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HYDROGEN SULPHIDE LITERATURE.¹

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In connection with a recent investigation of hydrogen sulphide poisoning, a study was made of the literature dealing with this problem. A paucity of articles on this subject seemed to be indicated by a superficial examination, but upon a more careful and detailed study a number of excellent reports were found. It was difficult to locate a few of the more important ones. Some, referred to in early literature on this subject, could not be found, although allusion to them appeared in other articles. For the convenience of those engaged in the future study of hydrogen sulphide poisoning, a list has been made of the most important articles on this subject. In addition, a résumé is given of the contributions of the principal workers.

The observations relative to hydrogen sulphide poisoning may be divided into three groups: Those which deal with the actual cases of poisoning; those which concern experimental pharmacological study of animals subjected to the poison; and those relating to chemical effects of the poison on the blood.

Hydrogen sulphide gas was known to the ancients and has been described as "sulphurous vapor" and as "divine water," its name being taken from the Greek word *theion*, meaning divine or sulphurous. The gas was first examined by Rouelle (1) in 1773, but Scheele (2) in 1777 was the first to make a systematic study of the compound, and we owe much of our knowledge to his work.

About this time there occurred in Paris numerous accidental deaths due to the gases from the sewers. A commission was appointed to investigate the conditions, and in 1785 M. Hallé (3) reported the results of the study. These early workers recognized two types of poisoning which they thought were quite distinct. One they termed the "mitte," which was described as an inflammation of the eyes and mucous membranes, and the other, called the "plomb," was described as a type of asphyxia. They did not understand that hydrogen sulphide was the cause of the poisoning.

¹ Work done in cooperation with the Bureau of Mines, Department of the Interior.

During the next few years Dupuytren, Thenard, and Barruel (4) by chemical analyses proved the presence of hydrogen sulphide in the sewers, and this gas was associated with the accidents and believed to be the cause of many of them.

In 1803 Chaussier (5) described the first animal experimental study, the records of which are available. He stated that the effects of breathing hydrogen sulphide were well known, probably referring to the work of Hallé 18 years previous. Chaussier's experiments indicated that poisoning might occur from surface absorption. He found that an animal would die in from 20 to 30 minutes if the body were exposed to the gas, although the animal was allowed to breathe fresh air. When he injected quantities of gas into the rectum of animals, and also into the stomach, symptoms of poisoning appeared and death resulted. Nine liters of gas injected into the rectum of a horse caused death within one minute.

Shortly after Chaussier's experiments, Nysten (6) injected hydrogen sulphide solution into the veins of experimental animals. Three injections of hydrogen sulphide, 10 c. c. of a saturated solution, in a dog caused the following symptoms:

1. Animal became excited and breathed deeply.
2. Made convulsive movements but later became calm.
3. Suffered from asphyxia—respirations feeble and slow, and the animal appeared as though dead. The following day, however, the animal was normal and apparently not affected by these injections.

Nysten concluded that the animal would probably not have been able to resist this quantity of hydrogen sulphide if it had been diluted in 500 to 600 volumes of air and given through the lungs (even though diluted in 500 to 600 volumes of air.) About this time Thenard and Dupuytren (7) also began to experiment with hydrogen sulphide. It is believed that the recognition of hydrogen sulphide as the cause of the accidents in the sewers was due to Dupuytren's experiments. In their experiments, Thenard and Dupuytren found that 0.066 per cent of hydrogen sulphide was fatal for a greenfinch, 0.125 fatal for dogs, and 0.4 fatal for a horse. The records of these early experiments were first available in 1812, but the experiments were probably completed a few years previous. In speaking of these experiments in 1827, Thenard gives the priority to Chaussier. Thenard also mentions Magendie (8) as having injected hydrogen sulphide into the venous system of animals. He found that some of the gas was liberated in the lungs but that a greater part was carried in solution in the arterial blood for a certain time and that it affected the red color of the blood. This in all probability is the earliest observation to associate a change in the hemoglobin with this gas.

In 1829 another commission was appointed to investigate the Paris sewers. Parent-Duchatelet (9) submitted a comprehensive report, which included a description of the means taken to prevent accidents, such as walling off the sewer, pumping in fresh air, burning the gas, etc. Analyses of the air in the sewers were made by Gaultier de Claubry. He stated that as high as 2.99 per cent of hydrogen sulphide was present and that the mean was 2.29 per cent. Parent-Duchatelet stated that a dog might live for eight days in this atmosphere. The method of analysis used is not given, but it was concluded from these experiments that the percentages as determined by Chaussier and other early workers were too low.

