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THE STILLBIRTH PROBLEM IN THE UNITED STATES[1]

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For the past few years the attention of many investigators has been centered on the problem of early infant mortality. We all recognize the fact that the deaths occurring in the first weeks of life constitute a grave problem in our program for the reduction of infant mortality.

In focusing our attention on neonatal mortality we are naturally, and fortunately, led to a consideration of those infants which have had no postnatal life. This is fortunate, because the stillbirth problem is the most neglected one in the whole field of infant mortality.

It is only since 1922 that the Bureau of the Census in the United States has published for consecutive years any data relative to stillbirths. In 1918 such data were presented for the single year; but it was not until four years later that material of this nature became a regular part of the Census mortality reports.

There are very good reasons why we approach the statistics of stillbirths with fear and hesitation. In the first place, no one doubts that the reporting of stillbirths is far from complete. In many instances both the medical profession and the laity are likely to look upon a stillbirth occurring in the early months of gestation as of little importance and the obligation to report such events may be lightly dismissed. Hence, the reported cases do not represent, by any means, the total products of conception which fail to survive intrauterine life.

Again, the rules and regulations for the reporting of stillbirths vary greatly in the different States. In only one (Maryland) is it required that every product of conception be reported. In some of the other States the requirement applies only to fetuses of six or seven months; and it will be readily seen that in such States many early stillbirths will go unreported.

With these facts in mind, it will be understood that the statistics presented do not claim to be an accurate picture of the situation, but they do give some idea of conditions in the United States.

The most recent official figures available are those of 1928. In that year 89,765 stillbirths were reported in the birth-registration area

[1] Prepared for the Sixth Pan American Child Congress, Lima, Peru, July, 1930.

of the United States. Since the birth-registration area does not include the whole United States (94.4 per cent), and since we know that all stillbirths are not reported, it is safe to assume that at least 100,000 children in the United States were stillborn in that year. No nation can afford to look upon such a tremendous yearly loss of potential citizens with equanimity.

In the same year there were reported 83,086 deaths of children under 1 month of age. It is plain, therefore, that in the United States at least, the stillbirth problem is one of greater magnitude than that of neonatal death. Even with incomplete reporting of stillbirths there were more fetal than neonatal deaths recorded in 1928, and in the 7-year period from 1922 to 1928 there has been a greater decline in the neonatal death rate than in the stillbirth rate. This is shown

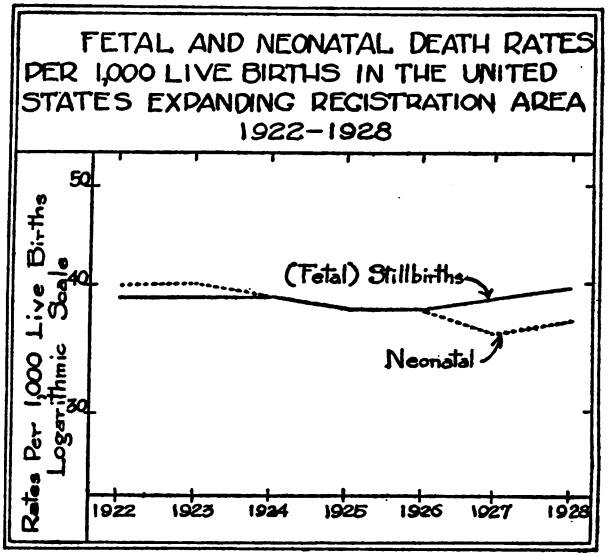

FIGURE 1.

plainly in Figure 1. The stillbirth curve is almost a straight line; and while the decline in the neonatal rate is slight, it is still a real decline.

With the number of stillbirths exceeding that of neonatal deaths and with no appreciable decline in the stillbirth rate, the United States has in its stillborn a serious problem.

There are certain factors, such as race, environment, and age, which may possibly have some significant relationship to stillbirths, but we are as yet far too much at sea in the matter to speak with any degree of assurance of such possible relationship.

Our figures show that the urban rate is about 10 per cent higher than the rural rate. We can not venture to say, however, that an urban or rural environment has anything to do with these rates. It is highly probable that the reporting of stillbirths is less complete

in the country than in the cities. It is equally true that the hospitals, most of which are located in cities, would naturally be sought by abnormal cases, and hospital reporting is likely to be better than that of nonhospital cases.

In the matter of race, the colored stillbirth rate is more than double that of the white rate. The difference between the races in the stillbirth rates is much greater than in the neonatal rates or the general infant mortality rates. There are two factors which doubtless tend to raise the negro rate: One is the great amount of syphilis among the negroes in the United States, and the other is the greater prevalence of contracted and deformed pelves among the women of the Negro race.

TABLE 1.—*Stillbirths per 100 live births in the expanding registration area of the United States, by race*

	1922	1923	1924	1925	1926	1927	1928
Both races	3.9	3.9	3.9	3.8	3.8	3.9	4.0
White	3.6	3.6	3.6	3.5	3.5	3.5	3.5
Colored	7.3	7.2	7.6	7.3	7.3	7.5	8.1

The age of the mother evidently bears a definite relationship to the occurrence of stillbirths. The very young mothers (14 and under) and those over 40 have higher stillbirth rates than those of intermediate ages. The most favorable ages are from 20 to 29 years.

TABLE 2.—*Stillbirths per 100 live births in the expanding registration area in continental United States, by age of mother*

Age of mother	1922	1923	1924	1925	1926	1927	1928
All ages	3.9	3.9	3.9	3.8	3.8	3.9	4.0
10–14 years	6.4	7.6	8.6	8.5	7.5	7.4	8.2
15–19 years	4.2	4.2	4.3	4.2	4.1	4.3	4.6
20–24 years	3.3	3.3	3.3	3.2	3.2	3.3	3.4
25–29 years	3.3	3.2	3.2	3.2	3.2	3.2	3.3
30–34 years	3.9	3.9	3.9	3.7	3.7	3.7	3.7
35–39 years	5.0	5.1	5.2	5.0	5.0	4.9	5.1
40–44 years	6.8	6.7	6.4	6.4	6.6	6.3	6.3
45–49 years	8.1	7.9	8.6	9.0	8.7	9.1	9.5
50 years and over	10.1	8.6	12.6	12.5	12.6	9.9	4.4

CAUSES OF STILLBIRTH

In an earlier paper[2] it was shown that much evidence pointed to complications of labor, syphilis, and the toxemias of pregnancy as most prominent among the known causes of stillbirths. These conclusions were based not only on Census reports but on the findings of most careful autopsies. In view of this fact, it seemed worth while to study these particular causes in relation to the stillbirths reported

[2] The problem of fetal and neonatal death. Public Health Reports, Mar. 18, 1927.

in the four States in which comparable data of the United States are available in the seven years from 1922 to 1928.

TABLE 3.—*Per cent of stillbirths from certain important causes to stillbirths from all causes in Connecticut, Illinois, New Jersey, and the District of Columbia*

Cause	1922	1923	1924	1925	1926	1927	1928
All causes	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Complications of labor	25.1	24.6	24.1	25.0	24.6	23.8	23.3
Syphilis	2.0	1.7	2.3	2.1	2.1	2.1	1.7
Toxemia	4.3	4.4	4.6	4.6	4.9	5.2	5.0
Unknown causes	37.3	35.4	35.3	33.3	33.0	33.2	34.0
All other causes	31.3	33.9	33.7	35.0	35.4	35.7	36.0

It is seen that the percentage of stillbirths from the complications of labor has remained fairly constant over the 7-year period, with only a very slight tendency to fall. The percentage of stillbirths from syphilis has shown little change, while that from the toxemias of pregnancy has increased by nearly 15 per cent.

This table brings out the fact that there has been little decline in the stillbirths from these important causes; there has actually been some rise in the stillbirths resulting from the toxemias of pregnancy. These trends, in the 7-year period studied, tend to accentuate the seriousness of the stillbirth problem.

The facts already brought out seemed to warrant a closer study of the relation of these causes to fetal death. Their relation to all stillbirths having been considered, they were next studied in relation to fetal deaths at various periods of utero-gestation. It is believed that stillbirths of 7, 8, and 9 months of gestation are better reported in the United States than those of earlier periods, but in Table 4 those of 5 and 6 months are also included.

TABLE 4.—*Per cent of stillbirths from certain important causes to stillbirths from all causes in selected areas of continental United States for the fifth, sixth, seventh, eighth, and ninth months of utero-gestation*

Causes	1924	1925	1926	1927	1928
All causes	100.0	100.0	100.0	100.0	100.0
Complications of labor, total	23.1	23.6	23.7	24.7	23.7
5 months	2.5	2.1	2.5	2.4	3.1
6 months	3.9	4.0	4.0	4.6	4.0
7 months	7.1	8.6	8.4	8.2	6.4
8 months	13.4	12.8	12.7	13.0	12.8
9 months	43.0	43.0	42.4	44.9	44.2
Syphilis, total	2.6	2.4	2.6	2.6	2.4
5 months	2.3	1.8	2.7	2.1	1.7
6 months	3.4	2.5	2.8	3.2	3.1
7 months	4.5	4.3	4.0	3.8	4.7
8 months	3.4	3.6	3.6	4.0	3.6
9 months	2.2	2.0	1.9	1.8	1.6
Toxemias, total	5.2	5.0	5.6	6.3	6.5
5 months	4.6	5.3	4.8	5.8	4.3
6 months	8.6	8.2	8.9	10.5	9.8
7 months	10.9	9.3	10.2	12.6	12.3
8 months	9.6	9.3	10.3	12.2	11.8
9 months	3.0	2.8	2.8	3.0	3.9

It is seen that the rate of stillbirths due to the complications of labor is very high in the eighth and ninth months. This is what one would expect. The more advanced the development of the fetus, the more serious become such complications as malpresentations, pelvic deformities, and compression of the cord. A small, immature fetus incurs comparatively little risk in being born.

Turning to the ravages of syphilis, we find that this disease takes only slight toll of fetal life in the early months of uterogestation. This is in accordance with the experience of Dr. J. Whitridge Williams, who has made most important contributions to our knowledge of this subject.

In the seventh and eighth months of uterogestation, however, syphilis is an important cause of stillbirths. The rather general falling off of the rates after that period would seem to indicate that if the fetus survives the infection of syphilis more than seven or eight months, the pregnancy is more likely to result in a syphilitic living child than in a stillbirth.

Under toxemias of pregnancy are included the three Census Bureau classifications, "eclampsia of pregnancy," "toxemia of pregnancy," and" albuminuria, nephritis, and other diseases incident to pregnancy."

These toxemias make heavy inroads on fetal life during the sixth, seventh, and eighth months of uterogestation. Even in the fifth month the rate is far from negligible, and one can not fail to realize the importance of this cause of fetal death.

PREVENTION OF STILLBIRTHS

The data presented through these figures from the United States are the grounds for a plea for continued and greater efforts directed towards the prevention of stillbirths. Out of a number of causes of fetal death only those three of greatest importance have been considered in this brief paper. The most important of all is dystocia, or the complications of labor. In the prevention of stillbirths from this cause we must have better obstetrics and midwifery, more careful medical examinations during the last month of pregnancy, and more research into the fundamental causes underlying fetal death. Before the patient comes to the delivery room, the obstetrician should always be familiar with the position and presentation of the fetus, the pelvic measurements, and any other ascertainable fact which might have any influence on labor. The devotee of instrumental delivery should be as expert as a brain surgeon, and even then should not be too eager to apply his knowledge. He should learn how not to interfere with normal birth.

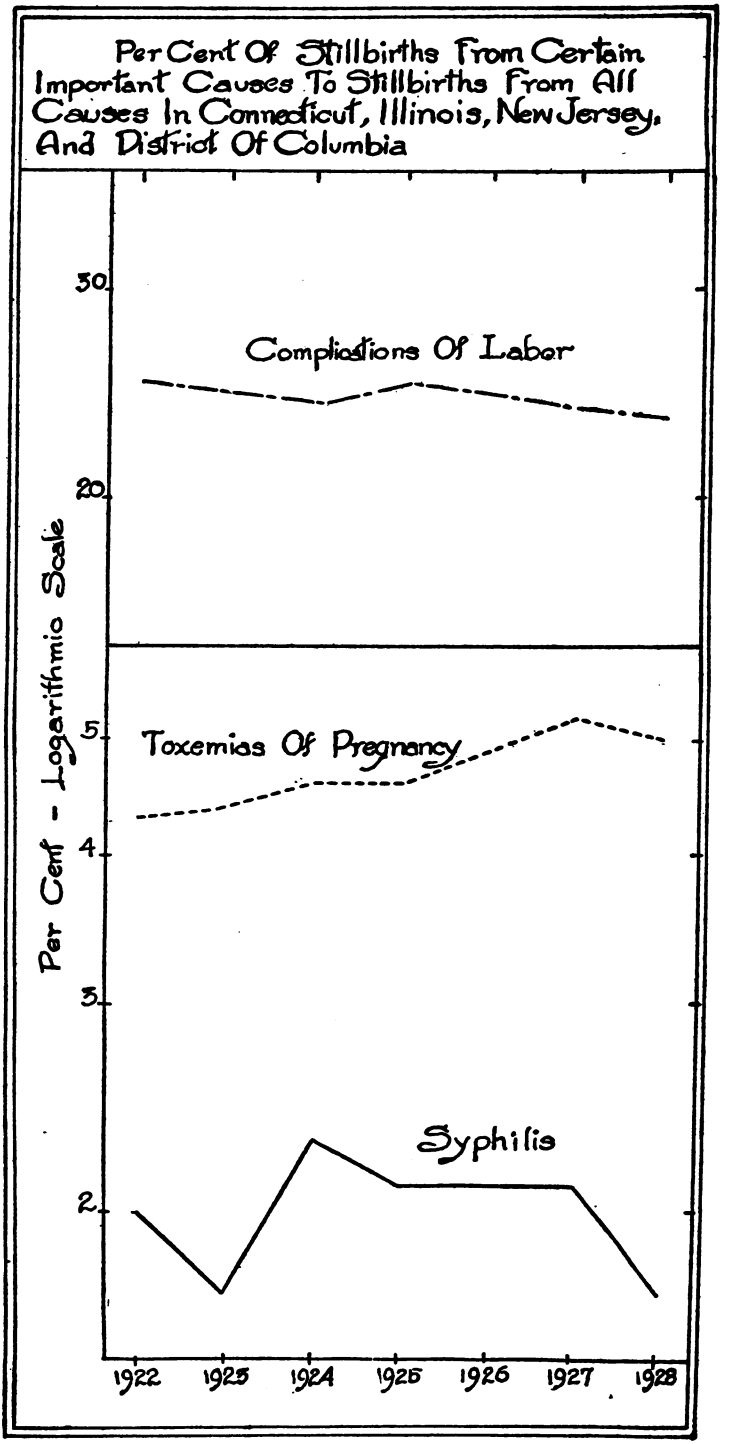
Per Cent Of Stillbirths From Certain Important Causes To Stillbirths From All Causes In Connecticut, Illinois, New Jersey, And District Of Columbia
Per Cent - Logarithmic Scale
30
20
5
4
3
2
Complications Of Labor
Toxemias Of Pregnancy
Syphilis
1922
1923
1924
1925
1926
1927
1928

FIGURE 2

Of all the causes of stillbirths, syphilis is the only one of which we can speak with any confidence in the matter of prevention. Competent investigators have found that if the proper treatment of a syphilitic woman is begun early enough in pregnancy and carried out carefully and conscientiously, the stillbirth rate from syphilis may be brought very low or possibly even be made to disappear.

In the prevention of the toxemias of pregnancy much may be hoped for from long-continued and careful medical supervision during pregnancy. However, it must be acknowledged that eclampsia is sometimes a difficult matter to control. In addition to prenatal care, further research into the toxemias of pregnancy is necessary if we wish to abolish fetal deaths from this cause.

SUMMARY

1. In the United States the stillbirth problem is one of greater magnitude than that of neonatal death.

2. While the decline in the neonatal death rate is slight, the stillbirth rate apparently shows no decline at all, the curve being practically a straight line. What effect, if any, more complete reporting of stillbirths would have on this curve can not be estimated.

3. Most prominent among the known causes of stillbirths are the complications of labor, syphilis, and the toxemias of pregnancy.

4. In the 7-year period from 1922 to 1928 the stillbirths from the toxemias of pregnancy have risen slightly, those from the complications of labor have fallen only very slightly, and those from syphilis do not appear to have changed significantly.

5. For the prevention of stillbirths we must have better obstetrics and midwifery; more careful medical examinations during the last month of pregnancy; thorough treatment of the syphilitic pregnant woman; medical supervision during pregnancy; and more research into the toxemias of pregnancy and the fundamental causes underlying fetal death.

REGULAR SESSION OF THE PERMANENT COMMITTEE OF THE INTERNATIONAL OFFICE OF PUBLIC HYGIENE, OCTOBER, 1930[1]

The permanent committee of the International Office of Public Hygience held its regular 1930 session from October 13 to 22, in Paris.

Those present were Messrs. Velghe (Belgium), president; Hamel (Germany); van Campenhout (Belgian Congo); C. Chagas (Brazil); A. Viel (Chile); Th. Madsen (Denmark); Shahin Pacha (Egypt); Palanca (Spain); McMullen (United States of America); Barrère

[1] Translation.

(France); L. Raynaud (Algeria); Boyé (French Equatorial Africa); Gaston Joseph (French West Africa); Lasnet (French Indo China); G. S. Buchanan (Great Britain); Mackie (British India); Heron (British Colonies and Territories Under the Mandate of Great Britain); McCallum (Australia); H. B. Jeffs (Canada); S. P. James (New Zealand); P. G. Stock (Union of South Africa); A. Lutrario (Italy); M. Tsurumi (Japan); P. Schmol (Luxemburg); de la Torre (Mexico); F. Roussel-Despierres (Monaco); N. M. Josephus Jitta (Netherlands); W. de Vogel (Netherlands Indies); Djavad Achtiany (Persia); Ricardo Jorge (Portugal); J. Cantacuzène (Rumania); C. Kling (Sweden); H. Carrière (Switzerland); L. Prochazka (Czechoslovakia); de Navailles (Tunisia); Herosa (Uruguay); G. Yoannovitch (Yugoslavia); and Messrs. Abt, director of the International Office of Public Hygiene, and Marignac, assistant director.

There were also present at the meetings of the committee, or at certain of them, Dr. L. Rajchman, medical director of the health section of the League of Nations; Maj. J. Gilmour, president of the Sanitary Maritime and Quarantine Board of Egypt; and Mr. H. B. Clayton, I. C. S., president of the Haj Inquiry Committee in British India.

