia, French Indo-China, during the five weeks ended February 2. Sporadic cases of plague occurred at Baghdad, Iraq; between December 22, 1928, and January 26, 1929, 11 cases were reported.

In China the plague epidemic at Shansi was under control at the end of the year. Toward the end of January an epidemic of bubonic plague was reported at Siuyuah, in the Province at Shansi. Two small local outbreaks of an epidemic disease resembling pneumonic plague occurred in the Province of Kirin, in Central Manchuria, during January. In Nungan, a town on the Itung River, about 40 miles north of Changchun, 23 cases occurred between November 15 and December 8, 1928, all of which were fatal. A second outbreak occurred in the village of Cha-Chia-Yuantze, a trading center about 100 miles from Harbin. Seven cases occurred, all fatal on the second day of illness. No bacteriological confirmation of the diagnosis was possible.

In Egypt 2 cases of plague were reported at Alexandria during the three weeks ended January 29, and 12 cases at Beni-Suef between December 22 and the end of January. Plague in Nigeria was confined to Lagos, where nine cases were reported during the latter half of December and eight during January 1929. In Madagascar an increase usually occurs in the incidence of plague during the winter months; for the months of November and December there were 209 and 282 cases, respectively, and for the first half of January 188 cases were reported.

A case of plague was reported at Rosario, Argentina, on December 27, 1928, and a case on January 5, 1929. During December, five plague rats were found in Buenos Aires. Plague still persisted in Guayaquil, Ecuador, and in neighboring villages. Twenty-one cases were reported in November and ten cases during the first half of December.

AUTOMOBILE FATALITIES IN 78 LARGE CITIES, APRIL 26, 1925, TO APRIL 20, 1929

The Department of Commerce announces that for the 52-week period ended April 20, 1929, there were 7,659 deaths from automobile accidents in 78 large cities of the United States, as compared with 7,221 for the corresponding period ending in 1928, giving rates of 23.3 and 22.4 per 100,000, respectively—an increase of 4 per cent in the year.

For the four weeks ended April 20, 1929, there were 528 automobile fatalities in these cities, as compared with 530 in the corresponding period of 1928. The following table gives a comparison by 4-week periods for recent years:

Automobile fatalities for 78 cities by 4-week periods

1925		1926		1927		1928		1929	
4 weeks ended—	No.	4 weeks ended—	No.	4 weeks ended—	No.	4 weeks ended—	No.	4 weeks ended—	No.
		Jan. 30	428	Jan. 29	471	Jan. 28	531	Jan. 26	612
		Feb. 27	374	Feb. 26	441	Feb. 25	504	Feb. 23	466
		Mar. 27	346	Mar. 26	441	Mar. 24	421	Mar. 23	525
		Apr. 24	423	Apr. 23	495	Apr. 21	530	Apr. 20	528
May 23	421	May 22	493	May 21	530	May 19	532		
June 20	492	June 19	547	June 18	507	June 16	503		
July 18	493	July 17	482	July 16	573	July 14	516		
Aug. 15	467	Aug. 14	499	Aug. 13	510	Aug. 11	588		
Sept. 12	521	Sept. 11	558	Sept. 10	526	Sept. 8	620		
Oct. 10	527	Oct. 9	650	Oct. 8	662	Oct. 6	623		
Nov. 7	612	Nov. 6	676	Nov. 5	684	Nov. 3	622		
Dec. 5	623	Dec. 4	632	Dec. 3	619	Dec. 1	738		
1926		1927							
Jan. 2	550	Jan. 1	522	Dec. 31	624	Dec. 29	771		

COURT DECISIONS RELATING TO PUBLIC HEALTH

Provisions in bovine tuberculosis eradication law held constitutional.—(Ohio Supreme Court; Kroplin *v.* Truax, Director of Agriculture, et al., 165 N. E. 498; decided February 6, 1929.) An action was brought against defendants, officials of the State department of agriculture, to enjoin them from giving tuberculin tests to plaintiff's cattle and from condemning and ordering the slaughter of his cattle. The plaintiff also asked that sections 1121–10 and 1121–14 of the General Code and the rules of the State board of agriculture for compensation to owners for tuberculous cattle destroyed be adjudged in contravention of certain provisions of the State constitution. The following are the challenged code sections:

SEC. 1121–10. In order to secure indemnity as provided in the provisions of sections 1121–1 to 1121–25 of the General Code, the value of all cattle reacting to a tuberculin test applied under the direction of the department of agriculture shall be determined by an appraisal made by a representative chosen by the owner and a representative chosen by the department of agriculture. In the event of a disagreement as to the amount of the appraisal, a third disinterested person shall be selected, at the owner's expense, by the two to act with them in the appraisal of the cattle.

SEC. 1121–14. The State board of agriculture shall have authority to draft and adopt rules for the compensation to owners for tubercular cattle destroyed under the provisions of sections 1121–1 to 1121–25 of the General Code, which compensation shall be subject to the appropriations made available by the general assembly, and such rules shall provide for inspection where indemnity has been waived. The department of agriculture and all officers and employees

thereof shall observe said rules. Said rules may also define any of the terms herein used.

The plaintiff claimed that the statute and rules contravened (*a*) the constitutional provision conferring the right of every person to possess and protect property; (*b*) the provision that, when private property is taken for a public purpose, the owner shall be compensated in money, to be assessed by a jury; and (*c*) the provisions that all courts shall be open and that every person, for an injury done him in his lands, goods, person, or reputation, shall have remedy by due course of law. The decision of the supreme court was adverse to the plaintiff, the court saying in part:

> Do sections 1121–10 and 1121–14 of the Riggs law violate the plaintiff in error's property right in his cattle, which may be killed if they are shown to be reactors?
>
> The petition does not allege that any of these cattle have been condemned, nor even that they have been tested. It alleges that active testing is about to be resumed. * * * However, the petition does allege that the plaintiff has not waived indemnity for any of his cattle, and that, in the event his cattle are slaughtered, he will receive very inadequate compensation. He states that the defendants and their agents threaten to subject his cattle to the tuberculin test, and will order slaughtered the cattle reacting to such test. Hence we proceed to consider whether the plaintiff in error's property right will be injured if his cattle are destroyed and compensation is made in accordance with the statute.
>
> After consideration of the record and the adjudicated cases, we held [hold] that the statute is constitutional, and that no property right of the plaintiff in error is violated thereby. Statutes of this nature, providing even drastic measures for the elimination of disease, whether in human beings, crops, stock, or cattle, are in general authorized under the police power. * * *
>
> In providing measures for the protection of public health, the destruction or summary abatement of public nuisances inimical to the public health may be ordered. Unwholesome food may be destroyed; diseased cattle may be slaughtered. Such action is not a taking of private property for public use. * * * * * * Hence Article I, section 1, and Article I, section 19, of the constitution of Ohio, are not violated.
>
> * * * * * * *
>
> The mere fact that a partial indemnity is given does not affect the question. * * *
>
> Since the statute does not contravene the private property rights of the plaintiff in error, neither does it violate Article I, section 16, of the bill of rights of the Ohio constitution, in that no appeal to a court and no assessment of value by a jury are provided. Under the sound doctrine which permits boards of health, without resort to the courts, in order to preserve the public health, to make summary destruction of property, this livestock may also be summarily destroyed in order to maintain the public health among the livestock of the State.

The court did not decide the question of the validity of the rules adopted by the State board of agriculture pursuant to section 1121–14 of the General Code, since plaintiff's cattle had not yet been tested and no reactors found.

Making of appropriations by county to defray expenses of State agents in tuberculin testing of cattle not enjoined.—(Ohio Supreme Court;

State ex rel. Honeyman *v.* Commissioners of Miami County, 165 N. E. 502; decided February 6, 1929.) Section 1121–17 of the General Code read as follows:

> The county commissioners in their respective counties are hereby authorized and empowered to make such appropriations from the general funds of their county as will enable them to cooperate effectively with the cattle owners, the department of agriculture, and the United States Bureau of Animal Industry in the eradication of tuberculosis. The money so appropriated shall be placed in a fund to be used in the county in which it originated, subject to the approval of the department of agriculture.

The plaintiff asked that the commissioners of Miami County be enjoined from making appropriations, pursuant to the above section, to defray the salaries and expenses of State veterinarians, officers, and employees and other necessary expenses in making tuberculin tests in the county, upon the ground that the veterinarians, etc., were State officers and, if the money was so expended, it would have been expended for a State purpose and the county could not be forced to expend its funds for a general State purpose. The dismissal of the plaintiff's petition by the lower courts was sustained by the supreme court, the contention of plaintiff not being agreed with. The court said:

> * * * The county is a subdivision of the State, subject to the legislative control of the State.
>
> Where a State by enactment, in furtherance of its governmental purposes, imposes an obligation upon a county not in conflict with the State constitution, that obligation becomes one which the county must fairly meet. [Case cited.]
>
> Counties are agencies of the State for governmental purposes. * * *
>
> Under the Riggs law, sections 1121–1 to 1121–25, General Code, the testing program is not exclusively a State enterprise. It constitutes a joint enterprise to be carried on by the State and the county. All cattle owners and all milk consumers of Miami County will receive the benefit of the enactment, and under section 1121–17 not one cent of this particular appropriation will be expended outside the confines of Miami County.
>
> * * * * * * *
>
> These decisions [Albright *v.* Board of County Commissioners of Douglas County, 108 Kan. 184, 194 P. 913; Chambers *v.* Gilbert, 17 Tex. Civ. App. 106, 42 S. W. 630] upheld statutes much more drastic than section 1121–17, which simply provides for the payment of bills incurred by officers, agents, and employees of the State in making tuberculin tests of cattle owned and located within Miami County.
>
> On the authority of these decisions and because of the general relation between the county and the State, we overrule the contention.
>
> Since the funds are to be disbursed in accordance with valid statute, the plaintiff in error is not entitled to an injunction, and the judgment of the court of appeals will be affirmed.

DEATHS DURING WEEK ENDED APRIL 27, 1929

Summary of information received by telegraph from industrial insurance companies for the week ended April 27, 1929, and corresponding week of 1928. (From the Weekly Health Index, May 1, 1929, issued by the Bureau of the Census, Department of Commerce)

	Week ended Apr. 27, 1929	Corresponding week, 1928
Policies in force	74, 033, 990	71, 066, 816
Number of death claims	13, 594	14, 249
Death claims per 1,000 policies in force, annual rate	9. 6	10. 5

Deaths from all causes in certain large cities of the United States during the week ended April 27, 1929, infant mortality, annual death rate, and comparison with corresponding week of 1928. (From the Weekly Health Index, May 1, 1929, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Apr. 27, 1929		Annual death rate per 1,000, corresponding week, 1928	Deaths under 1 year		Infant mortality rate, week ended Apr. 27, 1929 [2]
	Total deaths	Death rate [1]		Week ended Apr. 27, 1929	Corresponding week, 1928	
Total (63 cities)	7,431	13.1	14.7	726	843	[3] 62
Akron	43			6	4	62
Albany [4]	45	19.5	20.0	3	6	59
Atlanta	50	10.2	15.4	4	5	42
White	22			1	3	
Colored	28	(5)	(5)	3	2	
Baltimore [4]	212	13.3	14.9	12	22	38
White	161			10	15	40
Colored	51	(5)	(5)	2	7	32
Birmingham	60	14.1	20.0	6	13	54
White	26			2	4	45
Colored	34	(5)	(5)	3	9	69
Boston	233	15.2	16.9	24	28	66
Bridgeport	33			3	7	52
Buffalo	173	16.3	15.5	23	21	99
Cambridge	29	12.1	14.5	2	4	36
Camden	28	10.8	16.6	8	5	138
Canton	23	10.3	12.1	0	5	0
Chicago [4]	758	12.6	15.1	81	95	72
Cincinnati	129			11	22	64
Cleveland	180	9.3	10.5	18	28	53
Columbus	87	15.2	16.8	8	7	75
Dallas	47	11.3	9.6	6	1	
White	35			3	1	
Colored	12	(5)	(5)	3	0	
Denver	65	11.6	17.9	5	9	48
Des Moines	30	10.3	10.0	2	1	36
Detroit	341	12.9	13.0	50	40	80
Duluth	19	8.5	15.7	0	2	0
El Paso	47	20.9	17.8	5	9	
Erie	20			2	3	41
Fall River [4]	28	10.9	11.3	3	5	56
Flint	30	10.5	11.6	4	10	49
Fort Worth	37	11.3	9.8	4	4	
White	32			4	4	
Colored	5	(5)	(5)	0	0	
Grand Rapids	25	11.1	11.1	2	3	30
Houston	51			5	10	
White	30			4	6	
Colored	21	(5)	(5)	1	4	
Indianapolis	106	14.5	14.5	10	8	80
White	88			6	5	56
Colored	18	(5)	(5)	4	3	239
Jersey City	88	14.2	17.9	7	13	54

[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 70 cities.
[4] Deaths for week ended Friday.
[5] 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.