By 1836 the condition of the Paris sewers evidently had not been greatly improved, for D'Arcet (10) reported the death of three young men from the gas liberated from defective sewer connections.

During the building of the tunnel under the Thames by Sir M. Brunel, hydrogen sulphide seeped through the walls and poisoned the men engaged in the work. Taylor (11) stated that the symptoms of poisoning were marked and that a number of the men died. The affection ceased only when the tunnel was completed and ventilation was established.

Christison (12) in his description of hydrogen sulphide poisoning recognized that the two types of poisoning, early observed in the study of the gases of the Paris sewers, were due to hydrogen sulphide and were produced by different percentages of the gas. One type was acute poisoning, due to a high percentage of hydrogen sulphide gas in the atmosphere, while the other was subacute and due to a smaller amount of gas. He quoted the percentage as given by Thernard and Chaussier.

Apparently the first case of hydrogen sulphide poisoning reported in America is that mentioned by Bell (13) and Raphael (14) in 1851, both of whom report an accident due to gases formed and liberated in an outhouse, which was therefore comparable to the accidents of the Paris sewers. Though no analysis was made of the gas, the doctors in attendance recognized that hydrogen sulphide was the cause of the accident. The symptoms noted and the method of treatment used were described in detail. This report is instructive, particularly so as it directs attention to the severe intoxication which hydrogen sulphide may produce.

In 1857 Bernard (15) injected hydrogen sulphide solution into venous blood and proved that hydrogen sulphide was eliminated through the lungs, as determined by the blackening of lead acetate when exposed to the exhaled air. He believed that the arterial blood carried the hydrogen sulphide, which was poisonous. Bernard also found that an animal could often be revived by being given artificial respiration.

Barker (16) in 1858 recognized that hydrogen sulphide, in small quantities, first accelerated the respiration; this acceleration was soon followed by a decrease in the respiratory rate and the appearance of dyspnea. He did not state the percentage of gas which produced these symptoms, but reported that 1 part of hydrogen sulphide in 18 parts of air immediately killed birds and that dogs were asphyxiated by 1 part in 210 parts of air. He also recognized that the symptoms of hydrogen sulphide poisoning were similar to those seen in poisoning by sewer gas and that air from sewers might produce morbid symptoms due to the hydrogen sulphide in the sewer gas.

Holden and Letheby (17), in 1861, reported the medical history of cases of poisoning in London sewers and also gave the findings of a post-mortem examination. They observed that the poisoning altered the blood, for it was found to be dark and liquid even after 4 days following death. The lungs were pale, crepitant, and somewhat emphysematous. A number of dead sewer rats found near the place where the men were killed presented similar pathological findings. Holden and Letheby concluded that the hydrogen sulphide was probably formed by acid acting upon the sewer mud.

The next worker, Hoppe-Seyler (18), in 1863 was the first to study the chemical action on blood. He observed that when hydrogen sulphide was passed through blood a dark green pigment was deposited which was similar to the greenish discoloration of cadavers. This change was thought to be due to the action of hydrogen sulphide on the oxyhemoglobin of the blood with the formation of a substance termed "sulphmethemoglobin." An absorption spectrum was found with two bands in the red, one near to C and the second about midway between C and D. These findings were confirmed by Arake (19), who concluded that sulphmethemoglobin was a compound which might be decomposed to hemochromogen through the action of caustic soda in solution. Sulphmethemoglobin was thought to be derived from the hemoglobin of the blood.

The work of Hoppe-Seyler led to an intensive chemical study of the action of hydrogen sulphide on blood, special attention being given to its action on the hemoglobin. This study led to the discovery of a disease termed "sulphemoglobinaemia."

The conclusion of Gamgee (20) that blood previously treated with carbon dioxide is not decomposed by hydrogen sulphide agrees with the findings of Hoppe-Seyler and was later confirmed by Lewisson (21) and Kuhne (22). Gamgee did not believe, however, that there was sufficient evidence to support the theory of the existence of a special compound, sulphmethemoglobin, or that it explained the spectrum which has been described. He reasoned that there was a mixture of decomposition products of oxyhemoglobin brought about by the

action of hydrogen sulphide upon blood and that it was those products which produced the absorption bands.

