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CANCER AS A PUBLIC HEALTH PROBLEM¹

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It is only within the last few years that cancer has been considered a public health problem. I suppose that the old attitude was due to the fact that cancer is not an infectious disease; also largely because of the popular notion that it is not preventable; and probably also, to a large extent, to the feeling, fairly well grounded, that the disease is incurable. Fortunately, within the last two decades the last two of these objections have been partly removed, because we now know that some of the major forms of cancer are distinctly preventable, and owing to the improvements in the treatment and diagnosis of cancer the proportion of cures is much higher than it was many years ago. So that in recent years, instead of being entirely neglected by health officials and bodies throughout the country, there has been quite a change in the attitude toward cancer.

It was about 15 years ago that the Government of Sweden, sensing through the advice of some far-sighted physicians that radiation therapy had an important future, purchased a large amount of radium, which was used under the direction of very able men. The Government Institute in Sweden is probably now the leading cancer therapeutic institution in the world and publishes the very best statistics of the cure of some forms of cancer. The government established this institution devoted both to radiation therapy and to the diagnosis of cancer in all its forms, but went even further and made it practically mandatory that the people of Sweden should go to it for treatment, the government paying the railroad fares. They have provided a very efficient follow-up system. They have practically 100 per cent follow-up work in the city of Stockholm. I suppose it would be quite impossible to establish in America a mandatory institution for treatment such as that, but that is what has been done in Sweden, and it is certainly a lead for other health departments. It has been and is being followed by other countries in Europe. Norway is almost equal in its organization, and Denmark is following rapidly.

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England has been backward in this matter, owing probably to the strong entrenchment of old notions about the diagnosis and treatment of cancer. But about four years ago the Ministry of Health, after a survey of the conditions of the treatment of cancer in the British Isles, issued a pamphlet stating that it was a matter of grave concern to the ministry that English physicians were so backward with regard to new methods of diagnosis and treatment of cancer and that this was also a matter of grave concern to the people. This was quite a remarkable announcement for such a conservative body to issue. It is, nevertheless, on record, and as a result of it, within a few years there has been a complete change in the attitude toward the whole question of cancer in England. I noticed that within the past two months the British Ministry of Health has called upon the people of England to raise about \$2,500,000 to purchase 30 grams of radium, the Government to supply one-half of that amount. I was informed yesterday that the amount to be supplied had been raised. They propose to locate various quantities of this agent, together with modern X-ray machines, in at least 10 different centers. Now there is one matter of considerable importance in this decision, by the British Ministry of Health, which we may take as sound procedure, and that is that the practical diagnosis and treatment of cancer is a specialty.

In this country, Massachusetts is taking the lead, I believe, as usual. I am told by Doctor Bigelow that it was to a considerable extent the force of public opinion in that State, and not entirely the initiative of the medical profession, which forced the State of Massachusetts to make cancer a part of its public health program. That is an important question, because so many of us who are more or less familiar with cancer and the medical situation feel that in the long run the position of cancer as a public health problem will be determined largely by public opinion and not solely by initiative on the part of the medical profession. At any rate, Massachusetts granted considerable sums for the establishment of special cancer hospitals, one for the treatment of advanced cases. They farmed out some of their more favorable cases to other institutions such as the Massachusetts General Hospital, and much of the work in diagnosis is done by the State under the care of the Huntington Hospital; but the main point is that Massachusetts devoted funds for the establishment of special cancer hospitals and for the provision of special cancer diagnosis on a modern basis.

The Massachusetts General Hospital, realizing that the cancer patient did not always get a square deal, decided that it would be well to establish a cancer service to which all cancer patients might be referred and which would determine the disposition of the cancer patient, but the reference was not mandatory. However, that spe-

cial cancer service, headed by men interested in this subject and very competent in all branches of diagnosis and treatment, has been so advantageous that practically all patients, both private and ward, are now referred to this service. The Philadelphia General Hospital has established a similar service. The city of Buffalo followed in the same line and went one step further and made the reference of all cancer patients to the central service mandatory. These steps are being taken right along in bringing greater specialization and more mature talent to bear upon the problems of cancer in many institutions. I think no other State has actually devoted funds directly to deal with cancer as a health problem. I trust, however, that the position taken by Sweden and Norway, the Scandinavian countries, the program pursued by England, and the steps taken by Massachusetts will be accepted in this country as progress along the right lines and that from now on cancer will be recognized as an important public health problem.

There are some changes in the knowledge of cancer which have come within the past few years and which have made all these movements possible and desirable. In the first place, 25 years ago cancer was rated as a single disease. Now we distinguish between various forms of carcinoma, sarcoma, and other malignant tumors, and we know that there are just about as many clinical entities in the groups of cancer as there are outside of them. We know that they are all united by the fact that they consist essentially in malignant proliferation of cells, but of very different etiology, clinical course, prognosis, and indications for treatment. As a student of the cancer problem, I regard that as one of the most important steps made in cancer history.

One of the objections toward the development of organized attack on the cancer question has been the fact that we do not know the cause of cancer. We have no satisfactory proof of the nature of malignant proliferation of tissue cells. Neither have we any definite knowledge of the nature of normal growth; we merely have descriptive knowledge of the conditions under which it occurs. We know that the ovum, when fertilized, grows under certain conditions, but we do not know why it grows. I think, therefore, that the problem of the ultimate nature of the cancer process is one of those types of information which will long escape the human mind. In the present state of science, I think it is unsolvable; but the fact that the ultimate cause of cancer is unknown has little practical bearing upon our cancer problems of the present day.

The important thing to know to-day is that the exciting factors of the major forms of cancer are perfectly well known, are very simple, and are often controllable. The old French clinicians thought cancer of the mouth, which kills 3,500 yearly in the United States, was caused

by tobacco, bad teeth, and syphilis, and that if these three exciting factors were removed, cancer of the mouth would disappear. Instead of waiting for sensational discoveries in biology, we ought to be acquainting ourselves with these exciting factors in the major forms of human cancer which are accessible, controllable, and which, if dealt with intelligently, would result in a reduction in the incidence of cancer. On the whole, there is a very substantial body of knowledge regarding the various forms of chronic and specific irritation which are known to be necessary to the incidence of cancer. The exciting causes of several of the major forms of cancer are numerous and very commonplace. One conclusion that can be drawn from such information is that cancer is a public health problem of the first importance, because many of the forms of cancer are preventable, and if the public were thoroughly informed, a definite reduction in the incidence of cancer might follow.

Another difficulty arises in the conflicting opinions as to the best methods of attacking the cancer problems. One group feels that we must confine ourselves to laboratory research, discuss the ultimate cause of cancer, pursue chemistry, biochemistry, and physics, and that most of the efforts should be devoted to this type of investigation. I am not of that opinion. I do not see in the near future any likelihood of any discovery in these fundamental sciences which will throw a great light upon the cancer problem or put us in control of any essential factor in the cancer process. It will still remain necessary to pick out the particular chronic irritants and combat them. We shall still be hewers of wood in finding these common causes and types of irritation, acquainting the public with them, and thus attempting to reduce the incidence of the disease.

I do not see any reasons why State departments of health in general should devote large funds to fundamental cancer research. On the other hand, the United States Government, in the Hygienic Laboratory of the Public Health Service, is in a fortunate position to engage in fundamental cancer research. It would be following the excellent precedent of many European governments in establishing a broadly organized department of cancer research. If the Federal Government should devote adequate funds to this purpose, the action would receive the approval of competent authorities in this and other countries. Yet, the assignment of large sums of money with the object of initiating researches in all the branches of science that may possibly have a bearing on the cancer problem is not likely to result in any great advance. Cancer research is pretty well organized in most civilized countries. It is a live problem the world over. The number of competent workers and the resources available, however, are not large. Yet I do not see how the throwing in of large sums of money and the creation of a transient interest on the part of many persons who know little about cancer can result in any great good.

As far as I see the question, there are two ways in which public-health officials and organizations may help essentially in the program of cancer control, and these are in disseminating to the public the knowledge of the causes of cancer as they are known and of the early signs of the different forms of the disease, and in furthering the effort to provide proper facilities for the treatment of cancer. I was impressed last year traveling over Europe to find in England, France, Germany, and the Scandinavian countries that they do not do any publicity of this sort, or at least the efforts are very modest. You see very little information about the signs of cancer in the European public press. They feel that the driving of the patient to the doctor at the present time should be done cautiously. It is well said that in early diagnosis lies the only hope for cure. The statement is very good, but it is sophistical in two ways. In some of the major forms it is impossible to make an early diagnosis; in some cases there are no early signs; and in some instances there is no cure even where there is early diagnosis. In using this slogan we may therefore be holding out unwarranted hopes. Until the treatment of cancer is very much improved, I feel that the propaganda on the early signs of cancer is of limited value and in some instances is not playing quite fair to the public.

In some accessible types of cancer the propaganda has done good by bringing patients earlier for treatment. The results are most obvious in breast cancer. Every woman should and most do know the dangers of bleeding nipples and lumps in the breast. The public now pays considerable attention to the early stages of skin cancer and to many other conditions which are not cancer. Whether the mortality from melanoma has been reduced is not yet clear. There is definite need for much more urgent and specific instruction of the public about the early signs of lip and intraoral cancer, and about intraoral hygiene. Here is a large field for systematic, well-designed public propaganda. With uterine cancer the results seem to be less satisfactory. Every woman should know that abnormal bleeding is a sign of danger and not due to the menopause; but bleeding is not an early sign of uterine cancer. It is by no means certain that public propaganda has accomplished very much for uterine cancer, but it should be pursued and developed in more efficient ways. In all these common forms of cancer public education has done good, and it would be an excellent thing if health departments would take the initiative in acquainting the people of their communities with the early signs of these cancers in which such information may be of use.

I further believe that the time has come when the public should be informed of the most efficient methods of treating curable cancer, and of the progress which is being made in the field of therapeutics. This step has been taken boldly by the English press and by the British Ministry of Health. We can not close our eyes to the fact that many

persons lose their lives because of the fear, often well founded, of the penalties visited upon them when the diagnosis of cancer is made. When frantic efforts to cure advanced cancer by mutilating and dangerous operations are abandoned, when hopeless cases are rigidly assigned to palliative radiation, and when the public knows that bloodless and safe methods have already replaced the older standard surgical procedures in many cases, there will be less dread of cancer and more freedom in consulting the physician early. Pathologists see too many autopsies on persons dead of cancer and of efforts to cure it to feel enthusiastic about driving people early to aggressive surgeons and radiologists.

The following are the major forms of cancer: Stomach, 20 per cent; uterus and ovaries, 10 per cent; breast, 10 per cent; rectum, 10 per cent; esophagus, 10 per cent.

Under present conditions, what is the result of our public propaganda in these diseases. There are no early signs of gastric cancer. Not 1 per cent of these cases is saved to-day; it is more than 99 per cent fatal. It is only by accident that really early gastric cancer is recognized. I can not see much good in telling the public of the early signs of gastric cancer, since these are lacking in specific features. Slight persistent indigestion, heartburn, and irregularities in movements of the bowels are nearly universal experiences of human beings. Periodical examinations by highly competent experts seem to be the only method of dealing with this situation. When suspicious signs are observed, shall they in every instance be pursued by exploratory operation? It is evident that there are many difficult questions to be considered in any well-planned scheme of public education about the major forms of cancer.

The present state of efficiency of the medical profession in the diagnosis and treatment of cancer warns against too great confidence in the wisdom of telling the public about the signs of certain cancers, and the necessity of submitting to treatment. What will be the result of sending 100 persons early to the surgeon for rectal cancer? According to a survey by Doctor Saltstein for the American Society for the Control of Cancer, the average operative mortality in 19 cities of about 100,000 population is 45 per cent; Bellevue Hospital acknowledges 50 per cent mortality. Forty-five per cent would thus lose their lives on the operating table or die within a few hours; probably 40 per cent more would have a prompt recurrence of the disease and would never have a comfortable day, mentally or physically, from the time they reached the surgeon. Ten per cent is about all one can expect to enjoy any definite clinical improvement, and 5 per cent of the very early cases will be permanently cured. I do not think that the saving of 5 per cent permanently and 10 per cent for a number of years, justifies the taking of the lives of 45 per cent. This opinion is

shared, I believe, by competent surgeons who have had experience in this field. The only solution of the difficulty lies in the improvement of the service for cancer patients, by providing highly trained surgeons, fully competent and well-equipped radiologists, working together in institutions designed to render the best service.

While I am an exponent of X ray and radium in the treatment of cancer, I would not suggest that the day of cancer surgery is passing. On the contrary, there is more need to-day of intelligent surgical skill in the cancer field than there ever was before. To-day the surgeon is required to know all that can be done for the patient and to choose wisely and sometimes to do a partial operation, or refer the case to the radiologist. He must know something about the various types of cancer, because some should be operated on and some in the very same organ should be treated with radiation. The whole subject has become very much more complex. The surgeon should not be disturbed by the advent of new methods, but should undertake to combine them. I think from this point of view the outlook for the cancer patient is very much improved, but is still highly unsatisfactory, owing mainly to inexperience and prejudice.

Doctor Bigelow calculates that there are in the State of Massachusetts 5,000 new cases of cancer each year and there are 5,000 doctors. The average life of each cancer is two years. That permits each doctor to see two cases of cancer a year. How long will it be before he is competent to treat cancer? He can never become competent until he has special training. That is, cancer service to-day must be regarded as a medical specialty. It is a specialty all the way down the line. The clinical diagnosis of cancer, especially early cancer, is extremely difficult. It is impossible in many instances to be sure the patient has cancer. In many instances, after a section has been taken, it requires a specialist in the laboratory field to deal with it competently. I frequently encounter types of tumors for which the diagnosis and prognosis and indications for treatment are uncertain. I receive many sections for diagnosis from different parts of the country. They are often so badly prepared that no diagnosis can be made, although operations have already been performed. I remember some years ago a physician in the West brought me a paper on the operative cure of 10 cases of chorionic carcinoma. Out of these 10 cases there was only 1 death. The nine that recovered were all ordinary placental tissue. The case that died was a true carcinoma. He withdrew the paper. It is necessary to point out that the microscopic diagnosis of cancer is difficult. It will be of the greatest service if public health officials take steps to see that free and thoroughly competent diagnosis is given. That is the first step and it is a very big one.