Deaths from all causes in certain large cities of the United States during the week ended April 27, 1929, infant mortality, annual death rate, and comparison with corresponding week of 1928—Continued

City	Week ended Apr. 27, 1929		Annual death rate per 1,000, corresponding week, 1928	Deaths under 1 year		Infant mortality rate, week ended Apr. 27, 1929
	Total deaths	Death rate		Week ended Apr. 27, 1929	Corresponding week, 1928	
Kansas City, Kans.	32	14.1	23.0	3	5	66
White	27			2	3	50
Colored	5	(5)	(5)	1	2	179
Kansas City, Mo.	107	14.3	16.2	6	5	51
Knoxville	20	9.9	16.9	1	1	22
White	13			1	1	24
Colored	7	(5)	(5)	0	0	0
Los Angeles	257			19	27	56
Louisville	78	12.4	13.5	2	4	16
White	61			1	4	9
Colored	17	(5)	(5)	1	0	63
Lowell	24			0	2	0
Lynn	26	12.9	15.9	2	7	55
Memphis	82	22.5	20.1	7	3	83
White	51			6	1	114
Colored	31	(5)	(5)	1	2	31
Milwaukee	111	10.7	14.3	19	21	83
Minneapolis	107	12.3	11.8	12	8	74
Nashville	43	16.1	15.7	4	6	85
White	25			2	5	43
Colored	18	(5)	(5)	2	1	126
New Bedford	35			1	6	21
New Haven	55	15.3	15.6	1	11	15
New Orleans	137	16.7	17.8	20	18	99
White	85			11	8	78
Colored	52	(5)	(5)	9	10	151
New York	1,543	13.4	15.3	160	172	66
Bronx Borough	186	10.2	12.6	16	13	47
Brooklyn Borough	508	11.5	13.4	67	73	66
Manhattan Borough	656	19.6	20.7	61	57	75
Queens Borough	145	8.9	11.7	11	23	45
Richmond Borough	48	16.7	19.8	5	6	91
Newark, N. J.	134	14.8	12.0	14	7	74
Oakland	56	10.7	11.4	2	7	22
Oklahoma City	27			2	2	40
Omaha	44	10.3	12.2	5	3	58
Paterson	37	13.4	13.7	1	2	18
Philadelphia	509	12.9	14.9	46	65	65
Pittsburgh	162	12.6	16.6	20	28	69
Portland, Oreg.	68			3	3	34
Providence	81	14.8	12.6	7	6	62
Richmond	48	12.9	14.3	4	7	56
White	31			1	4	21
Colored	17	(5)	(5)	3	3	123
Rochester	92	13.7	13.2	2	4	17
St. Louis	230	14.2	16.6	16	18	54
St. Paul	68			3	3	31
Salt Lake City [4]	41	15.5	14.8	5	4	77
San Antonio	70	16.8	19.4	11	26	
San Diego	38	16.6	16.2	0	4	0
San Francisco	162	14.5	14.5	14	7	89
Schenectady	24	13.4	15.1	2	2	64
Seattle	71	9.7	10.4	3	2	32
Somerville	16	8.1	12.7	1	4	36
Spokane	26	12.5	12.9	2	1	52
Springfield, Mass.	44	15.4	10.1	4	2	66
Syracuse	48	12.6	20.5	5	9	60
Toledo	91	15.2	13.2	11	7	103
Trenton	46	17.3	12.4	6	3	109
Washington, D. C.	132	12.5	15.1	12	9	70
White	80			5	5	42
Colored	52	(5)	(5)	7	4	123
Waterbury	17			2	4	51
Wilmington, Del.	28	11.4	11.0	1	3	26
Worcester	54	14.3	17.2	2	5	25
Yonkers	17	7.3	10.8	2	0	47
Youngstown	38	11.4	11.1	4	3	57

[4] 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, 33; 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 Weeks Ended April 27, 1929, and April 28, 1928

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended April 27, 1929, and April 28, 1928

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928
New England States:								
Maine	6	1	1		186	31	0	0
New Hampshire	2	1	6		41	30	0	0
Vermont	1				3	32	0	0
Massachusetts	98	92	25	29	501	1,397	10	3
Rhode Island	9	8	1		115	361	0	0
Connecticut	21	29	3	17	484	354	2	3
Middle Atlantic States:								
New York	347	289	[1] 14	[1] 155	1,154	3,045	24	49
New Jersey	105	107	9	28	332	1,499	10	3
Pennsylvania	177	169			1,694	2,024	8	4
East North Central States:								
Ohio	75	145	34	114	2,195	702	11	11
Indiana	8	15		114	423	650	1	0
Illinois	168	109	119	227	1,838	173	13	13
Michigan	86	60	5	21	796	1,126	76	6
Wisconsin	14	18	15	780	1,314	49	1	4
West North Central States:								
Minnesota	23	27	1	9	636	105	2	0
Iowa	5	5			32	18	2	0
Missouri	33	19	7	29	240	527	14	7
North Dakota	16	11		132	163	26	3	1
South Dakota	5			13	31	11	0	0
Nebraska	10	7	1	15	88	128	3	0
Kansas	9	7	5	4	379	167	5	1
South Atlantic States:								
Delaware	2				10	35	0	0
Maryland [2]	16	30	15	38	27	728	1	0
District of Columbia	25	17	2	3	13	168	1	0
West Virginia	10	19	13	12	581	207	1	2
North Carolina	20	19			36	1,384	1	0
South Carolina	13	13	325	543	9	401	0	0
Georgia	5	6	28	102	21	150	1	1
Florida	11	7		1	48	94	1	0
East South Central States:								
Kentucky		9		28	39	319	0	0
Tennessee	7	17	26	339	78	784	3	2
Alabama	17	11	63	181	84	426	0	0
Mississippi	3	9						1

[1] New York City only.
[2] Week ended Friday.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended April 27, 1929, and April 28, 1928—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928
West South Central States:								
Arkansas	3	2	9	351	27	393	6	1
Louisiana	21	13	47	45	71	355	6	1
Oklahoma [3]	5	21	63	730	50	452	1	3
Texas	23	15	72	59	128	103	0	0
Mountain States:								
Montana	5	2			149	4	6	0
Idaho					3		3	1
Wyoming	1	1			34	14	4	0
Colorado	6	13		1	6	96	9	5
New Mexico	3	8	3	3	9	64	0	0
Arizona		7		1		8	4	2
Utah [3]	2	6	6	7	6		9	1
Pacific States:								
Washington	4	8		1	205	165	11	1
Oregon	3	5	29	16	291	90	2	2
California	46	88	48	27	88	111	19	5

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928
New England States:								
Maine	1	0	12	24	0	0	1	1
New Hampshire	0	0	10	9	1	0	0	0
Vermont	0	0	12	10	7	0	0	6
Massachusetts	0	0	266	240	1	0	6	4
Rhode Island	0	0	14	38	0	0	0	0
Connecticut	1	0	46	77	3	0	1	0
Middle Atlantic States:								
New York	1	0	522	722	3	2	12	6
New Jersey	0	0	191	253	0	6	3	5
Pennsylvania	2	2	390	439	0	2	17	6
East North Central States:								
Ohio	2	1	260	219	50	25	4	6
Indiana	0	0	234	70	24	111	2	2
Illinois	1	0	452	314	43	37	4	12
Michigan	2	0	422	301	77	27	9	4
Wisconsin	0	0	190	122	5	9	5	2
West North Central States:								
Minnesota	1	1	120	120	5	2	1	1
Iowa	0	0	98	78	39	51	1	2
Missouri	0	0	75	108	15	44	4	1
North Dakota	0	0	29	30	17	3	0	1
South Dakota	0	1	7	25	18	11	0	0
Nebraska	0	0	99	63	36	52	1	0
Kansas	1	0	127	159	42	104	1	3
South Atlantic States:								
Delaware	0	0	4	0	0	0	0	0
Maryland [2]	0	1	53	100	0	0	4	5
District of Columbia	0	0	15	51	0	1	1	0
West Virginia	0	0	13	27	8	40	9	9
North Carolina	0	1	24	16	20	103	4	1
South Carolina	2	1	2	12	7	5	11	7
Georgia	0	0	8	14	0	0	8	4
Florida	5	0	5	4	1	12	7	4
East South Central States:								
Kentucky	0	0	66	38	9	24	5	5
Tennessee	0	1	19	35	7	48	6	4
Alabama	3	0	0	11	1	5	15	2
Mississippi	1	0	9	11	1	0	6	10
West South Central States:								
Arkansas	1	0	6	12	8	15	6	4
Louisiana	0	0	41	10	5	20	17	9
Oklahoma [3]	0	0	24	61	57	97	4	8
Texas	0	0	67	53	52	43	11	5

[2] Week ended Friday.
[3] Figures for 1929 are exclsive of Oklahoma City and Tulsa.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended April 27, 1929, and April 28, 1928—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928	Week ended Apr. 27, 1929	Week ended Apr. 28, 1928
Mountain States:								
Montana	0	1	35	8	44	30	1	0
Idaho	0	0	8	9	10	7	0	0
Wyoming	0	0	7	20	22	1	0	1
Colorado	0	1	19	65	9	2	0	0
New Mexico	0	0	5	29	1	3	4	1
Arizona	0	0	5	2	10	6	0	1
Utah [2]	0	1	5	10	10	11	0	0
Pacific States:								
Washington	1	2	28	38	56	35	5	0
Oregon	1	0	15	2	33	63	1	10
California	1	6	437	122	87	19	8	3

[2] Week ended Friday.

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
January, 1929										
West Virginia	6	77	26,401	----	402	----	2	158	36	14
March, 1929										
Idaho	58	4	32	----	30	----	1	48	116	4
Kansas	22	55	129	----	1,350	----	0	817	262	11
Mississippi	6	----	4,377	3,476	2,997	790	1	59	2	46
Montana	12	24	4	----	454	----	0	96	25	16
Oklahoma [1]	23	57	857	109	242	16	0	194	432	22
Oregon	3	50	453	----	954	----	2	249	185	8
South Carolina	----	126	3,877	458	37	351	2	74	9	28
Virginia	3	94	2,329	31	807	18	1	136	14	8
Washington	36	45	197	----	459	----	5	134	228	15
West Virginia	6	51	248	----	1,304	----	2	137	69	47

[1] Exclusive of Oklahoma City and Tulsa.

January, 1929

West Virginia:	Cases
Chicken pox	244
Whooping cough	159

March, 1929

	Cases
Botulism:	
Oregon	3
Washington	2
Chicken pox:	
Idaho	18
Kansas	599
Mississippi	1,097
Montana	94
Oklahoma [1]	74
Oregon	264
South Carolina	435
Virginia	617
Washington	444
West Virginia	226
Dengue:	
South Carolina	5

March, 1929—Continued

Dysentery:	Cases
Mississippi	56
Mississippi (bacillary)	247
Oklahoma [1]	2
Virginia	33
German measles:	
Kansas	1,050
Montana	2
Washington	31
Hookworm disease:	
Mississippi	339
South Carolina	197
Impetigo contagiosa:	
Oregon	11
Washington	4
Lethargic encephalitis:	
Kansas	1
Oregon	1
Washington	3
Mumps:	
Idaho	92

[1] Exclusive of Oklahoma City and Tulsa.