I

The committee examined the report made, in execution of article 151 of the International Sanitary Convention of 1926, by the Sanitary Maritime and Quarantine Board of Egypt on the Mussulman pilgrimage of 1930.

On the advice of its committee on pilgrimage, it expressed its general approval of the provisions made to assure the sanitary protection of the pilgrims, and of the countries which they cross, or to which they return. The following points especially received attention:

1. Several carriers of vibrios, among which were certain recognized agglutinables, were discovered at the quarantine camp of Tor among the pilgrims returning north from Hedjaz. None of these pilgrims presented the clinical signs of cholera (but they had for the most part undergone anticholera vaccination); on the other hand—and although an established case of cholera occurred at Massaouah, among other pilgrims returning toward the south—no disease of a choleric nature appeared at Hedjaz, and the hygienic conditions of this country were much better in 1930 than in preceding years. However, in the presence of the danger which the development of cholera infection would have caused to the countries crossed and to those to which the pilgrims returned, the pilgrimage should have been declared infected with cholera and subjected to the measures provided for under these circumstances. According to the convention of 1926 and the regulations made through its application, there

is no intermediary term or situation between "free" and "infected," and it would be useful to consider the adoption of a system permitting only of the necessary delay for bacteriological examinations for the purpose of definite proof.

2. Following opinions previously expressed by the committee, regulations established in the French territories of north Africa have permitted the avoidance of all difficulties resulting from the pilgrims' traveling in small groups. Besides, the ancient practice of crossing the Red Sea in dhows and similar boats has been completely abolished as concerns the ports of Sudan.

3. The provisions adopted at Beirut, at the beginning of 1929, among the administrations of several countries crossed by the pilgrims with a view to coordinating their action for sanitary protection, have continued to give good results. However, because of the fact that these provisions also apply to persons coming from other countries, the meeting in Paris of a conference of greater extent and comprising representatives of the interested governments has been decided upon, and the French Government has been so kind as to take the initiative in calling it together.

4. A report presented this year to the government of India by the Haj Inquiry Committee stressed the advantages of the systematic vaccination of Indian pilgrims against smallpox and cholera. If this vaccination, already practiced before departure from Karachi and Calcutta and soon to be practiced at Bombay, is generalized, the pilgrims leaving India will be, like those coming from the Netherlands Indies or the Malay Peninsula, exempt from stopping at the Camaran Station, except in unusual cases, and the result will be a gain of time and considerable facilitation.

5. The question of the adoption of a uniform model of passport for pilgrims has not yet been decided, replies on the subject of the model established by the president of the Sanitary Maritime and Quarantine Board of Egypt and submitted by the Office to the examination of interested administrations not having been received in sufficient number.

II

The governments to which the preliminary draft of provisions relative to sanitary control of air navigation was submitted have expressed themselves favorably on the initiative taken by the committee, which provided measures indispensable to the protection of the public health, and the least possible hampering of the development of air traffic. Different observations and suggestions have been made only on a certain number of points; others should be still further presented, and consequently it does not seem opportune to make an immediate revision of the text formerly adopted. Several

questions of a more general order have been discussed, in view of drawing up a final plan which the special commission formed in the committee will prepare for the following session.

As especially concerns the measures against the introduction of yellow fever by air traffic, it was decided to make this point the object of entirely separate provisions, stating the principles upon which these regulations should be based, to be established by agreement among countries situated on the routes which cross zones of yellow-fever endemicity.

III

There is nothing new of importance to report on the question of ships' doctors. The system of "commissioning" instituted on a very large scale in Belgium seems not to have encountered any difficulty; it continues to function normally. In Italy a similar system, although limited to the English ships of the Orient Line, is giving satisfaction. National commissioning also exists. These experiences will be added to those made elsewhere (in Brazil, France, and Turkey) with the same or similar systems. The proposal of the possibility of international commissioning, by extension of the Belgian system, is at present under study. In Spain the suggestions of the report previously sent by the International Office of Public Hygiene have been favorably received. In a certain number of countries, on the other hand, governmental and commercial circles do not accept willingly either the intervention of the State (under one form or another) in the designation and powers of ships' doctors, or the compulsory recognition of special advantages for ships having a "qualified" physician. Yet in these very countries the sanitary authorities of the ports keep account of the presence of such a doctor on board and these provisions are being extended more and more, with the agreement of the Government, to assure to ships' physicians the special power necessary.

The form of international quarantine message by wireless previously established by the International Office of Public Hygiene, the final adoption of which had been postponed to permit of the determination of the symbols necessary for its transmission in code, has been agreed upon in the committee for the revision of the international signal code, and will be proposed for the consideration of the Governments in view of its introduction into the regulations and usage of their ports.

Steps for the abolition of bills of health, in conformance with the recommendations of article 49 of the International Sanitary Convention, have been pursued. An agreement to this effect seems near among several countries, as concerns, at least, their European ports. In other countries, only abolition of consular visas is considered.

The system organized, on the initiative of the International Office of Public Hygiene, in French ports for the notification to the authori-

ties of the country of destination, of individual sanitary passports issued to persons subjected to "surveillance" and proceeding to a foreign country, has given very good results and has been further extended. Its application in all other ports where it would also be useful is strongly urged by the committee.

The committee has given opinions on different questions raised apropos of the application of article 16 of the International Sanitary Convention of 1926 (notification of the measures which the Governments prescribe in regard to ports of another country) and of article 12 (notification of the end of danger of infection in a section previously attacked). It has, particularly on this point, observed that, when a country has not sent the notification in question, the other countries are not compelled to discontinue the application of the provisions provided by the convention; on the other hand, such a notification should be understood as possible and acceptable only when it concerns a territory in which the disease in question does not normally exist, in some sort, from year to year. It should not, particularly, take place, according to the terms of article 12, except when the interested country is, in good faith, convinced that its ports are no longer dangerous. This conviction should obviously not be founded on theoretical information, but on all the information bearing on the actual conditions of the locality—for example, in case of plague, on the negative result of investigations for the presence of plague-infected rats, carried on for a reasonable length of time. It should not, particularly, be based on the fact that a certain period of time had elapsed since the last reported case of human disease.

Concerning the application of the International Sanitary Convention, different observations have been presented on the subject of article 28 (periodic deratization of ships) on the part of sanitary authorities as well as of navigators.

It seems that the system of international sanitary police organized by this article is justified by the results obtained. Further proof is furnished by the continually increasing number of certificates of exemption which have been issued in Great Britain during the first nine months of the present year. But it is not to be doubted, on the contrary, that this system should be applied in a reasonable manner, not losing sight of the fact that it concerns not only the ships carrying or suspected of carrying plague infection, but all ships, and that it is not intended to check an actual danger, but to reduce, by general precautions, the very possibility of such a danger.

The committee dealt especially with certain questions pertaining to this subject. It again insisted on the importance of the general adoption, for the certificates of deratization (or of exemption) prescribed, of a uniform form, such as that already recommended by it to governments and sanitary administrations, and which a rather large

number of countries have placed effectively in force. Many difficulties are caused by the fact that the documents issued in certain ports contain insufficient explicit information concerning the operations carried on. In any other circumstance, if the certificate (of deratization or of exemption) has been regularly issued in a port qualified for this purpose and is not six months old, only considerations of peculiar gravity can justify the requirement of a new destruction of rats or of new investigations to ascertain their presence—except, it is always understood, in danger of plague as provided by other articles of the convention. The fact that the deratization previously made was not carried on exactly by the process in use in the port where the ship is lying at the expiration of the 6-month period is alone no reason for a new fumigation. On the other hand, article 28 does not intend to require the *complete* absence of rats on board ship. Doubtless, it may happen that the state of infestation of a ship by rats is such that an immediate new deratization should be imposed; but, under ordinary circumstances, the presence of a few rats does not seem to be a sufficient reason for requiring that the provisions relative to "periodic" deratization be applied oftener than every six months.

On most of these points, however, the committee has already previously expressed its opinion in the same way. Likewise, it can only maintain its point of view as concerns the placing of the consular visa on the certificates. Without disregarding the motives of a national character which, in certain countries, make such an obligation considered necessary, it recalls that the intervention of the consul, even if gratuitous, is a useless hindrance to commerce, in the sense that, in case a certificate of exemption or deratization has just been issued to a ship, the consul would not have the means of immediate and sufficiently exact information for his visa to constitute a real guarantee.

As to the collection of a fee by the sanitary authority for the issuance of the certificate, nothing prevents that; and, besides (on the condition, according to the general principles of the International Sanitary Convention, that it does not exceed the service rendered), it is justified by the fact that, in order to issue the certificates under conditions of sufficient exactness, a thorough examination of the ship is necessary.

The committee examined a proposal of the Japanese Government to provide, by a complementary stipulation of the International Sanitary Convention, the power, for countries situated in certain conditions from a point of view of the danger of the importation of cholera, to forbid ships directed toward their ports to throw bodies of persons having died from cholera or material which might be infected even outside the limit of the territorial waters. Any decision has been provisorily postponed on this question, which is under study.

The plan, formulated in a preceding session and submitted to the consideration of the interested governments, of an agreement on the

measures to be taken in case of the appearance of dengue has received a favorable reception. An agreement on these principles has already been reached among several countries,[2] and the extension of the provisions thus proposed is the object, on the part of the Government of Greece, of an introductory measure which the committee has declared itself ready to support.

In connection with a question raised on the subject of the application of the International Convention of Brussels of 1924, instituting facilities for the treatment of commercial sailors attacked by venereal diseases, the committee has declared that, in its opinion, this application should not be based on the principle of strict reciprocity, that is to say, that *every* sailor, even if he is a subject of a country not having adhered to the convention, should, when he presents himself at the dispensary in a port of a country adhering, benefit from free treatment without restrictions. The terms of the convention are formal and provide for sailors "without distinction of nationality." However, there is no doubt that the aim of the provisions established in 1924, both for humanitarian reasons and for those of general prophylaxis, would not be attacked if the facilities provided were not liberally offered.

It is apparent that these provisions, while of a general order, find a stronger reason for their application if the sailor, while belonging to a country not participating in the convention, is sailing under the flag of a country which has adhered.

V

The committee of the International Office of Public Hygiene has noted the resolutions approved by the health committee of the League of Nations in its sixteenth session, held at Geneva from September 29 to October 7, 1930.

On the other hand, new proposals relative to the application of article 8 of the Opium Convention of 1925 were submitted to the International Office of Public Hygiene, in conformance with the stipulations of this convention.

VI

Recent laboratory investigations of the virus of yellow fever and the epidemiological facts observed during the last few years have suggested or confirmed different ideas which bring themselves to the attention of the permanent committee of the International Office of Public Hygiene. Following are the principal matters:

The only positive idea that we have at present on the virus of yellow fever is that it passes through the filtering bougies. The experiments

[2] See Bulletin of the International Office of Public Hygiene, Vol. XXII, 1930, p. 1843.

made on monkeys have shown that the blood of inoculated subjects is infective during the period of incubation, at least two days before the appearance of the fever. It is also true in man. The human blood rapidly ceases to be infective, not because of the disappearance of the virus, but because of the production of antibodies which neutralize the virus. The antibodies form less rapidly in the monkey; at the time when it dies from the disease, about the third or fourth day, direct contact with its organs may still be dangerous. Man can, in fact, be infected by direct contact, through the intact skin. The entire body of the mosquito which bit the patient is infective, and especially its excretions. The virus can be transmitted from mosquito to mosquito, without passage through man. Besides the *Aëdes ægypti* there is a rather large number of insects (13 different species) which are capable of carrying the virus. The attempts to obtain an effective vaccine against yellow fever are less encouraging to-day than when they were begun; there are great differences in activity among the samples, and the vaccines rapidly lose their activity.

However, certain of these new discoveries do not seem yet to be of any considerable importance in practice; the contamination of man by direct contact has only been ascertained in case of laboratory accidents; the transmission of the virus from mosquito to mosquito, effected in the artificial conditions of breeding, is perhaps not frequent in nature; the only carrier which seems, up to the present time, to have played a part in an epidemic is the *Aëdes ægypti*.

It would be of the greatest usefulness, for the prophylaxis of yellow fever, to be able to diagnose the irregular, or atypical, cases which occur either in the foci of endemicity or even at the beginning of epidemic outbreaks of acute cases. These diagnoses could at present be used for three purposes: (1) The elimination of malaria in the feverish patients (for which the fever is not explained by any other diagnosis); (2) the examination for albumin; (3) the determination of the decrease of alexin in the blood of suspects. This phenomenon, well studied by Costa Cruz at Rio de Janeiro, manifests itself from the beginning of the symptoms of yellow fever, even in the benign cases, and seems to be strictly specific.

The usefulness of the destruction of *Stegomia* and their larvæ in checking or preventing an epidemic of yellow fever has been well proved by recent events. But the epidemics originate in zones of endemicity, where the virus is kept by nondiagnosed cases. Sanitary defense against yellow fever should, in the future, be based on the definite extinction of these foci. The prophylactic measures, which up to the present time have been set in motion by the reporting of definite cases, should be complemented by other very rigorous measures, but intended only for the zones of endemicity. Among the numerous localities where yellow fever has been reported during

the last 20 years, there are many in Africa in which no case has been reported since 1927, and in America since 1921. Has the virus really disappeared? Certain of these localities—about a hundred—are situated on the route of projected air lines. It seems necessary, in order to eliminate the fear of the spread of yellow fever by airplane, to know whether these localities are still dangerous, and to take adequate measures of protection if the situation requires. The committee also took up again the examination of a proposal which had been presented to it at a preceding session—that of encouraging systematic inquiries, by means of the seric index or some other appropriate method, for the purpose of establishing a chart of yellow fever endemicity.

Several cases of bubonic plague occurred during the summer and autumn of 1930 in the western Mediterranean basin—from July to the end of October, 40 at Algiers and 33 at Oran; after the first of September, 6 at Philippeville and 12 at Marseille. The cases in Algiers and Oran were in persons who frequented the quays and nearby stores; some had left Algiers in the incubation period and were taken ill at some distance from there, but without creating foci around them. The search for rats was intensified in the ports, and plague-infected rats were discovered up until the end of August at Algiers, and up to the end of September at Oran; none at Philippeville. The committee has seen, in these circumstances, an occasion to urge an inquiry on the present rat-plague situation in the Mediterranean ports.

A short epidemic of pulmonary plague occurred at Tunis in December, 1929. It attacked only an Arab tribe from south Tunisia, where sporadic cases of bubonic plague occur rather frequently. The members of this tribe who stay in Tunis are engaged as porters. From the beginning of the epidemic they and their families were all sought out and placed in quarantine, about 800 in number, in one institution; two or three cases occurred among them, none in the town. Two patients recovered; they had been vaccinated by pulverization of vaccine in the mouth and respiratory passages.

With regard to the precautionary measures taken at Tor after the discovery of vibrios, some agglutinable, others nonagglutinable, in pilgrims returning from the pilgrimage to Mecca in 1930, the question of the possible relations between the two groups of vibrios was raised. A method was suggested which would permit of ascertaining whether a nonagglutinable vibrio is derived from a true cholera vibrio, a method whose application has given excellent results in the study of the relations between the dysenteric bacillus of the Shiga-Kruse type and other isolated bacilli in dysentery patients. It is a question of immunizing animals with the nonagglutinable vibrios and ascertaining whether the serum from these animals possesses, afterwards, agglu-

tinating power for true cholera vibrios. In case of a positive result, the vibrio which would have served as antigen would be classed as suspect.

Besides, it would be useful for the laboratories of the different services which were called to make researches on the cholera vibrio in suspected subjects returning from the pilgrimage to be in possession of the same agglutinating serum. This serum should, from all evidence, be capable of agglutinating all the stocks of cholera vibrios; the best way of testing it would be for it to be used in current practice in a country where the occasion of examining isolated vibrios of cases of cholera is constantly presented.

On the subject of smallpox it would be interesting to know which countries have adopted the distinction between variola major and variola minor, or alastrim; and what is the stated relation between the two types of smallpox. Information will be requested on these points.

Several countries—Belgium, Canada, Japan, Mexico, and Poland—have sent replies to the questionnaire of the Office on the technique of antismallpox vaccination; these will be analyzed and published in the same form as those which were included in the report presented to the committee in May, 1930, by the committee on smallpox and antismallpox vaccination.[3] The committee had outlined a program of studies on different questions, on the subject of which present knowledge is obviously incomplete—influence of the number and extent of vaccinal incisions on the intensity of the local and general reaction on the degree of immunity obtained and its duration; virulence to be chosen for the lymph employed, etc. This program was adopted by the Conference of Directors of German Vaccine Institutes. Information on the questions which it raises has already been received from Mexico and Yugoslavia, as well as detailed statistics on the reactions observed at the vaccine office of the State of Belgium in those revaccinated, classified according to the time elapsed since the last vaccination and the number of vaccinal scars. In Japan a new process for purification of vaccine has been evolved; the vaccine virus is separated from the tissues and bacteria by adsorption on kaolin, from which it is extracted by a weak ammonia solution. After neutralization and dilution, there remains a suspension the volume of which is about 100 times that of the original pulp, and which produces by scarification on the skin of a rabbit, in doses of from 0.1 to 0.2 c. c., a confluent eruption similar to that obtained with ordinary vaccine. Trials of vaccination in man (34 children, 62 adults) have given favorable results.

Postvaccinal encephalitis has decreased in frequency in Germany; 11 cases in 1930, as compared with 27 in 1929; no deaths. In six cases reported as postvaccinal encephalitis the autopsy invalidated the

[3] Supplement to the July, 1930, number of the Bulletin of the International Office of Public Hygiene, Vol. XXII.

diagnosis. In Sweden there were, in 1929, three cases per 45,000 primary vaccinations; in 1930 there were also three, with one still under study. In a fourth reported case the autopsy showed that it was caused by a cerebral glioma. It can be seen how carefully the diagnoses should be examined. In Holland five cases were reported in 1930, of which two are under study; the number of vaccinations was small, and the proportion of encephalitis accidents does not seem to have varied noticeably. There has been no encephalitis reported in children vaccinated under 1 year of age; a departmental circular has recommended that physicians vaccinate as many as possible of the children in infancy. In Italy, after a critical examination of a dozen cases notified during the last three years, only one seemed to be really suspicious.

