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SUMMARY OF A STUDY OF HEALTH AND HOSPITAL SERVICES IN ALAMEDA COUNTY, CALIF.[1]

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Introduction

The county board of supervisors of Alameda County, Calif., on behalf of the several health organizations, requested the Surgeon General of the United States Public Health Service, through the State Board of Health of California, to detail an officer to conduct a study of health and hospital services supported in whole or in part by public funds. This survey was made by the writer during the period February 11–April 9, 1930.

The primary objects of the survey were to determine the quantity and quality of the work being performed; and the efficiency and adequacy of the service. Particular attention was given to those agencies supported in whole or in part by public funds and whose work for the most part was devoted to either the protection of the public health or the care of the ambulatory sick. Other agencies participating in or bearing a relationship to these functions were reviewed in less detail. The study was conducted from the administrative point of view, considering the needs of the county as a whole, rather than the determination of the merits of an individual institution or item of service.

CHARACTERISTICS OF THE COUNTY

Alameda County is situated on the eastern, or continental side of San Francisco Bay and comprises for the most part what is generally termed the East Bay district.

[1] The complete report of this study has been published by the Alameda County Tuberculosis Association.

Estimated population of county by area, 1929

City	
Oakland	281,000
Berkeley	72,600
Alameda	34,000
Albany	3,000
Emeryville	3,000
Hayward	4,200
Livermore	2,300
Piedmont	5,500
Pleasanton	1,100
San Leandro	7,000
Unincorporated area	26,500
Total Alameda County	440,200

Of the total population, 91.4 per cent is classed as urban and 8.6 per cent rural. About 400,000 inhabitants live in a strip of territory varying from 3 to 5 miles wide extending the entire width of the county along San Francisco Bay. In this section are located the cities of Albany, Berkeley, Emeryville, Piedmont, Oakland, Alameda, San Leandro, and Hayward, and a number of unincorporated communities. These cities in the order mentioned, from north to south, form a continuous urban area separated only by imaginary lines called political boundaries. In so far as the social and economic structure of the area is concerned, these cities form a continuous urban community. The rural population, too, is concentrated in the lower bay area and in the valleys extending to the east.

Summary of Findings and Major Recommendations

PRESENT STATUS OF PREVENTIVE WORK

In Alameda County there are 11 legal health jurisdictions—Oakland, Berkeley, Alameda, Albany, Piedmont, Emeryville, San Leandro, Hayward, Pleasanton, Livermore, and the unincorporated portions of the county, each under the charge of a duly appointed health officer. The health officer of Berkeley is trained in public health work and serves on a full-time basis. The health officer of Hayward is a veterinarian serving on a part-time basis. In each of the other jurisdictions the health officer is a practicing physician, for the most part without any particular training for the position and devotes but a small part of his time to public health work. Within most of the health jurisdictions the schools maintain a separate health service, which may or may not be coordinated with other health activities. Superimposed upon this structure there are nine health centers. The health centers in Berkeley, Oakland, and Alameda are essentially clinics for the treatment of the sick, and only from 15 to 20 per cent

of the work may be classed as preventive in purpose or effect. The health centers of the remainder of the county serve primarily as headquarters for the local public health nursing service. The expenditures for health service, both gross and per capita, are as follows: Oakland, $300,312.94, or $1.07 per capita; Berkeley, $70,342.32, or $0.97 per capita; Alameda City, $34,671.43, or $1.02 per capita; remainder of county, $61,490.62, or $0.78 per capita—making a grand total of $466,817.31, or $1.06 per capita. Of the total expenditure for public health in the county as a whole, the county government bears 13.39 per cent, the cities 50.85 per cent, the schools 16.73 per cent, and 19.03 per cent comes from miscellaneous sources. Public health work in the three large cities, rated according to the appraisal form of the American Public Health Association, scores as follows: Oakland, 629.18; Berkeley, 752.48; and city of Alameda, 637.79—each rated on the basis of a possible 1,000 points. In the remainder of the county the records were not of such a character that work could be appraised by any objective method of measurement.

The prevention of disease, to a very large extent, is a public responsibility and for many years has been accepted as a function of government. The principal elements in a modern health program are as follows:

Collection and analysis of vital statistics.
Environmental sanitation.
Control of food, milk, and water supplies.
Control of acute communicable diseases.
Control of tuberculosis, venereal diseases, and other chronic and communicable diseases.
Hygiene of maternity and childhood.
Industrial and adult hygiene.
Laboratory service.
Public health education.
Other essential public health services suited to the locality.

To carry out such a program involves the employment of physicians, nurses, and sanitarians and the establishment of facilities with respect to clinics and laboratories.

There are four essential principles upon which a community public health service should be founded; namely,

(1) The area should be a political and a taxing unit with definite legal status.
(2) The basic health organization should be a part of governmental structure.

(3) The health organization should have at its disposal sufficient funds to provide trained personnel capable of rendering an inclusive type of service and one of sufficient intensity to accomplish definite and tangible results.

(4) All public health personnel working the area should be an integral or coordinated part of one organization and serve under one directing head who should be an official health officer. At least the basic personnel should devote full time to the work.

Only in Berkeley does health administration conform in any great degree to these principles; yet, the social, economic, and geographic conditions of the county are such that no one unit of the population can be separated from another. A union is being effected, however, on a functional basis. Water is obtained from the East Bay municipal utility district; the Oakland Health Department performs the milk and meat inspection for most of the municipalities; and the county finances a number of the medical services, some of which are to a certain extent preventive in character. Other health problems continue to be considered as confined within political boundaries or affecting selected units of the population. The public expenditure for prevention is $1.06 per capita, while the public expenditure for treatment is $3.17. The public expenditure for prevention represents the entire amount devoted to prevention, while the public expenditure for treatment is supplemented by possibly $20 per capita from private sources.

In general, it may be said that a fair amount of preventive work is being accomplished and in some instances it is of a high character; but from the point of view of the county as a whole, the service is inadequate. It lacks professional direction and coordination, and, in most instances, positive accomplishments are not commensurate with expenditures.

PRESENT STATUS, TREATMENT OF THE SICK

The great bulk of medical service to the sick in Alameda County, as elsewhere, is rendered by the private physicians and private hospitals. The care of the sick poor, however, is a public function, and by law this duty has been imposed on the county. The elements in a complete program are as follows:

(1) Hospital care of the acutely ill.

(2) Hospital care for persons convalescing from acute illness.

(3) Hospital care for those with chronic diseases, including tuberculosis.

(4) Care of the ambulatory sick.

(5) Care of persons in their homes.

HOSPITAL CARE

The county provides hospital care through the following institutions:

Highland Hospital for the acutely sick. Bed capacity: Medical, 68; surgical, 164; children, 32; emergency, 5; maternity, 25; contagious, 60; psychopathic, 15; reserve, approximately 100. Total active service, 369.

Fairmont Hospital for convalescent patients discharged from Highland, for the chronically sick, including those with advanced tuberculosis, and the indigent aged. Bed capacity: Chronic and convalescent patients, 225; tuberculosis, 125; and 410, mostly in dormitories, for the aged and infirm. Total, 760.

Arroyo Sanatorium for tuberculosis patients presenting a possibility of arrest. Bed capacity: Adults, 140; children, 40. Total, 180.

Del Valle Farm for children between ages 6 and 12 years predisposed to tuberculosis. Total capacity, 84 beds, including four for contagious diseases.

The management of these institutions is vested in the county institutions commission. The medical director of Alameda County institutions is the executive officer of the commission and is in general charge of all institutions. He also acts as resident superintendent of Highland Hospital. The other hospitals are under the direction of a resident superintendent. Highland and Fairmont Hospitals and Arroyo Sanatorium are supported by the county, while Del Valle Farm is supported by the county tuberculosis association and local community chests.

EMERGENCY SERVICE

The county provides emergency treatment service at the County Receiving Hospital, at Highland Hospital, and to a limited extent at Fairmont Hospital. The facilities other than those provided at Fairmont Hospital are used almost exclusively by the city of Oakland. The cities of Alameda and Berkeley make additional provision for local emergency treatment. The Receiving Hospital and, technically speaking, the emergency work at other county hospitals are under the county emergency surgeon. The major emergency work is gradually being transferred to Highland Hospital, and the Receiving Hospital now confines its activities principally to first aid and care of minor accidents.

CARE OF THE AMBULATORY SICK

The treatment of the ambulatory sick is the major function of the health centers in Oakland (including the out-patient department of Baby Hospital), Berkeley, and Alameda. A very limited amount of treatment is done at the San Leandro and Hayward health centers. In the health centers of Livermore, Pleasanton, and Washington

Township, the program is purely preventive in character. In all instances, however, health center personnel assist in bringing patients to medical attention.

All health centers are organized and administered along essentially the same lines. They are local institutions under the charge of local self-perpetuating boards, but supported very largely by the county. A recently created county health-center board is bringing about a certain amount of uniformity in procedure, particularly in the matter of records, reports, and accounting. There is no definite staff connection between the health centers and the hospitals and no direct line of authority.

The number of visits made to the health centers for treatment purposes during 1929 was as follows: Oakland health centers (Clinic Building and Ethel Moore Clinics), 65,617 visits; Baby Hospital out-patient department, 19,617 visits; Berkeley Health Center, 34,672 visits; Alameda Health Center, 15,943 visits; San Leandro Health Center, 1,076 visits; Hayward Health Center, 1,005 visits. The total cost of operating those health centers which devote the major part of their activities to treatment, namely Oakland, Baby Hospital out-patient department, Berkeley, and Alameda was $237,872.43, of which the county paid 64.19 per cent, the cities 11.52 per cent, and 24.28 per cent was derived from other sources.

HOME CARE OF THE SICK

County physicians.—The county physicians render home care to the sick poor and determine medical eligibility for admission to the county institutions. In supervisorial districts 2, 3, 4, and 5, two physicians for each district are appointed by the county board of supervisors. In district 1, any physician may accept the call. Physicians are paid at the rate of $2.50 per home call and $2 per office call. The total amount must not exceed $150 per month for any one physician except in district 1 where the amount is not specified. The total cost of the service for 1929 was $14,202, but the budget now in effect contains an item of $17,000 for this purpose. This service is charged to the relief item in the county budget. The determination of eligibility for care by the county physician is a responsibility of the local health center, and the accounts are checked by the local welfare agency. There is no professional or administrative connection between the county physicians and the county health centers or the county hospitals.

Home nursing service.—This element of the service is to provide nursing care in the home for patients who are not hospitalized and who are not able to go to a treatment center. The following agencies carry on this service to a limited extent: Oakland Visiting Nurse Association, Baby Hospital Association, Berkeley Health Center,

Alameda Health Center, and to a lesser extent the outlying centers of the county. It was not possible to separate the visiting nurse calls from those of a preventive character, and it was not possible to allocate the cost according to type of service and source of funds.

EXPENDITURES

COUNTY INSTITUTIONS, RECEIVING HOSPITALS, AND COUNTY PHYSICIANS

Name	County	Other	Total	Per cent	Per capita
Arroyo Sanatorium	$162,687		$162,687	13.51	$0.369
Fairmont Hospital	399,165		399,165	33.15	.907
Highland Hospital	592,325		592,325	49.19	1.34
Receiving Hospital	35,852		35,852	2.98	.081
County physicians	14,202		14,202	1.18	.032
Subtotal	1,204,231		1,204,231		2.711
Del Valle Farm		$40,333	40,333		.092
Grand total	1,204,231	40,333	1,244,564		2.80

EXPENDITURES FOR PREVENTION

Area	County	City	Other local	Collections	Schools	Del Valle	Total	Per capita
Oakland	$24,201.84	$170,430.08	$35,869.46	$3,703.90	$41,346.56	$24,761.10	$300,312.94	$1.07
Berkeley	5,047.15	33,675.53	3,221.17	2,709.77	18,622.00	7,066.70	70,342.32	.97
Alameda city	2,612.80	22,588.52			7,087.11	2,483.00	34,671.43	1.02
Remainder of county	30,772.00	10,694.00	5,197.12		11,065.00	3,762.50	61,490.62	.78
Total	[1] 62,533.79	237,388.13	44,287.75	6,413.67	78,120.67	38,073.30	466,817.31	1.04
Percentage	13.40	50.85	9.49	1.37	16.73	8.16		

[1] Exclusive of rodent control.

EXPENDITURES FOR TREATMENT

Purpose	County	City	Other local	Collections	Total	Per cent	Per capita
County hospitals	$1,154,177.00				$1,154,177.00	82.54	$2.691
Emergency	35,852.00	$5,700.00			41,522.00	2.97	.09
County physicians	14,202.00				14,202.00	1.01	.032
Oakland Health Center	74,417.84			$10,975.07	85,392.91	6.11	.194
Out-patient department, Baby Hospital	16,601.89		$9,503.96	4,826.32	30,932.17	2.21	.070
Berkeley Health Center	17,454.66	15,998.81	11,139.83	9,371.23	53,964.53	3.86	.123
Alameda Health Center	12,462.20	5,646.48	(1)	(1)	18,108.68	1.29	.041
Total	1,325,167.59	27,345.29	20,643.79	25,172.62	1,398,329.29	99.99	3.175
Percentage	94.77	1.95	1.48	1.80			

[1] Amount included in other funds.

COMMENTS

In general, the plan of organization of the county institutions seems to be correct and workable, and the institutions appear to be well managed. So far as could be ascertained, they are adequate to meet the present needs of the county with the exception of certain minor ones, and these are mentioned in the body of the report. It may be said of the institutions that in their development and management they are far in advance of other related elements in the whole program of prevention and treatment.

The present emergency service is not satisfactory in that it is not uniform throughout the county in regard to its provisions, management, or method of financing. The present County Receiving Hospital is not suited to the purpose of a general emergency hospital and there is serious question concerning its necessity in view of the facilities available at Highland.

The provision for the care of ambulatory patients, while being fairly adequate in the three largest cities, is not so in the other sections of the county. The chief defect, however, lies in the plan of organization and administration. The health centers are performing a county service which should bear a direct relationship to other elements in the treatment program. Under the existing plan of administration, they are not directly under county control and the work which they perform is not integrated with other branches of the treatment service.

Sufficient information could not be ascertained concerning the quantity or quality of service delivered by the county physicians. Irrespective of the quantity or quality of the service, the plan of administration is wrong in that at present the county physicians are directly accountable to the county supervisors and are paid by the welfare organizations. County physicians should fill a definite place in the program, but this can not be done until the service is coordinated with the other parts of the program and placed under the same unified direction. The provisions for home nursing care of the sick are entirely inadequate, and as at present administered this element of the service can not be expected to fill the rôle it is intended to occupy in the whole scheme of treatment.

MAJOR RECOMMENDATIONS

All of the foregoing services, while differing in the approach to their problems, have as a common purpose the maintenance of health. The public-health agencies seek to prevent disease by the application of measures directed to that end. The curative agencies seek to restore to health those who have become afflicted with disease or disability. Neither agency is or possibly ever will be complete in

itself. A separation of their functions into distinct fields is no longer possible. With advancing knowledge, most diseases and disabilities become more and more preventable. The prompt and proper treatment of communicable diseases is a most effective measure of controlling spread. In some instances the prevention of a graver malady lies in correction of the condition during the stage of its incipiency. On the other hand, both prevention and cure of many conditions become a question of right living and general education directed to these ends.

Heretofore, each agency has felt that it would lose by being placed under the other and that to reach its full development it must be a primary unit of government directly responsible to the principal executive in the local government. This attitude has been more pronounced on the part of the health agencies engaged in prevention. It is based upon many years of experience, during which they have led a lean existence when united with agencies engaged in treatment. The reason for this is obvious. Public sympathy always goes out to the ill; and the average mind thinks in terms of sick individuals rather than in terms of death rates or sickness rates. To put it in other words, an infant mortality problem makes little impression, while sick children always bring forth a response in the form of private contributions or public appropriations.

It is believed by the surveyor, as well as by local persons who have given thought to the subject, that the time has arrived in Alameda County for the development of a coordinated program of administration for both treatment and prevention under the county government. A certain amount of unification in the control of these functions will be necessary in order to obtain this result, since something more than a plan of cooperation is indicated. In the plan suggested below, the proposed health and hospital commission is made the primary unit of government directly responsible to the executives of the county. Prevention and treatment are under separate directors with equal rank. Under such an arrangement, treatment and prevention should be coordinated, have independence of action, and, at the same time, each should develop its full potentialities. Recommendations to this end, as well as for the strengthening of certain major elements of the program, are therefore submitted.

GENERAL ADMINISTRATION

1. That the name of the county institutions commission be changed to "county health and hospital commission," or other descriptive title; and that the membership of the present county institutions commission be surveyed, and, if necessary, changed so as to insure proper representation of public health and educational interests and of the units of population to be served by the proposed county health department.

2. That the function of the county health and hospital commission include administration of all county activities related to (1) prevention of disease and promotion of health, and (2) care of the sick.

