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RÉSUMÉ OF REPORT ON SANITATION AND YELLOW FEVER CONTROL IN LIBERIA

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As a result of the death of the American minister to Liberia and the deaths of several other American and European residents in Monrovia during the year 1929, the American, British, French, and German Governments by common agreement made joint representation on the subject to the Government of Liberia. Later, following a memorandum agreement between the Government of the United States and the Government of Liberia, an officer of the United States Public Health Service was detailed to act as chief medical adviser to the President of that Republic.

Under the terms of this memorandum agreement, the officer detailed to act as chief medical adviser was to make health investigations and surveys and institute corrective sanitary measures not contrary to the organic and statutory laws of Liberia, and was made directly responsible to the Liberian President. The Liberian Government agreed to furnish the chief medical adviser with ample police assistance and to provide certain sums of money with which to carry out the proposed work. For this latter purpose the Liberian Legislature appropriated \$18,000 for the year beginning January 1, 1930. The agreement also provided that the officer detailed from the United States Public Health Service should submit a report regarding health conditions in Liberia, with recommendations as to the permanent sanitary improvements and organization which conditions might require, and the Liberian Government agreed that the measures so recommended would be undertaken and effected as early as practicable, in so far as they were economically feasible and were not contrary to the organic and statutory laws of Liberia.

The writer, detailed as chief medical adviser, arrived in Monrovia, the capital of the Republic of Liberia, on January 20, 1930, and, after formal presentation to the President and other Government officials, took up his duties on January 25, 1930.

It soon became evident that the officials of the Liberian Government were not in sympathy with the proposed program relating to

yellow-fever control, and many of them quite openly expressed their disbelief even in the existence of such a disease as yellow fever.

At the beginning of operations there was no trained sanitary personnel in Liberia. It was therefore necessary to select from approximately 150 untrained applicants sufficient men to form the nucleus of an inspectors' corps. Eight of the most promising applicants were chosen and were given an intensive although rather elementary course in matters pertaining to the work in hand. Considerable difficulty was experienced in securing control over this personnel as the President insisted that they be granted "commissions," under which the employee became subject to discipline and supervision only by the President. As the control of procedure and personnel in work relating to epidemic diseases must be vested in the person responsible for the success of the enterprise, such a procedure of "commissioning" employees could not be agreed to; and on February 27, after several conferences and considerable delay, the chief medical adviser was given power to appoint and control the personnel engaged in sanitation work.

The President was finally persuaded to issue an Executive order requiring all physicians and also the so-called "bush" doctors to report to the chief medical adviser all cases of fever of 100° F. or over. This was requested in order that all cases of fever within the city could be visited by a representative of the chief medical adviser's office to determine whether or not cases of yellow fever were occurring within the city. There was considerable opposition to the issuing of this Executive order, based on what was thought might be considered a reflection on the local physicians' ability to diagnose such a disease as yellow fever. Owing to lack of sympathy with the work, it was found impossible to enforce this Executive order.

Actual field work was finally started on March 5, 1930. This work embraced a house-to-house survey of each and every building and building lot in the city. The necessary survey cards had in the meantime been drafted and printed. These cards embraced data relative to the location of the premises, name of occupant, census of the occupants as to age, sex, and nationality, and the presence or absence of wells, cisterns, water barrels, tin cans, bottles, roof gutters, pools, or depressions, type of vegetation, etc., and also data as to whether or not wells, cisterns, and other water containers were protected against mosquito breeding, and as to whether or not breeding was actually taking place on the premises at the time of inspection. Information was also obtained as to the method of disposal of human excreta on each of the premises inspected.

In order that active mosquito control might be effected as early as possible, each inspector was furnished a sufficient number of laborers

to cut all weeds and to collect and remove from each city lot or premises all tin cans, bottles, and other types of refuse which might act as breeding places for mosquitoes during the rainy season. As a result of these activities, five hundred and forty-six 2-ton truck loads of tin cans, broken bottles, and similar refuse were removed from the city and disposed of during the course of the survey.

In March, 1930, the services of a trained public health nurse conversant with yellow fever and its symptoms were secured, and an infant welfare clinic was opened the latter part of that month. The number of children brought to the clinic increased weekly up to the time it had to be closed owing to the lack of funds. To this public health nurse was also delegated the duty of visiting the few cases which were reported to the chief medical adviser by local physicians as having a temperature of 100° F. or over. All cases the least suspicious of yellow fever in the opinion of the public health nurse were immediately visited by the chief medical adviser.

The work of the preliminary survey and the initial clean-up of the city occupied the time from March 5 to May 20. During this period a vast difference was made in the general appearance of the city. The death rate for the month of May was reduced by more than 75 per cent as compared with the rate for the corresponding month of any preceding year.

From the beginning of the work difficulty was experienced in having the expenses met and liquidated, and it was necessary on three occasions between February 1 and May 30 to discontinue practically all operations, owing to the fact that funds could not be had for the payment of salaries and the purchase of equipment.

Difficulty was also experienced in taking the census and in making the preliminary survey, although the law provided a penalty for interference with the inspectors in the performance of their official duties. During the entire time the work was in progress, support from the courts in connection with the enforcement of sanitary regulations as provided in the agreement was lacking.

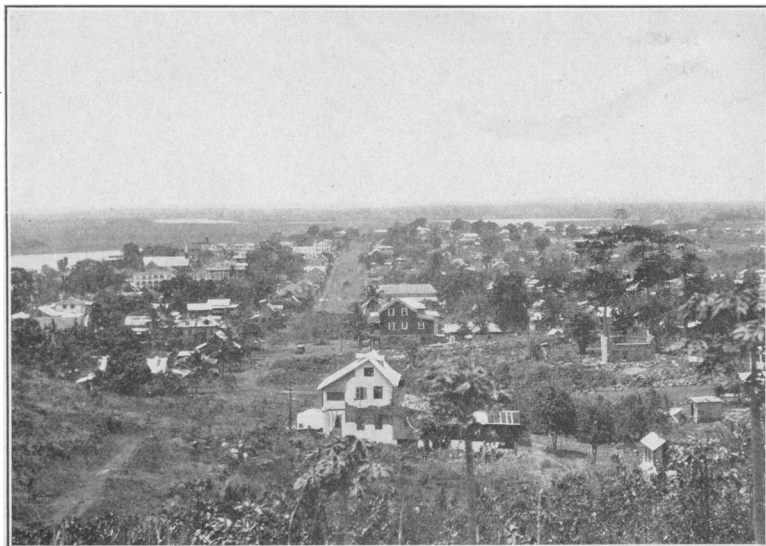
On May 26, 1930, the chief medical adviser received notice from the auditor, confirmed the following day by the secretary of the treasury, to the effect that there were no further funds available for the continuation of the special sanitation work, although at the time this notice was received only \$4,707 of the appropriation of \$18,000 had been obligated, and of this amount \$977 still remained unpaid. The total amount that had been paid out of the original \$18,000 was \$3,730. In view of the fact that no further funds were made available from the remainder of money appropriated, it was necessary to stop all operations and discontinue the services of all personnel, except those of the public health nurse, on May 31.

The data collected during the survey were compiled and a report on the conditions found was prepared. The report embraced the following subjects: History, geographical conditions, climatic conditions, rainfall, object and scope of survey, method of procedure, population, housing conditions, water supply, sewage disposal, garbage and refuse, vital statistics, communicable diseases, mosquitoes, mosquito breeding, public-health activities (national), public-health activities (municipal), and maritime quarantine. This report also presented the conclusions drawn from the actual findings as shown by the survey cards and the specific recommendations relative to the corrective measures which should be instituted.

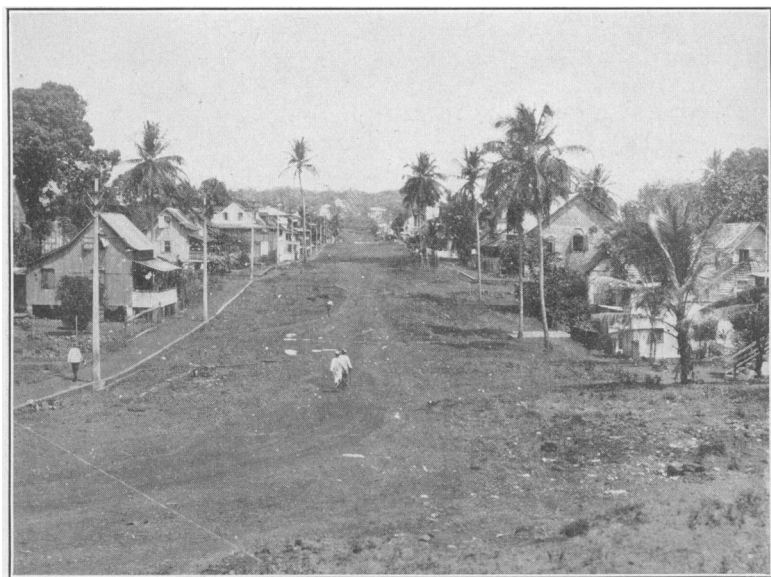
On June 3 the first-known case of yellow fever in Monrovia for the year 1930 was reported by one of the two European physicians in the city. The case was unquestionably an imported one as the patient had been in the city but eight hours when taken sick and had been absent from the city for a period of over 10 days prior to the onset of the disease. Upon a diagnosis of yellow fever being made, the family of the patient immediately discontinued the services of the European physician attending the patient and employed a native doctor. The case proved fatal three days after it had been reported. Examination of the burial permit at the close of the month showed that the cause of death as given by the local doctor was "strangulated hernia." Every house within a distance of two city blocks in all directions from the residence of this patient was visited daily for a period of five weeks. Every person in this area was seen or accounted for daily during this period. No secondary cases occurred.

Unsuccessful efforts were made by the chief medical adviser to secure from the municipal board permission to examine mortality records, and it became necessary to appeal to the President for permission to examine the city burial permits. The examination of such permits was permitted by the municipal board from May 1 until September 1, after which date the board again refused permission to examine the records or furnish any data relative to the number of deaths occurring in the city. Permission could not again be secured to inspect the city's mortality records.

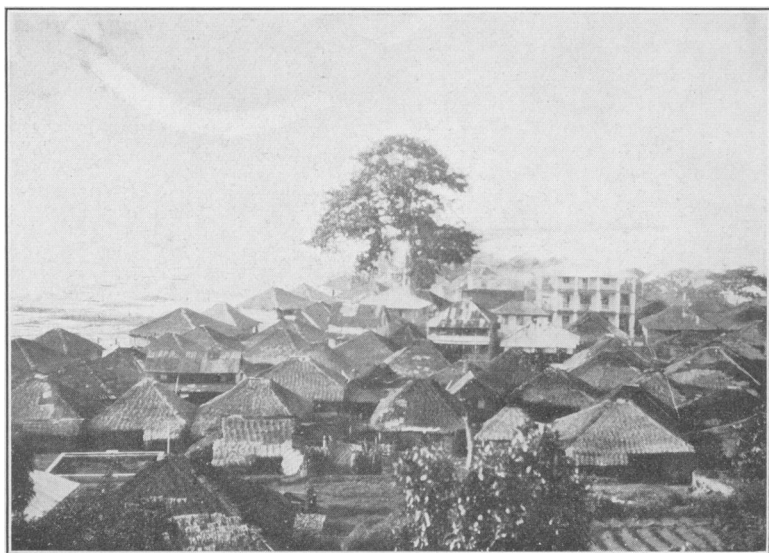
Fruitless appeals were made for the balance of the money appropriated by the legislature to carry on the work, and upon the specific recommendation of the financial adviser, the Finance Corporation of New York agreed to make available the sum of \$11,000 for a continuation of the sanitary program in Monrovia. It was recommended by the chief medical adviser, however, that this money be not made available until the Liberian Government agreed to give its cooperation and support to the sanitary program, and as evidence of this sympathy and support the President was requested to agree to the following program:



RESIDENTIAL SECTION OF MONROVIA PROPER



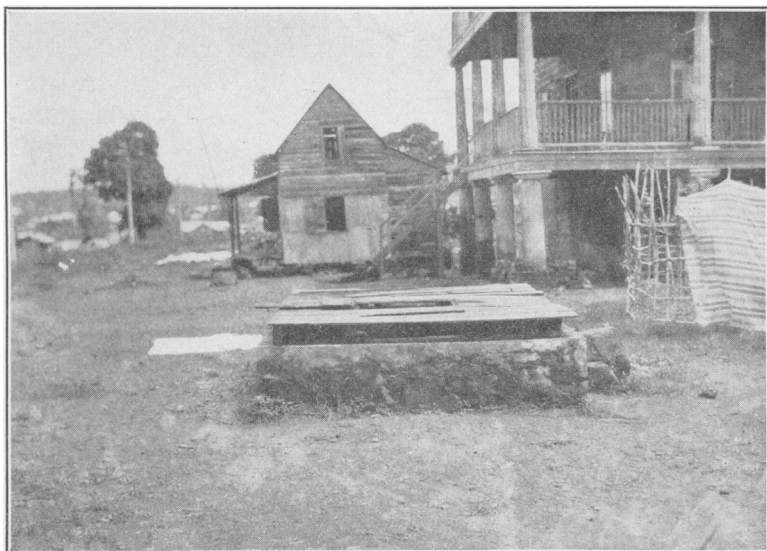
BROAD STREET, THE MAIN THOROUGHFARE AND BEST RESIDENTIAL SECTION OF MONROVIA PROPER