March, 1929—Continued

Mumps—Continued	Cases
Kansas	772
Mississippi	562
Montana	26
Oklahoma [1]	104
Oregon	170
South Carolina	174
Washington	347
Ophthalmia neonatorum:	
Mississippi	19
Oklahoma [1]	2
South Carolina	19
Paratyphoid fever:	
South Carolina	4
Puerperal septicemia:	
Mississippi	24
Washington	2
Rabies in animals:	
Idaho	1
Mississippi	12
Oregon	3
South Carolina	34
Washington	1
Rabies in man:	
Mississippi	1
Rocky Mountain spotted or tick fever:	
Oregon	1
Scabies:	
Oregon	20
Washington	2
Septic sore throat:	
Kansas	4
Montana	1

March, 1929—Continued

Septic sore throat—Continued.	Cases
Oklahoma [1]	17
Oregon	10
Washington	1
Tetanus:	
Oklahoma	3
Trachoma:	
Idaho	1
Mississippi	4
Oklahoma [1]	8
Washington	1
Tularaemia:	
Oregon	1
South Carolina	2
Typhus fever:	
Virginia	1
Vincent's angina:	
Kansas	6
Oklahoma [1]	1
Oregon	8
Washington	1
Whooping cough:	
Idaho	4
Kansas	302
Mississippi	1,386
Montana	33
Oklahoma [1]	121
Oregon	15
South Carolina	628
Virginia	702
Washington	289
West Virginia	223

[1] Exclusive of Oklahoma City and Tulsa.

Number of Cases of Certain Communicable Diseases Reported for the Month of February, 1929, by State Health Officers

	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Maine	93	5	1,229	101	108	21	20	2	64
New Hampshire	-------	5	-------	-------	37	0	-------	0	-------
Vermont	99	17	195	261	37	13	9	2	108
Massachusetts	683	331	1,517	358	1,058	0	428	10	488
Rhode Island	25	54	383	3	147	0	27	3	24
Connecticut	288	106	1,397	346	207	2	123	0	95
New York	2,100	994	3,549	1,178	1,971	0	1,685	44	1,197
New Jersey	993	449	976	-------	610	0	393	6	585
Pennsylvania	2,356	570	7,239	1,943	1,737	1	647	41	1,653
Ohio	1,151	265	4,163	396	1,224	178	602	27	1,658
Indiana	406	110	1,253	67	861	226	191	7	267
Illinois	1,042	536	2,791	446	1,792	486	708	18	567
Michigan	764	317	1,406	459	1,427	146	403	12	883
Wisconsin	1,221	96	3,129	525	839	51	167	29	827
Minnesota	576	101	1,598	-------	679	13	126	14	324
Iowa	142	42	30	343	676	176	48	7	127
Missouri	314	215	1,123	210	428	198	213	7	258
North Dakota	29	28	127	9	165	4	10	6	53
South Dakota	69	12	262	19	147	113	2	0	26
Nebraska	161	80	208	113	555	-------	[1] 8	5	62
Kansas	516	62	467	530	687	229	142	6	233
Delaware	5	-------	63	12	11	0	[1] 1	0	14
Maryland	406	96	434	429	278	0	269	14	382
District of Columbia	139	45	19	-------	96	0	85	1	102
Virginia	534	107	677	-------	190	22	[1] 193	9	504
West Virginia	143	63	558	-------	109	73	38	25	125

[1] Pulmonary.

Number of Cases of Certain Communicable Diseases Reported for the Month of February, 1929, by State Health Officers—Continued

	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
North Carolina	768	134	343	-------	202	66	-------	6	735
South Carolina	264	130	21	31	42	24	121	19	237
Georgia [2]									
Florida	98	62	72	10	47	4	89	24	82
Kentucky [3]									
Tennessee	170	52	14	66	256	10	155	19	102
Alabama	136	119	490	25	107	21	138	16	111
Mississippi	917	52	2,377	404	67	6	290	35	957
Arkansas	135	45	284	175	107	18	[1] 19	15	61
Louisiana	94	76	362	3	161	25	[1] 114	35	13
Oklahoma [4]	97	79	19	36	131	185	24	16	78
Texas [3]									
Montana	54	11	596	12	136	66	11	2	33
Idaho	59	7	23	55	37	130	[1] 2	13	7
Wyoming	49	6	48	25	58	8	1	0	1
Colorado	260	65	24	100	130	137	39	7	63
New Mexico [3]									
Arizona	32	19	35	7	31	21	75	11	17
Utah [3]									
Nevada [3]									
Washington	366	50	454	291	158	192	207	12	189
Oregon	212	48	463	149	185	188	37	3	24
California	2,140	286	224	1,326	1,720	361	927	39	748

[1] Pulmonary.
[2] Report not received at time of going to press.
[3] Reports received weekly.
[4] Exclusive of Oklahoma City and Tulsa.
[5] Reports received annually.

Case Rates per 1,000 Population (Annual Basis) for the Month of February, 1929

	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Maine	1.52	0.08	20.10	1.65	1.77	0.34	0.33	0.03	1.05
New Hampshire	-------	.14	-------	-------	1.06	.00	-------	.00	-------
Vermont	3.66	.63	7.21	9.65	1.37	.48	.33	.07	3.99
Massachusetts	2.05	.99	4.56	1.06	3.18	.00	1.29	.03	1.47
Rhode Island	.45	.97	6.86	.05	2.63	.00	.48	.05	.43
Connecticut	2.21	.81	10.72	2.66	1.59	.02	.94	.00	.73
New York	2.34	1.11	3.96	1.31	2.20	.00	1.88	.05	1.34
New Jersey	3.32	1.50	3.27	-------	2.04	.00	1.32	.02	1.96
Pennsylvania	3.08	.74	9.45	2.54	2.27	.00	.84	.05	2.16
Ohio	2.16	.50	7.82	.74	3.30	.33	1.30	.05	3.11
Indiana	1.65	.45	5.10	.27	3.51	.92	.78	.03	1.09
Illinois	1.81	.93	4.85	.78	3.12	.85	1.23	.03	.99
Michigan	2.12	.88	3.91	1.28	3.96	.41	1.12	.03	2.45
Wisconsin	5.33	.42	13.65	2.29	3.66	.22	.73	.13	3.61
Minnesota	2.72	.48	7.55	-------	2.21	.06	.60	.07	1.53
Iowa	.76	.23	.16	1.84	3.62	.94	.26	.04	.68
Missouri	1.16	.79	4.14	.77	1.58	.73	.79	.03	.95
North Dakota	.59	.57	2.58	.18	3.35	.08	.20	.00	1.08
South Dakota	1.26	.22	4.80	.85	2.69	2.07	.04	.00	.48
Nebraska	1.48	.73	1.91	1.04	5.09	-------	[1] .07	.05	.57
Kansas	3.65	.44	3.30	3.75	4.86	1.62	1.00	.04	1.65
Delaware	.27	-------	3.35	.64	.59	.00	[1] .05	.00	.74
Maryland	3.24	.78	3.46	3.42	2.22	.00	2.14	.11	3.05
District of Columbia	3.21	1.04	.44	-------	2.22	.00	1.96	.02	2.36
Virginia	2.67	.54	3.39	-------	.95	.11	[1] .97	.05	2.52
West Virginia	1.06	.47	4.15	-------	.81	.54	.28	.19	.93
North Carolina	3.36	.59	1.50	-------	.88	.29	-------	.03	3.22
South Carolina	1.83	.90	.15	.21	.29	.17	.84	.13	1.64
Georgia [2]									
Florida	.88	.55	.64	.09	.42	.04	.80	.21	.73
Kentucky [3]									
Tennessee	.88	.27	.07	.34	1.32	.05	.80	.10	.53
Alabama	.68	.60	2.46	.13	.54	.11	.69	.08	.56
Mississippi	6.68	.38	17.30	2.94	.49	.04	2.11	.25	6.97

[1] Pulmonary. [2] Report not received at time of going to press. [3] Reports received weekly.

Case Rates per 1,000 Population (Annual Basis) for the Month of February, 1929—Continued

	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid fever	Whooping cough
Arkansas	0.90	0.30	1.88	1.16	0.71	0.12	[1] 0.13	0.10	0.40
Louisiana	.62	.50	2.40	.02	1.07	.17	[1] .76	.23	.09
Oklahoma [4]	.58	.47	.11	.22	.79	1.11	.14	.10	.47
Texas [3]									
Montana	1.28	.26	14.15	.28	3.23	1.57	.26	.05	.78
Idaho	1.38	.16	.54	1.28	.86	3.04	[1] .05	.30	.16
Wyoming	2.52	.31	2.47	1.29	2.99	.41	.05	.00	.05
Colorado	3.06	.77	.28	1.18	1.53	1.61	.46	.08	.74
New Mexico [3]									
Arizona	.85	.51	.93	.19	.83	.56	2.00	.29	.45
Utah [3]									
Nevada [4]									
Washington	2.96	.40	3.67	2.35	1.28	1.55	1.67	.10	1.53
Oregon	3.02	.68	6.60	2.13	2.64	2.68	.53	.04	.34
California	5.96	.80	.62	3.69	4.79	1.01	2.58	.11	2.08

[1] Pulmonary.
[3] Reports received weekly.
[4] Exclusive of Oklahoma City and Tulsa.
[4] Reports received annually.

PLAGUE-INFECTED GROUND SQUIRRELS IN CALIFORNIA

The director of public health of the State of California reports that on April 22, 1929, plague infection was proved in one lot of five ground squirrels from a ranch 37 miles east of Monterey, Calif. These squirrels were from the same place as the two lots of infected squirrels referred to in the Public Health Reports of April 26, 1929, page 1029.

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 31,565,000. The estimated population of the 91 cities reporting deaths is more than 29,995,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended April 20, 1929, and April 21, 1928

	1929	1928	Estimated expectancy
Cases reported			
Diphtheria:			
46 States	1,322	1,506	
98 cities	817	826	849
Measles:			
45 States	13,508	19,872	
98 cities	5,446	8,085	
Meningococcus meningitis:			
45 States	206	131	
98 cities	139	79	
Poliomyelitis:			
46 States	15	20	
Scarlet fever:			
46 States	4,549	4,249	
98 cities	1,629	1,495	1,332
Smallpox:			
46 States	1,018	1,116	
98 cities	57	133	87
Typhoid fever:			
46 States	210	185	
98 cities	59	38	38
Deaths reported			
Influenza and pneumonia:			
91 cities	815	1,313	
Smallpox:			
91 cities	0	0	

City reports for week ended April 20, 1929

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 weeks 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 the reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1920 is included. In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviation 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, 1928, 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	78,600	3	1	0	2	0	27	1	2
New Hampshire:									
Concord	(1)	0	1	0	----	0	5	0	1
Vermont:									
Barre	(1)	0	0	0	----	1	0	1	0
Massachusetts:									
Boston	799,200	39	35	29	1	0	17	13	26
Fall River	134,300	0	3	4	2	2	0	0	1
Springfield	149,800	5	2	5	----	0	1	1	0
Worcester	197,600	10	4	3	----	0	6	1	1
Rhode Island:									
Pawtucket	73,100	1	1	3	----	0	6	0	1
Providence	286,300	0	8	9	----	1	73	0	11
Connecticut:									
Bridgeport	(1)	2	5	1	----	0	34	1	3
Hartford	172,300	8	5	3	1	0	48	9	3
New Haven	187,900	25	2	6	----	0	5	2	2
MIDDLE ATLANTIC									
New York:									
Buffalo	555,800	12	10	19	----	1	40	1	27
New York	6,017,500	302	248	291	20	13	73	0	145
Rochester	328,200	6	9	1	1	0	34	25	7
Syracuse	199,300	39	5	3	----	0	3	7	5
New Jersey:									
Camden	135,400	0	7	20	----	0	12	0	3
Newark	473,600	45	13	36	1	0	7	60	9
Trenton	139,000	8	3	4	----	0	4	0	3
Pennsylvania:									
Philadelphia	2,064,200	129	64	21	6	5	69	8	53
Pittsburgh	673,800	55	17	16	----	2	36	9	23
Reading	115,400	5	2	0	----	0	24	0	2
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	413,700	11	8	5	----	1	4	1	3
Cleveland	1,010,300	67	24	23	7	6	651	6	12
Columbus	299,000	7	3	2	----	0	37	1	9
Toledo	313,200	16	3	3	5	5	75	5	8
Indiana:									
Fort Wayne	105,300	5	3	3	----	0	34	0	2
Indianapolis	382,100	35	4	3	----	3	165	10	15
South Bend	86,100	0	1	1	----	0	12	0	4
Terre Haute	73,500	8	1	1	----	0	11	0	0
Illinois:									
Chicago	3,157,400	111	68	89	5	3	1,032	29	70
Springfield	67,200	3	1	1	1	1	9	0	0
Michigan:									
Detroit	1,378,900	54	43	56	2	4	57	58	48
Flint	148,800	14	3	1	----	1	10	1	4
Grand Rapids	164,200	6	3	3	----	0	137	2	2

[1] No estimate of population made.