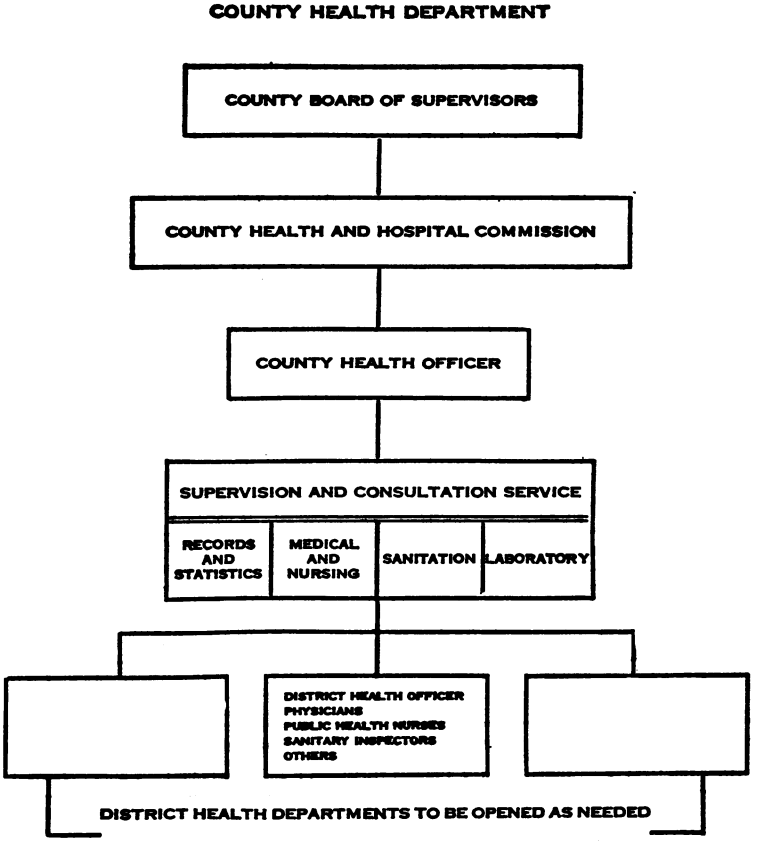
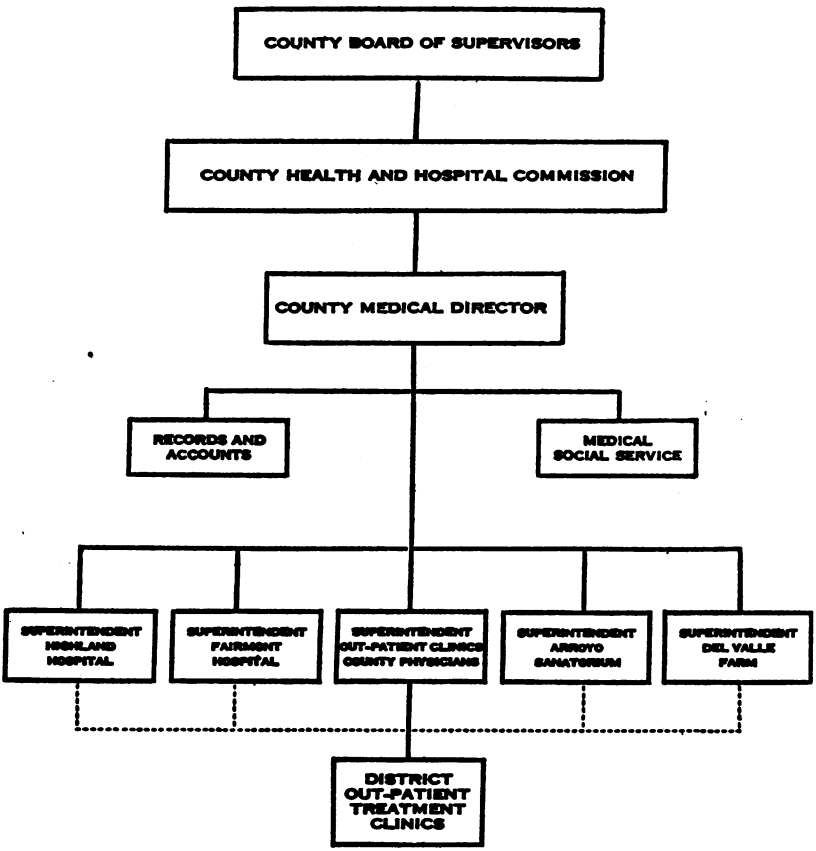


CHART 1.—Proposed plan of county health department

3. That the medical director of the county institutions commission as now organized be placed in administrative charge of all treatment services receiving county funds and be accountable for such services to the county board of supervisors through the county health and hospital commission.

4. That under the proposed county health and hospital commission there be created one additional director co-equal with the present medical director of county institutions who will have charge of prevention of disease and the promotion of health throughout the areas of the county served by the proposed county health department.

COUNTY HOSPITAL AND OUT-PATIENT SERVICE



SOLID LINES INDICATE ADMINISTRATIVE CONTROL—DOTTED LINES CORRELATION OF AGENCIES AND SERVICE.

CHART 2.—Plan of organization of county hospital and out-patient service

The said director of the proposed county health department is to be the duly appointed county health officer.

PREVENTION OF DISEASE AND PROMOTION OF HEALTH

1. That the program of disease prevention and health promotion be unified throughout the county by the creation of a county health department to be under the direction of a trained medical health

officer of demonstrated administrative ability, who will serve on a full-time basis.

2. That the director of the proposed county health department be the county health officer, and that he have administrative control of all public-health services, preventive clinics, and field activities in the areas served by the county health department.

3. That the county health officer be nominated by the proposed county health and hospital commission, and that he be appointed by and be accountable to the county board of supervisors through the county health and hospital commission.

4. That a county health department be created at once for the unincorporated areas; and that as cities make application, their public-health work be assumed by the county health department.

5. That the expenditures for such service begin at $1 per capita in the areas served, and that such funds be derived from county taxes.

6. That the control of public-health service by the proposed county health department within the cities be acquired by contract. That there be no charge to the city for such service unless the city demands a type of service above or beyond that furnished to other portions of the county, in which case the city would be required to supplement the budget to the extent of the cost of the additional service.

7. That after organizing the county health department and after allowing a reasonable time for adjustment of program and finances, the county discontinue financial aid to preventive work (maternity and child welfare, child guidance, immunization and similar clinics) in the health centers, unless, or until the general public health work of the area served by the health center be under the county health department.

8. That in areas served by the county health department the schools should not maintain a separate health organization beyond that essential for purely educational functions. For other services, the schools should contract with the county health department.

TREATMENT OF THE SICK

COUNTY INSTITUTIONS

That Del Valle Farm in its entirety be transferred to the county and that funds for its maintenance and operation be derived from taxation. The management should remain as it is, under the county institutions commission (or new county health and hospital commission).

EMERGENCY SERVICE

1. That emergency service as a county function be discontinued or else be developed in accordance with a policy which will provide a uniform county-wide service. The latter course is preferred.

2. That any emergency service retained or developed by the county be placed under the financial and administrative control of the county institutions commission. The cost of such service should be charged to the budget of the county institutions commission.

CARE OF THE AMBULATORY SICK

(Health Centers)

1. That the treatment function of all health centers be assumed by the county institutions commission. This should involve control over appointments, budgets, and accounts, and, where desirable, ownership of property.

2. That the cost of treatment in health centers, including personnel and operation, be carried on the budget of the county institutions commission.

3. That the county institutions commission survey existing treatment health centers from the point of view of physical condition, location, and place in the unified program. The commission should then project a plan which will meet the requirements in the most effective and economical manner, giving attention to the needs of the outlying portions of the county and a unification of the facilities in Oakland.

4. That two positions be created, viz, director of out-patient treatment service, and director of medical social service, both to be under the medical director of county institutions. The director of out-patient service would have charge over all out-patient treatment and the director of medical social service would have charge of all medical social service, both for the institutions and the out-patient clinics.

5. That the medical director of county institutions be placed in administrative charge of all treatment clinics receiving county funds and be accountable for such services to the county board of supervisors through the county institutions commission.

6. That in areas served by the proposed county health department the preventive functions of the health centers be under the direction of the county health officer. However, to prevent waste of funds and duplication of effort, joint use of facilities should be required and accounts should be adjusted by transfer of funds or exchange of services.

HOME CARE OF THE SICK

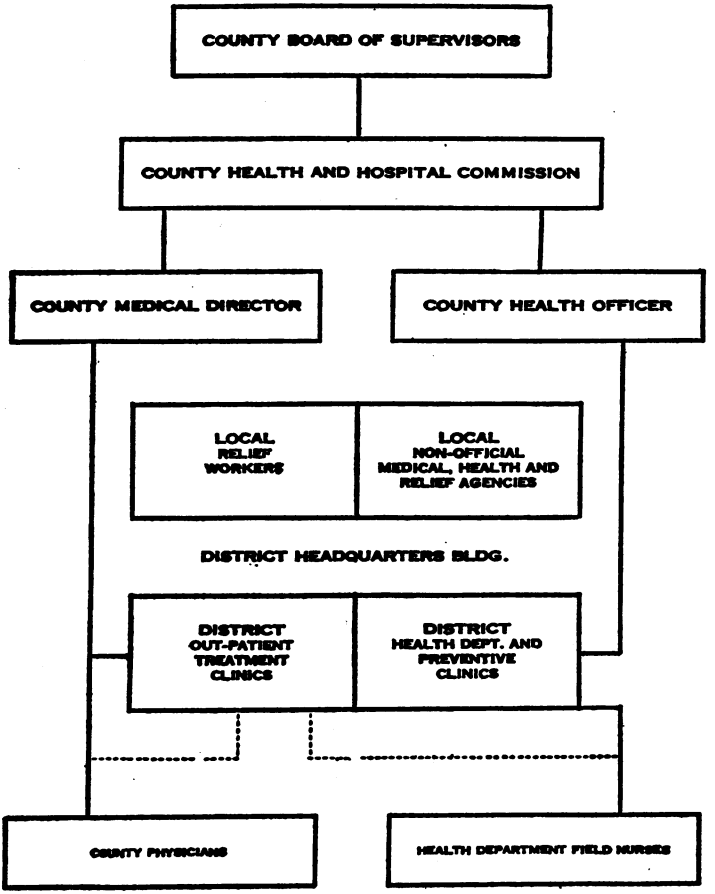
County physicians.—1. That the employment of county physicians and the administration of their work be placed under the direction of the county institutions commission.

2. That calls for such service be placed through the health centers when open, and through Highland Hospital at other times.

3. That the county institutions commission ascertain the need for county physicians and fix the number of physicians and rate of compensation accordingly.

4. That all bills be handled in the manner prescribed for county institutions and that the cost of county physicians be charged to the budget of the county institutions.

COUNTY FIELD PLAN OF PREVENTION AND TREATMENT



SOLID LINES INDICATE ADMINISTRATIVE CONTROL—DOTTED LINES CORRELATION OF AGENCIES AND SERVICES.

CHART 3.—Organization chart of county field plan of prevention and treatment

Home nursing service.—That field nursing service in areas served by the proposed county health department be organized on a generalized district basis under the control of the director of the proposed county health department and that the number of nurses be sufficient to meet the field needs of both the preventive and the treatment service.

That welfare work pertaining to the giving of material relief, development of character, and similar activities not primarily concerned with the prevention or cure of illness be developed as a function of the county, separate from the prevention or treatment of illness. In so far as may prove practicable, there should be joint use of facilities and personnel in order to promote efficiency and economy in administration.

FURTHER BIOCHEMICAL STUDIES ON THE ANTINEURITIC VITAMIN

By ATHERTON SEIDELL, *Chemist*, and MAURICE I. SMITH, *Senior Pharmacologist, National Institute of Health (formerly Hygienic Laboratory), United States Public Health Service*

Progress in the biochemical study of the antineuritic vitamin depends upon improvements both in the chemical processes of fractionation and in the physiological methods of testing the products obtained.

An accurate comparison of the advances claimed by various investigators is difficult to make, on account of the variety and imperfections of the physiological methods of control which have been employed. It is, consequently, highly desirable that greater attention be directed toward correlating the two branches of the problem and securing results which permit a more accurate comparison between purity of product and degree of antineuritic activity.

The present experiments are concerned with both phases of the subject. An improved physiological method described in a previous paper (1) has been used to control chemical fractionation steps, applied to a vitamin salt mixture prepared from brewer's yeast by a process involving adsorption on fuller's earth and subsequent purification by benzoylation (2).

The most highly purified fraction which has been obtained is active when tested on rats by the method referred to (1), in 0.05 mg. doses containing 0.0062 mg. nitrogen (12.4 per cent N). It is active in preventing loss of weight in pigeons fed exclusively on polished rice, in alternate day doses of 0.2 mg. containing 0.025 mg. nitrogen.

Through the kindness of Mr. R. R. Williams, who obtained personally from Dr. B. C. P. Jansen a small sample of the vitamin crystals made by the Jansen and Donath method (3), a direct comparison of the activity of these crystals and of our most highly purified fraction has been made. The smallest curative dose of the crystals for polyneuritis in rats was found to be 0.04 mg. containing 0.0069 mg. nitrogen (17.23 per cent N). Therefore, on the nitrogen basis the

two samples are of almost identical activity. Our concentrate has, so far, resisted all efforts to make it crystallize. The explanation of this may be that there is still present some non-nitrogenous impurity which prevents the crystallization of the active material in the sample.

Sufficient evidence has not as yet been obtained to indicate whether we are dealing with exactly the same compound as that obtained in a crystalline state by Jansen and Donath. Our product certainly does not respond to the Pauly reaction, as is claimed by Jansen and Donath for their crystals. Furthermore, Dr. M. X. Sullivan, of this laboratory, has obtained distinct evidence that a fairly large proportion (about 6 per cent) of organically bound sulphur is present in our active fraction. It is, of course, possible that this sulphur forms a part of the extraneous material, apparently still present in our product. It is equally probable, however, that the sulphur is present in the vitamin molecule. Jansen and Donath (3), it is true, do not indicate sulphur to be a constituent of their crystalline material, but their method of analysis does not definitely exclude such a possibility.

EXPERIMENTAL

In brief, the steps involved in preparing the vitamin containing salts are as follows: (1) Heating fresh brewer's bottom yeast with about an equal volume of water to 90° C.; (2) allowing the mixture to cool and removing coagulated protein and insoluble matter by means of a Sharples super centrifuge; (3) adding 30 grams of English fuller's earth to each liter of the nearly clear aqueous solution and, after stirring for one-half hour or longer, separating with the aid of the centrifuge and drying the vitamin-containing fuller's earth ("activated solid"); (4) extracting the "activated solid" by violent agitation for five minutes in 0.4 normal sodium hydroxide, using 1,000 c. c. per 100 grams of the solid, removing the solid quickly by means of the super centrifuge, and promptly acidifying the aqueous solution with sulphuric acid; (5) evaporating the faintly acid solution by vacuum distillation to about one-tenth its volume and removing the insoluble material; (6) adding about an equal volume of ethyl alcohol and removing the $Na_2SO_4 \cdot 10\,H_2O$ which crystallizes out on standing; (7) distilling the 50 per cent alcoholic solution to near dryness, mixing the concentrate with an aqueous sodium carbonate solution, and adding an excess of benzoyl chloride; (8) repeatedly extracting the acidified mixture with chloroform; (9) pouring the thoroughly extracted and filtered acid aqueous solution into ten volumes of acetone; (10) collecting and drying the precipitated salt mixture.

22456°—30——2

The vitamin-containing salt thus prepared usually has a nitrogen content of about 1 per cent but there may be considerable variation from this figure. It protects pigeons from loss in weight on an exclusive diet of polished rice in alternate day doses containing from 0.15 to 0.30 mg. of nitrogen.

Since the principal inorganic constituent of the vitamin salt mixture is sodium chloride, and this compound has solubility characteristics resembling more or less closely those of the antineuritic vitamin, an extensive series of experiments was required to select a solvent suitably adapted for effecting the desired separation. Percolation with various solvents was resorted to in the beginning, but later it was found that simple digestion was sufficient. In no case, however, was it possible to remove more than 90 per cent of the nitrogenous constituents present in the vitamin salt mixture. Of the various solvents and combinations which were studied during many months, the most satisfactory was a mixture of three volumes of normal propyl alcohol and one volume of concentrated hydrochloric acid ($d = 1.19$). This is used in about the proportion of 3 c. c. of the solvent per gram of vitamin salts and the mixture is constantly agitated for 18 hours. The solution separated by centrifugation from the insoluble salts contains about 60–80 per cent of the nitrogen originally present and a corresponding proportion of the physiologically active constituent. A second extraction of the salts yields an additional amount of vitamin. Upon evaporation or distillation of the extracts, a semi-solid residue is obtained. By digesting this in a small amount of methyl alcohol the active material dissolves completely and the insoluble residue consists for the most part of a white crystalline solid which possesses no activity. It should be remarked here that most of the experiments were made with vitamin salt mixtures prepared by extracting "activated solid" with 0.4 normal sodium hydroxide solution (step 4 in the outline given above). In several cases, however, saturated barium hydroxide was substituted for the aqueous sodium hydroxide, and it was found that the resulting vitamin salt mixture contained a much larger proportion of inactive nitrogenous constituents. These interfered seriously with the subsequent steps and prevented the obtaining of fractions of as high activity as those about to be described.

ACETONE PRECIPITATION

The methyl alcohol solution obtained as described above when poured slowly into ten or more volumes of actively stirred acetone yields an insoluble more or less voluminous white precipitate. This is thrown down by centrifugation and when dried in a vacuum

consists of a white powder usually containing about 7 to 11 per cent of nitrogen (samples Nos. 28.163, 28.188A, 28.190A, 28.193A, 28.194A). Reprecipitation may sometimes be necessary to obtain a granular solid. This material is usually active in pigeons in doses of about 1.0 milligram, and cures polyneuritis in rats in about 0.5 milligram doses.

PLATINUM PURIFICATION

Numerous experiments have shown that a platinum precipitate is best obtained by dissolving the above product in not more than 10 c. c. of methyl alcohol per gram of sample and adding a 10 per cent solution of platinic chloride in methyl or ethyl alcohol. Unfortunately the end point of the precipitation can not be accurately judged. Even after allowing the solution to stand a day or more in the cold room, an additional clouding may be produced by a drop of the platinum solution. It will be noted, however, that the precipitate now redissolves on stirring and a further amount of permanent precipitate is not obtained under these conditions.