KROOTOWN, OR NATIVE QUARTER OF MONROVIA



A STREET IN KROOTOWN



BEST TYPE OF MONROVIAN WELLS

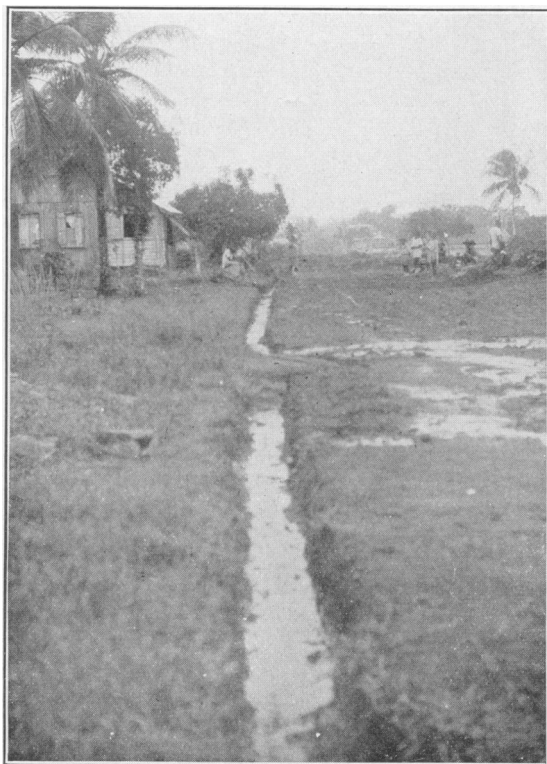


BEST TYPE OF MONROVIAN PRIVIES



REFUSE COLLECTED FROM TWO BACK YARDS

More than 500 truck loads of this type of refuse were collected and removed during the survey.



SAMPLE OF DITCHES CONSTRUCTED IN CONNECTION WITH ANOPHELES CONTROL

1. That the sanitary inspectors should be given police authority in all matters pertaining to their sanitary duties.
2. That all cases of violation of the sanitary regulations should be tried in a special sanitation court, such a court to be authorized by the President.
3. That the judge of such a court be named by the chief medical adviser and two disinterested Liberian citizens.
4. That the \$11,000 advanced be subject to expenditure only over the signature of the chief medical adviser.

Although agreement was secured to the above-listed requirements, Executive orders in consonance with such requirements failed to be forthcoming, and after further evidence of the lack of governmental sympathy with the program, it was deemed inadvisable to expend any portion of the \$11,000 advanced by the Finance Corporation, and especially so since this money had been made available on the specific condition that the Government comply with the above-enumerated requirements.

The following is a summary of the report presenting the findings, conclusions, and recommendations:

Geographical and climatic conditions.—The geographical location and climatic conditions are ideal for the propagation of *Aedes* mosquitoes throughout the year.

Rainfall.—There appeared to be a definite relationship between the amount of rainfall and the mortality. In all probability this increase in the number of deaths is related to the increase in the incidence of *Aedes* breeding, such breeding being greatly increased by the lack of any system of refuse collection. Average annual precipitation is 160 inches, practically all of which falls between April and November.

Housing conditions in the native quarter were such as to constitute a hazard to the health of the community generally.

Water supply was found to be inadequate and unsafe. A protected water supply should be one of the first public utilities to be installed when funds are available.

Sewage disposal.—The method of disposal of human excrement was found to be a menace to the health of the community and should be corrected.

Vital statistics.—There were practically no vital statistics, and those which were kept did not portray a true picture of conditions. Legislation or regulations governing the collection of vital statistics should be enacted.

Mosquitoes and mosquito control.—Ninety-six per cent of the premises inspected in the city proper during the survey were found to be breeding mosquitoes at the time of inspection. Experiments showed that 94 per cent of the mosquitoes hatched from specimens taken

from such premises were of a species capable of transmitting yellow fever. Conditions favoring the spread of yellow fever by mosquitoes should be eliminated.

Public-health activities—National.—Public-health legislation is far from adequate. There are no organized activities.

Public-health activities—Municipal.—Municipal public-health control measures were inadequate. The lack of organization had resulted in inadequate and ineffectual efforts to control conditions governing the conservation of health.

Maritime quarantine.—Legislation and regulations under law, both national and municipal, are, according to modern standards, inadequate and fail to provide the protection available through properly applied methods.

Yellow fever.—From information gained from physicians practicing in Monrovia, from the examination of such death records as were available, from conversation and interviews with persons who had previously had yellow fever while living in the city, from the known number of deaths occurring from that disease in the city which were not recorded in the local mortality records, and from the report of the representative of the West African Yellow Fever Commission, it was concluded that yellow fever had existed in Monrovia over a considerable period of time. With the lax methods of mortality reporting and with the absence of diagnosis in over 50 per cent of all deaths which were recorded, it was impossible to estimate the actual number of deaths from this disease occurring in the city. The activities which had been conducted concurrently with the survey aimed solely toward the correcting of conditions which favored the presence and spread of yellow fever, i. e., the control of mosquito breeding in and about human habitations.

After 10 weeks of such control measures, which period included the month (May) which heretofore had had the highest mortality of the year, it was found that the number of deaths for this particular month had been reduced over 75 per cent as compared with any previous corresponding month on record. As all other local factors including meteorological conditions for the month had remained practically unchanged as compared with the corresponding month of previous years, it was assumed that the reduction in the number of deaths during the month had been the result of the measures employed toward mosquito control.

If, then, those measures which bore directly on conditions relating to the control of yellow fever resulted in a reduction of over 75 per cent in the total mortality during a period in which occurred in previous years a number of deaths known to be due to yellow fever, and no known cases nor any known deaths from that disease occurred

after the inauguration of the measures above mentioned, it might be assumed that the marked increase in the number of deaths which had heretofore occurred periodically at that particular time were, in the absence of any diagnosis, due to yellow fever. This assumption was strengthened by the belief that, had the undiagnosed deaths which were known to have occurred at this time in previous years been actually due to yellow fever, the measures which had been instituted would unquestionably have resulted in a decrease in the mortality similar to that which actually occurred.

A continuation of the special sanitation program, together with the adoption of the recommendations embodied in the report, was urgently recommended.

Unless active measures should be constantly enforced, mosquito control, which had been demonstrated during the survey to play a most important rôle in the control of the community death rate, could not be made effective. Mosquito control in the city on May 31, 1930, was well in hand. Delay in the continuation of such control meant the loss of the advantages then held and a return of the death rate to its old level. To regain control of mosquito breeding at a later date would necessitate also an added increase in expenditures. Continued efforts, constant vigilance, and rigid enforcement of the sanitary regulations were shown to be the only means of safety.

This report was submitted to the President of Liberia on June 2, 1930, but no acknowledgment of its receipt was received from the Liberian Government, and no effort was made to carry out the corrective measures recommended even when funds were made available.

In this work the Government of the United States, through the officer of the United States Public Health Service appointed to act as chief medical adviser to the Republic of Liberia, carried out its obligations to the Liberian Government as set forth in the memorandum agreement; but, unfortunately, it became necessary to discontinue operations owing to the failure of the Liberian Government to provide funds and court assistance as provided for in the memorandum agreement. It is felt, however, that the value of such sanitary work was amply demonstrated by a reduction in deaths in Monrovia equivalent to the saving of 132 lives per year even by this brief application of sanitary measures, and that the experience and results set forth in this report are worthy of consideration when future plans for organization and appropriation for public health and sanitation activities shall be contemplated.

VENEREAL DISEASE AMONG COAST GUARD ENLISTED PERSONNEL DURING THE FISCAL YEAR 1930

By W. W. KING, *Medical Officer, United States Coast Guard Headquarters; Medical Director, United States Public Health Service*

The following report is supplemental to that for the fiscal year 1929, published in the PUBLIC HEALTH REPORTS for December 5, 1930, in which a general review was made of the study of venereal disease conditions in the Coast Guard since 1927, the first year for which a record had been kept.

The data for 1928 showed a marked improvement over the conditions for 1927, and this improvement continued through 1929. The record for 1930, however, shows that the improvement suffered a reverse in several respects during that year, and this report is submitted in the belief that those interested should be informed of the conditions, especially Public Health Service and Coast Guard officers who deal directly with the situation.

In Table 1 are included all cases of each disease reported during the fiscal year ended June 30, 1930, including those carried over from the previous year, together with the data for prior years. The carried-over cases were considerably greater in number than those carried over in 1928 and 1929, and they account for nearly one-third of the total increase of 109 cases. This is one consequence of the policy of retaining a venereal-disease patient in the Coast Guard if there is hope of his restoration to duty within a reasonable time, or if he can be treated without being a menace to his shipmates and without undue loss of time from duty.

The average number of enlisted personnel of the Coast Guard during the year was 10,834, an increase of 142. These additional men were potential venereal disease patients, but at the 1929 rate would not have added more than 12 cases. The rate of incidence for all cases of venereal disease increased in 1930 to 91.10 per 1,000 over the 1929 rate of 82.12. The carried-over cases have evidently influenced the increase in rate as well as the increase in the number of cases.

The number of new cases reported in 1930 was 834, an increase of 75, the rate increasing from 70.98 in 1929 to 76.98 in 1930, as shown in Table 2.

TABLE 1.—*Number of cases reported, and rate per 1,000*

	1927		1928		1929		1930	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Gonorrhea.....	764	78.36	677	66.23	645	60.33	656	60.55
Chancroid.....	86	8.82	116	11.17	65	6.08	95	8.77
Primary syphilis.....	65	6.68	54	5.20	50	4.68	80	7.38
Late syphilis.....	115	11.80	110	10.60	118	11.03	156	14.40
Total.....	1,030	105.64	957	92.21	878	82.12	987	91.10

TABLE 2.—*New cases reported, and rate per 1,000*

	1927		1928		1929		1930	
	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Gonorrhea.....	719	73.71	590	56.85	565	52.84	562	51.87
Chancroid.....	86	8.82	111	10.70	60	5.61	88	8.12
Primary syphilis.....	60	6.15	59	4.82	48	4.49	72	6.65
Late syphilis.....	98	10.05	78	7.52	86	8.04	112	10.34
Total.....	963	98.77	829	79.88	759	70.98	834	76.98

The cases were tabulated and the incidence rates were calculated under four heads, viz, gonorrhea, chancroid, primary syphilis, and late syphilis. The statistics for each group compared with those of the same group for 1929 show some interesting facts.

The gonorrhea group comprises about two-thirds of the venereal cases and is the group in which the greatest increase in the number of cases might be expected. On the contrary, this group for 1930, counting all cases, amounted to 656, an increase of only 11 cases, while the new cases were 562, a decrease of 3 cases as compared with the 1929 figures. Carried-over cases explain the increase among all cases.

The number of chancroid cases has varied greatly each year. In 1930 there were 95, as compared with 65 in 1929, counting all cases. Of new cases there were 88 in 1930, as compared with 60 in 1929. Thus there was a large actual increase, because the carried-over cases would account for but a small number. It was a bad year for chancroid infection.

It was equally bad for primary syphilis. The 1930 figures showed 80, all cases, as against 50 in 1929, and 72 new cases in 1930 as against 48 in 1929, increases of 30 and 28 cases, respectively.

The increases in the numbers of cases in these two groups constitute about one-half of the total increase, and are those for which a probable explanation may be most easily assigned. In view of the fact that the prophylactic use of calomel ointment gives the best results in the prevention of such cases, it seems probable that their increased number was due to neglect of that preventive measure.

In 1930 the last group of cases, those of late syphilis, numbered 156 in all, of which 112 were new cases, as against 118 and 86 in 1929. These cases fall into three classes: (1) New cases in which infection took place comparatively recently but which did not come to attention during the primary stage. The information at hand is insufficient to estimate the number in each class, but apparently this one is fairly numerous and probably has increased in 1930 for the same reason given in the last paragraph. A second class, (2) new cases in which infection took place a long time ago, and which are more or

less in a latent stage, the diagnosis being made usually as the result of a positive Wasserman reaction. This class seems relatively small. The third class, (3) old cases carried over from the previous years, is probably the largest of the three and accounts for a considerable proportion of the increased number of cases in this group.

An analysis of the data thus indicates that the adverse showing for 1930 is not as bad as might seem at first glance. Approximately one-half of the increased number of cases may be charged to the policy of retaining patients in the service under circumstances in which they were formerly discharged for physical disability. The remainder of the increase in cases constitutes an actual increase, apparently due to failure to apply a simple preventive measure of known efficacy.

It would be giving an incomplete picture of the venereal disease conditions to ignore the cases reported under the diagnosis "urethritis" or "ulcer." They can not be included in the four groups above mentioned because of the impossibility, with the information available, of separating those which are venereal from those which are not. Undoubtedly a considerable proportion are of venereal origin. It may be remarked here that many of these cases are reported as "non-venereal" when "nonspecific" is apparently the sense intended. The two words have distinct meanings but are mistakenly used at times as synonyms.