In Poland, since the law of 1919 prescribing on the one hand the compulsory reporting and isolation in a hospital and the institution of an investigation for each case, and on the other hand compulsory vaccination, smallpox has progressively decreased and almost disappeared. From 1907 to 1911 there were 355 deaths per year in the town of Warsaw alone; in 1929 only 12 cases occurred in the entire country of Poland. The mortality is very low (1 death in 46 cases). Vaccination is compulsory during the first year, and revaccination at the age of 7 years. There has been no postvaccinal encephalitis; three cases, the symptomatology of which was not clear, were reported in five years, for more than 9,000,000 vaccinations and revaccinations.

VII

Vaccination against tuberculosis by the B. C. G. has been carried on in Rumania on more than 60,000 subjects without accident. The decrease in the general mortality in vaccinated children, in comparison with the nonvaccinated, remains striking. It has now been ascertained that this is maintained during the second and third years of life. Vaccination by the subcutaneous method began to be applied to recruits, after two negative intradermal reactions; among 5,000 vaccinated persons there occurred only once a cold subcutaneous abscess, easily cured. The harmlessness of the injection thus seems absolute.

A comprehensive study of tuberculosis in the French colonies has shown that the disease was of ancient date only in Indo-China. In Africa, and in Oceania, when contact between the native population and the Europeans had been established for several years, outbreaks of tuberculosis occurred, presenting acute cases with rapid development. After 20 or 30 years, when the impregnation of the native environment had been made, the disease became chronic, as in the older civilized countries. At present the tuberculosis index is from 40 to 60 per cent in the towns where the native is subject both to

inferior lodgings and to fatigue of work; it is only 10 to 12 per cent in the country. The diffusion of the contagion into the interior is hindered by the habits of living in the open air and indulging in little effort. The measures adopted to protect the native populations are of three kinds: (1) Examination by a phthisiologist of all the officers and agents before leaving Europe for the colonies; the same control, as far as possible, over commercial travelers; return to Europe of those who become ill in the colony; surveillance of European and native agents who go from village to village; (2) improvement of lodgings and food; protection against cold nights; (3) vaccination by the B. C. G.

The program is, in general, the same in the Belgian Congo. The reporting of tuberculosis has been compulsory there since 1919. Any European person found sick in the colony should return to Europe within 6 months; the natives are sent to a lazaretto or hospital for the tuberculous. In the towns—where women and small children are rare—all the children whose reaction to tuberculin is negative are vaccinated at school age. Tuberculosis is, in fact, relatively rare; in 1928 there were 35 cases (32 pulmonary) in whites, and 344 cases (256 pulmonary) in blacks.

In Egypt pulmonary tuberculosis is increasing; formerly osseous or glandular forms were especially noted. The Sudanese coming into lower Egypt are often attacked by forms with rapid development. Reporting, first compulsory only for deaths, is now required for all cases.

In Algeria the contagion often originates in travelers infected in France. There are numerous native foci not only in the towns but also among the mountain Berbers, who live shut up during the winter in stone houses. The nomads, on the contrary, are free from the disease.

The influence of certain industrial dusts on the development of tuberculosis has been intensively studied in Germany, England, the United States, and the Union of South Africa. It seems to be admitted that the harmful character of many of these dusts comes only from their silicic acid content. The silica causes pulmonary sclerosis; whether tuberculosis is implanted secondarily on account of these local alterations, or whether tuberculous infection is established from the beginning, remains to be ascertained. It is difficult to say whether tuberculosis is more frequent in the workmen exposed to dusts than in others; all the conditions of each occupation must be taken into consideration. In Germany the administrative measures at present in force carry the obligation of industries to abolish dusts (stone, sand, porcelain, coal, and metals) and a special indemnity to tuberculous persons whose disease was contracted in a dusty industry.

The number of cases of trachoma reported in Poland is increasing (14,000 in 1929); but this is because the search for the disease is better organized. Two hundred and sixty dispensaries have been established; special teaching is given to practicing physicians, to supplement the insufficient number of ophthalmologists; and treatment is compulsory. The frequency of the disease in children in orphanages and institutions has led to the creating of special hospitals, with schools for the children (about 2,000 beds). The average percentage of trachomatous children in the schools is about 0.9, except at Vilna and Lodz, where it reaches 4.32 and 4.5; schools for the trachomatous have been opened in these two cities. In the recruits the percentage is about 1.47; Poland ranks among the countries where the disease is not relatively widespread.

In Egypt 80 per cent or more of the population are affected. The annual number of visits in hospitals reaches 3,000,000; the budget set aside for the campaign against trachoma is 170,000 Egyptian livres. Numerous physicians receive special instruction. The appreciable result which has been obtained is the decrease in the number of blind presenting themselves at hospitals.

In Palestine, after 10 years of effort, there is no great improvement reported in adults; but the cases are decreasing a great deal in children, all of whom are examined on entrance to school and are treated if necessary.

In Holland, where they have succeeded in eliminating trachoma almost entirely in the Jewish quarters of Amsterdam, they do not believe in the use of special schools for trachomatous children, and attribute great virtue to improvement in the physical and moral condition of the affected population.

Poliomyelitis continued to prevail in the Netherlands in 1930—446 cases in the first 8 months, a figure well above that for the same period of the preceding year. The regions attacked are mostly the central provinces, while in 1929 those in the south were the most affected, perhaps in connection with the epidemic in northern Belgium. The cases are very much scattered; the largest number was at Gouda, a town of 24,000 inhabitants, which had 48 cases. The mortality decreased from 21 per cent in 1928 to 16 in 1929 and to 7 in 1930; this fact is observed in many epidemics and is, in part, due to the progressive education of physicians, who diagnose the light or atypical cases. Seventy-one and three-tenths per cent of the patients were children under 4 years; on the basis of this it was decided not to close the schools. The sanitary administration designated, in all sections, neurologists, who might be called for consultation at the expense of the State, and who had the right to hospitalize the patients, also at the expense of the State. The efficiency of the serum of a former patient seemed to be manifest especially at the beginning of paralysis, which

the serotherapy could prevent from developing; in the very acute cases, which were quickly fatal, the results have been negligible. In Germany the prevalence of the disease was about the same as in 1929 (900 cases in the first 9 months); it is especially noticeable in the western sections—Baden, Palatinat, and the departments of Dusseldorf and Cologne. The mortality was, in the four years 1927–1930, respectively, 15, 12, 11, and 9.5 per cent. In Switzerland the number of cases is also about stationary, 200 per year; they are rarer in the towns than in the country. An epidemic occurred in Finland. In France 500 cases occurred from June to October in Alsace and Lorraine, of which 400 cases were in the department of the Bas-Rhin, with relatively important foci: 110 cases at Strasbourg, 61 in the canton of Schiltigheim, and 53 in the canton of Bischwiller. Four-fifths of the patients were children under 5 years of age.

In connection with the serotherapic treatment of poliomyelitis, two questions are raised: That of the control of the potency of serums obtained by immunization of the horse, and that of the organization of the collection of serum from former patients.

The serotherapic treatment of cerebrospinal meningitis has given such mediocre results in Denmark during the last few years that it has been abandoned. In Sweden the opinion of it is not favorable. On the other band, in Rumania, while the mortality in cases treated by other methods reached 65 per cent, with serotherapic treatment the mortality in a recent series of 101 cases, some in a military hospital at Bucharest, others in the child clinic in the same city, was about 18.3 per cent, and after the elimination of patients having arrived in coma or who died one or two days after their entrance into the hospital, 10.9 per cent. In babies it was 28.1 per cent, and after correction 15.6; in soldiers, in 21 cases, only 1 death (4.8 per cent). The factors favorable to recovery have been early treatment, the length of the stay in hospital, the use of the serum corresponding to the type of meningococcus, intraventricular injection in babies, and the discontinuation of the serotherapy at the appropriate time. In France, the mortality before serotherapic treatment was from 65 to 75 per cent. The statistics collected by the International Office of Public Hygiene all show an important decrease in these rates, although differing a great deal one from another. In the isolation service of the hospital of Lyons the mortality is about 50 per cent (54 in babies, 46.7 in adolescents and adults); at the Pasteur Hospital in Paris, in 135 cases from 1910 to 1929, 28 per cent, with the extreme rates of 13 per cent (30 cases, 1915) and 54 per cent (11 cases, 1918); in the French Army, from 1910 to 1919, 25 per cent, and from 1920 to 1929, 33 per cent; at the Marine Hospital at Brest (246 cases) from 1907 to 1920, about 30 per cent and, from 1920 to 1929, 21 per cent. These last figures, after elimination of the cases admitted to hospital

in extremis, insufficiently treated, or complicated with other affections is reduced, on an average, to 9.5 per cent.

In Egypt cerebrospinal meningitis, currently diagnosed for about 20 years, at first seemed to affect, on different occasions, a rather large number of members of the same family; then there were several local epidemics, and especially sporadic cases with no connection with each other. It is most prevalent in the winter season. The mortality was from 61 to 84 per cent at Cairo.

Three cases of acute meningitis with exclusively lymphocytic reaction, without Koch bacilli and other discoverable microorganisms and with favorable outcome were observed in Yugoslavia.

The origin of the psittacosis which broke out during the first few months of 1930 throughout the entire world was attributed to parrots coming from the Amazon. However, no human case has been reported in Brazil and no indication exists that an epizootic had attacked the parrots in the forests of Brazil. The infection seems to be apparent only after life in captivity, after leaving Brazil, and doubtless caused by unfavorable conditions of feeding, temperature, and crowding of imported parrots.

At present from 1 to 3 cases of undulant fever (Bang bacillus) per week are reported in Sweden. In France, a focus of 16 cases was observed in Franche-Comte, in a population engaged in the dairy industry (raising cows). In Rumania the agglutinating power for the Bang bacillus of human serum was reported on farms and in soldiers; the researches continue. One case has been recognized in Yugoslavia.

The nature of the exanthematic fevers observed in Italy remains obscure. While no case has been known in Lombardy, they are rather frequent in Rome; but the interpretations of clinicians who have studied them is not uniform. Some believe that it is an affection of the type of Brill's disease; others that it is a fever of the escharo-nodular type. The Weil-Felix reaction is frequently positive, at least tardily (in the patients studied by Professor Pecori, in 69 per cent of the cases, toward the thirteenth to sixteenth day); the infection seems to be transmitted by ticks which are found in 95 per cent of the dogs. With reference to the name "escharo-nodular," it must be noted that if the eschar, or at least the black spot, is not always apparent, one can sometimes discover it by a careful search.

Remarkable therapeutic success has been obtained in Yugoslavia in the treatment of psoriasis by the subcutaneous injection of the products of digestion of scales by pepsin and trypsin. The action of these extracts seems strictly specific; it is an example of a phenomenon which has perhaps a more general character, the influence on metabolism of substances drawn from diseased products.

The number of cases of beriberi hospitalized in Indo-China in the charity institutions has increased during the last few years (3,669 in

1928). A thorough investigation has shown that the greater part arose in the west of Cochinchina, a country rich to the extent that the use of rice mechanically husked has been substituted for that of rice rudely husked in the pestle. The use of a rice incompletely husked was prescribed; at the same time a recommendation was made to introduce into the diet fruits, green vegetables, meat, and fresh fish. It has been noted that this disease is rare in infants and frequent in pregnant women, especially toward the end of the confinement.

Among the additions to the diet which aid in preventing beriberi, beans have been used successfully in the Netherlands Indies, and peanuts in Africa.

Cancer is relatively rare in the black race, and more frequent in the yellow race, without being as widespread as it is in the European and American countries. A review of the literature concerning cancer in the French colonies was sent to the committee. In West Africa the most frequent malignant tumors are the osteosarcomatous and cancers of the membrane of the mouth (perhaps related to the habit of chewing vegetable irritants); tumors of the stomach and liver are rare, as well as those of the uterus, in spite of the frequency of poorly cared for or neglected metritic ulcers. In Indo-China a large proportion of tumors of the mouth (20 per cent of the total) are found, cervical tumors (16 per cent), tumors of the breast and uterus, and in males, of the penis (generally scattered among the Buddhist peoples); cancers of the ovary are two or three times rarer than in Europe. There was noted, in a Sengalese, a melanic sarcoma located in the heel, that is to say, in a region feebly pigmented; this fact confirms the hypothesis that the tumors develop under the influence of disorders in the general metabolism, but in a region where local changes in composition of fluids and cells occur, and which are located in a zone where the pigmented elements are near elements free from pigment.

VIII

A preliminary study on rural mortality, in response to the need for information which might serve as a basis for judging the sanitary condition of different population groups, was made in Poland. It presents special difficulties here because of the great movements of population which have occurred during the last 10 years, and the uncertainty of diagnoses in the rural sections. A comparison of a general character was concerned with the four departments of the south (more than 8,000,000 inhabitants in 1929); the figures for deaths in 1926, calculated on the 1921 census, give a rate of 19.2 per 1,000 for cities with more than 100,000 inhabitants, 16.5 for those of 25,000 to 100,000; 17.2 for those of less than 25,000, and 22.2 for the rural communities; calculated on the estimated population for 1926, the rate for large cities would only be about 15. The district of Wieliczka has been

studied in detail. The general mortality of the rural population (58,000 inhabitants) from 1926 to 1929 has risen from 17.8 to 21.1 per 1,000; the rate for two small towns (10,000 inhabitants in all) has decreased from 16.4 to 11.2. A comparison of the causes of death brings to light a greater frequency, in the country, of infectious diseases, and congenital debility, and in towns of malignant tumors and senility.

In several cantons of Switzerland an investigation of the same sort is being carried on at the present time.

The attempts at acclimatization of the Asiatic laborer in the French Sudan, the Belgian Congo, and in Madagascar have in the past given disastrous results. On the other hand, a contingent of 800 Chinese coolies were just employed in the warm and humid section of Mayumbe (Equatorial Africa), with a minimum mortality of 4 per cent in 15 months. This result is due to the great sanitary, hygienic, and dietary precautions which were taken after the departure from Asia, during the voyage, on the arrival in Africa, and in the yards. Vaccinations were made, quinine prophylaxis was instituted, oiled clothing and large hats were given as protection against the rain, and boots and leggings against the chigger-flea [sand flea]. The work was increased gradually and the diet was varied as much as possible (red rice, bread, fresh or salted meat, fresh or dried fish, azotized pastry, dry or green vegetables, manioc, bananas, potatoes, and potato leaves, fat, tea, Chinese condiments). The region was protected against sleeping sickness by the preliminary sterilization of carriers of germs by means of atoxyl.

Encouraged by this experience, the French minister of colonies is going to try to introduce Anamese workmen into Guiana.

In the Belgian Congo, the workmen necessary in the Katanga are recruited in other sections under the surveillance of a physician, accompanied on the trip by the doctor, habituated little by little to the work, covering six graded steps according to the effort required. The diet of the country of origin is studied and provided as far as possible. The cold climate of upper Katanga gives rise, in the beginning, to heavy losses, due to pneumonia, then the mortality reaches, for some time, 40 per 1,000; but once acclimatization has been effected, it is not more than 12 to 13 per 1,000. In the Netherlands Indies the mortality in workmen brought from Java to Sumatra has been reduced to 7 per 1,000.

In Egypt, in a manganese mine situated at an altitude of 1,000 meters, pneumonia claims as many as 50 per cent of the workmen. This high mortality has disappeared following certain measures adopted, such as distribution of warm clothing, antipneumococcic vaccination, and especially return of the workmen after a period of six months of work.

This question of the sanitary protection of the native workmen in the colonies, so important for their economic development, will remain on the order of the day of the sessions of the committee.

Following the investigation of the International Office of Public Hygiene on the number of hospital beds necessary for a given population, and on the territorial distribution of hospitals, the following conclusions have been presented in a general preliminary report. The increasing use which the public makes of hospitals tends to raise to 7 per 1,000 the number of beds required; moreover, the proportion of beds remaining unoccupied is decreasing. Certain countries, endowed with old institutions, are almost saturated with hospitals; others have great need of them, which they must satisfy with a minimum of expense. The fundamentals of an organization should be six beds per 1,000 inhabitants in towns, less in the country; a radius of clientel of 30 kilometers per hospital; institutions of at least 100 beds, preferably from 300 to 600 beds; for chronic patients, special hospitals and institutions, whose charges should be less than those of the hospitals; finally, an organization for treatment at home, with doctors and nurses, for patients who do not need to enter a hospital; and dispensaries for the continuation of treatment when stay in the hospital is no longer necessary.

The decrease in mortality, not only in comparison with the distant past, but even during the last 50 years, is considerable. It seems that, in the most highly developed countries, there is now little progress to be made in propaganda for hygiene. But it is reported, especially in the United States, that mortality over 45 years of age has varied less than mortality under that age, and that the cases of persons attacked, without their knowledge, especially with diseases of the heart, vascular system and liver, and with diabetes, tuberculosis, and cancer, are frequent. Whence the idea of preventive medical examination, popularized and organized in the United States by the Life Extension Institute, to which 45 insurance companies now have recourse. In Italy, the National Insurance Institute has begun the same system, giving to its policyholders the right of free medical examination; the physician, chosen by the policyholder from the members of the National Fascist Syndicate of Physicians, is paid by the Insurance Institute (30 livres per visit). In Germany, the Association of Life Insurance Companies has created a common medical service, which gives instruction in hygiene through a special publication, free to its policyholders, and which issues a ticket for free examination every three years. The association pays the physician (6 marks per visit). This organization reaches 26 per cent of the insured. In England, certain insurance companies give a reduction in premium to those policyholders who submit themselves to a periodic medical examination. In France there is a private institute

in Paris for preventive examinations; a center for research in disease has just been established in Algiers, similar to that in Brussels. This movement acquired a great importance because of the applications to which it may lead in the functioning of social insurance. The International Office of Public Hygiene intends to collect exact information on the results already obtained in different countries and on the methods used. It will collect, moreover, with the collaboration of the International Statistical Institute, information on the average prolongation of life, and on the mortality, by age groups and by causes of death, for a certain number of countries.

Finally, as to the subject of the regulations applied to the transportation, by sea or land, of ferrosilicon, and considered as likely to decrease the accidents caused by it, replies have been sent by the United States, Great Britain, Italy, Germany, Belgium, the Grand Duchy of Luxemburg, and Norway. This last country, which is especially interested in the question, is formulating a new plan of regulation. In the presence of differences in the opinions of different countries, it has seemed to the committee that preliminary scientific studies were necessary on certain points: What are the limits of dangerous percentages of silicon? Does exposure to air before loading actually decrease the risk? Is there a simple and easy reagent which could be used to detect the presence in the atmosphere of toxic gases? Researches will be made to clear up these questions.

