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THE PREVALENCE OF INFLUENZA

United States.—Reports from State health officers for the week ended February 28, 1931, show a decrease in the prevalence of influenza as compared with the preceding week in the eastern part of the country generally, but there was an increase in some of the North Central States and on the Pacific coast. (See pp. 601 and 602.) A total of 10,590 cases of influenza was reported to the Public Health Service for the week ended February 28, 1931, as compared with 11,135 cases for the preceding week, and with 2,337 for the corresponding week of last year.

The general death rate in large cities of the United States for the week ended February 28, 1931, as published by the Bureau of the Census, was 14 per thousand population. For the corresponding week of last year the rate was 14.1 per thousand.

Europe.—In 107 great towns of England and Wales, 456 deaths from influenza were registered during the week ended February 14, 1931, as compared with 331 influenza deaths for the preceding week. Of these deaths, 116 occurred in London. The outbreak in Liverpool was said to be decreasing. During the six weeks from January 4 to February 14, 1931, 1,585 influenza deaths were registered in the 107 great towns, as compared with 434 influenza deaths during the corresponding period of 1930.

The general death rate of the 16 principal towns of Scotland for the week ended February 7, 1931, was 16.8 per thousand population, which is 3.4 per thousand below the average for the corresponding weeks of the last five years. The death rate for respiratory diseases in Scotland for the week ended February 7, 1931, was 3.4 per thousand, which is 1.9 per thousand below the average.

In Madrid, Spain, the general mortality declined to 31.3 per thousand for the week ended February 14, 1931, from 47.7 and 36.7, respectively, for the two preceding weeks. The general mortality was above the average in Barcelona, Sevilla, Valladolid, Cadiz, Murcia, Cartagena, Alicante, Gerona, Bilbao, and Coruna. It was said to be normal in Valencia.

A LIMITED RAT FLEA SURVEY OF SAVANNAH, GA.

By CARROLL FOX, Medical Director, United States Public Health Service

During the early spring and late summer of 1927, Surg. K. F. Maxcy, in the course of studies of endemic typhus fever, conducted a limited rat flea survey of Savannah, Ga.

The data concerning this survey have been preserved at the New York quarantine station, where the fleas and other ectoparasites were identified. They are now published in the belief that the information adds a distinct item to our knowledge of distribution of rat fleas.

The survey was made in two separate parts: The first part included 387 rats trapped in February and March; the second part included 500 rats trapped in September and October of the same year.

Most of the trapping was done in the business section of the city. All rats were trapped alive in cage traps and brought to the laboratory without covering the cages or putting them in sacks. At the laboratory the rats were etherized, singly, in a closed box, and combed. All parasites combed from a single rat (including any found on the floor of the ether box) were put in alcohol in a vial, labeled with the serial number of the rat, and sent to the New York quarantine station for identification.

Fleas were identified by Surg. Carroll Fox and Acting Asst. Surg. G. C. Sherrard. Specimens of all types of mites found were sent to Dr. H. E. Ewing, of the National Museum, for identification or confirmation.

The results of the survey are given in Tables 1 and 2. The fleas found were *Xenopsylla cheopis*, *Ceratophyllus fasciatus*, *Leptopsylla musculi*, *Echidnophaga gallinacea*, and *Ctenocephalus canis* and *felis*. All rats were *Rattus norvegicus*.

TABLE 1.—First part of survey, February and March, 1927. (Includes 33 rats trapped between January 27 and 31. These yielded 210 fleas.)

Number of rats	Total number of fleas	Fleas per rat	Xenopsylla cheopis	Xenopsylla cheopis per rat	Ceratophyllus fasciatus	Ceratophyllus fasciatus per rat	Leptopsylla musculi	Leptopsylla musculi per rat	Echidnophaga gallinacea	Echidnophaga gallinacea per rat	Ctenocephalus canis and felis
387-----	1,764	4.6	891	2.3	361	0.9	460	1.2	52	0.13	5

TABLE 2.—Second part of survey, September and October, 1927

Number of rats	Total number of fleas	Fleas per rat	Xenopsylla cheopis	Xenopsylla cheopis per rat	Ceratophyllus fasciatus	Ceratophyllus fasciatus per rat	Leptopsylla musculi	Leptopsylla musculi per rat	Echidnophaga gallinacea	Echidnophaga gallinacea per rat	Ctenocephalus canis and felis
500-----	4,097	8.2	3,599	7.2	22	0.04	355	0.71	117	0.23	4

It should be noted that the marked increase in fleas per rat, recorded in the autumn months, is altogether made up of an increase in *Xenopsylla cheopis*. The virtual disappearance of *Ceratophyllus fasciatus* in September and October is not unexpected in the climate of Savannah. The relatively high incidence of *Leptopsylla musculi* is of interest. *Echidnophaga gallinacea* is not uncommonly found on rats in warm climates.

Besides fleas there were found the usual rat louse, *Polyplax spinulosa*, and four species of mites, *Laelaps echidninus*, *Laelaps hawaiiensis*, *Liponyssus bacoti*, and *Hoplopleura acanthopus*, the last named apparently accidental.

A PUBLIC-HEALTH SURVEY OF OKLAHOMA

By A. J. McLAUGHLIN, *Medical Director, United States Public Health Service*

Since the beginning of the present century the scope of public-health work has expanded from police power efforts to control communicable diseases to the prevention of all diseases and the promotion and conservation of health of the entire population. Necessarily, therefore, a public-health survey of a State must include much more than a survey of the health department itself. It must consider the public-health activities, existent and potential, of many agencies, official and unofficial, engaged in public-health work which are operating independently.

The earliest efforts at disease prevention were based upon the psychology of fear, and our first boards of health were born of fear and hope—fear of the epidemic diseases and hope that these “plagues” could be prevented by rigid quarantine and isolation. These boards were given enormous police powers and control over individuals for the common good. The early administrative health officers had the police power as their only weapon, and they fought these diseases as policemen. The flood of knowledge of the causation of disease following the epoch-making discoveries of Pasteur, Koch, and others, from 1870 to 1890, gave new impetus to the vigorous application of police power. With the knowledge that these diseases were caused by frail organisms, or germs, easily killed by disinfection, it was natural that health officers should visualize the possibility of stamping out epidemic diseases by rigid enforcement of laws and ordinances providing for quarantine, isolation, and disinfection. This system failed signally to suppress epidemics or prevent their spread; and the reason was apparent when the significance of the “carrier” became known in the first decade of the twentieth century. Doctors were blamed for not reporting. Although prompt reporting should be required, it became apparent that even if doctors reported all of the cases seen, there would be unreported and uncontrolled many more

cases. These unreported cases were either atypical, mild with few symptoms, or healthy carriers with no symptoms whatever, and none of these could be controlled by police power methods of quarantine, isolation, and disinfection.

This knowledge made health officers realize that control of these diseases could be secured only by the voluntary cooperation of all individual citizens and that such cooperation could be secured only by education of the public in personal, family, and public hygiene. About the same time health officers realized that the duties placed upon them by law demanded the expansion of public health to include the noncommunicable diseases and the promotion and conservation of health. These objectives obviously could be achieved only by public-health education. Health officers relinquished the dream that all public-health activity could be exercised by personnel on the pay roll of the health department and began to seek means of correlating the work of other departments and unofficial agencies with the work of the official department of health.

In the first decade of the present century unofficial agencies undertook important public-health activities of wide scope and boards of education had developed plans and procedures in school hygiene. The medical profession has always been a factor in public-health work, but only in the last decade has it shown willingness to assume its true function in regard to preventive health work. Of all the outside agencies, it is the most important and the most essential to success.

No health department now has, nor can it hope to have, sufficient funds to finance all public-health activity. The responsibility for the health of all the people is placed squarely on the shoulders of the health officer, and it is his duty to formulate a comprehensive plan that will include the public-health activities, existent and potential, of the medical profession, the educational authorities, and the unofficial agencies. The main objective is to have all parts of the field covered. It matters little which agency does the work; the important thing is to have the work done.

With the experience of the past three decades it is not difficult to set down an outline of organization for a State health department showing the major divisions it should possess and the details of organization of those divisions. It is much more important and also more difficult to put down a plan for the utilization of all the possible public-health activities in the State in a joint complete program. I shall therefore first outline briefly why and how agencies outside the health department should be organized and utilized in so far as their relationship to public health is concerned. Second, there will be considered the existing machinery for public-health work in the State department of health—its defects and its needs. Finally, recommendations will be made which have for their purpose the better utilization of outside

agencies and for the correction of defects in the department of health organization.

Section I. Organization of Outside Agencies

In formulating a plan for utilizing all agencies engaged in public-health activities outside of the department of health in a comprehensive joint program with a single direction, it is necessary to study carefully the work and potentialities of three factors, viz:

1. The organized medical profession.
2. The State educational authorities.
3. The unofficial health agencies.

THE ORGANIZED MEDICAL PROFESSION—THE STATE MEDICAL SOCIETY

The following are the two greatest defects in public-health administration to-day:

1. The failure to do any more than scratch the surface in the most important field of public health, viz, the hygiene of the preschool child.
2. The lack of properly organized local health units to apply, locally, the policies of the State health department.

Adequate supervision of the preschool child in any considerable percentage of the total children can be secured only by the activity of the individual practicing physician. Laudable efforts are made through parent-teacher associations, baby welfare stations, and public-health nurses, but the percentage of children reached is small. We must have a healthy public opinion demanding examination of the preschool child, with a county medical society establishing facilities to aid the practicing physician in responding to this demand. In order to get for the preschool child early diagnosis, preventive advice and treatment, and correction of defects, we are compelled to focus as our primary objective upon the greatest problem confronting the medical profession to-day, viz, "How can adequate medical, surgical, and preventive advice and treatment be made available, within easy reach of all citizens, at a cost within their ability to pay?"

The layman has been educated and now knows that diseases can be prevented or their hazard minimized by early diagnosis and treatment. The average citizen, for financial reasons, does not consult a doctor until he is definitely ill, and very often postpones calling the doctor until he is confined to bed. It is not the cost itself, but the lack of definite knowledge of what that cost may be. More important still, in smaller cities and towns there is an absolute lack of clinics and out-patient departments. Many careless statements and inaccurate generalizations are made in regard to the cost of medical care. In the larger cities clinics and out-patient departments have developed independently of the medical society as a unit. For this reason the

trite statement is often heard that the poor in large cities and the rich anywhere can secure the best medical service, but that for the intervening classes such treatment is not available.

The cost of the best medical care, where available, is worth what is paid for it. The cost has not increased in greater proportion than the cost of other services; but medical and surgical diagnostic and treatment facilities have been elaborated to include many new procedures, worth their cost, which were not included years ago. The greatest problem is not the cost but the absence of facilities for modern diagnosis and treatment at a definite known cost.

It is the collective obligation of the organized medical profession to solve this great problem. The American Medical Association has recognized this collective obligation, and every county medical society is urged to accept its problem and discharge its duty. In the large cities the problem is complicated by group clinics, industrial clinics, and other installations outside the control of the medical society. In the smaller cities the situation is less complex and the solution less difficult. Difficult or easy, the solution should come from the medical society. The demand for these services is based upon sound public opinion and must be satisfied by some agency. Protracted delay in grappling with this problem, seizing the initiative, and establishing such facilities can result only in makeshift clinics established by institutions and agencies independent of the organized profession or by quacks and charlatans. The installation of pay clinics by the medical society, or with its approval, gives the individual citizen valuable aid in avoiding the so-called clinic of the quack and charlatan.

The pay clinic, either with a fixed rate or a sliding scale, is a response to the demand of public opinion. The organized medical profession as a whole has been reluctant to take steps to respond to the demand. Such clinics have been established by individuals or groups of doctors, in connection with hospitals or medical colleges, or by endowments or foundations. Unfortunately, this insistent public demand has been capitalized by quacks and fakers who often establish clinics with elaborate and very impressive equipment.

The development of facilities for early diagnosis and early treatment by the organized medical profession at a known cost is, frankly, socialization of the practice of medicine. Such limited socialization is inevitable. It rests with the profession whether it shall seize the initiative and satisfy this demand or stand passively by and be compelled to submit to the process while it is carried out by outsiders.

State medicine may not come as a result of inactivity of the organized profession, though it is always a menace; but a gradual evolution, a haphazard growth in which the organized profession is inactive and inarticulate, will produce a chaotic condition which may be even worse than State medicine. The county medical societies must pro-

vide out-patient departments or clinics where examination, early diagnosis, and treatment of ambulatory cases can be made. Usually there is a small hospital which can be equipped and expanded for this purpose. It should be organized on a business basis, dividing the clientele into the following classes:

1. Indigents, whose care and treatment are to be paid for by the county.
2. Those unable to pay full fees, but who can pay something, according to income.
3. Those able to pay full fees.

A county medical society which organizes for public-health work by establishing facilities for early diagnosis and treatment and by fostering a full-time county health unit will be rendering its greatest contribution to public service. Without active participation by the local medical society as a unit, county health work is extremely difficult and generally a failure.

Enthusiastic workers who are poor waiters often attempt county public-health organization without this active participation by the county medical society. Such efforts are doomed to failure. You can not build successfully and permanently in advance of public opinion, and the most important factor in public opinion and in public-health progress is the collective dictum of the medical society. If this active participation of the county medical society can not be secured, then attempts to organize in that county should be deferred until public opinion brings about the desired change of attitude. No public-health work should be initiated in any county except through the direct approval and action of the medical society as a unit.

These facts bring to the State medical society tremendous responsibilities and duties. It is through the initiative of the State society that these activities of the county medical societies will be begun and carried to fulfillment.

In accepting the solution of this great problem as its collective obligation, the State medical society pledges itself to stimulate and assist the county medical societies in discharging this obligation as rapidly as the local units are able to establish these facilities.

It is not sufficient to have the best, most modern equipment and technical skill in one or two large centers in a State. It becomes the duty of the State medical society to arrange for the distribution of such equipment and technical skill by decentralization, by the establishment in county seats of such facilities so that they may be available and within easy reach of every citizen.

The fact that the problem is difficult and calls for executive ability, statesmanship, and energetic, collective action, does not alter the fact that it is the problem of the State medical society. It is not expected that the State medical society can achieve the ideal immediately, but

many county medical societies are ready now; and following the example of these, within 10 years every county in the State could be so organized.