Laborde (23) in 1886 found by repeated spectroscopic examination of the blood that injections of hydrogen sulphide solution into the veins were followed by changes in the spectroscopic bands similar to those produced by the action of hydrogen sulphide on hemoglobin. He concluded that hydrogen sulphide was carried to the central nervous system, for in an examination of specimens of brain tissue preserved in alcohol he found a change in the vascular system. There were also changes in the organic substance of the respiratory center. He believed that hydrogen sulphide had a direct action upon the respiratory center, the vagus nerves, and the hemoglobin.

In 1898 Harnack (24) demonstrated that when hemoglobin was made oxygen-free by saturation with carbon dioxide, as described by Hoppe-Seyler and others, hydrogen sulphide had no action, but that if the blood were not so saturated with carbon dioxide, the dark red color with characteristic absorption bands was formed. This spectrum consisted of a band between C and D, extending from $\lambda 610$ to $\lambda 625$. Further, a decomposition of the blood-coloring matter occurred when oxygen was present. Acid hemoglobin was formed and hematin might occur in rare cases.

Clarke and Hurlley (25), in 1907, produced a compound soluble in aqueous solution which they termed sulphemoglobin and believed to be the same as that described by Harnack. This compound was characterized by the production of a purple color and by the development of an absorption band in the red region of the spectrum from $\lambda 610$ to $\lambda 625$. It formed quickly and readily by adding hydrogen sulphide to blood or by adding a solution of hydrogen sulphide to defibrinated and laked blood. The solution was remarkably stable, but readily changed to acid hematin by the addition of a small quantity of acid. The band in the red was not affected by ammonia or ammonium sulphide. Clarke found that this substance was produced with minute quantities of hydrogen sulphide within a period of 25 minutes, but in the presence of phenyl hydrazine within 3 seconds. From this experiment Clarke and Hurlley suggested the theory that the presence of a powerful reducing agent in the blood would allow a mere trace of hydrogen sulphide to act on the blood, resulting in the formation of this compound, called sulphemoglobin.

Van der Beigh (26), two years before, had demonstrated that certain organisms isolated from the stool of patients suffering from constipation formed hydrogen sulphide, and he believed that these organisms were capable of bringing about, in the human body, a transformation of the hemoglobin to sulphemoglobin. He was the first to recognize that sulphemoglobinaemia was a distinct disease.

West and Clarke (27), while studying a case of sulphhemoglobinaemia, confirmed the theory advanced by Clarke and Hurtley that in cases of this disease very small amounts of hydrogen sulphide will combine with the hemoglobin to form sulphhemoglobin. They found that hydrogen sulphide in high dilution combined with blood. The dilutions were such that hydrogen sulphide could not be detected by chemical means.

It remained for Wallis (28) to find that blood from a patient suffering from sulphhemoglobinaemia quickly reduced normal blood, the former containing a powerful reducing substance. This reducing agent is probably a hydroxylamine derivative thought to be produced by a nitrobacillus which inhabits the buccal cavity. Sulphhemoglobin is present in these pathological cases as a constituent of the blood, and the existence of this compound depends upon two factors; i. e., the production of a powerful reducing agent and the production of hydrogen sulphide, thought to be formed in the gastrointestinal tract. In cases of hydrogen sulphide poisoning, however, sulphhemoglobin may not be found. The fact that hydrogen sulphide acts upon the hemoglobin with the formation of sulphhemoglobin has not been accepted as explaining what occurs.

A theory of hydrogen sulphide action, advanced by Diakonow (29) and supported by Pohl (30) was that a reaction between hydrogen sulphide and the sodium bicarbonate of the blood plasma occurred whereby sodium sulphide was formed. They noted the similarity between the poisoning from hydrogen sulphide and that from sodium sulphide. Pohl believed that the sodium sulphide was carried in the blood. Haggard (31) in his studies definitely disproved this theory. He stated that "it appears that not only does hydrogen sulphide fail to form sodium sulphide when acting upon blood or plasma, but that a portion of the gas is actually destroyed." This is in the form of an oxidation. Haggard believes that the products of oxidation combine, in part, with the sodium of the plasma. The oxygen is withdrawn from the corpuscles at such a rate that normally the hydrogen sulphide produced during digestion and absorption of sulphides, etc., is amply taken care of and poisoning does not result. In case of poisoning from hydrogen sulphide, however, "the greater the amount of inhaled hydrogen sulphide the more active will be the oxidation; but there will be also normally a higher concentration of hydrogen sulphide dissolved in the blood and in consequence a greater physiological effect." Haggard stated that the effect of poisoning is produced by the hydrogen sulphide held in solution in the blood and thus he corroborates the theory advanced by Laborde.