PUBLIC HEALTH SERVICE PUBLICATIONS

A List of Publications Issued During the Period July-December, 1930

There is printed herewith a list of publications of the United States Public Health Service issued during the period July–December, 1930.

The most important articles that appear each week in the Public Health Reports are reprinted in pamphlet form, making possible a wider and more economical distribution of information that is of especial value and interest to public-health workers and the general public.

All of the publications listed here, except those marked with an asterisk (*), are available for free distribution and, as long as the supply lasts, may be obtained by addressing the Surgeon General, United States Public Health Service, Washington, D. C. Those publications marked with an asterisk are not available for free distribution but may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D. C., *at the prices noted.* (No remittances should be sent to the Public Health Service.)

Reprints from the Public Health Reports

1391. Third report on a rat-flea survey of the city of San Juan, Porto Rico. By A. L. Carrión. July 4, 1930. 6 pages.

*1392. Experimental studies of water purification. IV. Observations on the effect of certain modifications in coagulation-sedimentation on the bacterial efficiency of preliminary water treatment in connection with rapid sand filtration. By H. W. Streeter. July 4 and 11, 1930. 42 pages.

1393. A public health survey of Iowa. By A. J. McLaughlin. July 11, 1930. 25 pages.

1394. The prevalence and trend of meningococcus meningitis in the United States. By R. C. Williams. July 18, 1930. 4 pages.

1395. Recent progress in studies of undulant fever. By H. E. Hasseltine. July 18, 1930. 7 pages.

1396. Pharmacological and chemical studies of the cause of so-called ginger paralysis. A preliminary report. By Maurice I. Smith and E. Elvove, with the cooperation of P. J. Valaer, Jr., William H. Frazier, and G. E. Mallory. July 25, 1930. 14 pages.

1397. Relation between trypanocidal and spirocheticidal activities of neoarsphenamine. By T. F. Probey and G. W. McCoy. July 25, 1930. 12 pages.

1398. Decrease of hookworm disease in the United States. By C. W. Stiles. August 1, 1930. 19 pages.

1399. The proposed morbidity reporting area. By R. C. Williams. August 1, 1930. 5 pages.

1400. The present status of streptococcus biologic products in the prevention and treatment of scarlet fever. By M. V. Veldee. August 8, 1930. 5 pages.

1401. Acute response of guinea pigs to vapors of some new commercial organic compounds. IV. Ethylene oxide. By C. P. Waite, F. A. Patty, and W. P. Yant. August 8, 1930. 12 pages.

1402. The immunizing value of diphtheria toxin-antitoxin mixture and of diphtheria toxoid. By W. T. Harrison. August 15, 1930. 6 pages.

1403. Antirabic vaccine paralysis. Consideration of various vaccines. By G. W. McCoy. August 15, 1930. 3 pages.

1404. Physical impairments and occupational class. Differential rates based upon medical examinations of 100,924 native-born, adult white insured males. By Edgar Sydenstricker and Rollo H. Britten. August 22, 1930. 36 pages.

1405. Acute response of guinea pigs to vapors of some new commercial organic compounds. V. Vinyl chloride. By F. A. Patty, W. P. Yant, and C. P. Waite. August 22, 1930. 9 pages.

1406. Psittacosis. Epidemiological considerations with reference to the 1929–30 outbreak in the United States. By Charles Armstrong. August 29, 1930. 11 pages.

1407. Acute response of guinea pigs to vapors of some new commercial organic compounds. VI. Dioxan. By W. P. Yant, H. H. Schrenk, F. A. Patty, and C. P. Waite. August 29, 1930. 10 pages.

1408. Public Health Service publications. A list of publications issued during the period July, 1929–June, 1930. August 29, 1930. 7 pages.

1409. Chief etiological factors of plague in Ecuador and the antiplague campaign. By C. R. Eskey. September 5 and 12, 1930. 64 pages.

1410. **Biological products. Establishments licensed for the propagation and sale of viruses, serums, toxins, and analogous products.** September 5, 1930. 5 pages.

1411. **Bacillus psittacosis Nocard, 1893. Failure to find it in the 1929–30 epidemic in the United States.** By Sara E. Branham, George W. McCoy, and Charles Armstrong. September 12, 1930. 8 pages.

1412. **A college course in child hygiene.** By E. Blanche Sterling. September 12, 1930. 4 pages.

1413. **Electron equilibria in biological systems. IV. An adaptation of the glass electrode to the continuous measurement of hydrogen ion concentration of the circulating blood.** By Carl Voegtlin, Floyd DeEds, and H. Kahler. September 19, 1930. 10 pages.

1414. **The United States Public Health Service as a career. Information for persons desiring to enter the regular commissioned corps.** September 19, 1930. 12 pages.

1415. **Mortality from influenza and pneumonia in 50 large cities of the United States, 1910–1929.** By Selwyn D. Collins, W. H. Frost, Mary Gover, and Edgar Syndenstricker. September 26, 1930. 52 pages.

1416. **The training of health officers.** By Joseph W. Mountin. October 3, 1930. 5 pages.

1417. **A note on the "zone phenomenon" in human sera. A comparison of antitularense with antiabortus sera.** By R. R. Spencer. October 3, 1930. 3 pages.

1418. **A study of the effect of typhoid vaccine when given after infection.** By J. H. Crouch. October 10, 1930. 4 pages.

1419. **The pharmacological action of certain phenol esters, with special reference to the etiology of so-called ginger paralysis. (2nd report.)** By Maurice I. Smith, with the cooperation of E. Elvove and W. H. Frazier. October 17, 1930. 16 pages.

1420. **Sickness among industrial employees in the first half of 1930.** October 24, 1930. 2 pages.

1421. **Cooperative rural health work of the Public Health Service in the fiscal year 1930.** By L. L. Lumsden. October 24, 1930. 20 pages.

1422. **A note on the incidence of endemic goiter in Northern Ireland.** By Robert Olesen and Paul A. Neal. October 31, 1930. 4 pages.

1423. **The influence of the size of the explant upon cultures of chick fibroblasts in vitro.** By W. R. Earle and J. W. Thompson. October 31, 1930. 26 pages.

1424. **The essentials of smallpox vaccination.** By James P. Leake and John N. Force. November 14, 1930. 5 pages.

1425. **State and insular health authorities, 1930. Directory, with data as to appropriations and publications.** November 14, 1930. 23 pages.

1426. **City health officers, 1930. Directory of those in cities of 10,000 or more population.** November 14, 1930. 15 pages.

1427. **An unusually mild recurring epidemic simulating food infection.** By R. R. Spencer. November 21, 1930. 11 pages.

1428. **Mottled enamel in a segrégated population.** By Grover A. Kempf and Frederick S. McKay. November 28, 1930. 18 pages.

1429. **Trachoma. Some facts about the disease and some suggestions for trachoma sufferers.** By Paul D. Mossman. November 28, 1930. 5 pages.

1430. **Venereal disease among Coast Guard enlisted personnel during the fiscal year 1929.** By W. W. King. December 5, 1930. 15 pages.

1431. **Miliary lung disease due to unknown cause.** By R. R. Sayers and F. V. Meriwether. December 5, 1930. 16 pages.

1432. The chemistry of cell division. I. The effect of glutathione on cell division in Amœba proteus. By Carl Voegtlin and H. W. Chalkley. December 12, 1930. 23 pages.
1433. The blacktongue preventative value of Minot's liver extract. By Joseph Goldberger and W. H. Sebrell. December 12, 1930. 7 pages.
1434. Experimental studies of water purification. V. Prechlorination in relation to the efficiency of water filtration processes. By H. W. Streeter and C. T. Wright. December 19, 1930. 24 pages.
1435. Consecutive readings of pulse rate on a small group of clerks. By Rollo H. Britten and C. R. Wallace. December 19, 1930. 7 pages.
1436. Whole-time county health officers, 1930. December 19, 1930. 7 pages.
1437. Summary of a study of health and hospital services in Alameda County, California. By Joseph W. Mountin. December 26, 1930. 15 pages.
1438. Further biochemical studies on the antineuritic vitamin. By Atherton Seidell and Maurice I. Smith. December 26, 1930. 6 pages.

Supplements to the Public Health Reports

85. The notifiable diseases. Prevalence during 1929 in cities of over 100,000. 1930. 29 pages.
86. Studies on the biochemistry of sulphur. VII. The cystine content of purified proteins. By M. X. Sullivan and W. C. Hess. 1930. 11 pages.
87. The notifiable diseases. Prevalence during 1929 in cities of 10,000 to 100,000 population. 1930. 83 pages.

Public Health Bulletin

197. Studies in illumination. III. A study of the loss of light due to smoke on Manhattan Island, New York City, during the year 1927, especially in its relation to the nature of the weather, the relative humidity of the air, and the velocity and direction of the wind. By James E. Ives. 1930. 40 pages.

National Institute of Health Bulletin [1]

157. Experimental syphilis. Lymph gland transfer method of determining human infection with Treponema pallidum. By G. C. Lake and K. K. Bryant. 1930. 41 pages.

Annual Report

Annual report of the Surgeon General of the United States Public Health Service for the fiscal year 1930. 358 pages.

Reprints from Venereal Disease Information

22. Syphilis and the Wassermann reaction in the private practice of obstetrics. By Joseph Earle Moore. From *Venereal Disease Information*, Vol. XI, No. 6. 9 pages.
23. Some observations upon the use of the Kahn test in experimental rabbit syphilis. By J. F. Mahoney, K. K. Bryant, and Marjorie Mehl Pickard. From *Venereal Disease Information*, Vol. XI, No. 7. 6 pages.
24. Data from venereal disease clinics of St. Louis. By Taliaferro Clark and Lida J. Usilton. From *Venereal Disease Information*, Vol. XI, No. 8. 16 pages.

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[1] This series of publications was formerly issued under the title of Hygienic Laboratory Bulletins. The name of the Hygienic Laboratory was changed to National Institute of Health by act of Congress approved May 26, 1930.

25. **Biologic therapy of gonococcus vulvovaginitis: A preliminary report.** By Russell D. Herrold, Samuel J. Hoffman, and Maurice L. Blatt. From *Venereal Disease Information*, Vol. XI, No. 9. 8 pages.
26. The Pitt County (N. C.) demonstration for the control of syphilis among the rural negro population. By O. C. Wenger. From *Venereal Disease Information*, Vol. XI, No. 10.

Compilations of Abstracts from Venereal Disease Information

Compilation No. 2. Revised. Congenital Syphilis. 375 pages. 50 cents.

COURT DECISION RELATING TO PUBLIC HEALTH

Order of local board of health prohibiting piggery upheld.—(Massachusetts Supreme Judicial Court; Ryder et al. *v.* Board of Health of Lexington et al., 173 N. E. 580; decided Nov. 26, 1930.) By statute a local board of health was authorized to assign places for the exercise of any trade or employment which was a nuisance or hurtful to the inhabitants, injurious to their estates, dangerous to the public health, or attended by noisome and injurious odors, and it was authorized also to prohibit the exercise thereof within town limits or in places not so assigned. The board of health of Lexington made an order prohibiting the exercise of the trade or employment of keeping swine on the plaintiffs' premises in Lexington. The plaintiffs appealed, as provided for in the statutes, for a jury trial. The evidence was that the land connected with the piggery comprised 100 acres, and that the maximum number of pigs kept on the premises was 1,500. There was also evidence relative to uncovered piles of refuse and garbage on the premises, to offensive odors which could have been found to come therefrom and which annoyed people living in the neighborhood and required them at times to keep the windows of their homes closed and to give up the use of their piazzas, and to annoyance at these homes from large numbers of flies such as were seen on garbage piles in the piggery.

The jury, by their verdict, affirmed the board's order. The supreme court said that "The evidence amply justified the jury in finding that a nuisance was maintained upon the premises" and that "Upon the record the board was not acting in excess of its powers in making the order of prohibition."

DEATHS DURING WEEK ENDED JANUARY 10, 1931

Summary of information received by telegraph from industrial insurance companies for the week ended January 10, 1931, and corresponding week of 1930. (From the Weekly Health Index issued by the Bureau of the Census, Department of Commerce)

	Week ended January 10, 1931	Corresponding week, 1930
Policies in force	74, 594, 205	75, 421, 100
Number of death claims	15, 212	16, 253
Death claims per 1,000 policies in force, annual rate	10. 6	11. 2

Deaths [1] from all causes in certain large cities of the United States during the week ended January 10, 1931, infant mortality, annual death rate, and comparison with corresponding week of 1930. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)

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

City	Week ended Jan. 10, 1931				Corresponding week, 1930		Death rate [2] for first 2 weeks	
	Total deaths	Death rate [2]	Deaths under 1 year	Infant mortality rate [3]	Death rate [2]	Deaths under 1 year	1931	1930
Total (81 cities)	9,598	14.1	873	[4] 67	12.8	808	13.7	13.1
Akron	48	9.7	5	49	6.5	6	8.0	8.1
Albany [5]	42	17.0	3	59	17.6	1	14.1	14.5
Atlanta	88	16.5	7	72	15.9	4	18.3	16.5
White	54		4	63		2		
Colored	34	(6)	3	86	(6)	2	(6)	(6)
Baltimore [5]	244	15.6	23	78	15.8	19	15.8	15.7
White	190		17	74		11		
Colored	54	(6)	6	94	(6)	8	(6)	(6)
Birmingham	81	15.7	5	50	10.0	6	15.8	13.7
White	28		2	34		4		
Colored	53	(6)	3	73	(6)	2	(6)	(6)
Boston	221	14.7	23	66	17.5	36	16.7	17.1
Bridgeport	47	16.7	4	66	15.3	6	14.5	15.1
Buffalo	149	13.4	15	61	14.5	17	13.5	15.6
Cambridge	30	13.7	4	80	16.0	4	15.5	16.3
Camden	40	17.5	4	70	15.8	7	19.3	14.7
Canton	20	9.8	0	0	8.4	3	9.3	11.6
Chicago [5]	763	11.5	66	58	11.8	79	11.4	11.4
Cincinnati	191	21.8	11	66	15.4	9	18.1	17.3
Cleveland	197	11.3	15	44	11.3	19	11.2	12.1
Columbus	85	15.0	1	10	12.7	2	14.6	14.3
Dallas	76	14.6	6		10.9	7	13.1	12.7
White	58		6			6		
Colored	18	(6)	0		(6)	1	(6)	(6)
Dayton	64	16.1	7	98	9.5	6	14.4	9.5
Denver	92	16.4	12	116	15.4	2	16.7	14.0
Des Moines	35	12.6	3	53	15.7	1	13.0	12.8
Detroit	276	8.7	38	61	10.0	55	8.5	9.7
Duluth	26	13.3	1	25	11.3	1	12.8	12.1
El Paso	53	26.3	19		26.3	8	27.1	24.1
Erie	23	10.2	3	56	13.0	3	9.5	10.3
Fall River [5] [7]	26	11.8	1	23	11.3	5	12.2	12.0
Flint	22	7.0	4	51	8.9	3	8.1	8.4
Fort Worth	48	15.0	7		12.1	3	13.7	12.1
White	32		5			3		
Colored	16	(6)	2		(6)	0	(6)	(6)
Grand Rapids	25	7.6	3	44	9.9	2	8.0	11.2
Houston	75	12.6	7		10.4	5	12.7	13.7
White	53		6			2		
Colored	22	(6)	1		(6)	3	(6)	(6)
Indianapolis	107	15.1	8	66	18.3	9	15.3	17.0
White	91		7	66		8		
Colored	16	(6)	1	67	(6)	1	(6)	(6)
Jersey City	78	12.8	9	80	12.8	13	12.2	13.2
Kansas City, Kans.	38	16.1	5	103	13.7	2	14.4	11.7
White	28		3	74		2		
Colored	10	(6)	2	254	(6)	0	(6)	(6)
Kansas City, Mo.	115	14.7	15	114	13.5	12	14.9	12.9
Knoxville	33	15.8	3	64	15.7	4	13.6	12.0
White	23		2	48		3		
Colored	10	(6)	1	204	(6)	1	(6)	(6)
Long Beach	30	10.3	3	72	13.0	1	12.3	10.7
Los Angeles	373	14.8	29	84	13.0	38	14.2	13.0
Louisville	150	25.4	14	120	8.3	2	19.5	12.7
White	120		10	98		0		
Colored	30	(6)	4	265	(6)	2	(6)	(6)
Lowell [7]	28	14.5	1	25	10.4	2	14.5	10.9
Lynn	28	14.2	3	78	11.7	2	12.9	9.9
Memphis	88	17.7	7	74	15.0	3	19.8	15.6
White	53		3	50		3		
Colored	35	(6)	4	116	(6)	0	(6)	(6)
Miami	22	10.2	3	76	11.3	1	13.7	11.5
White	18		1	35		1		
Colored	4	(6)	2	177	(6)	0	(6)	(6)
Milwaukee	120	10.6	13	56	10.2	19	9.2	11.1

See footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended January 10, 1931, infant mortality, annual death rate, and comparison with corresponding week of 1930. (From Weekly Health Index, issued by the Bureau of the Census, Department of Commerce.—Continued.