The platinum precipitate obtained in this way is separated by centrifugation and washed with methyl alcohol. It is then suspended in methyl alcohol to which a few drops of hydrochloric acid are added, hydrogen sulphide is passed through the solution for several hours, and the mixture is allowed to stand over night. The methyl alcohol solution, after separation from the black platinum sulphide, yields upon evaporation a residue which is extremely soluble in methyl alcohol, but very little so in ethyl alcohol, and evidently not at all in acetone or in ethyl ether. Many samples of this residue have been, with every possible care, subjected to the process employed by Jansen and Donath to secure crystals from the residue obtained by them from their platinum precipitate, but in no case have crystals been obtained. A slight increase in activity of the residue from the platinum precipitate, accompanied, however, by considerable losses of active material, has been effected as follows:

The residue obtained as above described is dissolved in a few cubic centimeters of methyl alcohol and absolute ether is added very gradually just to the production of a faint precipitate. The mixture is then placed in a desiccator containing calcium chloride as the drying agent, and a beaker of ether to provide for a gradual increase of concentration of ether in the methyl alcohol solution of the active compound. A deposit is gradually formed and the supernatant layer no longer gives a precipitate upon addition of ether. After decantation of the clear solution the deposit is redissolved in methyl alcohol containing a little ether, and this solution is likewise subjected to an atmosphere of ether in a desiccator containing calcium chloride. The deposit now obtained (samples Nos. 28.159, 28.183, 29E, 29.G2, 29.N,

29.Q, 29.48), when examined under the microscope, consists of transparent irregularly shaped particles. The refractive index of one sample, kindly measured by Doctor Wherry, of the Bureau of Chemistry, was approximately 1.56; but the material failed to polarize light and apparently possessed no inherent crystalline character. It did not respond to the Pauly test. Two samples contained, respectively, 9.1 and 3.3 per cent chlorine. The best samples were effective in curing polyneuritis in rats in doses of 0.05 mg. and protected rice-fed pigeons against loss of weight in doses of about 0.2 mg. Determinations of nitrogen in the highly active samples gave results varying between 10 and 13 per cent.

SOME BIOLOGICAL CHARACTERISTICS OF THE VITAMIN CONCENTRATE OBTAINED FROM THE PLATINUM PRECIPITATE

The experiments on this phase of the problem concern the antineuritic potency of several of the concentrates prepared by the method described above, and the relation thereof to the thermostable growth-promoting vitamin (variously referred to as B_2 and G). The activity of several of the concentrates measured in terms of the minimum amount required to effect a cure of polyneuritis in rats on a diet adequate in all respects with the exception of the antineuritic vitamin (1) is shown in the accompanying table. It will be seen that the activity of the several concentrates varied from 0.05 to 0.30 mg.

TABLE 1.—*Activity of several concentrates*

Concentrate No.	Dose administered	Number of rats	Result R=Complete recovery within 36 hours or less, lasting 3 days or longer. P=No improvement noticeable within 48 hours.
	mg.		
28-159 (10 per cent N)	0.06	5	P P P P P
	.08	4	R R R R
	.10	6	R R R R R P
29-G2 (12.4 per cent N)	.05	4	R R R P
29-N (13 per cent N)	.04	3	P P P
	.05	3	R R R
	.06	4	R R R P
29Q2	.10	7	P P P P P P R
	.15	2	P P
	.20	2	P P
	.30	2	R R
29-48	.06	6	R R P P P P
	.07	6	R R R R R R
Jansen-Donath crystals	.03	2	P P
	.04	3	R R R
	.05	3	R R R

In order to ascertain the rôle of this antineuritic concentrate in the nutrition of the rat, experiments were made to determine its behavior when used as a daily supplement to (*a*) a diet deficient in both the antineuritic and thermostable vitamins, and (*b*) a diet deficient in the antineuritic vitamin alone. In all cases the preliminary treatment was the same as described in the previous publication

(1). Rats were placed on a diet in which the antineuritic vitamin was, as far as is known, the sole limiting factor until polyneuritis developed. The ration was then changed to one deficient in both vitamins, by replacing the autoclaved yeast with an equivalent amount of starch. The antineuritic concentrate was then administered intravenously in daily doses of 0.1 mg., or approximately 20 per cent in excess of the minimal curative dose. The animals recovered from the paralysis promptly but failed to grow. Death, apparently due to nutritive failure, followed in from 22 to 32 days, with no skin lesions. This type of experiment is illustrated in curve 329, Chart 1. By increasing the daily intravenous dose of the antineuritic concentrate 5 to 10 fold, i. e., to from 0.5 to 1.0 mg., the weight curve showed the same features, but the life of the animals was sufficiently prolonged to permit the development of skin lesions, e. g., fissures at the corners of the mouth, with a tendency to bleeding and some desquamation of the skin over the nose and the inner surfaces of the front feet. The weight curve of one of these animals is illustrated in curve 374 of the chart.

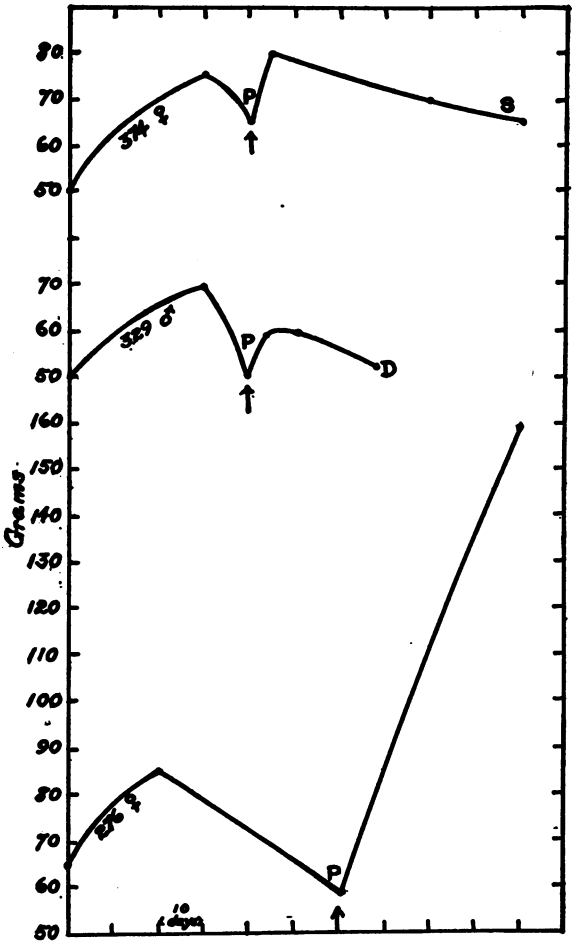


CHART 1.—Shows effect of the antineuritic fraction obtained by platinum precipitations when used by itself or in conjunction with the thermostable growth factor. First period, to arrow, polyneuritis producing diet (1) followed by polyneuritis at P. At this point rat 276 was continued on the same diet and in addition received daily intravenous injections of 0.1 mg. fraction 28.159. Rats 329 and 374 were changed at P to a diet deficient in the B complex (10 per cent of autoclaved yeast were replaced with an equivalent amount of starch) and in addition received daily intravenous injections of 0.1 and 1.0 mg. respectively of similar antineuritic fractions, 29-G2 and 29-48. All the rats promptly recovered from the paralysis. Rat 329 died in 28 days with no signs of paralysis or skin lesions, while rat 374 survived 60 days, at which time the experiment was discontinued. Skin lesions developed in rat 374 at S after 55 days. Rat 276 grew at a normal rate

If, however, the daily intravenous injection of 0.1 mg. of the antineuritic concentrate was given to rats having developed polyneuritis on our special polyneuritis-producing diet, and the administration of the thermostable growth factor was continued, normal growth ensued, as shown in curve 276 of the chart. It may be concluded, therefore, that the present concentrate is a highly active antineuritic fraction, probably wholly free from the thermostable component of the vitamin B complex, and when supplied in sufficient amount in conjunction with a diet adequate in all other respects satisfactorily meets the nutritional requirements of the rat in so far as normal growth is concerned.

REFERENCES

(1) M. I. Smith: Pub. Health Rep., 45 (1930), 116–129.
(2) A. Seidell: Jour. Biol. Chem., 82 (1929), 633–640.
(3) Jansen and Donath: Med. van den Dienst der Volksgesondheid in Ned. Indie, part 1 (1927). Weltevreden, Batavia, Java.

COMPARATIVE CURRENT STATE MORTALITY STATISTICS [1]

In this, as in the preceding report on current mortality statistics, the plan of publication has been changed from a monthly basis to the presentation of rates for a period including as many months of the current calendar year as are available, with comparative rates for the same period in the three preceding calendar years where data are available for those years. In the present report, figures are given for the 8-month period from January to October of 1930 for a number of the States, but for others the period is shorter. In the instance of many of the causes of death included in this report there is little seasonal variation and monthly rates seem unnecessary. It is believed that these rates for the "year-to-date" for each State with comparative rates for corresponding periods in preceding years will be more useful than monthly rates.

The rates are computed from current and generally preliminary reports furnished by State departments of health. Because of (*a*) some lack of uniformity in the method of classifying deaths according to cause, (*b*) some delayed death certificates, and (*c*) various other reasons, these preliminary rates can not be expected to agree in all instances with final rates published by the Bureau of the Census, which are based on a complete review and retabulation of the individual death certificates from each State. The preliminary rates given in the accompanying table are intended to serve as a current index of mortality until final figures are issued by the Bureau of the Census.

Populations used in computing rates are as of July 1 of each year, based on the 1920 Census and provisional results of the 1930 Census. Rates for 1930 and comparative years have been recomputed on new population estimates.

[1] From the Office of Statistical Investigations, United States Public Health Service.

Death rates from certain causes in stated periods of 1930, with comparative data for corresponding periods in preceding years

State	Period	Year	Rate per 1,000 population, all causes	Rate per 1,000 live births		Rates per 100,000 population (annual basis)																				
				Infant mortality	All except malformations and early infancy	Maternal mortality (143-150)	Typhoid fever (1)	Measles (7)	Scarlet fever (8)	Whooping cough (9)	Diphtheria (10)	Influenza (11)	Poliomyelitis (22)	Lethargic encephalitis (23)	Meningococcus meningitis (24)	Tuberculosis, all forms (31-37)	Cancer, all forms (43-49)	Diabetes (57)	Diseases of the nervous system (70-86)	Cerebral hemorrhage, apoplexy (74)	Diseases of the circulatory system (87-96)	Diseases of the heart (87-90)	Diseases of the respiratory system (97-107)	Pneumonia, all forms (100, 101)	Diseases of the digestive system (108-127)	Diarrhea and enteritis under 2 years (113)	Nephritis (128, 129)
Alabama	January to September	1930	11.3	74	45	7.8	7.4	3.4	0.8	10.4	3.4	34.4	0.8	0.7	1.5	82.3	50.8	8.1	93.9	60.1	144.0	127.1	97.6	86.8	88.2	30.5	96.3
		1929	12.4	78	47	8.9	7.5	2.8	1.0	10.3	5.7	143.9	1.9	1.1	1.0	82.9	46.6	8.5	96.8	58.3	136.8	127.4	98.7	91.4	101.3	28.5	89.8
		1928	12.0	81	50	8.5	8.9	10.2	.2	7.6	5.0	60.6	.8	(2)	(2)	89.3	47.6	9.7	(1)	57.1	(1)	127.4	(1)	103.9	(1)	37.1	87.7
		1927	10.1	63	34	7.4	11.9	4.6	.7	15.3	5.7	26.6	.7	(2)	(2)	86.7	47.2	7.6	(1)	47.0	(1)	97.9	(1)	60.4	(1)	29.8	73.4
Arizona	January to July	1930	16.2	134	93	5.1	9.6	2.5	2.0	11.8	3.0	20.0	2.0	.4	24.4	338.1	55.1	6.0	108.2	54.7	168.9	137.4	230.4	186.5	166.1	84.2	56.3
		1929	16.9	139	107	5.6	16.9	(1)	3.6	12.1	2.4	26.5	.8	.8	18.5	417.2	57.5	4.4	98.5	45.8	140.3	127.4	181.3	144.8	188.9	128.2	66.7
California	January to August	1930	11.6	58	29	5.6	1.8	7.3	1.4	4.4	3.4	8.7	2.1	1.1	3.3	103.3	124.4	18.7	111.6	81.4	276.8	235.9	83.6	71.0	79.4	15.7	84.5
		1929	12.1	66	35	5.5	1.7	.4	2.0	6.3	2.8	23.9	.8	1.4	8.2	112.4	117.4	19.0	115.0	81.5	289.6	255.0	94.0	81.4	79.7	14.0	91.5
		1928	11.9	61	33	5.6	2.0	.7	.8	6.1	5.8	14.7	1.6	1.0	2.0	117.5	117.1	18.4	118.3	83.2	263.8	226.7	87.6	76.2	83.1	15.4	95.5
Connecticut	January to September	1930	10.8	59	(1)	(1)	.7	.1	2.0	1.9	2.4	15.8	1.4	1.0	1.2	61.8	115.7	17.9	(1)	(1)	(1)	186.0	(1)	94.3	(1)	9.2	71.7
		1929	11.5	69	(1)	(1)	.8	4.0	1.2	2.9	3.5	47.1	.3	1.4	1.0	66.3	114.4	17.2	(1)	(1)	(1)	195.7	(1)	113.7	(1)	14.1	71.6
		1928	11.4	64	(1)	(1)	.9	4.8	1.8	7.3	5.2	23.7	.8	1.4	1.0	71.4	107.4	(1)	(1)	(1)	(1)	175.7	(1)	111.4	(1)	7.2	(1)
		1927	10.7	61	(1)	(1)	1.0	1.8	1.3	2.5	5.3	20.9	.8	(2)	.8	69.8	104.7	(1)	(1)	(1)	(1)	182.3	(1)	86.4	(1)	9.9	(1)
District of Columbia	January to October	1930	15.1	70	36	9.6	3.4	.2	2.2	4.9	3.0	6.6	.5	.5	1.5	119.8	137.8	27.8	139.2	99.1	371.2	315.4	136.5	115.9	106.8	20.4	159.2
		1929	15.4	71	36	5.9	2.7	(2)	2.5	5.2	6.7	23.8	1.0	1.0	2.2	119.9	129.6	27.3	134.1	81.7	372.7	321.1	164.9	142.5	103.8	20.6	163.4
		1928	15.0	(1)	(1)	(1)	3.0	4.3	1.8	3.5	8.8	14.8	1.3	1.3	.8	124.1	124.6	28.3	147.0	104.3	345.3	306.0	157.8	132.2	100.3	15.8	154.7
		1927	14.8	(1)	(1)	(1)	2.0	(2)	.8	3.5	5.1	21.8	1.5	1.8	.8	131.3	127.0	22.8	147.0	103.4	325.2	285.4	143.5	120.9	90.5	12.9	181.0
Florida	January to September	1930	12.2	65	32	9.7	5.3	5.5	.3	4.0	3.3	23.5	1.1	.5	.5	68.5	69.6	14.6	128.3	104.8	199.5	174.6	76.7	58.3	92.0	17.4	121.0
Georgia	January to August	1930	12.0	83	(1)	10.8	13.5	6.3	1.0	10.1	2.9	38.7	1.0	.3	3.5	76.4	49.6	11.6	128.5	(1)	154.3	139.4	106.8	91.5	88.1	25.8	133.2
		1929	11.8	(1)	(1)	(1)	10.0	1.5	.9	9.1	3.6	116.3	(1)	(1)	(1)	76.3	46.5	9.7	(1)	(1)	(1)	121.9	(1)	81.0	(1)	20.0	131.4

[1] Not available.

[2] No deaths.

Death rates from certain causes in stated periods of 1930, with comparative data for corresponding periods in preceding years—Continued

State	Period	Year	Rate per 1,000 population, all causes	Rate per 1,000 live births			Rates per 100,000 population (annual basis)																				
				Infant mortality	All except malformations and early infancy	Maternal mortality (143–150)	Typhoid fever (1)	Measles (7)	Scarlet fever (8)	Whooping cough (9)	Diphtheria (10)	Influenza (11)	Poliomyelitis (22)	Lethargic encephalitis (23)	Meningococcus meningitis (24)	Tuberculosis, all forms (31–37)	Cancer, all forms (43–49)	Diabetes (57)	Diseases of the nervous system (70–96)	Cerebral hemorrhage, apoplexy (74)	Diseases of the circulatory system (87–96)	Diseases of the heart (87–90)	Diseases of the respiratory system (97–107)	Pneumonia, all forms (100, 101)	Diseases of the digestive system (108–127)	Diarrhea and enteritis under 2 years (113)	Nephritis (128, 129)
Hawaii	January to September	1930	10.4	81	(1)	(1)	2.9	5.4	.4	4.7	11.9	8.7	(2)	(2)	5.1	98.8	54.1	13.0	(1)	45.1	(1)	122.7	(1)	118.0	143.2	84.4	(1)
		1929	12.8	(1)	(1)	(1)	4.5	6.7	(1)	36.2	9.7	22.0	1.1	.7	26.9	108.7	64.2	12.7	(1)	54.9	(1)	119.9	(1)	156.1	179.6	112.4	(1)
		1928	11.8	(1)	(1)	(1)	7.7	2.3	1.5	2.7	13.8	21.8	(2)	(2)	4.2	125.9	62.4	6.5	(1)	57.0	(1)	113.7	(1)	156.5	146.6	83.4	(1)
Idaho	January to October	1930	9.5	46	20	4.3	3.5	1.3	1.3	4.3	3.2	10.8	.8	(1)	5.7	33.9	61.6	6.7	99.3	66.7	188.9	166.8	116.8	100.4	64.9	4.	636.1
Illinois	do	1930	(1)	(1)	(1)	(1)	1.9	1.2	4.0	2.1	6.7	11.2	.7	.4	2.6	80.8	(1)	(1)	(1)	(1)	(1)	(1)	(1)	61.5	(1)	(1)	(1)
		1929	(1)	(1)	(1)	(1)	1.3	4.1	3.8	3.5	9.1	38.5	.2	.7	3.3	71.3	(1)	(1)	(1)	(1)	(1)	(1)	(1)	81.9	(1)	(1)	(1)
		1928	(1)	(1)	(1)	(1)	2.2	1.1	1.9	3.9	7.6	(1)	(1)	(1)	2.8	74.4	(1)	(1)	(1)	(1)	(1)	(1)	(1)	94.9	(1)	(1)	(1)
		1927	(1)	(1)	(1)	(1)	2.4	4.0	2.3	4.2	8.9	(1)	(1)	(1)	1.8	76.3	(1)	(1)	(1)	(1)	(1)	(1)	(1)	74.9	(1)	(1)	(1)
Indiana	January to October	1930	(1)	(1)	(1)	(1)	4.1	1.8	2.0	3.3	3.7	19.2	.8	1.3	8.8	64.9	101.1	15.3	(1)	108.3	(1)	182.6	(1)	80.4	90.5	85.1	
		1929	12.3	67	(1)	7.0	3.3	4.5	3.3	5.8	4.2	65.1	.2	.5	1.2	70.9	99.0	14.7	(1)	107.4	(1)	201.7	(1)	97.5	19.0	80.2	
		1928	11.8	64	(1)	6.1	4.2	2.2	2.1	4.5	4.8	41.8	(1)	(1)	(1)	70.0	100.0	(1)	(1)	108.3	(1)	179.9	(1)	93.0	19.5	89.7	
		1927	11.5	60	(1)	6.8	4.7	2.0	2.5	6.0	6.1	25.7	(1)	(1)	(1)	71.6	102.2	(1)	(1)	101.0	(1)	169.2	(1)	74.4	18.5	81.3	
Iowa	January to September	1930	10.7	55	21	7.7	1.4	10.4	3.1	4.1	1.7	26.6	1.5	2.5	3.4	34.2	111.0	21.3	135.1	95.1	243.9	191.4	87.4	79.2	74.2	6.1	41.6
		1929	10.5	54	21	5.9	1.6	1.2	2.2	4.9	1.1	62.5	.8	1.2	1.8	35.4	109.0	18.1	132.4	96.8	249.5	217.6	76.9	62.8	63.1	4.1	51.1
		1928	10.2	57	22	5.5	2.3	(2)	1.8	3.2	2.1	41.2	.7	1.4	1.1	36.2	111.4	18.3	134.4	98.2	233.9	207.7	75.6	65.4	68.2	6.0	52.7
Kansas	January to August	1930	10.6	54	24	7.7	2.2	6.1	2.6	4.3	3.0	34.7	1.8	.6	3.5	38.7	96.7	21.2	130.1	100.3	203.1	174.3	68.6	59.0	75.3	10.9	104.3
		1929	10.7	63	30	7.2	2.8	3.3	3.5	4.6	2.2	66.8	.5	.8	3.0	43.3	92.4	20.9	141.9	112.4	188.8	163.9	74.1	62.7	74.1	9.2	90.2
		1928	10.9	60	30	8.4	1.9	1.5	2.7	5.7	2.3	64.7	.4	1.0	1.0	42.2	95.1	20.5	141.1	107.8	201.4	174.0	74.3	60.7	81.8	15.3	90.5
Louisiana	January to September	1930	11.7	83	51	10.2	11.2	6.2	.4	6.2	3.9	37.3	2.1	.6	3.9	88.4	67.2	12.0	90.8	61.1	214.1	197.2	99.9	89.8	91.8	25.3	112.5
		1929	11.7	78	49	11.0	10.7	3.3	.5	6.2	4.3	91.7	.5	.3	2.3	87.9	64.0	11.0	87.9	56.8	200.0	185.0	89.6	79.6	93.0	27.4	108.7
		1928	12.1	81	50	11.2	12.7	11.2	.3	9.4	4.8	59.6	.9	.9	.7	93.8	63.4	11.6	95.2	64.1	189.2	177.9	105.7	94.0	96.8	27.7	109.9

