

PUBLIC HEALTH REPORTS

VOL. 46

AUGUST 7, 1931

NO. 32

TYPHUS FEVER

THE RAT FLEA, *XENOPSYLLA CHEOPIS*, IN EXPERIMENTAL TRANSMISSION

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Epidemiological studies have shown an association of typhus fever in the Southeastern United States with the handling of foodstuffs (1) and intimate association with rats (2).

The importance of the rat flea as a vector of endemic typhus fever in the United States has been shown by the recovery of the virus of this disease from fleas taken from wild rats trapped at typhus fever foci in Baltimore (3). More recently the virus of endemic typhus has also been recovered from fleas taken at a typhus focus in Savannah (4). The Baltimore and Savannah strains of virus have been definitely shown to be identical with the virus of endemic typhus recovered from a human case (4). The recovery of typhus virus from wild rats recently has been reported by Mooser, Castaneda, and Zinsser (5).

Experimental transmission of endemic typhus in the laboratory by means of the rat flea has been attempted. In these experiments one of the species of flea (*Xenopsylla cheopis*) incriminated by our previous work has been used (3).

Metal and glass boxes approximately 24 inches long, 14 inches wide, and 18 inches deep were constructed. The bottoms and corners were made of copper, the sides and ends being of glass. Tops were made of fine copper wire screening stretched over metal frames. A trap door was placed in each top.

White rats were chosen as the experimental animals.

Fleas were procured from rats trapped in Baltimore and identified by hand lens. Approximately 50 of these fleas were placed in glass box X-1. White rats were injected with endemic typhus virus (Baltimore and Savannah flea strains) and placed in the same glass box. Approximately two weeks after the first infected white rat had been placed in box X-1, six fleas were removed from this box, emulsified in normal saline, and injected into two guinea pigs. One of these guinea pigs developed clinical endemic typhus. This strain of virus was carried in guinea pigs and rabbits for three generations and then dropped. Smears from the tunica of one of the guinea pigs showed rickettsia. Two rabbits inoculated with this virus showed the development of agglutinins for *Proteus* X₁₉, type O.

Noninfected white rats and additional infected white rats were then placed in box X-1. After a residence of about two weeks in the box one of the white rats originally noninfected was removed and killed. Six fleas were removed from this rat, emulsified in normal saline, and injected into two guinea pigs. Both animals developed clinical endemic typhus. Two rabbits inoculated with the strain of virus obtained from these fleas developed agglutinins for *Proteus* X₁₉, type O.

The brain and spleen from this originally noninfected white rat were removed and inoculated, separately, into guinea pigs. These animals developed clinical endemic typhus. Two rabbits inoculated with the strain of virus recovered from this rat developed agglutinins for *Proteus* X₁₉, type O.

The fleas remaining in box X-1 were then transferred to a fresh box, X-3. White rats infected with typhus and noninfected white rats were placed in box X-3. About two weeks later one of the white rats, originally noninfected, was removed and killed. Fleas taken from this rat were treated as before, with the same results. The brain and spleen of this rat were injected into guinea pigs, and clinical endemic typhus again followed. This strain also produced agglutinins for *Proteus* X₁₉, type O, in rabbits.

The same experiment was again repeated, using a second originally noninfected rat from box X-3. This again resulted in establishing a strain of virus, in guinea pigs, clinically identical with endemic typhus.

Guinea pigs recovered from infection with an established strain of endemic typhus virus originally derived from a human case, and also guinea pigs recovered from infection with endemic typhus virus isolated from rat fleas caught at typhus foci have been found immune to subsequent inoculation with the strains of virus recovered from the emulsified fleas removed from boxes X-1 and X-3, and likewise to the strains recovered from brains and spleens of originally noninfected rats from the same boxes.

Careful repeated search of both boxes and rats failed to show the presence of any blood-sucking parasite other than *Xenopsylla cheopis*.

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CURRENT PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES¹

June 21-July 18, 1931

The prevalence of certain important communicable diseases, as indicated by weekly telegraphic reports from State health departments to the Public Health Service, is summarized in this report. The underlying statistical data are published weekly in the Public Health Reports under the section entitled "Prevalence of Disease."

Poliomyelitis.—During the period of this report the number of cases of poliomyelitis reported (491) was more than twice the number reported for the preceding 4-week period. The States along the Atlantic coast and the East North Central group seemed to be mostly responsible for the excess incidence. In Massachusetts the cases rose from 8 to 32; in New York from 16 to 105; in Connecticut from 1 to 16 and in North Carolina from 2 to 9. Each of the States in the East North Central group, except Indiana, reported from three to five times more cases than were recorded during the preceding 4-week period.

Part but not all of this increase represents the usual seasonal rise. The total number of cases reported was about 52 per cent of the number reported in the same period of 1930 but was more than twice the number reported for the corresponding period of either 1929 or 1928. The following table affords a comparison by geographic areas with the reports for 1930 and 1929.

TABLE 1.—*Poliomyelitis cases reported in various geographic regions by 4-week periods in 1931 with comparative figures for the same periods in 1929 and 1930*

Geographic division	Four-week period ended—			
	July 18	June 20	May 23	Apr. 25
All regions:				
1931.....	291	124	87	83
1930.....	611	189	93	63
1929.....	132	95	102	66
New England and Middle Atlantic:				
1931.....	169	30	23	23
1930.....	37	12	24	15
1929.....	33	23	24	16
South Atlantic:				
1931.....	23	14	10	9
1930.....	30	20	9	13
1929.....	39	18	23	14
East North Central:				
1931.....	41	15	14	14
1930.....	40	15	7	4
1929.....	11	16	23	19
South Central:				
1931.....	24	20	14	8
1930.....	137	36	12	18
1929.....	20	7	12	5
West North Central:				
1931.....	12	15	10	9
1930.....	33	6	2	0
1929.....	7	12	7	6
Mountain and Pacific:				
1931.....	22	30	16	20
1930.....	334	100	39	13
1929.....	22	19	13	6

¹ From the Office of Statistical Investigations, U. S. Public Health Service. The number of States included for the various diseases are as follows: Typhoid fever, 47; poliomyelitis, 48; meningococcus meningitis, 48; smallpox, 45; diphtheria, 47; scarlet fever, 47; influenza, 39 States and New York City. The District of Columbia is counted as a State in these reports.

In 1930 the far West and the Mississippi Valley were the areas chiefly affected. This year the first tendency toward any appreciable increase has appeared in States along the Atlantic coast and the East North Central group, with very little rise in the Western States and Mississippi Valley.

Typhoid fever.—The number of cases of typhoid fever reported for the current period was twice that recorded during the preceding 4-week period. Comparison with previous years shows that the disease was more prevalent than in the corresponding period of either of the two preceding years. The cases totaled 2,303, as compared with 2,092 in 1930 and 2,047 in 1929, i. e., approximately 10 per cent increase in 1931 over each of the two preceding years.

Each geographic area except the Mountain and Pacific groups contributed to the increase. The West North Central group showed an increase of about 42 per cent over last year's figure, and in the other groups the increases ranged from 6 per cent to 17 per cent. The Mountain and Pacific groups recorded a 10 per cent decrease.

Measles.—The number of cases of measles (26,081) reported for the four weeks ended July 18 was only 84 per cent of the number reported for the same period in 1930. It was, however, 10 per cent in excess of the number occurring in 1929.

For the first time this year the incidence of measles in the North Atlantic States fell below the incidence of last year during successive 4-week periods. The decrease (8 per cent) was small, however, compared with the decreases of from 40 to 70 per cent which occurred in other areas. The only exceptions to the decline were the South Atlantic and East North Central groups. In the former group the number of cases was four and five-tenths times that of last year and in the latter the excess was about 40 per cent.

Smallpox.—The incidence of smallpox reached its lowest level for the current year during the 4-week period ended July 18. The number of cases reported was 1,675, which was only 54 per cent of the cases reported for the corresponding period in 1930 and 71 per cent of the figure for 1929. All regions participated in the decline except the New England and Middle Atlantic groups. In Vermont the cases rose from 23 for the preceding 4-week period to 56 during the current period and in New York from 28 to 83 cases. The decreases in the other groups ranged from 24 per cent to 77 per cent.

Scarlet fever.—The number of cases of scarlet fever (6,727) reported during the 4-week period ended July 18 was only 50 per cent of the number reported during the preceding 4-week period. In relation to previous years the incidence was about 12 per cent higher than in the corresponding period of 1930, but was 2 per cent below that of 1929. Sections along the Atlantic coast reported increases over last year. The North Atlantic showing a 45 per cent increase and

the South Atlantic a 12 per cent increase. Most of the other sections showed very considerable decreases.

Meningococcus meningitis.—For the current period there were 244 cases of meningococcus meningitis reported, which was about 30 per cent lower than the figure for the corresponding period of 1930 and 60 per cent below 1929. All areas contributed to the decline. In the South Atlantic States, the only group which has shown any increase during the current year, the cases dropped to 25 per cent of last year's figure. The sharpest decreases were apparent in the South Central (51 per cent) and the Mountain and Pacific groups (62 per cent).

Diphtheria.—The comparison with previous years continued very favorable. The number of cases reported was 2,459, as compared with 3,062 for the corresponding period of last year and 4,430 in 1929 for the corresponding period. From 20 to 35 per cent decreases occurred in the North Atlantic States and the regions around the Great Lakes. In the other groups the figures approximated those of last year for the same period.

Influenza.—For the first time in the current year the incidence of influenza fell below that of the corresponding period of last year. The cases totaled 765, as compared with 856 for the corresponding periods of each of the years 1930 and 1929. With the exception of the East North Central group of States, all of the geographic areas were as low as last year's figure or showed decreases ranging from 21 to 26 per cent.

Mortality, all causes.—The mortality rate for all causes in a group of large cities as reported by the Bureau of the Census, averaged 11.2 per 1,000 for the 4-week period ended July 18, 1931. Last year the average rate for this period was 10.8. The average rate for this period during the four preceding years was 11.4.

COORDINATION IN THE SANITARY CONTROL OF BOTTLED MINERAL WATERS¹

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Over 400 springs or wells in the United States have been commercialized, the water from these sources being bottled and sold for medicinal and table use. Owing to improvements in the quality of municipal water supplies, high freight rates, and a changed attitude on the part of the medical profession toward the efficacy of mineral waters in the treatment of disease, only a small proportion

¹ Presented at the Twenty-ninth Annual Conference of State and Territorial Health Officers with the United States Public Health Service, Washington, D. C., Apr. 30, 1931.

of these 400 springs and wells are active at the present time. Nevertheless, considering the country as a whole, there is a substantial traffic in bottled waters. The traffic in these commodities at the present time is both local and interstate. There are several dozen well-known springs, such as Poland, Mountain Valley, Buffalo, Pluto, etc., from which bottled water is shipped in relatively large quantities to all parts of the United States. There are numerous other springs or wells, however, from which water is shipped only intermittently, chiefly in intrastate traffic, but also sporadically in interstate commerce.