City	Week ended Jan. 10, 1931				Corresponding week, 1930		Death rate [2] for first 2 weeks	
	Total deaths	Death rate [2]	Deaths under 1 year	Infant mortality rate [3]	Death rate [2]	Deaths under 1 year	1931	1930
Minneapolis	128	14.1	19	122	12.5	6	13.5	13.1
Nashville	49	16.4	8	119	15.2	5	16.8	18.3
White	29		5	100		2		
Colored	20	(6)	3	177	(6)	3	(6)	(6)
New Bedford [7]	33	15.3	5	133	12.0	0	14.8	12.7
New Haven	44	14.1	3	57	14.1	4	13.1	14.3
New Orleans	195	21.7	17	93	19.6	22	22.3	20.6
White	119		9	74		8		
Colored	76	(6)	8	130	(6)	14	(6)	(6)
New York	1,916	14.1	156	65	11.8	141	13.3	12.0
Bronx Boro	237	9.3	22	50	8.5	16	9.1	8.1
Brooklyn Boro	674	13.4	58	61	10.9	56	12.4	11.1
Manhattan Boro	743	21.3	59	101	17.5	52	20.5	18.2
Queens Boro	213	9.6	16	44	7.5	17	8.7	8.3
Richmond Boro	49	15.6	1	18	15.4	0	14.5	13.1
Newark, N. J	109	12.8	13	68	14.9	10	13.3	15.5
Oakland	89	15.9	7	89	11.5	8	15.3	13.0
Oklahoma City	47	12.5	7	97	10.0	2	11.7	8.3
Omaha	57	13.7	6	67	14.8	2	16.6	15.2
Paterson	35	13.1	2	34	13.9	8	11.8	14.3
Philadelphia	589	15.6	40	58	12.5	41	14.4	13.4
Pittsburgh	215	16.6	32	110	15.5	21	16.7	14.2
Portland, Oreg	92	15.6	1	12	14.6	3	14.6	13.9
Providence	82	16.8	9	83	15.8	8	15.0	16.5
Richmond	59	16.7	4	58	15.9	10	15.7	15.8
White	41		4	88		4		
Colored	18	(6)	0	0	(6)	6	(6)	(6)
Rochester	94	14.8	4	36	9.8	2	14.0	11.8
St. Louis	265	16.7	31	104	13.4	12	16.5	15.0
St. Paul	63	11.9	5	52	10.5	4	11.5	11.8
Salt Lake City [4]	38	13.9	4	60	13.3	2	16.4	12.4
San Antonio	70	15.2	13		16.8	11	15.2	19.2
San Diego	58	19.3	5	101	16.4	1	18.2	19.2
San Francisco	157	12.6	3	20	15.8	2	14.7	13.7
Schenectady	16	8.7	1	29	12.5	0	7.9	12.2
Seattle	90	12.6	4	38	8.8	3	12.8	10.2
Somerville	29	14.4	4	149	7.5	2	11.9	9.5
South Bend	12	5.8	1	25	13.4	3	7.5	11.2
Spokane	24	10.8	1	26	11.7	1	13.0	12.3
Springfield, Mass	34	11.6	2	31	11.1	2	13.5	12.7
Syracuse	56	13.7	7	83	13.9	6	13.5	13.3
Tacoma	27	13.1	1	26	11.7	2	16.7	11.0
Toledo	71	12.5	10	92	14.7	5	12.0	13.5
Trenton	63	26.5	8	139	20.7	4	25.3	17.1
Utica	29	14.8	0	0	10.2	1	14.8	14.8
Washington, D. C	183	19.4	14	78	15.3	10	18.4	16.3
White	118		6	49		6		
Colored	65	(6)	8	138	(6)	4	(6)	(6)
Waterbury	17	8.8	1	30	10.4	3	10.3	9.9
Wilmington, Del. [7]	39	19.1	5	108	16.6	4	16.9	13.7
Worcester	49	13.0	2	27	12.0	5	13.2	14.7
Yonkers	28	10.5	0	0	7.7	2	9.6	7.9
Youngstown	50	15.1	8	112	9.2	3	12.8	9.2

[1] Deaths of nonresidents are included. Stillbirths are excluded.
[2] These rates represent annual rates per 1,000 population, as estimated for 1931 and 1930 by the arithmetical method.
[3] Deaths under 1 year of age per 1,000 live births. Cities left blank are not in the registration area for births.
[4] Data for 76 cities.
[6] Deaths for week ended Friday.
[6] For the cities for which deaths are shown by color, the percentage of colored population in 1920 was as follows: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans., 14; Knoxville, 15; Louisville, 17; Memphis, 38; Miami, 31; Nashville, 30; New Orleans, 26; Richmond, 32; and Washington, D. C., 25.
[7] Population Apr. 1, 1930; decreased 1920 to 1930; no estimate made.

PREVALENCE OF DISEASE

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

UNITED STATES

CURRENT WEEKLY STATE REPORTS

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

Reports for Weeks Ended January 17, 1931, and January 18, 1930

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended January 17, 1931, and January 18, 1930

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930
New England States:								
Maine	5	2	4	9	21	3	0	0
New Hampshire	2	9	----	1	45	28	0	0
Vermont	----	1	----	----	25	13	0	0
Massachusetts	77	130	17	9	409	225	1	6
Rhode Island	7	12	----	----	----	2	1	0
Connecticut	10	22	82	9	192	44	1	0
Middle Atlantic States:								
New York	135	152	[1] 1,005	[1] 29	279	379	14	17
New Jersey	56	106	282	14	313	154	6	5
Pennsylvania	129	191	----	----	966	613	2	11
East North Central States:								
Ohio	62	60	34	11	126	989	6	8
Indiana	64	27	5	----	197	67	16	16
Illinois	165	180	41	105	555	268	14	18
Michigan	58	72	5	3	82	291	5	28
Wisconsin	15	25	38	71	229	679	3	3
West North Central States:								
Minnesota	14	27	1	1	16	123	3	2
Iowa	10	14	----	----	5	165	2	2
Missouri	37	36	12	20	1,012	33	3	16
North Dakota	5	21	----	----	----	12	0	3
South Dakota	15	1	----	----	3	25	1	0
Nebraska	6	21	7	50	16	249	3	8
Kansas	22	22	4	9	19	219	1	4
South Atlantic States:								
Delaware	2	6	----	----	3	----	0	0
Maryland [2] [3]	24	30	113	32	160	6	1	1
District of Columbia	10	12	10	----	17	2	0	0
Virginia	----	----	----	----	----	----	4	----
West Virginia	23	13	33	37	47	116	1	0
North Carolina	42	56	112	38	----	21	4	3
South Carolina [3]	11	18	1,078	981	----	----	0	6
Georgia	16	21	168	180	----	30	2	5
Florida	13	12	6	9	65	32	2	0

[1] New York City only.
[2] Week ended Friday.
[3] Typhus fever, 1931: 1 case in Maryland and 1 case in South Carolina.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended January 17, 1931, and January 18, 1930—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930
East South Central States:								
Kentucky	23	15	2			63	4	5
Tennessee	10	25	121	123	96	259	2	0
Alabama	22	22	126	129	370	28	4	9
Mississippi	20	16					2	8
West South Central States:								
Arkansas	8	3	101	75	1	9	2	2
Louisiana	26	34	77	34	2	36	5	9
Oklahoma [4]	34	39	169	136	8	46	1	1
Texas	41	54	85	68	9	79	1	1
Mountain States:								
Montana	7	3			3	12	0	2
Idaho	1		1		29	45	1	1
Wyoming		2		3	1	3	0	0
Colorado	12	5			49	26	4	8
New Mexico	4	8	1	3	35	161	4	2
Arizona	12	3	3	14	50	2	7	7
Utah [2]		1	12		3	78	4	4
Pacific States:								
Washington	10	2			76	73	3	2
Oregon	2	8	49	69	57	22	0	0
California	63	93	63	110	363	490	8	18

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930
New England States:								
Maine	1	0	14	45	0	0	2	3
New Hampshire	0	0	10	19	0	0	1	0
Vermont	0	0	8	5	0	7	1	0
Massachusetts	2	2	334	354	0	0	4	4
Rhode Island	1	0	30	23	0	0	0	1
Connecticut	0	0	68	84	0	0	2	1
Middle Atlantic States:								
New York	7	0	694	423	14	14	13	10
New Jersey	0	1	250	251	1	0	4	2
Pennsylvania	4	1	557	478	1	1	20	12
East North Central States:								
Ohio	7	0	550	262	117	269	11	7
Indiana	1	0	266	224	94	226	0	1
Illinois	9	2	512	531	72	147	5	14
Michigan	2	1	373	340	48	90	2	2
Wisconsin	3	0	138	116	3	38	0	6
West North Central States:								
Minnesota	2	0	62	143	8	3	3	0
Iowa	0	0	101	59	60	108	1	2
Missouri	2	0	126	71	80	60	2	5
North Dakota	0	1	18	23	7	15	0	0
South Dakota	0	2	16	27	57	38	1	0
Nebraska	1	0	41	79	63	37	0	1
Kansas	0	1	60	158	172	68	4	4
South Atlantic States:								
Delaware	0	0	16	15	0	0	0	0
Maryland [3]	0	0	106	80	0	0	6	3
District of Columbia	0	0	26	19	0	0	2	0
Virginia					1			
West Virgnia	0	1	48	36	11	32	2	10
North Carolina	2	0	81	84	3	59	4	3
South Carolina [3]	7	1	24	21	2	4	5	7
Georgia	1	0	56	36	0	0	1	8
Florida	1	1	15	15	0	2	1	2

[2] Week ended Friday.
[3] Typhus fever, 1931: 1 case in Maryland and 1 case in South Carolina.
[4] Figures for 1931 are exclusive of Oklahoma City and Tulsa.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended January 17, 1931, and January 18, 1930—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930	Week ended Jan. 17, 1931	Week ended Jan. 18, 1930
East South Central States:								
Kentucky	0	0	75	63	2	42	3	2
Tennessee	1	0	23	26	7	14	3	3
Alabama	0	1	48	35	2	0	4	11
Mississippi	0	0	19	13	14	0	3	1
West South Central States:								
Arkansas	0	0	15	18	29	16	4	1
Louisiana	1	0	26	26	12	3	6	10
Oklahoma [4]	1	0	44	44	54	98	8	4
Texas	1	1	63	52	187	122	4	2
Mountain States:								
Montana	0	0	43	28	18	16	1	0
Idaho	0	0	17	14	4	21	0	0
Wyoming	0	0	7	5	0	8	0	0
Colorado	0	1	41	26	11	34	3	3
New Mexico	1	0	10	18	2	2	3	3
Arizona	0	0	8	11	1	33	0	2
Utah [3]	0	0	11	11	0	2	1	7
Pacific States:								
Washington	1	0	54	54	34	95	3	1
Oregon	0	2	16	47	25	25	1	3
California	10	2	137	278	156	157	6	3

[3] Week ended Friday. [4] Figures for 1931 are exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

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

State	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
October, 1930										
Texas	----	143	66	609	----	3	23	75	----	73
November, 1930										
Kansas	9	85	5	----	28	1	31	217	103	26
December, 1930										
Arizona	8	17	21	----	151	----	0	19	2	7
Colorado	6	44	----	----	147	----	2	178	25	2
Delaware	1	12	2	----	3	----	1	59	0	1
Georgia	9	102	310	80	130	17	1	181	1	24
Iowa	6	54	----	----	15	----	12	338	106	7
Maine	1	22	6	----	84	----	9	77	0	20
New Hampshire	----	8	12	----	----	----	0	18	0	5
New Jersey	8	338	84	----	694	----	1	774	0	19
North Dakota	1	20	6	----	12	----	2	79	22	9
Porto Rico	----	25	26	5,281	15	5	0	----	0	25

October, 1930	Cases
Texas:	
Lethargic encephalitis	2
Paratyphoid fever	1
November, 1930	
Kansas:	
Chicken pox	342
German measles	5
Impetigo contagiosa	3
Mumps	50
Paratyphoid fever	1
Scabies	11
Septic sore throat	1
Tetanus	2
Tularaemia	3
Undulant fever	1
Vincent's angina	13
Whooping cough	113
December, 1930	
Chicken pox:	
Arizona	26
Colorado	249
Delaware	18
Georgia	61
Iowa	447
Maine	314
New Jersey	1,422
North Dakota	176
Dysentery:	
Georgia	3
Porto Rico	28
Filariasis:	
Porto Rico	4
German measles:	
Iowa	2
Maine	5
New Jersey	17
Hookworm disease:	
Georgia	14
Jaundice:	
Colorado	7
Lead poisoning:	
New Jersey	6
Leprosy:	
Porto Rico	2
Lethargic encephalitis:	
Maine	4
Mumps:	
Arizona	35
Colorado	122
Delaware	13
Georgia	14
Iowa	42
Maine	198
New Jersey	98
North Dakota	61
Porto Rico	11
Ophthalmia neonatorum:	
New Jersey	4
Porto Rico	8
Paratyphoid fever:	
Georgia	3
Maine	1
New Jersey	1
Porto Rico	1
Puerperal septicemia:	
Porto Rico	13
Rabies in animals:	
Delaware	2
Rabies in man:	
Georgia	1
Scabies:	
Colorado	1
Delaware	3
Septic sore throat:	
Colorado	1
Georgia	40
Maine	1
North Dakota	1
Tetanus:	
New Jersey	1
Porto Rico	8
Tetanus, infantile:	
Porto Rico	22
Trachoma:	
Arizona	22
Colorado	4
New Jersey	1
Tularaemia:	
Colorado	2
Delaware	1
Georgia	2
Iowa	1
New Jersey	1
Typhus fever:	
Georgia	23
Undulant fever:	
Arizona	2
Colorado	2
Iowa	10
Maine	2
New Jersey	3
North Dakota	1
Vincent's angina:	
Colorado	5
Iowa	5
Maine	5
North Dakota	28
Whooping cough:	
Arizona	7
Colorado	131
Delaware	6
Georgia	61
Iowa	42
Maine	248
New Jersey	548
North Dakota	72
Porto Rico	169

Cases of Certain Communicable Diseases Reported for the Month of October, 1930, by State Health Officers

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid and paratyphoid fever	Whooping cough
Maine	80	10	13	79	64	0	49	28	220
New Hampshire		15			25	0		4	
Vermont	95	7	10	4	31	1	8	3	140
Massachusetts	486	302	339	99	436	0	438	34	304
Rhode Island	41	61	1	10	39	0	37	19	39
Connecticut	82	43	73	32	65	0	125	33	155
New York	781	302	301	307	704	1	1,739	180	1,248
New Jersey	263	278	160	43	336	0	398	44	289
Pennsylvania	958	483	396	324	994	4	558	271	538
Ohio	859	321	73	133	1,266	68	619	248	201
Indiana	135	201	40	5	336	76	163	62	57
Illinois	911	579	118	424	897	84	1,194	148	548
Michigan	521	275	181	163	554	53	318	101	405
Wisconsin	981	95	531	171	375	27	192	35	580
Minnesota	365	73	32		143	32	150	20	85
Iowa	103	44	8	28	170	44	43	15	23
Missouri	91	185	213	19	205	43	216	120	71
North Dakota	58	14	27	25	45	26	12	20	27
South Dakota	50	45	15	3	27	77	13	9	9
Nebraska	71	52	42	18	107	30	28	15	45
Kansas	155	79	14	34	203	40	123	37	130
Delaware	4	6	6	12	21	0	20	46	5
Maryland	93	139	13	18	182	0	307	174	141
District of Columbia	5	47	9		48	0	81	12	22
Virginia	181	360	256		366	18	133	168	182
West Virginia	31	123	85		200	18	45	176	73
North Carolina	129	810	20		569	4		88	238
South Carolina	28	386	8	39	107	2	107	157	118
Georgia	7	111	43	9	126	1	81	132	45
Florida	4	74	14	11	21	4	43	11	19
Kentucky[1]									
Tennessee	43	257	40	13	248	14	184	206	66
Alabama	7	261	97	14	233	0	297	106	56
Mississippi	157	301	73	119	169	4	212	128	341
Arkansas	26	46	3	6	48	11	[2] 19	131	14
Louisiana	7	85	7	3	51	1	[2] 152	82	25
Oklahoma[3]	17	245	30		145	38	24	153	36
Texas		143			75			74	
Montana	187	8	5	28	74	6	41	13	88
Idaho	25	2	31	4	26	2	7	15	21
Wyoming	63	2		9	22	1	[2] 1	3	18
Colorado	222	50	328	98	99	8	135	33	117
New Mexico	38	37	29	9	28	1	102	75	9
Arizona	5	46	84	16	29	8	232	25	23
Utah[1]									
Nevada	17			99		3	[2] 1	0	16
Washington	217	140	29	135	208	99	142	53	93
Oregon	102	11	201	53	54	15	42	15	49
California	749	284	500	603	372	72	1,119	79	448

[1] Reports received weekly.
[2] Pulmonary.
[3] Exclusive of Oklahoma City and Tulsa.

Case Rates per 1,000 Population (Annual Basis) for the Month of October, 1930, Based on Provisional Populations

State	Chicken pox	Diphtheria	Measles	Mumps	Scarlet fever	Smallpox	Tuberculosis	Typhoid and paratyphoid fever	Whooping cough
Maine	1.18	0.15	0.19	1.16	0.94	.00	0.72	0.41	3.23
New Hampshire	-------	.38	-------	-------	.63	.00	-------	.10	-------
Vermont	3.11	.23	.33	.13	1.02	.03	.26	.10	4.59
Massachusetts	1.34	.83	.24	.27	1.20	.00	1.21	.09	.84
Rhode Island	.70	1.04	.02	.17	.67	.00	.63	.32	.67
Connecticut	.60	.31	.53	.23	.48	.00	.91	.24	1.13
New York	.73	.28	.28	.29	.65	.00	1.62	.17	1.16
New Jersey	.76	.81	.47	.13	.98	.00	1.16	.13	.84
Pennsylvania	1.17	.59	.48	.39	1.21	.00	.68	.33	.66
Ohio	1.52	.57	.13	.24	2.24	.12	1.09	.44	.36
Indiana	.49	.73	.15	.02	1.22	.28	.59	.23	.21
Illinois	1.40	.89	.18	.65	1.38	.13	1.84	.23	.85
Michigan	1.26	.66	.44	.39	1.34	.13	.77	.24	.93
Wisconsin	3.93	.38	2.13	.69	1.50	.11	.77	.14	2.32
Minnesota	1.67	.33	.15	-------	.65	.15	.69	.09	.39
Iowa	.49	.21	.04	.13	.81	.21	.21	.07	.11
Missouri	.30	.60	.69	.06	.67	.14	.70	.39	.23
North Dakota	1.00	.24	.47	.43	.78	.45	.21	.34	.47
South Dakota	.85	.77	.26	.05	.46	1.31	.22	.15	.15
Nebraska	.61	.44	.36	.15	.91	.26	.24	.13	.38
Kansas	.97	.49	.09	.21	1.27	.25	.77	.23	.81
Delaware	.20	.30	.30	.59	1.04	.00	.99	2.27	.25
Maryland	.67	1.00	.09	.13	1.31	.00	2.21	1.25	1.02
District of Columbia	.12	1.13	.22	-------	1.16	.00	1.95	.29	.53
Virginia	.88	1.75	1.24	-------	1.78	.09	.65	.82	.88
West Virginia	.21	.83	.58	-------	1.36	.12	.31	1.19	.50
North Carolina	.48	2.99	.07	-------	2.10	.01	-------	.33	.88
South Carolina	.19	2.62	.05	.26	.73	.01	.73	1.07	.80
Georgia	.03	.45	.17	.04	.51	.00	.33	.54	.18
Florida	.03	.59	.11	.09	.17	.03	.34	.09	.15
Kentucky [1]	-------	-------	-------	-------	-------	-------	-------	-------	-------
Tennessee	.19	1.16	.18	.06	1.12	.06	.83	.93	.30
Alabama	.03	1.16	.43	.06	1.03	.00	1.32	.47	.25
Mississippi	.92	1.76	.43	.70	.99	.02	1.24	.75	1.99
Arkansas	.16	.29	.02	.04	.30	.07	[2].12	.83	.09
Louisiana	.04	.43	.04	.02	.29	.01	[2].85	.46	.14
Oklahoma [3]	.10	1.39	.17	-------	.82	.22	.14	.87	.20
Texas	-------	.29	-------	-------	.15	-------	-------	.15	-------
Montana	4.11	.18	.11	.61	1.62	.13	.90	.29	1.93
Idaho	.66	.05	.82	.11	.69	.05	.18	.40	.55
Wyoming	3.29	.10	-------	.47	1.15	.05	[2].05	.16	.94
Colorado	2.52	.57	3.72	1.11	1.12	.09	1.53	.37	1.33
New Mexico	1.04	1.02	.80	.25	.77	.03	2.80	2.06	.25
Arizona	.13	1.24	2.26	.43	.78	.21	6.23	.67	.62
Utah [1]	-------	-------	-------	-------	-------	-------	-------	-------	-------
Nevada	2.19	-------	-------	12.77	-------	.39	[2].13	.00	2.06
Washington	1.63	1.05	.22	1.01	1.56	.74	1.07	.40	.70
Oregon	1.26	.14	2.47	.65	.66	.18	.52	.18	.60
California	1.54	.58	1.03	1.24	.76	.15	2.30	.16	.92