City reports for week ended April 20, 1929—Continued

Division, State, and city	Population July 1, 1928, 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			
EAST NORTH CENTRAL—continued									
Wisconsin:									
Kenosha	56,500	9	1	0	-------	0	23	0	0
Milwaukee	544,200	48	13	3	4	3	943	20	15
Racine	74,400	32	3	0	-------	0	53	0	0
Superior	(1)	2	0	0	-------	0	0	0	2
WEST NORTH CENTRAL									
Minnesota:									
Duluth	116,800	5	1	1	-------	0	1	51	3
Minneapolis	455,900	56	14	7	-------	4	267	72	8
St. Paul	(1)	15	11	0	-------	0	452	44	8
Iowa:									
Davenport	(1)	4	0	1	-------	-------	0	0	-------
Des Moines	151,900	0	1	0	-------	-------	0	0	-------
Sioux City	80,000	4	1	0	-------	-------	4	0	-------
Waterloo	37,100	1	0	0	-------	-------	7	28	-------
Missouri:									
Kansas City	391,000	32	5	1	-------	1	159	3	9
St. Joseph	78,500	0	1	0	-------	0	14	0	2
St. Louis	848,100	24	39	39	1	1	16	5	-------
North Dakota:									
Fargo	(1)	3	0	0	-------	0	50	0	2
Grand Forks	(1)	1	0	0	-------	-------	0	0	-------
South Dakota:									
Aberdeen	(1)	0	0	1	-------	-------	0	9	-------
Sioux Falls	(1)	0	0	5	-------	-------	0	0	-------
Nebraska:									
Omaha	222,809	4	2	10	-------	0	68	1	4
Kansas:									
Topeka	62,800	6	1	0	-------	0	-------	0	0
Wichita	99,309	30	1	0	-------	0	66	22	0
SOUTH ATLANTIC									
Delaware:									
Wilmington	128,509	2	2	2	-------	0	12	0	6
Maryland:									
Baltimore	830,400	43	25	17	6	1	4	161	27
Cumberland	(1)	0	0	0	-------	0	2	4	4
Frederick	(1)	0	1	0	-------	0	0	1	0
District of Columbia:									
Washington	552,000	29	12	7	-------	0	19	0	16
Virginia:									
Lynchburg	38,600	7	1	0	-------	0	5	107	1
Norfolk	184,200	11	1	0	-------	0	10	24	2
Richmond	194,400	2	2	1	-------	6	4	2	4
Roanoke	64,600	3	0	2	-------	1	0	2	0
West Virginia:									
Charleston	55,200	5	0	0	-------	0	176	0	0
Wheeling	(1)	3	1	1	-------	0	170	2	1
North Carolina:									
Raleigh	(1)	7	0	1	-------	0	0	0	1
Wilmington	39,100	22	1	0	-------	0	0	0	0
Winston-Salem	80,000	2	0	2	-------	0	0	0	1
South Carolina:									
Charleston	75,900	1	0	0	11	0	0	0	3
Columbia	50,600	10	0	0	-------	0	0	7	1
Greenville	(1)	1	1	0	-------	0	0	5	0
Georgia:									
Atlanta	255,100	11	2	1	4	2	13	1	9
Brunswick	(1)	2	0	0	-------	0	0	0	0
Savannah	99,900	2	0	0	1	0	0	0	3
Florida:									
Miami	156,700	2	2	0	-------	0	35	0	3
St. Petersburg	53,300	-------	0	-------	-------	0	-------	-------	0
Tampa	113,400	3	0	1	-------	1	1	0	1

[1] No estimate of population made.

City reports for week ended April 20, 1929—Continued

Division, State, and city	Population July 1, 1928, estimated	Chickenpox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST SOUTH CENTRAL									
Kentucky:									
Covington	59,000	0	1	0	-------	0	0	0	0
Tennessee:									
Memphis	190,200	8	2	0	-------	0	1	0	3
Nashville	139,600	5	0	0	-------	0	1	0	5
Alabama:									
Birmingham	222,400	5	1	1	3	2	2	6	12
Mobile	69,600	1	0	0	-------	0	3	0	1
Montgomery	63,100	8	0	0	1	-------	1	0	-------
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	(1)	1	1	0	-------	-------	0	1	-------
Little Rock	79,200	0	0	0	-------	1	1	1	1
Louisiana:									
New Orleans	429,400	0	7	11	4	6	8	0	9
Shreveport	81,300	4	0	0	------	0	8	0	2
Oklahoma:									
Oklahoma City	(1)	0	1	2	5	0	0	0	6
Tulsa	170,500	18	1	0	-------	-------	11	3	-------
Texas:									
Dallas	217,800	1	4	4	-------	1	23	0	2
Fort Worth	170,600	4	1	1	-------	1	11	0	6
Galveston	50,600	0	0	2	-------	0	0	0	0
Houston	(1)	0	2	4	-------	1	5	0	4
San Antonio	218,100	0	1	5	-------	4	1	0	2
MOUNTAIN									
Montana:									
Billings	(1)	12	0	0	-------	0	0	0	0
Great Falls	(1)	8	1	0	-------	0	15	3	1
Helena	(1)	0	0	0	-------	0	0	0	0
Missoula	(1)	0	0	0	-------	0	0	0	1
Idaho:									
Boise	(1)	0	0	0	-------	0	0	0	0
Colorado:									
Denver	294,200	51	10	5	7	1	1	26	8
Pueblo	44,200	28	1	0	-------	0	1	0	3
New Mexico:									
Albuquerque	(1)	5	1	0	1	0	0	0	0
Utah:									
Salt Lake City	138,000	11	3	3	-------	0	6	151	1
Nevada:									
Reno	(1)	0	0	0	-------	0	1	0	0
PACIFIC									
Washington:									
Seattle	383,200	31	3	0	-------	-------	2	28	-------
Spokane	109,100	2	2	0	-------	-------	125	0	-------
Tacoma	110,500	21	1	0	-------	1	1	8	0
Oregon:									
Portland	(1)	14	7	4	-------	4	72	9	5
Salem	(1)	0	0	0	-------	0	0	0	0
California:									
Los Angeles	(1)	117	40	13	38	3	17	36	37
Sacramento	75,700	15	2	0	-------	0	2	8	4
San Francisco	585,300	26	20	11	4	0	9	17	7

[1] No estimate of population made.

City reports for week ended April 20, 1929—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	2	5	0	0	0	0	1	0	0	1	16
New Hampshire:											
Concord	0	3	0	0	0	0	0	0	0	0	8
Vermont:											
Barre	0	0	0	0	0	1	0	0	0	2	4
Massachusetts:											
Boston	69	57	0	0	0	16	1	3	0	35	223
Fall River	4	2	0	0	0	1	0	0	0	1	34
Springfield	7	16	0	0	0	1	0	0	0	2	32
Worcester	9	3	0	0	0	5	0	0	0	29	56
Rhode Island:											
Pawtucket	1	3	0	0	0	1	0	0	0	2	9
Providence	10	7	0	0	0	3	0	0	0	0	92
Connecticut:											
Bridgeport	11	5	0	0	0	1	0	0	0	1	27
Hartford	4	5	0	0	0	1	0	0	0	4	43
New Haven	9	2	0	0	0	4	0	0	0	8	38
MIDDLE ATLANTIC											
New York:											
Buffalo	24	39	0	0	0	11	0	0	0	32	148
New York	310	283	0	0	0	115	9	9	2	71	1,464
Rochester	14	4	0	0	0	0	1	0	0	24	53
Syracuse	12	7	0	0	0	2	1	0	0	18	48
New Jersey:											
Camden	7	1	0	0	0	0	0	0	0	7	34
Newark	33	21	0	0	0	16	1	0	0	26	110
Trenton	4	4	0	0	0	3	0	0	0	3	41
Pennsylvania:											
Philadelphia	97	75	0	0	0	25	2	7	0	74	479
Pittsburgh	28	20	0	0	0	7	1	0	0	27	164
Reading	4	10	0	0	0	2	0	0	0	5	25
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	21	76	1	3	0	11	1	0	0	10	142
Cleveland	34	34	0	1	0	22	0	0	0	81	205
Columbus	9	3	2	0	0	4	0	0	0	28	75
Toledo	14	7	1	0	0	6	0	0	0	86	56
Indiana:											
Fort Wayne	6	1	2	0	0	0	0	0	1	0	31
Indianapolis	9	82	9	0	0	9	0	1	0	55	125
South Bend	4	2	0	0	0	0	0	0	0	0	23
Terre Haute	2	2	1	0	0	0	0	0	0	8	18
Illinois:											
Chicago	118	168	2	0	0	63	2	0	0	54	758
Springfield	3	5	0	0	0	1	0	2	0	8	15
Michigan:											
Detroit	92	208	1	1	0	25	2	2	1	125	323
Flint	7	38	1	12	0	0	0	0	0	18	25
Grand Rapids	7	8	0	1	0	2	0	0	0	27	33
Wisconsin:											
Kenosha	2	2	1	0	0	1	0	0	0	2	12
Milwaukee	28	19	1	0	0	6	1	1	0	114	141
Racine	4	3	0	0	0	1	1	0	0	3	9
Superior	3	4	0	0	0	0	0	0	0	0	12
WEST NORTH CENTRAL											
Minnesota:											
Duluth	7	7	1	0	0	4	0	1	0	3	18
Minneapolis	47	16	1	0	0	2	1	0	0	119	109
St. Paul	27	19	0	0	0	4	0	1	0	54	79
Iowa:											
Davenport	2	2	2	0	----	----	0	0	----	0	----
Des Moines	5	22	2	1	----	----	0	0	----	0	33
Sioux City	2	1	1	1	----	----	0	0	----	7	----
Waterloo	1	13	0	0	----	----	0	0	----	4	----

City reports for week ended April 20, 1929—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—continued											
Missouri:											
Kansas City	15	15	2	1	0	8	0	0	0	16	103
St. Joseph	3	1	1	0	0	1	0	0	0	2	25
St. Louis	36	7	3	1	0	11	1	2	0	45	229
North Dakota:											
Fargo	2	2	0	0	0	1	0	0	0	1	11
Grand Forks	1	1	0	0	----	----	0	0	----	0	----
South Dakota:											
Aberdeen	1	0	0	0	----	----	0	0	----	0	----
Sioux Falls	2	1	0	0	----	----	0	0	----	0	10
Nebraska:											
Omaha	3	3	5	0	0	5	0	1	0	3	62
Kansas:											
Topeka	3	3	1	0	0	2	0	0	0	12	18
Wichita	3	25	1	2	0	1	0	0	0	29	22
SOUTH ATLANTIC											
Delaware:											
Wilmington	6	1	0	0	0	1	0	0	0	1	37
Maryland:											
Baltimore	32	19	0	0	0	17	2	1	0	112	208
Cumberland	1	1	0	0	0	0	0	0	0	0	12
Frederick	3	0	0	0	0	0	0	0	0	0	3
District of Columbia:											
Washington	24	18	1	0	0	10	0	1	0	30	127
Virginia:											
Lynchburg	0	1	0	0	0	0	0	0	0	2	12
Norfolk	2	0	1	0	0	3	0	0	0	21	----
Richmond	3	1	0	0	0	3	0	0	0	7	48
Roanoke	1	1	0	0	0	1	0	0	0	0	23
West Virginia:											
Charleston	1	0	0	0	0	0	0	0	1	9	7
Wheeling	2	1	0	0	0	0	0	0	0	3	16
North Carolina:											
Raleigh	0	1	0	0	0	0	0	0	0	6	7
Wilmington	0	0	0	1	0	0	0	0	0	0	9
Winston-Salem	1	1	2	0	0	1	0	0	0	39	11
South Carolina:											
Charleston	0	0	1	0	0	1	0	0	0	0	19
Columbia	0	0	1	0	0	1	0	0	0	3	16
Greenville	0	0	1	0	0	0	0	0	0	3	1
Georgia:											
Atlanta	4	3	3	0	0	5	0	9	0	0	74
Brunswick	0	0	0	0	0	0	0	0	0	0	3
Savannah	0	0	1	0	0	2	1	0	0	25	35
Florida:											
Miami	0	2	2	0	0	0	1	0	0	6	19
St. Petersburg	0	----	0	----	0	0	0	----	0	----	17
Tampa	0	0	0	0	0	0	0	2	0	5	16
EAST SOUTH CENTRAL											
Kentucky:											
Covington	2	4	0	0	0	2	0	0	0	0	19
Tennessee:											
Memphis	6	4	3	0	0	3	0	0	0	8	38
Nashville	1	8	0	0	0	6	0	1	0	1	49
Alabama:											
Birmingham	2	2	7	0	0	5	0	0	0	14	85
Mobile	0	0	1	0	0	4	0	0	0	0	14
Montgomery	0	3	1	0	----	----	0	0	----	0	----
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	1	0	0	0	----	----	0	0	----	0	----
Little Rock	0	0	0	0	0	0	0	1	1	0	----
Louisiana:											
New Orleans	6	46	0	0	0	17	2	[1] 10	0	0	151
Shreveport	1	2	1	0	0	0	0	0	0	1	31

[1] 8 cases in nonresidents.