Cancers are being graded according to their malignancy. Broders struck a very practical note in the grading of cancers according to

malignancy. It is very useful, because we find, as a rule, that the very malignant grade four cancers all recur after operation, and, as a rule, they are radiosensitive. In uterine cancer, the more malignant the tumor the better the prognosis, because the very malignant types are very radiosensitive. We have 46 per cent of cures of the grade four cancers of the cervix uteri by radiation; none by surgery. The reason is that they are very rapidly growing, highly cellular, and radiosensitive. The adult squamous uterine cancers are more radioresistant. There are similar variations in grades of malignancy and of radiosensitivity, with corresponding indications for treatment, in practically all the different forms of cancer—breast, tongue, lip, tonsil, stomach, esophagus, rectum, bone sarcoma, etc.

In the use of many modern instruments employed in the exploration of organs and the diagnosis of cancer, specialization is essential. Many of these instrumentations are dangerous in the hands of anyone who has not had much experience and first-class training.

The surgery of cancer is also changing rapidly and becoming more specialized and difficult. The foundations of some of the standard operations are being scrutinized and the scope of operability is being reduced in many fields in favor of radiation. The proper combination of surgery and radiation requires a thorough knowledge of the uses and limitations of both methods. There is no longer any ground for the old conflict between the radiologist and the surgeon. This conflict is maintained mainly by circumstances by which the surgeon is equipped solely for operation, and the radiologist solely for radiation. Where the two can cooperate with proper facilities and opportunities for a deliberate choice of treatment the conflict ceases, to the great benefit of the patient.

All these demands for specialized knowledge and equipment lead inevitably to the conclusion that the diagnosis and treatment of cancer is a specialty which can best be conducted in special cancer hospitals, or larger broadly organized cancer institutes.

What can public health officials and organizations do to provide cancer hospitals and institutes? They can convince themselves of the necessity for them. They can induce their leading men to investigate the question. They can talk it over with their people and legislators and see if they can create an interest in their community which will permit the establishment of the modern cancer hospital or institute.

The cancer institute requires an expensive equipment for all forms of radiation. It requires complete laboratory facilities in pathology, chemistry, and physics. The various clinical departments should be manned by specialists who are thoroughly acquainted with their particular fields. There should be an efficient follow-up system. There should be a strong central organization to determine the

policies of the institution. This idea of clinical specialization in cancer is not new. The leading surgeons in the cancer field in America, England, and Germany are cancer specialists, and have been for many years. In the leading cancer institutes of the world the men are all specialists, and these are the men who are getting the best results, and making the progress in the knowledge of cancer.

The final difficulty will be to get the public to respond. Yet when they can be assured of the best results of treatment at the hands of thoroughly competent physicians the public will not fail to show proper appreciation. The present attitude is determined by the feeling that the outlook for the cancer patient is poor, and under present conditions this feeling is not without foundation. When the status of cancer service is brought up to the highest possible standard, there will be less excuse for the indifference and fear of the patient. Unless such improvements in service are provided, cancer will remain in the future as it has been in the past, the eliminator of the unintelligent, the uninformed, and the unprepared.

DIFFERENTIAL FERTILITY ACCORDING TO ECONOMIC STATUS¹

Hagerstown Morbidity Studies No. XI: Live Birth and Still Birth Rates Among Married Women of Different Ages Classified According to Family Economic Condition²

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In the course of a study of morbidity in Hagerstown, Md., the opportunity presented itself for recording the fertility rate in a group

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

² Other Hagerstown Morbidity Studies published are—

I. A study of Illness in a General Population Group: Method of Study and General Results. Pub. Health Rep., Vol. 41, No. 39 (Sept. 24, 1926), pp. 2069-2088. (Reprint No. 1113.)

II. The Reporting of Notifiable Diseases in a Typical Small City. Pub. Health Rep., Vol. 41, No. 41 (Oct. 8, 1926), pp. 2186-2191. (Reprint No. 1116.)

Supplement to Study No. II. Completeness of Reporting of Measles, Whooping Cough, and Chicken Pox at Different Ages. Pub. Health Rep., Vol. 44, No. 26 (June 23, 1929), pp. 1537-1543. (Reprint No. 1294.)

III. The extent of Medical and Hospital Service in a Typical Small City. Pub. Health Rep., Vol. 42, No. 2 (Jan. 14, 1927), pp. 121-131. (Reprint No. 1134.)

IV. The Age Curve of Illness. Pub. Health Rep., Vol. 42, No. 23 (June 10, 1927), pp. 1565-1576. (Reprint No. 1163.)

V. A Comparison of the Incidence of Illness and Death. Pub. Health Rep., Vol. 42, No. 25 (June 24, 1927), pp. 1689-1701. (Reprint No. 1167.)

VI. The Illness Rate Among Males and Females. Pub. Health Rep., Vol. 42, No. 30 (July 29, 1927), pp. 1939-1957. (Reprint No. 1172.)

VII. The Causes of Illness at Different Ages. Pub. Health Rep., Vol. 43, No. 18 (May 4, 1928), pp. 1067-1074. (Reprint No. 1225.)

VIII. The Incidence of Various Diseases According to Age. Pub. Health Rep., Vol. 43, No. 19 (May 11, 1928), pp. 1124-1156. (Reprint No. 1227.)

IX. Sex Differences in the Incidence of Certain Diseases at Different Ages. Pub. Health Rep., Vol. 43, No. 21 (May 25, 1928), pp. 1259-1276. (Reprint No. 1229.)

X. Economic Status and the Incidence of Illness: Total and Specific Rates for Age and Cause Among Persons Classified According to Family Economic Condition. Pub. Health Rep., Vol. 44, No. 30. (Reprint No. 1303.)

of more than 2,000 married women (living with their husbands) during a period of approximately 2½ years. The households of which these women were members were classified, at the initiation of the study, into broad economic groups.³ It was possible, therefore, to record the birth rate to women of similar age but of different economic status. Since the study had for its primary object the recording of illness and the conditions responsible therefor, it was possible to record also a considerably larger proportion of pregnancies which resulted in abortions, miscarriages, and stillbirths than is ordinarily feasible in the making of official records. While the period of observation is not long and the number of women included is not large, the accuracy and completeness with which it was possible to collect these records seems to make a brief contribution worth while.

The method and scope of the Hagerstown morbidity study have been described in considerable detail elsewhere ⁴ and it is only necessary here to reiterate that the households included in this study were revisited by competent field assistants at intervals of six weeks to two months during the period December 1, 1921–March 31, 1924. These field assistants became fairly well acquainted with the families, particularly with the women and especially with mothers of the families. Their opportunity for observing and recording natal data may be regarded as somewhat exceptional. Not all of the women were observed continuously for the period of 28 months; over two-thirds of the families were observed for two years or longer and over nine-tenths were observed for one year or longer. In order to make full use of the entire series of records, the “exposure” of the particular population group under consideration may be expressed in terms of “years of life observed.”

The total number of years of life observed for married women of child-bearing age (15–44) was 2,319. In these years of observation there occurred 313 live births, 32 stillbirths and abortions, and 21 deaths of infants under 1 year of age. The annual birth rate thus was 135 per 1,000 married women of the ages 15–44, the annual infant-mortality rate was 67 per 1,000 live births, and 9 per cent of all births were stillbirths or abortions. The birth and infant-mortality rates are not unusual for a typical population, but the percentage of stillbirths is very much higher than that ordinarily recorded, for the obvious reason that the stillbirths and abortions were more completely recorded than is possible in official statistics at the present time.

³ See the preceding paper of this series (No. X) for a discussion of the method of classification into economic groups.

⁴ See Study No. I.

TABLE 1.—*Number of white married women (living with their husbands) observed for 28 months in Hagerstown, Md., and the number of stillbirths and abortions and of live births to these women during this period: By age of woman*

Age of woman	Married women ¹	Stillbirths and abortions	Live births	Total number of pregnancies
15-19.....	72.8	0	28	28
20-24.....	311.3	4	70	74
25-29.....	514.7	13	87	100
30-34.....	525.3	9	64	73
35-39.....	465.2	1	51	52
40-44.....	425.7	4	13	17
Total 15-44.....	2,319.0	31	313	344

¹ Years of life observed.

In Table 1 are given the years of life observed, the number of stillbirths and abortions, the number of live births, and the total number of pregnancies (stillbirths, abortions, and live births) classified according to the age of the women in 5-year age groups. In Table 2 the rate per 1,000 women in each age group is shown for total pregnancies and for live births, together with the percentage of total pregnancies that were stillbirths and abortions. The pregnancy rate for these married women was highest in the ages 15-19, when it was 385 per 1,000, and declined according to age of the women until the age group 40-44, when it was only 40 per 1,000. The live-birth rate declined somewhat more rapidly, since the percentage of total pregnancies that did not result in live births showed a tendency to increase with age.

TABLE 2.—*Annual number of pregnancies and of live births per 1,000 white married women (living with their husbands) during a 28-month period in Hagerstown, Md., and the proportion of such pregnancies resulting in stillbirth or abortion: By age of woman*

Age of woman	Rate per 1,000		Per cent of total pregnancies that were stillbirths or abortions
	Total pregnancies	Live births	
15-19.....	385	385	0
20-24.....	238	225	5.4
25-29.....	194	169	13.0
30-34.....	138	121	12.3
35-39.....	112	110	1.9
40-44.....	40	30	23.5
Total 15-44.....	148	135	9.0

In Table 3 a similar classification of the live births, stillbirths, and abortions is made for women divided into two broad economic groups, viz, (a) those in families who were moderately "well off" or better

and (b) those in poor and very poor families. In classifying the 1,800 or more families which came under observation for some period of the study, five categories were used, as follows: "well-to-do," "comfortable," "moderate," "poor," and "very poor." The total number of women observed in the well-to-do and comfortable groups yielded only 207 years of observation, a figure which is too small for further classification according to age. Accordingly, these were combined with women in families classified as in "moderate" circumstances, making a total of 1,143 years of observation for a relatively higher economic group for comparison with 1,176 years of observation for the economic group denoted by the terms "poor" and "very poor."

TABLE 3.—*Number of white married women (living with their husbands) observed for 28 months in Hagerstown, Md., classified according to family economic status, and the number of live births and of stillbirths occurring to them during this period*

Age of woman	Family economic status							
	Moderately well off or better				Poor and very poor			
	Married women ¹	Still births and abortions	Live births	Total pregnancies	Married women ¹	Still births and abortions	Live births	Total pregnancies
15-19.....	20.5	0	8	8	52.3	0	20	20
20-24.....	136.5	1	22	23	174.8	3	48	51
25-29.....	235.7	4	29	33	279.0	9	58	67
30-34.....	256.8	4	20	24	271.5	5	44	49
35-39.....	251.6	0	15	15	213.6	1	36	37
40-44.....	241.6	1	5	6	185.1	3	8	11
Total 15-44.....	1, 142.7	10	99	109	1, 176.3	21	214	235

¹ Years of life observed.

The crude birth rate for 1,000 married women of childbearing age in the upper economic group was 87, as contrasted with 182 in the poorer group. The age distribution, however, of women in the two groups was somewhat different, the proportion of women in the younger ages being somewhat higher in the poorer class than in the richer group, as the second and sixth columns in Table 3 show. It is necessary, therefore, to adjust the gross birth rate according to a common age distribution, and when this is done we find that the birth rate per 1,000 married women 15 to 44 years of age for the upper economic group is 89 and for the lower is 174. The difference in the birth rates of the two economic classes is quite marked and is statistically significant. In fact, this difference in the birth rate persists at each age group of women, as Table 4 and Figure 1 clearly indicate.

TABLE 4.—*Annual birth rate per 1,000 native white married women, classified according to age and family economic status, in Hagerstown, Md., December 1, 1921–March 31, 1924*

Age of woman	Birth-rate per 1,000		Ratio of (B) to (A)
	Moderate or better (A)	Poor and very poor (B)	
15-19.....	390	382	1.0
20-24.....	161	275	1.7
25-29.....	123	208	1.7
30-34.....	78	162	2.1
35-39.....	33	169	5.1
40-44.....	21	43	2.1
Total 15-44.....	189	1174	2.0

¹ Adjusted to age distribution of all classes.

Another interesting indication is afforded by the rates in Table 4. The difference in the birth rate of the poorer and the richer women is not constant for all age periods. Although among the very young married women (under 20 years) the live birth and pregnancy rates

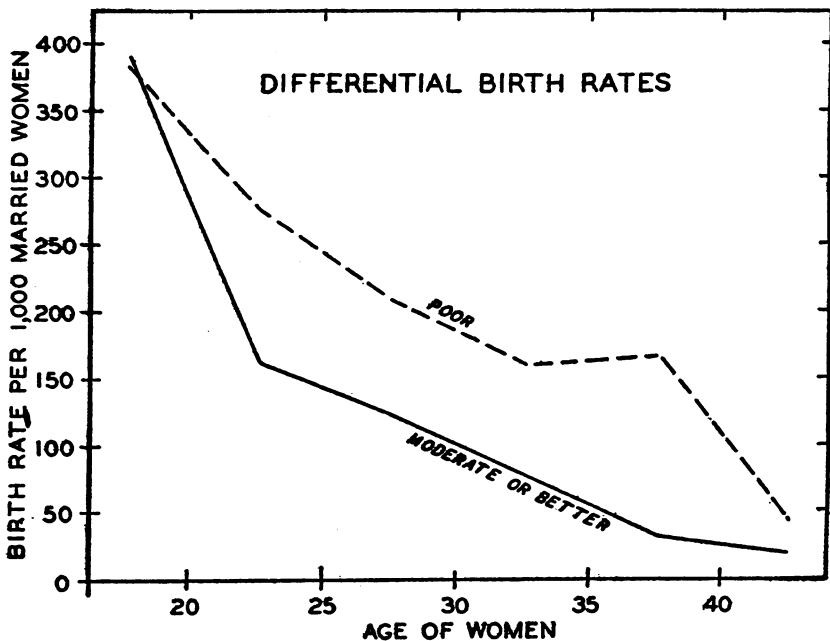


FIGURE 1.—*Annual birth rates among white married women of different family economic status in Hagerstown, Md., December 1, 1921, to March 31, 1924*

are about the same for both the poor and the rich classes, the birth rate among the women in the poor families tends to become relatively greater than in the richer in each successive age period until 40 years is reached; in the age period 40–44 the birth rate for the women in both classes exhibits that tendency toward parity which must come

as the childbearing period ends. This may be interpreted that the poorer married women tend to bear children for a longer time than the richer.