[1] Reports received weekly.
[2] Pulmonary.
[3] Exclusive of Oklahoma City and Tulsa.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 95 cities reporting cases used in the following table are situated in all parts of the country and have an estimated aggregate population of more than 32,730,000. The estimated population of the 89 cities reporting deaths is more than 31,300,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended January 10, 1931, and January 11, 1930

	1931	1930	Estimated expectancy
Cases reported			
Diphtheria:			
46 States	1,366	1,749	
95 cities	510	709	971
Measles:			
45 States	6,883	5,515	
95 cities	2,140	1,080	
Meningococcus meningitis:			
46 States	157	252	
95 cities	28	101	
Poliomyelitis:			
46 States	40	17	
Scarlet fever:			
46 States	4,875	4,947	
95 cities	1,740	1,636	1,393
Smallpox:			
46 States	900	1,665	
95 cities	78	145	48
Typhoid fever:			
46 States	170	164	
95 cities	25	17	32
Deaths reported			
Influenza and pneumonia:			
89 cities	1,245	1,046	
Smallpox:			
89 cities	0	0	

City reports for week ended January 10, 1931

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

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

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND								
Maine:								
Portland	13	1	0		0	0	1	2
New Hampshire:								
Concord	0	0	0		0	0	0	2
Manchester	0	0	0			12	0	2
Nashua	0	0	1			2	0	
Vermont:								
Barre	0	0	0		0	0	0	0
Burlington	3	0	1		0	0	0	0
Massachusetts:								
Boston	108	36	18	6	0	101	9	15
Fall River	10	5	1	2	0	1	8	1
Springfield	11	5	4		0	6	9	2
Worcester	45	5	3	5	1	1	1	5
Rhode Island:								
Pawtucket	4	2	2		0	0	1	1
Providence	13	10	1		0	0	1	11
Connecticut:								
Bridgeport	2	6	0	5	1	1	5	4
Hartford	0	7	4		0	74	2	1
New Haven	21	1	0		0	20	33	2

City reports for week ended January 10, 1931—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MIDDLE ATLANTIC								
New York:								
Buffalo	52	13	12		1	27	50	22
New York	242	208	76	438	46	199	27	374
Rochester	17	8	4		0	1	3	5
Syracuse	72	4	1		0	9	0	4
New Jersey:								
Camden	16	6	10	1	1	41	14	0
Newark	91	22	4	44	2	2	12	20
Trenton	10	3	1	3	0	1	0	4
Pennsylvania:								
Philadelphia	203	71	18	15	10	79	32	62
Pittsburgh	99	22	14	2	4	18	15	29
Reading	19	2	0		0	22	42	2
EAST NORTH CENTRAL								
Ohio:								
Cincinnati	26	11	2		1	23	15	27
Cleveland	206	32	7	21	3	4	110	15
Columbus	38	5	6	2	0	1	3	3
Toledo	117	10	8		0	1	15	9
Indiana:								
Fort Wayne	6	5	6		0	4	0	4
Indianapolis	44	10	3		0	2	6	16
South Bend	7	1	0		0	0	0	0
Terre Haute	8	1	0		0	4	0	9
Illinois:								
Chicago	185	116	95	9	5	36	63	61
Springfield	10	1	0	1	1	3	1	3
Michigan:								
Detroit	135	60	32	4	5	5	15	22
Flint	18	4	4		0	8	1	2
Grand Rapids	2	1	0		1	0	0	3
Wisconsin:								
Kenosha	57	2	0		0	0	18	0
Madison	28	0	1			0	16	
Milwaukee	181	18	3	5	4	7	93	12
Racine	22	2	1		0	0	1	1
Superior	5	1	0		0	1	0	3
WEST NORTH CENTRAL								
Minnesota:								
Duluth	18	0	0		1	0	0	4
Minneapolis	66	22	1		2	3	49	16
St. Paul	67	8	2		0	0	2	4
Iowa:								
Davenport	4	1	0			1	0	
Des Moines	1	2	0			0	0	
Sioux City	13	1	1			1	11	
Waterloo	17	0	0			0	0	
Missouri:								
Kansas City	41	7	12		1	5	1	18
St. Joseph	1	1	1		0	0	0	7
St. Louis	33	43	27	3	1	1,116	17	0
North Dakota:								
Fargo	17	0	0		0	0	5	1
Grand Forks	0	0	0			0	14	
South Dakota:								
Aberdeen	5	0	0			0	2	
Sioux Falls	0	0	0		0	0	0	0
Nebraska:								
Lincoln	18	1	0			3	14	
Omaha	24	5	6		0	2	3	4
Kansas:								
Topeka	26	3	0		2	0	0	4
Wichita	11	3	1		0	0	0	10
SOUTH ATLANTIC								
Delaware:								
Wilmington	4	2	1		0	1	0	3
Maryland:								
Baltimore		25						
Cumberland	0	1	0		0	0	0	1
Frederick	0	0	0		0	0	1	0

City reports for week ended January 10, 1931—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC—continued								
District of Columbia:								
Washington	62	18	14	2	0	11	0	25
Virginia:								
Lynchburg	1	1	0		0	0	4	4
Norfolk	12	3	2	10	0	2	0	14
Richmond	1	6	3		0	26	2	6
Roanoke	8	2	1		0	0	0	2
West Virginia:								
Charleston	1	1	2	1	0	0	10	0
Wheeling	12	1	1		0	2	0	3
North Carolina:								
Raleigh	7	1	1		0	2	0	2
Wilmington	20	1	1		0	0	0	3
Winston-Salem	3	1	1	2	0	0	0	4
South Carolina:								
Charleston	5	1	0	138	2	2	0	11
Columbia		1						
Greenville	1	0	1			0	0	
Georgia:								
Atlanta	0	5	3	46	2	61	0	14
Brunswick	2	0	0		0	0	0	0
Savannah	1	2	2	26	5	0	0	4
Florida:								
Miami	12	2	4	3	0	0	0	2
Tampa	5	1	3		0	9	0	5
EAST SOUTH CENTRAL								
Kentucky:								
Covington	0	1	2		0	0	1	2
Tennessee:								
Memphis	61	5	6		1	0	5	17
Nashville	2	3	1		4	6	0	5
Alabama:								
Birmingham	7	3	5	12	2	142	5	10
Mobile	4	1	2	1	0	0	0	8
Montgomery	2	1	4	2	0	0	0	0
WEST SOUTH CENTRAL								
Arkansas:								
Fort Smith	4	0	0			0	0	
Little Rock	2	1	1		0	0	0	4
Louisiana:								
New Orleans	0	13	17	23	18	2	0	24
Shreveport	6	2	1		0	1	0	5
Oklahoma:								
Muskogee	0		1	4		0	0	
Oklahoma City	0	2	1	2	0	0	0	12
Tulsa	24	3	2			10	0	0
Texas:								
Dallas	28	9	11		0	3	6	13
Fort Worth	10	5	5			0	0	
Galveston	0	1	2		0	0	0	1
Houston	3	8	7		1	0	2	10
San Antonio	0	3	3		3	0	1	12
MOUNTAIN								
Montana:								
Billings	1	0	0		0	0	0	1
Great Falls	1	0	0		0	0	0	0
Helena		0						
Missoula	1	0	0		0	0	0	0
Idaho:								
Boise	3	0	0		0	1	0	2
Colorado:								
Denver	61	9	3		4	11	35	18
Pueblo	2	2	0	1	0	13	0	5
New Mexico:								
Albuquerque	2	0	0	1	0	0	0	2
Arizona:								
Phoenix	0	0	0		1	1	0	3

City reports for week ended January 10, 1931—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MOUNTAIN—contd.								
Utah:								
Salt Lake City	28	4	0		0	0	4	2
Nevada:								
Reno	0	0	0		1	0	0	0
PACIFIC								
Washington:								
Seattle	23	4	1			1	26	
Spokane		2						
Tacoma	21	3	3		0	0	0	2
Oregon:								
Portland	28	11	1		0	2	16	8
Salem	0	0	0			3	9	
California:								
Los Angeles	37	41	17	45	5	11	23	37
Sacramento	16	2	4		0	0	6	7
San Francisco	39	16	4	2	4	3	5	10

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases, reported	Cases, estimated expectancy	Cases, reported	Deaths reported		Cases, estimated expectancy	Cases, reported	Deaths reported		
NEW ENGLAND											
Maine:											
Portland	4	3	0	0	0	1	1	0	0	38	16
New Hampshire:											
Concord	0	0	0	0	0	0	0	0	0	0	6
Manchester	2	0	0	0	0	0	0	0	0	0	14
Nashua	0	0	0	0	0	0	0	0		0	
Vermont:											
Barre	0	0	0	0	0	0	0	0	0	0	2
Burlington	2	2	0	0	0	0	0	0	0	0	9
Massachusetts:											
Boston	81	82	0	0	0	8	0	2	0	31	221
Fall River	3	11	0	0	0	2	1	0	0	4	26
Springfield	9	7	0	0	0	1	0	0	0	3	31
Worcester	12	19	0	0	0	2	0	0	0	10	49
Rhode Island:											
Pawtucket	2	17	0	0	0	0	0	0	0	4	8
Providence	12	23	0	0	0	0	1	0	0	4	82
Connecticut:											
Bridgeport	10	11	0	0	0	5	0	0	0	0	47
Hartford	7	1	0	0	0	2	0	0	0	1	27
New Haven	7	6	0	0	0	4	0	0	0	12	44
MIDDLE ATLANTIC											
New York:											
Buffalo	27	20	0	0	0	9	0	0	0	19	138
New York	228	198	0	0	0	112	7	3	0	147	1,916
Rochester	9	58	0	0	0	5	0	0	0	11	92
Syracuse	13	17	0	0	0	2	1	0	0	11	56
New Jersey:											
Camden	7	6	0	0	0	1	1	0	0	3	40
Newark	33	27	0	0	0	10	0	0	0	36	118
Trenton	5	11	0	0	0	3	0	0	0	0	63
Pennsylvania:											
Philadelphia	99	146	1	0	0	40	3	1	1	19	589
Pittsburgh	36	55	0	0	0	10	0	0	0	20	215
Reading	4	4	0	0	0	0	0	0	0	0	20
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	20	44	1	0	0	13	0	0	0	4	191
Cleveland	45	73	0	0	0	15	1	2	0	25	197
Columbus	10	16	1	0	0	2	0	0	0	0	8
Toledo	13	10	0	1	0	5	0	1	0	2	7

City reports for week ended January 10, 1931—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases, reported	Cases, estimated expectancy	Cases, reported	Deaths reported		Cases, estimated expectancy	Cases, reported	Deaths reported		
EAST NORTH CENTRAL—contd.											
Indiana:											
Fort Wayne	6	1	1	0	0	0	0	0	0	0	22
Indianapolis	10	85	4	14	0	5	0	0	0	15	
South Bend	4	5	1	0	0	0	0	0	0	3	15
Terre Haute	3	2	0	0	0	0	0	0	0	2	35
Illinois:											
Chicago	133	234	1	2	0	41	2	0	0	45	763
Springfield	2	6	0	0	0	0	0	0	0	1	26
Michigan:											
Detroit	106	80	2	9	0	26	0	1	0	74	276
Flint	13	13	1	0	0	1	0	0	0	14	22
Grand Rapids	12	16	0	0	0	1	0	0	0	4	25
Wisconsin:											
Kenosha	2	1	1	0	0	0	0	0	0	1	4
Madison	5	1	0	0	0		0	0	0	0	
Milwaukee	35	14	1	0	0	6	1	0	0	27	120
Racine	5	6	0	0	0	1	0	0	0	8	18
Superior	3	2	0	0	0	0	0	0	0	0	10
WEST NORTH CENTRAL											
Minnesota:											
Duluth	11	0	0	0	0	1	0	0	0	2	26
Minneapolis	53	10	2	0	0	1	1	0	0	19	128
St. Paul	32	3	1	0	0	0	0	0	0	24	70
Iowa:											
Davenport	1	0	0	4			0	0		0	
Des Moines	10	5	2	8	0	0	0	0	0	0	35
Sioux City	2	19	0	0			0	0		0	
Waterloo	2	0	1	0			0	0		0	
Missouri:											
Kansas City	18	11	0	1	0	3	0	0	0	8	115
St. Joseph	2	3	1	0	0	0	0	0	0	0	31
St. Louis	39	86	1	1	0	11	1	0	1	24	265
North Dakota:											
Fargo	3	6	0	0	0	1	0	0	0	1	13
Grand Forks	0	4	0	0			0	0		0	
South Dakota:											
Aberdeen	1	0	0	1			0	0		0	
Sioux Falls	2	2	1	4	0	0	0	0	0	0	10
Nebraska:											
Lincoln	0	3	0	1			0	0		3	
Omaha	5	16	2	28	0	1	0	0	1	1	57
Kansas:											
Topeka	3	1	1	0	0	0	0	0	0	0	24
Wichita	7	0	0	3	0	1	0	0	0	0	37
SOUTH ATLANTIC											
Delaware:											
Wilmington	6	10	0	0	0	3	0	0	0	1	39
Maryland:											
Baltimore	35		0				1				
Cumberland	1	3	0	0	0	0	0	1	0	0	8
Frederick	0	2	0	0	0	0	0	0	0	0	1
District of Col.:											
Washington	26	43	1	0	0	15	0	1	1	17	183
Virginia:											
Lynchburg	1	3	0	0	0	0	0	1	0	0	14
Norfolk	3	0	0	0	0	1	0	0	0	13	
Richmond	6	9	0	0	0	6	0	0	0	0	60
Roanoke	3	0	0	0	0	0	1	0	0	0	26
West Virginia:											
Charleston	1	1	0	0	0	0	0	1	0	1	14
Wheeling	2	2	0	0	0	1	1	0	0	2	22
North Carolina:											
Raleigh	1	1	1	0	0	0	0	0	0	7	20
Wilmington	1	2	0	1	0	0	0	0	0	2	10
Winston-Salem	2	1	1	0	0	1	0	0	0	2	16
South Carolina:											
Charleston	1	6	0	0	0	1	0	1	0	0	37
Columbia	0		0				0				
Greenville	0	1	0	0	0	0	0	0	0	0	1

City reports for week ended January 10, 1931—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases, reported	Cases, estimated expectancy	Cases, reported	Deaths reported		Cases, estimated expectancy	Cases, reported	Deaths reported		
SOUTH ATLANTIC—continued											
Georgia:											
Atlanta	5	20	2	0	0	5	0	0	0	12	88
Brunswick	0	0	0	0	0	1	0	0	0	0	5
Savannah	1	5	0	0	0	1	0	0	0	0	24
Florida:											
Miami	3	0	0	0	0	0	1	0	0	9	22
Tampa	1	1	0	0	0	1	1	0	0	0	36
EAST SOUTH CENTRAL											
Kentucky:											
Covington	1	13	0	0	0	2	0	0	0	0	28
Tennessee:											
Memphis	7	36	1	1	0	4	1	2	1	0	88
Nashville	2	0	0	0	0	1	0	0	0	11	49
Alabama:											
Birmingham	4	14	1	0	0	5	0	0	0	4	81
Mobile	1	2	0	0	0	1	0	0	0	0	28
Montgomery	1	3	0	0	----	----	0	0	----	0	----
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	1	0	0	0	0	----	0	0	----	0	----
Little Rock	1	1	0	1	0	1	0	0	0	0	----
Louisiana:											
New Orleans	8	0	0	1	0	12	3	5	1	2	196
Shreveport	1	3	1	0	0	0	0	0	1	0	39
Oklahoma:											
Muskogee	1	0	----	0	----	----	----	0	----	0	----
Oklahoma City	3	4	1	5	0	1	1	0	0	0	47
Tulsa	2	4	1	5	0	0	0	0	0	0	----
Texas:											
Dallas	6	10	1	1	0	1	1	1	1	6	76
Fort Worth	2	7	1	3	0	0	0	0	0	0	----
Galveston	1	1	0	0	0	0	0	0	0	0	17
Houston	2	4	2	7	0	5	0	0	0	0	75
San Antonio	1	1	0	1	0	8	0	0	0	0	70
MOUNTAIN											
Montana:											
Billings	2	0	0	0	0	0	0	0	0	6	7
Great Falls	3	9	0	0	0	0	0	0	0	7	6
Helena	1	----	0	----	----	----	0	----	----	----	----
Missoula	1	0	0	0	0	0	0	0	0	6	3
Idaho:											
Boise	1	0	0	1	0	1	0	0	0	0	11
Colorado:											
Denver	12	24	1	0	0	5	0	1	0	10	94
Pueblo	1	0	0	0	0	0	0	1	1	7	17
New Mexico:											
Albuquerque	1	0	0	0	0	5	0	0	0	1	16
Arizona:											
Phoenix	0	2	1	0	0	3	0	0	0	5	----
Utah:											
Salt Lake City	5	3	1	0	0	3	0	0	0	19	38
Nevada:											
Reno	1	1	0	0	0	0	0	0	0	0	7
PACIFIC											
Washington:											
Seattle	9	5	2	0	0	----	0	0	----	32	----
Spokane	10	----	4	----	----	----	0	----	----	----	----
Tacoma	3	2	4	1	0	0	0	0	0	3	27
Oregon:											
Portland	7	0	9	2	0	1	0	0	0	3	92
Salem	0	0	----	0	----	----	0	0	----	0	----
California:											
Los Angeles	40	17	3	3	0	20	1	0	1	8	373
Sacramento	2	1	0	1	0	4	0	0	0	13	35
San Francisco	19	6	2	1	0	12	1	1	0	4	176