Incidentally, the improvement in facilities for practice in county seats would tend to solve another of the pressing problems, namely, the unequal distribution of new graduates. The graduate of a modern, class A medical school to-day is accustomed to use the latest technique, methods, and equipment for early diagnosis and treatment. He knows he will not find facilities for such practice in the small towns. He therefore avoids the country towns and crowds the large cities. If the practice of medicine could be made attractive in country towns by the establishment of modern facilities for early diagnosis and treatment by the county medical society, the young graduate would be very glad to practice in such towns.

THE STATE EDUCATIONAL AUTHORITIES

The chief educational authorities which are now doing, or are equipped to do, public-health work in Oklahoma are the following:

1. The University of Oklahoma, at Norman.
2. The Oklahoma Agricultural and Mechanical College, at Stillwater.
3. The State Teachers Colleges, at Edmond, Ada, Tahlequah, Alva, Durant, and Weatherford.

There are several other colleges which have possibilities for aiding in some phase of public-health education. In addition to these there is the entire public-school system of the State, the most powerful and most valuable instrument we possess for the teaching of personal and family hygiene. The extension division of the university has already done some creditable work in extra-rural postgraduate courses for doctors in pediatrics and obstetrics. These courses have great value in maternal and child hygiene. More funds should be made available and this work expanded. The dental school has a fine opportunity to do educational work through the dentists and in conjunction with the department of health. A start has been made, but the scope of the work should be increased.

Medical colleges have one tremendously important duty and function in relation to public-health administration. It is the establishment of an adequate and more effective system of teaching preventive medicine and hygiene to the undergraduate medical students. The present practice varies in different colleges. Most schools have either a professor of preventive medicine or some one delegated to give lectures on this subject. In regard to adequacy and effectiveness, the major defect is a lack of practical demonstration. Teaching of hygiene consists of didactic lectures, the material for which is found in any textbook on the subject. What is needed is a close affiliation with a

health department, where the student can see preventive medicine in actual practice. The student will remember much from actual demonstrations, but lectures alone are often ideal soporifics, in view of the fact that they produce sleep and have little after effect.

The desirability and need for this more adequate teaching of preventive medicine is obvious for many reasons. It is essential in his own interest that the student be adjusted to the change of accent in the practice of medicine from curative to preventive; but there are two very definite reasons why the public-health administrator desires this improvement in teaching:

1. There will be graduated to enter practice a body of young doctors who will understand the objectives and efforts of the health officer and will, therefore, be sympathetic and helpful.

2. Health officers at present are recruited from the practicing medical profession by political appointment. Their only knowledge of preventive medicine upon their first appointment is the instruction they have received in medical college. This has either been entirely neglected or has consisted of a few lectures with no actual demonstration of public-health work. These men have to learn something entirely new, and in the process of learning will make many costly mistakes.

Some years ago it was hoped that postgraduate schools of public health would cover the need of trained health officers. This dream has not been realized. Our new appointees are not postgraduates in public health; they are ordinary practicing physicians, and appointees will continue to be such under our political system of government. Their training must come from actual experience in a health department or by short courses, and this is greatly facilitated by having a foundation acquired by an adequate undergraduate course in preventive medicine.

Just as the State department of health is vitally interested in the teaching of preventive medicine to the undergraduate medical students, the dean of the medical college is especially desirous of having the course in preventive medicine and hygiene made practical by demonstrations of applied preventive medicine as practiced by health departments. For this reason a model health department is desirable in Oklahoma City so that its work can be used for demonstration purposes in teaching preventive medicine to students. The model health department is also necessary for post graduate instruction for health officers and nurses, in summer courses, and during the regular school year.

The dean of the college of medicine is keenly interested in the problem of unequal distribution of doctors. He, therefore, is also interested in the wider distribution of high-grade medical service, by establishing centers with modern facilities and equipment in county

seats. He can assist in this decentralization and, by making the small town more attractive for modern practice, secure a better distribution of the young graduates. The dean can by means of public-health education activities of the university, assist in educating the public to demand early diagnosis and preventive and corrective treatment from the physicians for children from 1 to 6 years old. He can also render tremendous service by undergraduate and post-graduate instruction in preparing the doctors to respond to that demand.

The extension division of the agricultural and mechanical college is already doing work closely allied to public health in its work of home economics. Health and nutrition are being taught in the school of home economics, and, through the extension division, this knowledge is being carried to the farm homes. This work is extremely valuable, has great possibilities in spreading knowledge of diet and nutrition, and should be continued and expanded. State teachers colleges and normal schools have a wonderful opportunity for real service by more adequately teaching child hygiene to teachers. The lack of training in the practical application of child hygiene methods is a real handicap to public-health work in the schools. The need is most apparent in teachers of the first to the sixth grades and in the schools of the small city or county. In these situations it is not uncommon for one public-health nurse to be carrying an overload of 8,000 pupils. If the teachers are trained, they understand and are helpful; and in spite of the overload a creditable result is often obtained. The teacher is a very intelligent possibility in public health. She teaches hygiene and health habits and observes the children through the entire school day. Her training in hygiene is, therefore, one of the vital essentials in the health of the school child. Presidents of teachers' colleges have made very creditable efforts in many States to give good courses in health education. They have good textbooks and excellent theoretical instruction. With one or two exceptions, the same defect occurs which was charged to the teaching of preventive medicine in medical colleges, viz, too little practical demonstration of applied child hygiene. To correct this defect it is necessary to have a doctor and nurse trained in child hygiene on the faculty, and to have an arrangement with the city or town in which the college is located by which the city schools are used by the doctor and nurse to demonstrate to the students, in groups, the practical work of child hygiene. To this end the State health department should organize counties in which teachers colleges are located with a model county health department. This model health department could then be used for practical demonstration purposes to make the teaching of applied child hygiene to teachers more effective.

THE UNOFFICIAL HEALTH AGENCIES

The origin of unofficial voluntary health agencies and their development into great public health machines was due to two things: First, the restriction of official health work to an attempt to control communicable disease by police power alone; and, second, the demand of public opinion, based upon new medical knowledge, that new methods be tried, methods independent of police power and based largely upon education. The impatient desire to expand public-health work to include all diseases and to attack the communicable diseases directly by education of the individual citizens was a response to the seeming unwillingness of official health departments to expand and utilize methods other than those based on police power. The health officers were not unwilling to expand, but it was impossible to secure funds from official sources for untried methods, the efficiency of which had yet to be demonstrated.

The greatest contribution of the unofficial voluntary agencies was the demonstration in the first decade of the present century that educational methods were effective in the prevention of disease and the reduction of death rates and that such methods were legitimate weapons for the use of official health departments. Thus, as pioneers, voluntary health agencies have been of great help to official health departments in demonstrating the value of new procedures and in financing these demonstrations when funds for such purposes could not be secured by the official health department.

These two separate movements advancing side by side—the expansion of official health departments and the development of voluntary health agencies—were bound to conflict, and at first there was misunderstanding, distrust, and antagonism. In the second decade much of this conflict had disappeared, and in the last decade the policy of unofficial health agencies in their relation to health departments has been so clearly defined, understood, and accepted that there is to-day no reason for conflict. This clarification of policy was brought about by conferences of health officials with the heads of the great national unofficial health agencies. It is now clearly understood that an unofficial health agency is an auxiliary of the duly constituted health authorities, with freedom of action in untilled fields, and the obligation to turn over to the health department any legitimate public-health activity whenever the health department can secure the funds to carry on the work. The voluntary health agency has another obligation; it is that when the health officer has a comprehensive program of public-health activity it shall accept and agree to carry out such parts of that program as are within its power. And so to-day the proper utilization of the voluntary public-health agencies depends upon the health officer himself. They increase the total

budget for public health far beyond the amount which the health officer can secure by official appropriations. The Oklahoma Public Health Association is doing excellent work with a very limited appropriation.

The gross seal sale for the State is about \$45,000. Of this, 5 per cent goes to the National Tuberculosis Association. About seventy per cent of the remainder is retained for local expenditures, and something over \$15,000 is the budget left for the State association. The seal sale results are far below what they should be. A maximum of \$200,000 might be expected and it is probable that concerted effort by the State department of health, the organized medical profession, the educational authorities in support of the association could quickly boost the sales to above \$100,000. This association is a great asset for public health work in the State as its funds can be used to cover gaps in the official program left uncovered because of lack of official funds.

Valuable work is done in health education clinics for stimulation of early diagnosis and public-health nursing.

NECESSITY FOR A PUBLIC-HEALTH ADVISORY COUNCIL

In the foregoing pages the principal agencies outside the health department which are doing or should be doing health work have been considered. How can the work of these various agencies be included in a general program and coordinated with the work of the official State health department?

Public health in its broad modern sense includes not only the activities of the State department of health, but the activities of these other official and unofficial agencies as well. One of the most effective ways of incorporating these activities in a comprehensive State-wide program of public health is to give them representation in some form of joint council, committee, or board. State boards of health could be used to afford representation to these other agencies, but as a matter of fact are seldom so used. In two States, Alabama and South Carolina, the State medical society is, in effect, the State board of health and so functions by means of a committee. Eleven States require all members of the board of health to be physicians, and 21 other States specify that a certain number of the board members must be physicians.

Massachusetts, New York, Connecticut, Ohio, Maine, and West Virginia have a public-health council which functions chiefly as an advisory body to the commissioner of health, who is the executive head of the department. Even in the States where the executive power is vested in the board, it is the modern custom to delegate this power to the commissioner or State health officer, the board

acting as an advisory council on matters of law, regulation, and policy.

With these facts in mind it is fair to assume that members of a State board of health should be appointed and hold their office by virtue of their ability to contribute technical or scientific advice or because they could coordinate with the work of the board, activities of organizations which they represent. The presence of physicians on the board partially carries out this idea, provided they are carefully selected for their qualifications or represent the organized profession.

The responsibility for the health of all the people is placed by law on the State board of health and its executive, the commissioner of health. It is the commissioner's primary duty to formulate a comprehensive plan of public health for the State which will include activities now carried on by other departments of the State government, by the organized medical profession, and by unofficial voluntary agencies. It is obvious, therefore, that in formulating such a plan and carrying it out the commissioner would be greatly assisted by having the executives or authorized representatives of these other departments or agencies as members of his board or of a public-health council.

Legislation can be enacted which would state definitely how the board should be composed, providing for representation upon that board of the agencies doing public-health work. Pending such legislation, the governor could appoint a special public-health advisory council for the purpose of coordinating all State public-health activities in one comprehensive plan. This council should consist of the following, four of whom to be appointed by the governor:

Three members of the Oklahoma State Medical Society designated by the board of trustees.

State Superintendent of Public Instruction.

Dean of the college of medicine.

Director extension division University of Oklahoma.

Member nominated by the State Dental Society.

President of one of the State teachers colleges.

The executive officer of the Oklahoma Public Health Association.

The fact that there is a statutory authority for a board of health which has never been put into effect makes it possible to have instead of a public health council, a board of health, whose personnel would be identical with the council suggested above. This could be effected by a legislative act amending sections 8666 and 8667, Compiled Oklahoma Statutes, 1921, and a suggested draft of such an act is appended to this report.

Such an act would effect the desired liaison between the department of health and the extra departmental health activities and would also give to the commissioner of health that security of tenure which he now lacks and which is so much to be desired.

Section II. Organization of the Department Itself

STATE BOARD OF HEALTH

Although the State constitution provides for a board of health, none has been established. This is fortunate; and what is needed now is a legislative enactment specifying the members that should constitute said board and giving the board the authority to select one of its physician members as executive secretary, and nominate him for the governor's appointment of commissioner of health.

THE COMMISSIONER OF HEALTH

The following general observations will show the necessity for an experienced administrator as commissioner with security of tenure.

Oklahoma has many unique features. It is only 41 years since its lands were opened for settlement and 23 years since it achieved statehood; yet in this brief period over 200,000 farms have been established, a stupendous oil industry has been developed, and commerce and industry have kept pace with this rapid development. It now has nearly two and a half million inhabitants. Its gain in population is without parallel for any similar area. In considering Oklahoma from any viewpoint, diversity is the word which best expresses its varied character. Every conceivable type of topography exists—mountains, hills, irregular plains, and various types of valleys. Climate is extremely variable, due to topography, distance from large bodies of water, and cyclonic storms. The variation in rainfall is from 45 inches in the southeast to 18 inches in the arid northwest portion. Racially, Oklahoma has a very high percentage of native whites in the population (about 85 per cent). There are less than 2 per cent foreign born, and for a southern State its negro quota is small, only 7.3 per cent. Its original proprietors, the Indians, now constitute less than 3 per cent of the total. The foreign population, though small in numbers, is concentrated in limited areas as Pittsburg County (Italians in coal mining) and the large cities. They therefore add to the complexity of the problem. Although the Indian population is now small, the Indians constitute a serious public health problem, because of concentration in certain counties and for other reasons. In Rogers, Craig, and Cherokee Counties, Indians form from 9 to 12 per cent of the total population; in Mayes County 13 per cent, Delaware County 19 per cent, and in Adair County 24.7 per cent.

The rapid development of the oil industry has overshadowed the other natural resources, but there is a considerable coal-mining industry. Ottawa County forms a part of the tri-State zinc area, the greatest producer of zinc in the world. There is a large lumber industry in the southeastern counties, but Oklahoma must be considered as an agricultural State, and at least one-half of its population is dependent directly or indirectly upon farming. A peaceful agricultural county to-day may become a wild boom area to-morrow by the discovery of oil. With this background it may be conceded that Oklahoma's public-health problems are complex and intricate. It is obvious that they need an experienced, resourceful health officer to cope with these problems. It requires a man with vision, courage, and pertinacity to meet these kaleidoscopic changes in the picture and to look ahead and try to anticipate future changes. In what way has Oklahoma met this need?

Unfortunately, politics is a highly developed game in Oklahoma, and governors not only change every four years, but sometimes in less time, because of impeachment proceedings. When the governor goes out, the State health commissioner goes out also, and another physician without any public-health experience comes in. In 14 years, from 1915 to 1929, six governors have held office in Oklahoma, and each governor brought in a physician of his choice for commissioner of health.