City reports for week ended April 20, 1929—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—contd.											
Oklahoma:											
Oklahoma City	2	3	3	4	0	3	0	0	0	0	35
Tulsa	2	0	1	5			0	0		13	
Texas:											
Dallas	3	8	2	1	0	3	1	0	0	0	58
Fort Worth	1	3	5	10	0	1	0	1	0	0	25
Galveston	0	0	0	0	0	1	1	0	0	0	12
Houston	1	1	2	1	0	5	0	0	1	0	73
San Antonio	1	2	0	1	0	10	0	0	0	0	62
MOUNTAIN											
Montana:											
Billings	0	0	0	0	0	0	0	0	0	0	4
Great Falls	1	0	1	0	0	0	0	0	0	6	11
Helena	1	2	0	0	0	0	0	0	0	0	1
Missoula	1	0	0	3	0	0	0	0	0	0	11
Idaho:											
Boise	1	2	0	1	0	0	0	0	0	0	5
Colorado:											
Denver	11	2	2	0	0	6	0	0	0	15	72
Pueblo	1	0	0	0	0	0	0	0	0	0	10
New Mexico:											
Albuquerque	1	0	0	0	0	4	0	0	0	9	13
Utah:											
Salt Lake City	2	2	2	1	0	0	1	0	0	14	32
Nevada:											
Reno	0	0	0	0	0	1	0	0	1	0	3
PACIFIC											
Washington:											
Seattle	8	12	2	6			1	2		101	
Spokane	4	2	7	2			0	0		3	
Tacoma	2	0	3	13	0	0	0	0	0	3	21
Oregon:											
Portland	5	3	17	14	0	4	0	0	0	0	84
Salem	0	0	1	0	0	0	0	0	0	0	0
California:											
Los Angeles	23	52	5	0	0	33	1	2	1	22	305
Sacramento	1	21	0	3	0	1	1	0	0	13	25
San Francisco	17	67	2	1	0	15	1	0	0	44	158

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Csaes	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Massachusetts:									
Boston	3	2	1		0	0	0	0	0
Worcester	1	0	0		0	0	0	0	0
				0					
MIDDLE ATLANTIC									
New York:									
Buffalo	0	1	0		0	0	0	0	0
New York	26	8	4	0	0	0	1	3	0
New Jersey:				6					
Newark	2	1	0		0	0	0	0	0
Pennsylvania:				0					
Philadelphia	2	1	1	1	0	0	0	0	0
Pittsburgh	1	1	0	0	0	0	0	0	0

City reports for week ended April 20, 1929—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	1	1	0	0	0	0	0	0	0
Cleveland	5	1	0	1	0	0	0	2	0
Toledo	3	3	0	0	0	0	0	0	0
Illinois:									
Chicago	11	6	0	0	0	0	0	0	0
Michigan:									
Detroit	29	16	2	1	0	0	0	0	0
Flint	2	0	0	0	0	0	0	0	0
Wisconsin:									
Milwaukee	5	2	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Minneapolis	1	0	0	0	0	0	0	0	0
Missouri:									
Kansas City	10	4	0	0	0	0	0	0	0
St. Joseph	1	0	0	0	0	0	0	0	0
St. Louis	6	5	0	0	0	0	0	0	0
North Dakota:									
Fargo	1	0	0	0	0	0	0	0	0
SOUTH ATLANTIC									
Maryland:									
Baltimore	1	0	0	0	0	0	0	0	0
North Carolina:									
Raleigh	0	0	0	0	0	1	0	0	0
Winston-Salem	0	0	0	0	3	2	0	0	0
Georgia:									
Atlanta	6	5	0	0	0	0	0	0	0
Savannah	0	0	0	0	1	0	0	0	0
Florida:									
Miami	0	0	0	0	0	0	0	2	0
EAST SOUTH CENTRAL									
Tennessee:									
Memphis	3	1	0	0	0	0	0	0	0
Alabama:									
Birmingham	0	0	0	0	1	1	0	0	0
Mobile	0	0	0	0	0	1	0	0	0
WEST SOUTH CENTRAL									
Louisiana:									
New Orleans	2	2	0	0	4	3	1	0	0
Oklahoma:									
Oklahoma City	0	1	0	0	1	0	0	0	0
Tulsa	1	0	0	0	0	0	0	0	0
Texas:									
Dallas	0	0	0	0	1	1	0	0	0
Fort Worth	0	0	0	0	0	1	0	0	0
MOUNTAIN									
Montana:									
Great Falls	1	1	0	0	0	0	0	0	0
Colorado:									
Denver	2	2	0	0	0	0	0	0	0
Pueblo	1	1	0	0	0	0	0	0	0
Utah:									
Salt Lake City	11	5	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle	12	0	0	0	0	0	0	0	0
Tacoma	1	0	0	0	0	0	1	0	0
Oregon:									
Portland	0	0	1	0	0	0	0	1	0
California:									
Los Angeles	2	1	0	0	0	1	0	1	0
Sacramento	0	1	0	0	0	0	0	0	0
San Francisco	1	1	0	0	0	0	0	0	0

The following table gives the rates per 100,000 population for 98 cities for the 5-week period ended April 20, 1929, compared with those for a like period ended April 21, 1928. The population figures used in computing the rates are approximate estimates, authoritative figures for many of the cities not being available. The 98 cities reporting cases have estimated aggregate populations of more than 31,000,000. The 91 cities reporting deaths have nearly 30,000,000 estimated population. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, March 17 to April 20, 1929—Annual rates per 100,000 population, compared with rates for the corresponding period of 1928 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Mar. 23, 1929	Mar. 24, 1928	Mar. 30, 1929	Mar. 31, 1928	Apr. 6, 1929	Apr. 7, 1928	Apr. 13, 1929	Apr. 14, 1928	Apr. 20, 1929	Apr. 21, 1928
98 cities	135	161	129	140	[2] 132	135	124	146	135	139
New England	120	124	102	110	[3] 140	126	118	168	143	131
Middle Atlantic	180	223	187	181	190	189	166	210	198	204
East North Central	142	148	119	146	125	121	126	116	122	116
West North Central	131	133	138	84	75	102	83	102	112	80
South Atlantic	60	122	66	128	82	96	71	90	66	88
East South Central	41	56	41	70	27	35	75	42	7	42
West South Central	123	118	123	109	[4] 122	134	126	162	103	126
Mountain	35	80	44	115	44	44	61	133	70	80
Pacific	70	105	30	74	60	77	67	74	60	102

MEASLES CASE RATES

98 cities	760	1,325	719	1,375	[2] 845	1,275	827	1,336	900	1,361
New England	568	1,536	471	2,014	[3] 542	1,874	642	1,727	502	1,743
Middle Atlantic	179	1,397	154	1,495	174	1,508	160	1,744	146	1,829
East North Central	1,593	1,008	1,593	1,021	1,834	1,033	1,943	997	2,025	816
West North Central	1,880	728	1,782	751	1,961	765	1,655	864	2,123	990
South Atlantic	452	3,021	414	3,008	650	2,386	465	2,173	761	2,455
East South Central	136	1,361	88	1,354	88	596	129	814	54	1,480
West South Central	198	1,135	99	847	[4] 264	442	241	434	182	385
Mountain	766	505	409	753	618	709	192	744	209	762
Pacific	247	809	239	581	282	448	329	525	389	394

SCARLET FEVER CASE RATES

98 cities	346	309	319	303	[2] 291	276	271	223	269	252
New England	366	412	394	405	[3] 348	331	319	301	244	264
Middle Atlantic	308	375	264	399	244	367	224	274	224	288
East North Central	495	305	452	266	426	252	372	193	417	271
West North Central	292	293	310	258	275	204	242	278	215	289
South Atlantic	159	226	167	230	94	186	122	161	90	168
East South Central	306	154	265	77	210	91	183	42	143	112
West South Central	281	126	285	146	[4] 284	150	237	130	233	166
Mountain	113	177	78	186	104	239	165	239	70	213
Pacific	379	202	322	207	324	133	387	123	384	151

[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, 1929 and 1928, respectively.
[2] Pawtucket, R. I., and Fort Smith, Ark., not included.
[3] Pawtucket, R. I., not included.
[4] Fort Smith, Ark., not included.

Summary of weekly reports from cities, March 17 to April 20, 1929—Annual rates per 100,000 population, compared with rates for the corresponding period of 1928—Continued

SMALLPOX CASE RATES

	Week ended—									
	Mar. 23, 1929	Mar. 24, 1928	Mar. 30, 1929	Mar. 31, 1928	Apr. 6, 1929	Apr. 7, 1928	Apr. 13, 1929	Apr. 14, 1928	Apr. 20, 1929	Apr. 21, 1928
98 cities	11	25	16	25	[2] 11	18	12	20	9	22
New England	7	0	11	0	[3] 2	0	2	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	12	18	17	24	15	24	20	24	11	31
West North Central	12	125	25	65	17	84	8	49	10	61
South Atlantic	0	25	13	75	4	15	4	11	2	11
East South Central	7	35	41	35	7	14	7	28	0	21
West South Central	103	36	95	36	[4] 81	4	79	16	12	8
Mountain	44	62	44	142	26	106	78	151	44	168
Pacific	15	61	22	23	17	18	10	74	62	59

TYPHOID FEVER CASE RATES

98 cities	7	5	10	6	[2] 5	5	12	5	10	6
New England	7	9	5	5	[3] 5	2	9	9	7	7
Middle Atlantic	6	4	5	4	2	1	7	5	8	6
East North Central	4	3	17	2	7	3	11	1	4	3
West North Central	6	0	8	2	4	6	25	8	10	6
South Atlantic	6	11	13	23	4	13	13	4	24	10
East South Central	27	7	27	14	7	21	20	21	7	21
West South Central	8	8	20	12	[4] 8	16	43	20	43	20
Mountain	9	0	0	0	0	0	0	0	0	0
Pacific	20	5	0	3	7	8	7	3	10	3

INFLUENZA DEATH RATES

91 cities	27	33	18	30	[2] 20	35	15	31	15	29
New England	5	9	5	11	[3] 12	16	7	9	9	7
Middle Atlantic	23	22	12	29	16	31	14	27	11	26
East North Central	20	35	16	24	18	40	15	27	14	28
West North Central	30	24	18	28	27	24	6	37	18	61
South Atlantic	30	42	22	23	17	21	17	33	21	17
East South Central	89	100	89	115	74	92	30	123	15	92
West South Central	77	100	37	87	49	108	32	92	53	46
Mountain	78	123	52	53	44	80	17	53	9	53
Pacific	33	7	16	13	20	7	23	13	13	13

PNEUMONIA DEATH RATES

91 cities	169	218	158	225	[2] 150	218	139	213	127	204
New England	188	182	172	225	[3] 103	179	127	177	115	166
Middle Atlantic	190	245	180	265	178	244	161	243	134	243
East North Central	141	211	132	206	134	240	126	199	119	191
West North Central	189	178	150	196	147	184	114	263	108	233
South Atlantic	185	239	159	239	144	187	165	212	146	187
East South Central	170	222	170	161	141	283	163	176	155	238
West South Central	81	279	130	246	142	187	93	241	81	200
Mountain	165	168	131	106	122	97	113	186	122	106
Pacific	170	101	157	118	131	104	98	88	157	81

[2] Pawtucket, R. I., and Fort Smith, Ark., not included.
[3] Pawtucket, R. I., not included.
[4] Fort Smith, Ark., not included.