Maryland	January to October	1930	13.2	72	38	5.5	6.5	.4	2.1	4.9	2.7	10.6	.4	1.3	1.4	103.8	112.6	21.2	140.9	104.3	277.4	242.2	123.0	114.0	92.3	33.6	150.2
Michigan	do	1930	10.7	64	28	6.1	1.8	5.6	2.9	4.0	6.6	12.4	.8	.9	8.7	61.1	91.0	17.7	118.1	89.3	228.9	202.6	85.0	69.9	83.6	15.1	68.4
		1929	12.0	68	33	6.2	1.8	3.2	3.2	6.0	10.3	42.5	1.0	1.2	19.6	68.7	92.8	19.9	133.2	93.6	245.9	214.4	107.4	91.6	89.0	17.4	66.7
Minnesota	January to September	1930	9.7	44	15	5.2	1.0	4.3	1.6	2.8	1.4	15.6	1.4	1.5	2.1	48.4	118.3	18.0	103.7	78.9	188.2	171.2	73.9	68.0	70.0	6.4	82.1
		1929	10.0	50	19	4.1	1.0	3.6	2.6	5.1	2.3	46.6	.4	2.4	2.0	58.0	112.1	18.7	101.6	75.2	199.1	164.3	75.4	68.1	67.1	4.1	55.0
		1928	9.9	(1)	(1)	(1)	.6	.4	2.6	2.6	2.5	34.8	2.2	2.5	1.6	58.8	114.4	19.6	(1)	(1)	(1)	151.7	(1)	66.6	(2)	(2)	57.4
Mississippi	January to August	1930	11.4	(1)	(1)	(1)	9.0	1.9	.4	8.9	3.4	33.9	.5	.2	9.2	85.1	47.0	8.9	(1)	70.2	(1)	106.9	(1)	68.3	(2)	13.9	101.9
		1929	12.1	(1)	(1)	(1)	9.3	6.0	(2)	11.2	2.7	146.4	.8	.5	.6	77.5	44.1	6.5	(2)	64.0	(2)	99.2	(2)	64.1	(2)	21.4	92.4
Montana	January to October	1930	9.7	(1)	(1)	(1)	2.9	2.7	2.9	3.4	.7	22.6	.7	1.6	4.9	63.2	76.4	17.5	97.9	66.3	154.1	140.2	92.7	80.2	92.5	14.1	73.5
Nebraska	January to August	1930	9.7	48	18	5.5	1.3	9.1	2.8	3.0	3.3	18.3	.9	.8	2.8	26.9	105.1	22.4	113.5	87.7	194.2	170.7	78.1	67.7	77.1	7.4	55.5
		1929	10.1	57	27	(1)	1.6	2.7	5.1	3.9	3.1	61.4	.4	.9	3.1	33.0	93.9	22.8	116.2	87.7	192.1	171.7	75.1	65.1	75.1	6.1	57.1
New Jersey	January to October	1930	10.6	(1)	(1)	(1)	1.1	3.6	1.4	2.3	3.5	8.5	.4	1.0	1.9	70.4	106.5	22.9	106.7	79.3	253.7	228.3	88.7	78.7	73.7	12.9	99.4
		1929	11.4	62	(1)	5.4	1.3	.9	1.1	5.2	10.3	27.5	.5	1.4	2.4	78.2	109.1	22.8	111.4	81.5	264.3	244.3	118.3	105.0	73.3	12.5	99.6
		1928	11.4	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	13.2	(1)	(1)	(1)	74.7	103.9	(1)	113.2	(1)	250.8	(1)	63.4	73.0	70.9	15.0	102.3
		1927	11.1	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	11.6	(1)	(1)	(1)	75.3	103.7	(1)	119.7	(1)	230.3	(1)	49.7	54.8	65.3	17.2	94.2
New York [1]	January to September	1930	12.6	60	24	5.7	1.3	1.8	1.4	4.2	2.7	10.7	1.9	.8	1.3	69.3	126.2	28.1	134.6	103.2	337.0	293.5	99.6	85.1	76.7	10.6	118.5
		1929	13.6	65	27	5.6	1.5	3.1	2.1	4.1	3.1	46.3	1.2	1.0	1.2	75.2	124.9	26.6	149.4	114.1	366.1	319.3	126.0	109.8	78.3	10.8	112.7
		1928	13.0	66	27	6.5	2.0	3.7	2.0	4.0	4.0	16.6	1.8	.8	.7	77.2	123.5	25.1	151.1	115.9	348.5	299.5	109.3	95.3	76.6	12.8	109.5
		1927	12.8	64	26	6.3	2.1	2.9	1.8	3.8	4.4	14.0	.9	.9	.2	79.3	123.9	24.3	148.2	111.3	328.8	283.2	102.0	85.3	79.0	14.0	113.8
North Carolina	January to May	1930	12.9	82	(1)	7.5	1.0	.1	1.2	10.6	5.6	45.0	.3	.7	1.1	90.5	(3)	(3)	(3)	(3)	(3)	(3)	(3)	140.2	(3)	17.1	(3)
		1929	13.4	(1)	(1)	(1)	2.4	1.1	2.1	7.9	7.4	170.2	.9	(3)	.5	91.8	(3)	(3)	(3)	(3)	(3)	(3)	(3)	134.9	(3)	14.8	(3)
		1928	11.8	(3)	(3)	(1)	1.9	34.6	1.8	7.9	7.0	55.0	.7	.9	(3)	86.3	(3)	(3)	(3)	(3)	(3)	(3)	(3)	140.7	(3)	13.6	(3)
Ohio	January to August	1930	11.7	57	24	5.8	2.3	4.0	2.3	3.5	2.7	21.4	.7	1.0	2.0	68.2	106.9	21.9	118.5	108.8	261.8	231.1	91.1	80.1	64.7	11.8	81.8
		1929	12.8	(1)	(1)	(1)	1.5	5.1	2.3	9.9	2.9	82.1	.6	(1)	3.1	73.3	103.8	(1)	101.8	(1)	217.7	(1)	99.1	(1)	10.5	84.8
		1928	12.2	(1)	(3)	(1)	1.5	4.1	2.3	3.3	5.5	41.0	1.0	(1)	2.0	76.5	105.2	(3)	(1)	102.9	(1)	(1)	(3)	95.3	(1)	9.8	68.4
Pennsylvania	January to September	1930	11.3	68	36	5.7	2.1	2.6	2.0	4.3	5.0	20.7	.5	1.0	2.3	61.4	95.4	21.4	112.0	82.7	258.1	229.2	108.6	95.0	81.3	21.2	101.7
		1929	12.4	72	39	6.3	2.0	4.6	2.7	6.4	6.7	67.7	.5	1.1	2.3	67.3	100.3	21.9	119.8	86.6	260.5	234.9	126.7	109.1	80.4	19.7	104.8
		1928	12.3	70	36	5.9	1.8	6.0	2.5	4.5	8.6	33.6	.8	1.2	1.0	72.6	99.4	22.3	(1)	90.2	(1)	230.4	(1)	114.7	(1)	22.6	111.0
		1927	11.8	69	35	6.4	2.6	2.9	2.8	5.5	7.9	26.9	(2)	1.0	.4	74.4	96.5	19.2	(1)	88.4	(1)	217.3	(1)	104.9	(1)	22.0	106.3
South Carolina	January to October	1930	(1)	(1)	(1)	(1)	18.0	.4	.5	12.0	5.3	50.3	1.0	2.7	4.0	76.3	33.9	8.2	(3)	(1)	309.0	(1)	(1)	94.8	(1)	(1)	119.9
		1929	(1)	(1)	(1)	(1)	14.4	.1	.9	12.7	8.6	80.4	.6	2.4	3.0	78.1	42.5	8.6	(3)	(1)	325.0	(1)	(1)	97.0	(1)	(1)	105.4
		1928	(1)	(1)	(1)	(1)	19.5	16.1	.5	10.0	10.1	76.6	1.0	2.4	1.6	85.4	44.6	9.0	(3)	(1)	312.3	(1)	(1)	113.2	(1)	(1)	113.1
		1927	(1)	(1)	(1)	(1)	23.7	3.8	.2	13.7	8.7	19.4	1.4	3.2	1.7	88.9	41.8	7.2	(3)	(1)	294.7	(1)	(1)	105.1	(1)	(1)	100.1

[1] No deaths.

[2] Exclusive of New York City.

Death rates from certain causes in stated periods of 1930, with comparative data for corresponding periods in preceding years—Continued

State	Period	Year	Rate per 1,000 population, all causes	Rate per 1,000 live births		Rates per 100,000 population (annual basis)																		
				Infant mortality		Typhoid fever (1)	Measles (7)	Scarlet fever (8)	Whooping cough (9)	Diphtheria (10)	Influenza (11)	Poliomyelitis (22)	Lethargic encephalitis (23)	Meningococcus meningitis (24)	Tuberculosis, all forms (31-37)	Cancer, all forms (45-49)	Diabetes (57)	Diseases of the nervous system (70-86)	Cerebral hemorrhage, apoplexy (74)	Diseases of the circulatory system (87-96)	Diseases of the heart (87-90)	Diseases of the respiratory system (97-107)	Pneumonia, all forms (100, 101)	Diseases of the digestive system (108-127)	Diarrhea and enteritis under 2 years (113)	Nephritis (128, 129)
				All except malformations and early infancy	Maternal mortality (143-150)																				
South Dakota	January to May	1930	8.0	59	27	6.9	1.0	5.9	1.4	3.1	1.7	30.4	.3	.3	(2)	41.2	68.4	19.6	81.7	53.1	135.9	112.8	79.6	67.4	53.1	8.4	51.3
		1929	9.5	74	41	6.8	1.4	3.9	3.9	4.6	1.8	102.1	2.5	.7	3.2	54.9	61.9	20.4	90.4	55.6	156.6	139.7	104.5	89.7	66.8	4.9	46.0
		1928	9.0	68	33	4.9	1.8	1.8	3.5	4.6	3.2	53.3	(1)	(1)	(1)	74.2	66.1	19.1	98.2	55.8	140.3	120.8	99.6	84.4	65.0	8.5	41.7
Tennessee	January to October	1930	11.2	(1)	(1)	(1)	11.6	5.7	1.3	6.8	4.5	31.2	.9	.8	10.7	117.4	56.8	10.3	102.3	62.0	134.1	120.0	93.9	83.3	98.1	30.2	74.9
		1929	12.1	81	54	8.0	11.2	.6	2.0	7.6	6.1	117.7	1.3	.7	1.9	122.8	55.7	9.5	98.4	56.9	140.0	127.8	97.6	86.0	90.0	26.2	70.8
		1928	11.8	(1)	(1)	(1)	12.8	9.2	1.4	5.2	5.3	52.6	1.3	.7	.7	123.3	57.1	9.1	(1)	(1)	(1)	121.2	(1)	97.0	(1)	34.6	(1)
		1927	11.2	(1)	(1)	(1)	21.4	4.7	1.7	14.2	6.0	29.5	.9	.4	.5	128.6	(1)	(1)	(1)	(1)	(1)	(1)	(1)	76.4	(1)	29.3	(1)
Virginia	do	1930	11.7	72	(1)	6.5	5.8	4.4	1.1	11.8	4.6	28.5	.9	1.0	2.6	86.0	62.7	14.1	126.0	95.4	202.9	176.5	90.6	78.2	84.8	29.2	107.3
		1929	12.0	76	(1)	6.9	4.3	1.5	1.0	11.3	6.3	104.9	1.3	1.1	1.3	92.6	62.5	11.1	125.0	88.7	193.7	175.2	81.6	70.2	74.2	21.4	101.1
West Virginia	January to September	1930	10.1	(1)	(1)	6.0	10.2	5.8	1.9	13.4	4.4	26.9	.4	.5	1.4	65.8	58.0	11.9	88.4	59.4	143.9	113.6	88.8	80.7	119.2	64.7	52.2
		1929	10.9	(1)	(1)	5.8	9.9	5.6	1.2	13.7	3.4	114.5	1.0	.6	.9	68.8	58.7	9.0	86.2	48.4	153.5	110.8	96.1	80.5	112.6	63.0	53.8
Wisconsin	January to October	1930	10.3	56	(1)	4.8	.9	3.8	3.2	3.4	2.4	15.4	1.0	1.0	2.3	51.9	111.9	(1)	(1)	(1)	(1)	(1)	(1)	69.4	(1)	10.7	(1)
		1929	10.8	63	(1)	(1)	1.4	2.8	2.6	3.9	2.5	47.7	.5	1.7	4.1	54.3	110.1	(1)	(1)	(1)	(1)	(1)	(1)	73.0	(1)	11.9	(1)
		1928	(1)	60	(1)	(1)	.8	.4	2.3	2.3	3.2	30.6	.5	1.7	3.2	57.9	(1)	(1)	(1)	(1)	(1)	(1)	(1)	80.5	(1)	11.5	(1)

[1] Not available.

DEATHS DURING WEEK ENDED DECEMBER 6, 1930

Summary of information received by telegraph from industrial insurance companies for the week ended December 6, 1930, and corresponding week of 1929. (From the Weekly Health Index issued by the Bureau of the Census, Department of Commerce)

	Week ended Dec. 6, 1930	Corresponding week, 1929
Policies in force	75, 098, 994	75, 222, 398
Number of death claims	13, 993	13, 393
Death claims per 1,000 policies in force, annual rate	9. 7	9. 3

Deaths [1] from all causes in certain large cities of the United States during the week ended December 6, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929. (From the Weekly Health Index issued by the Bureau of the Census, Department of Commerce)

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

City	Week ended Dec. 6, 1930				Corresponding week 1929		Death rate [2] for first 49 weeks	
	Total deaths	Death rate [2]	Deaths under 1 year	Infant mortality rate [3]	Death rate [2]	Deaths under 1 year	1930	1929
Total (78 cities)	7,873	11.9	715	[4] 57	12.8	715	11.9	12.6
Akron	14	2.9	3	28	9.5	6	7.8	9.4
Albany [5]	34	13.9	1	21	14.0	3	14.8	16.3
Atlanta	70	13.6	8	82	17.7	13	15.5	16.0
White	31		5	79		6		
Colored	39	(6)	3	86	(6)	7	(6)	(6)
Baltimore [5]	243	15.8	25	87	14.1	21	14.1	14.6
White	183		15	67		13		
Colored	60	(6)	10	160	(6)	8	(6)	(6)
Birmingham	78	15.7	12	115	14.1	7	13.7	15.9
White	36		3	48		1		
Colored	42	(6)	9	220	(6)	6	(6)	(6)
Boston	176	11.7	26	75	14.2	24	14.0	14.9
Bridgeport	36	12.7	5	86	11.7	1	10.9	12.0
Buffalo	142	12.9	22	98	13.9	12	12.9	14.0
Cambridge	25	11.5	1	20	10.6	0	11.8	12.5
Camden	25	11.1	0	0	13.8	5	13.6	14.3
Canton	22	10.8	1	27	12.5	1	9.8	11.2
Chicago [5]	740	11.4	67	59	11.1	65	10.4	11.3
Cincinnati	139	16.1	9	53	16.7	8	15.6	17.0
Cleveland	183	10.6	9	27	11.9	17	11.0	12.3
Columbus	72	12.9	6	59	16.6	3	15.4	14.8
Dallas	54	10.7	8		15.2	8	11.5	11.5
White	40		6			7		
Colored	14	(6)	2		(6)	1	(6)	(6)
Dayton	51	13.2	3	45	12.2	3	10.8	11.5
Denver	69	12.5	7	76	13.5	11	14.9	14.8
Des Moines	28	10.2	0	0	14.4	4	11.6	11.0
Detroit	257	8.5	37	57	10.9	44	9.3	11.1
Duluth	28	14.4	2	54	8.8	0	11.5	11.4
El Paso	35	17.8	4		10.9	0	17.0	19.4
Erie	12	5.4	2	44	9.5	4	11.1	12.0
Fall River [5] [7]	22	10.0	2	46	6.4	1	11.7	13.4
Flint	23	7.6	4	47	7.5	4	9.0	10.7
Fort Worth	45	14.5	3		13.4	5	11.0	12.8
White	37		3			4		
Colored	8	(6)	0		(6)	1	(6)	(6)
Grand Rapids	34	10.5	3	45	9.1	3	10.1	10.2
Houston	76	13.6	10		12.4	10	12.3	12.6
White	50		5			9		
Colored	26	(6)	5		(6)	1	(6)	(6)
Indianapolis	107	15.3	6	45	15.5	11	14.5	14.8
White	88		6	52		10		
Colored	19	(6)	0	0	(6)	1	(6)	(6)

[1] Deaths of nonresidents are included. Stillbirths are excluded.