It is detrimental in itself to place in charge of a State health department a physician with no training or experience in public health, but this is a lesser crime as compared with the removal of an incumbent who has, though inexperienced, after a few years, perhaps, begun to learn something about his job. This insecurity of tenure is the greatest obstacle to public-health progress in Oklahoma. It is not limited to the commissioner alone, but all the subordinate personnel have the same insecurity of tenure. There is no civil service or other protection afforded. If the commissioner were safe from removal without just cause, he could protect and retain the necessary personnel.

BUREAU OF ADMINISTRATION

The bureau of administration consists of the commissioner, assistant commissioner, and such stenographic and clerical help as is necessary. This bureau exercises general control over and coordinates the activities of the other bureaus, determines policies, and approves programs.

BUREAU OF PUBLIC HEALTH EDUCATION

There is a so-called bureau of public health education, consisting of a director and one stenographer. They do general publicity work. The director is a layman with close liaison with the press. They send

out weekly bulletins to a mailing list of 1,100 names, including the State newspapers. Public-health education has not developed to such an extent as to warrant giving it a special bureau status. This work should be carried on in a bureau of administration under the direct supervision of the commissioner. A much wider and more fruitful expansion of public-health education can be secured by the commissioner without expense to the health department by utilizing the great possibilities of the public-school system and the extension work of the university and colleges. The commissioner could arrange for a committee on public health education from the proposed board of health as follows:

The superintendent of public instruction.

The director, extension division, University of Oklahoma.

Member of State dental society.

President of one of the teachers colleges.

Executive officer Oklahoma Public Health Association.

The machinery for public-health education represented by the above committee is already in operation. The educational authorities alone have an investment of many millions in the equipment and personnel which reaches the most hopeful age group for public-health education. The commissioner, through his committee, by coordinating and expanding the work now being done in public-health education, will achieve infinitely more than by attempting to secure large appropriations for public-health education within his own department.

BUREAU OF DENTAL HEALTH EDUCATION

Just why dental health education should have a bureau status is not clear. It could operate in the administration bureau with other public-health education activities, directly under the commissioner, or in a bureau of maternity and child hygiene. This is a mere detail of administration. A splendid piece of work has already been accomplished by the director of the bureau of maternity and child hygiene, and ambitious and sound plans have been made for expansion. The director has sought twin objectives: (1) To educate parents and children in regard to the necessity of preserving the early teeth and giving proper dental care to children; (2) to secure the interest of the dental profession in treatment of children to insure a proper response to the demand created by objective No. 1. She has secured the support and active participation in such a program by the dental profession; and, through the extension division of the university and State dental society, courses for dentists are given accentuating preventive service for children. The work of this bureau is one of the outstanding achievements of the State health department.

BUREAU OF LABORATORIES

The laboratory covers a wide range of diagnostic work, water and sewage analysis, milk, and manufacture of typhoid bacterine. In 1929-30 the operations were increased to a total of 35,146 examinations, and typhoid bacterine sufficient for about 50,000 immunizations was manufactured and distributed. Over 25,000 Wassermann examinations were made, checked by a Kahn test (microscopic precipitin test).

BUREAU OF RURAL SANITATION

The brightest spot in the picture of public-health work in Oklahoma is the development of nine full-time county health units. These were organized under rather adverse conditions and without the authority of a permissive law for their establishment. In 1929 such a law was passed and signed by the governor.

The most common defect in many State health departments is poor contact between the center (State department of health) and the periphery (local health units). This defect can be remedied in two ways:

1. By building up an adequate State health organization with liberal travel allowance to maintain frequent contact.
2. By developing local full-time county units in strategic points and ultimately in every county which will maintain constant touch with the State department of health.

The county is the logical unit of government in large States, and it is the only unit functioning on a state-wide basis that has the power to levy taxes and make expenditures for public health. The trend toward full-time county health officers is one of the striking features of public-health development of the past 15 years. In 1915 there were only a dozen counties organized on a full-time basis, while in 1930 over 500 counties were so organized. It is much better to develop full-time county units even if the response is slow. The building up of a big State machine would give a temporary advantage and more prompt results if the large appropriations could be secured, which is extremely doubtful. Such a State machine destroys local initiative, the priceless asset we must encourage and develop if we hope for permanent success in State public-health organization. The success of county health department organization in Oklahoma is surprising in view of the instability of the central administration, because of frequent changes in the commissionership. The reason is found in having a State appropriation for assisting counties in organizing full-time health departments. This appropriation should be increased and more counties organized as rapidly as possible.

BUREAU OF FOOD, DRUGS, AND SANITARY INSPECTION

The personnel of the bureau of food, drugs, and sanitary inspection consists of a director, who is also assistant commissioner of health, and six inspectors. The director is a layman, but an extremely valuable man because of 16 years' continuous service in the department and a keen appreciation of State conditions and needs. The work done in control of food and drugs is negligible, and the activities of the division are largely absorbed by the license problem. This license system by which hotels, cafés, groceries, markets, bottling works, etc., are licensed, serves no useful purpose. The bulk of the inspections are in cities, where the inspection should be a municipal function.

BUREAU OF VITAL STATISTICS

There is a registrar of vital statistics and an assistant registrar. These positions have the same insecurity of tenure as the position of commissioner. There are also three clerks. Each city, incorporated town, and township constitute primary registration districts. Local registrars are appointed by the State health commissioner and receive a fee of 25 cents for each certificate of birth and death and each burial permit. Reporting of deaths is estimated about 90 per cent complete. Seventy per cent of the reported deaths are reported by physicians, 20 per cent by undertakers, and 10 per cent by others.

Birth reporting is estimated as 90 per cent complete—about 97 per cent by doctors and 3 per cent by midwives, although midwives are not recognized officially in the State. The model law standard certificates and the International List of Causes of Death are used. Nothing more than a perfunctory recording of these data may be expected with untrained direction and frequent changes in personnel. Even with the present staff more utilization of the data and better results would be possible by installing punch cards and tabulating machines.

BUREAU OF COMMUNICABLE DISEASES

There is a so-called bureau of epidemiology, which consists of a competent epidemiologist and a part-time clerk. With this meager personnel very little real control is possible. Reports of contagious diseases are sent in by the part-time county superintendents of health, who are paid according to the population of the county from \$20 to \$125 per month. Some of them take considerable interest and make regular and satisfactory reports; others know little of public health and have apparently little interest in it.

The central office sends out report cards to 2,500 physicians each week. About 60 per cent return the cards.

There is also in the department what has been called a bureau of venereal diseases. Venereal disease activities of the department can

scarcely be said to warrant a bureau status. There is an appropriation of \$10,800 for venereal disease control, spent, roughly, as follows:

1 doctor	}	-----	\$3, 000
2 assistants			
2 nurses	}	-----	2, 700
1 clerk			
Biologics and supplies		-----	4, 300
			<hr/>
			10, 000

The chief activity is operating a venereal disease clinic in Oklahoma City. The great majority of patients treated are from Oklahoma City. There is no good reason for maintaining such a clinic in one large city of the State. The care of such patients is a city obligation.

The bureaus of epidemiology and venereal diseases should be consolidated. Sufficient clerical help should be provided to establish and maintain an endemic index in every county for each principal disease for each month in the year. It should be checked monthly, if possible.

BUREAU OF MATERNITY AND CHILD HYGIENE

The title of the existing bureau, is "Bureau of Maternity and Infancy." The present bureau is incomplete in that it takes no cognizance of the school child. It also lacks medical direction, although the director is a highly intelligent capable woman with the qualities of a good executive. The bureau has been doing excellent educational work, and by means of conferences it brings about the examination of over 4,000 children per year, with the discovery of 17,000 to 19,000 defects. Medical direction is not needed so much for the conduct of the work, but is a serious lack in bringing the local medical society into its proper place in the program. The bureau has little or no dealings with the local medical society as a collective unit, but deals directly with the public, with individual doctors, with women's clubs, and with the prospective mothers themselves. Besides the director, there is a supervising nurse, four field nurses, and a secretary. The personnel of this bureau is exceptionally capable, but should have a physician as director. It would be well also to consolidate with this bureau the work being done by the bureau of dental health education. This is child hygiene work of the best type. The name of the bureau should then be "Bureau of Maternity and Child Hygiene."

BUREAU OF SANITARY ENGINEERING

One of the amazing performances in public health in Oklahoma is the work of the bureau of sanitary engineering. For years the engineer alone constituted the entire bureau; only in the past year has he had some professional assistance, provision having been made

for an assistant engineer, whose time is largely devoted to the problems of malaria and milk. In spite of this lack of personnel, the State engineering bureau has a record of achievement of which the State may justifiably be proud.

In the past two years the plans for over \$5,000,000 worth of water and sewage projects were checked and passed upon. A check of over 300 water plants was maintained. Malaria activities and milk control work have been undertaken, sanitary surveys of streams have been made upon request, and a great deal of miscellaneous work has been done in swimming-pool sanitation, camp sanitation, conducting a school for water-plant operators, and in plumbing, garbage disposal, and nuisance problems. The complexity and urgency of the sanitary problems is obvious in studying the unique growth of this young State with its oil rushes, boom towns, and mobs of floating population.

Not only is the director of the engineering bureau without sufficient personnel, but his salary is not commensurate with his responsibilities and the work he has done in attempting to discharge his duty. He answers many calls for assistance from other departments of the State government, and there is in this State, as in many other States, a tendency to burden this department with duties which should at least be financed by other State departments. The lack of personnel has prevented this abuse from growing to undue proportions, but steps should be taken to prevent absorbing time and money of the bureau in projects only remotely connected with health. The great majority of the problems of pollution of streams call for solution not for public health but for aesthetic, fish conservation, or industrial reasons. There should be a State committee on stream pollution for handling these problems not directly affecting public health. Such a committee might consist of representatives of the fish and game commission, the corporation commission, the Isaak Walton League, the Mid-Continent Producers Association, with the attorney general and the State sanitary engineer.

It is good policy and saves State money to have the State sanitary engineer give his technical advice and have supervision of such projects. It avoids building up duplicating machinery, but this work must be secondary to the primary function of preventing disease. The funds for financing such projects could be secured by the committee suggested above from the department directly interested and served.

Financial

The expenditures of State health departments vary from less than 3 cents per capita in Iowa and Nebraska to 30 cents in Delaware and 25 cents in Florida. The average for 48 States is about 9 cents per capita. The total amount appropriated for the State department of health of Oklahoma is slightly below the average, with 8½ cents per

capita. It is not, therefore, so much a matter of total appropriation as it is a matter of how that appropriation is divided and expended. There is given herewith a budget showing how the total appropriation of Oklahoma's State department of health is now divided and expended:

DEPARTMENT OF PUBLIC HEALTH

Funds appropriated for fiscal year ending June 30, 1931:

Appropriated for—	Amount
Commissioner.....	\$4, 800
Assistant commissioner.....	2, 400
Secretary and stenographer.....	1, 800
Bookkeeper.....	2, 000
Stenographers (3), one at \$1,800, one at \$1,500, and one at \$1,200.....	4, 500
Director of bureau of maternity and infancy.....	3, 000
Secretary.....	1, 500
Head nurse.....	2, 400
Field nurses (4) at \$1,800 each.....	7, 200
Printing—other than office supplies, office supplies, and communication.....	7, 000
Traveling expenses, including motor supplies and motor repairs.....	5, 000
Bureau of public health education—	
Director.....	2, 400
Stenographer.....	1, 500
Bureau of diagnostic laboratory—	
Chemist.....	3, 000
Assistant chemist.....	2, 400
Bacteriologist and director.....	3, 000
Assistant bacteriologist.....	2, 400
Manufacture of typhoid vaccine.....	2, 500
Record clerk.....	1, 800
Extra help, janitor service.....	1, 200
Bureau of sanitary engineering: Sanitary engineer.....	3, 000
Bureau of pure food, drugs, and sanitary inspection—	
Supervisor (sanitary engineer).....	2, 400
Inspectors (6 at \$1,800 each).....	10, 800
Bureau of vital statistics—	
Registrar.....	2, 400
Assistant registrar.....	1, 800
Statistical clerks (3 at \$1,500 each).....	4, 500
Contractual services—	
Traveling, all departments.....	17, 500
Communication.....	3, 000
Printing.....	3, 500
Other expenses.....	2, 100
Supplies—	
Office supplies.....	1, 200
Medical supplies, administration.....	7, 000
Equipment—	
Office equipment.....	750
Laboratory equipment.....	900
Control of venereal diseases.....	10, 800
Epidemiology, disease prevention.....	5, 000
Rural sanitation and disease control in rural districts and county health units.....	35, 000
Malaria control.....	10, 000
Total.....	183, 450

By readjustment of these items of expenditure and by consolidation of some units into bureaus, a well-balanced organization for a

State health department is given, within the total appropriation now received, viz, \$183,450:

Proposed reorganization and budget for the State department of health

Bureau of administration:		
Commissioner of health.....	\$6, 000	
Chief inspector.....	2, 400	
Chief clerk.....	2, 400	
Secretary-stenographer.....	1, 800	
Stenographer.....	1, 800	
Stenographer-clerk.....	1, 200	
Travel.....	4, 000	
Equipment, office supplies, communication, printing, and miscellaneous contingent expenses.....	9, 000	
		\$28, 600
Bureau of vital statistics:		
Registrar.....	2, 400	
Assistant registrar.....	1, 800	
4 statistical clerks.....	6, 000	
		10, 200
Bureau of laboratories:		
Director (physician).....	5, 000	
Chemist.....	3, 000	
Assistant bacteriologist.....	2, 400	
Stenographer.....	1, 800	
Clerk.....	1, 200	
Extra help, manufacture of biologics.....	2, 500	
Janitor service.....	1, 200	
Supplies and equipment.....	2, 000	
		19, 100
Bureau of county health work:		
Director (physician).....	5, 000	
Stenographer.....	1, 500	
Rural sanitation, county health units.....	32, 000	
Travel.....	5, 000	
		43, 500
Bureau of communicable diseases:		
Director (physician).....	4, 500	
Epidemiologist.....	3, 600	
Stenographer and clerk.....	1, 800	
Morbidity clerk.....	1, 200	
Biologics clerk.....	1, 200	
Biologics and medicines.....	10, 000	
Travel.....	3, 600	
		25, 900
Bureau maternity and child hygiene:		
Director (physician).....	4, 500	
Assistant director (health education and oral hygiene).....	3, 600	
Supervisor of nurses.....	3, 000	
4 field nurses at \$1,800 each.....	7, 200	
Secretary-stenographer.....	1, 800	
Stenographer-clerk.....	1, 500	
Printing.....	5, 000	
Travel.....	6, 000	
		32, 600
Bureau of sanitary engineering:		
State sanitary engineer.....	5, 000	
1 assistant engineer.....	3, 500	
1 assistant engineer.....	2, 400	
1 junior engineer.....	1, 800	
1 stenographer.....	1, 500	
1 clerk.....	1, 200	
Travel.....	5, 000	
		20, 400
		183, 900

SUMMARY

Administration.....	\$28, 600
Vital statistics.....	10, 200
Laboratories.....	19, 100
County health work.....	47, 100
Communicable diseases.....	25, 900
Maternity and child hygiene.....	32, 600
Sanitary engineering.....	20, 400

183, 900

This reorganization, within the total funds now appropriated for the department, provides for the expansion necessary in some bureaus and for necessary increases of salary, and includes all the present personnel, with certain exceptions to be noted later. It includes all items in the present budget, although these items are sometimes grouped in one or other bureaus. The salary of director of laboratories and of the director of county health work is placed at \$5,000 for each bureau. At present the director's salary is partly paid from each. This arrangement is possible only because of the fact that the director has the training, experience, ability, and energy efficiently to direct both bureaus. It can not be considered permanent, and provision is made for a full-time physician in charge of each bureau. The only persons in the present personnel for whom the proposed budget does not provide are the inspectors in the food, drugs, and inspection division. The assistant commissioner is valuable in so many ways as a chief inspector that provision is made for him as such in the bureau of administration. The work of the inspectors under him is of such a character as to seem an unwarranted and futile use of funds appropriated for public health purposes. Their work is a combination of collection of license fees and of inspections which, in the main, should be made by cities and towns.