This group of indefinite cases showed a decided increase in the number of cases of urethritis, 74 in 1930 as against 50 in 1929. This increase makes the showing of the gonorrhea group less favorable if, as seems probable, a considerable proportion of these cases may be considered as undiagnosed gonorrhea. Thirteen received hospital treatment totaling 275 days, and two were off duty 28 days but not in hospital.

The cases of ulcer were the same in number, 13, as in 1929. Three received a total of 25 days in hospital.

Cases of more than one disease in the same patient were divided in two classes as shown by Tables 3 and 4.

TABLE 3.—*Mixed infections*

Treated at the same time for—	1927	1928	1929	1930
Gonorrhea and primary syphilis.....	5	5	4	4
Gonorrhea and late syphilis.....	15	21	10	18
Gonorrhea and chancroid.....	10	10	3	5
Gonorrhea, chancroid, and primary syphilis.....	0	4	1	0
Gonorrhea, chancroid, and late syphilis.....	2	0	2	1
Chancroid and primary syphilis.....	2	9	2	5
Chancroid and late syphilis.....	3	3	8	4
Total.....	37	52	30	37

TABLE 4.—*Reinfections*

Treated at different times for—	1927	1928	1929	1930
Gonorrhea and primary syphilis.....	3	0	4	7
Gonorrhea and late syphilis.....	1	0	3	6
Gonorrhea and gonorrhea (apparent reinfection).....	0	1	5	4
Gonorrhea and chancre.....	3	7	5	6
Gonorrhea at one time, chancre and primary syphilis at another time.....	0	0	1	0
Gonorrhea at one time, chancre and late syphilis at another time.....	1	0	0	0
Chancre and chancre (apparent reinfection).....	0	3	0	0
Chancre and primary syphilis.....	0	1	1	3
Chancre and late syphilis.....	1	4	0	12
Chancre at one time, gonorrhea and late syphilis at another time.....	0	0	0	1
Total.....	9	16	19	39

The number of patients treated for more than one venereal disease at the same time was 37, an unimportant increase of 7 cases. The number of those treated for more than one disease but at different times increased from 19 to 39, chiefly those having late syphilis who had acquired another disease. As many cases of late syphilis are carried over from previous years, it is not surprising that this occurs.

Each disease is recorded in its group; and since one man may have more than one disease, it follows that the number of men affected was less than the number of cases. There were 927 men affected in 1930, an increase of 103, and a corresponding increase in the percentage of men affected from 7.7 to 8.6.

The number discharged primarily on account of physical disability due to venereal disease (Table 5) decreased from 67 to 45, but the number of men with venereal disease discharged for undesirability and other reasons (not including expiration of enlistment) increased from 16 to 37. Therefore the net result was but slightly changed.

TABLE 5.—*Discharges for physical disability due to venereal diseases*

	1927	1928	1929	1930
Gonorrhea.....	302	39	57	33
Chancre.....	18	1	1	3
Primary syphilis.....	27	4	1	3
Late syphilis.....	39	15	8	6
Total.....	386	59	67	45

The number of hospital patients (Table 6) increased by 67, from 581 to 648, and there was a corresponding increase of 1,974 hospital days, from 22,150 to 24,124. The average number of hospital days per patient decreased from 38.12 to 37.23, which may be regarded as within normal variation, although it represents a saving of 577 hospital days as compared with the number of hospital days which would have occurred had the 1929 rate prevailed.

TABLE 6.—*Hospital days*

	Number of patients				Hospital days				Average number of days per patient			
	1927	1928	1929	1930	1927	1928	1929	1930	1927	1928	1929	1930
Gonorrhea.....	551	521	452	477	13,943	20,437	17,109	18,559	24.85	39.23	37.85	38.91
Chancroid.....	57	80	53	61	1,399	2,371	1,784	1,717	24.54	29.64	33.66	28.15
Primary syphilis.....	50	34	31	53	1,566	1,319	1,263	1,672	31.52	38.79	40.68	31.55
Late syphilis.....	56	56	45	57	1,598	1,787	1,904	2,176	28.54	31.91	44.31	38.18
Total.....	714	691	581	648	18,506	25,914	22,150	24,124	25.92	37.50	38.12	37.23

¹ Including 3 patients discharged from the Coast Guard before the beginning of the year but remaining in hospital. These patients are included also in Table 7.

² Including 1 patient discharged from Coast Guard before the beginning of the year but remaining in hospital. This patient is included also in Table 7.

Patients remaining in hospital after discharge from the Coast Guard numbered 30, a marked decrease from the 90 in 1929. The number of hospital days after discharge decreased from 1,125 to 362, and the average number of hospital days per patient from 12.50 to 12.07. (Table 7.)

TABLE 7.—*Cases in hospital after discharge from Coast Guard*

	Patients				Days				Average days per patient			
	1927	1928	1929	1930	1927	1928	1929	1930	1927	1928	1929	1930
Gonorrhea.....	200	75	72	23	2,411	493	668	234	12.05	6.57	9.28	10.17
Chancroid.....	17	2	4	3	365	27	53	17	21.47	13.50	13.25	5.67
Primary syphilis.....	19	6	2	1	257	77	259	2	13.53	12.83	129.50	2.00
Late syphilis.....	17	17	12	3	255	178	145	109	15.00	10.47	12.08	36.33
Total.....	253	100	90	30	3,288	775	1,125	362	13.00	7.75	12.50	12.07

These days in hospital after discharge from service do not represent time lost to the Coast Guard; but a number of other patients who were not in hospital were off duty on account of venereal disease, and this time was lost to the Coast Guard. It amounted to 414 days, as against 909 days in 1929. Added to the number of days in hospital of men in service, it makes a total of 24,176 days' time lost to the Coast Guard in 1930, an increase of 2,242 over the same item for 1929. (Table 8).

TABLE 8.—*Days off duty while in Coast Guard*

	1927	1928	1929	1930
Gonorrhea.....	12,228	23,123	17,190	18,642
Chancroid.....	1,066	2,373	1,773	1,703
Primary syphilis.....	1,317	1,242	1,090	1,688
Late syphilis.....	1,362	1,628	1,881	2,143
Total.....	15,973	25,366	21,934	24,176

The increase in the number of hospital days represents a loss to the Public Health Service, and the increase in off-duty days represents a corresponding loss to the Coast Guard. About one half of these losses may be regarded as normal to certain circumstances as being the result of matters of policy and other factors, but the other half may be considered an absolute loss in that it apparently might have been prevented.

Notwithstanding the increase in the number of cases, the number of admissions and readmissions to off-duty status was slightly decreased from a monthly average of 56 to 54.75. This is not inconsistent with the increase in the number of hospital patients, the difference being made up by cases carried over while on off-duty status, having been admitted during the preceding year. The monthly average of admissions and readmissions indicates the approximate number of men off duty at all times on account of venereal disease.

Other data were included in the 1929 report, but as the figures for 1930 on the same points do not show any change of material interest it has not been thought necessary to discuss them.

TEMPORARY INJUNCTION AGAINST PASTEURIZATION REQUIREMENT DENIED BY TRIAL COURT

An ordinance of the city of Winona, Minn., prohibited the distribution or delivery of milk within the city, except for manufacturing or cooking purposes, unless the milk had been pasteurized. In an action in which it was contended that the pasteurization requirement was an unwarranted and unlawful burden upon interstate commerce to the extent that it prohibited the delivery from Wisconsin in interstate commerce of unpasteurized milk to persons within Winona, the district court in Winona County denied the plaintiff's motion for a temporary injunction, accompanying such denial with the following memorandum opinion:

MEMORANDUM

The ordinance under consideration prohibits the distribution or delivery of milk within the city of Winona, except for manufacturing or cooking purposes, unless such milk has been pasteurized. Plaintiff contends that this requirement "to the extent that it prohibits the delivery from Wisconsin in interstate commerce of unpasteurized milk and cream to persons within the city of Winona is an unwarranted and unlawful burden upon such commerce."

The court recognizes the validity of the general principles of law set forth in the scholarly brief submitted by plaintiff's counsel. The arguments of counsel, however, are founded upon the premise that "raw milk" as such is a legitimate and well-recognized article of commerce, that it is a wholesome food substance, and that the ordinance wholly prohibits its importation into the city.

The court is of the opinion that while the term "raw milk" may sometimes be appropriately used in contradistinction to "pasteurized milk," no such dis-

inction is justified in stating the premise of this argument. Pasteurized milk, regarded as an article of commerce and of food, has substantially the same properties and is used for substantially the same purposes as unpasteurized milk—both are in fact raw milk. It is only in the realms of hygiene and pathology that any substantial distinction exists.

When milk is actually boiled, or evaporated, or when it is converted into butter or cheese, a distinctly different article of food is produced; but pasteurization is not a manufacturing process. It is merely a sterilizing process. Its sole purpose and result is to safeguard the health of the consumer, and consequently the health of the community in which he lives. Pasteurization is generally regarded as an invaluable achievement of modern science. Its merit lies wholly in the fact that it safeguards human life without substantially changing the properties of the food thus treated.

Our supreme court has said that, "A statute may indirectly or incidentally affect interstate commerce, as local police measures frequently do, without offending the commerce clause." (*State v. Fairmont Creamery Co.*, 162 Minn. 146; 202 N. W. 714; 42 A. L. R. 548.) Plaintiff recognizes this rule in his brief, but denies its application to the situation here involved. He freely concedes that the State may require quarantine or inspection. The court regards pasteurization as an analogous requirement, having the same purpose, but less burdensome than either. Its effect upon interstate commerce is purely indirect and incidental.

Pasteurization is too well established in practice, and too strongly supported by enlightened public opinion, to be regarded as a fad or a fanatical requirement. (See *Pfeffer v. City of Milwaukee*, 171 Wis. 514; 177 N. W. 850; 10 A. L. R. 128; also see notes in 18 A. L. R. 235, and 42 A. L. R. 556.) All milk sold in Winona for many years past has been submitted to this safeguarding process, and this has been generally regarded as a most important factor in the maintenance of our excellent public health.

COURT DECISION RELATING TO PUBLIC HEALTH

Provisions concerning "shoddy" in mattress law construed.—(Indiana Supreme Court; *Weisenberger v. State*, 175 N. E. 238; decided Mar. 4, 1931.) A State law relating to the manufacture and sale of mattresses provided in part as follows:

No person * * * shall employ or use in the making, remaking, or renovating of any mattress: * * * (b) Any material known as "shoddy," and made in whole or in part from old or worn clothing, carpets, or other fabric or material previously used, or any other fabric or material from which "shoddy" is constructed. (2) No person * * * shall sell, offer to sell * * * any mattress made, remade, or renovated in violation of subsection 1 of this section.

In a prosecution for unlawfully manufacturing bed mattresses from material known as "shoddy" and for unlawfully selling and offering to sell mattresses so manufactured, the constitutionality of the statute was challenged, it being contended that the act was inhibited by the personal liberty clause and the equal privilege and immunity section of the State constitution. The supreme court, however, stated that the evidence "will not warrant us in declaring the statute void" on such ground. "It was an affirmative act of the State to restrain a

lawful business from the exercise of abuses which would endanger health and public welfare. The statute thus construed falls short of being arbitrary or of unnecessarily invading property rights or unreasonably restraining a lawful business. It being a reasonable exercise by the State of her police power, and applying alike to all similarly situated, neither of the constitutional provisions relied on by appellant are violated."

The court, however, construed the provisions of the statute respecting "shoddy," above quoted, "to be a prohibition on the use of the materials therein specifically mentioned when they are shown to be unsanitary, or, by allegations of fact, it appears that, when they are transformed into 'shoddy' and used in mattresses, will endanger health." The court said:

* * * The evident object of provision (b) was the preservation of health by prohibiting the use of things likely to disseminate disease, and nothing more. The police power does not extend to arbitrarily prevent the making of "shoddy" out of thoroughly sterilized and cleansed materials, even though the same should be old and secondhand. * * *

DEATHS DURING WEEK ENDED MAY 16, 1931

Summary of information received by telegraph from industrial insurance companies for the week ended May 16, 1931, and corresponding week of 1930. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)

	Week ended May 16, 1931	Corresponding week, 1930
Policies in force.....	75, 158, 197	75, 793, 257
Number of death claims.....	14, 697	15, 282
Death claims per 1,000 policies in force, annual rate.....	10. 2	10. 5

Deaths¹ from all causes in certain large cities of the United States during the week ended May 16, 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 midyear population estimates derived from the 1930 census]

City	Week ended May 16, 1931				Corresponding week, 1930		Death rate ² for first 20 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, 983	11. 7	624	4. 48	11. 7	775	13. 5	13. 2
Akron.....	37	7. 5	1	10	8. 0	5	8. 5	8. 5
Albany ³	28	11. 3	2	40	14. 3	4	15. 1	16. 7
Atlanta.....	71	13. 3	8	82	14. 2	8	16. 2	16. 9
White.....	40		6	95		5		
Colored.....	31	(⁰)	2	57	(⁰)	3	(⁰)	(⁰)
Baltimore ⁴	204	13. 1	11	37	14. 5	11	16. 6	15. 6
White.....	180		6	26		9		
Colored.....	54	(⁰)	5	78	(⁰)	2	(⁰)	(⁰)

See foot notes at end of table.