The regulatory control of these bottled waters from the standpoint of their sanitary quality and from the standpoint of the therapeutic claims made for them in the labeling of the interstate package, is vested in the Food and Drug Administration of the United States Department of Agriculture under the general provisions of the Federal food and drugs act. Ever since the act became effective in January, 1907, a portion of the funds and time of the personnel of the Administration has been expended in bringing these products into compliance with the terms of the law.

The elimination of the names of diseases from the labeling of bottled waters through numerous court actions brought under the provisions of the act, will not be referred to here. The phase of the regulatory control which it is desired to bring before you at this time is that governing the sanitary quality of these bottled waters.

The current procedure in the Food and Drug Administration is to purchase from dealers and handlers of bottled waters and from consumers of these products, adequate samples for bacteriological and sanitary chemical analyses. Several hundred such samples are examined annually in our Water and Beverage Laboratory under the direction of Mr. J. W. Sale. Only a small proportion, about 10 or 15 per cent, of these samples is found to be polluted. Additional samples of the waters found to be polluted are collected and examined, and formal action leading to confiscation of polluted shipments and prosecution of the shipper is instituted under the act. The standards which we employ in determining whether or not a water is polluted are essentially the same as those used by the United States Public Health Service in the control of water on interstate carriers. The exact standards that we use and other details of our procedure are fully described in a mimeographed article entitled, "Mineral Waters and Their Salts Under the Federal Food and Drugs Act." The laboratory examination of the samples is supplemented, wherever possible, by inspection of the sources of the supplies; but we have not found it practicable to make as many surveys on as many occasions as would be required to bring about thoroughly acceptable conditions. We are somewhat handicapped in that we have no

sanitary engineers on our staff, which consists of chemists, bacteriologists, microscopists, pharmacologists, medical officers, inspectors, etc.

It has occurred to some of us that a closer coordination between the administration and State health officials who are charged with the sanitary control of public water supplies might prove to be extremely beneficial to all parties concerned. As already stated, the water from many springs and wells is sold and consumed largely within the State in which the sources of supplies are located and is distributed only intermittently in interstate commerce. Under these circumstances the chief responsibility for the sanitary quality of this class of bottled waters rests primarily upon local health authorities. While we have made close contact with the State health officials of a few States, generally speaking we are not informed of the steps which these officials have taken to control the sanitary quality of bottled waters, and presumably the State health officials have not been aware, except perhaps in a very general way, of the control that has been exercised under the provisions of the food and drugs act. It was our thought that if our work could be coordinated more closely, considerable duplication of work would be avoided, with a consequent saving in funds.

With this thought in mind, the writer and Mr. Sale, accompanied by a representative from the United States Public Health Service, visited the State Health Departments of North and South Carolina and Florida. Arrangements were made with the officials of these States for an interchange of information through the medium of the administration's field stations, which are located at strategic points throughout the United States. Specifically, it would be advantageous if this administration should be informed as to what measures have been taken by the State departments in the sanitary control of these springs and wells, particularly with respect to the sanitary inspection and the source of supplies, the conclusions reached by the engineers who have made the inspections, the reports of laboratory analyses, and the recommendations for improvement. It was agreed that this administration would report in detail conditions which we have found as a result of our various inspections and analyses of the waters which have entered interstate commerce, and that we would be prepared, chiefly through the agents of our field stations, to cooperate at all times with the health departments for the purpose of securing bottled waters of high sanitary quality and eliminating so far as possible from the channels of commerce any such waters as may prove a possible menace to health.

If this plan of cooperation appeals in general to other State health officials, it is planned that members of the administration will personally visit every State department which is charged with the sanitary control of mineral springs and that these contacts will be made,

as soon as opportunity offers. We shall continue to exercise supervision over the labeling of these bottled waters under that section of the act which interdicts the use of therapeutic claims which are false and fraudulent. We are confident that if such mutual arrangements can be effected, the result will be advantageous to health officials as well as to members of the administration in their common aim—the protection of the consuming public.

The writer is indebted to Mr. J. W. Sale for his assistance in the preparation of this paper.

COURT DECISION RELATING TO PUBLIC HEALTH

Disease developing gradually held not compensable under workmen's compensation act.—(Tennessee Supreme Court; *Morrison v. Tennessee Consol. Coal Co.*, 39 S. W. (2d) 272; decided June 10, 1931.) An action was brought against a coal company by an employee of said company to recover damages for personal injuries. The plaintiff's allegations were to the effect that, because of unsuitable tools furnished him and because of improper ventilation of the mine, he had been compelled to breathe large quantities of dust, fumes, and gases, and that, as a result of such inhalation, tuberculosis or other serious infection of his respiratory organs had gradually developed. One of the defenses interposed was that the injury sued on was compensable under the workmen's compensation law, and the question presented to the supreme court on appeal was whether such injury was so compensable.

The compensation statute provided:

"Injury" and "personal injury" shall mean only injury by accident arising out of and in the course of employment, and shall not include a disease in any form except as it shall naturally result from the injury.

The supreme court stated that "If the plaintiff suffers from a disease at all, occupational or otherwise, he has no recourse under the workmen's compensation act, unless that disease naturally results from an accidental injury," and, citing former decisions by it, declared:

An injury, to be regarded as an accidental injury under the compensation act, must be an injury unforeseen, unexpected, and fortuitous. An element of unexpected casualty must be present.

Proceeding the court said:

According to the declaration herein, the disease of the plaintiff came about as a natural result of the inhalation of dust, gases, and fumes present in the mine. Certainly then there is no unforeseen, unexpected, nor fortuitous result involved.

Moreover, we are unable to see anything unforeseen, unexpected, or fortuitous in the cause of plaintiff's injuries, as that cause is stated in the declaration. * * * No element of casualty appears about the selection of the tools or the preparation of the working place, nor does any element of casualty appear in the operation of such tools by plaintiff, nor in the pursuit of his activities by plaintiff in the particular working place. * * *

The court also pointed out that, in addition to the foregoing, it was quite generally held that, in order for a disease to be referable to an accidental injury under compensation statutes, the inception of the disease must be assignable to a determinate or single occurrence identified in space or time. It cited one of its own decisions in which the last proposition was recognized, and then went on to say:

If an accidental injury was viewed otherwise, it would be difficult to apply the statutory provision as to notice and indeed difficult to apply the limitation of the time in which an action under the compensation statute must be commenced. Such provisions of the statute indicate that the legislature could not have intended accidental injuries to include diseases which developed "gradually" or "by gradual process," as the plaintiff's troubles herein are alleged to have evolved.

DEATHS DURING WEEK ENDED JULY 18, 1931

Summary of information received by telegraph from industrial insurance companies for the week ended July 18, 1931, and corresponding week of 1930. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)

	Week ended July 18, 1931	Corresponding week, 1930
Policies in force.....	75, 038, 874	76, 031, 799
Number of death claims.....	12, 549	12, 065
Death claims per 1,000 policies in force, annual rate...	8. 7	8. 3

Deaths¹ from all causes in certain large cities of the United States during the week ended July 18, 1931, infant mortality, annual death rate, and comparison with corresponding week of 1930. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)

[The rates published in this summary are based upon mid-year population estimates derived from the 1930 census]

City	Week ended July 18, 1931				Corresponding week, 1930		Death rate ² for the first 29 weeks	
	Total deaths	Death rate ¹	Deaths under 1 year	Infant mortality rate ¹	Death rate ¹	Deaths under 1 year	1931	1930
Total (81 cities).....	7, 025	10. 3	598	47	11. 0	668	12. 8	12. 6
Akron.....	26	5. 3	2	20	6. 9	4	8. 1	8. 0
Albany.....	24	13. 7	2	40	12. 7	3	14. 5	15. 5
Atlanta.....	63	11. 8	8	82	16. 7	19	15. 9	16. 8
White.....	29		3	48		7		
Colored.....	34	(⁹)	5	144	(⁹)	12	(⁹)	(⁹)
Baltimore.....	177	11. 3	19	64	10. 9	13	15. 3	14. 5
White.....	135		9	39		7		
Colored.....	42	(⁹)	10	156	(⁹)	6	(⁹)	(⁹)
Birmingham.....	61	11. 8	7	70	18. 3	11	14. 6	14. 5
White.....	41		5	86		5		
Colored.....	20	(⁹)	2	49	(⁹)	6	(⁹)	(⁹)
Boston.....	176	11. 7	16	46	9. 7	14	15. 0	15. 0
Bridgeport.....	20	7. 1	2	33	13. 1	3	11. 8	12. 2
Buffalo.....	126	11. 3	16	65	11. 1	15	14. 0	13. 7
Cambridge.....	24	11. 0	3	60	6. 0	0	13. 1	12. 8
Camden.....	31	13. 6	0	0	12. 3	1	15. 2	14. 2
Canton.....	14	6. 8	0	0	7. 4	4	10. 7	10. 7
Chicago.....	638	9. 6	39	34	8. 8	34	11. 5	11. 0
Cincinnati.....	144	16. 4	13	78	13. 6	4	16. 8	16. 0

See footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended July 18, 1931, infant mortality, annual death rate, and comparison with corresponding week of 1930. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended July 18, 1931				Corresponding week, 1930		Death rate for the first 29 weeks	
	Total deaths	Death rate	Deaths under 1 year	Infant mortality rate	Death rate	Deaths under 1 year	1931	1930
Cleveland.....	173	9.9	17	49	9.2	15	11.8	11.8
Columbus.....	60	10.6	2	20	12.7	5	14.5	16.8
Dallas.....	50	9.6	8	—	11.3	11	12.0	12.0
White.....	41	—	8	—	—	10	—	—
Colored.....	9	(9)	0	—	(9)	1	(9)	(9)
Dayton.....	33	8.3	2	28	11.3	7	12.6	10.4
Denver.....	61	10.9	4	39	14.5	13	14.6	15.1
Des Moines.....	30	10.8	0	0	11.7	2	11.8	12.4
Detroit.....	224	7.1	28	45	8.6	31	9.0	10.0
Duluth.....	22	11.3	2	49	8.7	3	11.0	11.7
El Paso.....	21	10.4	6	—	15.2	11	17.0	18.5
Erie.....	21	9.3	2	37	8.1	3	11.0	11.6
Fall River.....	12	5.4	1	23	9.0	1	12.4	13.0
Fort Worth.....	41	12.8	2	—	7.3	3	11.5	11.5
White.....	33	—	2	—	—	1	—	—
Colored.....	8	(9)	0	—	(9)	2	(9)	(9)
Grand Rapids.....	26	7.9	2	30	8.0	4	9.6	11.1
Houston.....	68	11.4	11	—	12.0	6	11.6	12.8
White.....	52	—	9	—	—	6	—	—
Colored.....	16	(9)	2	—	(9)	0	(9)	(9)
Indianapolis.....	88	12.4	7	58	12.3	10	14.5	15.0
White.....	74	—	4	38	—	6	—	—
Colored.....	14	(9)	3	201	(9)	4	(9)	(9)
Jersey City.....	56	9.2	4	36	10.4	6	12.3	12.1
Kansas City, Kans.....	18	7.6	1	21	10.7	0	13.8	11.5
White.....	14	—	1	25	—	0	—	—
Colored.....	4	(9)	0	0	(9)	0	(9)	(9)
Kansas City, Mo.....	94	12.0	7	53	14.2	9	14.2	13.6
Knoxville.....	25	11.9	4	85	10.8	5	13.4	14.5
White.....	21	—	3	71	—	4	—	—
Colored.....	4	(9)	1	204	(9)	1	(9)	(9)
Long Beach.....	21	7.2	2	48	12.3	6	10.2	10.0
Los Angeles.....	277	11.0	17	49	13.2	27	11.2	11.5
Louisville.....	79	13.4	2	17	11.3	4	15.2	13.9
White.....	59	—	0	0	—	4	—	—
Colored.....	20	(9)	2	133	(9)	0	(9)	(9)
Lowell.....	8	4.1	1	25	10.4	4	13.3	14.4
Lynn.....	18	9.1	3	78	8.1	1	10.5	11.3
Memphis.....	79	15.9	12	127	28.3	10	17.1	18.3
White.....	42	—	7	117	—	3	—	—
Colored.....	37	(9)	5	145	(9)	7	(9)	(9)
Miami.....	19	8.8	1	25	10.8	3	12.6	11.8
White.....	12	—	1	35	—	1	—	—
Colored.....	7	(9)	0	0	(9)	2	(9)	(9)
Milwaukee.....	98	8.7	12	52	7.8	4	10.0	10.2
Minneapolis.....	115	12.7	7	45	10.6	4	12.1	11.0
Nashville.....	43	14.4	3	45	17.9	5	17.4	16.9
White.....	23	—	0	0	—	3	—	—
Colored.....	20	(9)	3	177	(9)	2	(9)	(9)
New Bedford.....	27	12.5	2	53	8.3	1	13.2	11.9
New Haven.....	36	11.5	2	38	9.0	3	12.5	13.9
New Orleans.....	137	15.3	16	88	14.5	10	17.8	18.5
White.....	86	—	10	83	—	6	—	—
Colored.....	51	(9)	6	98	(9)	4	(9)	(9)
New York.....	1,273	9.4	102	43	9.1	121	12.0	11.6
Bronx Borough.....	180	7.1	13	29	7.1	12	8.8	8.3
Brooklyn Borough.....	426	8.5	31	33	7.7	37	11.1	10.6
Manhattan Borough.....	492	14.1	48	82	13.8	55	18.3	17.2
Queens Borough.....	134	6.1	8	22	6.3	15	7.7	7.5
Richmond Borough.....	41	13.1	2	36	13.4	2	14.2	14.9
Newark, N. J.....	78	9.1	9	47	9.2	8	12.5	13.0
Oakland.....	54	9.6	7	89	10.0	2	10.9	11.4
Oklahoma City.....	48	12.7	6	83	10.0	10	11.7	10.6
Omaha.....	41	9.9	3	34	20.4	6	14.5	14.1
Paterson.....	19	7.1	1	17	7.9	2	14.2	13.1
Peoria.....	27	13.0	6	158	11.8	0	13.5	13.0
Philadelphia.....	392	10.4	29	42	10.2	36	14.2	13.1
Pittsburgh.....	154	11.9	18	62	11.5	15	15.8	14.6
Portland, Oreg.....	52	8.8	3	36	12.6	5	12.0	13.0

See footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended July 18, 1931, infant mortality, annual death rate, and comparison with corresponding week of 1930. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended July 18, 1931				Corresponding week, 1930		Death rate ¹ for the first 29 weeks	
	Total eaths	Death rate ¹	Deaths under 1 year	Infant mortality rate ²	Death rate ¹	Deaths under 1 year	1931	1930
Providence.....	42	8.6	8	28	11.1	5	13.6	14.1
Richmond.....	51	14.4	8	117	11.1	3	16.4	15.6
White.....	36		7	153		0		
Colored.....	15	(³)	1	43	(³)	3	(³)	(³)
Rochester.....	65	10.2	5	46	9.8	6	12.8	12.1
St. Louis.....	220	13.9	14	47	28.0	28	16.6	15.0
St. Paul.....	59	11.1	6	62	10.3	2	11.6	10.8
Salt Lake City ⁴	30	10.9	4	60	10.7	3	12.7	13.3
San Antonio.....	47	10.2	5		12.7	9	15.7	18.2
San Diego.....	28	2.8	1	20	15.8	2	14.3	14.8
San Francisco.....	159	12.8	6	40	13.9	5	13.4	13.4
Schenectady.....	26	14.1	2	59	12.0	2	10.8	11.6
Seattle.....	68	9.5	1	9	9.1	4	11.9	11.3
Somerville.....	12	5.9	1	37	5.5	1	10.0	10.6
South Bend.....	13	6.3	0	0	9.4	2	8.6	3.5
Spokane.....	22	3.9	1	26	12.6	1	12.7	13.0
Springfield, Mass.....	24	8.2	4	61	10.4	1	12.6	13.1
Syracuse.....	37	9.1	5	59	7.4	3	12.2	12.3
Tacoma.....	17	8.2	2	51	7.3	2	12.9	12.8
Toledo.....	64	11.3	5	46	8.8	8	12.6	13.2
Trenton.....	30	12.6	4	70	10.6	3	17.6	17.1
Utica.....	22	11.2	0	9	15.9	2	14.8	15.9
Washington, D. C.....	124	13.1	14	78	12.7	9	16.6	15.7
White.....	72		8	65		6		
Colored.....	52	(³)	6	103	(³)	3	(³)	(³)
Waterbury.....	16	8.3	3	90	9.9	2	10.2	10.5
Wilmington, Del. ⁵	13	6.4	0	0	12.2	1	14.8	14.9
Worcester.....	28	7.4	0	0	9.9	2	13.1	13.8
Yonkers.....	17	6.4	2	52	6.5	3	9.2	8.4
Youngstown.....	39	11.8	1	14	8.9	2	11.0	10.5

¹ Deaths of nonresidents are included. Stillbirths are excluded.

² These rates represent annual rates per 1,000 population, as estimated for 1931 and 1930 by the arithmetical method.

³ Deaths under 1 year of age per 1,000 live births. Cities left blank are not in the registration area for births.

⁴ Data for 76 cities.

⁵ Deaths for week ended Friday.

⁶ For the cities for which deaths are shown by color, the percentage of colored population in 1920 was as follows: 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; Miami, 31; Nashville, 20; New Orleans, 26; Richmond, 32; and Washington, D. C., 25.

⁷ Population Apr. 1, 1930; decreased 1920 to 1930, no estimate made.

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 July 25, 1931, and July 26, 1930

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended July 25, 1931, and July 26, 1930

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended July 25, 1931	Week ended July 26, 1930	Week ended July 25, 1931	Week ended July 26, 1930	Week ended July 25, 1931	Week ended July 26, 1930	Week ended July 25, 1931	Week ended July 26, 1930
New England States:								
Maine.....		4		1	11	6	0	0
New Hampshire.....		1				5	0	0
Vermont.....					21	1	0	0
Massachusetts.....	36	23	2		135	153	1	1
Rhode Island.....	1	1			67	10	0	0
Connecticut.....	9	6			55	8	0	2
Middle Atlantic States:								
New York.....	78	63	13		531	360	9	8
New Jersey.....	20	52			120	172	4	5
Pennsylvania.....	46	69			320	269	5	6
East North Central States:								
Ohio.....	15	17	5	7	74	73	1	3
Indiana.....	12	4		2	25	13	2	5
Illinois.....	61	64	148	2	240	56	8	3
Michigan.....	28	67		2	33	98	2	5
Wisconsin.....	9	15	2	4	130	112	2	2
West North Central States:								
Minnesota.....	5	16	1		22	11	2	1
Iowa.....	5	4			6	8	0	0
Missouri.....	11	11			26	21	1	0
North Dakota.....		4			9	6	0	1
South Dakota.....	2	1			1	12	0	0
Nebraska.....	3	6			2	4	1	0
Kansas.....	10	6	1		33	38	1	3
South Atlantic States:								
Delaware.....		1			10	5	0	0
Maryland ¹	7	13	1	2	33	8	2	2
District of Columbia.....	5	8				13	1	0
West Virginia.....	3	5		10	48	17	1	1
North Carolina.....	11	27		2	85	10	0	0
South Carolina.....	8	8	42	68	48		0	0
Georgia ²	3	5	8	13	9	37	0	1
Florida ³	4	4			10	5	0	0
East South Central States:								
Kentucky.....					80		0	2
Tennessee.....	2	2	2	3	4	3	2	1
Alabama.....	6	10		3	27	33	3	0
Mississippi.....	6	9					5	1

¹ New York City only.

² Week ended Friday.

³ Typhus fever: 1931, 8 cases; 2 cases in Maryland; 4 cases in Georgia; and 2 cases in Florida.