The mortality rate among infants in the well-to-do families was 59 per 1,000 live births, as against 72 in the poorer families. This observation is in accordance with the far more extensive studies of the United States Children's Bureau, as well as other investigations. The ratio of live births to still births and abortions was practically the same for both the poorer and the richer women, being 10.3 and 10.1 to 1, respectively.

SUMMARY

The following table summarizes this fragmentary but somewhat intensive study of the differential fertility according to economic status of a group of native white married women, aged 15-44, with living husbands, in Hagerstown, Md.:

	Moderate economic status or better	Poor and very poor economic status
Years of life of women observed.....	1, 143	1, 176
Annual live birth rate per 1,000 women.....	89	174
Ratio of live to stillbirths.....	10.1	10.3
Infant mortality rate per 1,000 live births.....	59	72
Annual "effective fertility" ¹ —rate per 1,000 women.....	84	161

¹ Number of infants per 1,000 (born to women aged 15-44) remaining alive at end of 1 year.

The fertility rate is approximately the same for both economic groups for women under 20, but decreases with age less rapidly for the poorer women, indicating that the poorer women bear children for a longer period than do the richer.

PLAN FOR INTERNATIONAL AGREEMENT REGARDING DENGUE

At the session of the Permanent Committee of the International Office of Public Hygiene held in May of this year, the committee approved a plan submitted by a commission composed of representatives of the countries most directly interested, setting forth tentatively the basis of an agreement for the control of dengue among those countries. In explanation of its action appointing the commission to draw up the plan, the permanent committee states:

"In spite of the difficulties which are presented a priori in a struggle against a disease which can be rarely diagnosed from its first manifestations and the extent of which may be in some degree overwhelming, it has seemed useful to the committee to look into measures which,

while causing the least difficulties in international relations, will be likely to diminish the risk of the spread of said disease from one country to another through maritime channels."

In the view of the spread of dengue in Greece and various other Mediterranean countries in 1927 and 1928, and especially in view of the recent recrudescence of yellow fever and of the fact that first cases of the latter disease may be reported as dengue, the action of the permanent committee is reported here.

Following is the tentative plan approved by the committee:

1. When dengue shall appear in epidemic form in one of the countries participating in the present agreement, the highest health authority of the country shall notify the other participating countries.

It shall keep the International Office of Public Hygiene informed as to the movement of the epidemic.

2. When an epidemic of dengue is reported in a port or in the region near a port, the sanitary authority of said port shall recommend to the captains, and eventually to the ships' doctors, the carrying out, as soon as possible after leaving the port, of a search for and destruction of mosquitoes and their larvæ in all accessible parts of the ship, especially in the cabins, baggage rooms, stewards' rooms, kitchens, heating apparatus, water tanks, and all places especially likely to give shelter to mosquitoes.

It shall urge the physician, or, in the absence of a physician, the captain, to take the necessary precautions so that, if cases of dengue occur on board, the patients can be isolated in places where they can not be bitten by mosquitoes.

3. Every ship coming from a port where an epidemic of dengue is in progress and arriving in a port where the sanitary authority has reason to fear that the disease may be spread, by reason of the presence of a large number of mosquitoes which are likely to transmit it, may be subjected to the following measures:

(a) Interrogation, and reply by the physician, or, in his absence, by the captain, to the question: "Are there, or have there been, on board persons suffering from dengue?"

(b) Medical inspection.

Patients suffering from dengue for less than five days who desire to leave the ship will be taken off immediately and isolated on land, following instructions from competent sanitary authorities, in places where they will be protected from mosquito bites, until the expiration of five days from the onset of the disease.

(c) Inspection of the ship with a view to ascertaining that no *Stegomyia* [*Aedes*] exist, with the reservation that measures taken en route will be considered. In the case that the presence of *Stegomyia* [*Aedes*] has been reported on board, the sanitary authority of the port shall carry on the destruction of the mosquitoes.

(d) By exception, the sanitary authority of the port may, if he considers it necessary by reason of circumstances, place the disembarked passengers under surveillance and confine the baggage on board until the expiration of eight days after exposure to risk.

DEATH RATES IN A GROUP OF INSURED PERSONS

Rates for Principal Causes of Death for June and the First Six Months of 1929

The accompanying tables, taken from the Statistical Bulletin for July, 1929, issued by the Metropolitan Life Insurance Co., present the mortality record of the company for June and for the first six months of 1929, by principal causes of death. The rates are based on a strength of approximately 19,000,000 insured persons. In recent years the death rate in this group of persons has been approximately 73 per cent of that for the death registration area of the United States.

JUNE, 1929

The death rate of 8.2 per 1,000 for June was the lowest ever recorded in this group for that month. For every disease listed in the accompanying table the mortality rate is lower for June, 1929, than for the same month of 1928. The only causes of death which show increases are homicides, accidents, and automobile fatalities, the rate for the latter cause increasing 13.6 per cent as compared with June of last year.

Typhoid fever and diarrheal complaints were the only diseases which had higher death rates in June than in May of this year, both of which exhibited the usual seasonal rise.

Death rates, (annual basis), per 100,000 for principal causes of death, June, 1929

[Industrial department, Metropolitan Life Insurance Co.]

Cause of death	Rate per 100,000 lives exposed ¹				
	May, 1929	June, 1929	June, 1928	Cumulative Jan- uary to June	
				1929	1928
Total, all causes.....	900.1	816.1	943.6	1,028.0	989.0
Typhoid fever.....	1.5	2.4	2.5	1.6	1.8
Measles.....	5.0	4.8	10.2	4.5	8.6
Scarlet fever.....	3.5	2.2	3.1	3.4	3.7
Whooping cough.....	5.0	4.7	7.4	6.3	6.2
Diphtheria.....	8.1	7.5	10.8	9.5	11.5
Influenza.....	20.3	9.9	23.8	71.9	32.7
Tuberculosis, (all forms).....	91.6	86.7	102.6	92.9	97.6
Tuberculosis of respiratory system.....	81.0	75.7	87.8	82.5	85.5
Cancer.....	76.9	73.5	73.9	76.2	76.0
Diabetes mellitus.....	18.5	13.8	17.8	20.6	19.2
Cerebral hemorrhage.....	55.8	50.0	55.2	61.0	60.7
Organic diseases of heart.....	145.0	130.1	142.7	162.6	153.4
Pneumonia, (all forms).....	81.2	61.1	94.1	123.7	122.0
Other respiratory diseases.....	11.6	11.1	16.2	14.2	14.6
Diarrhea and enteritis.....	13.9	16.3	21.3	14.1	16.0
Bright's disease, (chronic nephritis).....	70.3	60.0	67.6	73.9	76.5
Puerperal state.....	12.5	11.1	14.4	14.1	14.6
Suicides.....	8.9	8.0	9.4	8.8	8.4
Homicides.....	5.6	6.2	5.8	6.2	6.4
Other external causes, (excluding suicides and homi- cides).....	56.8	63.9	61.1	58.5	57.0
Traumatism by automobiles.....	16.9	19.2	16.9	16.8	15.4
All other causes.....	208.0	192.8	203.8	204.1	201.9

¹ All figures include infants insured under one year of age.

FIRST SIX MONTHS OF 1929

Although the year 1929 had a bad start, from the standpoint of mortality, due to the influenza outbreak, the unfavorable first quarter was followed by good health conditions in the second; and now, unless there comes a setback during the latter part of the year, it is predicted that 1929 will rank as one of the best health years. The Statistical Bulletin bases this prediction on the mortality experience of the policyholders for the first half of the year.

Of the epidemic diseases of childhood, measles, scarlet fever, and diphtheria showed decreases among the white policyholders as compared with the first half of last year, while the rate for whooping cough is exactly the same for both periods.

The low death rate for influenza for the second quarter brought the rate for that disease for the first half-year to 63.4 per 100,000, as compared with 122.3 for the first quarter of the year; while the pneumonia rate dropped so sharply in the second quarter that the cumulative death rate for the first half-year was only slightly above that for the corresponding period of 1928.

Tuberculosis shows an improvement as compared with last year, and it is believed that 1929 will see a new minimum mortality figure for this disease in the United States, superseding that established only last year.

Cancer recorded a fractional increase as compared with 1928.

The combined death rate for the three principal degenerative diseases, (heart disease, chronic nephritis, and cerebral hemorrhage), increased slightly, due to the increase in deaths from heart disease.

Diabetes showed a decided increase over both 1928 and 1927.

The death rates from alcoholism increased somewhat as compared with 1929, and it is stated that the rates for cirrhosis of the liver and for acute alcoholic poisoning also increased.

The increase in the number of deaths from puerperal conditions during the first quarter was more than compensated for by the decrease in the second quarter, and there is now good prospect that another low rate for these diseases will be established in 1929.

The rate for automobile fatalities increased 9.1 per cent as compared with the first six months of 1928. This rate increased continuously for two decades up to 1928, in which year there was a small decline from the rate for the preceding year. It now appears that this check in the steady rise of the automobile mortality rate was only transitory.

Death rates, (annual basis), per 100,000 for principal causes of death, first six months of 1927, 1928, and 1929

[Industrial department, Metropolitan Life Insurance Co.]

Cause of death	Death rates per 100,000 persons exposed					
	White			Colored		
	Jan. to June, 1929	Jan. to June, 1928	Jan. to June, 1927	Jan. to June, 1929	Jan. to June, 1928	Jan. to June, 1927
All causes of death.....	934.4	896.2	870.2	1,655.5	1,611.0	1,544.5
Typhoid fever.....	1.4	1.7	4.3	3.4	2.7	6.5
Measles.....	4.9	8.7	7.2	1.9	8.1	3.6
Scarlet fever.....	3.7	4.0	4.5	1.1	1.7	1.4
Whooping cough.....	5.8	5.8	7.0	9.9	8.7	9.4
Diphtheria.....	10.0	12.2	12.0	6.3	6.2	6.7
Influenza.....	63.4	28.4	22.0	128.5	61.8	52.5
Meningococcus meningitis.....	5.4	2.2	1.3	9.3	2.9	1.8
Tuberculosis, all forms.....	73.6	76.1	81.6	222.4	241.2	238.2
Tuberculosis of respiratory system.....	65.2	66.7	71.4	197.9	211.2	208.9
Tuberculosis of meninges, etc.....	8.9	4.4	5.1	4.7	8.1	7.4
Other forms of tuberculosis.....	4.5	5.0	5.2	19.9	21.9	21.9
Cancer.....	76.4	75.9	75.6	75.2	76.9	71.9
Diabetes.....	20.3	18.8	17.6	22.3	21.3	19.5
Alcoholism.....	3.1	2.8	3.2	5.4	5.3	5.0
Cerebral hemorrhage; apoplexy.....	54.4	54.2	52.3	105.1	103.9	97.9
Organic diseases of the heart.....	148.6	140.7	132.0	255.7	238.4	218.0
Total respiratory diseases.....	124.7	120.9	104.3	226.2	242.5	210.3
Bronchitis.....	4.5	4.8	4.7	5.9	7.2	8.1
Broncho-pneumonia.....	47.7	45.1	39.8	68.5	81.5	68.2
Pneumonia, lobar and undefined.....	63.5	62.0	51.7	138.2	140.4	122.3
Other diseases of respiratory system.....	9.0	8.9	8.2	13.6	13.4	11.8
Diarrhea and enteritis.....	13.9	15.8	16.8	15.0	17.4	19.7
Under 2 years.....	11.2	12.9	13.5	8.9	12.0	13.4
2 years and over.....	2.8	2.9	3.2	6.1	5.3	6.3
Acute nephritis.....	3.8	4.2	4.0	13.1	13.0	15.3
Chronic nephritis.....	65.9	67.7	67.1	127.4	135.5	129.9
Total puerperal state.....	13.0	13.7	14.8	21.9	20.9	25.6
Puerperal septicemia.....	4.6	4.8	6.0	9.4	9.2	13.4
Puerperal albuminuria and convulsions.....	2.7	3.1	2.8	5.3	3.6	4.6
Other diseases of puerperal state.....	5.6	5.8	6.0	7.2	8.1	7.5
Total external causes.....	68.6	66.9	69.3	106.0	104.5	115.8
Suicides.....	9.1	8.7	8.7	6.4	6.2	7.0
Homicides.....	2.8	2.8	3.2	28.9	30.4	36.7
Accidental and unspecified violence.....	56.6	55.4	57.4	70.7	67.8	72.1
Accidental drowning.....	4.9	4.9	4.6	3.4	4.1	6.5
Automobile accidents.....	17.0	15.3	15.3	15.4	16.5	14.7
All other and ill-defined causes of death.....	173.3	175.2	173.4	299.6	298.3	295.4

NEW YORK CITY'S HEALTH FOR THE FIRST HALF OF 1929

The Weekly Bulletin for July 30, 1929, issued by the department of health of the city of New York, presents a table showing the general death rate and the infant-mortality rate, by weeks, for the first half of 1929, as compared with the average for the corresponding weeks of the period 1923-1928, inclusive. The editor of the Bulletin makes the following comment:

Despite the handicap imposed by the outbreak of influenza in January and February, which caused about 4,000 deaths, New York City's death rate for the first six months of this year is lower than it was in the corresponding period of 1928. This is an excellent showing, but still more gratifying is the fact that each week during the past three months the infant death rate has been considerably below the average of the past six years during the corresponding period. In

place of the high infant-mortality rate, so common a feature of past years, the city is now enjoying rates regarded as Utopian 20 years ago for a city of 6,000,000 inhabitants.