Deaths¹ from all causes in certain large cities of the United States during the week ended May 16, 1931, infant mortality, annual death rate, and comparison with corresponding week of 1930—Continued.

City	Week ended May 16, 1931				Corresponding week, 1930		Death rate ¹ for first 20 weeks	
	Total deaths	Death rate ¹	Deaths under 1 year	Infant mortality rate ¹	Death rate ¹	Deaths under 1 year	1931	1930
Birmingham.....	59	11.4	0	0	13.8	8	15.2	14.4
White.....	30		0	0		2		
Colored.....	29	(⁹)	0	0	(⁹)	6	(⁹)	(⁹)
Boston.....	223	14.8	22	63	14.9	27	16.2	16.2
Bridgeport.....	24	8.5	1	17	9.9	0	12.4	13.4
Buffalo.....	152	13.6	13	53	13.7	14	14.9	14.5
Cambridge.....	33	15.1	2	40	11.5	1	14.1	14.0
Camden.....	22	9.6	0	0	14.9	5	17.2	15.0
Canton.....	29	14.2	1	23	8.9	2	11.4	11.3
Chicago ¹	653	9.8	52	46	8.9	44	11.7	11.5
Cincinnati.....	115	13.1	6	36	13.0	8	17.5	17.1
Cleveland.....	190	10.9	20	58	11.4	27	12.4	12.4
Columbus.....	95	16.8	11	107	14.3	7	15.0	18.2
Dallas.....	69	13.2	4		10.9	9	12.5	12.3
White.....	53		1			8		
Colored.....	16	(⁹)	1		(⁹)	1	(⁹)	(⁹)
Dayton.....	34	8.6	3	42	9.0	4	13.0	10.5
Denver.....	74	13.2	7	68	14.8	12	15.4	15.3
Des Moines.....	58	13.7	3	53	12.8	6	12.0	12.6
Detroit.....	261	8.2	28	45	9.1	27	9.5	10.5
Duluth.....	20	10.2	1	25	15.9	2	11.6	11.5
El Paso.....	27	13.4	10		20.3	12	17.8	18.6
Erie.....	30	13.3	2	37	12.6	2	11.6	11.3
Fall River ¹⁷	24	10.9	3	68	15.4	6	13.3	14.2
Flint.....	17	5.4	1	13	8.9	5	8.1	10.2
Fort Worth.....	44	13.7	6		9.8	2	12.5	11.7
White.....	37		6			1		
Colored.....	7	(⁹)	0		(⁹)	1	(⁹)	(⁹)
Grand Rapids.....	29	8.8	4	59	9.6	6	9.7	11.5
Houston.....	64	10.8	8		11.7	9	11.7	12.8
White.....	44		7			8		
Colored.....	20	(⁹)	1		(⁹)	1	(⁹)	(⁹)
Indianapolis.....	96	13.5	3	25	9.1	5	15.0	15.6
White.....	85		3	28		4		
Colored.....	11	(⁹)	0	0	(⁹)	1	(⁹)	(⁹)
Jersey City.....	62	10.1	4	36	12.0	6	13.1	13.1
Kansas City, Kans.....	21	8.9	3	62	13.7	0	14.5	12.4
White.....	17		1	25		0		
Colored.....	4	(⁹)	2	254	(⁹)	0	(⁹)	(⁹)
Kansas City, Mo.....	98	12.5	4	30	12.7	6	14.8	14.1
Knoxville.....	29	13.8	4	85	17.1	3	14.0	15.3
White.....	22		3	71		3		
Colored.....	7	(⁹)	1	204	(⁹)	0	(⁹)	(⁹)
Long Beach.....	19	6.5	0	0	12.0	2	10.5	10.5
Los Angeles.....	272	10.8	15	44	11.1	23	11.5	11.7
Louisville.....	69	11.7	4	34	13.0	7	16.2	14.7
White.....	50		3	30		6		
Colored.....	19	(⁹)	1	66	(⁹)	1	(⁹)	(⁹)
Lowell ⁷	24	12.4	4	102	14.5	4	13.9	15.1
Lynn.....	30	15.2	1	26	8.1	2	11.8	12.1
Memphis.....	74	14.9	7	74	18.1	11	17.7	18.3
White.....	33		4	67		6		
Colored.....	41	(⁹)	3	87	(⁹)	5	(⁹)	(⁹)
Miami.....	28	13.0	1	25	8.5	1	14.0	12.6
White.....	22		1	35		1		
Colored.....	6	(⁹)	0	0	(⁹)	0	(⁹)	(⁹)
Milwaukee.....	96	8.4	12	52	11.8	13	10.3	10.8
Minneapolis.....	102	11.2	9	58	11.4	15	12.1	11.5
Nashville.....	46	15.4	4	60	14.9	8	17.8	17.0
White.....	30		2	40		5		
Colored.....	16	(⁹)	2	118	(⁹)	3	(⁹)	(⁹)
New Bedford ⁷	35	16.2	5	133	6.9	3	13.6	12.0
New Haven.....	31	9.9	2	38	14.1	2	13.3	14.9
New Orleans.....	138	15.4	10	55	18.6	13	18.7	19.2
White.....	78		3	25		9		
Colored.....	60	(⁹)	7	114	(⁹)	4	(⁹)	(⁹)
New York.....	1,537	11.3	121	51	10.8	199	13.0	12.2
Bronx Borough.....	225	8.8	15	34	8.4	28	9.3	8.7
Brooklyn Borough.....	507	10.1	43	46	10.3	78	12.0	11.3
Manhattan Borough.....	600	17.2	53	90	15.0	71	19.8	18.1
Queens Borough.....	157	7.1	4	11	7.3	20	8.3	7.9
Richmond Borough.....	48	15.3	6	108	12.1	2	14.2	15.3

See foot notes at end of table.

Deaths¹ from all causes in certain large cities of the United States during the week ended May 16, 1931, infant mortality, annual death rate, and comparison with corresponding week of 1930—Continued

City	Week ended May 16, 1931				Corresponding week, 1930		Death rate ² for first 20 weeks	
	Total deaths	Death rate ³	Deaths under 1 year	Infant mortality rate ⁴	Death rate ⁵	Deaths under 1 year	1931	1930
Newark, N. J.	93	10.9	7	37	10.7	5	13.3	13.9
Oakland	52	9.3	3	38	11.1	3	11.5	11.7
Oklahoma City	43	11.4	3	41	9.5	3	12.2	10.3
Omaha	65	15.6	9	101	10.7	3	14.8	14.2
Paterson	36	13.5	4	69	17.7	2	15.4	13.9
Philadelphia	496	13.2	44	64	13.5	39	15.5	14.0
Pittsburgh	169	13.0	12	41	12.8	15	17.3	15.6
Portland, Oreg.	76	12.9	2	24	13.1	2	12.6	13.3
Providence	58	11.9	3	28	13.0	6	14.7	15.2
Richmond	57	16.1	4	58	17.1	4	17.5	16.3
White	34		2	44		2		
Colored	23	(⁶)	2	87	(⁶)	2	(⁶)	(⁶)
Rochester	94	14.8	4	36	11.1	4	13.7	12.9
St. Louis	201	12.7	6	20	10.5	11	17.4	14.8
St. Paul	53	10.0	3	31	9.0	1	11.6	11.0
Salt Lake City ⁷	36	13.1	2	30	11.9	3	13.3	14.0
San Antonio	87	18.9	13		17.4	13	15.9	18.4
San Diego	48	16.0	0	0	14.3	4	15.1	15.1
San Francisco	175	14.0	7	46	14.1	7	14.2	13.8
Schenectady	16	8.7	0	0	10.9	2	11.5	12.6
Seattle	81	11.4	3	28	11.2	0	12.8	11.8
Somerville	21	10.4	1	37	8.5	2	11.1	12.1
South Bend	14	6.8	1	25	7.9	0	9.0	9.7
Spokane	23	10.3	0	0	13.5	1	13.1	13.6
Springfield, Mass.	42	14.4	4	61	11.8	2	13.9	14.0
Syracuse	42	10.3	4	47	9.7	1	12.8	13.0
Tacoma	27	13.1	3	77	13.6	3	14.4	13.3
Toledo	67	11.8	8	73	12.3	9	13.1	14.3
Trenton	47	19.8	3	52	17.3	3	19.3	17.9
Utica	20	10.2	3	78	15.9	4	16.2	17.3
Washington, D. C.	130	13.8	10	55	14.1	9	17.7	16.3
White	83		3	25		3		
Colored	47	(⁶)	7	120	(⁶)	6	(⁶)	(⁶)
Waterbury	17	8.8	1	30	12.5	4	11.0	10.7
Wilmington, Del. ⁷	20	9.8	2	43	13.7	2	16.1	15.8
Worcester	42	11.1	4	55	8.8	1	14.8	15.1
Yonkers	22	8.3	2	52	7.7	5	9.7	9.1
Youngstown	41	12.4	6	84	12.2	7	11.4	11.2

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, 30; 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 May 23, 1931, and May 24, 1930

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended May 23, 1931, and May 24, 1930

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended May 23, 1931	Week ended May 24, 1930	Week ended May 23, 1931	Week ended May 24, 1930	Week ended May 23, 1931	Week ended May 24, 1930	Week ended May 23, 1931	Week ended May 24, 1930
New England States:								
Maine.....	8	2	2	2	5	49	1	0
New Hampshire.....					88	38	0	0
Vermont.....						50	0	0
Massachusetts.....	45	44	8	4	609	1,441	2	11
Rhode Island.....	4	3			171	29	0	0
Connecticut.....	6	9	2	4	634	50	2	3
Middle Atlantic States:								
New York.....	130	121	17	15	3,516	2,302	12	10
New Jersey.....	40	80	5	3	1,104	1,155	8	4
Pennsylvania.....	67	90			3,007	1,356	10	9
East North Central States:								
Ohio.....	15	26	10	14	587	628	3	1
Indiana.....	13	9	12		610	169	8	4
Illinois.....	104	144	7	5	2,220	610	22	6
Michigan.....	40	64		5	355	1,514	8	18
Wisconsin.....	15	12	14	9	702	598	0	0
West North Central States:								
Minnesota.....	7	14	1	2	231	185	0	1
Iowa.....	9	9			86	293	0	2
Missouri.....	34	28	7	4	409	63	3	8
North Dakota.....	1	6			45	19	0	0
South Dakota.....	5	2	1		21		0	0
Nebraska.....	2	16			4	137	3	0
Kansas.....	10	5	5		112	512	0	0
South Atlantic States:								
Delaware.....		1			131	7	0	0
Maryland.....	12	23	5	5	1,105	73	4	1
District of Columbia.....	7	7	1		248	40	3	0
Virginia.....								
West Virginia.....	7	5	11	9	131	70	0	1
North Carolina.....	17	26	5	5	854	48	4	5
South Carolina.....	6	15	254	177	130	43	0	1
Georgia.....	5	12	44	12	175	131	3	3
Florida.....	3	5	3	2	118	210	1	0

¹ New York City only.

² Week ended Friday.

³ Typhus fever, 1931, 7 cases; 4 cases in Georgia; 1 case in Florida; 1 case in Alabama; and 1 case in Texas.

*Cases of certain communicable diseases reported by telegraph by State health officers
for weeks ended May 23, 1931, and May 24, 1930—Continued.*

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended May 23, 1931	Week ended May 24, 1930	Week ended May 23, 1931	Week ended May 24, 1930	Week ended May 23, 1931	Week ended May 24, 1930	Week ended May 23, 1931	Week ended May 24, 1930
East South Central States:								
Kentucky.....		3			120	65	2	1
Tennessee.....	6	6	19	13	122	232	4	9
Alabama ¹	8	8	14	18	138	116	7	9
Mississippi.....	4	7					2	1
West South Central States:								
Arkansas.....	4	2	14	37	60	69	0	2
Louisiana.....	19	9	11	4	15	39	2	1
Oklahoma ⁴	11	9	40	17	23	295	0	2
Texas ¹	23	34	31	6	58	232	0	0
Mountain States:								
Montana.....	3				13	20	1	0
Idaho.....	1				2	21	0	2
Wyoming.....		2			2	74	0	0
Colorado.....	4	10			136	749	0	1
New Mexico.....	6	4	2		118	31	0	0
Arizona.....	1	3		3	52	108	2	1
Utah ¹	1	3	1	4	2	327	0	2
Pacific States:								
Washington.....	6	3			405	743	0	3
Oregon.....	6	3	15	9	96	81	1	0
California.....	76	54	35	9	1, 110	2, 221	4	4
Division and State	Pollomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended May 23, 1931	Week ended May 24, 1930	Week ended May 23, 1931	Week ended May 24, 1930	Week ended May 23, 1931	Week ended May 24, 1930	Week ended May 23, 1931	Week ended May 24, 1930
New England States:								
Maine.....	0	0	24	14	0	0	0	4
New Hampshire.....	0	0	4	14	0	0	0	0
Vermont.....	0	0	7	3	5	0	1	0
Massachusetts.....	2	0	384	239	0	0	4	3
Rhode Island.....	1	0	40	15	0	0	0	1
Connecticut.....	0	0	54	63	0	0	2	1
Middle Atlantic States:								
New York.....	4	0	931	433	7	8	14	14
New Jersey.....	1	0	305	205	6	0	3	5
Pennsylvania.....	1	1	404	308	0	0	13	10
East North Central States:								
Ohio.....	0	1	221	154	46	98	6	9
Indiana.....	0	1	145	110	98	145	0	4
Illinois.....	1	2	524	375	75	81	5	6
Michigan.....	0	0	470	188	26	83	4	5
Wisconsin.....	0	1	121	196	2	0	2	0
West North Central States:								
Minnesota.....	2	0	69	83	5	13	2	4
Iowa.....	0	0	69	33	57	60	0	0
Missouri.....	0	0	167	105	24	38	7	0
North Dakota.....	0	0	29	15	6	19	1	0
South Dakota.....	0	0	4	8	16	21	0	0
Nebraska.....	0	0	39	46	24	52	0	0
Kansas.....	0	0	44	51	74	55	3	3
South Atlantic States:								
Delaware.....	0	0	14	11	0	0	1	0
Maryland ¹	2	0	79	56	0	0	5	6
District of Columbia.....	0	0	13	16	0	0	2	1
Virginia.....		1						
West Virginia.....	0	0	40	20	8	43	5	10
North Carolina.....	1	0	34	23	0	3	1	14
South Carolina.....	0	0	6	6	6	5	10	24
Georgia ²	0	0	63	18	0	0	6	8
Florida ¹	0	2	2	0	0	0	5	3

² Week ended Friday.