Number of cities included in summary of weekly reports, and aggregate population of cities of each group, approximated as of July 1, 1929 and 1928, 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	
			1929	1928	1929	1928
Total	98	91	31,568,400	31,052,700	29,995,100	29,498,600
New England	12	12	2,305,100	2,273,900	2,305,100	2,273,900
Middle Atlantic	10	10	10,809,700	10,702,200	10,809,700	10,702,200
East North Central	16	16	8,181,900	8,001,300	8,181,900	8,001,300
West North Central	12	9	2,712,100	2,673,300	1,736,900	1,708,100
South Atlantic	19	19	2,783,200	2,732,900	2,783,200	2,732,900
East South Central	6	5	767,900	745,500	704,200	682,400
West South Central	8	7	1,319,100	1,289,900	1,285,000	1,256,400
Mountain	9	9	598,800	590,200	598,800	590,200
Pacific	6	4	2,090,600	2,043,500	1,590,300	1,551,200

FOREIGN AND INSULAR

SMALLPOX ON VESSEL

Steamship "Tuscania."—The S. S. *Tuscania* arrived at Marseille from Bombay March 27, 1929, with one case of smallpox on board, which was disembarked at Marseille. All passengers and crew were vaccinated before the ship's arrival at Liverpool, April 1. The ship arrived at Glasgow, April 4, with seven cases of smallpox on board, all among members of the crew, which were disembarked and isolated in the hospital at Glasgow.

All members of the crew are under observation, and a list of the passengers has been sent to competent authorities. Sanitary measures have been taken in regard to the ship.

CANADA

Provinces—Communicable diseases—Week ended April 13, 1929.—The Department of Pensions and National Health reports cases of certain communicable diseases from eight provinces of Canada for the week ended April 13, 1929, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal fever		1		2	1	1	3		8
Influenza	14		6	18				7	45
Lethargic encephalitis				2					2
Poliomyelitis							1		1
Smallpox	1		11	15		1		12	40
Typhoid fever	1	2	17	20	4	2			46

Quebec Province—Communicable diseases—Week ended April 20, 1929.—The bureau of health of the Province of Quebec reports cases of certain communicable diseases for the week ended April 20, 1929, as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	2	Mumps	73
Chicken pox	32	Scarlet fever	123
Diphtheria	53	Smallpox	8
German measles	12	Tuberculosis	44
Influenza	54	Typhoid fever	20
Measles	103	Whooping cough	21

CHINA

Meningitis.—During the week ended April 20, 1929, 3 cases and 3 deaths from meningitis were reported at Canton, China. At Shanghai there were 58 admissions to the hospital, and 35 deaths from meningitis during the week ended April 29. No case of meningitis was reported in Hong Kong during the week ended April 20.

ITALY

Communicable diseases—Four weeks ended October 21, 1928.—During the four weeks ended October 21, 1928, communicable diseases were reported in the Kingdom of Italy as follows:

Disease	Sept. 24-30		Oct. 1-7		Oct. 8-14		Oct. 15-21	
	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected
Anthrax	50	46	51	38	43	34	54	44
Cerebrospinal meningitis	7	6	2	2	2	2	10	9
Chicken pox	37	22	21	14	37	27	55	32
Diphtheria	367	207	360	204	387	228	480	261
Dysentery	43	21	21	16	17	11	12	5
Lethargic encephalitis	1	1	1	1	2	2	1	1
Measles	319	109	586	140	763	137	889	160
Poliomyelitis	26	23	28	18	20	18	18	15
Rabies	1	1						
Scarlet fever	354	146	293	127	331	137	382	169
Smallpox			1	1	1	1	1	1
Typhoid fever	1,351	540	1,432	628	1,339	549	1,285	564

SCOTLAND

Glasgow—Smallpox.—Information dispatched April 19, 1929, stated that the number of cases suffering from smallpox or under observation in the hospital at Glasgow was 20, of whom 18 were members of the crew of the S. S. *Tuscania*, and 1 was a passenger. A passenger from the ship was also found suffering from smallpox at Aberdeen, and was taken to the hospital.

TRINIDAD

Port of Spain—Vital statistics—Comparative—March, 1929.—The following statistics for the month of March, 1929, with a comparison of the same month for the years 1925 to 1928, are taken from a report issued by the public health department of Port of Spain, Trinidad:

	1925	1926	1927	1928	1929
Number of births	176	140	165	160	164
Births per 1,000 population	32.4	25.5	29.9	28.8	29.1
Number of deaths	120	115	98	118	123
Deaths per 1,000 population	22.1	21	17.7	21.2	21.8
Deaths under 1 year	18	20	15	13	24
Deaths under 1 year per 1,000 births	102.3	142.9	90.9	81.2	146.3

YUGOSLAVIA

Communicable diseases—March, 1929.—During the month of March, 1929, communicable diseases were reported in Yugoslavia, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	24	5	Poliomyelitis	2	
Cerebrospinal meningitis	12	5	Rabies	1	1
Diphtheria	267	75	Scarlet fever	1,044	211
Dysentery	21	1	Tetanus	3	3
Measles	991	44	Typhoid fever	73	10
Lethargic encephalitis	5	5	Typhus fever	7	

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

From medical officers of the Public Health Service, American consuls, health section of the League of Nations, and other sources. The reports contained in the following table must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given:

CHOLERA

[C indicates cases; D, deaths; P, present]

Place		Sept. 23–Oct. 20, 1928	Oct. 21–Nov. 17, 1928	Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Week ended— January, 1929		February, 1929				March, 1929					April, 1929	
						19	26	2	9	16	23	2	9	16	23	30	6	13
Ceylon	C				7							2	2					
	D				4							2	2					
Colombo	C				3	1	1											
	D				1													
Ingiriya Province	C		1															
	D		1															
China:																		
Canton	C		2		3									1	1	1		1
	D				1													1
Shanghai		3																
India	C	17,028	20,937	23,528	17,038	4,173	3,739	3,032	2,622	2,193	1,881	1,766						
	D	10,187	12,490	14,950	10,507	2,358	2,233	1,758	1,563	1,280	1,092	1,007						
Bassein	C			1		1	4	1		2	1	1	2	1	3	12	29	
Bombay	C	15	1	4		1								1				
	D	7	1	4									1			1	1	
Calcutta	C	41	219	247	103	28	43	34	29	43	56	72	90	108	155			
	D	39	140	155	61	13	30	19	23	30	31	40	43	56	83	79	89	
Madras	C	97	203	102	16	1		1	2	2	3	1	3					
	D	73	115	42	17		1	4		1		3						
Madras Presidency	C			1														
	D			1														
Moulmein	C			1														
	D			1														
Negapatam	C			1	6	8	9		1	1	1	1	1	4	1	1	1	
	D	1		1														
Rangoon	C	1		5	6	4	4	1	6	1	4	5	3	3				
	D	2		3	5	1	3	1	4		1	4	1	2	6	28	1	
Tuticorin	C	1		2	115	31	31	7	16	5	1							
	D		1		61	15	21	5	11	2	2							
India (French):																		
Chandernagor	C	16	43	25	4									1	1	1		1
	D	7	34	10	4									1	1	1		1
Karikal	C	9	111	7	54	40	61	31	18	28	10	28	22	14	6			3
	D	8	85	4	41	34	46	31	17	21	8	21	21	12	3			3
Pondicherry Province	C	31	6	37	92	27	58	32	22	29	18	29	10	30	12	4		
	D	19	5	30	55	21	45	22	16	24	18	24	8	24	10	4		

Indo-China (see also table below):																		
Pnompenh	C	-------	1	1	6	1	-------	-------	1	7	22	12	1	------	2	3	1	3
	D	-------	1	1	1	-------	-------	-------	1	5	20	10	1	------	1	3	1	1
Saigon	C	-------	1	-------	6	3	1	2	-------	-------	-------	-------	-------	2	5	5	------	3
	D	-------	-------	-------	4	1	1	1	-------	-------	-------	-------	-------	------	1	------	1	2
Japan: Osaka	C	1	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	------	-------	------	-------	-------
Kwangchow-Wan (see table below).																		
Siam	C	14	47	104	224	59	72	29	35	39	43	41	42	50	74	117	156	175
	D	10	27	68	150	50	38	23	27	26	32	22	37	33	59	73	104	119
Anthoang	C	-------	-------	-------	4	1	-------	-------	-------	3	-------	-------	-------	------	-------	------	-------	-------
	D	-------	-------	-------	1	1	-------	-------	-------	2	-------	-------	-------	------	-------	------	-------	-------
Ayudhaya	C	7	15	2	16	1	-------	2	1	-------	-------	4	-------	------	-------	1	------	2
	D	6	12	2	14	1	-------	2	1	-------	-------	4	-------	------	-------	1	------	2
Bangkok	C	4	5	18	22	11	14	12	17	17	19	12	13	10	14	3	11	15
	D	1	3	12	6	18	8	8	9	12	7	5	12	7	9	1	4	10
Chaxoengsao	C	-------	-------	-------	-------	1	-------	3	5	-------	1	-------	-------	------	-------	------	-------	-------
	D	-------	-------	-------	-------	1	-------	3	5	-------	1	-------	-------	------	-------	------	-------	-------
Dhannapuri	C	-------	-------	6	16	2	-------	-------	1	1	1	1	-------	------	-------	------	-------	2
	D	-------	-------	5	10	2	-------	-------	-------	-------	1	-------	-------	------	-------	------	-------	1
Lobpuri	C	-------	-------	-------	74	-------	-------	-------	-------	2	-------	-------	1	------	-------	------	-------	1
	D	-------	-------	-------	61	-------	-------	-------	-------	1	-------	-------	-------	------	-------	------	-------	1
Nagara Pathom	C	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	2	------	-------	------	-------	-------
	D	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	2	------	-------	------	-------	-------
Nondpuri	C	-------	-------	1	4	-------	-------	-------	-------	-------	-------	-------	-------	------	-------	------	-------	-------
	D	-------	-------	1	2	-------	-------	-------	-------	-------	-------	-------	-------	------	-------	------	-------	-------
Pradhumdham	C	-------	-------	-------	-------	-------	-------	-------	1	-------	-------	-------	-------	------	-------	------	-------	-------
	D	-------	-------	-------	-------	-------	-------	-------	1	-------	-------	-------	-------	------	-------	------	-------	-------
Singhapuri	C	-------	-------	-------	17	2	-------	3	1	1	-------	-------	-------	------	-------	------	-------	-------
	D	-------	-------	-------	12	2	-------	4	1	1	-------	-------	-------	------	-------	------	-------	-------
Smud Prakar	C	-------	-------	37	30	6	-------	2	2	1	-------	-------	-------	------	-------	------	-------	-------
	D	-------	-------	28	10	5	-------	2	1	-------	-------	-------	-------	------	-------	------	-------	-------
Smud Sagara	C	-------	27	34	-------	-------	-------	-------	-------	-------	-------	-------	-------	------	-------	------	-------	-------
	D	-------	12	16	-------	-------	-------	-------	-------	-------	-------	-------	-------	------	-------	------	-------	-------
On vessel:																		
S. S. Ekma at Penang from Singapore	C	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	P	------	-------	------	-------	-------
S. S. Tilawa at Penang from Singapore	C	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	P	-------	------	-------	-------
S. S. Elephanta at Penang from Calcutta	C	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	------	P	------	-------	-------

Place		October, 1928	November, 1928	December, 1928	January, 1929			February, 1929			March, 1929		
					1-10	11-20	21-31	1-10	11-20	21-28	1-10	11-20	21-31
Indo-China (French) (see also table above):													
Annam	C	11	5	-------	-------	-------	-------	-------	-------	-------	-------	3	3
Cambodia	C	25	21	25	26	25	28	29	40	-------	-------	26	3
Cochin-China	C	52	156	697	232	202	226	107	115	-------	-------	13	170
Kwangchow-Wan	C	-------	1	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------

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

PLAGUE

[C indicates cases; D, deaths; P, present]