General death rate and infant death rate, city of New York, by weeks, 1929, and six years, 1923-1928, inclusive

Week	General death rate ^a		Infant death rate ^b	
	1929	1923-1928	1929	1923-1928
First.....	14.70	13.85	60.7	65.3
Second.....	18.35	13.86	80.3	71.0
Third.....	19.86	13.82	96.0	69.2
Fourth.....	20.41	13.56	95.7	68.3
Fifth.....	18.83	14.49	75.4	72.2
Sixth.....	17.57	14.58	88.2	72.2
Seventh.....	15.73	15.05	76.6	75.5
Eighth.....	14.57	15.22	73.1	78.9
Ninth.....	15.45	15.14	74.2	67.7
Tenth.....	14.94	15.47	67.8	77.3
Eleventh.....	14.80	15.33	77.2	83.5
Twelfth.....	13.93	15.56	69.8	81.8
Thirteenth.....	13.50	14.86	64.9	82.3
Fourteenth.....	13.66	14.79	76.5	83.2
Fifteenth.....	13.44	15.67	65.0	83.5
Sixteenth.....	12.59	14.64	53.4	78.5
Seventeenth.....	13.37	13.62	66.7	74.2
Eighteenth.....	12.76	13.85	61.3	76.0
Nineteenth.....	13.02	13.57	61.8	73.6
Twentieth.....	13.00	12.98	62.7	71.3
Twenty-first.....	12.41	12.32	61.9	64.0
Twenty-second.....	12.44	12.54	58.6	62.4
Twenty-third.....	12.10	12.80	54.5	72.2
Twenty-fourth.....	12.05	11.37	46.5	58.3
Twenty-fifth.....	11.96	11.01	45.5	60.1
Twenty-sixth.....	10.38	10.11	41.6	55.3

^a Per 1,000 of population.

^b Per 1,000 births.

COURT DECISION RELATING TO PUBLIC HEALTH

Selection of site of negro tuberculosis hospital upheld.—(Arkansas Supreme Court; *Mitchell et al. v. Deisch et al.*, 18 S. W. (2d) 364; decided June 17, 1929.) Act 113 of 1923 provided, in section 4, as follows:

As soon after the organization of said board as practicable said board shall select a suitable site for the establishment of a tuberculosis sanatorium for negroes and in selecting said site they shall place institution at such point in the State as shall appear to them to be more nearly in the center of the negro population of said State.

A site for the hospital was selected and, after such selection, the legislature by Act 277 of 1927 made an appropriation for the erection of the necessary buildings and improvements "on the lands heretofore acquired for the purpose of a negro tuberculosis sanatorium."

A suit to enjoin the board of trustees of the hospital from proceeding with the construction of the same on such site was brought by persons owning lands adjoining and within a short distance of the site selected. The lower court denied an injunction and its decree was affirmed by the supreme court.

The appellate court held that the 1923 statute was "only directory in its terms, leaving the board the discretion to place the institution at such point in the State 'as shall appear to them,' etc.," and also held that the appropriation under the 1927 act "was an approval by the legislature of the selection of the site for the sanatorium by the authorized agency of the State, amounting to a ratification thereof, even if any such ratification had been necessary." The court also stated that the establishment of a sanatorium "can not be regarded a nuisance per se," and went on to say that "The chancellor did not find that its establishment and operation would cause irreparable injury to the appellants, and at best the testimony conduced to show that any injury to the market value of the land would be only temporary and not irreparable, not furnishing sufficient grounds for equitable relief."

DEATHS DURING WEEK ENDED AUGUST 17, 1929

Summary of information received by telegraph from industrial insurance companies for the week ended August 17, 1929, and corresponding week of 1928. (From the Weekly Health Index, August 21, 1929, issued by the Bureau of the Census, Department of Commerce)

	Week ended August 17, 1929	Corresponding week, 1928
Policies in force.....	74, 271, 896	71, 589, 449
Number of death claims.....	12, 112	11, 713
Death claims per 1,000 policies in force, annual rate..	8. 5	8. 6

Deaths from all causes in certain large cities of the United States during the week ended August 17, 1929, infant mortality, annual death rate, and comparison with corresponding week of 1928. (From the Weekly Health Index, August 21, 1929, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Aug. 17, 1929		Annual death rate per 1,000, corre- sponding week, 1928	Deaths under 1 year		Infant mor- tality rate week ended Aug. 17, 1929 ¹
	Total deaths	Death rate ¹		Week ended Aug. 17, 1929	Corre- sponding week, 1928	
Total (64 cities).....	6, 089	10. 7	10. 7	662	709	* 57
Akron.....	35			6	7	62
Albany ⁴	36	15. 6	11. 7	5	3	99
Atlanta.....	86	17. 6	11. 9	7	6	73
White.....	39			3	1	
Colored.....	47	(⁹)	(⁹)	4	5	
Baltimore ⁴	189	11. 9	11. 6	21	35	67
White.....	144			13	21	52
Colored.....	45	(⁹)	(⁹)	8	14	127
Birmingham.....	67	15. 8	18. 3	9	6	81
White.....	29			2	2	30
Colored.....	38	(⁹)	(⁹)	7	4	160
Boston.....	176	11. 5	11. 2	18	12	50
Bridgeport.....	29			4	2	69
Buffalo.....	124	11. 7	10. 3	8	11	34
Cambridge.....	21	8. 7	6. 7	4	3	72
Camden.....	18	7. 0	9. 3	0	3	0
Canton.....	11	4. 9	9. 0	1	8	24
Chicago ⁴	611	10. 1	11. 1	47	74	42

Footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended August 17, 1929, infant mortality, annual death rate, and comparison with corresponding week of 1928—Continued

City	Week ended Aug. 17, 1929		Annual death rate per 1,000, corresponding week, 1928	Deaths under 1 year		Infant mortality rate week ended Aug. 17, 1929
	Total deaths	Death rate		Week ended Aug. 17, 1929	Corresponding week, 1928	
Cincinnati.....	109			7	22	41
Cleveland.....	158	8.2	9.3	14	25	41
Columbus.....	62	10.8	10.7	9	8	84
Dallas.....	51	12.2	12.5	8	5	
White.....	39			8	5	
Colored.....	12	(¹)	(¹)	0	0	
Dayton.....	37	10.5	10.2	7	3	111
Denver.....	74	13.2	11.7	5	5	43
Des Moines.....	31	10.7	12.0	2	2	26
Detroit.....	250	9.5	8.4	42	37	67
Duluth.....	26	11.6	13.4	0	3	0
El Paso.....	33	14.6	13.8	6	10	
Erie.....	27			2	3	41
Fall River.....	30	11.7	9.0	3	5	58
Flint.....	24	8.4	10.2	7	5	85
Fort Worth.....	37	11.3	12.3	1	4	
White.....	29			0	4	
Colored.....	8	(¹)	(¹)	1	0	
Grand Rapids.....	24	7.6	8.9	4	2	60
Houston.....	71			7	4	
White.....	50			5	3	
Colored.....	21	(¹)	(¹)	2	1	
Indianapolis.....	104	14.2	10.4	14	6	112
White.....	86			7	4	65
Colored.....	18	(¹)	(¹)	7	2	42
Jersey City.....	52	8.4	10.9	5	12	39
Kansas City, Kans.....	22	9.7	14.1	2	4	44
White.....	19			2	3	50
Colored.....	3	(¹)	(¹)	0	1	0
Kansas City, Mo.....	94	12.6	10.8	11	8	93
Knoxville.....	37	18.4	11.4	6	3	131
White.....	30			6	3	146
Colored.....	7	(¹)	(¹)	0	0	0
Los Angeles.....	225			16	17	47
Louisville.....	72	11.4	13.3	10	17	81
White.....	63			10	12	93
Colored.....	9	(¹)	(¹)	0	5	0
Lowell.....	18			1	1	23
Lynn.....	14	6.9	8.4	1	5	27
Memphis.....	51	14.0	18.7	11	5	130
White.....	23			9	1	170
Colored.....	23	(¹)	(¹)	2	4	63
Milwaukee.....	77	7.4	8.5	8	12	35
Minneapolis.....	77	8.8	9.2	6	7	37
Nashville.....	50	18.7	19.5	9	10	145
White.....	31			5	9	109
Colored.....	19	(¹)	(¹)	4	1	252
New Bedford.....	18			1	3	21
New Haven.....	30	8.3	11.7	3	4	46
New Orleans.....	131	16.0	16.1	14	15	70
White.....	87			12	10	85
Colored.....	44	(¹)	(¹)	2	5	34
New York.....	1,159	10.1	10.5	113	136	46
Bronx Borough.....	149	8.2	8.8	9	13	27
Brooklyn Borough.....	361	8.2	8.2	28	39	39
Manhattan Borough.....	457	13.6	15.3	50	68	61
Queens Borough.....	146	8.9	8.3	16	11	65
Richmond Borough.....	46	16.0	13.9	0	5	0
Newark, N. J.....	83	9.2	9.7	10	10	53
Oakland.....	57	10.9	8.8	8	5	89
Oklahoma City.....	42			5	2	100
Omaha.....	54	12.7	10.1	4	5	47
Paterson.....	26	9.4	10.8	2	6	35
Philadelphia.....	424	10.7	10.4	56	39	79
Pittsburgh.....	138	10.7	10.2	18	20	62
Portland, Oreg.....	62			5	3	57
Providence.....	50	9.1	8.8	2	5	18
Richmond.....	44	11.2	16.1	7	10	98
White.....	16			3	5	64
Colored.....	28	(¹)	(¹)	4	5	164

Footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended August 17, 1929, infant mortality, annual death rate, and comparison with correspondinh week of 1929—Continued

City	Week ended Aug. 17, 1929		Annual death rate per 1,000, corresponding week, 1928	Deaths under 1 year		Infant mortality rate week ended Aug. 17, 1929
	Total deaths	Death rate		Week ended Aug. 17, 1929	Corresponding week, 1928	
Rochester.....	75	11.9	8.9	10	10	85
St. Louis.....	166	10.2	11.7	18	14	61
St. Paul.....	44			2	0	21
Salt Lake City.....	32	12.1	12.9	1	2	15
San Antonio.....	77	18.5	13.4	9	15	
San Diego.....	27			1	2	19
San Francisco.....	144	12.9	13.2	7	7	45
Schenectady.....	22	12.3	9.0	7	5	223
Seattle.....	72	9.8	7.5	6	2	64
Somerville.....	8	4.1	7.6	1	1	36
Spokane.....	25	12.0	13.9	1	2	26
Springfield, Mass.....	40	14.0	9.1	2	3	33
Syracuse.....	43	11.3	13.4	7	4	84
Toledo.....	60	10.0	8.3	5	1	47
Trenton.....	32	12.0	10.9	7	6	127
Utica.....	27	13.5	11.5	3	2	76
Washington, D. C.....	120	11.4	9.0	16	6	94
White.....	61			6	4	51
Colored.....	59	(¹)	(²)	10	2	189
Waterbury.....	13			1	2	25
Wilmington, Del.....	23	9.4	6.5	1	1	26
Worcester.....	37	9.8	9.5	5	5	63
Yonkers.....	29	12.5	3.9	3	1	70
Youngstown.....	35	10.5	11.1	5	3	72

¹ Annual rate per 1,000 population.

² Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.

³ Data for 72 cities.

⁴ Deaths for week ended Friday.

⁵ In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans., 14; Knoxville, 15; Louisville, 17; Memphis, 38; Nashville, 30; New Orleans, 26; Richmond, 32; and Washington, D. C., 25.

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 August 17, 1929, and August 18, 1928

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended August 17, 1929, and August 18, 1928

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928
New England States:								
Maine.....	2	-----	1	1	8	16	0	0
New Hampshire.....	2	-----	-----	6	5	12	0	0
Vermont.....	1	2	-----	-----	2	1	0	0
Massachusetts.....	31	52	3	2	31	70	4	1
Rhode Island.....	3	-----	-----	-----	5	14	0	0
Connecticut.....	15	7	4	2	8	19	1	3
Middle Atlantic States:								
New York.....	80	99	10	11	79	194	19	32
New Jersey.....	57	47	4	-----	19	43	2	9
Pennsylvania.....	56	88	-----	-----	76	179	17	4
East North Central States:								
Ohio.....	17	46	-----	20	36	131	4	1
Indiana.....	15	10	-----	3	10	9	1	0
Illinois.....	98	63	3	27	81	26	15	7
Michigan.....	45	65	2	-----	57	26	6	3
Wisconsin.....	19	11	-----	30	57	17	1	2
West North Central States:								
Minnesota.....	4	20	-----	2	10	6	1	0
Iowa.....	4	8	-----	-----	7	-----	0	0
Missouri.....	6	22	2	-----	6	12	3	3
North Dakota.....	8	4	-----	-----	13	7	1	2
South Dakota.....	-----	4	-----	3	2	9	0	0
Nebraska.....	5	9	-----	3	29	1	1	0
Kansas.....	18	1	2	-----	27	6	0	0
South Atlantic States:								
Delaware.....	3	-----	-----	-----	1	-----	0	0
Maryland ¹	7	32	1	2	6	12	1	0
District of Columbia.....	8	10	2	-----	2	7	0	0
Virginia.....	-----	-----	-----	-----	-----	-----	-----	-----
West Virginia.....	13	10	10	5	43	10	1	0
North Carolina.....	52	33	-----	-----	2	12	2	0
South Carolina.....	8	6	48	254	-----	-----	0	0
Georgia.....	24	10	6	39	5	4	1	0
Florida.....	11	10	-----	40	1	1	0	1

¹ New York City only.