¹ Typhus fever, 1931, 7 cases; 4 cases in Georgia; 1 case in Florida; 1 case in Alabama; and 1 case in Texas.

⁴ 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 May 23, 1931, and May 24, 1930—Continued.

Division and State	Polio-myelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended May 23, 1931	Week ended May 24, 1930	Week ended May 23, 1931	Week ended May 24, 1930	Week ended May 23, 1931	Week ended May 24, 1930	Week ended May 23, 1931	Week ended May 24, 1930
East South Central States:								
Kentucky.....	0	0	33	38	4	0	3	4
Tennessee.....	0	0	22	38	9	11	6	11
Alabama ¹	1	2	29	12	6	3	7	9
Mississippi.....	0	0	15	7	37	3	13	10
West South Central States:								
Arkansas.....	0	0	12	5	33	4	5	2
Louisiana.....	0	3	21	14	12	2	7	13
Oklahoma ¹	0	0	22	32	62	121	3	5
Texas ¹	0	0	23	28	40	38	6	1
Mountain States:								
Montana.....	0	0	16	32	1	2	0	0
Idaho.....	0	0	4	5	1	0	1	1
Wyoming.....	0	0	9	2	1	11	0	0
Colorado.....	0	0	36	19	6	11	0	3
New Mexico.....	0	0	7	7	1	14	2	3
Arizona.....	0	1	3	8	0	5	2	5
Utah ¹	0	0	4	5	1	2	0	0
Pacific States:								
Washington.....	0	0	38	37	26	44	4	1
Oregon.....	0	0	13	26	19	23	0	0
California.....	3	11	114	109	21	64	9	18

¹ Week ended Friday.

² Typhus fever, 1931, 7 cases; 4 cases in Georgia; 1 case in Florida; 1 case in Alabama; and 1 case in Texas.

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

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-gococcus menin-gitis	Diph-theria	Influ-enza	Ma-laria	Meas-les	Pol-lagra	Polio-my-e-litis	Scarlet fever	Small-pox	Ty-phoid fever
March, 1931										
Hawaii Territory.....	1	50	10		489		3	4	0	4
April, 1931										
California.....	39	326	690	2	7,354	11	22	772	239	57
Idaho.....	6	14	80		20		0	67	13	12
Illinois.....	99	494	67	1	7,259		4	2,296	245	25
Louisiana.....	8	76	123	15	114	70	1	88	150	31
Maine.....	1	17	42				2	109	0	7
Maryland.....	10	52	97		5,981		0	307	0	15
Michigan.....	41	143	37		466		5	1,502	96	15
Minnesota.....	9	50	8		466		0	369	25	5
Missouri.....	52	121	159	7	2,036		0	1,407	213	7
Montana.....	4	10	52		93		0	139	14	5
Nevada.....	1	2	178		89		0	4	0	0
New Hampshire.....		8					1	12	0	2
New Mexico.....	6	8	73	8	232	4	1	27	7	9
New York.....	57	476		5	10,483		8	3,982	16	49
North Carolina.....	16	91	123		3,805	124	1	176	6	11
Ohio.....	22	194	258	2	3,504		2	1,969	288	22
Oklahoma ¹	8	55	523	79	83	54	1	143	306	19
Oregon.....	2	20	288		548		0	53	110	2
Rhode Island.....	1	25	6		178		0	314	0	3
Texas.....	1	99	309	435		1	1	171		20
Washington.....	6	30	116		413		2	177	180	14
West Virginia.....	3	39	258		324		4	188	14	21
Wisconsin.....	9	51	218		2,806		4	626	28	6

¹ Exclusive of Oklahoma City and Tulsa.

<i>March, 1931</i>		Cases	<i>German measles—Continued.</i>		Cases
Hawaii Territory:			Maryland		384
Chicken pox.....		50	Michigan.....		183
Conjunctivitis, follicular.....		44	New Mexico.....		7
Dysentery (amebic).....		1	New York.....		1,681
Dysentery (bacillary).....		4	North Carolina.....		2,651
Hookworm disease.....		7	Ohio.....		262
Leprosy.....		7	Rhode Island.....		12
Mumps.....		72	Washington.....		68
Tetanus.....		2	Wisconsin.....		422
Trachoma.....		1	Hookworm disease:		
<i>April, 1931</i>			California.....		1
Anthrax:			Louisiana.....		23
Montana.....		1	Impetigo contagiosa:		
Washington.....		2	Illinois.....		2
Chicken pox:			Maryland.....		4
California.....		2,734	Montana.....		2
Idaho.....		11	Oregon.....		14
Illinois.....		1,532	Jaundice:		
Louisiana.....		57	California.....		7
Maine.....		133	Maryland.....		4
Maryland.....		466	Lead poisoning:		
Michigan.....		1,235	Illinois.....		1
Minnesota.....		735	Ohio.....		19
Missouri.....		317	Leprosy:		
Montana.....		227	California.....		4
Nevada.....		13	Louisiana.....		2
New Mexico.....		172	Washington.....		1
New York.....		2,902	Lethargic encephalitis:		
North Carolina.....		556	California.....		4
Ohio.....		2,146	Illinois.....		5
Oklahoma ¹		185	Maine.....		3
Oregon.....		232	Maryland.....		1
Rhode Island.....		71	Michigan.....		3
Washington.....		527	Minnesota.....		2
West Virginia.....		236	New York.....		17
Wisconsin.....		1,590	Ohio.....		6
Conjunctivitis:			Texas.....		1
Maine.....		3	Washington.....		6
Montana.....		1	Wisconsin.....		2
New Mexico.....		7	Mumps:		
Diarrhea:			California.....		1,597
Maryland.....		5	Idaho.....		47
Diarrhea and enteritis (under 2 years):			Illinois.....		1,312
Ohio.....		6	Louisiana.....		3
Dysentery:			Maine.....		162
California (amebic).....		4	Maryland.....		365
California (bacillary).....		14	Michigan.....		694
Illinois.....		8	Missouri.....		157
Illinois (amebic).....		1	Montana.....		111
Louisiana.....		1	Nevada.....		11
Minnesota.....		3	New Mexico.....		96
Minnesota (amebic).....		3	New York.....		2,029
New Mexico (amebic).....		1	Ohio.....		2,511
New York.....		9	Oklahoma ¹		41
Ohio.....		1	Oregon.....		308
Oklahoma ¹		9	Rhode Island.....		393
Washington.....		1	Washington.....		273
Food poisoning:			Wisconsin.....		3,778
California.....		27	Ophthalmia neonatorum:		
Ohio.....		14	California.....		1
German measles:			Illinois.....		5
California.....		139	Maryland.....		3
Illinois.....		133	Minnesota.....		1
Maine.....		5	Missouri.....		1

¹ Exclusive of Oklahoma City and Tulsa.

Ophthalmia neonatorum—Continued.		Cases	Trachoma—Continued.		Cases
New York.....		1	Missouri.....		82
Ohio.....		90	Montana.....		28
Oklahoma ¹		1	New Mexico.....		1
Wisconsin.....		1	New York.....		2
Paratyphoid fever:			Ohio.....		5
Illinois.....		2	Oklahoma ¹		9
Maine.....		1	Wisconsin.....		2
New York.....		1	Trichinosis:		
Oregon.....		3	California.....		3
Texas.....		1	Maryland.....		2
Washington.....		1	New York.....		6
Puerperal septicemia:			Tularæmia:		
Illinois.....		2	Illinois.....		2
New York.....		18	Louisiana.....		4
Ohio.....		12	Missouri.....		1
Washington.....		4	Montana.....		1
Rabies in animals:			North Carolina.....		1
California.....		98	Typhus fever:		
Illinois.....		5	New York.....		2
Louisiana.....		15	Undulant fever:		
Maryland.....		2	California.....		7
Missouri.....		3	Illinois.....		22
New York.....		7	Louisiana.....		5
Rhode Island.....		3	Maine.....		1
Washington.....		1	Maryland.....		1
Rabies in man:			Michigan.....		2
Louisiana.....		1	Minnesota.....		5
West Virginia.....		1	Missouri.....		8
Rocky Mountain spotted or tick fever:			New Mexico.....		1
Idaho.....		7	New York.....		16
Montana.....		10	Ohio.....		14
Nevada.....		5	Washington.....		4
Oregon.....		15	Vincent's angina:		
Scabies:			Illinois.....		1
Maryland.....		7	Maine.....		2
Oregon.....		9	Maryland.....		15
Septic sore throat:			New York.....		76
California.....		32	Oregon.....		5
Illinois.....		13	Whooping cough:		
Louisiana.....		1	California.....		1,773
Maryland.....		7	Idaho.....		299
Michigan.....		27	Illinois.....		735
Missouri.....		16	Louisiana.....		25
Montana.....		2	Maine.....		222
New York.....		36	Maryland.....		132
North Carolina.....		10	Michigan.....		855
Ohio.....		155	Minnesota.....		177
Oklahoma ¹		44	Missouri.....		160
Oregon.....		3	Montana.....		135
Rhode Island.....		6	Nevada.....		28
Tetanus:			New Mexico.....		105
California.....		4	New York.....		2,066
Maryland.....		1	North Carolina.....		740
Missouri.....		1	Ohio.....		391
New York.....		7	Oklahoma ¹		45
Oklahoma ¹		1	Oregon.....		60
Rhode Island.....		1	Rhode Island.....		42
Trachoma:			Washington.....		562
California.....		10	West Virginia.....		367
Illinois.....		4	Wisconsin.....		445
Louisiana.....		1			

¹ Exclusive of Oklahoma City and Tulsa.² Exclusive of New York City.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 97 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 33,370,000. The estimated population of the 90 cities reporting deaths is more than 31,825,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended May 16, 1931, and May 17, 1930

	1931	1930	Esti- mated ex- pectancy
<i>Cases reported</i>			
Diphtheria:			
46 States.....	799	888	
97 cities.....	400	468	751
Measles:			
44 States.....	21, 232	19, 374	
97 cities.....	9, 003	7, 774	
Meningococcus meningitis:			
46 States.....	120	175	
97 cities.....	62	78	
Poliomyelitis:			
46 States.....	21	38	
Scarlet fever:			
46 States.....	5, 401	3, 468	
97 cities.....	2, 499	1, 424	1, 294
Small pox:			
46 States.....	880	1, 298	
97 cities.....	112	139	55
Typhoid fever:			
46 States.....	190	238	
97 cities.....	31	51	34
<i>Deaths reported</i>			
Influenza and pneumonia:			
90 cities.....	671	654	
Smallpox:			
90 cities.....	1	0	
Memphis, Tenn.....	1	0	

City reports for week ended May 16, 1931

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrences 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 reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND								
Maine:								
Portland.....	11	0	0	-----	0	1	9	2
New Hampshire:								
Concord.....	0	0	0	-----	0	37	0	0