[2] These rates represent annual rates per 1,000 population, as estimated for 1930 and 1929 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 73 cities.

[5] Deaths for week ended Friday.

[6] For the cities for which deaths are shown by color the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans., 14; Knoxville, 15; Louisville, 17; Memphis, 38; Nashville, 30; New Orleans, 26; Richmond, 32; and Washington, D. C., 25.

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

Deaths from all causes in certain large cities of the United States during the week ended December 6, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929. (From the Weekly Health Index issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Dec. 6, 1930				Corresponding week 1929		Death rate for first 49 weeks	
	Total deaths	Death rate	Deaths under 1 year	Infant mortality rate	Death rate	Deaths under 1 year	1930	1929
Jersey City	67	11.1	9	78	12.6	5	11.4	12.4
Kansas City, Kans.	27	11.5	0	0	12.4	0	11.7	12.8
White	22		0	0		0		
Colored	5	(6)	0	0	(6)	0	(6)	(6)
Kansas City, Mo.	97	12.8	4	33	15.7	5	13.4	14.0
Knoxville	16	7.8	2	47	11.1	0	13.5	13.9
White	9		2	52		0		
Colored	7	(6)	0	0	(6)	0	(6)	(6)
Los Angeles	273	11.4	24	73	7.7	14	11.1	11.3
Louisville	88	14.9	12	103	14.8	6	13.5	15.1
White	67		11	108		4		
Colored	21	(6)	1	66	(6)	2	(6)	(6)
Lowell [7]	20	10.4	3	79	13.9	4	13.3	14.0
Lynn	20	10.2	3	84	12.8	3	10.3	11.2
Memphis	74	15.3	6	71	21.2	9	16.9	19.0
White	37		1	18		6		
Colored	37	(6)	5	168	(6)	3	(6)	(6)
Milwaukee	136	12.4	13	57	11.1	11	9.8	10.9
Minneapolis	102	11.5	10	66	11.0	2	10.7	10.8
Nashville	43	15.2	3	47	19.2	6	17.3	18.6
White	19		3	63		5		
Colored	24	(6)	0	0	(6)	1	(6)	(6)
New Bedford [7]	26	12.0	3	77	7.8	2	11.0	12.0
New Haven	19	6.1	2	31	12.8	2	12.6	13.4
New Orleans	152	17.3	20	111	20.7	22	17.4	17.7
White	88		14	119		13		
Colored	64	(6)	6	97	(6)	9	(6)	(6)
New York	1,423	10.6	131	55	11.2	119	10.7	11.2
Bronx Borough	180	7.3	11	32	8.8	16	7.8	8.2
Brooklyn Borough	492	9.8	47	49	9.5	45	9.7	10.2
Manhattan Borough	554	15.6	55	71	15.7	39	16.0	16.3
Queens Borough	169	8.1	17	68	8.9	16	7.0	7.6
Richmond Borough	28	9.2	1	19	21.0	3	13.9	15.9
Newark, N. J.	106	12.4	8	42	13.0	11	11.9	12.6
Oakland	63	11.5	2	25	12.9	5	11.0	11.3
Oklahoma City	57	16.1	8	144	13.9	4	11.0	10.9
Omaha	40	9.7	6	73	10.5	4	13.5	13.5
Paterson	36	13.6	1	17	12.5	4	12.1	13.3
Philadelphia	512	13.6	55	82	15.3	46	12.5	13.1
Pittsburgh	175	13.6	12	43	17.4	22	13.8	14.8
Portland, Oreg.	61	10.6	4	50	13.4	3	12.2	12.7
Providence	61	12.7	1	9	14.2	5	12.9	14.4
Richmond	62	17.7	3	44	18.0	7	14.8	16.2
White	43		2	44		4		
Colored	19	(6)	1	43	(6)	3	(6)	(6)
Rochester	54	8.6	3	27	10.3	5	11.6	12.3
St. Louis	204	12.9	10	35	13.7	8	14.0	14.6
St. Paul	52	10.0	1	10	13.0	3	10.1	10.5
Salt Lake City [8]	38	14.1	5	79	11.7	5	12.5	13.0
San Antonio	68	13.8	10		15.4	5	14.4	14.6
San Diego	48	16.8	3	63	14.6	2	14.5	15.0
San Francisco	148	12.3	1	7	15.9	7	13.2	13.1
Schenectady	17	9.3	1	31	13.7	2	11.1	12.1
Seattle	76	10.9	3	30	13.5	5	10.9	11.2
Somerville	16	8.0	2	63	7.6	1	9.6	9.2
Spokane	33	14.9	3	78	13.1	2	12.5	12.8
Springfield, Mass.	32	11.1	2	34	11.6	1	12.0	12.6
Syracuse	48	12.1	4	49	14.5	6	11.7	12.9
Tacoma	16	7.8	1	27	12.8	2	12.4	11.8
Toledo	81	14.5	7	64	14.1	8	12.6	13.7
Trenton	58	24.6	4	77	18.3	7	16.7	17.0
Utica	17	8.6	2	56	20.9	4	14.5	15.5
Washington, D. C.	140	15.0	13	76	17.1	13	15.2	15.4
White	91		9	79		6		
Colored	49	(6)	4	71	(6)	7	(6)	(6)
Waterbury	24	12.3	1	24	7.8	1	9.4	9.3
Wilmington, Del. [7]	24	11.9	2	48	12.4	1	14.6	13.9
Worcester	41	10.9	3	42	13.6	3	12.6	12.6
Yonkers	12	4.6	1	24	12.6	3	8.1	9.3
Youngstown	30	9.2	2	29	14.3	6	10.3	12.3

[8] Deaths for week ended Friday.

[6] For the cities for which deaths are shown by color the colored population in 1920 constituted the following peacentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indinapolis, 11; Kansas Cjty, Kans., 14; Knoxville, 25; Louisville, 17; Memphis, 42; Nashville, 30; New Orleans, 26; Richmond, 32; and Washingtonf 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 December 13, 1930, and December 14, 1929

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended December 13, 1930, and December 14, 1929

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929	Week ended Dec. 13, 1930	Week ended Dec 14, 1929
New England States:								
Maine	4	10	1	8	24	7	0	0
New Hampshire	2	3				28	0	0
Vermont	5	2			11	30	0	0
Massachusetts	93	122	9	11	232	203	2	4
Rhode Island	16	12			2		0	0
Connecticut	17	27	1	4	105	5	3	9
Middle Atlantic States:								
New York [1]	95	185	[2] 13	[2] 24	208	215	17	15
New Jersey	70	129	16	21	118	65	2	6
Pennsylvania	138	165			381	469	3	10
East North Central States:								
Ohio	98	92	25	44	57	549	5	7
Indiana	71	36	2		119	31	4	9
Illinois	179	225	29	24	253	370	11	15
Michigan	81	122	1		89	80	7	12
Wisconsin	17	17	21	23	206	574	3	0
West North Central States:								
Minnesota	15	32			11	248	1	5
Iowa	7	13			5	171	0	0
Missouri	53	74	9	14	554	84	10	11
North Dakota	5	2			5	4	0	5
South Dakota	5				2	4	2	0
Nebraska	15	25			1	149	2	3
Kansas	34	35		6	2	105	2	0
South Atlantic States:								
Delaware	3	5	2			1	0	0
Maryland [3]	40	28	22	43	8	26	1	1
District of Columbia	19	14			3	2	0	2
West Virginia	27	34	32	22	12	20	2	3
North Carolina	89	119	26	28	44	7	3	4
South Carolina	29	49	625	945			4	0
Georgia	52	25	88	122	37	40	1	0
Florida	15	20		12	12	8	0	0
East South Central States:								
Kentucky	17	18				84	1	1
Tennessee	29	22	60	73	51	9	3	1
Alabama	82	45	52	138	148	9	6	2
Mississippi	29	37					1	1

[1] Figures for 1930 are exclusive of Rochester, N. Y.
[2] New York City only.
[3] Week ended Friday.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended December 13, 1930, and December 14, 1929—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929
West South Central States:								
Arkansas	12	8	29	88	2	2	0	19
Louisiana	38	53	5	45	3	6	5	3
Oklahoma [4]	52	60	40	101	29	19	0	3
Texas	56	238	53	101	54	21	0	1
Mountain States:								
Montana	2	4				22	0	4
Idaho					5	31	2	0
Wyoming	1	6	6			2	1	0
Colorado	11	17			49	9	3	2
New Mexico	9	40			38	1	0	1
Arizona	4	9	5	10	59	1	3	2
Utah [3]	2	1	8		1	67	2	3
Pacific States:								
Washington	12	15		5	22	22	2	6
Oregon	10	8	17	26	29	21	2	1
California	56	68	50	84	221	315	5	18

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929
New England States:								
Maine	2	0	15	49	0	0	4	1
New Hampshire	0	0	2	12	0	0	0	0
Vermont	0	0	7	11	0	1	1	0
Massachusetts	6	4	236	299	0	0	9	8
Rhode Island	0	0	33	14	0	0	0	1
Connecticut	0	0	59	83	0	0	5	1
Middle Atlantic States:								
New York [1]	4	6	463	357	9	9	24	14
New Jersey	0	1	182	180	0	0	2	6
Pennsylvania	1	1	451	354	0	11	34	13
East North Central States:								
Ohio	11	2	547	383	53	114	23	6
Indiana	1	0	189	148	71	216	4	3
Illinois	5	0	388	617	36	153	27	5
Michigan	3	0	228	16	34	99	13	4
Wisconsin	2	0	121	130	18	41	3	5
West North Central States:								
Minnesota	2	0	71	115	11	15	1	5
Iowa	4	2	53	65	14	140	1	6
Missouri	0	0	93	104	5	22	4	5
North Dakota	0	0	25	45	5	33	1	0
South Dakota	4	0	11	17	12	10	1	0
Nebraska	3	0	38	76	7	72	1	0
Kansas	3	0	51	124	25	52	2	2
South Atlantic States:								
Delaware	0	0	22	7	0	0	0	1
Maryland [2]	0	1	76	79	0	0	9	9
District of Columbia	0	0	29	17	0	0	0	1
West Virginia	0	1	57	78	23	19	15	7
North Carolina	1	0	82	103	1	11	3	5
South Carolina	0	2	20	24	0	1	24	11
Georgia	0	2	49	27	0	0	9	3
Florida	0	0	5	10	1	4	0	5
East South Central States:								
Kentucky	0	0	25	52	8	17	1	3
Tennessee	1	1	51	30	2	8	3	11
Alabama	0	0	86	34	0	5	22	7
Mississippi	0	0	33	23	1	0	10	11

[1] Figures for 1930 are exclusive of Rochester, N. Y.
[2] Week ended Friday.
[4] Figures for 1930 are exclusive of Oklahoma City and Tulsa.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended December 13, 1930, and December 14, 1929—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929	Week ended Dec. 13, 1930	Week ended Dec. 14, 1929
West South Central States:								
Arkansas	2	0	17	23	0	2	16	10
Louisiana	0	0	13	19	9	1	18	6
Oklahoma [4]	2	0	34	23	21	58	9	15
Texas	3	0	47	114	16	25	6	12
Mountain States:								
Montana	0	0	42	30	14	26	2	6
Idaho	0	0	1	27	1	9	0	0
Wyoming	0	0	21	1	0	9	1	0
Colorado	2	0	62	32	4	13	1	15
New Mexico	1	0	11	9	2	3	16	6
Arizona	0	0	5	1	0	0	4	0
Utah [3]	0	0	6	14	0	1	0	1
Pacific States:								
Washington	1	3	45	37	25	78	5	2
Oregon	1	0	22	39	19	12	4	3
California	15	1	99	382	46	56	4	3

[3] Week ended Friday. [4] Figures for 1930 are exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week.

State	Cerebrospinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
October, 1930										
Delaware		6			6			21	0	46
Kansas	3	79	16	1	14		164	203	40	33
Mississippi	9	301	1,000	3,653	73	438	5	169	4	128
November, 1930										
Delaware	1	19	1		4		0	49	0	11
Massachusetts	6	268	13	5	559	1	51	677	0	38
North Dakota	10	47			29		8	80	77	22
Porto Rico		33	45	5,380	20	2	1		0	44
Vermont	0	22			27		0	26	5	2

October, 1930	Cases
Chicken pox:	
Delaware	4
Kansas	155
Mississippi	157
Dengue:	
Mississippi	7
Diarrhea:	
Kansas	1
Dysentery:	
Mississippi (amebic)	47
Mississippi (bacillary)	610
German measles:	
Kansas	1
Hookworm disease:	
Mississippi	217
Impetigo contagiosa:	
Kansas	9
Lethargic encephalitis:	
Kansas	1
Mumps:	
Delaware	12
Kansas	34
Mississippi	119
Ophthalmia neonatorum:	
Mississippi	10
Paratyphoid fever:	
Kansas	4
Puerperal septicemia:	
Mississippi	21
Rabies in animals:	
Mississippi	3
Scabies:	
Delaware	3
Kansas	16
Septic sore throat:	
Kansas	1
Tetanus:	
Kansas	3

Trachoma:	Cases
Mississippi	1
Tularaemia:	
Kansas	1
Undulant fever:	
Kansas	7
Vincent's angina:	
Kansas	2
Whooping cough:	
Delaware	5
Kansas	130
Mississippi	341
November, 1930	
Actinomycosis:	
Massachusetts	1
Anthrax:	
Porto Rico	1
Chicken pox:	
Delaware	13
Massachusetts	1,425
North Dakota	235
Vermont	283
Dysentery:	
Massachusetts	1
Porto Rico	23
Filariasis:	
Porto Rico	8
German measles:	
Massachusetts	62
Lead poisoning:	
Massachusetts	2
Lethargic encephalitis:	
Massachusetts	7
Mumps:	Cases
Delaware	5
Massachusetts	184
North Dakota	84
Porto Rico	12
Vermont	8
Ophthalmia neonatorum:	
Massachusetts	88
Porto Rico	5
Paratyphoid fever:	
Porto Rico	9
Septic sore throat:	
Massachusetts	19
Vermont	1
Tetanus:	
Massachusetts	1
Tetanus (infantile):	
Porto Rico	5
Trachoma:	
Massachusetts	1
North Dakota	2
Trichinosis:	
Massachusetts	2
Undulant fever:	
Vermont	2
Vincent's angina:	
North Dakota	52
Whooping cough:	
Delaware	8
Massachusetts	397
North Dakota	49
Porto Rico	127
Vermont	150

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 95 cities reporting cases used in the following table are situated in all parts of the country and have an estimated aggregate population of more than 31,740,000. The estimated population of the 88 cities reporting deaths is more than 30,145,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended December 6, 1930, and December 7, 1929

	1930	1929	Estimated expectancy
Cases reported			
Diphtheria:			
46 States	1,673	2,372	----------
95 cities	562	869	1,106
Measles:			
45 States	2,905	3,166	----------
95 cities	891	593	----------
Meningococcus meningitis:			
46 States	105	149	----------
95 cities	35	59	----------
Poliomyelitis:			
46 States	108	38	----------
Scarlet fever:			
46 States	3,910	4,271	----------
95 cities	1,263	1,519	1,129
Smallpox:			
46 States	619	1,054	----------
95 cities	44	113	26
Typhoid fever:			
46 States	407	244	----------
95 cities	63	33	47
Deaths reported			
Influenza and pneumonia:			
88 cities	644	865	----------
Smallpox:			
88 cities	0	0	----------