Fundamental Defects

1. Insecurity of tenure of the office of the commissioner, depriving the State of a trained executive left long enough in office to plan constructively and build a well-balanced effective department.

2. The lack of a board or council which would include representatives of the principal health agencies, official and unofficial, in the State. Such a board or council would make possible a comprehensive program covering every phase of public health activity, allotting to each agency the work it is now doing or is able and willing to do.

3. Partial failure to secure the active participation of the State and county medical societies, as organized units, in preventive medicine. The only possible way of bringing about the discovery and correction of defects and early prophylactic measures in any considerable percentage of children below school age is by the activity of county medical societies, stimulated and organized for this service by the State medical society. The writer has found many county medical socie-

ties who see their duty clearly, are willing to organize on preventive lines, but are appalled by the clerical work, the social service work, and other details of organization. They are willing to organize, and believe in the plan; but they are busy men, and the funds available are small. The greatest obstacle to such organization is the lack of money to employ expert help in solving their local problems. The State medical society must help them by providing, when necessary, clerical help and advice in the details of arranging for out-patient clinics, scale of pay in those clinics, and the basis upon which the fees are adjusted.

Recommendations

Following are the recommendations, which are confined to the correction of the fundamental defects:

1. The passage of an act (tentative copy of which is printed herewith) providing for a board of health and also for a reasonably secure tenure of office for a competent commissioner of health. This would remedy defects 1 and 2.

2. Formal declaration of policy by the State Medical Society accepting the following problem as their collective obligation and pledging themselves to bring about the desired activity of county medical societies as rapidly and as thoroughly as possible:

How can adequate medical, surgical, and preventive advice and treatment be made available within easy reach of all citizens, at a cost within their ability to pay?

Appendix A

AN ACT Amending sections 8666 and 8667, compiled Oklahoma Statutes, 1921, relating to the creation, membership, appointment, powers, duties, and compensation of the State board of health and prescribing the manner of selecting a State commissioner of health and of fixing the salary, specifying the duties of the office, providing for the selection of and salaries of other employees, for the removal from office and recess appointments of members of the State board of health, and declaring an emergency

Be it enacted by the people of the State of Oklahoma:

SECTION 1. That section 8666, Compiled Oklahoma Statutes, 1921, be, and the same is hereby, amended to read as follows:

SEC. 8666. A State board of health composed of nine members is hereby created, four of whom shall be appointed by the governor, by and with the advice and consent of the Senate, the terms of the first appointments to be as follows: One member to be appointed for a term of one year; one member for a term of three years; one member for a term of four years; and one member for a term of six years. All subsequent appointments on said State board of health shall be made for a term of six years. In addition to these four members, which shall include three physicians duly licensed to practice medicine in this State and in good professional standing and one dentist duly licensed to practice dentistry in this State and in good professional standing, the State board of health shall consist of the State superintendent of public instruction, the dean of the college of medicine of the University of Oklahoma, the director of the extension division of the University of Oklahoma, the president of one of the State teachers colleges to be designated by the governor, and the executive officer of the Oklahoma Public Health Association. Each of said members shall be a qualified elector of the State. In case of death, removal from the State, resignation, removal from office as hereinafter provided, or inability to act, the governor shall appoint a successor for the unexpired term, and the appointment of said successor shall be confirmed by the senate in the same manner as in the original appointments.

Immediately after their appointment the members of said board shall take and subscribe to the oath of office prescribed by the constitution or such oath or oaths as may otherwise be prescribed by law, and shall organize by electing a president and vice president and choosing a secretary who shall be a physician, skilled in the specialty of public health and preventive medicine, and at the time of appointment not a member of the board. Upon selection the secretary shall become ex-officio a member of the board. The board shall adopt rules and regulations for the government of the board and adopt and use an official seal.

SEC. 2. The president, vice president, and secretary of the board shall perform the usual duties of such officers and such other duties as the board or the statutes may provide; and the secretary of the board, in addition to his duties as secretary, shall be State commissioner of health and shall take the oath of office prescribed by the constitution or such oath or oaths as may otherwise be provided by law, and whose duties shall be the active supervision of the execution and enforcement of all the rules and regulations of the Board and the laws of the State relating to the public health, and such other duties as shall be prescribed by law or the rules and regulations of the State board of health. The State commissioner of health shall use the seal of office and be empowered to conduct investigations and administer oaths when necessary in the discharge of his official duties.

SEC. 3. The State board of health shall fix the salary of the State commissioner of health at not to exceed ——— dollars per annum. The other employees of the board of health shall be selected by the commissioner of health and confirmed by the board. Their salaries shall be fixed within reasonable limits, on recommendation of the State commissioner of health, and within the appropriations made for such purposes by the legislature. The State board of health shall submit a budget outlining proposed expenditures and activities and reasons therefor to the State budget officer each biennium.

SEC. 4. That Section 8667, Compiled Oklahoma Statutes, 1921, be and the same is hereby amended to read as follows:

SECTION 8667. The State Board of Health shall have power to make any and all needful rules and regulations for the prevention and cure and for the prevention of the spread of any communicable disease; to establish quarantines and to isolate any person affected with a communicable disease; to remove or cause to be removed any dead, decayed, putrid or other substance that may endanger the health of persons or of domestic animals; to condemn and cause to be destroyed any impure, adulterated, or contaminated articles of food that may be offered for sale; to superintend the several boards of health in the counties, cities, villages, towns, and townships of the State; to establish rules and regulations for the keeping and reporting of all vital and morbidity statistics; to promote the public health in keeping with the discoveries of science; and to perform such other duties as may be prescribed by law.

SEC. 5. *Removal from office.*—That the members of the State board of health shall be subject to removal from office only in the manner provided for the removal of elective State officials.

SEC. 6. *Compensation.*—The appointive members of the State board of health shall receive \$10 per day for the time devoted to their duties, and all members shall receive their actual traveling and hotel expenses while attending the meetings of the board and for committee work when duly authorized by the board. There shall be four quarterly meetings of the board annually, to be designated by the board, and not more than four called meetings of the board in any one year.

SEC. 7. *Recess appointments.*—In case of recess appointment of any member of said State board of health, such appointment shall be made by the governor within ten days after the nomination has been referred and transmitted to each member of the senate for approval or disapproval, and upon the approval in writing of a majority of the senate, said recess appointment shall become effec-

tive. Should any member of the senate fail to signify approval or disapproval within sixty days from the date of mailing of notice of the appointment, the same shall be deemed approved by such member.

SEC. 8. *Emergency.*—It being necessary for the preservation of the public peace, health, and safety, an emergency is hereby declared to exist, by reason whereof this act shall take effect and be in full force from and after its passage and approval.

COURT DECISION RELATING TO PUBLIC HEALTH

Statute making certified copy of death certificate prima facie evidence upheld.—(Kentucky Court of Appeals; Massachusetts Mutual Life Insurance Co. v. Bush, 33 S. W. (2d) 351; decided Nov. 21, 1930.) A State law contained the following provision:

And any such [certified] copy of the record of birth, sickness, or death, when properly certified by the State registrar to be a true copy thereof, shall be prima facie evidence in all courts and places of the facts therein stated.

In an action brought to recover on a life-insurance policy, the court of appeals had the following to say regarding the above-quoted statutory provision:

The [circuit] court refused to allow the paper [a properly authenticated copy of a death certificate] to be read to the jury, and the company excepted. The statute only makes the certificate prima facie evidence. It is within the power of the legislature to prescribe rules of this sort. The statute is valid. The circuit court erred in refusing to allow the certificate to be read. * * *

DEATHS DURING WEEK ENDED FEBRUARY 21, 1931

Summary of information received by telegraph from industrial insurance companies for the week ended February 21, 1931, and corresponding week of 1930. (From the Weekly Health index, issued by the Bureau of the Census, Department of Commerce)

	Week ended February 21, 1931	Correspond- ing week, 1930
Policies in force.....	75, 140, 437	75, 485, 684
Number of death claims.....	17, 290	15, 322
Death claims per 1,000 policies in force, annual rate..	12. 0	10. 6

Deaths¹ from all causes in certain large cities of the United States during the week ended February 21, 1931, infant mortality, annual death rate, and comparison with corresponding week of 1930. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)

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

City	Week ended Feb. 21, 1931				Corresponding week, 1930		Death rate ² for the first 8 weeks	
	Total deaths	Death rate ¹	Deaths under 1 year	Infant mortality rate ¹	Death rate ¹	Deaths under 1 year	1931	1930
Total (81 cities).....	9,918	14.5	887	4.70	13.7	897	14.2	13.3
Akron.....	42	8.5	6	50	8.6	4	8.4	8.9
Albany.....	38	15.3	3	59	15.9	3	15.3	16.5
Atlanta.....	114	21.4	12	123	13.6	11	16.8	17.1
White.....	51		4	63		4		
Colored.....	63	(⁹)	8	230	(⁹)	7	(⁹)	(⁹)
Baltimore.....	259	16.6	26	88	15.5	19	17.7	15.4
White.....	200		18	78		12		
Colored.....	59	(⁹)	8	125	(⁹)	7	(⁹)	(⁹)
Birmingham.....	89	17.2	14	141	13.4	7	15.0	14.2
White.....	40		4	69		3		
Colored.....	49	(⁹)	10	243	(⁹)	4	(⁹)	(⁹)
Boston.....	276	18.3	18	51	17.3	28	18.0	15.8
Bridgeport.....	43	15.2	3	50	13.1	4	14.1	14.2
Buffalo.....	180	16.1	20	82	14.2	16	14.8	14.1
Cambridge.....	25	11.4	3	60	8.3	0	14.6	13.6
Camden.....	54	23.7	6	105	14.5	2	19.3	14.6
Canton.....	20	9.8	3	69	12.9	2	10.7	11.8
Chicago.....	849	12.7	62	55	12.5	84	12.5	11.7
Cincinnati.....	160	18.2	6	36	19.6	14	17.8	17.4
Cleveland.....	265	15.2	17	49	12.1	22	11.9	12.2
Columbus.....	93	16.4	7	68	13.8	7	14.5	14.7
Dallas.....	60	11.5	11		14.5	7	12.6	13.9
White.....	49		2			6		
Colored.....	11	(⁹)	9		(⁹)	1	(⁹)	(⁹)
Dayton.....	65	16.4	9	126	10.8	4	13.5	10.7
Denver.....	96	17.2	9	87	18.8	9	16.2	15.7
Des Moines.....	31	11.2	6	106	12.8	6	12.5	13.5
Detroit.....	376	11.9	51	81	13.6	70	9.4	10.6
Duluth.....	29	14.9	2	49	12.3	3	12.0	11.7
El Paso.....	41	20.4	8		17.2	3	21.1	20.0
Erie.....	32	14.2	5	93	9.0	2	11.5	11.5
Fall River.....	35	15.8	7	159	19.9	6	13.5	14.0
Flint.....	21	6.7	3	38	8.6	8	7.4	9.6
Fort Worth.....	32	10.0	0		13.3	5	11.7	13.0
White.....	26		0			3		
Colored.....	6	(⁹)	0		(⁹)	2	(⁹)	(⁹)
Grand Rapids.....	23	7.0	0	0	11.4	2	9.4	10.9
Houston.....	73	12.3	4		15.4	3	12.2	13.5
White.....	53		3			3		
Colored.....	20	(⁹)	1		(⁹)	0	(⁹)	(⁹)
Indianapolis.....	141	19.9	8	66	18.3	5	15.5	17.1
White.....	121		7	66		4		
Colored.....	20	(⁹)	1	67	(⁹)	1	(⁹)	(⁹)
Jersey City.....	84	13.7	10	89	14.1	3	14.5	13.1
Kansas City, Kans.....	49	20.8	3	62	15.8	6	16.5	13.3
White.....	35		3	74		4		
Colored.....	14	(⁹)	0	0	(⁹)	2	(⁹)	(⁹)
Kansas City, Mo.....	134	17.1	6	46	14.9	6	15.2	14.3
Knoxville.....	32	15.3	4	85	13.2	3	14.3	14.8
White.....	29		4	95		2		
Colored.....	3	(⁹)	0	0	(⁹)	1	(⁹)	(⁹)
Long Beach.....	23	7.9	1	24	8.3	2	11.0	10.4
Los Angeles.....	258	10.2	17	49	11.7	19	12.4	12.6
Louisville.....	87	14.7	10	86	15.4	6	17.1	15.1
White.....	64		8	79		3		
Colored.....	23	(⁹)	2	133	(⁹)	3	(⁹)	(⁹)
Lowell.....	23	11.9	3	76	16.6	6	14.7	14.8
Lynn.....	25	12.7	4	104	12.2	2	13.2	12.5
Memphis.....	90	18.1	14	148	16.0	3	17.3	17.2
White.....	45		9	150		1		
Colored.....	45	(⁹)	5	145	(⁹)	2	(⁹)	(⁹)
Miami.....	31	14.4	5	127	16.4	1	14.1	13.2
White.....	20		3	106		1		
Colored.....	11	(⁹)	2	177	(⁹)	0	(⁹)	(⁹)

Footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended February 21, 1931, etc.—Continued

City	Week ended Feb. 21, 1931				Corresponding week, 1930		Death rate ² for the first 8 weeks	
	Total deaths	Death rate ¹	Deaths under 1 year	Infant mortality rate ³	Death rate ¹	Deaths under 1 year	1931	1930
Milwaukee.....	144	12.7	12	52	11.9	16	10.7	10.8
Minneapolis.....	116	12.8	9	58	10.2	10	12.6	11.6
Nashville.....	59	19.8	7	104	17.9	4	17.1	17.1
White.....	34		4	80		3		
Colored.....	25	(⁴)	3	177	(⁴)	1	(⁴)	(⁴)
New Bedford ⁷	32	14.8	7	186	11.6	4	13.9	11.5
New Haven.....	42	13.5	2	38	18.0	3	13.2	15.4
New Orleans.....	172	19.2	11	60	18.3	10	21.0	20.3
White.....	97		8	66		4		
Colored.....	75	(⁴)	3	49	(⁴)	6	(⁴)	(⁴)
New York.....	1,732	12.7	166	69	12.1	182	14.3	12.0
Bronx Borough.....	235	9.2	24	54	8.8	24	10.3	8.4
Brooklyn Borough.....	575	11.4	64	68	11.5	67	13.4	11.1
Manhattan Borough.....	704	20.2	59	101	17.9	74	21.5	17.8
Queens Borough.....	168	7.6	16	44	7.6	14	9.5	7.9
Richmond Borough.....	50	16.0	3	54	11.1	3	14.6	14.4
Newark, N. J.....	114	13.3	15	78	14.2	17	14.7	14.5
Oakland.....	72	12.8	2	26	9.1	4	12.2	12.8
Oklahoma City.....	46	12.2	9	124	13.6	8	11.6	10.5
Omaha.....	57	13.7	3	34	13.1	4	15.1	14.4
Paterson.....	33	12.4	5	86	13.9	1	15.0	13.0
Philadelphia.....	596	15.8	57	83	16.0	45	16.7	13.8
Pittsburgh.....	304	23.5	32	110	16.9	31	18.1	15.5
Portland, Oreg.....	70	11.9	0	11	11.4	1	13.0	14.5
Providence.....	84	17.2	5	46	15.2	9	15.9	15.7
Richmond.....	79	22.4	8	117	17.4	4	18.3	16.7
White.....	52		5	110		0		
Colored.....	27	(⁴)	3	130	(⁴)	4	(⁴)	(⁴)
Rochester.....	102	16.0	8	73	15.9	5	13.8	12.5
St. Louis.....	351	22.1	16	54	15.8	15	18.6	15.2
St. Paul.....	69	13.0	4	41	8.8	2	11.0	11.5
Salt Lake City ⁴	27	9.8	2	30	15.6	6	12.9	14.6
San Antonio.....	65	14.1	9		17.0	12	15.5	19.8
San Diego.....	51	17.0	3	61	17.4	2	16.7	16.6
San Francisco.....	224	18.0	15	100	12.4	8	14.9	14.2
Schenectady.....	32	17.4	4	117	13.1	1	11.4	10.6
Seattle.....	87	12.2	8	76	11.9	3	12.5	11.6
Somerville.....	33	16.4	0	0	13.5	3	12.0	13.0
South Bend.....	24	11.6	2	50	14.4	2	8.4	9.9
Spokane.....	26	11.7	5	130	13.5	2	13.1	13.5
Springfield, Mass.....	36	12.3	1	15	15.3	5	14.0	14.8
Syracuse.....	63	15.4	8	95	12.9	5	13.6	13.2
Tacoma.....	37	17.9	4	103	12.7	3	15.1	12.2
Toledo.....	85	15.0	2	18	15.4	5	13.0	14.3
Trenton.....	46	19.4	3	52	17.7	5	19.8	18.0
Utica.....	34	17.3	0	0	17.4	4	16.4	15.2
Washington, D. C.....	196	20.7	18	100	17.6	22	19.0	16.3
White.....	112		5	41		16		
Colored.....	84	(⁴)	13	223	(⁴)	6	(⁴)	(⁴)
Waterbury.....	25	12.9	2	60	13.0	5	11.6	10.9
Wilmington, Del. ⁷	28	13.7	4	86	14.2	5	16.9	15.0
Worcester.....	49	13.0	2	27	18.7	9	15.6	15.2
Yonkers.....	29	10.9	2	52	7.7	1	11.2	8.9
Youngstown.....	58	17.5	9	126	9.8	1	11.8	10.3

¹ Deaths of nonresidents are included. Stillbirths are excluded.

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

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

⁴ Data for 76 cities.

⁵ Deaths for week ended Friday.

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

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

PREVALENCE OF DISEASE

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring

UNITED STATES

CURRENT WEEKLY STATE REPORTS

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

Reports for Weeks Ended February 28, 1931, and March 1, 1930

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended February 28, 1931, and March 1, 1930

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930
New England States:								
Maine.....	6	4	71	7	48	13	0	1
New Hampshire.....		3	21		82	4	0	0
Vermont.....			1		4	1	0	0
Massachusetts.....	30	89	53	7	481	748	4	5
Rhode Island.....	7	5	1		1	1	0	0
Connecticut.....	9	23	133	10	438	23	2	3
Middle Atlantic States:								
New York.....	120	160	192	143	1,099	762	20	36
New Jersey.....	53	118	104	27	721	561	4	11
Pennsylvania.....	99	174			2,444	945	16	19
East North Central States:								
Ohio.....	67	75	826	65	580	1,291	7	12
Indiana.....	42	15	126		878	118	8	20
Illinois.....	152	174	245	20	1,427	683	12	10
Michigan.....	38	83	261	5	270	765	11	46
Wisconsin.....	14	27	249	41	381	1,202	3	5
West North Central States:								
Minnesota.....	11	15	2	3	67	271	1	2
Iowa.....	7	10	1	27	15	776	1	5
Missouri.....	27	56	100	12	551	44	14	18
North Dakota.....	9	4			6	37	2	5
South Dakota.....	4	3			14	104	0	1
Nebraska.....	9	14	30	4	4	653	2	8
Kansas.....	13	19	344	3	27	467	3	11
South Atlantic States:								
Delaware.....		1	7	2	24	4	0	0
Maryland.....	24	27	352	64	727	18	1	2
District of Columbia.....	31	10	8	1	90	21	1	0
Virginia.....								2
West Virginia.....	13	9	160	24	62	70	0	2
North Carolina.....	14	35	365	36	419	15	2	6
South Carolina.....	9	22	3,463	1,082	160		9	2
Georgia.....	11	15	1,421	126	124	114	3	14
Florida.....	6	7	204	5	135	228	3	2

¹ New York City only.

² Week ended Friday.

³ Typhus fever, 1931, 1 case in Georgia.

*Cases of certain communicable diseases reported by telegraph by State health officers
for weeks ended February 28, 1931, and March 1, 1930—Continued*

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930
East South Central States:								
Kentucky.....	2	-----	9	-----	206	56	2	8
Tennessee.....	7	14	355	127	277	190	3	6
Alabama.....	24	13	407	212	531	191	4	3
Mississippi.....	8	11	-----	-----	-----	-----	2	24
West South Central States:								
Arkansas.....	-----	10	166	89	1	15	0	5
Louisiana.....	47	19	151	21	9	144	4	7
Oklahoma *.....	17	17	178	86	4	405	1	2
Texas.....	36	29	33	64	111	151	1	4
Mountain States:								
Montana.....	1	-----	-----	-----	1	63	1	3
Idaho.....	-----	-----	4	-----	4	23	3	4
Wyoming.....	1	4	-----	-----	2	16	1	1
Colorado.....	6	12	-----	-----	147	150	2	1
New Mexico.....	4	5	1	2	27	52	1	10
Arizona.....	5	9	5	5	157	7	3	9
Utah †.....	2	-----	-----	3	-----	257	2	9
Pacific States:								
Washington.....	11	8	-----	1	44	248	2	8
Oregon.....	8	6	77	81	99	48	0	1
California.....	57	57	555	45	939	1,433	6	14

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930
New England States:								
Maine.....	0	0	19	75	0	0	1	4
New Hampshire.....	0	0	4	18	0	0	0	0
Vermont.....	0	0	7	7	0	2	0	0
Massachusetts.....	2	0	378	304	0	0	2	0
Rhode Island.....	0	0	58	20	0	0	0	1
Connecticut.....	0	0	40	124	0	0	0	0
Middle Atlantic States:								
New York.....	2	2	951	678	6	7	17	21
New Jersey.....	0	0	272	258	0	0	1	2
Pennsylvania.....	0	2	595	521	0	0	10	6
East North Central States:								
Ohio.....	3	2	707	437	54	240	12	6
Indiana.....	0	0	410	213	137	201	3	2
Illinois.....	1	2	547	717	33	112	4	6
Michigan.....	1	3	386	414	32	60	1	5
Wisconsin.....	0	0	161	227	6	36	1	5
West North Central States:								
Minnesota.....	3	0	119	154	4	6	6	2
Iowa.....	0	0	120	119	54	77	0	2
Missouri.....	0	0	232	118	50	132	0	5
North Dakota.....	0	1	28	42	1	41	-----	1
South Dakota.....	0	0	38	15	21	33	0	0
Nebraska.....	0	0	56	155	55	55	1	1
Kansas.....	1	1	76	159	103	71	1	2
South Atlantic States:								
Delaware.....	0	0	30	6	0	0	0	0
Maryland †.....	1	0	142	109	0	0	3	2
District of Columbia.....	0	0	18	24	0	0	0	1
Virginia.....	-----	-----	-----	-----	-----	-----	-----	-----
West Virginia.....	1	0	21	49	4	51	7	13
North Carolina.....	0	1	47	44	0	30	2	0
South Carolina.....	1	1	11	11	0	2	6	10
Georgia †.....	1	0	69	47	0	0	17	6
Florida.....	0	0	4	9	0	2	3	6

‡ Week ended Friday.

§ Typhus fever, 1931, 1 case in Georgia.

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

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended February 28, 1931, and March 1, 1930=Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930	Week ended Feb. 28, 1931	Week ended Mar. 1, 1930
East South Central States:								
Kentucky.....	0	0	91	117	11	14	6	0
Tennessee.....	0	0	48	32	1	13	1	4
Alabama.....	0	0	24	25	8	3	5	6
Mississippi.....	0	0	27	14	18	9	4	6
West South Central States:								
Arkansas.....	0	0	13	11	10	10	6	3
Louisiana.....	0	1	22	22	33	2	8	10
Oklahoma ¹	0	1	29	37	121	140	7	5
Texas.....	0	0	28	40	60	96	1	10
Mountain States:								
Montana.....	1	0	44	63	1	7	0	2
Idaho.....	0	0	12	5	2	13	2	0
Wyoming.....	0	0	39	7	2	9	0	1
Colorado.....	0	1	54	19	11	30	2	0
New Mexico.....	0	0	9	14	1	1	0	3
Arizona.....	0	0	2	31	1	37	0	3
Utah ²	0	0	11	14	0	4	0	0
Pacific States:								
Washington.....	0	0	68	79	33	85	0	8
Oregon.....	1	0	32	48	32	22	0	2
California.....	3	2	120	264	45	68	5	3

¹ Week ended Friday.

² Figures for 1931 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	Menin- gococ- cus menin- gitis	Diph- theria	Influ- enza	Malaria	Measles	Pella- gra	Polio- myelitis	Scarlet fever	Small- pox	Ty- phoid fever
<i>January, 1931</i>										
Alabama.....	16	195	681	57	1,945	12	3	293	14	33
Montana.....	4	19	25		18		0	243	27	6
Nevada.....	4	4	14		3		0	6	0	0
Oklahoma ¹	4	160	910	61	172	22	4	204	453	35
Pennsylvania.....	35	684		1	4,887		11	2,604	5	59
South Dakota.....	2	80	2		32		3	83	202	6
Texas.....	10	195	383	362			2	248		36
Virginia.....	27	184	11,332	13	1,031	30	3	369	6	28
Washington.....	12	71	46		332		1	239	141	11

¹ Exclusive of Oklahoma City and Tulsa.

<i>January, 1931</i>	Cases	German measles:	Cases
Actinomycosis:		Montana.....	2
Pennsylvania.....	2	Pennsylvania.....	125
Chicken pox:		Washington.....	337
Alabama.....	458	Impetigo contagiosa:	
Montana.....	165	Washington.....	2
Nevada.....	2	Lead poisoning:	
Oklahoma ¹	169	Pennsylvania.....	6
Pennsylvania.....	5,391	Leprosy:	
South Dakota.....	129	Washington.....	1
Virginia.....	803	Lethargic encephalitis:	
Washington.....	613	Alabama.....	4
Diarrhea and dysentery:		Pennsylvania.....	6
Virginia.....	134	Washington.....	2
Dysentery:		Mumps:	
Oklahoma ¹	5	Alabama.....	150
Pennsylvania.....	1	Montana.....	128

¹ Exclusive of Oklahoma City and Tulsa.