Place		Oct. 21–Nov. 17, 1928	Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Week ended— January, 1929		February, 1929				March, 1929					April, 1929			
					19	26	2	9	16	23	2	9	16	23	30	6	13	20	27
Algeria:																			
Algiers	C	2																	
Oran	C	2																	
Argentina: [1]																			
Buenos Aires [2]—																			
Catamarca Province—Recreo	C	P	9																
Cordoba Province—																			
Canada Honda	C	14																	
Laborde	C			1															
Jujuy Province—Perico	C			1				3											
Rosario	C			2				1						[3] 20					
Santiago del Estero	C	7																	
Tucuman Province—El Mollar	C		5																
Azores: St. Michaels Island	C	3		2	1														
	D	1																	
Belgian Congo:																			
Djugu	C	2						1	3			1							
	D							1				1							
Lenza	C	1	1	1															
Brazil:																			
Para	C					1													
Santos	C		2																
British East Africa (see also table below):																			
Uganda	C	114	124	155	39	37	30	46	36	27	22	27							
	D	103	121	152	38	37	30	44	35	27	20	26							
Canary Islands:																			
Teneriffe	C		1																
Laguna	C							1											
Ceylon:																			
Colombo	C	1	4	8		1	2	3	2			2		2	2				
	D	1	4	8		2	1	2	2			1							
Plague-infected rats			5					2	2				2						
Jaffna	C	1																	

China:																			
Hainan	C							P		1	P								
Mongolia—Tungliao	C	19																	
Suyuan Province	C							P		1	P								
Dutch East Indies:																			
Celebes—Makassar	D			1															
Plague-infected rats		2						1											
Java—																			
Batavia and West Java	C	23	43	54	13	12	22	27	16	16			1				1		
	D	22	42	53	13	12	22	26	16	16			1						
Plague-infected rats			1								2	2		2			5		
Surabaya	C	2	1		1	1	3	1											
	D	2			1	1	3	1											
Kediri Residency	C					P													
Ecuador (see table below).																			
Egypt:																			
Alexandria	C					2	1												
	D					1													
Assiout Province	D	3																	
Beni-Suef	C		4	9	1	2						4	2				1	5	
	D		1	2		3						1	1	1				1	
Dierout	D	1																	
Girga	C		1																
Kena Province	C		4																
Menoufieh Province	C	7																	
Suez	C										1			1	1				
Tanta	C	5																	
Greece (see also table below):																			
Athens and Piræus	C	5																	
Corfu	C		1																
India	C	8,710	7,767	7,841	2,592	3,117	3,224	3,667	3,767	4,030	4,970								
	D	4,428	4,863	5,234	1,834	2,166	2,227	2,588	2,896	2,867	3,528								
Bassein	D	2		1	1		3		2	1			1	2	2	1			
Bombay	C	5	4		1			1		2	2		1	1	1				
	D	2	6		1	1	2		1	1	1	1	1	3					
Plague-infected rats		7	32	35	11	10	11	6		8	12	18	9	17	18	13			
Cochin	D			10															
Madras Presidency	C	539	686	500	120	107	130	77	103	90	87	53							
	D	235	307	231	65	60	66	44	49	58	52	30							
Rangoon	C	2	1	1		1	2	1	1	1	2								
	D	3	1	2	1	1	2	1	1	1	2			3	3	3			
Plague-infected rats		4						5	1	4	3	3	2	2	6	5			
Indo-China (see also table below):																			
Pnompenh	C	1	4	8	2	4	1	3	2		1	2	3	2	4	1			
	D	1	4	6	2	4	1	2	1		1	1	3	2	4	1			
Saigon	C	1								1									
Tourane	C								5										

[1] During the period from Nov. 10 to Dec. 11, 1928, 13 cases of plague were reported at El Mollar, Tucuman Province, Argentina. During the same period 1 case of plague was reported at Chipion and 1 at Ucacha, both in Cordoba Province, Argentina.

[2] 18 plague-infected rats were reported at Buenos Aires, Argentina, from July 1 to Dec. 31, 1928.

[3] Unofficial report.

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

PLAGUE—Continued

[C indicates cases; D, deaths; P, present]

Place		Oct. 21–Nov. 17, 1928	Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Week ended— January, 1929		February, 1929				March, 1929					April, 1929			
					19	26	2	9	16	23	2	9	16	23	30	6	13	20	27
Iraq:																			
Baghdad	C	9	10	9	2	1	3			1	6	3	4	5	2			1	2
	D	5	5	8		1	2				3			2	1			1	2
Plague-infected rats							1	5	6	6	5	5	3	2	2	7	2		
Naudham	C					2													
	D					1													
Plague-infected rats								1											
Madagascar (see also table below):																			
Tamatave	C	7		2	1														
	D	3	1																
Morocco	C													22	59	25			
	D													14	43	16			
Nigeria:																			
Lagos	C	83	43	12	1	4	2	7	2	4	5		1	1	1				
	D	77	41	11	1	3	1	7	2	4	5		1	1	1	1			
Plague-infected rats		145	30	28		14	12	22	10	16	15	9							
Peru (see table below).																			
Senegal (see table below).																			
Siam	C	1	9	4	2	11	6	26	3	4	1	1							
	D	1	8	3	2	6	6	3	2	5	1	1							
Bangkok	C	1		4	1					1									
	D	1		1	1		1			1									
Nagara Pathom	C									2	1				4				
	D									1	1				4				
Panknampo	C		8																
Straits Settlements: Singapore	C									1									1
	D									1									1
Syria (see table below).																			
Turkey: Adalia	C	1																	
Union of Socialist Soviet Republics:																			
Kalmouks District	C	10																	
Kasacks	C	7																	
Ural Government	C	7																	

Union of South Africa:																				
Cape Province	C	2	1	4																
Orange Free State	C	P		1	1		2	3	1	1			P							
	D							1												
Transvaal	C			3																
Uruguay:																				
Montevideo	C															4				
Rivera	C			1																
On vessel:																				
S. S. Chenonceaux, at Singapore, from Colombo	C													1						
	D													1						
S. S. Halydan, at Bangkok, from Singapore	C			1																
S. S. Sjomand, at Alexandria, from Batoum	C					1														

Place		October, 1928	November, 1928	December, 1928	January, 1929	February, 1929	March, 1929
British East Africa (see also table above):							
Kenya	C	37	16	15	7	4	
Uganda	C	134					
	D	108					
Ecuador: Guayaquil	C	3	21	20	25	54	
	D	2	8	7	12	22	
Plague-infected rats		21	29	75	20	27	
Greece (see also table above)	C		1	2	3		
	D		1	1	1		
Indo-China (see also table above)	C	2			11		3
Madagascar (see also table above)	C	88		282	233		
	D	84		263	224		
Ambositra Province	C	8	14	79	169		
	D	8	14	74	159		
Antisirabe Province	C	2	6	4	15		
	D	2	6	4	15		
Itasy Province	C	5	6	11	3		
	D	5	6	11	3		
Moramanga Province	C	38	32	28	22		
	D	35	32	27	21		
Tamatave	C	9	2	2	4		
	D	7	2	2	4		

Place		October, 1928	November, 1928	December, 1928	January, 1929	February, 1929	March, 1929
Madagascar—Continued.							
Tananarive Province	C	100	159	158	208		
	D	95	141	144	192		
Peru	D	10	18	26	37		
	D	4	6	6	9		
Senegal:							
Baol [1]	C	39	18	4			6
	D	14	6	2			3
Cayor [1]	C	17		14			
	D	6		10			
Fatick [1]	C	35					
	D	20					
Louga [1]	C	14	2				
	D	5	1				
Rufisque [1]	C	49	8				
	D	14	4				
Thies [1]	C	51	11			8	4
	D	29				7	3
Tivaouane [1]	C					12	
	D					2	
Syria: Beirut	C	1	3				

[1] Reports incomplete.

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

SMALLPOX

[C indicates cases; D, deaths; P, present]

Place		Oct. 21–Nov. 17, 1928	Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Week ended— January, 1929		February, 1929				March, 1929					April, 1929			
					19	26	2	9	16	23	2	9	16	23	30	6	13	20	27
Algeria:																			
Algiers	C	2	1																
Cherchell	C									4	11	6	11	19	12				
Oran	C		7								1			1					
Arabia: Aden	C	1	1	1	1	1							1	11	9	9			
	D													1	4	3			
Brazil (see table below).																			
British East Africa (see also table below), Kenya—Mombasa	C			3															
British South Africa:																			
Northern Rhodesia	C	342	67	173															
	D	14	8	23															
Southern Rhodesia	C	1	5					1	1	16									
Tanganyika	C	1					1	12	1		1	1							
Canada:																			
Alberta	C	4	21	3	3					2	1	1			7				
Calgary	C											1							
Edmonton	C			14	2					2			2			10		4	
British Columbia—Vancouver	C	21	25	51	24	16	16	10	17	14	21	18	22	17	18		12		
Manitoba	C	14	29	23	3		12	6	2	5	3	5			3				
Winnipeg and vicinity	C		17	2															
New Brunswick	C														3				
Nova Scotia	C			5	1		1										1		
Ontario	C	12	15	36	7	4	25	47	38	23	15	7	12	21	14	10	15		
Kingston	C	1																	
Niagara Falls	C													1					
North Bay	C		1						1	2		1							
Ottawa	C	6	2							1									
Sarnia	C	1																	
Toronto	C						1							1		1	1		
Windsor	C																		3
Prince Edward Island	C						2					2							
Quebec	C	118	125	37	9	5	5	5	6	14	3	5	4	3	2	5	11	8	
Montreal	C	10	3	8	5	2	2	1	3	10	2	1	3		1				
Quebec	C	12	6	4	4	2		2						1		2	1		
Riviere du Loup	C																1		

Saskatchewan	C	10	52	14	3	2	13	17	13	22	31	4		13					
Moose Jaw	C	2	1											1					
Regina	C		2	1	2	4													
Saskatoon	C						3	1						1					
China:																			
Amoy	C	P	2	5				P	1	1	1	2	1	1	1				
Canton	C		14	18	14	21	36	16	17	25	15	29	22	42	38	33	29		
	D			2	1			1	3	1	2	9	3	4	4	4	2		
Chefoo	C	P	P																
Foochow	C	P	P	P	P	P	P	P	P	P	P	P	P						
Hong Kong	C	66	202	319	91	78	58	80	47	54	51	37	26	31	22	13	21	16	
	D	21	78	152	83	77	67	59	61	59	34	42	51	47	29	10	39	36	
Manchuria—																			
Changshun	C						3			2							1		
Fushun	C	1			1		1	3											
Harbin	C	7	4	2	5														
Kwantung—Dairen	C	2	5				1	1	1	4	3	1				1	6		
	D						1	1	1		2						3		
Mukden	C			1				3								1			
	D							1											
Shanghai—																			
Foreigners only	C	9	6	23	8	3	4	8	3	4	1	3	1	1	1				
Including natives	D	20	32	64	15	18	18	9	9	9	10	12	3	8	5	9	7		
Swatow	C										5	4	12	7					
Tientsin	C	6	2	6		2		1		1		1	2						
Tsingtao	C								P	P	P		P		P				
Yunnanfu	C												P	P					
Colombia: Cartagena	D		7							7									
Dominican Republic	C							1											
Dutch East Indies:																			
Balikpapan	C									1			1	4					
Belawan Deli	C	5	6	7	5	11	2	8	4	3	1	1	2	2	2	1	1		
	D	2	2	3	1	4		1	3	2	1			1	1				
Borneo	C				30					13		13							
Pontianak	C	1																	
Samarinda	C	16	27	11				4		17	3	27	1			1			
	D	2	4	3						3	1			3					
Celebes—Makassar	C		1												4	2	6		
	D															2	5		
Java—																			
Batavia and West Java	C	2	1																
East Java and Madura	C	1																	
	D	1																	
Surabaya	C	1	2																
Palembang	C								1		8								
	D								1		1								
Sumatra—																			
Baros	C			96	50	14	25	17	3	19	13	1		9					
	D			30	12	7	5	2	1	3	1								
Medan	C	4	3	9		1	2	8	4	3	1	1	2	2					
	D	2	1	5		4		1	3	2	1		1	1					

Ecuador (see table below).