*Cases of certain communicable diseases reported by telegraph by State health officers
for weeks ended July 26, 1931, and July 26, 1930—Continued*

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended July 26, 1931	Week ended July 26, 1930	Week ended July 26, 1931	Week ended July 26, 1930	Week ended July 26, 1931	Week ended July 26, 1930	Week ended July 26, 1931	Week ended July 26, 1930
West South Central States:								
Arkansas.....	3	1		5	1		1	1
Louisiana.....	14	6	17	6	1	5	1	1
Oklahoma.....	13	6	9	2	4	7	0	1
Texas.....	12	2		10	1	28	1	0
Mountain States:								
Montana.....	2				11	7	0	0
Idaho.....					2	5	0	0
Wyoming.....		1			1	16	0	0
Colorado.....	5	8			3	23	0	0
New Mexico.....		2			1	10	0	0
Arizona.....	2	1	1			18	0	1
Utah.....					7	7	1	1
Pacific States:								
Washington.....	4	4			14	63	0	2
Oregon.....	4	4	4	4	2	29	0	0
California.....	21	26	14	11	148	181	2	4
Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended July 26, 1931	Week ended July 26, 1930	Week ended July 26, 1931	Week ended July 26, 1930	Week ended July 26, 1931	Week ended July 26, 1930	Week ended July 26, 1931	Week ended July 26, 1930
New England States:								
Maine.....	1	0	9	16	0	0	0	2
New Hampshire.....	0	0	1	0	0	0	0	0
Vermont.....	0	0	7	1	1	0	0	0
Massachusetts.....	16	6	120	50	0	0	8	2
Rhode Island.....	0	0	6	6	0	0	0	0
Connecticut.....	11	4	9	10	0	0	1	2
Middle Atlantic States:								
New York.....	204	15	113	93	6	4	16	25
New Jersey.....	14	0	52	20	0	0	4	6
Pennsylvania.....	7	5	113	80	0	0	24	25
East North Central States:								
Ohio.....	1	3	43	55	9	37	15	27
Indiana.....	0	0	17	20	11	40	7	6
Illinois.....	12	6	104	72	43	38	17	32
Michigan.....	9	0	87	61	6	24	3	10
Wisconsin.....	6	0	25	26			6	3
West North Central States:								
Minnesota.....	3	16	20	16	0	2	2	5
Iowa.....	1	1	8	2	10	21	6	1
Missouri.....	0	0	16	9	3	25	23	13
North Dakota.....	0	1	0	10	14	9	0	1
South Dakota.....	0	1	3	3	1	10	6	1
Nebraska.....	0	0	4	4	5	18	0	17
Kansas.....	3	7	12	23	16	20	13	16
South Atlantic States:								
Delaware.....	0	0	5	5	0	0	0	0
Maryland.....	1	1	12	6	1	0	16	25
District of Columbia.....	0	0	2	2	0	0	4	1
West Virginia.....	1	1	4	23	3	3	16	28
North Carolina.....	2	3	23	22	0	4	64	56
South Carolina.....	2	2	0	2	0	0	72	70
Georgia.....	0	0	13	10	2	0	80	73
Florida.....	0	0	1	2	0	2	19	0
East South Central States:								
Kentucky.....	0	0	17	5	1	11	25	39
Tennessee.....	1	0	8	13	4	3	41	50
Alabama.....	1	2	8	9	4	0	30	36
Mississippi.....	0	4	2	2	6	1	42	58
West South Central States:								
Arkansas.....	0	7	2	2	1	4	17	30
Louisiana.....	1	27	9	9	1	6	48	52
Oklahoma.....	2	13	9	14	10	42	28	52
Texas.....	1	2	5	6	18	8	43	20

¹ Week ended Friday.

² Typhus fever: 1931, 8 cases; 2 cases in Maryland; 4 cases in Georgia; and 2 cases in Florida.

³ Figures for 1931 are exclusive of Oklahoma City and Tulsa.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended July 25, 1931, and July 26, 1930—Continued

Division and State	Polio-myelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended July 25, 1931	Week ended July 26, 1930	Week ended July 25, 1931	Week ended July 26, 1930	Week ended July 25, 1931	Week ended July 26, 1930	Week ended July 25, 1931	Week ended July 26, 1930
Mountain States:								
Montana.....	1	0	3	3	2	0	2	1
Idaho.....	0	0	3	0	1	1	0	2
Wyoming.....	0	0	1	2	1	2	0	0
Colorado.....	0	1	3	3	0	2	7	1
New Mexico.....	0	1	0	2	0	6	11	3
Arizona.....	0	3	0	3	0	1	6	4
Utah ¹	0	0	0	2	0	0	0	1
Pacific States:								
Washington.....	2	0	6	13	17	21	6	4
Oregon.....	0	1	10	8	1	5	3	4
California.....	4	89	33	44	4	6	20	32

¹ 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	Menin- gococ- cus menin- gitis	Diph- theria	Influ- enza	Ma- laria	Mea- sles	Pol- lagra	Pollo- mye- litis	Scarlet fever	Small- pox	Ty- phoid fever
<i>June, 1931</i>										
Alabama.....	11	32	29	226	241	314	4	39	46	69
Illinois.....	41	451	26	26	6,290	-----	5	1,465	246	32
Louisiana.....	5	87	42	46	15	271	4	49	75	104
Maryland.....	6	55	14	2	1,868	2	0	152	1	29
Michigan.....	21	149	11	1	1,366	-----	9	1,634	82	22
Missouri.....	12	79	2	23	636	-----	3	382	181	35
New Mexico.....	-----	25	-----	14	180	2	0	18	1	12
North Carolina.....	10	56	14	-----	2,307	595	3	98	6	94
Oklahoma ¹	1	29	56	206	58	144	2	39	190	50
Oregon.....	-----	14	35	-----	160	-----	0	47	52	12
Wisconsin.....	5	34	45	-----	2,626	-----	2	283	38	8

¹ Exclusive of Oklahoma City and Tulsa.

June, 1931			
Actinomycosis:		Puerperal septicemia:	
Illinois.....	1	Illinois.....	7
Anthrax:		Rabies in animals:	
Louisiana.....	1	Illinois.....	21
Chicken pox:		Louisiana.....	10
Alabama.....	57	Maryland.....	4
Illinois.....	1,447	Missouri.....	7
Louisiana.....	24	Rocky Mountain spotted or tick fever:	
Maryland.....	219	Maryland.....	6
Michigan.....	1,300	Oregon.....	6
Missouri.....	170	Seabies:	
New Mexico.....	77	Oregon.....	4
North Carolina.....	193	Septic sore throat:	
Oklahoma ¹	63	Illinois.....	4
Oregon.....	147	Louisiana.....	1
Wisconsin.....	1,397	Maryland.....	3
Conjunctivitis:		Michigan.....	30
New Mexico.....	2	Missouri.....	1
Diarrhea:		North Carolina.....	5
Maryland.....	17	Oklahoma ¹	10
Dysentery:		Oregon.....	6
Illinois.....	23	Tetanus:	
Illinois (amebic).....	1	Illinois.....	5
Illinois (bacillary).....	1	Louisiana.....	5
Louisiana.....	3	Missouri.....	1
Maryland.....	10	Oklahoma ¹	1
Oklahoma ¹	14	Trachoma:	
German measles:		Illinois.....	3
Illinois.....	129	Missouri.....	83
Maryland.....	107	Oklahoma ¹	20
North Carolina.....	299	Trench mouth:	
Wisconsin.....	620	Oklahoma ¹	1
Hookworm disease:		Tularaemia:	
Louisiana.....	16	Louisiana.....	1
Impetigo contagiosa:		Missouri.....	5
Maryland.....	9	Typhus fever:	
Oregon.....	19	Alabama.....	4
Lead poisoning:		Maryland.....	5
Illinois.....	4	North Carolina.....	1
Lethargic encephalitis:		Undulant fever:	
Alabama.....	4	Alabama.....	1
Illinois.....	5	Illinois.....	5
Louisiana.....	4	Louisiana.....	3
Maryland.....	1	Maryland.....	7
Michigan.....	3	Michigan.....	1
New Mexico.....	1	Missouri.....	24
Mumps:		New Mexico.....	1
Alabama.....	59	Oregon.....	1
Illinois.....	747	Wisconsin.....	3
Louisiana.....	12	Vincent's angina:	
Maryland.....	201	Maryland.....	14
Michigan.....	658	Oregon.....	12
Missouri.....	86	Whooping cough:	
New Mexico.....	23	Alabama.....	90
Oklahoma ¹	7	Illinois.....	957
Oregon.....	128	Louisiana.....	21
Wisconsin.....	2,048	Maryland.....	352
Ophthalmia neonatorum:		Michigan.....	1,286
Illinois.....	15	Missouri.....	324
Maryland.....	2	New Mexico.....	54
Missouri.....	3	North Carolina.....	1,091
North Carolina.....	1	Oklahoma ¹	53
Oklahoma ¹	1	Oregon.....	95
Paratyphoid fever:		Wisconsin.....	471
Illinois.....	5		
North Carolina.....	4		

¹ Exclusive of Oklahoma City and Tulsa

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 96 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 32,965,000. The estimated population of the 89 cities reporting deaths is more than 31,420,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended July 18, 1931, and July 19, 1930

	1931	1930	Estimated expectancy
<i>Cases reported</i>			
Diphtheria:			
46 States.....	568	637	-----
96 cities.....	288	287	479
Measles:			
45 States.....	3,629	2,958	-----
96 cities.....	1,159	911	-----
Meningococcus meningitis:			
46 States.....	49	90	-----
96 cities.....	30	30	-----
Polioomyelitis:			
46 States.....	116	196	-----
Scarlet fever:			
46 States.....	1,141	822	-----
96 cities.....	435	323	397
Smallpox:			
46 States.....	217	497	-----
96 cities.....	22	38	23
Typhoid fever:			
46 States.....	755	787	-----
96 cities.....	84	98	84
<i>Deaths reported</i>			
Influenza and pneumonia:			
89 cities.....	294	270	-----
Smallpox:			
89 cities.....	0	0	-----