City reports for week ended December 6, 1930

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

If the reports have not been received for the full nine years, data are used for as many years as possible but no year earlier than 1921 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	3	1	0		0	0	1	0
New Hampshire:								
Concord	0	0	0		0	0	0	1
Manchester	0	2	0		0	10	0	0
Vermont:								
Barre	0	0	0		0	0	0	0
Burlington	1	1	0		0	1	0	0
Massachusetts:								
Boston	55	39	27	2	0	59	8	17
Fall River	21	4	2	1	1	0	2	0
Springfield	23	5	0		0	1	4	4
Worcester	37	5	6		0	0	3	1
Rhode Island:								
Pawtucket	5	2	4		0	1	0	0
Providence	15	10	5		0	1	0	2
Connecticut:								
Bridgeport	1	6	2	1	1	0	0	3
Hartford	3	7	4		0	23	1	1
New Haven	2	2	0		0	6	7	1
MIDDLE ATLANTIC								
New York:								
Buffalo	31	19	18		1	11	23	22
New York	191	183	70	7	3	90	30	119
Rochester	16	6	0		0	1	1	1
Syracuse	29	3	0		0	1	0	3
New Jersey:								
Camden	9	7	3		0	46	10	1
Newark	54	23	7	5	0	1	4	5
Trenton	6	4	0		0	0	0	8
Pennsylvania:								
Philadelphia	169	69	16	5	3	28	26	49
Pittsburgh	63	22	14		6	4	8	13
Reading	21	3	0		0	5	34	2
EAST NORTH CENTRAL								
Ohio:								
Cincinnati	5	14	5		2	12	17	6
Cleveland	183	50	15	7	2	8	48	12
Columbus	13	10	1	1	1	1	0	3
Toledo	135	9	11	1	1	0	15	5
Indiana:								
Fort Wayne	2	5	2		0	1	0	0
Indianapolis	47	11	7		0	3	3	18
South Bend	3	2	2		0	0	0	1
Terre Haute	1	1	0		0	0	0	1
Illinois:								
Chicago	120	143	111	6	3	7	51	46
Springfield	0	1	2	1	0	0	0	0
Michigan:								
Detroit	117	67	34	1	4	8	4	23
Flint	37	3	0		0	3	1	3
Grand Rapids	9	2	0		1	0	0	1
Wisconsin:								
Kenosha	81	2	0		0	0	6	0
Madison	49	1	2		0	0	23	0
Milwaukee	138	21	0		0	2	57	7
Racine	48	4	0		0	0	1	1
Superior	7	1	1		0	0	0	2

City reports for week ended December 6, 1930—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
WEST NORTH CENTRAL								
Minnesota:								
Duluth	12	0	0		0	0	0	2
Minneapolis	89	27	7		2	0	17	13
St. Paul	60	14	3		1	1	1	7
Iowa:								
Davenport	5	1	0			0	0	
Des Moines	1	3	0			0	2	
Sioux City	26	1	1			0	3	
Waterloo	21	0	0			0	0	
Missouri:								
Kansas City	20	10	8		0	2	2	4
St. Joseph	1	2	0		0	0	0	4
St. Louis	55	45	16	1	1	488	6	
North Dakota:								
Fargo	13	0	0		0	0	10	0
Grand Forks	1	0	0			1	4	
South Dakota:								
Aberdeen	1	0	0			0	1	
Sioux Falls	0	0	0			0	0	
Nebraska:								
Omaha	12	9	12		0	0	2	7
Kansas:								
Topeka	3	2	4		0	0	1	2
Wichita	15	3	1		0	1	0	5
SOUTH ATLANTIC								
Delaware:								
Wilmington	1	1	0		0	0	0	3
Maryland:								
Baltimore	65	29	10	9	1	3	3	30
Cumberland	0	1	0		0	3	0	0
Frederick	3	1	3		0	0	0	0
District of Columbia:								
Washington	16	20	13	2	2	3	0	12
Virginia:								
Lynchburg	1	3	4		0	0	4	1
Norfolk	0	3	6		0	2	0	0
Richmond	0	13	5		1	10	2	3
Roanoke	12	4	2		1	0	2	2
West Virginia:								
Charleston	4	1	[1] 1	1	1	0	1	2
Wheeling	5	2	1		0	0	0	2
North Carolina:								
Raleigh		2						
Wilmington	13	2	3		0	0	0	3
Winston-Salem	8	3	1		0	0	1	2
South Carolina:								
Charleston	0	0	1	47	1	0	0	4
Columbia	13	1	1		0	1	3	1
Georgia:								
Atlanta	2	7	5	16	2	11	0	7
Brunswick	0	0	0		0	0	0	0
Savannah	0	2	1	15	1	0	0	3
Florida:								
Miami	0	3	0		0	0	0	1
St. Petersburg		0			0			0
Tampa	0	2	5	1	0	0	0	0
EAST SOUTH CENTRAL								
Kentucky:								
Covington	0	1	1		0	1	0	3
Tennessee:								
Memphis	26	7	6		1	0	12	5
Nashville	0	3	1		0	0	0	7
Alabama:								
Birmingham	10	6	12	8	1	25	0	7
Mobile	0	3	2		0	0	0	2
Montgomery	2	2	2	1		0	0	

[1] Nonresident.

City reports for week ended December 6, 1930—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
WEST SOUTH CENTRAL								
Arkansas:								
Fort Smith	0	1	0			0	1	
Little Rock	26	2	1		0	0	1	2
Louisiana:								
New Orleans	0	14	10	6	5	2	0	12
Shreveport		1						
Oklahoma:								
Muskogee	3	3	1		0	0	0	0
Oklahoma City	0	4	4	4	1	2	0	7
Tulsa	17	6	3			7	4	
Texas:								
Dallas	5	18	15	2	1	0	1	3
Fort Worth	5	7	4		0	0	0	3
Galveston	0	1	3		0	0	0	1
Houston	3	9	7		2	1	0	6
San Antonio	0	6	4		1	0	2	10
MOUNTAIN								
Montana:								
Billings	1	0	0		0	1	0	0
Great Falls	13	0	0		0	1	0	1
Helena	7	0	0		0	0	0	0
Missoula	0	0	0		0	0	0	0
Idaho:								
Boise	2	0	0		0	0	0	0
Colorado:								
Denver		10						
Pueblo	0	1	0		1	0	0	2
New Mexico:								
Albuquerque	19	0	0		0	0	0	1
Arizona:								
Phoenix	1	0	1		1	0	0	1
Utah:								
Salt Lake City	32	5	0		1	1	1	5
Nevada:								
Reno	0	0	0		0	0	0	0
PACIFIC								
Washington:								
Seattle	12	5	4	2		1	15	
Spokane	7	2	0			3	0	
Tacoma	8	3	11		0	0	0	0
Oregon:								
Portland	36	11	1		0	5	10	10
Salem	1	0	0		0	0	2	0
California:								
Los Angeles	21	40	14	32	0	6	9	18
Sacramento	6	3	1	1	1	0	9	3
San Francisco	22	16	2	2	0	3	5	3

City reports for week ended December 6, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine:											
Portland	3	2	0	0	0	0	0	1	0	17	18
New Hampshire:											
Concord	1	0	0	0	0	1	0	0	0	0	10
Manchester	2	0	0	0	0	0	0	0	0	0	4
Vermont:											
Barre	1	0	0	0	0	0	0	0	0	0	0
Burlington	1	0	0	0	0	0	0	1	0	0	12
Massachusetts:											
Boston	63	50	0	0	0	5	1	2	1	16	176
Fall River	3	2	0	0	0	3	0	0	0	0	22
Springfield	6	3	0	0	0	1	0	0	0	1	35
Worcester	10	22	0	0	0	0	0	0	0	1	41
Rhode Island:											
Pawtucket	2	2	0	0	0	1	0	0	0	0	18
Providence	9	11	0	0	0	4	0	0	0	3	61
Connecticut:											
Bridgeport	7	11	0	0	0	0	0	0	0	2	36
Hartford	6	8	0	0	0	3	0	0	0	3	28
New Haven	4	0	0	0	0	1	0	0	0	3	19
MIDDLE ATLANTIC											
New York:											
Buffalo	26	19	0	0	0	0	1	1	0	21	139
New York	152	133	0	0	0	84	13	10	0	121	1,423
Rochester	6	36	0	0	0	3	1	2	0	13	49
Syracuse	9	12	0	0	0	1	0	0	0	13	48
New Jersey:											
Camden	3	8	0	0	0	0	0	0	0	1	25
Newark	15	8	0	0	0	6	0	1	0	31	109
Trenton	2	8	0	0	0	4	0	1	0	0	58
Pennsylvania:											
Philadelphia	72	115	0	0	0	41	3	2	0	22	512
Pittsburgh	34	50	0	0	0	8	1	0	0	4	175
Reading	3	3	0	0	0	0	0	0	0	1	24
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	15	29	0	0	0	10	1	0	0	0	139
Cleveland	35	56	0	0	0	11	1	4	0	14	183
Columbus	12	10	0	0	0	2	0	2	0	0	75
Toledo	12	5	0	0	0	7	0	0	0	0	81
Indiana:											
Fort Wayne	3	1	0	0	0	2	0	0	0	0	30
Indianapolis	13	43	3	0	0	0	0	1	0	8	----
South Bend	4	4	0	0	0	0	0	0	0	3	20
Terre Haute	4	3	0	0	0	0	0	0	0	3	16
Illinois:											
Chicago	110	145	0	0	0	33	2	6	0	38	740
Springfield	3	8	0	0	0	0	0	0	0	0	17
Michigan:											
Detroit	88	77	0	0	0	16	2	1	0	41	257
Flint	13	6	0	0	0	0	0	2	0	3	23
Grand Rapids	9	10	0	1	0	0	0	0	0	2	24
Wisconsin:											
Kenosha	2	4	0	0	0	0	0	0	0	3	7
Madison	1	2	0	0	----	----	0	0	----	0	----
Milwaukee	20	10	1	0	0	7	0	0	0	20	136
Racine	6	4	0	0	0	3	0	0	0	1	14
Superior	3	4	0	0	0	2	0	0	0	5	14
WEST NORTH CENTRAL											
Minnesota:											
Duluth	9	1	0	0	0	0	0	0	0	6	28
Minneapolis	48	12	0	0	0	2	0	1	1	6	102
St. Paul	25	8	2	0	0	2	1	0	0	18	59
Iowa:											
Davenport	1	0	1	1	----	----	0	0	----	0	----
Des Moines	11	5	1	5	----	----	0	0	----	0	28
Sioux City	2	4	1	0	----	----	0	0	----	0	----
Waterloo	2	0	0	0	----	----	0	0	----	0	----

City reports for week ended December 6, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST NORTH CENTRAL—Con.											
Missouri:											
Kansas City	14	12	0	0	0	4	0	0	1	5	77
St. Joseph	2	3	1	0	0	0	0	0	0	0	25
St. Louis	30	46	1	0	0	7	2	1	0	14	204
North Dakota:											
Fargo	3	4	0	0	0	0	0	0	0	1	5
Grand Forks	0	0	0	0	----	----	0	0	----	0	----
South Dakota:											
Aberdeen	1	0	0	0	----	----	0	0	----	0	----
Sioux Falls	0	0	0	1	----	----	0	1	----	0	7
Nebraska:											
Omaha	6	11	2	18	0	1	0	1	0	3	40
Kansas:											
Topeka	3	1	0	0	0	0	0	0	0	0	13
Wichita	5	0	0	7	0	1	0	0	0	0	37
SOUTH ATLANTIC											
Delaware:											
Wilmington	6	4	0	0	0	1	0	0	0	0	24
Maryland:											
Baltimore	25	26	0	0	0	10	2	2	0	10	243
Cumberland	1	4	0	0	0	0	0	0	0	0	8
Frederick	1	2	0	0	0	0	1	0	0	0	2
District of Col.:											
Washington	20	19	0	0	0	7	1	0	0	3	140
Virginia:											
Lynchburg	2	3	0	0	0	1	0	1	0	0	11
Norfolk	2	2	0	0	0	0	0	0	0	0	----
Richmond	7	10	0	0	0	5	1	0	0	8	56
Roanoke	3	4	0	0	0	0	1	0	0	0	18
West Virginia:											
Charleston	2	0	0	0	0	1	0	2	1	0	26
Wheeling	2	2	0	0	0	0	1	0	0	0	21
North Carolina:											
Raleigh	0	----	0	----	----	----	0	----	----	----	----
Wilmington	0	0	0	0	0	0	0	0	0	3	14
Winston-Salem	3	5	0	0	0	0	0	0	0	0	23
South Carolina:											
Charleston	1	1	0	0	0	2	1	0	0	0	25
Columbia	0	3	1	0	0	1	0	0	0	0	11
Georgia:											
Atlanta	6	28	1	0	0	6	0	0	0	6	70
Brunswick	0	0	0	0	0	0	0	0	0	0	5
Savannah	1	3	0	0	0	4	----	3	0	0	34
Florida:											
Miami	2	7	0	0	0	1	0	0	0	0	28
St. Petersburg	0	----	0	----	0	1	0	----	0	----	11
Tampa	0	0	1	0	0	1	0	1	1	0	30
EAST SOUTH CENTRAL											
Kentucky:											
Covington	2	8	0	0	0	1	0	0	1	0	21
Tennessee:											
Memphis	6	14	0	0	0	8	1	1	0	1	74
Nashville	3	3	0	0	0	4	1	1	0	1	43
Alabama:											
Birmingham	4	22	1	0	0	3	1	0	0	0	78
Mobile	0	2	0	0	0	2	0	0	0	0	22
Montgomery	0	1	0	0	----	----	0	0	----	9	----
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	1	0	0	0	----	----	0	0	----	0	----
Little Rock	2	3	0	0	0	3	1	0	0	0	----
Louisiana:											
New Orleans	8	10	0	0	0	9	2	2	1	5	152
Shreveport	2	----	0	----	----	----	1	----	----	----	----

City reports for week ended December 6, 1930—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST SOUTH CENTRAL—continued											
Oklahoma:											
Muskogee	1	0	0	0	0	0	0	2	0	0	
Oklahoma City	3	8	0	2	0	3	0	0	0	0	57
Tulsa	3	13	0	1			0	0		0	
Texas:											
Dallas	8	6	0	0	0	2	0	3	0	2	54
Fort Worth	2	1	0	0	0	2	0	0	0	0	50
Galveston	0	0	0	0	0	1	1	2	1	0	14
Houston	3	3	1	1	0	5	0	0	0	0	76
San Antonio	2	3	0	0	0	5	0	0	0	0	68
MOUNTAIN											
Montana:											
Billings	1	1	0	12	0	1	0	0	1	9	5
Great Falls	2	4	0	0	0	0	0	0	0	7	5
Helena	1	1	0	0	0	0	0	0	0	0	7
Missoula	2	0	1	0	0	0	0	0	0	0	2
Idaho:											
Boise	1	0	0	0	0	0	0	0	0	4	7
Colorado:											
Denver	13		0				0				
Pueblo	1	0	0	0	0	2	0	0	0	0	16
New Mexico:											
Albuquerque	1	1	0	0	0	2	0	1	0	3	7
Arizona:											
Phoenix	2	0	0	1	0	4	0	0	0	0	18
Utah:											
Salt Lake City	4	1	0	0	0	1	0	1	0	14	38
Nevada:											
Reno	0	0	0	0	0	0	0	0	0	0	5
PACIFIC											
Washington:											
Seattle	9	21	1	0			0	1		17	
Spokane	9	4	4	4			0	0		0	
Tacoma	5	1	3	1	0	1	0	0	0	1	16
Orogon:											
Portland	8	3	5	1	0	1	1	1	0	0	61
Salem	0	1	0	0	0	0	0	0	0	1	
California:											
Los Angeles	33	15	1	0	0	15	1	2	0	15	273
Sacramento	3	0	0	0	0	0	0	1	0	1	24
San Francisco	16	7	0	0	0	8	1	1	1	17	165

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Maine:									
Portland	0	0	0	0	0	0	0	1	0
Massachusetts:									
Boston	2	0	1	0	0	0	1	6	1
MIDDLE ATLANTIC									
New York:									
New York [1]	10	1	1	2	0	0	2	3	0
Syracuse	1	0	0	0	0	0	0	0	0
New Jersey:									
Newark	0	1	1	0	0	0	1	0	0
Pennsylvania:									
Philadelphia	2	1	1	1	0	0	0	2	0
Pittsburgh	1	1	0	1	0	0	0	0	0

[1] Typhus fever: 7 cases and 1 death; 1 case at New York, N. Y.; 1 case and 1 death at Atlanta, Ga. 4 cases at Savannah, Ga.; and 1 case at Miami, Fla.

City reports for week ended December 6, 1930—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	0	0	0	0	0	0	0	1	0
Cleveland	0	1	0	0	0	0	0	1	0
Columbus	1	0	0	0	0	0	0	1	0
Indiana:									
Indianapolis	1	0	0	0	0	0	0	0	0
Illinois:									
Chicago	1	1	0	1	0	0	0	3	0
Michigan:									
Detroit	3	0	0	0	0	0	0	2	0
Flint	0	0	0	0	0	1	0	0	0
Wisconsin:									
Milwaukee	0	0	0	0	0	0	0	2	0
WEST NORTH CENTRAL									
Minnesota:									
Minneapolis	0	0	0	0	0	0	0	1	0
Missouri:									
Kansas City	0	0	0	0	0	1	0	0	0
St. Louis	1	1	0	1	0	0	0	0	0
Nebraska:									
Omaha	2	0	0	0	0	0	0	0	0
SOUTH ATLANTIC									
Maryland:									
Baltimore	1	0	0	0	0	0	0	1	0
North Carolina:									
Winston-Salem	0	1	0	0	0	0	0	0	0
South Carolina:									
Charleston	0	0	0	0	3	0	0	0	0
Georgia: [1]									
Atlanta [1]	1	1	0	0	1	1	0	0	0
Florida:									
Miami [1]	0	0	1	0	0	0	0	0	0
EAST SOUTH CENTRAL									
Tennessee:									
Memphis	2	3	0	0	1	0	0	0	0
Alabama:									
Birmingham	0	2	0	0	0	2	0	0	0
Mobile	0	0	0	1	1	0	0	0	0
WEST SOUTH CENTRAL									
Louisiana:									
New Orleans	1	2	0	0	0	0	0	0	0
Oklahoma:									
Tulsa	1	0	0	0	0	0	0	0	0
Texas:									
Dallas	0	1	0	0	3	3	1	0	1
Fort Worth	0	0	0	0	0	0	0	1	0
MOUNTAIN									
Arizona:									
Phoenix	1	0	0	0	0	0	0	0	0
Utah:									
Salt Lake	2	0	0	0	0	0	0	0	0
PACIFIC									
California:									
Los Angeles	0	0	0	0	0	0	1	0	1
Sacramento	1	0	0	0	1	0	0	1	0
San Francisco	2	1	0	0	1	0	0	2	3

[1] Typhus fever: 7 cases and 1 death; 1 case at New York, N. Y.; 1 case and 1 death at Atlanta, Ga.; 4 cases at Savannah, Ga.; and 1 case at Miami, Fla.