Kaufmann and Rosenthal (32), in 1865, believed that the action of hydrogen sulphide was of such a nature as to result in oxygen hunger. They sought to demonstrate by an exhaustive experimental investi-

gation that hydrogen sulphide poisoning is comparable to suffocation. It was pointed out, however, by Hoppe-Seyler (33) in a subsequent article that, while Kaufmann and Rosenthal defended this conception of suffocation, they did not account for the effect of hydrogen sulphide on the nervous system and, therefore, the explanation was not complete. Hoppe-Seyler believed that in warm-blooded animals the action of hydrogen sulphide on the oxyhemoglobin was very rapid. If the hydrogen sulphide was not in excess in case of poisoning in warm-blooded animals the effect was in the blood alone and there was no effect produced in the other tissues. Kaufmann and Rosenthal pointed out that the action of hydrogen sulphide resembles suffocation very closely and the description given by Schäfer (34) of the symptoms of suffocation might readily be taken as a description of the symptoms of acute hydrogen sulphide poisoning.

In 1865 Eulenberg (35) subjected animals to toxic doses of hydrogen sulphide. He determined that 0.1 per cent of hydrogen sulphide was fatal for cats, rabbits, and doves within a short time. Young animals appeared to succumb to 0.05 per cent, and a dove was killed within four minutes by a concentration of 0.007 per cent; on the other hand, 0.014 per cent had no noticeable effect upon a young cat following 10 minutes' exposure, while 0.07 per cent asphyxiated a cat within 25 minutes and 0.11 per cent caused the death of another within 5 minutes. Eulenberg carefully reported the symptoms observed in cases of poisoning from different percentages of hydrogen sulphide and also recorded the pathological changes which he observed. He divided the poisoning into mild, medium, and severe, or asphyxia.

Biefel and Polek (36) some years later found that a rabbit died within 75 minutes when exposed to 0.05 per cent of hydrogen sulphide and concluded that 0.01 per cent was without effect. They observed crying, convulsions, trembling, respiratory disturbance, and an increase in the secretions of the salivary glands.

In 1884 Smirnow (37) reported that in his experiments he was unable to find the spectroscopic changes in the blood of animals poisoned by hydrogen sulphide, as reported by other investigators. He did not believe that the hemoglobin was in any way altered. The percentages of hydrogen sulphide used by him were reported as considerably higher than those given by the majority of the investigators. Smirnow stated that 0.3 per cent of hydrogen sulphide quickly kills small animals, while 0.2 per cent may cause death, and that 0.1 to 0.15 per cent may be endured for a considerable period. He studied the effect of hydrogen sulphide on tracheotomized animals; possibly this, together with poor methods for chemical analysis, might account for the higher percentages which he has reported.

The studies of Brouardel and Loye (38) were also performed on tracheotomized dogs, and they reported two types of death—one, fulminating, due apparently to direct action of the gas on the central nervous system, and the other, slow, with death due probably to asphyxia. They did not determine the absolute quantity of hydrogen sulphide breathed but depended upon the tension of the gas in air. They found 2 parts of hydrogen sulphide in 100 parts of air caused death within two to three minutes.

The attention of J. Peyron (39) was attracted to hydrogen sulphide poisoning because of the practice of injecting the gas into the rectum as a method of treatment of certain pulmonary diseases. He found that if a small amount of hydrogen sulphide gas was given no severe symptoms were produced and hydrogen sulphide could not be detected in the breath. However, if larger quantities were injected into the rectum a small part was liberated through the lungs, while the major part of the gas was fixed, presumably by the tissues. He believed that the appearance of the gas in the lungs depended upon its tension in the blood. Since with larger quantities of gas injected into the rectum, symptoms of poisoning developed, he concluded that rectal injections should be done with great care and only when absolutely necessary.