City reports for week ended July 18, 1931

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 nonepidemic 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 1922 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	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases re- ported	Mumps, cases re- ported	Pneu- monia, deaths reported
		Cases, estimated expect- ancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND								
Maine:								
Portland.....	1	0	0	-----	0	0	1	0
New Hampshire:								
Concord.....	0	0	0	-----	0	0	0	0
Nashua.....	0	0	0	-----	0	0	0	0
Vermont:								
Barre.....	0	0	0	-----	0	0	0	1
Burlington.....	0	0	0	-----	0	0	1	0
Massachusetts:								
Boston.....	22	21	22	2	0	32	8	8
Fall River.....	1	2	0	-----	0	18	2	1
Springfield.....	1	1	1	-----	0	6	7	1
Worcester.....	1	0	0	-----	0	3	6	2
Rhode Island:								
Pawtucket.....	0	1	0	-----	0	0	0	0
Providence.....	0	3	4	-----	0	46	8	3
Connecticut:								
Bridgeport.....	1	2	0	-----	0	16	0	2
Hartford.....	3	2	0	-----	0	0	0	2
New Haven.....	1	1	0	-----	0	11	0	1
MIDDLE ATLANTIC								
New York:								
Buffalo.....	4	7	3	-----	0	18	10	8
New York.....	83	148	60	1	1	166	34	83
Rochester.....	1	3	3	1	0	64	4	3
Syracuse.....	2	1	0	-----	0	9	0	0
New Jersey:								
Camden.....	1	3	1	-----	0	2	0	1
Newark.....	-----	9	-----	-----	-----	-----	-----	-----
Trenton.....	2	1	0	-----	0	12	6	0
Pennsylvania:								
Philadelphia.....	21	35	9	3	0	33	10	28
Pittsburgh.....	12	12	3	-----	0	14	28	13
Reading.....	2	1	0	-----	0	0	3	0
EAST NORTH CENTRAL								
Ohio:								
Cincinnati.....	1	3	2	-----	1	12	6	3
Cleveland.....	24	17	3	-----	0	113	67	8
Columbus.....	1	2	1	-----	0	5	1	4
Toledo.....	6	0	3	-----	1	12	1	1
Indiana:								
Fort Wayne.....	1	1	1	-----	0	0	0	1
Indianapolis.....	1	1	3	-----	0	4	4	6
South Bend.....	0	0	0	-----	0	1	0	0
Terre Haute.....	0	0	0	-----	0	2	0	1
Illinois:								
Chicago.....	33	62	48	-----	3	227	12	15
Springfield.....	2	0	0	-----	0	0	2	0
Michigan:								
Detroit.....	16	28	21	-----	1	11	4	7
Flint.....	3	1	0	-----	0	0	3	0
Grand Rapids.....	0	0	0	-----	0	28	0	1

City reports for week ended July 18, 1931—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases re- ported	Mumps, cases re- ported	Pneu- monia, deaths reported
		Cases, estimated expect- ancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL —continued								
Wisconsin:								
Kenosha.....	1	1	0	-----	0	0	17	0
Madison.....	12	0	0	-----	-----	0	18	-----
Milwaukee.....	33	8	3	-----	1	118	56	2
Racine.....	1	1	-----	-----	-----	-----	-----	-----
Superior.....	1	0	0	-----	0	0	0	0
WEST NORTH CENTRAL								
Minnesota:								
Duluth.....	0	0	0	-----	1	0	0	2
Minneapolis.....	12	8	2	-----	0	12	4	4
St. Paul.....	4	5	0	-----	0	6	1	4
Iowa:								
Davenport.....	0	2	0	-----	-----	0	0	-----
Des Moines.....	0	2	0	-----	-----	0	0	-----
Sioux City.....	0	0	2	-----	-----	0	1	-----
Waterloo.....	0	0	0	-----	-----	2	2	-----
Missouri:								
Kansas City.....	0	1	2	-----	0	4	1	4
St. Joseph.....	0	0	1	-----	0	7	0	2
St. Louis.....	0	17	9	-----	-----	0	7	4
North Dakota:								
Fargo.....	0	0	0	-----	0	1	0	0
Grand Forks.....	0	0	0	-----	-----	0	0	-----
Nebraska:								
Omaha.....	0	2	0	-----	0	0	13	2
Kansas:								
Topeka.....	1	1	0	-----	0	0	21	1
Wichita.....	5	0	0	-----	0	0	0	1
SOUTH ATLANTIC								
Delaware:								
Wilmington.....	0	0	0	-----	0	4	0	1
Maryland:								
Baltimore.....	8	10	5	-----	0	22	9	8
Cumberland.....	3	0	0	-----	0	0	0	1
Frederick.....	0	0	0	-----	0	0	0	0
District of Columbia:								
Washington.....	4	5	5	-----	0	8	0	4
Virginia:								
Lynchburg.....	0	0	0	-----	0	1	0	0
Norfolk.....	0	0	1	-----	0	1	0	2
Richmond.....	0	1	0	-----	1	2	0	2
Roanoke.....	0	0	0	-----	0	1	0	0
West Virginia:								
Charleston.....	1	0	0	-----	0	0	0	1
Wheeling.....	0	0	0	-----	0	5	0	0
North Carolina:								
Raleigh.....	0	0	0	-----	0	3	0	0
Wilmington.....	0	0	0	-----	0	0	0	0
Winston-Salem.....	2	0	0	-----	0	8	8	0
South Carolina:								
Charleston.....	0	0	0	-----	0	0	0	0
Columbia.....	0	0	0	-----	1	0	0	3
Georgia:								
Atlanta.....	0	1	0	-----	0	0	0	0
Brunswick.....	0	0	0	-----	0	0	0	0
Savannah.....	0	0	1	-----	3	0	2	0
Florida:								
Miami.....	1	0	3	-----	0	6	0	0
Tampa.....	0	0	1	-----	0	0	0	0
EAST SOUTH CENTRAL								
Kentucky:								
Covington.....	0	0	0	-----	0	0	0	2
Tennessee:								
Memphis.....	0	1	1	-----	0	18	2	4
Nashville.....	0	0	0	-----	0	1	1	0
Alabama:								
Birmingham.....	0	1	0	-----	2	0	0	1
Mobile.....	0	0	4	-----	0	0	0	0
Montgomery.....	1	0	0	-----	-----	1	0	-----

City reports for week ended July 18, 1931—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
WEST SOUTH CENTRAL								
Arkansas:								
Fort Smith.....	0	0	0	-----	-----	0	0	-----
Little Rock.....	0	0	0	-----	0	2	0	0
Louisiana:								
New Orleans.....	0	5	6	-----	0	0	0	6
Shreveport.....	0	0	0	-----	0	1	0	1
Oklahoma:								
Muskogee.....	0	1	0	-----	0	0	0	0
Oklahoma City..	0	1	1	-----	0	0	1	3
Texas:								
Dallas.....	0	2	4	-----	0	0	0	0
Fort Worth.....	1	0	0	-----	0	1	0	2
Galveston.....	0	0	0	-----	0	0	0	1
Houston.....	0	2	3	-----	0	2	1	3
San Antonio.....	0	1	1	-----	1	0	0	2
MOUNTAIN								
Montana:								
Billings.....	2	0	0	-----	0	7	0	0
Great Falls.....	5	0	0	-----	0	0	0	0
Helena.....	0	0	0	-----	0	0	0	0
Missoula.....	0	0	0	-----	0	0	0	1
Idaho:								
Boise.....	0	0	0	-----	0	2	0	1
Colorado:								
Denver.....	3	7	7	-----	0	4	10	2
Pueblo.....	2	0	0	-----	0	0	0	0
New Mexico:								
Albuquerque.....	0	0	0	-----	0	1	0	0
Arizona:								
Phoenix.....	0	0	0	-----	0	0	0	0
Utah:								
Salt Lake City...	4	2	0	-----	0	1	7	0
Nevada:								
Reno.....	0	0	0	-----	0	0	0	0
PACIFIC								
Washington:								
Seattle.....	21	2	0	-----	-----	3	5	-----
Spokane.....	2	1	1	-----	-----	2	0	-----
Tacoma.....	3	2	0	-----	0	0	1	1
Oregon:								
Portland.....	4	6	0	-----	0	1	7	0
Salem.....	2	0	2	-----	0	0	7	0
California:								
Los Angeles.....	14	23	21	4	0	24	8	5
Sacramento.....	1	2	1	-----	0	15	1	0
San Francisco....	9	8	3	-----	0	19	2	4

City reports for week ended July 18, 1931—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culosis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths all causes
	Cases, esti- mated expect- ancy	Cases re- ported	Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		
NEW ENGLAND											
Maine:											
Portland.....	1	0	0	0	0	0	0	0	0	0	17
New Hampshire:											
Concord.....	0	0	0	0	0	0	0	0	0	0	8
Nashua.....	0	0	0	0	0	0	0	0	0	0	-----
Vermont:											
Barre.....	0	0	0	0	0	1	0	0	0	4	2
Burlington.....	0	0	1	4	0	0	0	0	0	4	8
Massachusetts:											
Boston.....	26	20	0	0	0	7	2	3	0	29	176
Fall River.....	1	5	0	0	0	1	1	1	0	0	12
Springfield.....	2	10	0	0	0	0	0	0	0	1	24
Worcester.....	3	23	0	0	0	4	1	1	0	14	28
Rhode Island:											
Pawtucket.....	0	0	0	0	0	0	0	0	0	0	8
Providence.....	3	2	0	0	0	1	0	0	0	2	42
Connecticut:											
Bridgeport.....	2	0	0	0	0	0	0	0	0	3	20
Hartford.....	1	1	0	0	0	1	0	0	0	7	34
New Haven.....	0	1	0	0	0	0	0	0	0	3	36
MIDDLE ATLANTIC											
New York:											
Buffalo.....	10	21	0	0	0	6	0	0	0	27	125
New York.....	57	44	1	0	0	103	15	10	0	241	1,273
Rochester.....	3	7	0	0	0	2	1	0	0	4	60
Syracuse.....	3	7	0	0	0	0	0	0	0	34	37
New Jersey:											
Camden.....	0	2	0	0	0	2	0	1	2	4	31
Newark.....	7	0	0	-----	-----	0	0	-----	-----	-----	-----
Trenton.....	1	4	0	0	0	3	1	1	0	5	30
Pennsylvania:											
Philadelphia.....	30	32	0	0	0	30	4	4	1	68	392
Pittsburgh.....	13	23	0	1	0	10	2	0	0	36	154
Reading.....	1	0	0	0	0	2	0	0	0	2	24
EAST NORTH CEN- TRAL											
Ohio:											
Cincinnati.....	5	5	1	0	0	14	1	0	0	7	144
Cleveland.....	16	14	0	0	0	17	1	2	0	69	170
Columbus.....	2	1	0	1	0	5	1	0	0	0	60
Toledo.....	4	5	3	0	0	3	0	2	0	30	64
Indiana:											
Fort Wayne.....	0	1	1	0	0	1	0	1	0	0	26
Indianapolis.....	3	3	3	2	0	9	1	0	0	53	-----
South Bend.....	0	1	0	0	0	0	1	0	0	0	13
Terre Haute.....	1	0	0	0	0	3	0	0	0	1	21
Illinois:											
Chicago.....	49	77	2	0	0	42	3	4	0	121	638
Springfield.....	1	1	0	0	0	0	0	0	0	4	25
Michigan:											
Detroit.....	37	44	1	2	0	22	3	0	0	184	224
Flint.....	5	9	0	0	0	0	0	1	0	0	17
Grand Rapids.....	4	1	0	0	0	0	0	0	0	14	26
Wisconsin:											
Kenosha.....	1	0	0	0	0	1	0	0	0	2	8
Madison.....	1	0	0	1	-----	0	0	-----	-----	1	-----
Milwaukee.....	9	13	0	0	0	4	0	1	0	70	98
Racine.....	2	-----	0	-----	-----	0	-----	-----	-----	-----	-----
Superior.....	1	1	1	1	0	1	0	0	0	3	12
WEST NORTH CENTRAL											
Minnesota:											
Duluth.....	4	0	0	0	0	1	0	0	0	0	22
Minneapolis.....	13	5	0	0	0	0	0	0	0	6	115
St. Paul.....	8	3	0	1	0	2	0	1	0	20	61
Iowa:											
Davenport.....	0	1	0	3	-----	-----	0	0	-----	0	-----
Des Moines.....	2	1	0	0	-----	-----	0	0	-----	0	30
Sioux City.....	1	2	1	0	-----	-----	0	0	-----	10	-----
Waterloo.....	0	0	0	0	-----	-----	0	0	-----	1	-----