¹ Week ended Friday.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended August 17, 1929, and August 18, 1928—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928
East South Central States:								
Kentucky.....	4	2					1	2
Tennessee.....	21	1	14	9	4	13	0	1
Alabama.....	25	17	6	37	7	7	1	0
Mississippi.....	16	5						1
West South Central States:								
Arkansas.....	1	4	3	26	1	1	0	0
Louisiana.....	20	5	3	20	3	13	1	0
Oklahoma ¹	8	11	10	17	2	3	0	0
Texas.....	46	8		29	5	3	0	0
Mountain States:								
Montana.....	3	1			10	2	0	3
Idaho.....		2			3		0	1
Wyoming.....	1	5			2		0	3
Colorado.....	4	5			5	6	0	1
New Mexico.....	7	2			1		1	0
Arizona.....	1				2	3	3	0
Utah ²	1		3	2	1	3	0	1
Pacific States:								
Washington.....	5	1			15	7	3	2
Oregon.....	7	8	1	4		9	2	2
California.....	38	60	9	15	28	4	9	4

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928
New England States:								
Maine.....	0	1	4	9	0	1	4	2
New Hampshire.....	0	0	2	3	0	0	0	1
Vermont.....	0	0		4	1	0	13	0
Massachusetts.....	0	44	45	45	0	0	9	9
Rhode Island.....	0	0	5	2	0	0	1	3
Connecticut.....	0	5	7	5	0	0	3	7
Middle Atlantic States:								
New York.....	32	94	51	55	2	0	36	54
New Jersey.....	5	10	30	15	0	0	9	24
Pennsylvania.....	14	3	67	39	0	0	37	53
East North Central States:								
Ohio.....	4	12	30	44	32	7	38	47
Indiana.....	1	1	17	25	25	10	8	14
Illinois.....	1	5	58	45	11	6	30	31
Michigan.....	9	1	70	42	27	3	7	19
Wisconsin.....	0	2	29	29	6	3	1	8
West North Central States:								
Minnesota.....	1	4	23	47	1	1	3	10
Iowa.....	1	2	8	10	10	0	25	6
Missouri.....	2	2	10	26	4	2	11	32
North Dakota.....	0	8	8	4	2	0	1	0
South Dakota.....	0	2	2	9	9	1	6	0
Nebraska.....	0	0	12	14	2	9	1	10
Kansas.....	1	1	17	15	2	17	14	32
South Atlantic States:								
Delaware.....	0	1		3	0	0	0	3
Maryland ¹	1	29	28	7	0	0	24	43
District of Columbia.....	0	3	3	1	0	0	1	3
Virginia.....	10							
West Virginia.....	1	4	17	0	0	2	16	30
North Carolina.....	5	2	41	24	2	10	38	71
South Carolina.....	0	3	10	0	0	1	21	57
Georgia.....	0	0	12	10	0	0	51	42
Florida.....	2	0	8	0	0	1	2	6

¹ Week ended Friday.

² Figures for 1929 are exclusive of Oklahoma City and Tulsa and for 1928 are exclusive of Tulsa only.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended August 17, 1929, and August 18, 1928—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928	Week ended Aug. 17, 1929	Week ended Aug. 18, 1928
East South Central States:								
Kentucky.....	0	4	26	15	11	2	39	35
Tennessee.....	7	2	8	10	0	0	86	88
Alabama.....	3	1	8	6	1	0	35	55
Mississippi.....	2	1	7	5	0	0	39	34
West South Central States:								
Arkansas.....	0	1	6	2	12	0	26	55
Louisiana.....	1	0	4	1	0	0	28	48
Oklahoma ¹	2	2	7	14	1	8	60	81
Texas.....	0	0	24	8	6	1	46	19
Mountain States:								
Montana.....	1	4	7	0	1	0	2	3
Idaho.....	0	1	—	3	4	3	1	3
Wyoming.....	0	0	1	8	0	1	0	2
Colorado.....	6	5	4	9	1	0	7	1
New Mexico.....	0	1	1	3	0	0	5	2
Arizona.....	0	0	2	0	0	0	0	0
Utah ²	0	0	1	7	1	0	0	2
Pacific States:								
Washington.....	0	15	12	6	21	3	8	4
Oregon.....	1	1	4	1	17	14	2	8
California.....	7	5	57	34	13	6	24	22

¹ Week ended Friday.

² Figures for 1929 are exclusive of Oklahoma City and Tulsa and for 1928 are exclusive of Tulsa only.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week:

State	Me-ningo-coccus menin-gitis	Diph-theria	Influ-enza	Ma-laria	Mea-sles	Pel-lagra	Polio-mye-litis	Scarlet fever	Small-pox	Ty-phoid fever
<i>July, 1929</i>										
Alabama.....	2	49	15	1,186	66	157	5	55	0	152
Florida.....	4	28	32	143	33	4	0	16	0	27
New Hampshire.....	—	3	—	—	—	—	1	13	0	0
New Jersey.....	20	283	4	3	237	—	5	155	0	49
New York.....	90	672	—	10	1,497	—	39	413	1	100
Ohio.....	25	155	25	14	850	—	6	360	164	74
Pennsylvania.....	36	388	—	—	1,318	6	—	444	3	139
Tennessee.....	10	21	15	668	37	59	21	37	13	264

July, 1929

Anthrax:	Cases
Pennsylvania.....	5
Chicken pox:	
Alabama.....	16
Florida.....	1
New Jersey.....	216
New York.....	778
Ohio.....	357
Pennsylvania.....	412
Tennessee.....	12
Dengue:	
Alabama.....	1
Diarrhea and enteritis (under 2 years):	
Ohio.....	35

Dysentery:

Florida.....	Cases
New Jersey.....	7
New York.....	1
Ohio.....	9
Pennsylvania.....	3
Tennessee.....	4
German measles:	
New Jersey.....	16
New York.....	190
Ohio.....	1
Pennsylvania.....	45
Lead poisoning:	
New Jersey.....	3
Ohio.....	15

Lethargic encephalitis:	Cases	Tetanus:	Cases
Alabama.....	1	New York.....	11
New York.....	22	Ohio.....	3
Ohio.....	5	Pennsylvania.....	12
Pennsylvania.....	2	Tennessee.....	1
Tennessee.....	2	Trachoma:	
Mumps:		Ohio.....	9
Alabama.....	14	Pennsylvania.....	2
Florida.....	10	Tennessee.....	7
New York.....	757	Trichinosis:	
Ohio.....	120	Pennsylvania.....	2
Pennsylvania.....	255	Tularaemia:	
Tennessee.....	34	Florida.....	1
Ophthalmia neonatorum:		Typhus fever:	
New York.....	7	Alabama.....	4
Ohio.....	100	Florida.....	12
Pennsylvania.....	13	New Jersey.....	1
Paratyphoid fever:		New York.....	1
Florida.....	3	Undulant fever:	
New York.....	4	Alabama.....	3
Ohio.....	2	Florida.....	1
Tennessee.....	1	New York.....	5
Puerperal septicaemia:		Ohio.....	4
New York.....	1	Pennsylvania.....	2
Ohio.....	6	Tennessee.....	1
Pennsylvania.....	10	Vincent's angina:	
Rabies in animals:		New York.....	65
New York (exclusive of New York City).....	12	Whooping cough:	
Rabies in man:		Alabama.....	193
Pennsylvania.....	1	Florida.....	79
Septic sore throat:		New Jersey.....	954
New York.....	20	New York.....	1,686
Ohio.....	41	Ohio.....	1,685
		Pennsylvania.....	2,053
		Tennessee.....	223

ADMISSIONS TO HOSPITALS FOR THE INSANE, OCTOBER, 1928

Reports for the month of October, 1928, showing new admissions to hospitals for the care and treatment of the insane, have been received by the Public Health Service from 103 institutions located in 35 States, the District of Columbia, and the Territory of Hawaii. These hospitals reported a total of 151,001 patients on October 31, 1928, including those on parole.

The following table shows the number of new admissions for the month of October, 1928, by psychoses:

Psychoses	Number of first admissions		
	Male	Female	Total
1. Traumatic psychoses.....	9	0	9
2. Senile psychoses.....	131	100	231
3. Psychoses with cerebral arteriosclerosis.....	138	71	209
4. General paralysis.....	160	57	217
5. Psychoses with cerebral syphilis.....	19	14	33
6. Psychoses with Huntington's chorea.....	0	2	2
7. Psychoses with brain tumor.....	1	0	1
8. Psychoses with other brain or nervous disease.....	21	10	31
9. Alcoholic psychoses.....	141	19	160
10. Psychoses due to drugs and other exogenous toxins.....	18	11	29
11. Psychoses with pellagra.....	9	12	21
12. Psychoses with other somatic diseases.....	33	33	66
13. Manic-depressive psychoses.....	168	220	388
14. Involution melancholia.....	12	33	45
15. Dementia praecox (schizophrenia).....	277	220	497

Psychoses	Number of first admissions		
	Male	Female	Total
16. Paranoia and paranoid conditions.....	29	31	60
17. Epileptic psychoses.....	26	28	54
18. Psychoneuroses and neuroses.....	19	31	50
19. Psychoses with psychopathic personality.....	11	12	23
20. Psychoses with mental deficiency.....	41	39	80
21. Undiagnosed psychoses.....	99	63	162
22. Without psychosis.....	111	45	156
Total.....	1, 473	1, 051	2, 524

Fifty-eight and four-tenths per cent of the new admissions were males and 41.6 per cent were females, giving a ratio of 140 males per 100 females. The 103 institutions on October 31, 1928, had 80,327 male patients and 70,674 female patients, the ratio being 114 males per 100 females.

At the end of the month 9.1 per cent of the patients were on parole, 9.5 per cent of the male patients and 8.7 per cent of the female patients.

Cases of dementia præcox constituted 19.7 per cent of the first admissions; manic-depressive psychoses, 15.4 per cent; senile psychoses, 9.2 per cent; general paralysis, 8.6 per cent; psychoses with cerebral arteriosclerosis, 8.3 per cent; 6.4 per cent of the cases were undiagnosed, and 6.2 per cent were without psychosis.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 94 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 30,880,000. The estimated population of the 89 cities reporting deaths is more than 29,405,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended August 10, 1929, and August 11, 1928

	1929	1928	Estimated expectancy
<i>Cases reported</i>			
Diphtheria:			
46 States.....	905	771	-----
94 cities.....	382	360	447
Measles:			
45 States.....	945	1, 152	-----
94 cities.....	175	340	-----
Meningococcus meningitis:			
45 States.....	115	87	-----
94 cities.....	56	56	-----
Poliomyelitis:			
47 States.....	109	233	-----
Scarlet fever:			
46 States.....	894	772	-----
94 cities.....	263	216	257
Smallpox:			
46 States.....	230	211	-----
94 cities.....	31	7	15
Typhoid fever:			
46 States.....	809	1, 024	-----
94 cities.....	102	147	161
<i>Deaths reported</i>			
Influenza and pneumonia:			
89 cities.....	306	350	-----
Smallpox:			
89 cities.....	0	0	-----

City reports for week ended August 10, 1929

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

If the reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1920 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviation from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1928, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine:									
Portland.....	78,600	1	1	0		0	0	0	2
New Hampshire:									
Concord.....	(1)	0	1	0		0	0	0	1
Vermont:									
Barre.....	(1)	1	0	0		0	1	0	0
Massachusetts:									
Boston.....	799,200	9	25	11		0	7	14	3
Fall River.....	134,300	0	2	4		0	0	0	1
Springfield.....	149,800	1	1	0		0	0	0	1
Worcester.....	197,600	1	2	3		0	0	0	0
Rhode Island:									
Pawtucket.....	73,100	0	0	0		0	0	0	2
Providence.....	286,300	0	3	2		0	1	0	1
Connecticut:									
Bridgeport.....	(1)	0	3	0		0	0	1	2
Hartford.....	172,300	0	3	0		0	4	1	2
New Haven.....	187,900	1	1	0		0	1	0	2
MIDDLE ATLANTIC									
New York:									
Buffalo.....	555,800	4	8	12		0	2	0	7
New York.....	6,017,500	26	100	96	6	2	17	42	90
Rochester.....	328,200	0	4	2		0	2	1	1
Syracuse.....	199,300	0	2	0		0	1	2	0
New Jersey:									
Camden.....	135,400	0	2	6		0	0	0	1
Newark.....	473,600	4	7	21		0	2	7	4
Trenton.....	139,000	0	1	0		0	3	0	2
Pennsylvania:									
Philadelphia.....	2,064,200	14	31	6	2	0	5	12	13
Pittsburgh.....	673,800	6	12	3	3	0	0	0	5
Reading.....	115,400	0	1	0		0	0	0	1
EAST NORTH CENTRAL									
Ohio:									
Cincinnati.....	413,700	0	4	0		0	1	0	0
Cleveland.....	1,010,300	10	18	7		0	4	1	10
Columbus.....	299,000	0	2	1	1	1	9	0	1
Toledo.....	313,200	1	4	0		0	8	2	2
Indiana:									
Fort Wayne.....	105,300	0	2	0		0	0	0	1
Indianapolis.....	382,100		3						
South Bend.....	86,100	0	1	0		0	0	0	3
Terre Haute.....	73,500	0	0	0		0	0	0	0
Illinois:									
Chicago.....	3,157,400	18	45	90	1	1	45	4	28
Springfield.....	67,200	1	0	0		0	0	0	2
Michigan:									
Detroit.....	1,378,900	3	25	20	2	0	12	7	9
Flint.....	148,800	3	2	1		0	2	1	0
Grand Rapids.....	164,200	0	1	0		0	0	0	0