Mumps—Continued.	Cases	Tularaemia:	Cases
Oklahoma ¹	27	Alabama.....	2
Pennsylvania.....	1,400	Montana.....	1
South Dakota.....	49	Pennsylvania.....	3
Washington.....	271	Virginia.....	8
Ophthalmia neonatorum:		Typhus fever:	
Oklahoma ¹	2	Alabama.....	3
Pennsylvania.....	18	Undulant fever:	
Puerperal septicemia:		Alabama.....	1
Pennsylvania.....	12	Oklahoma ¹	1
Rocky Mountain spotted or tick fever:		Pennsylvania.....	7
Nevada.....	1	Washington.....	1
Scabies:		Vincent's angina:	
Washington.....	15	Oklahoma ¹	2
Septic sore throat:		Whooping cough:	
Montana.....	3	Alabama.....	57
Oklahoma ¹	46	Montana.....	199
Tetanus:		Nevada.....	10
Oklahoma ¹	1	Oklahoma ¹	24
Pennsylvania.....	4	Pennsylvania.....	322
Trachoma:		South Dakota.....	35
Oklahoma ¹	5	Virginia.....	424
Pennsylvania.....	2	Washington.....	234
South Dakota.....	4		
Trichinosis:			
South Dakota.....	2		

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 97 cities reporting cases used in the following table are situated in all parts of the country and have an estimated aggregate population of more than 33,400,000. The estimated population of the 90 cities reporting deaths is more than 31,865,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended February 21, 1931, and February 22, 1930

	1931	1930	Estimated expectancy
<i>Cases reported</i>			
Diphtheria:			
46 States.....	1,100	1,317	
97 cities.....	429	568	887
Measles:			
45 States.....	12,705	10,141	
97 cities.....	4,289	2,812	
Meningococcus meningitis:			
46 States.....	145	236	
97 cities.....	73	131	
Poliomyelitis:			
46 States.....	22	17	
Scarlet fever:			
46 States.....	5,799	5,047	
97 cities.....	2,194	1,854	1,558
Smallpox:			
46 States.....	904	1,505	
97 cities.....	130	150	61
Typhoid fever:			
46 States.....	145	174	
97 cities.....	23	33	25
<i>Deaths reported</i>			
Influenza and pneumonia:			
90 cities.....	1,688	1,181	
Smallpox:			
90 cities.....	2	0	
Memphis, Tenn.....	1	0	
Fort Worth, Tex.....	1	0	

¹ Exclusive of Oklahoma City and Tulsa.

City reports for week ended February 21, 1931

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

If the reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1922 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviation from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases re- ported	Mumps. cases re- ported	Pneu- monia, deaths reported
		Cases, estimated expect- ancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND								
Maine:								
Portland.....	9	1	0	14	0	0	13	4
New Hampshire:								
Concord.....	0	1	0	-----	0	0	0	0
Vermont:								
Barre.....	0	0	0	-----	0	0	0	0
Massachusetts:								
Boston.....	62	37	17	40	7	90	11	48
Fall River.....	2	4	0	4	1	0	3	3
Springfield.....	5	4	0	1	0	1	11	3
Worcester.....	13	3	3	1	2	6	1	3
Rhode Island:								
Pawtucket.....	-----	1	-----	-----	-----	-----	-----	-----
Providence.....	2	8	1	6	4	1	4	21
Connecticut:								
Bridgeport.....	4	6	1	6	2	0	1	6
Hartford.....	7	6	2	6	0	52	1	13
New Haven.....	14	1	0	2	2	74	24	-----
MIDDLE ATLANTIC								
New York:								
Buffalo.....	25	13	4	9	4	87	51	43
New York.....	235	200	91	180	30	676	54	277
Rochester.....	7	7	1	3	2	0	3	11
Syracuse.....	20	2	1	-----	0	11	2	4
New Jersey:								
Camden.....	7	6	3	1	5	90	4	11
Newark.....	84	17	13	29	2	5	7	18
Trenton.....	0	2	0	24	1	2	1	10
Pennsylvania:								
Philadelphia.....	223	68	19	46	27	326	53	75
Pittsburgh.....	85	19	11	38	21	87	31	70
Reading.....	8	2	0	-----	2	175	33	8
EAST NORTH CENTRAL								
Ohio:								
Cincinnati.....	7	8	1	10	11	68	25	23
Cleveland.....	153	32	8	424	20	6	161	44
Columbus.....	18	3	2	85	1	4	6	10
Toledo.....	52	5	8	5	5	1	35	15
Indiana:								
Fort Wayne.....	3	3	5	-----	1	45	0	4
Indianapolis.....	49	7	2	-----	1	77	12	27
South Bend.....	2	1	1	-----	1	1	0	3
Terre Haute.....	2	0	0	-----	0	1	0	4
Illinois:								
Chicago.....	86	98	69	77	26	50	51	104
Springfield.....	11	1	2	2	0	105	0	8

City reports for week ended February 21, 1931—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases re- ported	Mumps, cases re- ported	Pneu- monia, deaths reported
		Cases, estimated expect- ancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued								
Michigan:								
Detroit.....	91	46	12	114	28	12	24	64
Flint.....	11	2	1	72	1	2	6	2
Grand Rapids.....	5	1	0	-----	2	1	1	0
Wisconsin:								
Kenosha.....	16	0	0	6	0	1	74	1
Madison.....	38	0	1	6	-----	1	25	-----
Milwaukee.....	120	17	4	13	8	43	449	14
Racine.....	12	2	1	4	0	3	1	0
Superior.....	7	0	0	-----	0	0	0	0
WEST NORTH CENTRAL								
Minnesota:								
Duluth.....	6	0	0	18	2	0	3	4
Minneapolis.....	62	17	1	6	3	30	118	10
St. Paul.....	59	7	0	-----	1	6	2	6
Iowa:								
Davenport.....	2	1	0	-----	-----	2	0	-----
Des Moines.....	3	2	0	-----	-----	0	0	-----
Sioux City.....	17	0	0	-----	-----	0	8	-----
Waterloo.....	4	1	0	-----	-----	0	0	-----
Missouri:								
Kansas City.....	48	5	2	6	3	73	3	21
St. Joseph.....	3	1	2	-----	2	0	0	2
St. Louis.....	23	42	14	33	11	457	7	-----
North Dakota:								
Fargo.....	2	0	0	-----	0	0	4	0
Grand Forks.....	2	0	3	-----	-----	0	6	-----
South Dakota:								
Aberdeen.....	3	0	0	-----	-----	1	0	-----
Sioux Falls.....	0	0	0	-----	-----	0	0	-----
Nebraska:								
Omaha.....	16	5	9	-----	0	1	17	0
Kansas:								
Topeka.....	7	1	3	1	1	1	30	1
Wichita.....	7	2	0	-----	0	0	0	6
SOUTH ATLANTIC								
Delaware:								
Wilmington.....	1	1	1	-----	0	11	1	3
Maryland:								
Baltimore.....	135	26	6	126	13	387	63	55
Cumberland.....	3	0	0	14	2	3	0	4
Frederick.....	0	0	1	-----	0	0	0	1
District of Columbia:								
Washington.....	31	18	4	12	4	84	0	35
Virginia:								
Lynchburg.....	12	1	1	-----	0	1	0	0
Norfolk.....	17	3	3	49	0	1	0	5
Richmond.....	0	4	5	1	6	348	1	8
Roanoke.....	3	1	0	-----	0	1	0	1
West Virginia:								
Charleston.....	8	0	3	1	0	0	1	1
Wheeling.....	12	0	0	2	1	1	0	2
North Carolina:								
Raleigh.....	6	0	0	-----	0	10	0	6
Wilmington.....	37	0	0	1	0	1	0	3
Winston-Salem.....	3	1	0	7	0	3	2	5
South Carolina:								
Charleston.....	4	0	1	332	1	112	1	8
Columbia.....	3	0	0	-----	8	1	4	16
Greenville.....	0	1	0	-----	0	0	1	0
Georgia:								
Atlanta.....	4	4	1	482	14	42	0	15
Brunswick.....	0	0	0	-----	0	0	7	0
Savannah.....	3	0	1	104	13	0	12	4
Florida:								
Miami.....	5	3	0	3	1	0	0	2
Tampa.....	25	2	0	8	5	110	1	5

City reports for week ended February 21, 1931—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases re- ported	Mumps, cases re- ported	Pneu- monia, deaths reported
		Cases, estimated expect- ancy	Cases reported	Cases reported	Deaths reported			
EAST SOUTH CENTRAL								
Kentucky:								
Covington.....	0	1	0	2	0	15	0	2
Tennessee:								
Memphis.....	38	3	3		7	28	3	11
Nashville.....	0	1	3		6	9	0	14
Alabama:								
Birmingham.....	9	3	2	30	7	135	1	12
Mobile.....	4	1	0	15	2	0	1	3
Montgomery.....	12	1	2	22		6	0	
WEST SOUTH CENTRAL								
Arkansas:								
Fort Smith.....	5	0	0			0	0	
Little Rock.....	0	1	1		0	0	0	7
Louisiana:								
New Orleans.....	9	14	41	23	14	0	0	19
Shreveport.....	5	0	0		0	0	1	7
Oklahoma:								
Muskogee.....	6	0	1	15		0	0	
Texas:								
Dallas.....	34	6	6	4	5	5	40	10
Fort Worth.....	11	3	2		4	0	0	1
Galveston.....	2	1	1		1	0	0	3
Houston.....	0	6	4		1	0	2	11
San Antonio.....	3	4	2		7	2	2	9
MOUNTAIN								
Montana:								
Billings.....	3	1	0		3	0	0	0
Great Falls.....	1	1	0		0	0	0	1
Helena.....	1	0	0		0	0	0	0
Missoula.....	0	1	0		0	0	0	2
Idaho:								
Boise.....	5	0	0		0	0	0	0
Colorado:								
Denver.....	43	9	4		4	17	13	13
Pueblo.....	5	2	0		0	161	2	2
New Mexico:								
Albuquerque.....	13	0	0		0	1	0	1
Arizona:								
Phoenix.....	8	0	1	1	0	0	0	2
Utah:								
Salt Lake City.....	8	2	0		0	2	7	4
Nevada:								
Reno.....	0	0	0	8	0	0	0	1
PACIFIC								
Washington:								
Seattle.....	31	4	2			2	13	
Spokane.....	2	2	0			3	0	
Tacoma.....	8	1	2		0	1	0	3
Oregon:								
Salem.....	0	0	1			12	22	
California:								
Los Angeles.....	91	38	16	115	5	108	11	20
Sacramento.....	38	2	5	23	2	1	2	1
San Francisco.....	70	15	5	225	4	9	10	5

City reports for week ended February 21, 1931—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culosis, deaths reported	Typhoid fever			Whoop- ing cough, cases reported	Deaths, all causes
	Cases, esti- mated expect- ancy	Cases, re- ported	Cases, esti- mated expect- ancy	Cases, re- ported	Deaths reported		Cases, esti- mated expect- ancy	Cases, re- ported	Deaths reported		
NEW ENGLAND											
Maine:											
Portland.....	3	13	0	0	0	2	0	0	0	25	31
New Hampshire:											
Concord.....	0	0	0	0	0	0	0	0	0	0	4
Vermont:											
Barre.....	0	0	0	0	0	0	0	0	0	0	-----
Massachusetts:											
Boston.....	83	138	0	0	0	10	0	0	0	39	276
Fall River.....	2	18	0	0	0	2	0	0	0	8	35
Springfield.....	10	7	0	0	0	1	0	0	0	2	39
Worcester.....	10	17	0	0	0	2	0	0	0	5	49
Rhode Island:											
Pawtucket.....	1	-----	0	-----	-----	-----	0	-----	-----	-----	-----
Providence.....	12	13	0	0	0	5	0	0	0	10	84
Connecticut:											
Bridgeport.....	12	6	0	0	0	1	0	0	0	2	43
Hartford.....	6	6	0	0	0	2	0	0	0	4	47
New Haven.....	10	2	0	0	0	1	0	0	0	4	42
MIDDLE ATLANTIC											
New York:											
Buffalo.....	29	24	0	6	0	8	1	0	0	19	178
New York.....	290	373	0	0	0	94	6	5	1	176	1,731
Rochester.....	9	91	0	0	0	1	0	0	0	17	94
Syracuse.....	15	12	0	0	0	1	0	0	0	8	63
New Jersey:											
Camden.....	7	6	0	0	0	2	0	0	0	2	54
Newark.....	48	49	0	0	0	8	0	1	0	26	121
Trenton.....	6	8	0	0	0	7	0	1	0	1	46
Pennsylvania:											
Philadelphia.....	104	167	0	0	0	54	2	0	1	42	596
Pittsburgh.....	35	35	0	0	0	11	1	0	0	37	304
Reading.....	6	0	0	0	0	2	0	0	0	1	26
EAST NORTH CEN- TRAL											
Ohio:											
Cincinnati.....	22	34	1	0	0	14	0	0	0	3	160
Cleveland.....	57	59	0	0	0	25	1	0	0	31	265
Columbus.....	12	15	2	0	0	2	0	0	0	0	93
Toledo.....	14	12	1	6	0	4	0	0	0	2	85
Indiana:											
Fort Wayne.....	4	1	0	1	0	0	0	0	0	1	29
Indianapolis.....	12	73	7	19	0	6	0	0	0	18	-----
South Bend.....	4	3	1	0	0	1	0	0	0	3	24
Terre Haute.....	3	5	0	0	0	0	0	0	0	0	26
Illinois:											
Chicago.....	137	217	3	0	0	49	3	0	0	39	840
Springfield.....	3	4	0	0	0	0	1	0	0	0	33
Michigan:											
Detroit.....	120	107	2	2	0	24	0	0	0	87	376
Flint.....	17	17	0	0	0	1	1	0	0	14	21
Grand Rapids.....	13	19	0	0	0	0	0	0	0	3	23
Wisconsin:											
Kenosha.....	3	0	1	0	0	0	0	0	0	0	9
Madison.....	6	0	0	0	-----	-----	0	0	-----	7	-----
Milwaukee.....	26	19	1	0	0	10	0	0	0	18	144
Racine.....	5	7	0	0	0	0	0	0	0	7	12
Superior.....	4	1	0	0	0	0	0	0	0	0	3
WEST NORTH CENTRAL											
Minnesota:											
Duluth.....	10	0	0	0	0	2	0	0	0	6	29
Minneapolis.....	52	19	2	0	0	1	0	0	0	11	116
St. Paul.....	35	4	0	0	0	2	0	2	0	17	73
Iowa:											
Davenport.....	2	3	1	15	-----	-----	0	0	-----	0	-----
Des Moines.....	12	4	2	13	-----	-----	0	0	-----	0	81
Sioux City.....	2	18	0	1	-----	-----	0	0	-----	3	-----
Waterloo.....	2	2	1	0	-----	-----	0	0	-----	2	-----