City reports for week ended January 10, 1931—Continued

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	1	1	0	0	0	0	0	0
Rhode Island:									
Providence	1	0	0	0	0	0	0	0	0
Connecticut:									
Hartford	1	0	0	0	0	0	0	0	0
MIDDLE ATLANTIC									
New York:									
New York	11	4	2	0	0	0	1	1	1
New Jersey:									
Newark	0	0	0	0	0	0	0	1	0
Trenton	1	0	0	0	0	0	0	0	0
Pennsylvania:									
Philadelphia	0	0	0	0	0	0	0	2	0
Pittsburgh	2	3	0	0	0	0	0	0	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	1	0	0	0	0	0	0	0	0
Cleveland	1	0	0	0	0	0	0	0	0
Indiana:									
Indianapolis	0	1	0	0	0	0	0	0	0
Illinois:									
Chicago	8	3	3	0	0	0	1	2	0
Michigan:									
Detroit	1	0	0	0	0	0	0	0	0
Flint	0	0	2	1	0	0	0	0	0
Wisconsin:									
Milwaukee	1	1	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Minneapolis	1	1	0	0	0	0	0	0	1
St. Paul	0	0	0	0	0	0	0	0	0
Iowa:									
Davenport	1	-------	0	-------	0	-------	0	0	-------
Missouri:									
Kansas City	1	0	0	0	0	0	0	1	0
St. Joseph	1	0	0	0	0	0	0	0	0
St. Louis	3	2	0	0	0	0	0	0	0
Nebraska:									
Omaha	1	0	0	0	0	0	0	0	0
SOUTH ATLANTIC									
South Carolina:									
Charleston	0	0	0	0	3	0	0	0	0
Georgia: [1]									
Atlanta [1]	4	2	0	0	0	0	0	0	0
Florida: [1]									
Tampa	0	0	0	0	1	1	1	0	0
EAST SOUTH CENTRAL									
Kentucky:									
Covington	0	1	0	0	0	0	0	0	0
Tennessee:									
Memphis	4	1	0	0	0	0	0	0	0
Alabama:									
Birmingham	0	0	0	0	2	1	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Little Rock	0	0	0	0	0	1	0	0	0
Louisiana:									
New Orleans	3	2	0	0	1	1	0	0	0
Texas:									
Ft. Worth	1	0	0	0	0	0	0	0	0

[1] Typhus fever: 4 cases; 1 case at Atlanta, Ga., 2 cases at Savannah, Ga., and 1 case at Miami, Fla.

City reports for week ended January 10, 1931—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases estimated expectancy	Cases	Deaths
MOUNTAIN									
Colorado:									
Denver	2	1	0	0	0	0	0	0	0
Arizona:									
Phoenix	4	1	0	0	0	0	0	0	0
Utah:									
Salt Lake City	2	1	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle	1		0		0		0	0	
California:									
Los Angeles	3	3	0	0	0	0	1	2	1
Sacramento	2	1	0	0	0	0	0	0	0
San Francisco	0	0	0	0	0	0	0	1	0

The following tables give the rates per 100,000 population for 98 cities for the 5-week period ended January 10, 1931, compared with those for a like period ended January 11, 1930. The population figures used in computing the rates previous to 1931 are approximate estimates. Those used in computing the rates for the weeks ended January 3 and January 4, and subsequent weeks, are estimated midyear populations for 1930 and 1931, respectively, derived from the 1930 census. The 98 cities reporting cases have an estimated aggregate population of more than 33,000,000. The 91 cities reporting deaths have more than 31,500,000 estimated population.

Summary of weekly reports from cities December 7, 1930, to January 10, 1931—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929–30 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Dec. 13, 1930	Dec. 14, 1929	Dec. 20, 1930	Dec. 21, 1929	Dec. 27, 1930	Dec. 28, 1929	Jan. 3, 1931	Jan. 4, 1930	Jan. 10, 1931	Jan. 11, 1930
98 cities	[2] 89	134	[2] 97	128	[3] 73	120	[4] 78	113	[5] 81	114
New England	117	117	131	168	69	126	[6] 119	141	76	162
Middle Atlantic	50	112	65	106	49	113	66	81	62	107
East North Central	121	170	117	167	103	167	89	153	97	130
West North Central	95	148	87	110	53	67	82	116	98	126
South Atlantic	112	107	99	107	79	79	61	94	[7] 94	90
East South Central	155	137	94	123	94	109	70	102	116	72
West South Central	[2] 147	293	[2] 219	225	153	171	132	181	142	153
Mountain	26	61	17	61	[3] 67	35	[8] 85	53	[9] 27	70
Pacific	64	58	97	56	47	82	53	99	[10] 59	73

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimates as of July 1, 1931, 1930, and 1929, respectively.
[2] Shreveport, La., not included.
[3] Salt Lake City, Utah, not included
[4] Hartford, Conn., and Denver, Colo., not included.
[5] Baltimore, Md., Helena, Mont., and Spokane, Wash., not included.
[6] Hartford, Conn., not included.
[7] Baltimore, Md., not included.
[8] Denver, Colo., not included.
[9] Helena, Mont., not included.
[10] Spokane, Wash., not included.

Summary of weekly reports from cities December 7, 1930, to January 10, 1931—Annual rates per 100,000 population compared with rates for the corresponding period of 1929–30—Continued

MEASLES CASE RATES

	Week ended—									
	Dec. 13, 1930	Dec. 14, 1929	Dec. 20, 1930	Dec. 21, 1929	Dec. 27, 1930	Dec. 28, 1929	Jan. 3, 1931	Jan. 4, 1930	Jan. 10, 1931	Jan. 11, 1930
98 cities	[2] 166	113	[2] 198	109	[3] 185	91	[4] 270	126	[5] 341	171
New England	250	85	248	92	279	90	[6] 171	129	469	116
Middle Atlantic	89	47	91	59	74	51	98	72	177	109
East North Central	26	133	28	94	28	97	54	117	63	152
West North Central	1,055	202	1,387	210	1,250	146	1,871	283	2,156	310
South Atlantic	73	28	126	39	114	30	318	144	[7] 323	128
East South Central	337	14	310	0	364	0	896	6	861	12
West South Central	[2] 8	61	[2] 20	133	26	88	24	91	20	293
Mountain	146	104	163	139	[3] 258	78	[5] 441	203	[9] 222	150
Pacific	31	464	7	418	19	326	24	261	[10] 31	443

SCARLET FEVER CASE RATES

98 cities	[2] 229	277	[2] 239	249	[3] 227	216	[4] 224	242	[5] 277	264
New England	237	375	321	310	323	299	[6] 315	391	414	411
Middle Atlantic	196	172	219	176	200	165	224	175	240	218
East North Central	318	438	309	355	288	311	255	341	363	350
West North Central	205	271	273	235	241	179	235	254	296	221
South Atlantic	238	193	190	253	163	144	259	202	[7] 311	218
East South Central	425	89	223	48	385	75	291	114	396	96
West South Central	[2] 94	137	[2] 80	99	64	122	105	80	68	129
Mountain	206	322	292	583	[3] 404	322	[5] 85	388	[9] 328	493
Pacific	83	340	97	244	99	246	71	225	[10] 64	241

SMALLPOX CASE RATES

98 cities	[2] 15	23	[2] 9	23	[3] 7	18	[4] 7	19	[5] 12	30
New England	0	2	0	0	0	0	[6] 0	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	3	29	6	31	3	20	5	16	15	27
West North Central	120	56	47	60	42	58	46	81	63	91
South Atlantic	0	0	0	0	0	2	0	2	[7] 3	0
East South Central	0	0	0	7	0	7	0	0	6	6
West South Central	[2] 8	34	[2] 16	34	19	27	17	14	37	66
Mountain	146	78	112	52	[3] 45	44	[8] 17	53	[9] 9	44
Pacific	7	118	12	113	24	77	10	89	[10] 12	146

TYPHOID FEVER CASE RATES

98 cities	[2] 8	6	[2] 9	5	[3] 7	4	[4] 5	3	[5] 4	3
New England	18	7	9	0	2	2	[6] 2	2	5	0
Middle Atlantic	7	6	3	4	3	3	4	1	2	3
East North Central	7	3	9	3	13	1	4	2	2	2
West North Central	6	6	8	8	6	2	2	0	0	2
South Atlantic	4	7	11	4	15	9	4	6	[7] 14	10
East South Central	20	14	40	0	20	34	47	6	12	6
West South Central	[2] 25	8	[2] 28	38	0	8	3	0	20	3
Mountain	0	9	9	17	[3] 11	0	[8] 34	9	[9] 18	0
Pacific	7	7	7	2	7	10	6	8	[10] 2	4

[2] Shreveport, La., not included.
[3] Salt Lake City, Utah, not included.
[4] Hartford, Conn., and Denver, Colo., not included.
[5] Baltimore, Md., Helena, Mont., and Spokane, Wash., not included.
[6] Hartford, Conn., not included.
[7] Baltimore, Md., not included.
[8] Denver, Colo., not included.
[9] Helena, Mont., not included.
[10] Spokane, Wash., not included.

Summary of weekly reports from cities December 7, 1930, to January 10, 1931—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929–30—Continued

INFLUENZA DEATH RATES

	Week ended—									
	Dec. 13, 1930	Dec. 14, 1929	Dec. 20, 1930	Dec. 21, 1929	Dec. 27, 1930	Dec. 28, 1929	Jan. 3, 1931	Jan. 4, 1930	Jan. 10, 1931	Jan. 11, 1930
91 cities	[2] 10	16	[2] 10	19	[3] 12	19	[11] 15	16	[12] 24	18
New England	4	7	2	9	2	9	[6] 7	7	5	0
Middle Atlantic	8	9	5	18	11	13	[12] 11	9	28	13
East North Central	5	15	10	14	8	13	7	15	12	12
West North Central	21	12	15	15	9	15	3	27	21	30
South Atlantic	22	19	18	13	22	26	20	20	[7] 26	34
East South Central	29	60	37	52	22	30	25	26	44	58
West South Central	[2] 12	78	[2] 25	66	34	94	90	71	76	57
Mountain	9	0	17	26	[3] 0	26	[8] 34	18	[9] 44	44
Pacific	9	19	12	28	21	19	10	10	22	12

PNEUMONIA DEATH RATES

91 cities	[2] 109	150	[2] 114	158	[3] 130	143	[11] 150	165	[12] 183	160
New England	109	135	106	157	109	94	[6] 154	169	108	176
Middle Atlantic	109	156	133	165	132	155	[12] 167	170	231	181
East North Central	86	116	70	117	95	116	101	114	110	121
West North Central	145	174	95	180	115	174	177	197	200	153
South Atlantic	123	191	126	184	159	152	227	240	[7] 248	192
East South Central	140	216	125	216	184	194	202	227	265	123
West South Central	[2] 176	230	[2] 147	234	203	234	186	295	238	189
Mountain	154	192	215	235	[3] 235	209	[8] 254	185	[9] 249	229
Pacific	74	107	156	138	166	104	130	92	134	120

[2] Shreveport, La., not included.
[3] Salt Lake City, Utah, not included.
[6] Hartford, Conn., not included.
[7] Baltimore, Md., not included.
[8] Denver, Colo., not included.
[9] Helena, Mont., not included.
[11] Hartford, Conn., New York City, N. Y., and Denver, Colo., not included.
[12] Baltimore, Md., and Helena, Mont., not included.
[13] New York City, N. Y., not included.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—Week ended January 10, 1931.—The Department of Pensions and National Health of Canada reports cases of certain communicable diseases for the week ended January 10, 1931, as follows:

Disease	Cerebro-spinal fever	Influenza	Smallpox	Typhoid fever
Prince Edward Island [1]				
Nova Scotia	3	8		
New Brunswick [1]				
Quebec	2	3		6
Ontario	1		8	8
Manitoba [1]				
Saskatchewan	1			1
Alberta				1
British Columbia			2	3
Total	7	11	10	19

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

Quebec Province—Communicable diseases—Week ended January 10, 1931.—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the week ended January 10, 1931, as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	2	Mumps	12
Chicken pox	89	Paratyphoid fever	2
Diphtheria	38	Scarlet fever	90
Erysipelas	2	Tuberculosis	46
Influenza	3	Typhoid fever	6
Measles	47	Whooping cough	27

CUBA

Provinces—Communicable diseases—Four weeks ended December 20, 1930.—During the four weeks ended December 20, 1930, cases of certain communicable diseases were reported in the Provinces of Cuba as follows:

Disease	Pinar del Rio	Habana	Matanzas	Santa Clara	Camaguey	Oriente	Total
Chicken pox		7	1	5		3	16
Diphtheria	2	26	2	5	1	2	38
Malaria		24		1	13	67	105
Measles	2	4		4			10
Paratyphoid fever			1	2		6	9
Scarlet fever		4	1	1			6
Tetanus (infantile)			1	1			2
Typhoid fever	6	25	2	16	6	19	74

ITALY

Communicable diseases—Four weeks ended October 5, 1930.—During the four weeks ended October 5, 1930, cases of certain communicable diseases were reported in Italy as follows:

Disease	Sept. 8–14, 1930		Sept. 15–21, 1930		Sept. 22–28, 1930		Sept. 29–Oct. 5, 1930	
	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected
Anthrax	38	32	77	62	82	62	46	40
Cerebrospinal meningitis	4	4	9	9	7	7	5	4
Chicken pox	60	37	48	32	48	34	54	31
Diphtheria and croup	446	234	423	245	599	288	748	347
Dysentery	28	16	21	14	25	16	28	19
Lethargic encephalitis	2	2	4	4	2	2	4	4
Measles	401	153	414	137	449	126	455	153
Poliomyelitis	21	15	18	17	27	21	23	18
Scarlet fever	301	133	309	147	422	157	420	181
Smallpox							1	1
Typhoid fever	989	464	1,049	441	1,148	515	1,401	594

VIRGIN ISLANDS

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

St. Thomas and St. John:	Cases
Gonorrhea	2
Syphilis	10
Tuberculosis	1

St. Croix:	Cases
Filariasis	1
Syphilis	9
Tuberculosis	1

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

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

CHOLERA

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

Place		June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Sept. 21–Oct. 18, 1930	Week ended— Oct. 25, 1930	November, 1930					December, 1930				January, 1931		
							1	8	15	22	29	6	13	20	27	3	10	17
Afghanistan	C	P	P															
China:																		
Amoy	C			2														
	D			2														
Canton	C	2			1	1												
	D	1																
Shanghai	C			34	38	1		1										
	D			3	4													
Shensi Province	C			P														
Swatow	C		3	2														
Tientsin	C		2	1														
India	C	26,121	42,893	51,551	36,529	5,222	5,689	4,146	3,887									
	D	13,822	22,358	23,950	17,635	2,733	2,915	2,149	1,985									
Bassein	C			1														
Bombay	C		14	1	16	17	1	1		2	2	4	5					
	D		8	2	11	10	6	1		2	1	1	3					
Calcutta	C	220	63	27	24	7	7	11	8	4	6	2	10	9	7			
	D	128	30	12	15	4	2	6	4	4	4	1	7	6	4			
Madras	C		1		2		1							44				
	D		1		2									39				
Rangoon	C	1	1	2	1										1			
	D	1	1	1	1										1			
Tuticorin	C				1				1	4		1		1				
	D				1				1									
India (French):																		
Chandernagor	C	1		1	3				1		1							
	D				1									1				
Pondicherry	C				1				1	1	1	1	1	3				
	D				1					1	1	1	1	3				
India (Portuguese)	C		1	1			3	9	2									
	D			1			3	5	1									

Indo-China (see also table below):																			
Pnompenh	C	32	11		2	1					1	1							
	D	22	6								1	1							
Saigon and Cholon	C	10	5		2	1					1		2	1					
	D	3	1								1								
Philippine Islands: [1]																			
Ports—																			
Cebu	C	65	9	2															
	D	36	8	2															
Iloilo	C	29	64	10	1						1					1			
	D	22	56	14	4						3					1			
Manila	C		1	43	5														
	D			12	1														
Provinces—																			
Antique	C		20	47	40														
	D		12	34	18														
Bohol	C		138	49															
	D		79	20															
Bulacan	C	4	1	4	2														
	D			2	1														
Capiz	C	3	2	1															
	D	2	2																
Cebu	C	713	85	25															
	D	303	50	11															
Iloilo	C	309	571	238	50	10	10	4	6	11	21	13		7	5	13	3	11	
	D	193	376	151	40	7	7	3	6	8	11	8		6	4	10	2	9	
La Union	C	1																	
Leyte	C	1																	
	D	11																	
Masbate	C	92	34																
	D	35	14																
Misamis, Occidental	C	3																	
	D	3																	
Negros, Occidental	C	508	343	122	28	12	3	19	22	44	38	48	33	28	19	33	40	19	
	D	368	237	91	20	12	3	12	14	33	17	45	23	22	16	26	33	15	
Negros, Oriental	C	23	8																
	D	13	4																
Nueva Acija	C	1																	
	D	1																	
Pampanga	C	2		1															
Pangasinan	C	3	1																
	D	2	1																
Rizal	C	1																	
	D							4											
Samar	C		18	4	7	6	3	4	3	4	4			2		12	2		
	D		16	2	7	5	1	4	2	4	4			1	1	7	1		
Sorsogon	C							5											
	D	1						4											
Surigao	C		28	1	(2)														
	D		17	2															
Tarlac	C		1																

[1] Figures for cholera in the Phillippine Islands are subject to correction.
[2] During the period from Aug. 24 to Sept. 26, 1930, 26 cases of cholera with 17 deaths were reported in Manitum, Surigao Province, P. I.