City reports for week ended May 16, 1931—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pne- monia, deaths reported
		Cases, estimated expect- ancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND— continued								
Vermont:								
Barre.....	0	0	0	-----	0	0	0	0
Burlington.....	2	0	0	-----	0	0	0	0
Massachusetts:								
Boston.....	63	30	8	1	0	98	10	22
Fall River.....	3	2	0	-----	0	18	4	3
Springfield.....	12	2	1	-----	0	22	31	1
Worcester.....	8	3	2	-----	0	10	12	2
Rhode Island:								
Pawtucket.....	8	1	0	-----	0	1	2	1
Providence.....	7	5	2	-----	1	71	2	7
Connecticut:								
Bridgeport.....	0	3	0	-----	0	18	1	2
Hartford.....	5	5	3	-----	0	22	2	5
New Haven.....	39	1	0	-----	0	187	10	2
MIDDLE ATLANTIC								
New York:								
Buffalo.....	17	9	7	-----	1	351	46	9
New York.....	324	239	109	11	4	1,842	65	162
Rochester.....	13	4	1	-----	0	90	17	3
Syracuse.....	16	3	0	-----	0	1	1	0
New Jersey:								
Camden.....	4	6	0	-----	0	2	6	2
Newark.....	83	15	8	1	1	18	12	4
Trenton.....	5	2	0	-----	1	0	3	
Pennsylvania:								
Philadelphia.....	113	55	2	8	5	891	26	47
Pittsburgh.....	65	15	3	1	4	119	53	39
Reading.....	7	1	0	-----	0	9	10	2
EAST NORTH CENTRAL								
Ohio:								
Cincinnati.....	4	5	1	-----	0	117	20	7
Cleveland.....	224	21	11	12	3	249	410	17
Columbus.....	18	3	1	1	1	11	3	2
Toledo.....	24	3	2	-----	0	-----	40	2
Indiana:								
Fort Wayne.....	3	1	2	-----	0	12	0	0
Indianapolis.....	35	3	0	-----	1	551	40	8
South Bend.....	4	1	0	-----	0	7	0	2
Terre Haute.....	3	0	0	-----	0	9	0	0
Illinois:								
Chicago.....	143	81	84	1	2	783	89	46
Springfield.....	5	0	0	-----	0	57	3	4
Michigan:								
Detroit.....	119	41	19	-----	1	33	61	22
Flint.....	47	2	1	-----	0	2	10	2
Grand Rapids.....	3	1	0	-----	0	24	0	3
Wisconsin:								
Kenosha.....	0	0	0	-----	0	1	128	0
Madison.....	17	0	6	-----	-----	1	67	-----
Milwaukee.....	126	10	0	-----	0	302	490	7
Racine.....	7	1	0	-----	0	3	2	0
Superior.....	4	0	0	-----	0	0	1	1
WEST NORTH CENTRAL								
Minnesota:								
Duluth.....	8	0	0	-----	0	1	1	1
Minneapolis.....	104	12	4	-----	1	248	125	9
St. Paul.....	79	8	0	1	1	129	3	0
Iowa:								
Davenport.....	1	0	0	-----	0	0	0	-----
Des Moines.....	1	1	2	-----	0	0	0	-----
Sioux City.....	15	0	1	-----	-----	2	35	-----
Waterloo.....	4	0	0	-----	0	0	0	-----
Missouri:								
Kansas City.....	16	3	3	-----	1	319	7	4
St. Joseph.....	1	0	4	-----	0	9	0	2
St. Louis.....	22	30	17	-----	-----	11	19	12

City reports for week ended May 16, 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			
WEST NORTH CEN- TRAL—continued								
North Dakota:								
Fargo.....	2	0	0		0		13	0
Grand Forks.....	0	0	0			0	1	
South Dakota:								
Aberdeen.....	3	0	0			6	0	
Sioux Falls.....	0	0	0			0	0	
Nebraska:								
Omaha.....	16	2	2		0	1	29	7
Kansas:								
Topeka.....	3	1	1	1	0	2	45	1
Wichita.....	16	1	5		0	8	4	1
SOUTH ATLANTIC								
Delaware:								
Wilmington.....	3	2	0		0	46	5	0
Maryland:								
Baltimore.....	49	20	12	1	2	794	33	22
Cumberland.....	0	0	0		0	1	0	3
Frederick.....	0	0	0		0	8	0	0
District of Columbia:								
Washington.....	15	12	6	2	1	353	0	7
Virginia:								
Lynchburg.....	16	0	0		0	11	0	1
Norfolk.....	10	1	0		0	270	0	2
Richmond.....	0	1	2		0	208	1	2
Roanoke.....	10	0	0		0	15	3	4
West Virginia:								
Charleston.....	0	1	0		0	1	0	1
Wheeling.....	13	0	0		0	0	1	0
North Carolina:								
Raleigh.....	3	1	0			54	0	1
Wilmington.....	1	0	0		0	1	0	1
Winston-Salem.....	6	0	1		1	127	6	0
South Carolina:								
Charleston.....	0	0	0	22	1	1	0	3
Columbia.....	0	0	1		1	0	2	7
Greenville.....	2	0	0		0	0	0	0
Georgia:								
Atlanta.....	6	2	4	11	2	34	0	10
Brunswick.....	0	0	0		0	0	6	0
Savannah.....	6	0	1	13	0	16	9	2
Florida:								
Miami.....	12	1	3		0	124	0	0
Tampa.....	5	1	1		0	34	0	0
EAST SOUTH CENTRAL								
Kentucky:								
Covington.....	0	1	1		0	8	0	3
Tennessee:								
Memphis.....	7	2	2		4	111	8	8
Nashville.....	1	1	0		1	87	0	5
Alabama:								
Birmingham.....	1	1	0	3	1	6	0	3
Mobile.....	0	0	0		2	0	0	1
Montgomery.....	11	0	0			0	0	
WEST SOUTH CENTRAL								
Arkansas:								
Fort Smith.....	5	0	0			0	0	
Little Rock.....	0	0	0		0	3	13	3
Louisiana:								
New Orleans.....	8	8	11	2	0	1	0	7
Shreveport.....	3	1	1		0	0	2	1
Oklahoma:								
Muskogee.....	2	0	1	11		0	8	
Oklahoma City.....	3	1	0	1	2	3	0	10
Texas:								
Dallas.....	34	3	8		0	1	11	6
Fort Worth.....	17	1	3		2	1	0	1
Galveston.....	0	0	1		0	4	0	2
Houston.....	2	4	2		0	14	0	4
San Antonio.....	5	1	1		2	26	0	10

City reports for week ended May 16, 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			
MOUNTAIN								
Montana:								
Billings.....	5	0	0	-----	0	2	0	0
Great Falls.....	4	0	1	-----	1	1	0	1
Helena.....	2	0	0	-----	0	0	0	0
Missoula.....	15	0	0	-----	0	0	0	1
Idaho:								
Boise.....	1	0	0	-----	0	0	3	0
Colorado:								
Denver.....	37	8	4	-----	0	39	36	6
Pueblo.....	1	0	0	-----	0	16	1	0
New Mexico:								
Albuquerque.....	16	0	0	-----	0	2	1	0
Arizona:								
Phoenix.....	0	0	0	-----	0	1	0	3
Utah:								
Salt Lake City.....	28	2	2	-----	0	3	10	0
Nevada:								
Reno.....	0	0	0	-----	0	0	0	1
PACIFIC								
Washington:								
Seattle.....	63	2	0	-----	-----	11	22	-----
Spokane.....	12	2	0	-----	-----	0	0	-----
Tacoma.....		1	-----	-----	-----	-----	-----	-----
Oregon:								
Portland.....	26	5	0	-----	0	26	10	6
Salem.....	4	1	1	-----	1	12	13	-----
California:								
Los Angeles.....	66	32	28	-----	33	2	134	15
Sacramento.....	8	2	3	-----	0	0	66	4
San Francisco.....	66	13	5	-----	3	1	72	10
NEW ENGLAND								
Maine:								
Portland.....	3	14	0	0	0	1	1	0
New Hampshire:								
Concord.....	1	3	0	0	0	1	0	0
Vermont:								
Barre.....	1	1	0	0	0	1	0	0
Burlington.....	0	1	0	0	0	0	0	1
Massachusetts:								
Boston.....	71	124	0	0	0	20	1	1
Fall River.....	4	15	0	0	0	2	1	0
Springfield.....	8	17	0	0	0	0	0	0
Worcester.....	8	39	0	0	0	5	0	0
Rhode Island:								
Pawtucket.....	3	12	0	0	0	1	0	0
Providence.....	11	43	0	0	0	2	0	0
Connecticut:								
Bridgeport.....	9	3	0	0	0	0	0	0
Hartford.....	5	4	0	0	0	1	0	0
New Haven.....	5	2	0	0	0	1	0	0
MIDDLE ATLANTIC								
New York:								
Buffalo.....	24	34	0	3	0	12	1	0
New York.....	284	459	0	0	0	94	8	10
Rochester.....	10	87	0	0	0	1	0	0
Syracuse.....	10	30	0	0	0	2	0	0

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		
NEW ENGLAND											
Maine:											
Portland.....	3	14	0	0	0	0	1	1	0	2	18
New Hampshire:											
Concord.....	1	3	0	0	0	1	0	0	0	0	6
Vermont:											
Barre.....	1	1	0	0	0	1	0	0	0	5	3
Burlington.....	0	1	0	0	0	0	0	0	0	1	7
Massachusetts:											
Boston.....	71	124	0	0	0	20	1	1	0	26	223
Fall River.....	4	15	0	0	0	2	1	0	0	1	24
Springfield.....	8	17	0	0	0	0	0	0	0	2	40
Worcester.....	8	39	0	0	0	5	0	0	0	7	42
Rhode Island:											
Pawtucket.....	3	12	0	0	0	1	0	0	0	1	12
Providence.....	11	43	0	0	0	2	0	0	0	1	58
Connecticut:											
Bridgeport.....	9	3	0	0	0	0	0	0	0	1	4
Hartford.....	5	4	0	0	0	1	0	0	0	3	24
New Haven.....	5	2	0	0	0	1	0	0	0	5	31
MIDDLE ATLANTIC											
New York:											
Buffalo.....	24	34	0	3	0	12	1	0	0	26	149
New York.....	284	459	0	0	0	94	8	10	1	164	1,547
Rochester.....	10	87	0	0	0	1	0	0	0	17	89
Syracuse.....	10	30	0	0	0	2	0	0	0	23	42

City reports for week ended May 16, 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 expec- tancy	Cases re- ported	Cases, esti- mated expec- tancy	Cases re- ported	Deaths re- ported		Cases, esti- mated expec- tancy	Cases re- ported	Deaths re- ported		
MIDDLE ATLANTIC—continued											
New Jersey:											
Camden.....	5	10	0	0	0	1	0	0	0	1	22
Newark.....	28	49	0	0	0	10	0	0	0	54	101
Trenton.....	3	8	0	0	0	5	0	1	0	0	47
Pennsylvania:											
Philadelphia....	92	202	0	0	0	32	2	1	0	22	496
Pittsburgh.....	29	102	0	0	0	9	0	0	0	20	169
Reading.....	5	1	0	0	0	0	0	0	0	0	21
EAST NORTH CENTRAL											
Ohio:											
Cincinnati.....	16	55	3	0	0	11	1	0	0	2	115
Cleveland.....	40	85	0	1	0	17	1	0	0	30	190
Columbus.....	8	7	0	1	0	6	0	0	0	1	95
Toledo.....	11	9	1	4	0	5	0	0	1	13	67
Indiana:											
Fort Wayne.....	4	3	2	0	0	0	0	1	0	1	18
Indianapolis....	13	36	6	28	0	3	0	0	0	49	-----
South Bend.....	4	5	0	0	0	0	0	0	0	2	15
Terre Haute.....	2	4	0	0	0	0	0	0	0	0	19
Illinois:											
Chicago.....	116	299	2	1	0	37	2	1	1	44	653
Springfield....	3	5	1	0	0	0	0	1	0	0	25
Michigan:											
Detroit.....	111	168	1	0	0	28	1	0	0	104	261
Flint.....	9	31	2	6	0	1	0	0	0	3	17
Grand Rapids..	10	12	1	0	0	2	0	0	0	12	29
Wisconsin:											
Kenosha.....	2	3	0	0	0	0	0	0	0	5	8
Madison.....	3	3	0	0	0	0	0	0	0	4	-----
Milwaukee.....	29	33	0	1	0	6	0	0	0	13	95
Racine.....	4	0	0	0	0	0	0	0	0	10	11
Superior.....	2	1	0	0	0	0	1	0	0	0	9
WEST NORTH CENTRAL											
Minnesota:											
Duluth.....	7	1	0	0	0	1	0	1	0	3	20
Minneapolis....	31	7	1	0	0	4	1	0	0	20	102
St. Paul.....	21	7	0	0	0	3	0	2	0	24	59
Iowa:											
Davenport.....	1	1	1	5	-----	-----	0	0	-----	0	-----
Des Moines.....	8	9	2	11	-----	-----	0	0	-----	2	38
Sioux City.....	2	14	0	7	-----	-----	0	0	-----	4	-----
Waterloo.....	2	1	0	0	-----	-----	0	0	-----	5	-----
Missouri:											
Kansas City....	17	3	1	0	0	7	0	0	0	9	98
St. Joseph.....	3	3	0	0	0	0	0	0	0	0	29
St. Louis.....	31	157	2	1	0	10	0	0	0	35	201
North Dakota:											
Fargo.....	1	2	0	0	0	0	0	0	0	5	5
Grand Forks...-	1	0	0	0	-----	-----	0	0	-----	1	-----
South Dakota:											
Aberdeen.....	1	1	0	0	-----	-----	0	0	-----	0	-----
Sioux Falls....	1	0	0	0	-----	-----	0	0	-----	0	8
Nebraska:											
Omaha.....	3	4	4	12	0	2	0	0	0	2	65
Kansas:											
Topeka.....	2	1	0	0	0	0	0	0	0	6	21
Wichita.....	3	0	1	19	0	1	0	0	0	4	32
SOUTH ATLANTIC											
Delaware:											
Wilmington....	4	11	0	0	0	1	0	0	0	2	20
Maryland:											
Baltimore.....	37	36	0	0	0	14	2	3	2	38	204
Cumberland....	0	1	0	0	0	0	0	0	0	0	13
Frederick.....	0	0	0	0	0	0	0	0	0	0	6