City reports for week ended February 21, 1931—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culosis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths, all causes
	Cases, esti- mated expect- ancy	Cases, re- ported	Cases, esti- mated expect- ancy	Cases, re- ported	Deaths re- ported		Cases, esti- mated expect- ancy	Cases, re- ported	Deaths re- ported		
WEST NORTH CENTRAL—contd.											
Missouri:											
Kansas City.....	21	16	0	0	0	7	0	0	0	5	130
St. Joseph.....	3	4	0	0	0	0	0	0	0	0	26
St. Louis.....	36	153	2	3	0	15	1	0	0	8	351
North Dakota:											
Fargo.....	2	3	0	0	0	0	0	0	0	0	4
Grand Forks.....	1	0	0	0	—	—	0	0	—	0	—
South Dakota:											
Aberdeen.....	1	0	0	0	—	—	0	0	—	0	—
Sioux Falls.....	2	0	0	3	—	—	0	0	—	0	8
Nebraska:											
Omaha.....	5	10	2	16	0	0	0	0	0	1	57
Kansas:											
Topeka.....	4	0	1	6	0	0	0	0	0	2	20
Wichita.....	4	1	0	41	0	0	0	0	0	7	29
SOUTH ATLANTIC											
Delaware:											
Wilmington.....	5	8	0	0	0	0	0	0	0	1	23
Maryland:											
Baltimore.....	39	40	0	0	0	7	1	0	0	15	259
Cumberland.....	1	2	0	0	0	1	0	0	0	0	17
Frederick.....	0	3	0	0	0	0	0	0	0	0	5
District of Col.:											
Washington.....	24	14	1	0	0	9	0	1	0	4	196
Virginia:											
Lynchburg.....	0	1	0	0	0	0	0	0	0	0	11
Norfolk.....	2	2	0	0	0	2	0	0	0	9	—
Richmond.....	4	16	0	0	0	4	0	0	0	0	66
Roanoke.....	0	1	0	0	0	1	0	0	0	0	22
West Virginia:											
Charleston.....	1	1	0	0	0	0	0	1	1	0	10
Wheeling.....	2	1	0	0	0	0	0	0	0	0	22
North Carolina:											
Raleigh.....	1	2	1	0	0	4	0	0	0	7	18
Wilmington.....	0	0	0	0	0	1	0	0	0	3	11
Winston-Salem.....	2	2	0	0	0	2	0	0	0	0	12
South Carolina:											
Charleston.....	0	1	0	0	0	3	0	0	0	0	37
Columbia.....	0	1	0	0	0	1	0	0	0	0	36
Greenville.....	0	0	1	0	0	0	0	0	0	0	—
Georgia:											
Atlanta.....	6	57	2	1	0	7	0	0	1	2	114
Brunswick.....	0	0	0	0	0	0	0	0	0	0	5
Savannah.....	1	1	0	0	0	1	0	1	0	0	46
Florida:											
Miami.....	3	1	0	0	0	2	1	0	0	0	31
Tampa.....	0	3	0	0	0	3	1	2	0	0	41
EAST SOUTH CENTRAL											
Kentucky:											
Covington.....	1	19	0	0	0	0	0	0	0	0	23
Tennessee:											
Memphis.....	8	53	1	3	1	6	0	0	0	0	90
Nashville.....	2	7	0	0	0	2	0	0	0	0	59
Alabama:											
Birmingham.....	2	8	1	0	0	6	1	0	0	4	89
Mobile.....	0	3	0	0	0	2	0	0	0	0	18
Montgomery.....	1	1	0	0	—	—	0	0	—	1	—
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith.....	1	0	0	0	—	—	0	0	—	0	—
Little Rock.....	2	2	0	2	0	3	0	0	0	0	—
Louisiana:											
New Orleans.....	8	25	0	4	0	15	2	1	0	8	172
Shreveport.....	0	0	0	8	0	5	0	0	1	0	40
Oklahoma:											
Muskogee.....	1	3	2	0	—	—	0	1	—	0	—

City reports for week ended February 21, 1931—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culo- sis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths, all causes
	Cases, esti- mated expect- ancy	Cases, re- ported	Cases, esti- mated expect- ancy	Cases, re- ported	Deaths re- ported		Cases, esti- mated expect- ancy	Cases, re- ported	Deaths re- ported		
WEST SOUTH CENTRAL—contd.											
Texas:											
Dallas.....	5	8	4	0	0	1	0	0	0	8	60
Fort Worth.....	4	2	2	17	1	2	0	0	0	0	22
Galveston.....	0	0	0	0	0	0	0	1	0	0	23
Houston.....	2	6	3	1	0	3	0	0	0	0	73
San Antonio.....	2	0	0	0	0	8	0	0	1	0	65
MOUNTAIN											
Montana:											
Billings.....	0	0	1	0	0	0	0	0	0	0	8
Great Falls.....	3	10	0	0	0	0	0	0	0	19	6
Helena.....	0	0	0	5	0	0	0	0	0	0	6
Missoula.....	0	0	0	0	0	0	0	0	0	7	8
Idaho:											
Boise.....	1	2	0	0	0	0	0	0	0	0	6
Colorado:											
Denver.....	14	14	0	0	0	8	0	1	0	24	97
Pueblo.....	2	1	0	0	0	1	0	0	0	7	9
New Mexico:											
Albuquerque.....	1	1	0	0	0	7	0	1	0	1	15
Arizona:											
Phoenix.....	1	0	0	1	0	0	0	0	0	1	-----
Utah:											
Salt Lake City.....	3	7	1	0	0	0	0	0	0	25	27
Nevada:											
Reno.....	0	0	1	0	0	0	0	0	0	0	3
PACIFIC											
Washington:											
Seattle.....	10	7	3	0	-----	-----	1	2	-----	44	-----
Spokane.....	6	0	9	3	-----	-----	0	1	-----	2	-----
Tacoma.....	2	9	3	1	0	0	0	0	0	0	37
Oregon:											
Salem.....	0	0	1	0	-----	-----	0	0	-----	0	-----
California:											
Los Angeles.....	44	26	3	5	0	25	2	0	0	16	258
Sacramento.....	2	4	0	0	0	7	0	1	0	8	30
San Francisco.....	27	2	1	2	0	17	0	2	0	24	183

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases estimated expectancy	Cases	Deaths
NEW ENGLAND									
Massachusetts:									
Boston.....	1	0	0	0	0	0	0	1	0
Springfield.....	1	0	0	0	0	0	0	0	0
Rhode Island:									
Providence.....	0	0	1	0	0	0	0	0	0
MIDDLE ATLANTIC									
New York:¹									
New York.....	12	8	4	1	0	0	1	3	0
New Jersey:									
Newark.....	0	2	0	0	0	0	0	0	0
Pennsylvania:									
Philadelphia.....	6	3	1	1	0	0	0	0	0
Pittsburgh.....	1	2	0	1	0	0	0	0	0

¹Rabies (in man): 1 death at New York City.

City reports for week ended February 21, 1931—Continued

Division, State, and city	Meningo- coccus meningitis		Lethargic en- cephalitis		Pellagra		Polio-myelitis (Infan- tile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases esti- mated expect- ancy	Cases	Deaths
EAST NORTH CENTRAL									
Ohio:									
Cincinnati.....	1	1	0	0	0	0	0	0	0
Cleveland.....	0	0	0	1	0	0	0	0	0
Indiana:									
Indianapolis.....	6	1	0	0	0	0	0	0	0
Illinois:									
Chicago.....	0	2	0	0	0	0	1	0	0
Michigan:									
Detroit.....	8	1	0	0	0	0	0	1	0
Wisconsin:									
Milwaukee.....	1	0	0	0	0	0	0	0	0
Racine.....	0	0	1	0	0	0	0	0	0
Superior.....	1	0	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth.....	0	0	0	0	0	0	0	1	0
Minneapolis.....	1	0	0	0	0	0	0	0	0
Iowa:									
Des Moines.....	1	0	0	0	0	0	0	0	0
Sioux City.....	1	0	0	0	0	0	0	0	0
Missouri:									
Kansas City.....	1	0	0	0	0	0	0	0	0
St. Louis.....	5	2	1	1	0	0	0	0	0
North Dakota:									
Fargo.....	1	0	0	0	0	0	0	0	0
SOUTH ATLANTIC									
Maryland:									
Baltimore.....	2	0	1	0	0	0	0	0	1
District of Columbia:									
Washington.....	2	1	0	0	0	0	0	0	0
Virginia:									
Richmond.....	0	0	0	1	0	0	0	0	0
North Carolina:									
Raleigh.....	0	0	0	0	2	1	0	0	0
Wilmington.....	0	0	0	0	3	0	0	0	0
Winston-Salem.....	0	0	0	0	2	0	0	0	0
South Carolina:									
Charleston.....	0	0	0	0	2	0	0	0	0
Columbia.....	0	3	0	0	0	0	0	0	0
Georgia:									
Atlanta.....	0	1	0	0	0	0	0	0	0
Savannah.....	0	0	0	0	1	1	0	0	0
Florida:									
Tampa.....	0	0	0	0	1	0	0	0	0
EAST SOUTH CENTRAL									
Tennessee:									
Memphis.....	7	5	0	0	0	1	0	0	0
Nashville.....	2	2	0	0	0	0	0	0	0
Alabama:									
Birmingham.....	1	1	1	0	1	1	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Little Rock.....	0	0	0	0	0	1	0	0	0
Louisiana:									
New Orleans.....	3	1	0	0	4	4	0	0	0
Shreveport.....	0	0	0	0	0	1	0	0	0
Texas:									
Dallas.....	0	0	0	0	1	2	0	0	0
Houston.....	0	0	0	0	0	1	0	0	0
San Antonio.....	1	0	0	0	0	0	0	0	0
MOUNTAIN									
Colorado:									
Denver.....	2	0	0	0	0	0	0	0	0
Utah:									
Salt Lake City.....	2	0	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Tacoma.....	1	0	0	0	0	0	0	0	0
California:									
Los Angeles.....	2	2	0	1	0	0	0	1	0
Sacramento.....	1	0	0	0	0	0	0	0	0

* Nonresident.

The following tables give the rates per 100,000 population for 98 cities for the 5-week period ended February 21, 1931, compared with those for a like period ended February 22, 1930. The population figures used in computing the rates are estimated mid-year populations for 1930 and 1931, respectively, derived from the 1930 census. The 98 cities reporting cases have an estimated aggregate population of more than 33,000,000. The 91 cities reporting deaths have more than 31,500,000 estimated population.

*Summary of weekly reports from cities January 18 to February 21, 1931—Annual rates per 100,000 population, compared with rates for the corresponding period of 1930*¹

DIPHTHERIA CASE RATES

	Week ended—									
	Jan. 24, 1931	Jan. 25, 1930	Jan. 31, 1931	Feb. 1, 1930	Feb. 7, 1931	Feb. 8, 1930	Feb. 14, 1931	Feb. 15, 1930	Feb. 21, 1931	Feb. 22, 1930
98 cities.....	79	110	80	112	78	92	67	95	67	91
New England.....	106	160	106	135	82	119	75	104	60	109
Middle Atlantic.....	67	91	68	98	53	92	53	78	64	83
East North Central.....	94	144	111	139	96	102	85	114	66	101
West North Central.....	84	83	111	77	99	83	55	107	59	95
South Atlantic.....	65	116	73	116	75	76	59	102	47	120
East South Central.....	76	66	70	84	52	72	52	66	58	96
West South Central.....	81	146	183	216	156	157	118	136	186	80
Mountain.....	35	35	70	35	78	70	78	62	35	70
Pacific.....	88	79	45	69	69	36	49	75	59	53

MEASLES CASE RATES

98 cities.....	405	220	418	278	473	317	521	411	670	446
New England.....	522	230	438	341	502	322	534	472	559	418
Middle Atlantic.....	261	111	306	145	353	176	397	213	652	254
East North Central.....	80	135	142	167	151	171	183	251	255	267
West North Central.....	1,984	467	1,521	424	1,488	610	1,314	810	1,086	775
South Atlantic.....	804	172	1,032	314	1,294	268	1,817	334	2,202	441
East South Central.....	698	24	906	54	1,034	72	896	233	1,123	604
West South Central.....	10	582	17	293	3	648	17	692	24	745
Mountain.....	757	220	496	396	1,123	405	688	758	1,567	767
Pacific.....	72	626	110	1,028	112	1,028	168	1,243	243	1,271

SCARLET FEVER CASE RATES

98 cities.....	334	288	337	292	320	323	348	302	342	294
New England.....	575	457	519	346	534	530	683	382	549	409
Middle Atlantic.....	314	226	328	289	304	260	321	234	342	242
East North Central.....	385	375	378	416	331	427	375	434	353	421
West North Central.....	323	314	386	263	480	370	474	331	497	327
South Atlantic.....	343	192	212	224	204	222	320	252	304	286
East South Central.....	483	149	512	143	419	191	378	149	528	149
West South Central.....	142	98	112	73	88	129	106	108	139	94
Mountain.....	357	379	322	414	261	361	409	428	286	308
Pacific.....	119	344	148	306	145	289	128	269	94	202

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, 1931 and 1930, respectively.

² Columbia, S. C., not included.

³ Pawtucket, R. I., not included.