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

CHOLERA—Continued

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

Place		June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Sept. 21–Oct. 18, 1930	Week ended— Oct. 25, 1930	Nov. 1	Nov. 8	Nov. 15	Nov. 22	Nov. 29	Dec. 6	Dec. 13	Dec. 20	Dec. 27	Jan. 3	Jan. 10	Jan. 17
Siam	C	20	3	-------	4	3	------	1	------	2	1	1	------	------	------	------	------	------
	D	9	2	-------	1	3	------	1	------	2	1	1	------	------	------	------	------	------
Bangkok	C	8	1	-------	3	1	2	------	------	2	1	------	1	2	1	1	1	------
	D	3	1	-------	2	1	1	------	------	2	1	------	1	2	1	1	1	------
Songkla	C	10	------	-------	-------	------	------	------	------	------	------	------	------	------	------	------	------	------
	D	6	------	-------	-------	------	------	------	------	------	------	------	------	------	------	------	------	------
On vessel: S. S. Malwa from Shanghai	D	------	------	1	-------	------	------	------	------	------	------	------	------	------	------	------	------	------

Place		June, 1930	July, 1930	August, 1930	September, 1930 1–10	Sept. 11–20	Sept. 21–30	October, 1930 1–10	Oct. 11–20	Oct. 21–31	November, 1930 1–10	Nov. 11–20	Nov. 21–30	Dec. 1–10, 1930
Indo-China (French) (see also table above):														
Annam [1]	C	16	1	3	------	------	------	------	------	------	------	------	------	------
Cambodia [1]	C	144	43	59	23	13	2	16	------	6	------	1	------	28
Cochin-China [1]	C	273	46	27	9	6	18	14	6	8	------	5	------	8

[1] Reports incomplete.

PLAGUE

Place		June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Sept. 21–Oct. 18, 1930	Week ended Oct. 25, 1930	November, 1930					December, 1930				January, 1931		
							1	8	15	22	29	6	13	20	27	3	10	17
Algeria:																		
Algiers	C	3	7	11	6	5	3	1	2			1	1					1
	D					3												
Constantine	C	1						1							3	1		
Oran	C	3	4	10	10	1			1									
	D			1	3													
Plague-infected rats		2		10	6	1												
Philippeville	C			1	3	1		1									1	
Argentina: Cordoba Province—Chazon	C												1					
Belgian Congo	C	2	2	5					1				1					
	D	2	2	3					1				1					
British East Africa (see also table below):																		
Tanganyika	C															3		
	D															3		
Uganda	C	228	236	202	165	53	37	34	47									
	D	213	229	191	164	53	36	33	46									
Canary Islands: Las Palmas	D		1															
Ceylon:																		
Colombo	C	3	2	2	3				1	1		4	4	4		4		
	D	3	2	3	3				1	1		3	4	4		4		
Plague-infected rats		1							1	1	1							
China:																		
Manchuria—Tungliau and Nungan	C		30	29	2													
Shensi	C			P		P												
Dutch East Indies:																		
Batavia and West Java	C	84	83	79	107	41	36	27	39	53	56							
	D	84	83	76	103	42	37	28	39	53	56							
Plague-infected rats			1	3														
Java and Madura	D	217	188	260	335	124	140	107	130	137	127	132						
Egypt:																		
Alexandria	C	23	11	10	9	2	1	1	3		1		2	1	1			1
	D	10	6	8	6	3		2	2				1					
Assiout	C	2						3			2		7	5	1		1	2
	D	2						1					1				1	2
Aswan	C										3							
Beni-Suef	C		1															1
Gharbieh	C		3															
	D		1															

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

PLAGUE—Continued

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

Place		June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Sept. 21–Oct. 18, 1930	Week ended Oct. 25, 1930	November, 1930					December, 1930				January, 1931		
							1	8	15	22	29	6	13	20	27	3	10	17
Egypt—Continued.																		
Girga	C	1		1										3	1	3		
	D														1	1		
Manfalut	C																23	5
	D																5	2
Minieh	C	3											1					
Port Said	C	1	1			1	1											
France:																		
Marseille	C			5	4	2	1		1									
St. Ouen	C	1																
	D	1																
Gambia	C		4															
	D		4															
Greece (see also table below):																		
Patras	C	1																
Pyrgos	C				2													
India	C	377	877	2,497	2,371	604	616	553	943									
	D	256	477	1,132	1,068	336	288	317	556									
Bassein	C			2			1										2	
	D			3														
Bombay	C	1		1	2	1												
	D	1		1	2		1											
Plague-infected rats		52	35	47	64	2	9	11	8	11	5	12	4	10				
Madras Presidency	C	47	81	127	196	69	31	45	40	33					4			
	D	31	34	57	110	43	22	37	22	24								
Rangoon	C	2	3	10	2		1		1						1	1		
	D	2	2	9	2		1								1			
Plague-infected rats		6	7	8	1	1				1	1			1				
India (Portuguese)	D		P				3											
Indo-China (see also table below):																		
Pnompenh	C	2	4	3	2					1	3	1	1	1				
	D	2			3	1				1	3	1	1	1				
Saigon and Cholon	C		1	1	1													
Iraq: Baghdad	C	18	9		1				P	2	2							
	D	7	3		1					1	1							
Kwang-Chow-Wan	C	4	1															

Madagascar (see also table below): Tamatave	C	1	2	1	1	3		2			2	1	1		2			
	D				1	3					2		1					
Morocco	C	1	15			4		1						9		10		
	D		2											4		4		
Nigeria: Lagos	C	1	7	6	5	33	1	2	2	4	3	2				1		
	D	1	7	6	5		1	2	2	4	3	2				1		
Plague-infected rats		18	8	10	11	3	1	2	7	1	1	1	2					
Peru: Lima.[1]																		
Senegal (see table below).																		
Siam	C		7	3	1	3	1	1	1						1			
	D		6	2		3	1		1						1			
Bangkok	C		3						1				1		1	2		
	D		2						1				1		1	2		
Nagara Rajsima	C		2	1	1				1		3		8	4				
	D		2	1	1				1		3		6	3				
Syria: Beirut	C	9	2	5		1	1	3	1								1	
Tripolitania	C		2							4	6	2	1					
Tunisia:																		
Sfax district	C	6	1															
Tunis	C	5					1		1				P	12			1	
	D	1																
Union of Socialist Soviet Republics: Salsk region	C	5	7															
	D	4	5															
Union of South Africa:																		
Cape Province	C	1	1	1		1					P	P						
	D	1	1	1														
Orange Free State	C			2														
	D			2														
On vessel:																		
S. S. Marionga de Thermiotis, at Avonmouth	C														1			

Place		June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930	Nov., 1930
British East Africa (see also table above):							
Kenya	C	107	97	87	53	58	62
Greece (see also table above)	C	1				2	
Indo-China (see also table above)	C	11	1	2	4		
Madagascar (see also table above):							
Antisirabe Province	C	3	24	11	21		
	D	3	24	11	21		
Miarinarivo Province	C	1	1	2	7		
	D	1	1	2	7		
Moramanga Province	C	3		27	18		
	D	3		27	17		
Tananarive Province	C	16	28	39	79		
	D	16	28	38	79		

Place		June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930	Nov., 1930
Senegal:							
Baol[2]	C	2	62	79	48	53	
	D	2	48	20	23	35	4
Dakar[2]	C	53	140	108	3		
	D	117	122	90	8		
Louga[2]	C	60	138	75	61	37	10
	D	21	103	33	30	25	3
Thies[2]	C	52	54	34	12	24	27
	D	35	30	20	4	15	23
Tivaouane[2]	C	43	119	110	20	53	31
	D	28	70	54	14	31	25

[1] Eight cases of plague were reported at Lima, Peru, during December, 1930. Plague infection is said to exist in interior towns north of Lima.

[2] Reports incomplete.

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

SMALLPOX

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

Place		June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Sept. 21–Oct. 18, 1930	Week ended— Oct. 25, 1930	November, 1930					December, 1930				January, 1931		
							1	8	15	22	29	6	13	20	27	3	10	17
Algeria:																		
Algiers	C	1	3											1				
Constantine	C	1						1										
Arabia: Aden	C	1																
Brazil:																		
Porto Alegre (alastrim)	C		1	1	26		14	14	8	20	8							
Rio de Janeiro	C							2										
British East Africa (see also table below):																		
Tanganyika	C	168	242	522	95	3	1		13	7	26	18						
	D	42	37	60	6	1					1							
British South Africa: Southern Rhodesia	C	31	1	1	153	2	54	1	38	12								
	D									2								
Canada:																		
Alberta	C	5	1	1	22					1						19		
British Columbia—Vancouver	C	6	6	2	2		3					1				1		
Manitoba	C			1													1	
Winnipeg	C															8	8	
Ontario	C	24	20	10	19	16	20	9	14	7	12	3	1	1				
Kingston	C														2	4		
North Bay	C														1		1	
Ottawa	C	13	7	5		14		9	14		8	1	1			2		1
Toronto	C	1		1							2	2						
Quebec	C	3	5							1			1					
Montreal	C		7															
Saskatchewan	C	5	8	1	3		2			2		16						
China:																		
Changking	C	P	P	P	P	P	P	P	P	P		P						
Foochow	C	P	P	P	P		P		P		P		P					
Hong Kong	C	2													1			
	D	1																
Manchuria—																		
Harbin	C	3	2				1											
Kwantung—Dairen	C	8								2		1	1	1				
	D												1					
Nanking	C	P	P	P	P	P	P	P				P	P	P				

Shanghai—																		
Foreigners only	C	4	3	18	1	1		1				3	5	4	2	6		
Including natives	D			2					1				4	5		1		
Swatow	D	1	4	2	4	1	1		1	1			2		2			
Tientsin	C				1			1		1	1							
Chosen (see table below).																		
Colombia:																		
Barranquilla	C		2															
Buenaventura	C	10	2															
Cali	D				2							1						
Curacao (alastrim)	C	2	1															
Dutch East Indies:																		
Borneo	C	2																
Java—																		
Batavia and West Java	C	8	12	11	14	2	13	11		2		2		2		2		
	D	5	5	4	4	2	1	1		1						1		
East Java and Madura	C	1																
Sanggi Islands	C	11	36	14		29												
	D	3	2	3		3												
Egypt: Port Said	C	3																
France (see table below).																		
Great Britain:																		
England and Wales	C	529	344	341	325	86	87	92	107	116	160	95	137	138	135			
Ashton under Lyne	C	8																
Bradford	C	1			3	1	1						1					
Cardiff	C	2				1												
Leeds	C	1				1			2									
London	C	250	178	164	120	29	32	41	47	52	67	27	48	42	27			
London and Great Towns	C	408	285	268	223	52	58	68	82	88	136	74	112	111	105			
	D				1		1					1						
Stoke-on-Trent	C	9	2	2	1		1											
Scotland	C	1		5														
	D	1																
Honduras:																		
Naco	C			5														
Puerto Castilla	C																4	7
India	C	7,630	4,877	3,131	2,322	570	499	644	699									
	D	2,348	1,246	680	572	242	104	108	152									
Bombay	C	50	12	6	1							1				1		
	D	33	10	5								1				1		
Calcutta	C	73	25	14	12	2	4	3		3	5	6	4	10	19	15		
	D	56	21	9	11	2	2	3		3	2	4	2	7	13	10		
Cochin	C	6	14	3	12	3	5	10	7	4	5	6	7	6	7	2		
	D			1	1	1			2	2		2						
Karachi	C	1	4	4						2	1							
	D		3	2							1							
Madras	C	49	38	34	19	2	1	2	4	3	5	6	6		1	3		
	D	12	11	6	8			2				2	1			1		
Moulmein	C	18	2	1														
	D	1	1	1														
Negapatam	C	4	4	9	14	2	2	2	3	3		1	2					

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

SMALLPOX—Continued

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

Place		June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Sept. 21–Oct. 18, 1930	Week ended— Oct. 25, 1930	November, 1930					December, 1930				January, 1931		
							1	8	15	22	29	6	13	20	27	3	10	17
India—Continued																		
Rangoon	C		3		2			1			1							
	D							1										
Tuticorin	C				1													
Vizagapatam	C				1													
India (French):																		
Chandernagor	C	4		3	3		3											
	D	3		2	1		1											
Karikal	C	2	9	5	1													
	D	2	9	2	1													
Pondicherry Province	C	26	22	35	38	2	2		7	7	7		5	8	1			
	D	25	22	33	36	2	2		7	7	5		5	7				
India (Portuguese)	C	1	9	4														
	D	1	2															
Indo-China (see also table below):																		
Pnompenh	C	1			2						1				2			
	D	1	1								1							
Saigon and Cholon	C		1	1			2			2	1		1					
	D		3	1			2			1			1					
Iraq:																		
Baghdad	C	3	1	1	2													
	D	1	1															
Mossoul Liwa	C	67			69			6		7	9						1	
	D	20			27					1	1							
Ivory Coast (see table below).																		
Mexico (see also table below):																		
Jalisco (State) Guadalajara	D	4	1		3	1		1	1	1		2						
Juarez	C		2															
	D		1		1	1												
Mexico City and surrounding territory	C	37	10	12	13	1	3	3	2	1	2		3					
	D	8	6	5	3	1		1					6					
Vera Cruz	C																	
Morocco (see table below).																		
Nicaragua: Porto Cabezas	C													2				
Poland	C					2	3		3	1	2							

Portugal:																		
Lisbon	C	13	50	27	16	12			8	11		15	11	21	17			
Oporto	C		1															
Siam	C	6			1													
	D	3																
Somaliland, British: Boales	C				1			1				1						
	D				1													
Spain	C	5	2	5		14	5	11	21	23	21	23		19	31			
Straits Settlements	C	11	8	6	5	3	3	4		3	9	1	3	3		2		
	D	3	3	1	1		1	1		1	2		2	2		1		
Sudan (Anglo-Egyptian)	C	12	42	128	82	3			2		3		47		47		17	
	D	1	3	52	7				1				5		5		1	
Sudan (French) (see table below).																		
Switzerland: Berne Canton	C	1	2		1													
Syria (see table below).																		
Tunisia: Tunis	C	1			2											13		
Turkey (see table below).																		
Union of South Africa:																		
Cape Province	C	P		P	P	P	P	P	P	P		P						
Orange Free State	C	P	P				1	1	P	P	P	P						
Transvaal	C		P	P	P	P	P	P	P	P	P	P						
Upper Volta	C										6							
On vessel:																		
S. S. Manoa, from Honolulu to San Francisco	C	1																
S. S. Muncaster, at Manila from Hong Kong	C														1			

Place		June, 1930	July, 1930	August, 1930			September, 1930			October, 1930			November, 1930			Dec. 1-10, 1930
				1-10	11-20	21-31	1-10	11-20	21-30	1-10	11-20	21-31	1-10	11-20	21-30	
Indo-China (see also table above)	C	213	238	59	34		54	52	86	32	62	164		56		38
Ivory Coast	C											4		2		9
Sudan (French)	C	76	34			39		P			17					43
	D	18				3					2					16
Syria: Beirut	C	7	2	1												

Place		June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930	Nov., 1930
British East Africa (see also table above):							
Kenya	C	142	186		424		
Chosen	C		3	2			
Seishin	C	1	2				
France	C		1				

Place		June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930	Nov., 1930
Mexico: Durango (see also table above)	D	3	3	3	2		
Morocco	C	5	3	8	4	4	20
Turkey	C		51	21	19	74	
	D		13	4	2	1	

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

TYPHUS FEVER

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

Place		June 29–July 26, 1930	July 27–Aug. 23, 1930	Aug. 24–Sept. 20, 1930	Sept. 21–Oct. 18, 1930	Week ended— Oct. 25, 1930	November, 1930					December, 1930				January, 1931	
							1	8	15	22	29	6	13	20	27	3	10
Algeria:																	
Algiers	C	6	2	3				1			2						
Constantine Department	C	2	3		2	1					1		1				
Oran	C	3	1	1	3						3		2				
Bulgaria	C	10	1	4				1	2	1	1	3	6	3			
China:	D	1												1			
Manchuria—Harbin (see also table below)	C	2	2	2	1							1					
Shanghai	C		1														
Chosen (see table below).																	
Czechoslovakia (see table below).																	
Egypt:																	
Alexandria	C	1	1	3	1				2	1	1						
	D			1					2					1			
Beheira Province	C	15		1													
	D	2												1			
Cairo	C		7	2									1	1			
Port Said	C		4	1	1	1	1									3	
Great Britain: Scotland—																	
Clydebank	C	1															
Dunfermline	C																
Greece (see table below).																	
Ireland:																	
Irish Free State—																	
Galway County—Oughterard	C	2															
Leitrim County—Mohill	C	1															
Mayo County—																	
Ballina	C	1															
Castlebar	C		1														
Westport	C	2	1														
Roscommon County—																	
Roscommon	C	1															
Strokestown	C	1															
Wicklow County—Shillelagh	C	1															

Latvia (see table below).																	
Lithuania (see table below).																	
Mexico:																	
Durango	D			1	2												
Mexico City, including municipalities in Federal District	C	5	9	7	8	1	1	5	4	1	1		12				
	D		2	2	2	1		3		2	3		2				
San Luis Potosi	D											1	1				
Morocco	C	11	8	2		1		1	1	1				8			
	D				1												
Palestine	C	6	3	3	3			2	1	1	6			1	1		2
Poland	C	36	34	23	22	7	8	15	7	12		21	9				
	D	4	3	1	2					1		3	3				
Portugal: Oporto	C		1		2		2	1	1	2	2	2					
Rumania	C	28	9	4	14	4	13	10	14	19							
	D	8	2					1	1	1							
Spain	C	3		1	2			4				1					
	D	1		1	2							1					
Tunisia	C	24	10	6	12					5		23					
Turkey (see table below).																	
Union of South Africa:																	
Cape Province	C	P	P	P	P	P	P	P	P	P	P						
Municipality of East London	C	1		2	1				1	1							
Natal	C	1	P	P	2	P	P	P									
Orange Free State	C	P	P	P													
Transvaal	C	P	P	P	P	P	P	P	P	P	P						
Yugoslavia (see table below).																	

Place		June, 1930	July, 1930	Aug., 1930	Sept., 1930	Oct., 1930	Nov., 1930
China: Harbin (see also table above)	C		14	5		3	
Chosen: Seoul	C	2	3	2	1	7	1
Czechoslovakia	C	1		1			16
Greece: Athens	C	3	6	6	4	4	4
Latvia	C	3	3	1	2		
Lithuania	C	16	18	7	24	1	5
	D			1	2		1
Turkey	C	2	7	11		28	3
Yugoslavia	C	6		2		2	2
	D			1		1	

YELLOW FEVER

	Cases
Brazil:	
Campos, Rio de Janeiro Province, May 23, 1930	1
Para, June 23, 1930	2
Gold Coast:	
July 10, 1930	1
Albosso, Aug. 4, 1930 (death)	1
Liberia, Monrovia, June 3, 1930	1
Nigeria, Lagos, July 12, 1930 (probably laboratory infection)	1