The following tables give the rates per 100,000 population for 98 cities for the 5-week period ended December 6, 1930, compared with those for a like period ended December 7, 1929. The population figures used in computing the rates are approximate estimates, authoritative figures for many of the cities not being available. The 98 cities reporting cases have an estimated aggregate population of more than 32,000,000. The 91 cities reporting deaths have more than 30,500,000 estimated population.

Summary of weekly reports from cities November 2 to December 6, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Nov. 8, 1930	Nov. 9, 1929	Nov. 15, 1930	Nov. 16, 1929	Nov. 22, 1930	Nov. 23, 1929	Nov. 29, 1930	Nov. 30, 1929	Dec. 6, 1930	Dec. 7, 1929
98 cities	[2] 84	156	91	159	102	[3] 186	89	139	[4] 92	146
New England	78	119	75	168	113	117	80	177	111	112
Middle Atlantic	35	104	46	112	54	123	50	123	61	110
East North Central	110	195	130	205	125	302	123	167	113	191
West North Central	[3] 75	200	104	165	108	169	108	114	99	121
South Atlantic	79	125	110	122	141	135	60	144	[5] 104	127
East South Central	243	219	209	232	310	239	155	157	162	226
West South Central	213	480	172	427	183	446	164	259	[6] 159	362
Mountain	120	61	26	44	26	[3] 89	77	17	[7] 0	157
Pacific	109	97	73	84	73	60	111	56	76	84

MEASLES CASE RATES

98 cities	[2] 60	44	93	56	129	[3] 72	109	74	[4] 146	98
New England	117	20	157	45	164	56	148	70	202	81
Middle Atlantic	35	20	71	26	80	34	73	33	89	54
East North Central	16	68	17	91	31	94	28	101	28	93
West North Central	[3] 275	94	491	50	751	81	636	100	933	216
South Atlantic	44	9	24	7	59	24	40	22	[5] 57	4
East South Central	94	7	20	14	169	14	74	0	175	14
West South Central	0	4	0	19	4	27	11	38	[6] 12	46
Mountain	223	61	300	252	318	[3] 107	275	131	[7] 51	165
Pacific	28	113	38	142	33	280	12	249	31	377

SCARLET FEVER CASE RATES

98 cities	[2] 173	191	191	205	200	[3] 218	178	212	[4] 207	252
New England	206	276	253	265	217	249	241	258	246	276
Middle Atlantic	140	102	133	135	168	127	156	116	187	148
East North Central	234	295	290	311	266	347	224	361	259	409
West North Central	[3] 137	187	140	139	214	223	137	183	194	231
South Atlantic	145	167	141	238	198	163	172	139	[5] 211	159
East South Central	331	178	310	157	236	157	243	137	337	144
West South Central	97	152	127	152	101	156	142	118	[6] 100	156
Mountain	275	357	378	226	275	[3] 267	223	348	[7] 120	392
Pacific	111	176	116	179	102	261	97	266	113	355

[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 estimates as of July 1, 1930, and 1929, respectively.
[2] Waterloo, Iowa, not included.
[3] Reno, Nev., not included.
[4] Raleigh, N. C., Shreveport, La., and Denver, Colo., not included.
[5] Raleigh, N. C., not included.
[6] Shreveport, La., not included.
[7] Denver, Colo., not included.

Summary of weekly reports from cities November 2 to December 6, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929—Continued.

SMALLPOX CASE RATES

	Week ended—									
	Nov. 8, 1930	Nov. 9, 1929	Nov. 15, 1930	Nov. 16, 1929	Nov. 22, 1930	Nov. 23, 1929	Nov. 29, 1930	Nov. 30, 1929	Dec. 6, 1930	Dec. 7, 1929
98 cities	[2] 2	9	4	13	3	[3] 24	8	14	[4] 7	19
New England	0	2	0	25	0	0	0	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	4	15	2	22	0	33	4	13	1	26
West North Central	[2] 6	29	21	42	33	50	66	48	47	64
South Atlantic	0	0	0	0	0	2	0	0	[5] 0	0
East South Central	0	0	0	0	0	0	0	0	0	0
West South Central	7	8	4	4	4	38	4	11	[6] 4	19
Mountain	9	17	0	9	43	[3] 71	34	35	[7] 205	78
Pacific	7	19	21	31	7	111	9	75	12	60

TYPHOID FEVER CASE RATES

98 cities	[2] 11	9	15	8	15	[3] 13	10	5	[4] 10	5
New England	4	11	22	22	15	11	11	2	7	2
Middle Atlantic	5	8	4	3	5	10	3	2	8	4
East North Central	9	6	5	6	9	9	4	5	10	4
West North Central	[2] 4	12	19	4	23	12	8	6	6	2
South Atlantic	29	13	31	9	26	19	29	4	[5] 17	6
East South Central	27	21	54	14	13	34	13	34	13	48
West South Central	30	11	93	8	90	34	75	15	[6] 28	0
Mountain	17	17	26	44	51	[3] 36	9	26	[7] 17	26
Pacific	19	7	12	10	12	5	7	2	12	10

INFLUENZA DEATH RATES

91 cities	9	8	10	9	11	[3] 8	9	11	[4] 10	17
New England	2	4	4	9	7	4	2	4	4	11
Middle Atlantic	13	8	9	4	8	9	11	5	6	14
East North Central	6	8	9	9	5	6	7	10	8	9
West North Central	3	3	6	3	6	9	0	21	12	27
South Atlantic	9	4	5	11	22	4	9	17	[5] 19	28
East South Central	29	37	44	22	15	30	29	15	15	60
West South Central	15	12	31	31	38	16	15	55	[6] 37	47
Mountain	9	0	9	26	60	[3] 9	26	17	[7] 34	17
Pacific	9	16	6	9	9	6	9	13	3	13

PNEUMONIA DEATH RATES

91 cities	104	105	118	98	119	[3] 101	112	106	[4] 102	136
New England	82	119	104	88	115	88	71	92	66	74
Middle Atlantic	122	115	136	103	140	106	125	101	107	139
East North Central	75	78	86	71	83	96	78	84	78	126
West North Central	86	108	77	120	136	102	92	126	130	126
South Atlantic	139	137	157	107	143	94	165	129	[5] 143	131
East South Central	155	90	214	231	199	254	155	224	177	239
West South Central	119	125	111	121	123	129	165	156	[6] 139	238
Mountain	189	131	215	157	163	[3] 107	223	157	[7] 137	165
Pacific	52	72	83	85	61	28	86	104	74	138

[2] Waterloo, Iowa, not included.
[3] Reno, Nev., not included.
[4] Raleigh, N. C., Shreveport, La., and Denver, Colo., not included.
[5] Raleigh, N. C., not included.
[6] Shreveport, La., not included.
[7] Denver, Colo., not included.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—Week ended December 6, 1930.—The Department of Pensions and National Health of Canada reports cases of certain communicable diseases for the week ended December 6, 1930, as follows:

Province	Cerebro-spinal meningi-tis	Influenza	Polio-myelitis	Smallpox	Typhoid fever
Prince Edward Island [1]					
Nova Scotia		9			
New Brunswick					2
Quebec	1	2			16
Ontario	2	13	6	3	18
Manitoba					1
Saskatchewan				16	2
Alberta					1
British Columbia			1	1	5
Total	3	24	7	20	45

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

Ontario Province—Communicable diseases—Five weeks ended November 29, 1930.—During the five weeks ended November 29, 1930, and the corresponding weeks of the year 1929, certain communicable diseases were reported in the Province of Ontario, Canada, as follows:

Disease	5 weeks, 1929		5 weeks, 1930	
	Cases	Deaths	Cases	Deaths
Cerebrospinal meningitis	8	4	2	2
Chancroid			3	
Chicken pox	2,065		1,365	
Conjunctivitis	1			
Diphtheria	500	20	459	17
Goiter			1	
Dysentery				5
Erysipelas			1	
German measles	66		31	
Gonorrhea	217		501	
Influenza	8		12	
Lethargic encephalitis	1	1	1	
Measles	636	2	105	
Mumps	59		595	
Paratyphoid fever	2		5	
Pneumonia		141		153
Poliomyelitis	30	1	80	11
Puerperal septicemia		2		
Scarlet fever	656	4	621	1
Septic sore throat	5		6	1
Smallpox [1]	55		62	
Syphilis	234		354	
Tetanus		1		1
Tuberculosis	134	51	209	51
Typhoid fever	92	3	73	8
Undulant fever			5	
Whooping cough	421	3	370	1

[1] The cases of smallpox were distributed as follows: Ottawa, 35; Trafalgar, 13; Toronto, 8; Kingston, 3; Percy, 2; Rama, 1.

Quebec Province—Communicable diseases—Week ended December 6, 1930.—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the week ended December 6, 1930, as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	1	Mumps	88
Chicken pox	115	Paratyphoid fever	1
Diphtheria	74	Scarlet fever	112
Erysipelas	4	Tuberculosis	65
German measles	2	Typhoid fever	16
Influenza	2	Whooping cough	59
Measles	79		

DENMARK

Communicable diseases—September, 1930.—During the month of September, 1930, cases of certain communicable diseases were reported in Denmark as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	4	Poliomyelitis	22
Chicken pox	9	Puerperal fever	19
Diphtheria and croup	377	Scabies	729
Erysipelas	298	Scarlet fever	174
Influenza	4,044	Tetanus	5
Lethargic encephalitis	13	Typhoid fever	9
Measles	550	Undulant fever (Bac. abort. Bang)	53
Mumps	271	Whooping cough	1,297
Paratyphoid fever	8		

GREAT BRITAIN

England and Wales—Vital statistics—July-September, 1930.—During the third quarter of the year 1930, 165,768 births and 96,400 deaths were registered in England and Wales, giving a birth rate on an annual basis of 16.5 per 1,000 population and a death rate of 9.6 per 1,000. The figures are provisional. The mortality of infants under 1 year of age was 45 per 1,000 live births.

Deaths from certain communicable diseases were reported in 158 smaller towns for the quarter ended September 30, 1930, as follows:

Disease	Deaths	Disease	Deaths
Diarrhea and enteritis (under 2 years)	95	Scarlet fever	13
Diphtheria	52	Typhoid fever	5
Influenza	63	Whooping cough	28
Measles	34		

During the 13 weeks ended September 27, 1930, deaths from certain communicable diseases were reported in 107 county boroughs and great towns, including Greater London, as follows:

Disease	Number of deaths	Death rate per 1,000 population	Disease	Number of deaths	Death rate per 1,000 population
Diarrhea and enteritis (under 2 years)	649		Scarlet fever	66	0.01
Diphtheria	366	0.07	Smallpox	2	
Influenza	194	.04	Typhoid fever	30	
Measles	164	.03	Whooping cough	160	.03

England and Wales—Communicable diseases—Thirteen weeks ended September 27, 1930.—During the 13 weeks ended September 27, 1930, cases of certain communicable diseases were reported in England and Wales, as follows:

Disease	Cases	Disease	Cases
Diphtheria	14,739	Puerperal pyrexia	1,301
Ophthalmia neonatorum	1,365	Scarlet fever	21,539
Pneumonia	6,075	Smallpox	1,292
Puerperal fever	583	Typhoid fever	1,036

Scotland—Vital statistics—Quarter ended September 30, 1930.—The Registrar General of Scotland has published the following statistics for the third quarter of the year 1930:

Population, estimated	4,879,700
Births	22,951
Birth rate per 1,000 population	18.7
Deaths	13,353
Death rate per 1,000 population	10.9
Marriages	9,532
Deaths under 1 year	1,358
Deaths under 1 year per 1,000 births	59
Deaths from—	
Bronchitis	451
Broncho-pneumonia	332
Cerebrospinal meningitis	43
Diabetes	127
Diphtheria	72
Erysipelas	33
Heart disease	1,921
Influenza	73
Deaths from—Continued.	
Lethargic encephalitis	34
Malaria	3
Measles	66
Nephritis (acute)	38
Nephritis (chronic)	413
Paratyphoid fever	8
Pneumonia	416
Poliomyelitis	7
Puerperal sepsis	49
Scarlet fever	26
Syphilis	31
Tetanus	5
Tuberculosis (pulmonary)	664
Tuberculosis (other forms)	275
Typhoid fever	8
Whooping cough	93

PANAMA CANAL ZONE

Communicable diseases—October, 1930.—During the month of October, 1930, certain communicable diseases, including imported cases, were reported in the Panama Canal Zone and terminal cities, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Cerebrospinal meningitis	1		Mumps	2	
Chicken pox	33		Paratyphoid fever	1	
Diphtheria	25		Pneumonia		27
Dysentery (amebic)	7		Tuberculosis		25
Leprosy	3	1	Typhoid fever	5	
Malaria	123	3	Whooping cough	8	
Measles	6				

TRINIDAD (BRITISH WEST INDIES)

Port of Spain—Vital statistics—October, 1929 and 1930.—The following statistics for the month of October, 1929 and 1930, are taken from a report issued by the Public Health Department of Port of Spain, Trinidad:

	October	
	1929	1930
Number of births	162	201
Birth rate per 1,000 population	28.7	35.1
Number of deaths	123	96
Death rate per 1,000 population	21.8	16.8
Deaths under 1 year	25	14
Infant mortality rate per 1,000 births	154.3	69.6

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		June 1–28, 1930	June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Week ended— Sept. 27, 1930	October, 1930				November, 1930					December, 1930	
							4	11	18	25	1	8	15	22	29	6	13
Afghanistan	C		[1] P	P													
China:																	
Amoy	C				2												
	D				2												
Canton	C	2	2				1			1							
	D		1														
Shanghai	C				34	23	5	6	4	1		1					
	D				3	2			2								
Shensi Province	C				P												
Swatow	C	7		3	2												
Tientsin	C			2	1												
India	C	37,102	26,121	42,893	51,551	11,109	10,172										
	D	25,711	13,822	22,358	23,959	5,225	4,808										
Bassein	C				1												
Bombay	C			14	1	1	3	1	11	17	1	1		2	2		
	D			8	2	1	2		8	10	6	1		2	1		
Calcutta	C	327	220	63	27	4	4	7	9	7	7	11		4			
	D	179	128	30	12	3	4	4	4	4	2	6		4			
Madras	C			1				2			1						
	D			1				2									
Negapatam	C	1															
	D	1															
Rangoon	C	6	1	1	2			1									
	D	4	1	1	1			1									
Tuticorin	C								1				1	4			
	D								1				1				
India (French):																	
Chandernagor	C	3	1		1		1	2									
	D	2					1										
Karikal	C	3															
	D	3															

Pondicherry	C							1						1				
	D							1						1				
India (Portuguese)	C			1	1						3							
Indo-China (see also table below):																		
Pnompenh	C	40	32	11		1		1		1							1	
	D	18	22	6													1	
Saigon and Cholon	C	48	10	5		1	1			1						1		
	D	23	3	1												1		
Philippine Islands: [1]																		
Ports—																		
Cebu	C	1	65	9	2													
	D		36	8	2													
Iloilo	C		29	64	10	1			2							1		
	D		22	56	14	2										3		
Manila	C			1	43	2	1	2										
	D				12		1											
Provinces—																		
Antique	C			20	47	12		28										
	D			12	34	8		10										
Bohol	C			138	49													
	D			79	20													
Bulacan	C	3	4	1	4		2											
	D	1			2		1											
Capiz	C		3	2	1													
	D		2	2														
Cebu	C	355	713	85	25													
	D	170	303	50	11													
Iloilo	C	2	309	571	238	18	7	13	12	10	10	4	6	11	21	13		
	D	1	193	376	151	15	6	7	12	7	7	3	6	8	11	8		
La Union	C		1															
Leyte	C	47	1															
	D	19	11															
Masbate	C	10	92	34														
	D	3	35	14														
Misamis, Occidental	C		3															
	D		3															
Negros, Occidental	C	140	568	343	122	8	10	5	5	12	3	19	22	44	38	48	33	
	D	88	368	237	91	6	5	6	3	12	3	12	14	33	17	45	28	
Negros, Oriental	C		23	8														
	D		13	4														
Nueva Acija	C		1															
	D		1															
Pampanga	C	2	2		1													
Pangasinan	C		3	1														
	D		2	1														
Rizal	C	1	1															
	D											4						
Samar	C			18	4	4			3	6	3	4	3	4	4			
	D			16	2	4			3	5	1	4	2	4	4			
Sorsogon	C											5						
	D	1	1									4						

[1] An outbreak of cholera was reported in June, 1930, in Afghanistan.

[1] Figures for cholera in the Philippine Islands are subject to correction.

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

CHOLERA—Continued

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

Place		June 1–28, 1930	June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Week ended— Sept. 27, 1930	October, 1930				November, 1930					December, 1930	
							4	11	18	25	1	8	15	22	29	6	13
Philippine Islands—Continued.																	
Provinces—Continued.																	
Surigao	C			28	1	(3)											
	D			17	2												
Tarlac	C			1													
Siam	C	27	20	3				1	3	3		1			1		
	D	19	9	2					1	3		1					
Bangkok	C	12	8	1				1	2	1	2			2	1		
	D	5	3	1				1	1	1	1			2	1		
Songkla	C		10														
	D		6														
On vessel:																	
S. S. Malwa from Shanghai	D				1												
On small boat at Port Cebu, from Bantayan Island	C	1															
	D	1															

Place		May, 1930	June, 1930	July, 1930	August, 1930			September, 1930			October, 1930			November, 1930	
					1–10	11–20	21–31	1–10	11–20	21–30	1–10	11–20	21–31	1–10	11–20
Indo-China (French) (see also table above):															
Annam [1]	C	23	16	1		3									
Cambodia [1]	C	88	144	43	37	22		23	13	2	16		6		1
Cochin-China [1]	C	671	273	46	22	5		9	6	18	14	6	8		5

[1] Reports incomplete.
[3] During the period from Aug. 24 to Sept. 26, 1930, 26 cases of cholera with 17 deaths were reported in Manitum, Surigao Province, P. I.