City reports for week ended July 18, 1931—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culosis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths all causes
	Cases, esti- mated expect- ancy	Cases re- ported	Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		
WEST NORTH CENTRAL—CON.											
Missouri:											
Kansas City.....	3	0	0	0	0	5	1	0	1	11	94
St. Joseph.....	0	1	0	0	0	0	0	0	0	0	39
St. Louis.....	9	9	0	0	0	15	3	0	1	87	220
North Dakota:											
Fargo.....	0	0	0	0	0	0	0	0	0	4	9
Grand Forks....	1	0	0	0			0	0		0	
Nebraska:											
Omaha.....	1	2	1	1	0	1	0	0	0	1	41
Kansas:											
Topeka.....	0	0	0	0	0	0	0	0	0	11	14
Wichita.....	1	0	1	0	0	0	0	0	0	6	27
SOUTH ATLANTIC											
Delaware:											
Wilmington.....	1	2	0	0	0	1	0	0	0	3	13
Maryland:											
Baltimore.....	10	3	0	0	0	11	4	3	0	91	177
Cumberland.....	0	0	0	0	0	0	0	0	0	0	14
Frederick.....	0	0	0	0	0	1	0	0	0	0	4
District of Col.:											
Washington.....	6	5	0	0	0	15	2	0	0	52	124
Virginia:											
Lynchburg.....	1	0	0	0	0	0	0	2	0	3	17
Norfolk.....	1	0	0	0	0	0	1	1	0	0	
Richmond.....	1	1	0	0	0	2	1	1	0	0	55
Roanoke.....	0	1	0	0	0	4	0	0	0	6	16
West Virginia:											
Charleston.....	0	0	0	0	0	0	1	0	0	27	17
Wheeling.....	1	0	0	0	0	1	0	3	0	9	20
North Carolina:											
Raleigh.....	0	0	0	0	0	2	0	0	0	4	9
Wilmington.....	0	0	0	0	0	1	0	0	0	6	12
Winston-Salem..	0	0	0	0	0	1	0	1	0	5	13
South Carolina:											
Charleston.....	0	1	0	0	0	2	1	2	0	1	28
Columbia.....	0	0	0	0	0	2	0	0	3	1	33
Georgia:											
Atlanta.....	2	4	0	0	0	8	2	6	2	2	63
Brunswick.....	0	0	0	0	0	0	0	0	0	0	3
Savannah.....	0	0	0	0	0	2	0	5	1	0	29
Florida:											
Miami.....	0	1	1	0	0	1	0	0	0	1	19
Tampa.....	0	0	0	0	0	4	0	1	0	4	22
EAST SOUTH CENTRAL											
Kentucky:											
Covington.....	0	2	0	0	0	1	0	0	0	0	25
Tennessee:											
Memphis.....	2	0	0	0	0	7	7	2	0	26	79
Nashville.....	0	2	0	0	0	2	5	4	1	6	43
Alabama:											
Birmingham....	2	0	1	0	0	2	3	0	2	6	61
Mobile.....	0	0	0	0	0	0	0	0	0	0	17
Montgomery....	0	0	0	0			0	0		0	
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith.....	0	0	0	0			0	0		1	
Little Rock....	0	0	0	0	0	1	2	2	0	0	
Louisiana:											
New Orleans....	3	5	0	0	0	7	4	1	0	2	137
Shreveport....	0	0	0	0	0	2	1	2	1	5	34
Oklahoma:											
Muskogee.....	0	0	0	0	0	0	0	2	1	0	
Oklahoma City..	2	3	0	0	0	1	2	6	1	0	48
Texas:											
Dallas.....	2	3	1	1	0	4	2	10	1	15	50
Fort Worth....	1	1	1	0	0	0	1	0	1	1	41
Galveston.....	0	0	0	0	0	0	0	0	0	0	14
Houston.....	1	0	1	1	0	6	1	1	0	0	68
San Antonio....	1	2	0	0	0	6	1	1	0	1	47

City reports for week ended July 18, 1931—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culo- sis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths all causes
	Cases, esti- mated expect- ancy	Cases re- ported	Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		
MOUNTAIN											
Montana:											
Billings.....	0	0	0	0	0	0	0	1	0	3	8
Great Falls.....	1	0	0	0	0	0	0	1	0	6	8
Helena.....	0	0	0	0	0	0	0	0	0	0	7
Missoula.....	0	0	0	0	0	1	0	0	0	0	5
Idaho:											
Boise.....	0	0	0	0	0	0	0	0	0	1	6
Colorado:											
Denver.....	4	3	0	0	0	7	1	0	0	21	64
Pueblo.....	0	0	0	0	0	0	0	1	0	0	8
New Mexico:											
Albuquerque.....	0	0	0	0	0	4	0	0	0	1	8
Arizona:											
Phoenix.....	0	0	0	0	0	4	0	0	0	0	-----
Utah:											
Salt Lake City.....	1	0	1	0	0	2	0	0	0	22	80
Nevada:											
Reno.....	0	0	0	0	0	0	0	0	0	0	8
PACIFIC											
Washington:											
Seattle.....	3	1	1	0	-----	-----	1	0	-----	52	-----
Spokane.....	1	0	1	6	-----	-----	0	0	-----	16	-----
Tacoma.....	1	2	2	5	0	1	0	0	0	2	17
Oregon:											
Portland.....	2	0	4	1	0	0	0	0	0	1	52
Salem.....	0	0	0	0	0	0	0	0	0	0	-----
California:											
Los Angeles.....	14	2	2	0	0	23	2	1	0	39	277
Sacramento.....	1	1	0	0	0	1	0	2	0	0	-----
San Francisco.....	7	0	0	0	0	10	1	0	0	5	150

Division, State, and city	Meningococcus meningitis		Lethargic en- cephalitis		Pellagra		Poliomyelitis (Infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, esti- mated expect- ancy	Cases	Deaths
NEW ENGLAND									
New Hampshire:									
Nashua.....	0	0	0	0	0	0	0	1	0
Massachusetts:									
Boston.....	2	0	0	0	1	1	1	16	1
Connecticut:									
Bridgeport.....	0	0	0	0	0	0	0	2	0
New Haven.....	0	0	0	0	0	0	0	1	1
MIDDLE ATLANTIC									
New York:									
New York.....	7	3	1	1	0	0	4	53	11
Pennsylvania:									
Philadelphia.....	1	1	0	0	0	0	0	0	0
Pittsburgh.....	1	1	0	0	0	0	0	0	1
EAST NORTH CENTRAL									
Ohio:									
Cleveland.....	2	1	0	0	0	0	0	0	0
Toledo.....	1	0	0	0	0	0	0	0	0
Indiana:									
Indianapolis.....	2	3	0	0	0	0	0	0	0
Illinois:									
Chicago.....	3	4	0	0	0	0	1	2	1
Michigan:									
Detroit.....	1	0	0	0	0	0	0	2	0

City reports for week ended July 18, 1931—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Pollomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST NORTH CENTRAL—CON.									
Wisconsin:									
Madison.....	0	0	0	0	0	0	0	3	0
Milwaukee.....	0	1	0	0	0	0	0	1	0
WEST NORTH CENTRAL¹									
Missouri:									
St. Joseph.....	1	1	0	0	0	0	0	0	0
St. Louis.....	3	0	1	1	0	0	0	0	0
SOUTH ATLANTIC									
Maryland:									
Baltimore.....	3	1	0	1	0	0	1	0	0
District of Columbia:									
Washington.....	0	1	0	0	0	0	0	0	0
South Carolina:									
Charleston.....	0	0	0	0	1	1	0	0	0
Columbia.....	0	0	0	0	0	1	0	0	0
Georgia:									
Atlanta ²	0	0	0	0	1	0	0	0	0
Savannah ¹	0	0	0	0	7	0	0	0	0
Florida:									
Miami ¹	0	0	0	0	2	0	0	0	0
EAST SOUTH CENTRAL									
Alabama:									
Birmingham.....	0	1	1	1	2	1	0	0	0
Montgomery.....	1	0	0	0	1	0	0	0	0
WEST SOUTH CENTRAL									
Louisiana:									
New Orleans.....	2	1	0	0	0	0	0	0	0
Shreveport.....	0	0	0	0	0	1	0	0	0
Texas:									
Fort Worth.....	1	0	0	0	0	0	0	1	0
Galveston.....	0	0	0	0	0	1	0	0	0
Houston.....	0	0	0	0	0	1	0	0	0
MOUNTAIN									
Montana:									
Great Falls.....	0	0	0	0	0	0	0	1	0
PACIFIC									
Washington:									
Spokane.....	1	0	0	0	0	0	0	0	0
California:									
Los Angeles.....	0	0	0	0	0	0	1	1	0
San Francisco.....	0	0	0	0	1	0	0	0	1

¹ Typhus fever: 5 cases; 1 case at Minneapolis, Minn.; 3 cases at Savannah, Ga.; and 1 case at Miami, Fla.² Dengue: 1 case at Atlanta, Ga.

The following tables give the rates per 100,000 population for 98 cities for the 5-week period ended July 18, 1931, compared with those for a like period ended July 19, 1930. The population figures used in computing the rates are estimated midyear populations for 1930 and 1931, respectively, derived from the 1930 census. The 98 cities reporting cases have an estimated aggregate population of more than 33,000,000. The 91 cities reporting deaths have more than 31,500,000 estimated population.