1 No estimate of population made.

City reports for week ended August 10, 1929—Continued

Division, State, and city	Population July 1, 1928, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued									
Wisconsin:									
Kenosha.....	56,500	2	0	0	—	0	1	1	0
Madison.....	50,500	1	0	0	—	0	5	1	0
Milwaukee.....	544,200	9	8	7	—	0	8	3	6
Racine.....	74,400	0	1	0	—	0	1	0	0
Superior.....	(1)	0	0	1	—	0	1	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth.....	116,800	0	0	0	—	0	2	0	0
Minneapolis.....	455,900	12	10	4	—	2	0	1	4
St. Paul.....	(1)	0	7	3	—	0	1	2	3
Iowa:									
Davenport.....	(1)	0	0	2	—	—	0	0	—
Des Moines.....	151,900	0	2	0	—	—	0	0	—
Sioux City.....	80,000	0	0	0	—	—	4	0	—
Waterloo.....	37,100	0	0	0	—	—	2	0	—
Missouri:									
Kansas City.....	391,000	1	2	4	—	0	0	0	6
St. Joseph.....	78,500	0	0	0	—	0	0	1	0
St. Louis.....	848,100	4	13	5	—	—	0	8	—
North Dakota:									
Fargo.....	(1)	3	0	0	—	0	0	0	0
Grand Forks.....	(1)	1	0	0	—	—	0	0	—
South Dakota:									
Aberdeen.....	(1)	0	0	0	—	—	0	0	—
Sioux Falls.....	(1)	0	0	0	—	—	0	0	—
Nebraska:									
Omaha.....	222,800	0	3	0	—	0	4	1	2
Kansas:									
Topeka.....	62,800	0	1	0	—	0	4	3	0
Wichita.....	99,300	0	0	0	—	0	0	0	0
SOUTH ATLANTIC									
Delaware:									
Wilmington.....	128,500	0	1	0	—	0	0	0	0
Maryland:									
Baltimore.....	830,400	5	11	2	—	0	2	14	8
Cumberland.....	(1)	0	0	0	—	0	0	0	0
Fredrick.....	(1)	0	0	0	—	0	0	0	0
District of Columbia: ¹									
Washington.....	562,000	1	5	5	1	0	0	0	4
Virginia:									
Lynchburg.....	38,600	2	1	0	—	0	0	11	0
Richmond.....	194,400	—	4	—	—	—	—	—	—
Roanoke.....	64,600	0	1	0	—	0	0	0	0
West Virginia:									
Charleston.....	55,200	0	0	1	—	0	0	0	0
Wheeling.....	(1)	1	0	0	—	0	0	0	0
North Carolina:									
Raleigh.....	(1)	0	1	0	—	0	0	0	0
Wilmington.....	39,100	3	0	1	—	0	0	1	1
Winston-Salem.....	80,000	0	1	0	—	0	1	0	2
South Carolina:									
Charleston.....	75,900	0	0	0	1	0	0	0	3
Columbia.....	50,600	0	0	0	—	0	0	1	2
Georgia:									
Atlanta.....	255,100	0	2	3	12	0	2	1	0
Brunswick.....	(1)	0	0	0	—	0	0	0	0
Savannah.....	99,900	0	0	0	—	0	0	0	2
Florida:									
Miami.....	156,700	0	1	0	—	0	0	1	4
St. Petersburg.....	53,300	—	0	—	—	0	—	—	0
Tampa.....	113,400	0	1	4	—	0	0	0	0

¹ No estimate of population made.

City reports for week ended August 10, 1929—Continued

Division, State, and city	Population July 1, 1928, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST SOUTH CENTRAL									
Kentucky:									
Covington.....	59,000	0	0	0	-----	0	0	0	0
Louisville.....	329,400	0	2	2	-----	0	0	0	8
Tennessee:									
Memphis.....	190,200	0	2	2	-----	0	0	2	4
Nashville.....	139,600	0	2	0	-----	0	1	0	1
Alabama:									
Birmingham.....	222,400	2	2	2	-----	0	0	0	3
Mobile.....	69,600	0	0	0	-----	0	0	0	0
Montgomery.....	63,100	-----	0	-----	-----	-----	-----	-----	-----
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith.....	(1)	-----	0	-----	-----	-----	-----	-----	-----
Little Rock.....	79,200	1	0	1	-----	0	0	2	1
Louisiana:									
New Orleans.....	429,400	0	5	6	2	1	2	0	9
Shreveport.....	81,300	0	1	0	-----	0	0	3	8
Oklahoma:									
Oklahoma City.....	(1)	0	2	0	6	0	0	0	0
Tulsa.....	170,500	0	1	3	-----	-----	1	0	-----
Texas:									
Dallas.....	217,800	0	4	13	-----	0	3	1	2
Fort Worth.....	170,600	0	1	3	-----	0	0	0	2
Galveston.....	50,600	0	0	0	-----	0	0	0	1
Houston.....	(1)	0	2	8	-----	1	0	0	4
San Antonio.....	218,100	0	1	3	-----	0	0	0	6
MOUNTAIN									
Montana:									
Billings.....	(1)	0	0	0	-----	0	1	0	1
Great Falls.....	(1)	0	0	0	-----	0	2	3	1
Helena.....	(1)	0	0	0	-----	0	0	3	0
Missoula.....	(1)	0	0	0	-----	0	0	0	0
Idaho:									
Boise.....	(1)	0	0	0	-----	0	1	0	2
Colorado:									
Denver.....	294,200	7	9	4	-----	0	2	1	3
Pueblo.....	44,200	0	1	0	-----	0	0	0	0
New Mexico:									
Albuquerque.....	(1)	0	0	0	-----	0	0	0	1
Utah:									
Salt Lake City.....	138,000	3	2	0	-----	0	1	12	0
Nevada:									
Reno.....	(1)	0	0	0	-----	0	0	0	0
PACIFIC									
Washington:									
Seattle.....	383,200	3	3	1	-----	-----	5	5	-----
Spokane.....	109,100	1	1	0	1	-----	0	0	-----
Tacoma.....	110,500	1	1	2	-----	0	0	0	0
Oregon:									
Portland.....	(1)	1	5	2	-----	0	6	1	2
California:									
Los Angeles.....	(1)	8	24	9	-----	0	3	14	12
Sacramento.....	75,700	0	1	0	-----	0	0	0	1
San Francisco.....	585,300	2	8	6	-----	0	2	2	0

1 No estimate of population made.

City reports for week ended August 10, 1929—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, es- timated expect- ancy	Cases re- ported	Cases, es- timated expect- ancy	Cases re- ported	Deaths re- ported		Cases, es- timated expect- ancy	Cases re- ported	Deaths re- ported		
NEW ENGLAND											
Maine:											
Portland	0	1	0	0	0	0	1	0	0	1	20
New Hampshire:											
Concord	1	0	0	0	0	0	0	0	0	0	8
Vermont:											
Barre	0	0	0	0	0	1	0	0	0	1	2
Massachusetts:											
Boston	15	11	0	0	0	10	3	3	2	44	150
Fall River	0	2	0	0	0	2	1	0	0	12	22
Springfield	2	3	0	0	0	4	1	0	0	3	28
Worcester	2	0	0	0	0	3	0	0	1	8	35
Rhode Island:											
Pawtucket	0	0	0	0	0	0	0	0	0	0	12
Providence	2	5	0	0	0	0	1	2	0	7	52
Connecticut:											
Bridgeport	2	0	0	0	0	2	1	0	0	1	33
Hartford	1	1	0	0	0	2	0	1	0	3	28
New Haven	1	0	0	0	0	4	1	0	0	0	28
MIDDLE ATLANTIC											
New York:											
Buffalo	5	4	0	0	0	7	1	0	0	4	119
New York	29	23	0	0	0	77	33	18	4	86	1,101
Rochester	2	2	0	0	0	2	1	2	0	8	65
Syracuse	2	0	0	0	0	1	0	1	0	21	41
New Jersey:											
Camden	1	1	0	0	0	0	1	0	0	1	18
Newark	4	5	0	0	0	6	1	0	0	59	86
Trenton	1	1	0	0	0	2	1	0	0	4	38
Pennsylvania:											
Philadelphia	17	8	0	0	0	28	9	2	1	61	358
Pittsburgh	9	3	0	0	0	5	2	0	1	44	178
Reading	0	0	0	0	0	0	1	0	0	5	17
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	3	5	1	0	0	11	2	2	0	2	145
Cleveland	11	4	0	0	0	12	4	2	0	52	83
Columbus	3	1	0	0	0	2	0	2	0	26	71
Toledo	2	4	1	0	0	5	2	0	0	41	21
Indiana:											
Fort Wayne	1	1	0	2	0	1	0	0	0	0	16
Indianapolis	2	1	1	0	0	2	2	0	0	0	15
South Bend	1	0	0	0	0	0	0	0	0	0	15
Terre Haute	0	0	0	0	0	2	1	0	0	0	15
Illinois:											
Chicago	26	50	0	0	0	53	5	5	0	111	591
Springfield	0	0	0	0	0	0	0	1	0	1	18
Michigan:											
Detroit	22	37	1	2	0	20	5	6	2	97	260
Flint	4	4	0	14	0	0	0	0	0	8	15
Grand Rapids	2	1	0	0	0	2	1	0	0	8	31
Wisconsin:											
Kenosha	1	0	0	0	0	1	0	0	0	4	87
Madison	0	0	0	0	0	0	0	0	0	8	5
Milwaukee	6	5	1	0	0	3	1	0	0	86	12
Racine	1	0	0	0	0	0	0	0	0	7	5
Superior	1	0	0	0	0	0	0	0	0	0	12
WEST NORTH CENTRAL											
Minnesota:											
Duluth	4	1	0	0	0	2	0	0	0	7	20
Minneapolis	11	9	0	0	0	2	2	1	0	4	72
St. Paul	6	4	1	0	0	3	1	0	0	20	49
Iowa:											
Davenport	0	0	0	4	0	0	0	0	0	5	26
Des Moines	2	1	0	0	0	0	0	0	0	0	26
Sioux City	0	1	0	0	0	0	0	0	0	6	5
Waterloo	1	0	0	5	0	1	0	0	0	0	12

City reports for week ended August 10, 1929—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- cul- osis, 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.....	2	1	0	0	0	8	2	0	0	8	95
St. Joseph.....	0	0	0	0	0	1	0	0	0	0	37
St. Louis.....	7	3	0	0	0	0	6	4	0	26	182
North Dakota:											
Fargo.....	1	0	0	0	0	0	0	0	0	0	2
Grand Forks.....	0	0	0	1	—	—	0	0	—	0	—
South Dakota:											
Aberdeen.....	0	1	0	0	—	—	0	0	—	2	—
Sioux Falls.....	1	0	0	0	—	—	0	0	—	0	5
Nebraska:											
Omaha.....	2	0	0	0	0	2	0	2	0	5	38
Kansas:											
Topeka.....	1	1	0	0	0	0	0	1	0	12	9
Wichita.....	1	3	0	0	0	0	0	0	0	3	23
SOUTH ATLANTIC											
Delaware:											
Wilmington.....	0	0	0	0	0	1	0	0	0	0	15
Maryland:											
Baltimore.....	5	10	0	0	0	18	9	3	0	53	198
Cumberland.....	0	0	0	0	0	0	1	0	11	0	9
Frederick.....	0	0	0	0	0	0	0	0	0	0	2
District of Colum- bia:											
Washington.....	3	3	0	0	0	4	4	1	0	2	95
Virginia:											
Lynchburg.....	0	0	0	0	0	1	1	0	0	22	12
Richmond.....	1	—	0	—	—	—	2	—	—	—	—
Roanoke.....	1	0	0	0	0	1	1	1	0	0	14
West Virginia:											
Charleston.....	0	0	0	0	0	1	2	2	0	4	25
Wheeling.....	1	0	0	0	0	0	0	1	0	4	8
North Carolina:											
Raleigh.....	0	0	0	0	0	1	0	0	1	6	13
Wilmington.....	0	1	0	0	0	0	0	0	0	2	8
Winston-Salem.....	0	2	0	0	0	0	2	1	0	22	13
South Carolina:											
Charleston.....	0	0	0	0	0	2	2	0	0	0	23
Columbia.....	0	0	0	0	0	0	1	1	0	3	26
Georgia:											
Atlanta.....	2	6	1	0	0	4	4	2	3	16	77
Brunswick.....	0	0	0	0	0	2	0	0	0	0	6
Savannah.....	0	0	0	0	0	2	1	0	0	0	33
Florida:											
Miami.....	0	0	0	0	0	5	2	0	0	0	25
St. Petersburg.....	0	—	0	—	0	0	0	—	—	—	—
Tampa.....	0	0	0	0	0	1	1	0	0	0	17
EAST SOUTH CENTRAL											
Kentucky:											
Covington.....	0	0	0	0	0	0	0	0	0	0	15
Louisville.....	1	7	1	0	0	6	4	5	0	11	104
Tennessee:											
Memphis.....	1	0	0	1	0	3	7	3	0	11	61
Nashville.....	1	1	1	0	0	2	6	2	1	15	46
Alabama:											
Birmingham.....	1	1	0	0	0	4	6	0	0	7	67
Mobile.....	0	0	0	0	0	1	1	1	0	0	24
Montgomery.....	0	—	0	—	—	—	1	—	—	—	—
WEST SOUTH CENT- RAL											
Arkansas:											
Fort Smith.....	0	—	0	—	—	—	0	—	—	—	—
Little Rock.....	0	1	0	0	0	4	1	2	0	2	—
Louisiana:											
New Orleans.....	2	3	1	0	0	14	4	2	3	1	153
Shreveport.....	0	0	0	0	0	1	1	0	0	3	34

¹ Nonresident.