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

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		Oct. 21–Nov. 17, 1928	Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Week ended— January, 1929		February, 1929				March, 1929					April, 1929			
					19	26	2	9	16	23	2	9	16	23	30	6	13	20	27
Egypt:																			
Gharbieh	C								1										
Port Said	C							1											
Suez	C		1														1		4
France (see table below).																			
Great Britain:																			
England and Wales	C	581	719	733	171	239	230	250	231	275	288	289	272	288	323	273	339		
Bradford	C		1					1		1		1		3					
Bristol	C				1														
Cardiff	C		1				4									1	1		
Castleford	C	6	8	16	4	14	16	14	22	31	12	20	13	17	17	9	5		
Hull	C	3	1				2												
Leeds	C	1	2	1		1	1	1	1	1	3	1	1	3	3	1	1		
Liverpool	C				1											1			
London	C	21	14	36	6	13	17	4	9	17	10	18	11	13	19	15	29		
Newcastle-on-Tyne	C	1	3				1	5	2		3	1	2			14	1		
Nottingham	C	1	3	3				1					2						
Plymouth	C	6																	
Stoke-on-Trent	C	9	11	4	2	8	2	2	5	4	4	5	4	28	20	20	42		
Scotland—																			
Dundee	C	2	1																
Glasgow	C															1	12		
Greece (see table below).																			
Hedjaz	C			48	55	21	22	55	29	42	37			24	30	30	23		
	D			15	20	7	9	20	13	15	12			10	21	21	16		
India	C	3,041	5,902	7,877	2,887	3,285	3,248	3,111	3,528	3,520	3,937								
	D	836	1,602	2,143	729	798	815	703	860	788	847								
Bombay	C	9	11	34	34	42	44	38	44	93	112	148	142	119	94	86			
	D	4	4	21	13	17	25	23	32	37	49	70	58	52	51	45			
Calcutta	C	2	13	10	8	4	7	13	13	9	11	71	35	32	22	28			
	D	2	7	6	5	1	3	7	6	7	7	9	24	21	13	19			
Karachi	C			6		10	1	16	28	24	49	46	43	57	58	48			
	D					1		4	7	4	11	22	14	13	20	33			
Madras	C	71	58	94	50	82	37	54	60	56	68	76	88	96	104	104			
	D	22	16	25	6	11	12	6	13	6	18	24	11	23	23	26			

Moulmein	C		5	3	2	2	2		4		5	5	5	3	5	5				
	D		1	1		1	1					4	2		1	1				
Negapatam	C	38	33	8	3	14	2	7	2	2		1	4	3						
	D	8	5			1		5	2	1		1								
Rangoon	C	1	1	1		4	1	3	4	6	2	5	3	2	4					
	D						1		1	1	2	2	1	2						
Tuticorin	C				1		1			1										
Vizagapatam	C			2	2			6	12	4	17	19	8	3	15					
	D								2		3	4	1	2	2					
India (French):																				
Chandernagor	C	3																		
	D	3																		
Pondicherry Province	C	84	48	75	22	13	12	12	18	26	16	19	6	21	23					
	D	67	46	62	20	13	10	8	14	22	12	13	6	17	18					
Indo-China (see also table below):																				
Pnompenh	C	30	44	38	11	6	38	22	19	15	18	10	13	19	27	9	9			
	D	5	20	21	8	3	17	14	10	8	11	7	5	10	14	4	5			
Saigon	C	2		12	2		1	2		1	1		1		1	1				
	D	2		6			1									1				
Iraq:																				
Baghdad	C	40	46	20	13	1	1	2	4	2	1		2	3		1	16	1	1	
	D	23	45	29	2	1			4	1				1						
Basra	C	35	35	11	5	4	1	8	4	2		1	2	1	1	5	2	1		
	D	33	26	7	4	3	1	2	3	1		1			1	1		1		
Hillah Liwa	C			54	20															
	D			14	9															
Kirkuk Liwa	C		173	86					9	9										
	D		38	17					2	2										
Mossoul	C	53	294	55	2		23	5	14	14										
	D	23	110	39	4		12	1	2	2										
Sinjar	C			53	61															
	D			5	15															
Italy:																				
Palermo	C	2	3	3																
Turin	C								1											
Ivory Coast (see table below).																				
Jamaica (outside Kingston) (alastrim)	C			1																
Kingston (alastrim)	C		1																	
Japan:																				
Kobe	C										1									
Nagasaki	C				1	1	1													
	D					1	1													
Osaka	C										1									
	D										12	15	6	3	14	9	9			
Macao	D			9	2	8		14	24	24										
Mexico:																				
Aguascalientes	D		2	1	1	1	1			3				2		5	1	6		
Chiapas Province	C														P					
	D																			
Chihuahua	C				1															
Jalisco (State): Guadalajara	D		4	1		2	2	4	4	2	1	1		2	4	7	3	1		
Juarez	D			5		1					1		3							
Mexico City and surrounding territory	C	5		7	2					2			1							
Palomas	C										1									

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

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		Oct. 21–Nov. 17, 1928	Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Week ended— January, 1929		February, 1929				March, 1929					April, 1929			
					19	26	2	9	16	23	2	9	16	23	30	6	13	20	27
Mexico—Continued.																			
Saltillo	D	1																	
San Luis Potosi	D	1																	
Tampico	C	1								1				2					
Vera Cruz	D													2					
Morocco (see table below).																			
Nicaragua: Managua	C																P		
Nigeria:																			
Lagos	C	1																	
Southern Provinces	C					57	105												
	D					11	20												
Panama Canal Zone	C														P				
Poland	C	1	3	1				41											
	D	1						3											
Portugal (see also table below).																			
Lisbon	C			2	2		2						3						
Oporto	C														1				
Senegal (see table below).																			
Siam	C	1	8	19				2		3	1								
	D			2															
Bangkok	C		1																
Spain: Valencia	C									1	1			4	1				
Straits Settlements: Singapore	C			1		2	1	2	2		1				1				
Sudan (Anglo-Egyptian)	C	79	220	491	190	17	58		49	71	13	55	30	22	37	156	127	138	12
	D	13	42	57	24	5	5		13	14	11	16	6	2	6	15	17	3	3
Sudan (French) (see table below).																			
Sweden: Stockholm	C		1																
Syria (see table below).																			
Tunisia: Tunis	C	1	2	14							3	2							
Union of South Africa:																			
Cape Province	C	P	P																
Natal	C			1															
Orange Free State	C	P																	
Transvaal	C	P																	
Upper Volta	C	5				1		2	2		2				3				

Place																			
On vessel:																			
S. S. Ballarat, en route to Cape Town, South Africa	C	1																	
S. S. Lopes-Lopes, at Suez	C																1		
S. S. Malwa, at Suez	C																	1	
S. S. Mancar, at Suez, from Calcutta	C																1		
Tantalus (motorship), at Amsterdam	C									3									
S. S. Tuscania, at Glasgow, from Bombay	C															P			

Place		October, 1928	November, 1928	December, 1928			January, 1929			February, 1929			March, 1929		
				1-10	11-20	21-31	1-10	11-20	21-31	1-10	11-20	21-28	1-10	11-20	21-31
Indo-China (see also table above)	C	100	144	23	100	120	74	130	107	128	236			200	361
Ivory Coast	C	1													4
Senegal	C	2								80			17	8	45
	D									8			1	3	7
Sudan (French)	C	32		2		P								26	
	D	2												3	
Syria: Beirut	C	1	2			1		1		21	24	3		10	2

Place		September, 1928	October, 1928	November, 1928	December, 1928	January, 1929	February, 1929
Brazil: Porto Alegre	C	1	12	3			
British East Africa (see also table above):							
Kenya	C		36	37	31		
Zanzibar	C		2				
Chosen: Chinampo	C						1
Ecuador: Guayaquil	C	22	6	6	13	12	4
	D	1	3	1	1	1	1
France	C	3	3		18	9	8

Place		September, 1928	October, 1928	November, 1928	December, 1928	January, 1929	February, 1929
Greece	C	6	6	6	6	8	5
	D		1			1	1
Morocco	C	4	5	2		7	11
Persia	D				119	68	23
Portugal (see also table above)	C	24	27				
	D	2	3				
Turkey	C					16	7
	D					6	

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

TYPHUS FEVER

[C indicates cases; D, deaths; P, present]

Place		Oct. 21–Nov. 17, 1928	Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Week ended— January, 1929		February, 1929				March, 1929					April, 1929			
					19	26	2	9	16	23	2	9	16	23	30	6	13	20	27
Algeria:																			
Algiers	C	4											3	1					
Constantine Department	C							2	2			11	P	2					
Oran	C	2				5						2							
Bulgaria	C	4	9	5	3	4			3		19	17	7	18					
	D	1										2	1	3					
Sofia	C							1											
Chile: Valparaiso	C		1																
China:																			
Canton	C				2														
	D				2														
Hong Kong	C				1														
Manchuria—																			
Harbin	C		2																
Kwantung	C	1										1							
Chosen (see table below).																			
Egypt:																			
Alexandria	C												1						1
Assouan Province	C								2										
	D								2										
Beheira Province	C								6	7						67	50		
	D															9	9		
Daqalhiya Province	C		15	11									34						
	D		1	2															
Gharbieh	C							1		2									
	D									1									
Menoufieh Province	C																	35	
Port Said	C	1																	
Greece (see table below).																			
Ireland: Irish Free State—																			
Clare County—Scariff	C	1																	
Cork County	C										1								

Dublin	C					1													
	D						1												
Kerry County—																			
Dingle	C												2						
Killarney	C											1					2		
Lithuania (see table below).																			
Mexico (see also table below):																			
Aguascalientes	D		2										3		2				
Chihuahua	D			1															
Mexico City, including municipalities in Federal District	C	15	12	9	3	4	1	3	1	3	1	2	1	1	2				
	D	2	1	2		1		2	1			1							
San Luis Potosi	D			1															
Morocco	C	1	16	4	1	7	7	5	6	10	1		7		6	6			
Palestine	C	6	12	2		2		1		2					2	1			
Peru (see table below).																			
Poland	C	81	117	203	33	76	72	41	47	51	91	55	69						
Portugal: Oporto	C		1																
Rumania	C	17	42	167	56	40	47	30	42	32	70								
	D		1	11	5	7	7	4	3	7	8								
Tunisia	C	4	6				2		3				9		9	1			
Menzel	C	1																	
Turkey (see table below).																			
Union of South Africa:																			
Cape Province	C	P	P	P		P	P	P	P	P	P	P	P						
	D	1																	
Natal	C	P	P	2						2									
Orange Free State	C	P	P	P		P	P	P	P	P									
Transvaal	C			P		1													
Yugoslavia (see table below).																			

Place		October, 1928	November, 1928	December, 1928	January, 1929	February, 1929	March, 1929
Chosen:							
Chemulpo	C	1	1				
Seoul	C	3		3	4		
Greece: Athens	C	1	4	1	13		
	D				5		
Lithuania	C		4	11	32	24	62
	D				3	3	1

Place		October, 1928	November, 1928	December, 1928	January, 1929	February, 1929	March, 1929
Mexico: Sonora (see also table above)	D				1		
Peru	C		3				
Turkey	C	4		19	1	3	
	D					1	
Yugoslavia	C	1	17	7	15	13	
	D					2	

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

YELLOW FEVER

[C indicates cases; D, deaths; P, present]

Place		Oct. 21–Nov. 17, 1928	Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Week ended—														
					January, 1929		February, 1929				March, 1929					April, 1929			
					19	26	2	9	16	23	2	9	16	23	30	6	13	20	27
Brazil:																			
Bahia	C	1		2											1				
	D			1											1				
Guaratingueta	C										[2] 1								
	D										[2] 1								
Para	D			2		1										5			
Rio de Janeiro [1]	C	2	2	2			7	19	13	11	21	47		59	61	66	57	51	39
	D	1		2			4	13	9	6	18	27		30	38	32	34	23	20
Sao Paulo	C							[3] 1											
	D							[3] 1											
Dahomey: Ouidah Military Camp	C	1	1																
	D	1																	
Gambia: Bathurst	C	4	3																
	D	1	2																
Liberia: Monrovia	C					[3] 3													
	D					2													
On vessel:																			
S. S. Victoria, at Manaos, from Para, Brazil	C			1															
	D			1															

[1] 29 cases of yellow fever with 14 deaths were reported at Rio de Janeiro during January, 1929, mostly suburban.
[2] Imported.
[3] Suspected cases.