PLAGUE

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

Place		June 1–28, 1930	June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Week ended— Sept. 27, 1930	October, 1930 4	11	18	25	November, 1930 1	8	15	22	29	December, 1930 6	13
Algeria:																	
Algiers	C		3	7	11	1	1	2	2	5	3	1	2			1	
	D									3							
Constantine	C	1	1									1					
Oran	C		3	4	10		4	4	2	1			1				
	D				1			2	1								
Plague-infected rats			2		10	2			4	1							
Philippeville	C				1	1		1	1	1		1					1
Argentina: Cordoba Province—Chazon	C																
Belgian Congo	C		2	2	5								1				
	D		2	2	3												
British East Africa (see also table below): Uganda	C	406	228	236	202	65	18	32	50	53							
	D	328	213	229	191	65	18	32	49	53							
Canary Islands: Las Palmas	D			1													
Ceylon:																	
Colombo	C	1	3	2	2	1	1		1				1	1			
	D	1	3	2	3	1	1		1				1	1			
Plague-infected rats		1	1										1	1	1		
China:																	
Manchuria—Tungliau and Nungan	C			30	29	2											
Shensi	C				P					P							
Dutch East Indies:																	
Batavia and West Java	C	98	84	83	79	22	14	26	45	41							
	D	98	84	83	76	22	14	26	41	42							
Plague-infected rats		4		1	3												
Java and Madura	D	202	217	188	260	75	68	95	97	124	140						
Ecuador (see table below).																	
Egypt:																	
Alexandria	C	19	23	11	10	2	1	3	3	2	1	1	3		1		2
	D	9	10	6	8	3	1	1	1	3		2	2				1
Assiout	C	9	2									3			2		7
	D	3	2									1					1
Aswan	C														3		
Beni-Suef	C			1													
Dakahlieh	C	1															
Gharbieh	C			3													
	D			1													

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

PLAGUE—Continued

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

Place		June 1–28, 1930	June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Week ended— Sept. 27, 1930	October, 1930 4	11	18	25	November, 1930 1	8	15	22	29	December, 1930 6	13
Egypt—Continued.																	
Girga	C		1		1												
Minieh	C	10	3														
	D	1															1
Port Said	C	2	1	1						1	1						
France:																	
Marseille	C				5				4	2	1		1				
St. Ouen	C		1														
	D		1														
Gambia	C			4													
Greece (see also table below):	D			4													
Patras	C	1	1														
Pyrgos	C						2										
Hawaii Territory, Hamakua, Hawaii: Plague-infected rats		1															
India	C	240	377	877	2,497	672	527										
	D	187	256	477	1,132	289	222										
Bassein	C				2						1						
	D				3												
Bombay	C	3	1		1	1			1	1							
	D	2	1		1		1		1		1						
Plague-infected rats		26	52	35	47	21	13	16	14	2	9	11	8	11	5		
Madras Presidency	C	39	47	81	127	41	59	46	50	69							
	D	22	31	34	57	14	32	31	33	43							
Rangoon	C	1	2	3	10	2					1		1				
	D	1	2	2	9	2					1						
Plague-infected rats		1	6	7	8		1			1				1	1		
India (Portuguese)	D			P							3						
Indo-China (see also table below):																	
Pnompenh	C	6	2	4	3	1	1							1	3	1	
	D	7	2			1	1	1		1				1	3	1	
Saigon and Cholon	C	2		1	1	1											
	D	1															
Iraq: Baghdad	C	28	18	9		1											
	D	15	7	3		1											
Kwang-Chow-Wan	C	31	4	1													
Madagascar (see also table below): Tamatave	C	1	1	2	1		1			3		2					
	D						1			3							

Morocco	C	3	1	15						4		1						
	D	4		2														
Nigeria: Lagos	C	5	1	7	6		3		2	33	1	2	2	4				
	D	5	1	7	6		3		2		1	2	2	4				
Plague-infected rats		11	18	8	10				11	3	1	2						
Senegal (see table below).																		
Siam	C			7	3			1		3	1	1						
	D			6	2					3	1							
Bangkok	C			3														
	D			2														
Nagara Rajsima	C			2	1				1				1					
	D			2	1				1				1					
Syria: Beirut	C	12	9	2	5					1	1	3	1					
Tripolitania	C			2										4	6			
Tunisia:																		
Sfax district	C	9	6	1														
Tunis	C	1	5								1		1					
	D	1	1															
Union of Socialist Soviet Republics:																		
Salsk Region	C	2	5	7														
	D	1	4	5														
Stavropol Region	C	1																
	D	1																
Union of South Africa:																		
Cape Province	C	1	1	1	1					1								
	D		1	1	1													
Orange Free State	C				2													
	D				2													

Place		May, 1930	June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930
British East Africa (see also table above):							
Kenya	C	171	107	97	87	53	50
Ecuador: Guayaquil	C	0	0				
	D	0	0				
Plague-infected rats		0	0				
Greece (see also table above)	C		1				
Indo-China (see also table above)	C		11	1	2	4	
Madagascar (see also table above):							
Ambositra Province	C	1					
	D	1					
Antisirabe Province	C	19	3	24	11	21	
	D	19	3	24	11	21	
Miarinarivo Province	C	5	1	1	2	7	
	D	5	1	1	2	7	
Moramanga Province	C	1	3		27	18	
	D		3		27	17	

Place		May, 1930	June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930
Madagascar (see also table above)—Con.							
Tananarive Province	C	15	16	28	39	79	
	D	14	16	28	38	79	
Senegal:							
Baol [1]	C	13	2	62	79	48	53
	D	11	2	48	20	23	35
Dakar [1]	C	52	53	140	108	3	
	D	42	117	122	90	8	
Louga [1]	C	54	60	138	75	61	37
	D	27	21	103	33	30	25
Thies [1]	C	21	52	54	34	12	24
	D	8	35	30	20	4	15
Tivaouane [1]	C	135	43	119	110	20	53
	D	69	28	70	54	14	31

[1] Reports incomplete.

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

SMALLPOX

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

Place		June 1–28, 1930	June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Week ended— Sept. 27, 1930	October, 1930				November, 1930					December, 1930	
							4	11	18	25	1	8	15	22	29	6	13
Algeria:																	
Algiers	C		1	3													
Constantine	C	1	1									1					
Arabia: Aden	C		1														
Brazil: Rio de Janeiro	C											2					
British East Africa (see also table below):																	
Tanganyika	C	1,610	168	242	522	27	43	4	21	3	1						
	D	301	42	37	60	1		1	4	1							
British South Africa: Southern Rhodesia	C	79	31	1	1	14	39	98	2	2	54						
Canada:																	
Alberta	C		5	1	1		13	8	1					1			
British Columbia—Vancouver	C	2	6	6	2	1			1		3						
Manitoba	C	4			1												
Ontario	C	47	24	20	10	1		3	15		20	9		7	12		
Ottawa	C	15	13	7	5					14		9	14		8	1	1
Toronto	C	4	1		1										2	2	
Quebec	C	4	3	5										1			
Montreal	C			7													
Saskatchewan	C	22	5	8	1		3				2			2			
China:																	
Changking	C	1	P	P	P	P	P	P	P	P	P	P					
Foochow	C	P	P	P	P		P				P		P				
Hong Kong	C	4	2														
	D	3	1														
Manchuria—																	
Harbin	C	4	3	2													
Kwantung—Dairen	C	16	8											1			
	D	1															
Nanking	C	P	P	P	P	P	P	P	P	P	P	P					
Shanghai—																	
Foreigners only	C	5	4	3	18				1	1		1					
Including natives	D	3			2								1				
Swatow	D	4	1	4	2	1			3	1	1		1	1			
Tientsin	C					1											

Chosen (see table below).																	
Colombia:																	
Barranquilla	C			2													
Buenaventura	C	6	10	2													
Cali	D						1		1								
Costa Rica: Port Limon	C	2															
Curacao (alastrim)	C	1	2	1													
Dutch East Indies:																	
Borneo	C	12	2														
	D	1															
Java—																	
Batavia and West Java	C	13	8	12	11	10	2	1	1	2	13						
	D	3	5	5	4	1	1	1	1	2	1						
East Java and Madura	C		1														
Sanggi Islands	C		11	36	14					29							
	D		3	2	3					3							
Egypt: Port Said	C		3														
France (see table below).																	
Great Britain:																	
England and Wales	C	926	529	344	341	82	74	44	125	86	87	92	107	116	160		
Ashton under Lyne	C	7	8														
Bradford	C		1				1	1	1	1	1						
Cardiff	C		2							1							
Leeds	C		1							1			2				
London	C	498	250	178	164	30	34	23	33	29	32	41	47	52	67		
London and Great Towns	C	753	408	285	268	55	56	32	80	52	58	68	82	88	136		
	D							1			1						
Stoke-on-Trent	C	32	9	2	2			1			1						
Scotland	C	4	1		5												
	D		1														
Honduras: Naco	C				5												
India	C	12,962	7,630	4,877	3,131	611	528										
	D	3,531	2,348	1,246	680	202	122										
Bombay	C	113	50	12	6			1									
	D	79	33	10	5												
Calcutta	C	161	73	25	14	3	4	3	2	2	4	3		3			
	D	146	56	21	9	3	4	3	1	2	2	3		3			
Cochin	C	16	6	14	3			8	4	3	5	10	7	4	5		
	D	4			1			1		1			2	2			
Karachi	C	7	1	4	4									2			
	D	3		3	2										1		
Madras	C	35	49	38	34	4	4	8	3	2	1	2	4	3	5		
	D	10	12	11	6	1	2	3	2			2					
Moulmein	C	21	18	2	1												
	D	7	1	1	1												
Negapatam	C	2	4	4	0	4	2	5	3	2	2	2	3	3			
Rangoon	C	9		3					2			5			1		
	D	2															
Tuticorin	C	1							1								
Vizagapatam	C	1						1									

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

SMALLPOX—Continued

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

Place		June 1–28, 1930	June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Week ended— Sept. 27, 1930	October, 1930				November, 1930					December 1930	
							4	11	18	25	1	8	15	22	29	6	13
India (French):																	
Chandernagor	C	19	4	-------	3	------	------	3	------	------	3	------	------	------	------	------	------
	D	3	3	-------	2	------	------	1	------	------	1	------	------	------	------	------	------
Karikal	C	11	2	9	5	1	------	------	------	------	------	------	------	------	------	------	------
	D	8	2	9	2	1	------	------	------	------	------	------	------	------	------	------	------
Pondicherry Province	C	23	26	22	35	11	10	6	11	2	2	------	------	------	------	------	------
	D	23	25	22	33	11	8	6	11	2	2	------	------	------	------	------	------
India (Portuguese)	C	28	1	9	4	------	------	------	------	------	------	------	------	------	------	------	------
	D	10	1	2	-------	------	------	------	------	------	------	------	------	------	------	------	------
Indo-China (see also table below):																	
Pnompenh	C	-------	1	-------	-------	------	------	2	------	------	------	------	------	------	1	------	------
	D	1	1	1	-------	------	------	------	------	------	------	------	------	------	1	------	------
Saigon and Cholon	C	1	-------	1	1	------	------	------	------	------	2	------	------	2	1	------	------
	D	-------	-------	3	1	------	------	------	------	------	2	------	------	1	------	------	------
Iraq:																	
Baghdad	C	1	3	1	1	------	2	------	------	------	------	------	------	------	------	------	------
	D	-------	1	1	-------	------	------	------	------	------	------	------	------	------	------	------	------
Mossoul Liwa	C	4	67	-------	-------	63	------	4	2	------	------	6	------	7	9	------	------
	D	1	20	-------	-------	27	------	------	------	------	------	------	------	1	1	------	------
Ivory Coast (see table below).																	
Mexico (see also table below):																	
Jalisco (State) Guadalajara	D	15	4	1	-------	------	2	------	1	1	------	1	1	1	------	2	------
Juarez	C	6	-------	2	-------	------	------	------	------	------	------	------	------	------	------	------	------
	D	1	-------	1	-------	1	------	------	------	1	------	------	------	------	------	------	------
Mexico City and surrounding territory	C	77	37	10	12	1	3	5	4	1	3	------	2	1	------	------	------
	D	17	8	6	5	------	------	1	2	1	------	------	------	------	------	------	------
Progreso	D	1	-------	-------	-------	------	------	------	------	------	------	------	------	------	------	------	------
Vera Cruz	C	-------	-------	-------	-------	------	------	------	------	------	1	------	------	------	------	------	------
Morocco (see table below).																	
Nigeria: Lagos	C	1	-------	-------	-------	------	------	------	------	------	------	------	------	------	------	------	------
Poland	C	2	-------	-------	-------	------	------	------	------	2	3	------	------	1	------	------	------
Portugal:																	
Lisbon	C	10	13	50	27	4	5	------	7	12	------	------	8	11	------	------	------
Oporto	C	-------	-------	1	-------	------	------	------	------	------	------	------	------	------	------	------	------

Siam	C		6				1											
	D		3															
Somaliland, British: Boales	C						1					1						
	D						1											
Spain	C	12	5	2	5					14	5	11	21					
Straits Settlements	C	9	11	8	6	1	1	1	2	3	3	4		3	9			
	D	2	3	3	1			1			1	1		1	2			
Sudan (Anglo-Egyptian)	C	67	12	42	128	25	1	56		3			2		3		47	
	D	3	1	3	52	2		5					1					
Sudan (French) (see table below).																		
Switzerland: Berne Canton	C		1	2		1												
Syria (see table below).																		
Tunisia: Tunis	C	2	1		2													
Turkey (see table below).																		
Union of South Africa:																		
Cape Province	C		P		P			P	P	P	P							
Orange Free State	C		P	P							1	1						
Transvaal	C			P	P	P		P	P	P	P							
Upper Volta	C	13																
On vessel: S. S. Manoa, from Honolulu to San Francisco	C		1															

Place		May, 1930	June, 1930	July, 1930	August, 1930			September, 1930			October, 1930		
					1-10	11-20	21-31	1-10	11-20	21-30	1-10	11-20	21-31
Indo-China (see also table above)	C	305	213	238	59	34		54	52	86	32	62	164
Ivory Coast	C												4
Sudan (French)	C	274	76	34			39		P			17	
	D	32	18				3					2	
Syria: Beirut	C	7	7	2	1								

Place		May, 1930	June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930
British East Africa (see also table above):							
Kenya	C	171	142	186		424	
Uganda	C	78					
	D	69					
Chosen	C	107		3	2		
	D	35					
Seishin	C	2	1	2			
	D	1					

Place		May, 1930	June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930
France	C	51		1			
Mexico: Durango (see also table above)	D	4	3	3	3	2	
Morocco	C	18	5	3	8	1	4
Turkey	C	16					

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

TYPHUS FEVER

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

Place		June 1–28, 1930	June 29–July 26, 1930	July 27–Aug. 23, 1930	Week ended— Aug. 30, 1930	September, 1930 6	13	20	27	October, 1930 4	11	18	25	November, 1930 1	8	15	22	29
Algeria:																		
Algiers	C	3	6	2		3									1			
Constantine Department	C	12	2	3						2			1					
Oran	C	4	3	1	1						1	2						
Bulgaria	C	16	10	1		2	2		2		1	3			1	2		
	D	1	1															
China:																		
Manchuria—Harbin (see also table below)	C	8	2	2	2							1						
Shanghai	C			1														
Chosen (see table below).																		
Czechoslovakia (see table below).																		
Egypt:																		
Alexandria	C	1	1	1		1	1	1	1							2		1
Beheira Province	C	45	15					1										
	D	4	2															
Cairo	C			7	1		1											
Port Said	C			4		1				1			1	1				
Great Britain: Scotland—Dunfermline	C		1															
Greece (see table below).																		
Ireland:																		
Irish Free State—																		
Galway County—Oughterard	C		2															
Leitrim County—Mohill	C	9	1															
Mayo County—																		
Ballina	C	1	1															
Castlebar	C			1														
Westport	C		2	1														
Roscommon County—																		
Roscommon	C		1															
Strokestown	C		1															
Wicklow County—Shillelagh	C	4	2															
Latvia (see table below).																		
Lithuania (see table below).																		

Mexico:																			
Durango	D							1	1		1								
Mexico City, including municipalities in Federal District	C	9	5	9	2	2	3				3	5	1	1		4	1		
	D	1		2		1	1				2		1				2		
Morocco	C	15	11	8		2							1		1	1			
	D											1							
Palestine	C	2	6	3		1	1	1		1	1	1			2	1	1	6	
Poland	C	117	36	34	2	3	6	12	3	6	6	7	7	8	15	7	12		
	D	11	4	3		1			1			1					1		
Portugal: Oporto	C			1						1		1		2	1	1	2	2	
Rumania	C	58	28	9	1		1	2	3	4	1	6	4	13	10				
	D	5	8	2											1				
Spain	C	3	3				1				1	1			4				
	D		1				1				1	1							
Tunisia	C	18	24	10	1	1		4	1	1	1	9					5		
Turkey (see table below).																			
Union of South Africa:																			
Cape Province	C	P	P	P	P	P	P	P	P	P	P	P	P	P					
Municipality of East London	C		1					2			1								
Natal	C	P	1	P			P			P	P	2	P	P					
Orange Free State	C	P	P	P	P	P	P	P											
Transvaal	C		P	P	P	P	P	P	P	P	P	P	P	P					
Yugoslavia (see table below).																			

Place		May, 1930	June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930
China: Harbin (see also table above)	C	240		14	5		
Chosen: Seoul	C	43	2	3	2	1	
Czechoslovakia	C	12	1		1		
Greece: Athens	C	3	3	6	6	4	2
Latvia	C	3	3	3	1	2	

Place		May, 1930	June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930
Lithuania	C	27	16	18	7	24	1
	D				1	2	
Turkey	C	16	2	7	2		
Yugoslavia	C	16	6				
	D	1					

YELLOW FEVER

Brazil:	Cases
Campos, Rio de Janeiro Province, May 23, 1930	1
Para, June 23, 1930	2

Gold coast:	Cases
July 10, 1930	1
Albosso, Aug. 5, 1930 (deaths)	1
Liberia, Monrovia, June 3, 1930	1
Nigeria, Lagos, July 12, 1930 (probably laboratory infection)	