Summary of weekly reports from cities, June 14 to July 18, 1931.—Annual rates per 100,000 population, compared with rates for the corresponding period of 1930¹

DIPHTHERIA CASE RATES

	Week ended—									
	June 20, 1931	June 21, 1930	June 27, 1931	June 28, 1930	July 4, 1931	July 5, 1930	July 11, 1931	July 12, 1930	July 18, 1931	July 19, 1930
98 cities.....	66	66	54	65	* 47	57	43	58	* 42	48
New England.....	41	39	67	68	96	56	60	41	65	86
Middle Atlantic.....	65	77	47	62	53	56	50	49	* 37	46
East North Central.....	89	92	72	97	* 51	91	41	86	* 50	66
West North Central.....	52	35	42	72	33	37	31	68	31	39
South Atlantic.....	43	36	45	26	12	26	18	32	24	46
East South Central.....	6	12	23	12	12	36	23	24	29	12
West South Central.....	85	80	68	85	27	49	61	59	47	85
Mountain.....	26	9	9	0	* 9	9	17	26	61	70
Pacific.....	71	47	51	54	51	32	41	53	51	32

MEASLES CASE RATES

98 cities.....	723	642	568	489	* 347	270	316	252	* 183	147
New England.....	635	1,144	438	832	402	544	351	460	317	256
Middle Atlantic.....	668	776	511	607	283	322	311	305	* 148	195
East North Central.....	1,178	377	921	331	* 643	168	527	154	* 319	70
West North Central.....	331	302	296	269	143	139	103	130	61	50
South Atlantic.....	766	411	591	256	* 310	180	259	142	107	122
East South Central.....	844	239	588	227	349	126	116	179	116	42
West South Central.....	88	77	47	17	24	24	27	17	17	10
Mountain.....	609	2,687	479	1,454	* 215	731	122	582	122	247
Pacific.....	302	1,069	362	798	149	451	182	482	123	310

SCARLET FEVER CASE RATES

98 cities.....	221	141	168	107	* 104	75	79	71	* 69	53
New England.....	272	126	238	135	188	73	142	73	149	65
Middle Atlantic.....	280	112	194	85	135	54	89	49	* 65	35
East North Central.....	310	226	240	182	* 121	115	90	114	* 105	86
West North Central.....	132	151	78	99	21	105	44	85	42	43
South Atlantic.....	77	106	93	68	* 54	62	49	68	34	48
East South Central.....	63	60	64	54	47	12	52	42	23	18
West South Central.....	30	98	30	38	41	45	34	35	34	21
Mountain.....	78	203	96	62	* 36	167	52	88	26	79
Pacific.....	57	73	57	49	47	38	49	43	12	49

SMALLPOX CASE RATES

98 cities.....	7	10	8	13	* 6	6	2	7	* 3	6
New England.....	5	0	0	0	0	0	2	0	0	0
Middle Atlantic.....	0	0	1	0	0	0	0	0	* 0	0
East North Central.....	5	7	5	10	* 8	5	1	9	* 4	10
West North Central.....	29	31	19	52	10	14	4	10	4	14
South Atlantic.....	14	2	12	10	* 0	2	4	0	0	4
East South Central.....	12	18	17	6	23	18	6	18	0	0
West South Central.....	20	24	30	21	24	0	10	7	7	7
Mountain.....	0	35	70	53	* 0	53	0	9	0	18
Pacific.....	16	36	6	43	14	32	8	36	22	18

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, 1931 and 1930, respectively.

* Milwaukee, Wis.; Columbia, S. C.; and Billings, Mont., not included.

* Newark, N. J., and Racine, Wis., not included.

* Newark, N. J., not included.

* Milwaukee, Wis., not included.

* Racine, Wis., not included.

* Columbia, S. C., not included.

* Billings, Mont., not included.

Summary of weekly reports from cities, June 14 to July 18, 1931.—Annual rates per 100,000 population, compared with rates for the corresponding period of 1930—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	June 20, 1931	June 21, 1930	June 27, 1931	June 28, 1930	July 4, 1931	July 5, 1930	July 11, 1931	July 12, 1930	July 18, 1931	July 19, 1930
98 cities.....	9	8	10	13	¹ 10	10	14	16	¹ 13	16
New England.....	10	0	0	10	10	7	2	5	12	10
Middle Atlantic.....	12	4	4	5	5	5	8	10	⁴ 7	4
East North Central.....	4	2	6	10	³ 3	1	5	6	⁶ 6	9
West North Central.....	6	8	10	14	10	8	19	10	2	23
South Atlantic.....	14	24	16	40	⁷ 10	28	28	60	47	44
East South Central.....	12	48	35	60	41	84	58	84	35	60
West South Central.....	14	24	54	31	71	45	81	35	57	59
Mountain.....	0	9	52	35	³ 36	0	35	0	26	26
Pacific.....	10	6	14	4	4	4	6	14	6	16

INFLUENZA DEATH RATES

91 cities.....	7	4	4	3	¹ 8	4	3	3	¹ 2	2
New England.....	7	2	2	0	0	2	2	0	0	0
Middle Atlantic.....	8	5	2	2	1	4	4	4	⁴ 0	3
East North Central.....	5	4	6	2	¹ 1	2	2	3	⁴ 4	2
West North Central.....	6	0	0	0	9	0	0	6	3	0
South Atlantic.....	4	2	6	6	⁷ 4	6	4	2	4	0
East South Central.....	0	13	6	13	19	6	6	13	0	0
West South Central.....	14	7	7	11	10	14	7	7	8	11
Mountain.....	9	0	0	0	⁹ 9	0	0	0	0	9
Pacific.....	5	0	2	2	5	7	0	2	0	5

PNEUMONIA DEATH RATES

91 cities.....	70	72	67	66	¹ 64	54	59	53	¹ 47	43
New England.....	65	75	60	53	36	36	79	44	50	39
Middle Atlantic.....	72	78	76	71	67	55	59	54	⁴ 63	54
East North Central.....	60	52	51	56	¹ 61	40	47	37	⁶ 29	32
West North Central.....	106	111	38	87	77	63	88	75	71	39
South Atlantic.....	89	70	103	72	⁷ 67	60	71	60	39	54
East South Central.....	82	117	139	91	82	142	50	71	44	52
West South Central.....	76	64	90	85	90	78	86	78	45	46
Mountain.....	78	132	35	79	¹ 72	62	61	106	35	53
Pacific.....	34	60	41	45	46	52	81	50	24	15

¹ Milwaukee, Wis., Columbia, S. C., and Billings, Mont., not included.

² Newark, N. J., and Racine, Wis., not included.

³ Newark, N. J., not included.

⁴ Milwaukee, Wis., not included.

⁵ Racine, Wis., not included.

⁶ Columbia, S. C., not included.

⁷ Billings, Mont., not included.

FOREIGN AND INSULAR

ARGENTINA

San Juan Province—Plague.—Unofficial advices report an epidemic of plague in the Province of San Juan, Argentina.

CANADA

Provinces—Communicable diseases—Week ended July 11, 1931.—The Department of Pensions and National Health of Canada reports cases of certain communicable diseases for the week ended July 11, 1931, as follows:

Province	Cerebro-spinal fever	Dysentery	Polio-myelitis	Small-pox	Typhoid fever
Prince Edward Island ¹					
Nova Scotia ¹					
New Brunswick ¹					
Quebec.....					12
Ontario.....	1		2	6	12
Manitoba ¹					
Saskatchewan.....				13	2
Alberta.....	1				2
British Columbia.....	1	1	1		
Total.....	3	1	3	19	28

¹ No case of any disease included in the table was reported during the week.

Quebec Province—Communicable diseases—Week ended July 18, 1931.—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the week ended July 18, 1931, as follows:

Disease	Cases	Disease	Cases
Chicken pox.....	27	Scarlet fever.....	21
Diphtheria.....	19	Smallpox.....	1
Erysipelas.....	1	Tuberculosis (pulmonary).....	36
German measles.....	1	Tuberculosis (other forms).....	3
Measles.....	56	Typhoid fever.....	15
Mumps.....	3	Whooping cough.....	6
Polio-myelitis.....	1		

CHINA

Chiobe and Changchow—Plague.—An outbreak of plague in Chiobe and Changchow, 25 and 65 miles, respectively, from Amoy, China, was reported July 23, 1931. It was said that 1,500 deaths had occurred during the preceding six weeks.

CZECHOSLOVAKIA

Communicable diseases—May, 1931.—During the month of May, 1931, certain communicable diseases were reported in the Republic of Czechoslovakia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax.....	10	1	Paratyphoid fever.....	14	1
Cerebrospinal meningitis.....	18	8	Puerperal fever.....	42	10
Diphtheria.....	1, 029	60	Scarlet fever.....	1, 016	27
Dysentery.....	9	-----	Trachoma.....	209	-----
Malaria.....	70	-----	Typhoid fever.....	234	22

SOUTH AMERICA

Yellow fever.—Quarantine officers of the Public Health Service are alert to the possible presence of yellow fever in parts of South America on the Caribbean coast, particularly the western part, and on the east coast south of the Amazon River to Rio de Janeiro. The port of Para (Belem) at the mouth of the Amazon River is regarded as infected and scattered cases have been reported at various interior points more or less close to several of the seaports along the coast. (See p. 1908.) It is understood that the Brazilian authorities are maintaining an effective antimosquito campaign in the principal seaports and that danger of maritime spread is decreased accordingly. Information has been received from reliable unofficial sources indicating the occurrence of cases of yellow fever in the interior of Colombia in the region of Santa Marta and Barranquilla, but as yet these reports lack official confirmation.