City reports for week ended August 10, 1929—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 re- ported		Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		
WEST SOUTH CENTRAL—contd.											
Oklahoma:											
Oklahoma City	1	0	1	1	0	3	3	6	1	0	33
Tulsa	0	0	0	0	0	—	2	1	—	3	—
Texas:											
Dallas	2	2	0	0	0	4	4	4	0	6	49
Forth Worth	1	0	0	0	0	4	2	1	0	0	34
Galveston	0	0	0	0	0	2	1	0	0	0	17
Houston	1	4	0	0	0	4	1	6	0	1	38
San Antonio	0	0	0	0	0	5	1	2	2	0	61
MOUNTAIN											
Montana:											
Billings	0	0	0	0	0	0	0	0	0	0	3
Great Falls	1	0	1	0	0	0	0	1	1	19	9
Helena	0	0	0	0	0	0	0	0	0	0	2
Missoula	0	0	0	0	0	0	0	0	0	0	2
Idaho:											
Boise	0	0	0	0	0	1	0	0	0	0	10
Colorado:											
Denver	2	0	0	0	0	5	1	0	0	7	57
Pueblo	1	0	0	0	0	1	1	0	0	0	12
New Mexico:											
Albuquerque	0	0	0	0	0	3	0	1	0	0	11
Utah:											
Salt Lake City	1	4	0	0	0	0	1	0	0	20	16
Nevada:											
Reno	0	1	0	0	0	0	0	0	0	0	1
PACIFIC											
Washington:											
Seattle	2	1	1	1	—	—	1	0	—	16	—
Spokane	1	1	1	0	—	—	0	0	—	16	—
Tacoma	1	0	1	2	0	2	0	2	0	2	19
Oregon:											
Portland	2	0	5	0	0	0	0	2	1	0	59
California:											
Los Angeles	9	10	4	1	0	29	4	5	0	27	273
Sacramento	1	5	0	0	0	0	1	1	0	7	23
San Francisco	5	6	0	3	0	12	2	4	0	14	118

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	0	0	0	0	0	0	2	1	0	0
Worcester	2	1	0	0	0	0	0	0	0	0
Rhode Island:										
Providence	0	0	0	0	0	0	0	2	0	0
MIDDLE ATLANTIC										
New York:										
Buffalo	0	2	0	0	0	0	0	9	0	0
New York	12	9	3	2	0	0	15	5	2	2
New Jersey:										
Newark	2	0	0	0	0	0	1	0	0	0
Pennsylvania:										
Philadelphia	9	3	0	0	2	2	0	1	1	1
Pittsburgh	0	1	0	0	0	0	0	0	0	0

City reports for week ended August 10, 1929—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST NORTH CENTRAL									
Ohio:									
Cleveland.....	2	0	1	1	0	0	1	0	0
Toledo.....	2	0	0	0	0	0	0	0	0
Illinois:									
Chicago ¹	9	4	1	1	0	0	2	0	1
Michigan:									
Detroit.....	3	4	2	0	0	0	1	7	0
Flint.....	1	0	0	0	0	0	0	0	0
Wisconsin:									
Milwaukee.....	3	2	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Minneapolis.....	1	0	0	0	0	0	0	0	0
Iowa:									
Des Moines.....	1	0	0	0	0	0	0	0	0
Missouri:									
Kansas City.....	3	1	0	1	0	0	1	0	0
St. Louis.....	4	0	0	0	0	0	0	0	0
North Dakota:									
Fargo.....	0	0	1	0	0	0	1	0	0
Nebraska:									
Omaha.....	1	0	0	0	0	0	0	0	0
SOUTH ATLANTIC									
District of Columbia:									
Washington.....	0	0	1	1	0	0	0	1	1
Virginia:									
Roanoke.....	0	0	0	0	0	1	0	0	0
North Carolina:									
Winston-Salem.....	0	0	0	0	1	0	0	0	0
South Carolina:									
Charleston ²	0	0	0	0	3	1	0	0	0
Columbia.....	0	0	0	0	0	1	0	0	0
Georgia:									
Atlanta.....	0	0	0	0	3	1	0	0	0
Brunswick.....	0	0	0	0	1	0	0	0	0
Savannah ³	0	0	0	0	1	1	0	0	0
Florida:									
Miami.....	0	0	0	0	0	1	0	0	0
EAST SOUTH CENTRAL									
Kentucky:									
Louisville.....	0	1	1	0	0	0	0	0	0
Alabama: ⁴									
Birmingham.....	0	0	0	0	1	2	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Little Rock.....	0	0	0	0	0	3	0	0	0
Louisiana:									
New Orleans.....	1	2	0	0	3	2	0	0	0
Shreveport.....	0	0	0	0	0	1	0	0	0
Oklahoma:									
Oklahoma City.....	0	0	0	1	0	0	0	0	0
Texas:									
Dallas.....	0	1	0	0	1	2	0	0	0
Houston.....	0	0	0	0	0	1	0	0	0
MOUNTAIN									
Utah:									
Salt Lake.....	1	1	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle.....	0	0	0	0	0	0	0	1	0
Oregon:									
Portland.....	0	0	0	0	0	0	0	1	0
California:									
Los Angeles.....	1	1	0	0	0	0	1	1	0
Sacramento.....	1	1	0	0	0	0	0	0	0
San Francisco.....	0	0	1	1	0	0	0	0	0

¹ Rabies in man: 1 death at Chicago, Ill.² Dengue: 4 cases at Charleston, S. C.³ Typhus fever: 2 cases at Savannah, Ga., and 1 death at Mobile, Ala.

The following table gives the rates per 100,000 population for 98 cities for the 5-week period ended August 10, 1929, compared with those for a like period ended August 11, 1928. The population figures used in computing the rates are approximate estimates, authoritative figures for many of the cities not being available. The 98 cities reporting cases have estimated aggregate populations of more than 31,000,000. The 91 cities reporting deaths have nearly 30,000,000 estimated population. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, July 7 to August 10, 1929—Annual rates per 100,000 population, compared with rates for the corresponding period of 1928¹

DIPHTHERIA CASE RATES

	Week ended—									
	July 13, 1929	July 14, 1928	July 20, 1929	July 21, 1928	July 27, 1929	July 28, 1928	Aug. 3, 1929	Aug. 4, 1928	Aug. 10, 1929	Aug. 11, 1928
98 cities	88	85	74	70	68	68	67	65	64	61
New England	80	80	82	46	59	46	55	57	45	60
Middle Atlantic	99	116	76	90	75	81	67	67	70	60
East North Central	119	82	105	76	103	64	99	73	85	73
West North Central	69	53	59	53	21	59	24	66	31	59
South Atlantic	43	63	30	50	28	67	47	55	32	54
East South Central	41	7	27	35	27	49	34	28	30	14
West South Central	87	41	76	57	103	69	101	41	126	53
Mountain	26	71	17	35	9	62	9	35	35	35
Pacific	42	72	42	54	32	57	47	84	45	69

MEASLES CASE RATES

98 cities	150	267	100	165	70	130	49	99	30	56
New England	188	777	148	504	102	651	98	527	32	248
Middle Atlantic	51	350	47	204	27	126	35	79	15	51
East North Central	351	214	210	145	149	83	83	84	56	63
West North Central	104	117	61	63	58	29	38	14	33	18
South Atlantic	49	134	43	98	17	75	11	59	10	23
East South Central	14	224	7	77	7	98	7	28	17	35
West South Central	63	24	15	44	28	60	18	0	20	4
Mountain	104	239	61	186	70	80	26	97	61	44
Pacific	157	26	112	20	80	54	45	30	25	20

SCARLET FEVER CASE RATES

98 cities	84	52	64	56	59	42	40	46	44	37
New England	84	87	57	78	57	57	64	53	52	67
Middle Atlantic	41	37	35	33	19	27	24	28	23	21
East North Central	160	71	103	88	110	56	62	58	72	42
West North Central	79	35	61	72	77	61	36	68	44	68
South Atlantic	64	34	69	29	60	38	28	38	44	27
East South Central	48	49	54	14	27	14	34	35	15	49
West South Central	43	28	71	32	59	20	37	77	41	36
Mountain	35	62	78	44	26	27	9	27	44	18
Pacific	92	74	67	79	67	71	50	67	57	38

¹ The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1929 and 1928, respectively.

² Barre, Vt., Kansas City, Mo., and San Antonio, Tex., not included.

³ Seattle and Spokane, Wash., not included.

⁴ Barre, Vt., Sioux City, Iowa, and Fort Smith, Ark., not included.

⁵ Indianapolis, Ind., Richmond, Va., Montgomery, Ala., and Fort Smith, Ark., not included.

⁶ Barre, Vt., not included.

⁷ Indianapolis, Ind., not included.

⁸ Kansas City, Mo., not included.

⁹ Sioux City, Iowa, not included.

¹⁰ Richmond, Va., not included.

¹¹ Montgomery, Ala., not included.

¹² San Antonio, Tex., not included.

¹³ Fort Smith, Ark., not included.

Summary of weekly reports from cities, July 7 to August 10, 1929—Annual rates per 100,000 population, compared with rates for the corresponding period of 1928—Continued

SMALLPOX CASE RATES

	Week ended—									
	July 13, 1929	July 14, 1928	July 20, 1929	July 21, 1928	July 27, 1929	July 28, 1928	Aug. 3, 1929	Aug. 4, 1928	Aug. 10, 1929	Aug. 11, 1928
98 cities.....	8	7	¹ 14	4	6	¹ 2	¹ 7	¹ 4	¹ 5	1
New England.....	0	0	⁰ 0	0	0	0	⁰ 0	0	0	0
Middle Atlantic.....	0	0	⁰ 0	0	0	0	0	0	0	0
East North Central.....	18	7	32	3	16	1	13	7	⁷ 12	1
West North Central.....	15	12	² 23	14	21	4	¹ 6	0	10	2
South Atlantic.....	2	0	2	6	0	0	0	2	¹⁰ 0	2
East South Central.....	7	7	7	14	7	35	7	21	¹¹ 7	0
West South Central.....	16	4	¹⁰ 0	4	4	0	¹⁴ 4	0	¹³ 0	0
Mountain.....	35	89	44	18	9	18	26	35	0	9
Pacific.....	10	31	35	10	22	¹ 3	35	¹ 10	17	8

TYPHOID FEVER CASE RATES

98 cities.....	14	17	¹ 18	18	18	¹ 22	¹ 19	¹ 21	¹ 17	27
New England.....	5	14	⁰ 9	7	29	11	⁰ 11	5	14	16
Middle Atlantic.....	7	9	10	12	7	17	11	17	11	15
East North Central.....	7	11	8	7	8	5	10	10	⁷ 12	14
West North Central.....	10	16	² 23	12	13	23	⁰ 32	8	15	25
South Atlantic.....	7	38	32	31	37	36	22	42	¹⁰ 24	57
East South Central.....	156	70	143	140	102	140	149	154	¹¹ 44	245
West South Central.....	87	65	¹² 71	89	71	105	¹³ 57	61	¹⁰ 65	78
Mountain.....	9	9	52	0	44	27	9	0	9	9
Pacific.....	2	22	5	18	7	¹ 17	30	¹ 27	30	15

INFLUENZA DEATH RATES

91 cities.....	3	6	¹ 3	5	3	5	⁰ 3	6	¹¹ 1	5
New England.....	2	5	⁰ 0	9	2	5	⁰ 0	2	0	0
Middle Atlantic.....	2	8	2	4	2	2	2	6	1	5
East North Central.....	3	4	3	5	4	6	4	3	⁷ 1	1
West North Central.....	0	6	⁰ 0	3	8	3	0	3	6	6
South Atlantic.....	4	8	6	8	4	6	4	15	¹⁰ 0	8
East South Central.....	7	8	0	0	0	23	15	0	0	15
West South Central.....	4	25	¹² 20	4	4	12	8	12	8	29
Mountain.....	26	18	0	9	9	9	9	0	0	9
Pacific.....	0	10	3	3	0	0	0	10	0	0

PNEUMONIA DEATH RATES

91 cities.....	55	61	¹ 57	58	50	44	⁰ 54	53	¹¹ 53	59
New England.....	29	67	⁰ 70	55	32	34	⁰ 43	57	38	48
Middle Atlantic.....	62	72	65	60	57	51	61	60	60	72
East North Central.....	50	54	40	57	38	29	47	31	⁷ 41	33
West North Central.....	51	40	⁰ 39	40	51	31	26	70	45	80
South Atlantic.....	58	52	54	50	60	71	45	52	¹⁰ 44	54
East South Central.....	20	54	52	61	52	84	96	38	59	60
West South Central.....	85	71	¹² 74	54	89	58	81	87	126	108
Mountain.....	44	62	06	80	61	80	61	62	61	71
Pacific.....	56	54	06	81	26	10	52	76	43	57

¹ Barre, Vt., Kansas City, Mo., and San Antonio, Tex., not included.

² Seattle and Spokane, Wash., not included.

³ Barre, Vt., Sioux City, Iowa, and Fort Smith, Ark., not included.

⁴ Indianapolis, Ind., Richmond, Va., Montgomery, Ala., and Fort Smith, Ark., not included.

⁵ Barre, Vt., not included.

⁶ Indianapolis, Ind., not included.

⁷ Kansas City, Mo., not included.

⁸ Sioux City, Iowa, not included.

⁹ Richmond, Va., not included.

¹⁰ Montgomery, Ala., not included.

¹¹ San Antonio, Tex., not included.

¹² Fort Smith, Ark., not included.

¹³ Indianapolis, Ind., and Richmond, Va., not included.