Summary of weekly reports from cities January 18 to February 21, 1931—Annual rates per 100,000 population, compared with rates for the corresponding period of 1930—Continued

SMALLPOX CASE RATES

	Week ended—									
	Jan. 24, 1931	Jan. 25, 1930	Jan. 31, 1931	Feb. 1, 1930	Feb. 7, 1931	Feb. 8, 1930	Feb. 14, 1931	Feb. 15, 1930	Feb. 21, 1931	Feb. 22, 1930
98 cities.....	16	26	17	31	23	29	18	26	20	24
New England.....	0	5	0	0	0	2	0	7	0	0
Middle Atlantic.....	0	1	0	0	2	0	0	0	3	0
East North Central.....	21	19	25	39	12	34	10	33	13	20
West North Central.....	77	72	84	48	151	60	84	48	128	93
South Atlantic.....	4	2	0	6	0	4	0	6	2	2
East South Central.....	29	0	17	12	29	0	12	24	17	12
West South Central.....	34	35	51	73	81	94	132	98	51	52
Mountain.....	9	26	0	62	44	18	0	35	44	18
Pacific.....	20	152	18	152	24	126	29	89	22	101

TYPHOID FEVER CASE RATES

98 cities.....	6	4	5	5	4	4	3	6	4	5
New England.....	2	0	5	0	2	0	2	2	0	5
Middle Atlantic.....	3	5	2	5	1	3	2	6	3	6
East North Central.....	3	2	1	3	2	5	1	3	0	1
West North Central.....	10	2	13	4	2	2	2	10	4	2
South Atlantic.....	14	8	8	8	18	12	0	8	10	14
East South Central.....	12	18	17	6	6	18	29	18	0	6
West South Central.....	27	3	14	3	24	7	14	7	7	3
Mountain.....	17	9	0	9	0	0	0	0	9	9
Pacific.....	6	2	10	14	0	2	10	4	12	10

INFLUENZA DEATH RATES

91 cities.....	52	21	70	16	60	14	59	20	60	19
New England.....	12	10	34	2	46	5	46	5	45	17
Middle Atlantic.....	91	14	101	14	68	10	49	14	42	15
East North Central.....	18	17	36	13	52	12	56	17	61	16
West North Central.....	29	18	29	18	21	21	56	12	68	12
South Atlantic.....	38	34	127	12	129	12	118	32	122	22
East South Central.....	63	52	76	52	63	32	63	58	139	71
West South Central.....	83	103	100	82	73	50	159	68	97	68
Mountain.....	44	9	52	9	52	44	17	35	61	26
Pacific.....	22	15	14	2	12	7	14	17	26	2

PNEUMONIA DEATH RATES

91 cities.....	229	140	259	164	231	175	220	171	216	177
New England.....	178	138	185	193	286	160	291	193	264	242
Middle Atlantic.....	332	128	368	188	293	180	254	191	236	190
East North Central.....	126	110	176	128	176	138	182	128	187	151
West North Central.....	171	150	159	162	135	159	124	111	147	163
South Atlantic.....	280	214	345	238	325	216	373	214	340	222
East South Central.....	296	194	227	239	176	207	164	220	265	239
West South Central.....	245	288	203	292	214	270	176	256	228	174
Mountain.....	157	220	200	229	209	379	183	256	200	247
Pacific.....	108	77	115	92	72	130	72	107	70	67

¹ Columbia, S. C., not included.

² Pawtucket, R. I., not included.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—Week ended February 21, 1931.—The Department of Pensions and National Health of Canada reports cases of certain communicable diseases for the week ended February 21, 1931, as follows:

Province	Cerebro-spinal fever	Dysentery	Influenza	Polio-myelitis	Smallpox	Typhoid fever
Prince Edward Island ¹						
Nova Scotia.....			53	1		1
New Brunswick.....						6
Quebec.....	2		1			7
Ontario.....	2		21	1	4	1
Manitoba.....	1			1		2
Saskatchewan.....					18	3
Alberta.....						2
British Columbia.....		3	1		2	2
Total.....	5	3	76	3	24	22

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

Quebec Province—Communicable diseases—Week ended February 21, 1931.—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the week ended February 21, 1931, as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis.....	2	Ophthalmia neonatorum.....	1
Chicken pox.....	88	Puerperal septicemia.....	2
Diphtheria.....	46	Scarlet fever.....	95
Erysipelas.....	5	Tuberculosis.....	84
German measles.....	1	Typhoid fever.....	6
Measles.....	52	Whooping cough.....	59
Mumps.....	23		

CUBA

Provinces—Communicable diseases—Four weeks ended January 17, 1931.—During the four weeks ended January 17, 1931, cases of certain communicable diseases were reported in the provinces of Cuba as follows:

Disease	Pinar del Rio	Habana	Matanzas	Santa Clara	Carnagney	Oriente	Total
Cancer.....			1	1			2
Chicken pox.....		12	9	30	4	7	62
Diphtheria.....	1	24	3	2	1	1	32
Malaria.....	1	4			7	66	78
Measles.....		1		10			11
Paratyphoid fever.....			2			2	4
Scarlet fever.....		1		1			2
Tetanus (infantile).....				1			1
Typhoid fever.....	3	18	2	11	4	16	54

Habana—Communicable diseases—January, 1931.—During the month of January, 1931, certain communicable diseases were reported in the city of Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Chicken pox.....	12		Measles.....	7	
Diphtheria.....	22	3	Rabies.....	1	1
Filaria.....	1		Scarlet fever.....	1	
Leprosy.....	2	1	Tuberculosis.....	29	6
Malaria.....	2		Typhoid fever.....	7	2

¹ Many of these cases are from the island, outside of Habana.

DENMARK

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

Disease	Cases	Disease	Cases
Cerebrospinal meningitis.....	4	Paratyphoid fever.....	3
Chicken pox.....	31	Poliomyelitis.....	4
Diphtheria and croup.....	499	Puerperal fever.....	21
Erysipelas.....	297	Scabies.....	844
German measles.....	3	Scarlet fever.....	170
Influenza.....	5,907	Tetanus.....	4
Lethargic encephalitis.....	6	Typhoid fever.....	5
Measles.....	1,400	Undulant fever (Bac. abort. Bang).....	54
Mumps.....	393	Whooping cough.....	2,109

PORTO RICO

San Juan—Communicable diseases—Five weeks ended January 31, 1931.—During the five weeks ended January 31, 1931, cases of certain communicable diseases were reported in San Juan, Porto Rico, as follows:

Disease	Cases	Disease	Cases
Diphtheria.....	6	Measles.....	4
Influenza.....	6	Typhoid fever.....	2
Leprosy.....	1	Whooping cough.....	38
Malaria.....	42		

Philippine Islands: ¹

Ports—

Place	June, 1930	July, 1930	August, 1930	September, 1930			October, 1930			November, 1930			Dec. 1-10, 1930
				1930			1930			1930			
				1-10	11-20	21-30	1-10	11-20	21-31	1-10	11-20	21-30	
Indo-China (French) (see also table above):													
Annam	16	1	3										28
Cambodia	144	43	59	23	13	2	10	6	6		1		28
Cochin-China	273	46	27	9	6	13	14	6	8		5		8
Philippine Islands: 1													
Cebu	2	2											
Iloilo	10	1											
Manila	14	3											
Provinces—													
Antique	47	40											
Bohol	34	18											
Bulacan	20	2											
Capiz	4	2											
Cebu	25	1											
Iloilo	288	11	50	30	45	7	6	13	3	11	41	36	57
Negros, Occidental	161	40	22	27	6	6	4	10	2	9	27	26	49
Negros, Oriental	122	28	56	163	28	19	33	40	19	32	33	6	1
Pampanga	91	20	41	123	22	16	26	33	15	17	19	5	1
Samar	1	1											
Sortogon	2	7	16	12	8	2	1	12	2				
Surigao	1	(1)	4										
Siam	2	4	4	4	6	2		2	2	2	2	1	1
Bangkok	1	1	1	1	2	2	1	2	2	2	2	1	1
On vessel: S. S. Malwa from Shanghai	1	3	3	3	4	2	1	1	2	2	1	1	

Indo-China (French) (see also table above):													
Annam	16	1	3										28
Cambodia	144	43	59	23	13	2	10	6	6		1		28
Cochin-China	273	46	27	9	6	13	14	6	8		5		8

¹ Figures for cholera in the Philippine Islands are subject to correction.² During the period from Aug. 24 to Sept. 26, 1930, 26 cases of cholera with 17 deaths were reported in Manila, Surigao Province, P. I.³ Reports incomplete.

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

[illegible]

Place	July, 1960	Aug., 1960	Sept., 1960	Oct., 1960	Nov., 1960	Dec., 1960
British East Africa (see also table above):						
Kenya.....	97	87	53	58	62	50
Greece (see also table above).....				2	2	
Indo-China (see also table above).....	1	2	5	2	5	1
Madagascar (see also table above):						
Ambohitra Province.....				4	16	
Antistrabe Province.....	24	11	21	4	4	
Marinarivo Province.....	24	11	21	3	10	
Moramanga Province.....	1	2	7	18	8	
Tananarive Province.....		27	18	19	8	
	23	27	17	20	8	
	23	33	70	126		
			70	116		
Peru.....						
Senegal:						
Baol ¹						
Dakar ¹						
Louga ¹						
Thies ¹						
Tivaouane ¹						

¹ Reports incomplete.

SMALLPOX

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

Place	Week ended—														
	Aug. 24— Sept. 21— 20, 1930	Oct. 19—Nov. 15, Nov. 15, Dec. 13, 1930	January, 1931							February, 1931					
			Decem- ber, 1930	20	27	3	10	17	24	31	7	14	21	28	
Algeria:															
Algiers	0														
Bone	0														
Constantine	0														
Oran	0		1								1				
Arabia: Aden	0												1		
Brazil:															
Porto Alegre (alastrim)	0	1	26	36	28										
Rio de Janeiro	0	522	95	17	385	23	1	67	3						
British East Africa (see also table below): Tanganyika	D	60	6	1	36	1		3							
British South Africa: Southern Rhodesia	D	1	153	95	18				18						
Canada:															
Alberta	0	1	22		1					19				1	
British Columbia—Vancouver	0	2	2	3	1					1	2		2	1	
Manitoba	0	1										1			
Winnipeg	0										1				1
Nova Scotia	0														
Ontario	0	10	19	59	23	1				8	8	10	3	32	4
Kingston	0						2			4	1				
North Bay	0						1								
Ottawa	0									2	1		1		1
Sault Ste. Marie	0	5		37	12								1	6	6
Toronto	0	1			4								2		2
Quebec	0				2										
Saskatoon	0	1	3	3	18								2		
China:													7	6	5
Canton	0														17
Chungking	0	P	P	P	P	2									2
Foochow	0	P	P	P	P						P				
Hong Kong	0					1									
															2
															3

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

SMALLPOX—Continued

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

Place	Week ended—																				
	Aug. 24— Sept. 20, 1930	Sept. 21— Oct. 13, 1930	Oct. 14— Nov. 10, 1930	Nov. 11— Dec. 12, 1930	January, 1931							February, 1931									
					December, 1930		3	10	17	24	31	7	14	21	28						
					20	27															
India (French):																					
Chandernagor.....	3	3	3			5															
	2	1	1			2															
Karikal.....	5	1	1			2															
	2	1				1															
Pondicherry Province.....	2	1				1															
	35	38				8															
	33	36	11	19	10	7	11	16	8	1											
	4		11	17	7	8	7	16	8	1											
India (Portuguese)						3															
Indo-China (see also table below):																					
Phnompenh.....																					
		2		1		2															
				1																	
Saloon and Cholon.....	1		2	2																	
	1		2	2																	
Iraq:																					
Baghdad.....																					
Mosul Liwa.....																					
	1	2	6	16																	
		69	2	2																	
		27																			
Ivory Coast (see table below).																					
Mexico (see also table below):																					
Jalisco (State) Guadalajara.....		3	3	3																	
Juarez.....	12	13	9	6		1	5														
Mexico City and surrounding territory.....	5	3	2	6		2	1														
			1																		
Vera Cruz.....																					
Morocco (see table below).																					
Nicaragua: Porto Cabezas.....			8	3		2															
Poland.....			37	21	17																
Portugal: Lisbon.....	27	16	20	37	34	27	31	15	30												
Poland.....			1	1																	
Siam.....		1	1	1																	
Somaland, British: Boale.....		1	1	1																	
	5	5	61	67	19	31	18														
Spain.....																					

Place	July, 1930		Aug., 1930		Sept., 1930		Oct., 1930		November, 1930		December, 1930		January, 1931	
	1-10	11-31	1-10	11-31	1-10	11-31	1-10	11-31	1-10	11-31	1-10	11-31	1-10	11-31
Straits Settlements.....	0	6	5	10	17	3	2	1	3	1	2	1	2	1
Sudan (Anglo-Egyptian).....	0	1	1	2	7	2	1	1	1	1	1	1	1	1
Sudan (French) (see table below).	0	123	82	5	50	47	1	7	1	7	1	8	1	1
Switzerland: Berno Canton.....	0	52	7	1	5	6								6
Syria (see table below).....	0													
Tunisia.....	0													
Turkey (see table below).....	0													
Union of South Africa.....	0													
Upper Volta.....	0													
On vessel:														
S. S. Clan Macgregor at Suzer.....	0													
S. S. Muncaster Castle at Manila from Hong Kong.....	0													2
S. S. Matheran at Suez from Calcutta.....	0													
S. S. Clan Buchanan at Suez.....	0													3
Indo-China (see also table above).....	C	238	93	192	258									46
Ivory Coast.....	C				4	86								
Sudan (French).....	C	34	39	P	17	2								
Syria: Beirut.....	O	2	1										1	
British East Africa (see also table above):														
Kenya.....	C	424		633										4
Chosen.....	D	35	3	65	65									1
France.....	O	21	15	5	2									
Place	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930	Nov., 1930	Dec., 1930	Place		July, 1930	Aug., 1930	Sept., 1930	Oct., 1930	Nov., 1930	Dec., 1930
Greece.....	186				633				1	718	822	863		
Mexico: (see also table above).....	65	35	22	2					650	8	8	4	20	
Morocco.....	21	15	5	6	51				61	21	19	74		
Turkey.....	1				13				13	4	2	1		

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

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

Place	Aug. 24-Sept. 20, 1930	Sept. 21-Oct. 15, 1930	Oct. 16-Nov. 15, 1930	Week ended—											
				November, 1930			December, 1930			January, 1931					
				22	29	6	13	20	27	3	10	17	24	31	February, 1931
Algeria:															
Algiers.....	3		1	2											
Constantine Department.....		2	1	1											
Oran.....	1	3		3			1			3	3		6	6	10
Bulgaria.....	4	6	3	1	1	3	6	3				9	2	1	
China:								1							
Canton.....															
Manchuria—Harbin (see also table below).....	2	1				1							2		
Shanghai.....													2		
Chosen (see table below).....															
Czechoslovakia (see table below).....															
Egypt:															
Alexandria.....	3	1	2	1	1										
Behaira Province.....	1		2												
Cairo.....	1														
Port Said.....							1	1							
Great Britain: Scotland.....	2														
Glasgow.....	1	1	2										1	1	
Guatemala.....														2	
Guatemala, 1.....														1	
Latvia (see table below).....															
Lithuania (see table below).....															
Mexico (see also table below):															
Durango.....	1	2	11	1	1		12	5	2	4		13	12	6	
Mexico City, including municipalities in Federal District.....	2	2	4	2	3		2	4	1	3	2	8	9	9	
San Luis Potosi.....							1								
Morocco.....	2		3	1			1	8						1	3
Palestine.....	3	1	3	1	6			1	1		2	1	1		3