City reports for week ended May 16, 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		
SOUTH ATLANTIC— continued											
District of Col.: Washington	23	14	0	0	0	13	0	0	0	11	136
Virginia:											
Lynchburg	0	0	0	0	0	0	0	0	0	0	11
Norfolk	1	2	1	0	0	3	0	0	0	5	
Richmond	3	9	0	0	0	4	1	0	0	2	52
Roanoke	0	0	1	0	0	2	0	0	0	2	24
West Virginia:											
Charleston	0	0	0	0	0	0	0	0	0	0	7
Wheeling	1	1	0	0	0	0	0	0	0	0	17
North Carolina:											
Raleigh	0	0	0	0	0	1	0	0	0	27	13
Wilmington	0	2	0	0	0	0	0	0	0	28	11
Winston-Salem	0	1	1	0	0	3	0	0	0	17	15
South Carolina:											
Charleston	0	0	0	0	0	0	0	0	0	0	25
Columbia	0	0	0	0	0	2	0	0	0	1	35
Greenville	1	1	1	0	0	0	0	0	0	0	
Georgia:											
Atlanta	4	45	2	3	0	6	0	3	0	8	71
Brunswick	0	0	0	0	0	0	0	0	0	0	3
Savannah	0	0	0	0	0	1	0	0	0	15	30
Florida:											
Miami	0	0	1	0	0	2	1	0	0	3	28
Tampa	0	3	0	0	0	1	1	0	0	5	15
EAST SOUTH CEN- TRAL											
Kentucky:											
Covington	2	10	1	0	0	0	0	0	0	0	19
Tennessee:											
Memphis	6	36	0	2	1	8	1	1	0	20	74
Nashville	1	6	0	0	0	1	1	0	0	2	46
Alabama:											
Birmingham	1	5	0	0	0	7	1	2	0	5	59
Mobile	0	0	0	0	0	1	0	0	0	0	20
Montgomery	0	1	0	0			0	0		0	
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	0	0	0	0			0	0		3	
Little Rock	0	1	0	0	0	2	0	0	0	0	5
Louisiana:											
New Orleans	10	20	0	10	0	11	2	0	0	1	138
Shreveport	0	0	1	1	0	1	0	0	0	5	33
Oklahoma:											
Muskogee	1	1	2	1			0	0		0	
Oklahoma City	3	4	2	6	0	1	0	0	0	0	
Texas:											
Dallas	3	5	2	0	0	3	0	0	0	14	69
Fort Worth	2	3	3	10	0	2	0	0	0	0	44
Galveston	0	0	1	0	0	3	1	1	0	0	17
Houston	1	4	1	1	0	4	0	0	0	0	64
San Antonio	0	2	0	0	0	11	0	1	0	0	87
MOUNTAIN											
Montana:											
Billings	0	0	1	0	0	0	0	0	0	4	10
Great Falls	1	2	0	0	0	0	0	0	0	6	8
Helena	0	0	0	0	0	0	0	0	0	0	5
Missoula	0	0	0	0	0	0	0	0	0	0	5
Idaho:											
Boise	0	1	0	0	0	0	0	0	0	0	1
Colorado:											
Denver	13	12	0	2	0	3	0	0	0	41	73
Pueblo	1	0	0	0	0	0	0	0	0	3	8
New Mexico:											
Albuquerque	0	0	0	0	0	3	0	0	0	3	10
Arizona:											
Phoenix	1	1	0	0	0	6	0	0	0	0	

City reports for week ended May 16, 1931—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culo- sis, deaths reported	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—contd.											
Utah:											
Salt Lake City	2	3	0	0	0	0	0	0	0	29	36
Nevada:											
Reno.....	0	0	1	0	0	0	0	0	0	0	2
PACIFIC											
Washington:											
Seattle.....	8	5	3	0	-----	-----	1	0	-----	67	-----
Spokane.....	5	3	6	10	-----	-----	0	0	-----	6	-----
Tacoma.....	3	-----	3	-----	-----	-----	0	-----	-----	-----	-----
Oregon:											
Portland.....	5	4	8	7	0	2	1	0	0	2	76
Salem.....	0	0	0	1	-----	-----	0	0	-----	0	-----
California:											
Los Angeles....	30	45	6	3	0	21	1	0	0	25	272
Sacramento....	2	1	0	0	0	3	0	0	1	17	21
San Francisco..	21	8	1	0	0	18	1	0	0	29	204

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases estimated expectancy	Cases	Deaths
NEW ENGLAND									
Massachusetts:									
Boston.....	2	1	0	0	1	0	0	0	0
Connecticut:									
Bridgeport.....	1	0	1	0	0	0	0	0	0
Hartford.....	0	0	0	1	0	0	0	0	0
MIDDLE ATLANTIC									
New York:									
New York.....	11	6	4	3	0	0	1	3	0
Rochester.....	1	1	0	0	0	0	0	0	0
New Jersey:									
Newark.....	5	0	0	0	0	0	0	0	0
Pennsylvania:									
Philadelphia....	3	0	0	1	0	0	0	0	0
Pittsburgh.....	2	2	0	0	0	0	0	0	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati.....	1	0	0	0	0	0	0	0	0
Cleveland.....	1	1	0	0	0	0	0	0	0
Indiana:									
Indianapolis....	5	2	0	0	0	0	0	0	0
Illinois:									
Chicago.....	10	5	1	1	0	0	0	0	0
Springfield....	1	0	0	0	0	0	0	0	0
Michigan:									
Detroit.....	3	3	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Minneapolis....	1	0	0	0	0	0	0	0	0
Missouri:									
Kansas City....	1	0	0	0	0	0	0	0	0
St. Joseph.....	0	1	0	0	0	0	0	0	0
St. Louis.....	2	1	0	0	0	0	0	0	0
North Dakota:									
Fargo.....	1	0	0	0	0	0	0	0	0

City reports for week ended May 16, 1931—Continued

Division, State, and city	Meningo-coccus meningitis		Lethargic encephalitis		Pellagra		Polio-myelitis (Infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases estimated expectancy	Cases	Deaths
SOUTH ATLANTIC									
Maryland:									
Baltimore.....	2	1	0	0	0	0	0	0	0
Virginia:									
Lynchburg.....	0	0	0	0	0	1	0	0	0
North Carolina:									
Raleigh.....	0	1	0	0	1	0	0	0	0
Winston-Salem.....	0	0	0	0	0	1	0	0	0
South Carolina:									
Charleston.....	0	0	0	0	5	0	0	0	0
Columbia.....	1	3	0	0	0	0	0	0	0
Georgia:									
Atlanta.....	1	1	0	0	3	0	0	0	0
Savannah ¹	0	0	0	0	3	0	0	0	0
Florida:									
Tampa.....	0	0	0	0	1	1	0	0	0
EAST SOUTH CENTRAL									
Tennessee:									
Memphis ²	1	0	0	0	0	0	0	1	0
Alabama:									
Birmingham.....	1	1	0	1	0	1	0	0	0
Mobile.....	0	0	0	0	0	1	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Little Rock ¹	1	0	0	0	0	0	0	0	0
Louisiana:									
New Orleans.....	4	1	0	0	2	2	0	0	0
Oklahoma:									
Oklahoma City.....	0	2	0	0	0	0	0	0	0
Texas:									
Dallas.....	0	0	0	0	1	0	0	0	0
Houston.....	0	0	0	0	0	2	0	0	0
PACIFIC									
Oregon:									
Portland.....	0	1	0	0	0	0	0	0	0
California:									
Los Angeles ²	0	1	0	0	1	1	1	0	0
San Francisco.....	0	0	0	0	2	0	0	1	0

¹ Typhus fever: 3 cases; 2 cases at Savannah, Ga., and 1 case at Little Rock, Ark.² Rabies (in man): 2 cases and 2 deaths; 1 case and 1 death at Memphis, Tenn., and 1 case and 1 death at Los Angeles, Calif.

The following tables give the rates per 100,000 population for 98 cities for the 5-week period ended May 16, 1931, compared with those for a like period ended May 17, 1930. The population figures used in computing the rates are estimated mid-year 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, April 12 to May 16, 1931—Annual rates per 100,000 population, compared with rates for the corresponding period of 1930¹

DIPHTHERIA CASE RATES

	Week ended—									
	Apr. 18, 1931	Apr. 19, 1930	Apr. 25, 1931	Apr. 26, 1930	May 2, 1931	May 3, 1930	May 9, 1931	May 10, 1930	May 16, 1931	May 17, 1930
98 cities.....	66	86	53	91	63	83	67	77	62	74
New England.....	79	119	58	85	36	82	35	65	38	106
Middle Atlantic.....	62	83	46	99	61	72	61	85	58	74
East North Central.....	83	96	58	113	84	130	82	103	72	91
West North Central.....	63	87	67	68	57	68	71	45	71	74
South Atlantic.....	65	64	51	64	69	50	63	62	55	54
East South Central.....	23	18	23	48	6	0	41	6	17	36
West South Central.....	74	206	71	101	68	94	108	73	81	66
Mountain.....	17	9	26	88	26	44	28	70	61	35
Pacific.....	43	36	63	49	53	61	61	49	73	43

MEASLES CASE RATES

98 cities.....	1, 316	1, 227	1, 342	1, 356	1, 250	1, 293	1, 308	1, 411	1, 407	1, 255
New England.....	1, 349	1, 628	1, 286	1, 710	964	1, 942	1, 103	2, 303	1, 166	1, 843
Middle Atlantic.....	1, 543	1, 097	1, 418	1, 192	1, 411	1, 284	1, 433	1, 235	1, 486	1, 337
East North Central.....	790	1, 074	1, 075	999	897	1, 005	1, 102	927	1, 313	814
West North Central.....	589	1, 009	830	1, 352	777	1, 003	1, 016	1, 269	1, 396	831
South Atlantic.....	4, 343	1, 089	4, 049	1, 306	3, 871	1, 188	3, 553	1, 298	3, 365	1, 228
East South Central.....	1, 612	299	1, 600	407	1, 426	185	1, 263	442	1, 234	359
West South Central.....	101	502	139	592	156	731	152	711	166	735
Mountain.....	923	6, 793	661	8, 802	661	5, 912	576	9, 128	531	6, 652
Pacific.....	417	1, 800	517	2, 067	505	1, 773	501	1, 992	578	1, 670

SCARLET FEVER CASE RATES

98 cities.....	382	298	405	262	368	296	390	258	390	226
New England.....	584	402	575	348	582	268	631	310	666	261
Middle Atlantic.....	415	262	488	239	409	285	448	266	439	222
East North Central.....	383	391	432	360	402	394	439	318	454	308
West North Central.....	518	366	469	248	480	384	440	238	383	262
South Atlantic.....	306	302	304	248	273	294	276	242	243	172
East South Central.....	582	143	396	126	407	132	250	138	337	24
West South Central.....	112	115	98	59	132	115	105	94	108	73
Mountain.....	278	352	191	229	191	361	177	370	157	229
Pacific.....	116	144	86	176	94	109	106	130	127	128

SMALLPOX CASE RATES

98 cities.....	22	27	21	30	27	27	15	24	17	22
New England.....	0	2	0	0	0	0	0	2	0	0
Middle Atlantic.....	2	0	1	0	1	1	3	0	1	0
East North Central.....	19	23	20	18	10	21	6	22	23	16
West North Central.....	92	139	71	145	125	132	78	101	75	126
South Atlantic.....	10	4	6	0	6	0	8	0	6	4
East South Central.....	52	18	35	42	58	36	41	6	12	72
West South Central.....	95	70	98	38	101	31	64	38	41	21
Mountain.....	9	26	17	97	0	150	0	79	17	62
Pacific.....	27	71	41	109	51	73	12	83	27	47

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.

² Pawtucket, R. I., Billings, Mont.; and Boise, Idaho, not included.

³ Tacoma, Wash., not included.

⁴ Pawtucket, R. I., not included.

⁵ Billings, Mont., and Boise, Idaho, not included.