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

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

CHOLERA

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

Place	Jan. 1- Feb. 7, 1931	Feb. 8- Mar. 7, 1931	Mar. 8- Apr. 4, 1931	Apr. 5- May 2, 1931	Week ended—									
					May, 1931					June, 1931				
					9	16	23	30		6	13	20	27	July, 1931
Ceylon: Colombo.....			1					1		1				
China:								1		1				
Canton.....				1										
Swatow.....							2					1		
Tientsin.....							1				3	1	6	
India.....	15,334	11,544	8,968	11,462	3,242	3,013	3,555	3,784						
Bombay.....	8,123	6,131	4,550	5,767	1,806	1,598	1,845	2,021						
Calcutta.....	21			2										1
Karikal.....	9													6
Madras.....	121	170	435	310	72	89	49	55		94	74	50	74	
Negapatam.....	86	112	250	176	39	44	34	32		57	47	26	38	
Rangoon.....		8	12	19	10		1	1						
Tuticorin.....		8	12	14	5		1	1						
Vizagapatam.....		72	20	20	18	23	11			3	6			2
Chandernagor.....	99	29	10	13	6	8	2	1			4			
Pondicherry.....	47	3												
Prinsepah.....	3													
Saigon and Cholon.....	1	1												
Tuticorin.....	1													
Vizagapatam.....														
India (French):														
Chandernagor.....	1	5	7	6	3		1							
Pondicherry.....	1	5	6	5	3		1			1	1	2		
Prinsepah.....	19	100	100	24	3	8	2	4		1	1	1		
Saigon and Cholon.....	11	34	18	4		3				1	1	1		
Indo-China (see also table below):														
Prinsepah.....	4	9		2										1
Saigon and Cholon.....	2	5	1	1	2									1
Saigon and Cholon.....	6	4	5	27	25	23	34	22		18	16	14	13	8
Saigon and Cholon.....	3	4	5	22	20	18	25	13		9	14	9	9	3

Assiout.....	26	41	13	32	4	5	1	4	1	5	2		
Beul-Suef.....	6	11	6	17	2	4	1		1		1		
Cairo.....	1			12	3		2						
Delrout.....				3	1								
Gharbleh.....	21	16	1	1	7	1	2	3	2				
Girga.....	1	4			2	2		1					
Kenn.....	1			44	1	1					1		
Manafut.....	1		56	22	1	1	5						
Minieh.....	30	15	17	3			1						
Port Said.....	6	5	3	1	5		1					2	
Hawaii Territory: Hamakua—Plague-infected rats	2	3	3	2	2		1					1	
India.....	1		2				1					1	
Basseln.....	5,335	5,457	9,139	6,142	434	139	120	49					
Bombay.....	3,422	3,661	7,037	5,199	385	143	131	33					
Calcutta.....	4	1		1	1		1						
Madras Presidency.....	3	1		11	5		1						
Rangoon.....	1	1		11	4	1	1						
Plague-infected rats	1	1		137	26	30	17						
Indo-China (see also table below): Pnompenh	34	32	70	2	2		21	10	10	10	7	11	16
Iraq:													
Baghdad.....	312	74	23	2	1	1							
Maudhan.....	182	46	21	2	1	1							
Madagascar (see also table below): Tamatave	2		1	1	1	1							
Morocco.....	1		1	1	1	1							
Nigeria: Lagos.....	4	8	7	4	1	1	3	2	1	3	1	2	
Plague-infected rats	7	1	6	4									
Peru (see table below)	5	3	8	23	7	10	4	2	10	6	1	6	1
Senegal (see table below)	4	2	5	8	3	4	2	2	1	4	1	3	1
Nigeria: Lagos.....	1			5									
Plague-infected rats	1			6									

1 On July 23, 1931, an indirect report was received stating that an epidemic of plague had occurred in Chiohe and Changchow, China, not far from Amoy.

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

PLAGUE—Continued

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

Place	Week ended—															
	Jan. 11– Feb. 7, 1931				Feb. 8– Mar. 7, 1931				Mar. 8– Apr. 5– May 2, 1931				May, 1931			
	Jan. 11– Feb. 7, 1931	Feb. 8– Mar. 7, 1931	Mar. 8– Apr. 5– May 2, 1931	Apr. 6– May 3, 1931	May 4– Jun. 1, 1931	Jun. 2– Jul. 1, 1931	Jul. 2– Aug. 1, 1931	Aug. 2– Sep. 1, 1931	Sep. 2– Oct. 1, 1931	Oct. 2– Nov. 1, 1931	Nov. 2– Dec. 1, 1931	Dec. 2– Jan. 1, 1932	Jan. 2– Feb. 1, 1932	Feb. 2– Mar. 1, 1932	Mar. 2– Apr. 1, 1932	Apr. 2– May 1, 1932
Slam.....	4	2	18	31	1	1	1	1	1	1	1	1	1	1	1	1
Bangkok.....	4	2	14	7	1	1	1	1	1	1	1	1	1	1	1	1
Nagara Rajsuma.....	8	8	6	29	6	6	6	6	6	6	6	6	6	6	6	6
Syria: Beirut.....	9	9	5	1	1	1	1	1	1	1	1	1	1	1	1	1
Tripolitania.....	10	10	7	6	6	6	6	6	6	6	6	6	6	6	6	6
Tunisia: Tunis.....	8	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Union of Socialist Soviet Republics:	3	3	14	10	16	8	1	1	1	1	1	1	1	1	1	1
Gouranduz.....	1	1	7	4	4	4	4	4	4	4	4	4	4	4	4	4
Transcaucasia—Karabakh.....	28	28														
Union of South Africa:	6	6														
Cape Province.....	P	P														
Orange Free State.....			1	6	1	1	1	1	1	1	1	1	1	1	1	1
British East Africa (see also table above):																
Kenya.....	69	21	345	245	154	2										
Indo-China (see also table above):																
Madagascar (see also table above):																
Amboitra Province.....	100	92	30	30												
Antistrabe Province.....	66	88	70	66												
Miarinarivo Province.....	66	84	83	83												
Moromanga Province.....	57	79	78	47												
Tananarive Province.....	28	31	19	6												
Tananarive Province.....	7	7	1	1												
Tananarive Province.....	92	145	90	41												
Tananarive Province.....	89	139	40	40												

* Reports incomplete.

SMALLPOX

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

Place	Jan. 11- Feb. 7, 1931	Feb. 8- Mar. 7, 1931	Mar. 8- Apr. 4, 1931	Week ended—												
				April, 1931			May, 1931					June, 1931				July, 1931
				11	18	25	2	9	16	23	30	6	13	20	27	
Algeria:																
Algiers.....	1	1	2		2						1			7	1	
Bone.....	1															
Constantine.....																
Arabis: Aden.....		1						1								1
Belgian Congo.....	50								7	10	30					
Belgium.....																
Bolivia.....																
Brazil: Porto Alegre (alastrim).....	3	7	49	20	19	8	6	2	4	7	6	2	3			
		1	1													
	70	91	8						13			1				
	13	13	3										1			
British East Africa: Tanganyika.....																
British South Africa: Southern Rhodesia.....																
Canada:																
Alberta.....	7	1														
British Columbia.....	2	8														
Manitoba.....	1	1														
Winnipeg.....		1						4								
Nova Scotia.....	1		1													
Ontario.....	49	29	9	4		6	7	17	5		3	4	3	14	3	6
Kingston.....	1	1				2	3									
North Bay.....	1	1														
Ottawa.....	3	1														
Sault Ste. Marie.....	30	2		3	1			1						1		
Toronto.....		2			4											
Quebec.....	2		2													
Saskatchewan.....	38	63	58	5	16	3	22	7	15	18	8	7	16	18	13	1
Regina.....	2	1		2		2	2									13
Canary Islands: Las Palmas.....			1													
Chile:																
Antofagasta.....																
Chanaral.....																
China:																
Amoy.....			1				2	2	1	1	1	2	1	2	1	1
		3	7	1	2	1	1									
Canton.....																

An epidemic of smallpox was reported on May 13 with 716 cases and 314 deaths since the middle of April, 1931, in Mender Province, Bolivia.

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

SMALLPOX—Continued

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

[illegible]

Place	Decem- ber, 1930	Jan- uary, 1931	February, 1931			March, 1931			April, 1931			May, 1931			June, 1931
			1-10	11-20	21-28	1-10	11-20	21-31	1-10	11-20	21-30	1-10	11-20	21-31	
Indo-China (see also table above)	O	61	95	46	27	125	139	100	42		17	41	30	16	
Ivory Coast.	O	9													
Sudan (French)	O	139				4	P								
Syria: Beirut.	O	20	1												

Place	Dec., 1930	Jan., 1931	Feb., 1931	Mar., 1931	Apr., 1931	May, 1931	Place	Dec., 1930	Jan., 1931	Feb., 1931	Mar., 1931	Apr., 1931	May, 1931
Chosen		1		11		1	Morocco	25		4	6	7	49
France		1		3			Rumania					1	1
Greece		4	16	15			Turkey	116	63	37	1		9
Mexico (see also table above)	4		4			3		9	7	6			
	1		3		1	1							

TYPHUS FEVER

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

[illegible]

Place	Dec., 1930	Jan., 1931	Feb., 1931	Mar., 1931	Apr., 1931	May, 1931	Place	Dec., 1930	Jan., 1931	Feb., 1931	Mar., 1931	Apr., 1931	May, 1931
Latvia (see table below).													
Lithuania (see table below).													
Mexico (see also table below).													
Mexico City, including municipalities in Federal District.													
San Luis Potosí.													
Morocco.													
Palestine.													
Panama Canal Zone—Balboa.													
Paraguay: Asunción.													
Poland.													
Portugal: Oporto.													
Rumania.													
Syria.													
Tunisia:													
Sbeitia, vicinity of.													
Sfar.													
Tunis.													
Turkey (see table below).													
Union of South Africa:													
Cape Province.													
Municipality of East London.													
Natal.													
Orange Free State.													
Transvaal.													
Yugoslavia (see table below).													
Chosen: Seoul.	C	1	1	3	4		Lithuania.	6	26	3	99	34	10
Czechoslovakia.	C	24	60	26	5		Mexico (see also table above).	3	3	3	3	5	
Greece.	C	10	10	17	8	6	Turkey.	85	66	83	15		3
Latvia.	C	2	2	1	3		Yugoslavia.	2	17	18	10	43	14
	D		12					1	20	12	1	5	

¹ On Feb. 27, 1931, the Director General of Public Health of Guatemala reported an unusual outbreak of typhus fever in a small village in Guatemala.

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

YELLOW FEVER

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

Place	Week ended—											
	May, 1931			June, 1931			July, 1931					
	9	16	23	30	6	13	20	27	4	11	18	
Brazil:												
Bahia State ¹												
Ceara State.....	1	2										
	1	2										
Minas Geraes State.....		1			1							
		1										
Rio de Janeiro State.....		1										
		1										
Cambucy.....												
Erilburgo (imported).....	3											
Pedras.....	1											
	2											
Sergipe State.....												
British Cameroons: Mamfe.....												
Colombia: ²												
Gold Coast:												
Akuse.....												
Kintampo.....												
Tamale.....												
Ivory Coast:												
Bobo Dionasso.....												
Kong Circle.....												
Sudan (French).....												

¹ The report of 2 cases of yellow fever in the State of Bahia, Brazil, during March, 1931, was erroneous.² 4 suspected cases of yellow fever were reported near Cienega, Magdalena Province, Colombia, July 30, 1931.