Number of cities included in summary of weekly reports and aggregate population of cities of each group, approximated as of July 1, 1929 and 1928, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1929	1928	1929	1928
Total	98	91	31, 568, 400	31, 052, 700	29, 995, 100	29, 498, 600
New England.....	12	12	2, 305, 100	2, 273, 900	2, 305, 100	2, 273, 900
Middle Atlantic.....	10	10	10, 808, 700	10, 702, 200	10, 808, 700	10, 702, 200
East North Central.....	16	16	8, 181, 900	8, 001, 300	8, 181, 900	8, 001, 300
West North Central.....	12	9	2, 712, 100	2, 673, 300	1, 736, 900	1, 708, 100
South Atlantic.....	19	19	2, 783, 200	2, 732, 900	2, 783, 200	2, 732, 900
East South Central.....	6	5	767, 900	745, 500	704, 200	682, 400
West South Central.....	8	7	1, 319, 100	1, 289, 900	1, 285, 000	1, 256, 400
Mountain.....	9	9	598, 800	590, 200	598, 800	590, 200
Pacific.....	6	4	2, 090, 600	2, 043, 500	1, 590, 300	1, 551, 200

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—Week ended August 3, 1929.—The Department of Pensions and National Health of the Dominion of Canada reports cases of certain communicable diseases for the week ended August 3, 1929, as follows:

Province	Cerebro-spinal fever	Influenza	Poliomyelitis	Small-pox	Typhoid fever
Prince Edward Island.....					
Nova Scotia.....				2	1
New Brunswick.....					4
Quebec.....				1	11
Ontario.....	1		13		38
Manitoba.....	1	1	5		1
Saskatchewan.....					
Alberta.....					
British Columbia.....				5	2

Ontario Province—Communicable diseases (comparative)—Four weeks ended July 27, 1929.—The following table shows the numbers of cases of certain communicable diseases in the Province of Ontario, Canada, with deaths from these diseases, for the four weeks ended July 27, 1929, as compared with the corresponding period of the year 1928:

Disease	1929		1928	
	Cases	Deaths	Cases	Deaths
Cerebrospinal meningitis.....	1	3	5	4
Chancroid.....	0	0	1	0
Chicken pox.....	547	0	398	1
Conjunctivitis.....	5	0	1	0
Diphtheria.....	184	11	155	8
Dysentery.....	0	1	1	1
Encephalitis.....	0	0	0	1
German measles.....	7	0	4	0
Gonorrhoea.....	262	0	129	0
Influenza.....	8	3	5	9
Malaria.....	1	0	0	0
Malta fever.....	0	0	1	0
Measles.....	954	3	903	0
Mumps.....	137	0	295	0
Pneumonia.....	6	91	5	68
Poliomyelitis.....	1	0	3	0
Puerperal septicemia.....	0	0	0	1
Scarlet fever.....	164	0	148	1
Septic sore throat.....	19	0	0	0
Smallpox.....	57	0	18	0
Syphilis.....	208	0	72	1
Tuberculosis.....	116	35	123	41
Typhoid fever.....	23	2	48	4
Whooping cough.....	347	0	218	3

CHINA

Shanghai—Cholera.—Under date of August 17, 1929, 300 cases of cholera were reported in hospitals at Shanghai, China. The epidemic started during the week ended August 10, 1929. It is said to be the usual summer epidemic.

NETHERLANDS

Rotterdam—Smallpox.—A statement from the Dutch Central Health Office at The Hague gives a total of 45 cases of smallpox with 2 deaths at Rotterdam from the beginning of the outbreak to July 31, 1929. The disease is of a mild form. There were two principal foci of infection—one of the city hospitals and a small suburban place called Spangen. Free city vaccination stations were maintained.

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

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

CHOLERA

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

Place	Jan. 13- Feb. 9, 1929	Feb. 10- Mar. 9, 1929	Apr. 7- May 4, 1929	May 5- June 1, 1929	Week ended—											
					June, 1929					July, 1929					August, 1929	
					8	15	22	29	6	13	20	27	3	10		
Ceylon.....																
Colombo.....	2	4			3											
China:																
Amoy.....																
Canton.....																
Manchuria—Kwantung—Dairen.....																
Shanghai.....																
Swatow.....																
India.....	12,566	7,627	9,046	18,521	30,616	8,406	7,329	6,937	6,777		3	1				
Bassain.....	7,912	4,425	4,997	11,069	20,311	5,943	4,815	4,798	4,444							
Bombay.....	6	6	45	118	208	1	1	1	1							
	1		6	3		1	1	1								
Calcutta.....	129	261	552	788	924	98	83	74	99	89	60					
Madras.....	85	144	307	461	605	65	53	7	51	41	29	50	28			
	4	9			1											
Moulmein.....	1	1	7	6	31	5						1				
Negapatam.....	3															
Rangoon.....	18	3														
	15	15	8	13	13	1	3	3	1	1						
Tuticorin.....	9	37	10	7	7	2	2	2	3	1	4	1				
	85	6				15	15	16	4	4	2	2				
	52	4				12	10	8								
India, (French):																
Chanderanagor.....						1	1	1	1	1	1	1				
						3	3	3	3	3	3	3				
						1	1	1	1	1	1	1				

A case of plague and a plague-infected rat were reported at Hong Kong Aug. 22, 1929.

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

PLAGUE—Continued

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

Place	Feb- ru- ary, 1929	March, 1929	April, 1929	May, 1929	June, 1929	July, 1929	Place	Feb- ru- ary, 1929	March, 1929	April, 1929	May, 1929	June, 1929	July, 1929
British East Africa, (see also table above):							Madagascar—Continued.						
Kenya.....	C 4	10	4	22	69	---	Moromanga Province.....	C 7	5	3	---	---	---
Uganda.....	C 142	121	282	---	---	---	Tananarive Province.....	C 4	6	---	---	---	---
Ecuador: Guayaquil.....	C 139	113	264	2	---	---	Peru.....	C 146	120	78	---	---	---
Plague-infected rats.....	C 54	26	19	---	---	---	Senegal:	C 136	119	74	---	---	---
Greece.....	C 22	4	5	1	---	---	Baol ¹	C 16	35	---	---	---	---
Indo-China, (see also table above).....	C 27	14	13	3	1	---	Dakar ¹	C 13	13	---	---	---	---
Madagascar, (see also table above).....	C 1	---	---	---	---	---	Thies ¹	---	---	---	---	---	---
Ambohitra Province.....	C 348	196	92	---	11	---	Tivaouane ¹	---	---	---	---	---	---
Antsirabe Province.....	C 335	194	88	---	---	---							
Antsirabe Province.....	C 164	90	8	---	---	---							
Itasy Province.....	C 21	13	---	---	---	---							
	C 10	8	2	---	---	---							
	C 10	7	2	---	---	---							

SMALLPOX

Place	Week ended—									
	June, 1929					July, 1929				
	8	15	22	29	6	13	20	27	Aug 3, 1929	
Algeria:										
Algiers.....										
Cherchall.....										
Oran.....										
Angola, (see table below).										

¹ Incomplete reports.

Egypt:	1	1	1,063	1,156	1,423	1,179	272	191	166	160	153	115	144	129	
Gharbieh.....	1				1				1						
Port Said.....					5										
Suez.....															
France, (see table below).															
Great Britain:															
England and Wales.....	890	1,063	1,156	1,423	1,179	272	191	166	160	153	115	144	129	7	
Ashton under Lyne.....					1										
Birmingham.....		2	3	1	4	2	2					2	1		
Bristol.....	1				1						1				
Cardiff.....	4				31						1				
Castelford.....	48	85	56	1	12	2			1						
Hull.....	2														
Leeds.....	3	6	8		3		1							1	
Liverpool.....	1		1												
London.....	40	14	58	201	183	69	41	40	17	43	16	30	18	31	
London and Great Towns.....	433	425	598	888	659	166	120	113	97	103	64	109			
Newcastle-on-Tyne.....		6	16	3	3		11		9	9	4		2	1	
Nottingham.....	1				6										
Stoke-on-Trent.....	2				3										
West Ham.....	14	18	72	133	86	24	9	13	16	5	7	11	9	26	
Scotland.....															
Aberdeen.....					2										
Glasgow.....			1	19	1										
Greece (see table below).															
Hedjaz.....	183	108	84	77	40	23	19	12	16	14	27	8	7	11	4
Honduras: Puerto Castilla.	56	40	52	52	24	11	12	16	14	21	21	2	4	8	3
India.....	12,531	14,890	19,120	22,556	17,011	3,265	2,942	2,674	2,668						
Bombay.....	3,045	3,285	3,983	5,060	4,185	891	693	723							
Calcutta.....	158	397	441	315	208	38	42	36	31	28	21	22	21		
Madras.....	78	188	206	175	131	22	27	23	13	13	15	12	15	16	
Moulmein.....	32	104	127	101	39	7	4	8	8	6	3	2	6		
Nagapatam.....	16	29	77	74	36	7	4	7	6	4	3	1	3		
Rangoon.....	5	147	206	144	84	8	13	10	4	6	3	12			
Tatlochin.....	223	14	70	59	59	6	8	7	4	6	1	6			
Vizagapatam.....	35	260	392	327	174	21	17	28	22	25	39	24	34		
Moulmein.....	6	81	83	84	61	2	6	8	4	6	12	10	15		
Negapatam.....	2	14	18	7	8	3			3	3	1	4	5		
Rangoon.....	26	5	9	6	2	2			3	1	3	1	2		
Tatlochin.....	6	4	4	7	2				1	3	1	1			
Vizagapatam.....	8	17	13	7	1										
Tatlochin.....	1	6	6	3	1										
Vizagapatam.....	2	1		1											
Tatlochin.....	8	53	26	28	2		1	2	2	2			1		
Vizagapatam.....	9	9	5	8					1	1			2		

SMALLPOX—Continued

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

[illegible]

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

SMALLPOX—Continued

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

Place	Week ended—													
	Jan. 13- Feb. 9, 1929	Feb. 10- Mar. 9, 1929	Mar. 10- Apr. 6, 1929	Apr. 7- May 4, 1929	June, 1929						July, 1929			Aug. 3 1929
					June, 1929						July, 1929			
					8	15	22	29	6	13	20	27		
Place	Jan- ary, 1929	Febru- ary, 1929	March, 1929	April, 1929			May, 1929			June, 1929			July 3-10, 1929	
				1-10	11-20	21-30	1-10	11-20	21-31	1-10	11-20	21-30		
Union of South Africa:														
Cape Province.....	O													
Transvaal.....	O													
Upper Volta.....	O	8	4		P	P	P	P	P	P				
On vessel.....											5	3		
S. S. Aerangi, at Sydney.....	O											1		
S. S. Asyria, at Suez, from Bombay.....	O													
S. S. City of Venice, at Suez, from Calcutta.....	O													
S. S. Fern, at Port Said, from Abadan.....	O													
S. S. British Birch, at Suez, from Abadan.....	O											1		
S. S. Keneb, at Suakin, from Jeddah.....	O													
S. S. Le Panto, at Suez, Egypt.....	O											4		
S. S. Lopez-Lopez, at Suez.....	O													
S. S. Malwa, at Suez.....	O													
S. S. Mancoer, at Suez, from Calcutta.....	O													
Tantalus (motor ship), at Amsterdam.....	O													
S. S. Tuscania, at Glasgow, from Bombay.....	O													
Indo-China (see also table above).....	O	311	364	561	500	100	155						87	
Ivory Coast.....	O		4	4										
Senegal.....	O		80	70	50	7								
Sudan (French).....	O		8	11	15			1						
Syria.....	O		28	10	9	64			2				57	
Syria: Beirut.....	O	1	43	12	2	16			4		8	18	16	
												12	6	
													26	

Place	Jan- ary, 1929	Feb- ruary, 1929	March, 1929	April, 1929	May, 1929	June, 1929	Place	Jan- ary, 1929	Feb- ruary, 1929	March, 1929	April, 1929	May, 1929	June, 1929
Angola.....	0	1					Greece.....	8	5	2	4	5	
British East Africa, (see also table above):.....								1	1				
Kenya.....	0		23	91	38		Morocco.....	7	11	8	12	39	
Chosen.....	0	1					Persia.....	28	23	8			
Ecuador.....	12	4	2	2	1		Turkey.....	16	7		1		11
Guayasquil.....	1	1						6					
France.....	9	3	5			15							

TYPHUS FEVER

[illegible]

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

TYPHUS FEVER—Continued

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

Place		Jan. 13- Feb. 9, 1929	Feb. 10- Mar. 9, 1929	Mar. 10-Apr. 6, 1929	Apr. 7- May 4, 1929	May 5- June 1, 1929	Week ended—						
							June, 1929						
							8	15	22	29	6	13	20
Czechoslovakia, (see table below).													
Egypt:													
Alexandria.....	C			1	1	1							
Assuan Province.....	D		2										
Behaira Province.....	D		2										
Cairo.....	D		13	67	50	159	13				5		3
Daqahliya Province.....	D			9	9	24	6				2		2
Gharbieh.....	C			34		2					1		1
Menoufieh Province.....	C	1	2										
Port Said.....	D		1										
Menoufieh Province.....	C				36		2	1		1	3	1	
Greece, (see table below).													
Hungary.....	C												
Indo-China, (see table below).													
Ireland (Irish Free State):													
Cavan County—Carrickmacross.....	C												
Cork County.....	C		1										
Donegal County.....	C												
Radnor.....	C				1								
Stranorlar.....	C								1				
Dublin.....	C	1											
Kerry County—	D	1											
Dingle.....	C			2	2								
Killarney.....	C		1										
Tyrone County, Strabane. ¹													
Latvia, (see table below).													
Lithuania, (see table below).													
Mexico, (see also table below):													
Agascalientes.....	D	11	7	5			8	6	2	4	1	2	5
Mexico City, including municipalities in Federal District.....	D	3	2	4	4	2							