Summary of weekly reports from cities, April 12 to May 16, 1931—Annual rates per 100,000 population, compared with rates for the corresponding period of 1930—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	Apr. 18, 1931	Apr. 19, 1930	Apr. 25, 1931	Apr. 26, 1930	May 2, 1931	May 3, 1930	May 9, 1931	May 10, 1930	May 16, 1931	May 17, 1930
98 cities.....	5	6	3	6	6	6	15	6	15	8
New England.....	2	7	2	5	7	2	15	0	5	10
Middle Atlantic.....	4	2	4	5	7	3	5	4	5	7
East North Central.....	2	2	2	6	4	6	2	2	2	2
West North Central.....	4	8	4	4	4	4	2	8	6	8
South Atlantic.....	8	22	2	12	14	6	8	16	12	14
East South Central.....	12	6	6	0	12	24	6	18	17	42
West South Central.....	7	7	0	24	0	21	7	3	7	35
Mountain.....	9	18	9	0	0	53	10	18	0	0
Pacific.....	10	8	4	4	6	6	8	20	10	2

INFLUENZA DEATH RATES

	17	15	13	12	11	9	12	9	8	8
91 cities.....	17	15	13	12	11	9	12	9	8	8
New England.....	7	7	7	12	7	5	15	10	2	0
Middle Atlantic.....	12	14	12	9	12	9	11	10	7	7
East North Central.....	10	12	6	14	5	7	11	9	5	4
West North Central.....	29	18	18	9	12	9	6	3	9	3
South Atlantic.....	32	22	10	12	20	16	22	6	16	20
East South Central.....	76	58	44	39	19	19	50	13	50	39
West South Central.....	45	25	55	25	38	21	14	26	7	4
Mountain.....	17	9	17	18	26	0	28	0	9	9
Pacific.....	10	2	5	0	2	5	7	7	8	12

PNEUMONIA DEATH RATES

	161	149	137	140	121	135	117	133	102	102
91 cities.....	161	149	137	140	121	135	117	133	102	102
New England.....	144	160	132	189	154	164	135	131	113	111
Middle Atlantic.....	180	180	165	160	141	163	144	176	121	124
East North Central.....	128	114	98	108	77	107	87	92	74	67
West North Central.....	244	156	230	81	180	114	121	126	103	108
South Atlantic.....	188	202	168	210	180	204	130	132	126	170
East South Central.....	290	207	126	227	120	123	120	142	126	84
West South Central.....	173	121	145	132	152	110	114	164	114	78
Mountain.....	113	167	104	150	61	62	102	123	78	79
Pacific.....	67	37	46	50	46	42	70	52	56	47

¹ Pawtucket, R. I.; Billings, Mont.; and Boise, Idaho, not included.

² Tacoma, Wash., not included.

³ Pawtucket, R. I., not included.

⁴ Billings, Mont., and Boise, Idaho, not included.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—Week ended May 9, 1931.—The Department of Pensions and National Health reports cases of certain communicable diseases for the week ended May 9, 1931, as follows:

Provinces	Cerebro-spinal fever	Influenza	Poliomy-elitis	Smallpox	Typhoid fever
Prince Edward Island ¹					
Nova Scotia.....		3			1
New Brunswick ¹					
Quebec.....	1				21
Ontario.....			1	17	10
Manitoba.....				4	3
Saskatchewan.....				7	
Alberta.....			1		1
British Columbia ¹					
Total.....	1	3	2	28	36

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

Quebec Province—Communicable diseases—Week ended May 16, 1931.—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the week ended May 16, 1931, as follows:

Disease	Cases	Disease	Cases
Chicken pox.....	45	Puerperal septicemia.....	1
Diphtheria.....	24	Scarlet fever.....	64
Erysipelas.....	7	Tuberculosis.....	52
German measles.....	12	Typhoid fever.....	9
Measles.....	626	Whooping cough.....	20

Quebec Province—Vital statistics—March, 1931.—Births, deaths, and marriages for the month of March, 1931, in the Province of Quebec, Canada, with deaths from certain specified causes, are shown in the following table:

Estimated population.....	2,782,500	Deaths from—	
Births.....	6,727	Influenza.....	187
Birth rate per 1,000 population.....	28.5	Lethargic encephalitis.....	1
Deaths.....	3,030	Measles.....	5
Death rate per 1,000 population.....	12.8	Nephritis.....	188
Marriages.....	353	Pneumonia.....	366
Deaths under 1 year.....	768	Puerperal state.....	38
Deaths under 1 year per 1,000 births.....	114.2	Scarlet fever.....	9
Deaths from—		Syphilis.....	18
Cancer.....	198	Traffic.....	16
Cerebrospinal meningitis.....	9	Tuberculosis (pulmonary).....	244
Diabetes.....	34	Tuberculosis (other forms).....	55
Diarrhea.....	127	Typhoid fever.....	14
Diphtheria.....	18	Violence.....	68
Heart disease.....	321	Whooping cough.....	23

CUBA

Provinces—Communicable diseases—Four weeks ended April 11, 1931.—During the four weeks ended April 11, 1931, cases of certain communicable diseases were reported in the Provinces of Cuba as follows:

Disease	Pinar del Rio	Habana	Matanzas	Santa Clara	Camaguey	Oriente	Total
Cancer.....				2	1	1	4
Chicken pox.....	2	56	6	41	10	2	117
Diphtheria.....		13		3			16
Malaria.....		2		1	2	70	75
Measles.....		70		18			88
Paratyphoid fever.....				1			1
Scarlet fever.....	2	7				2	11
Typhoid fever.....	1	16		37	8	17	79

NEWFOUNDLAND

Vital statistics—1929 and 1930.—According to the annual report of the registrar of births, marriages, and deaths, the estimated population of Newfoundland and Labrador was 275,888 on January 1, 1931, as compared with 263,033 in 1921. These figures include about 4,000 in Labrador for each year.

During the year 1930 births showed a decrease of 91 as compared with 1929, deaths a decrease of 194, and marriages a decrease of 19. The death rate was 13.9 per 1,000 population and the infant mortality rate per 1,000 births was 134.77. There were 573 deaths from general tuberculosis in 1930, as compared with 614 in 1929, and 232 deaths from cancer as compared with 221 during the previous year. Cancer has shown a steady increase in the last 10 years. The cause of the greatest number of deaths during the year 1930 was tuberculosis, the pulmonary form causing 468 and other types of the disease 105 deaths.

VIRGIN ISLANDS

Communicable diseases—April, 1931.—During the month of April, 1931, cases of certain communicable diseases were reported in the Virgin Islands as follows:

St. Thomas and St. John:	Cases.	St. Croix:	Cases.
Chicken pox.....	2	Chicken pox.....	8
Gonorrhea.....	1	Filaria.....	1
Pellagra.....	3		
Syphilis.....	6		

YUGOSLAVIA

Communicable diseases—April, 1931.—During the month of April, 1931, certain communicable diseases were reported in Yugoslavia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax.....	23	6	Poliomyelitis.....	1	-----
Cerebrospinal meningitis.....	20	11	Puerperal septicemia.....	4	-----
Diphtheria.....	420	50	Scarlet fever.....	369	53
Dysentery.....	23	2	Rabies.....	1	1
Erysipelas.....	161	17	Tetanus.....	21	12
Measles.....	1,065	53	Typhoid fever.....	117	13
Paratyphoid fever.....	5	-----	Typhus fever.....	43	5

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	Nov. 14, 1930- Dec. 13, 1930	Dec. 14, 1930- Jan. 10, 1931	Jan. 11- Feb. 7, 1931	Week ended—													
				February, 1931			March, 1931			April, 1931			May, 1931				
				14	21	28	7	14	21	28	4	11	18	25	2	9	16
Ceylon: Colombo.....	C																
China:																	
Canton.....	C																
India.....	C	11, 112	10, 687	15, 334	3, 529	2, 549	3, 173	2, 293	2, 471	2, 551	2, 959						
Basseln.....	D	5, 933	5, 689	8, 123	1, 846	1, 325	1, 703	1, 257	1, 252	1, 314	1, 511		1				
Bombay.....	D																
Calcutta.....	D	13		21													
Karikal.....	D	7	28	121	27	33	45	65	80	102	129	125	95	82	71		
Madras.....	D	16	20	86	22	25	26	39	49	68	69	70	55	51	44		
Negapatam.....	D				4		1	4	2	1	7	7	2	10	8	10	
Rangoon.....	D		201	99	18	20	19	15	4	5	2	4	3	1	4	18	12
Tuticorin.....	D		67	47	5	4	14	6	5	3	2		5	1	3	5	6
India (French):	D																
Chandernagor.....	D	5	1	1		1											
Pondicherry.....	C	1	2	1		1	2	2	2	2	2	1			1		
India (Portuguese)	D		3	1		1	3	1	2	3	1						
Indo-China (see also table below):	D	4	31	19	10	20	31	39	29	25	26	20	5	3	3		
Pnompenh.....	C	4	21	11	10	9	6	9	6	5	4						
Saigon and Cholon.....	D																
	D	2		4		3	3	3									
	D	2		2		1	2	2		1							
	D	3	9	6			3	1	1								
	D	1	4	3			3	1	2	1							

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

PLAGUE

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

[illegible]

PLAGUE—Continued

Week ended—

[illegible]

SMALLPOX

Place	Nov. 14- Dec. 13, 1930	Dec. 14, 16- Jan. 10, 1931	Jan. 11- Feb. 7, 1931	Week ended—													
				February, 1931			March, 1931			April, 1931			May, 1931				
				14	21	28	7	14	21	28	4	11	18	25	2	9	16
Algeria:																	
Algiers.....		1	1		1					2				2			
Bone.....			1														
Constantine.....									1							1	
Oran.....	3																
Arabia: Aden.....			1	1													
Belgian Congo.....		79	50														
Belgium.....				1													
Brazil:																	
Porto Alegre (alastrim).....	30		3	1	1	2	3	7	12	16	14	20	19				
British East Africa (see also table below): Tanganyika.....	385	84	70	35	42	13	1	6	2								
British East Africa (see also table below): Tanganyika.....	26	4	5		12	1		1	2								
British South Africa: Southern Rhodesia.....	18	18	13														
British South Africa: Southern Rhodesia.....	3																
Canada:																	
Alberta.....	1	19	7	1													
British Columbia.....	1	3	2	1	2	6											
Manitoba.....			1			1										4	
Winnipeg.....		1				1											
Nova Scotia.....			1							1							
Ontario.....	23	17	49	10	4	7	8	2	3	3	1	4		6	7	17	5
Kingston.....		6	1		1												
North Bay.....		2		1													
Ottawa.....	12	2	2	3													
Sault Ste. Marie.....		1	30		1	2						3	1			1	
Toronto.....	4							1		1						1	
Quebec.....	2	2	2														
Saskatchewan.....	18		33	17	18	18	10	40	10	8		5	16	3	22	7	15
Regina.....					1				2	2				2		2	
Canary Islands: Las Palmas.....										1							

1 Reports incomplete.

SMALLPOX—Continued

(C indicates cases; D, deaths; P, present)

[illegible]

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

TYPHUS FEVER

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

Place	Nov. 16- Dec. 13, 1930	Dec. 14, 1930- Jan. 10, 1931	Jan. 11- Feb. 7, 1931	Week ended—														
				February, 1931			March, 1931			April, 1931			May, 1931					
				14	21	28	7	14	21	28	4	11	18	25	2	9	16	
Algeria:																		
Algiers.....	2			1	1					3						2	1	3
Constantine Department.....	2	6	31		4				1				2	2		6	1	8
Oran.....	5		3				1									1		
Australia, western.....																		
Bulgaria.....	11	3	13	2	2		3						9	9	26	4		
Chile: Valparaiso.....		1											2		3			
China:																		
Canton.....			2					1										
Manchuria—Harbin (see also table below).....	1		3							3								
Shanghai.....			2															
Tientsin.....	1												1	1				
Chosen (see table below).....																		
Czechoslovakia (see table below).....																		
Egypt:																		
Alexandria.....	2															1		
Beheira Province.....																		
Cairo.....		1											3	1				
Port Said.....	1	1	1										2					
Eritrea: Asmara.....																		
Great Britain: Scotland.....			1					1										
Glasgow.....			1															
Greece (see table below):																		
Guatemala. ¹				2	1	1	1	1										2
Iraq: Baghdad.....				1														2
Irish Free State:																		
Kerry County—Dingle.....																		1
Mayo County—Belmullet.....																		

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

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

	Cases	Deaths		Cases	Deaths
Brazil:			Brazil—Continued		
Bahia State—			Ilho de Janeiro State—		
Mar 14, 1931.....	1	—	Mar 7, 1931.....	1	1
Mar 15-21, 1931.....	1	—	Mar 14, 1931.....	1	1
Ceara State—			Mar 21, 1931.....	1	1
Mar 14, 1931.....	2	—	May 10-16, 1931.....	1	—
Apr. 27-May 2, 1931.....	1	2	May 17-23, 1931.....	1	—
May 10-16, 1931.....	1	1	Cambruy.....	—	—
Parana, Feb. 7, 1931.....	1	1	Jan. 1-25, 1931.....	3	3
Minas Gerais State—			Feb. 1-7, 1931.....	1	1
Mar. 20, 1931.....	2	1	Friburgo (imported), Jan. 25-30, 1931.....	1	—
Apr. 8-11, 1931.....	1	—	Padua.....	—	—
Apr. 19-25, 1931.....	2	1	Jan. 18-24, 1931.....	1	1
Apr. 26-May 2, 1931.....	2	1	Feb. 1-7, 1931.....	1	1
May 3-9, 1931.....	1	1	Feb. 8-14, 1931.....	1	1
May 17-23, 1931.....	1	—	British Cameroon: Mamfe, May 14, 1931.....	3	1