A. Flint (40) also studied the effect of hydrogen sulphide injected as an enemata. He reported that one-half fluid ounce of a saturated solution of hydrogen sulphide injected into the rectum of a dog was not a sufficient quantity to cause the gas to be eliminated through the lungs. If, however, larger quantities were injected the gas could be detected in the expired air. His results agreed with those of Peyron. In addition, Flint injected 1 fluid drachm of a saturated solution of hydrogen sulphide into the external jugular vein of a dog, whereupon hydrogen sulphide appeared in the breath. No objective symptoms of poisoning were noticed. He found that up to a certain limit hydrogen sulphide was destroyed in the blood in some unknown manner. He also observed that hydrogen sulphide had no inhibiting action upon the growth of bacteria and concluded that hydrogen sulphide would therefore have no destructive action on bacteria present in the lungs. Its use for the treatment of lung affections may therefore be considered as problematical.

Cahn (41) observed a striking case of hydrogen sulphide poisoning occurring in a student who carelessly exposed himself to the gas. The young man developed a severe abdominal pain which was followed by respiratory changes characteristic of hydrogen sulphide poisoning. Later, sugar appeared in the urine and persisted for three days, the young man finally recovering.

The symptoms produced by hydrogen sulphide poisoning would not be complete without mention of the mental depression which may

occur. Wigglesworth (42) reported two cases of insanity caused by inhalation of hydrogen sulphide. They were characterized by great muscular excitement. One case recovered after five months, but the other had not recovered at the time of writing, although temporary improvement had been observed.

Perhaps the most exhaustive of all the experimental studies, with men as subjects, was made by Lehmann (43). He subjected men to varying concentrations of hydrogen sulphide, ranging from 0.01 to 0.05 per cent, and observed severe poisoning. The symptoms reported were similar to those noted in animals exposed to hydrogen sulphide of the same percentages. He therefore concluded that the reaction of man to higher concentrations would be comparable to that of dogs subjected to like concentrations.

In 1908 Haibe (44) reported an interesting study of cases of chronic poisoning due to hydrogen sulphide occurring in the gas industry. These men presented symptoms of discomfort, depression, loss of appetite, pulmonary disturbances, gastric troubles, debility, and eventually icterus. Seven deaths were caused by hepatogenic icterus, while in those cases that recovered anemia was a constant finding. The men were apparently subjected to a relatively low concentration of the gas, although an analysis made in one location showed 0.063 per cent of hydrogen sulphide present. In addition he reported three cases all of which showed changes in the liver.

Sir Thomas Oliver (45) in 1911 investigated the sulphur mines of Sicily and reported a number of deaths—11—due to hydrogen sulphide poisoning. One boy was unconscious for several days and on recovery had lost his speech. Numerous cases of conjunctivitis occurred among the workmen at these mines.

In an experimental study on the effects of hydrogen sulphide upon animals (canary birds, white rats, guinea pigs, dogs, and goats) and upon men by Sayers, Mitchell, and Yant (46), it was found that as low a concentration as 0.005 per cent would cause toxic symptoms and on continued exposure covering a number of days, with a concentration of 0.02 per cent, death occurred.

Summary.

The history of the study of hydrogen sulphide poisoning is of interest inasmuch as our present knowledge is built up from the work of many scientists. No one man may be credited with an epoch-making discovery, but each has laid a stone on which some other investigator has built. We now know that hydrogen sulphide is one of the most toxic of the gases. It is comparable to hydrogen cyanide in the rapidity of its action and the concentration from which death will result. In general, its action depends upon its concentration. In concentration of 0.005 it will cause poisoning. Hydrogen sulphide

in such low percentage is often found in certain industries. It is, therefore, an industrial poison with which we should be well acquainted.

The exact mechanism of hydrogen sulphide poisoning is still unknown and is therefore a subject which invites further study. Such a study should be applied to those changes which occur in the body at the time poisoning occurs. Care should be exercised against inferring that a chemical change which may occur outside the living body may be comparable to the reactions occurring within the body. Such reasoning has been done in the past and has been discarded when careful experimental study on the living animal has proven the application to be incorrect.

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MORTALITY FROM TYPHOID FEVER IN THE UNITED STATES REGISTRATION AREA, 1922.

The Department of Commerce announces that there were 6,981 deaths from typhoid fever in 1922 in the death registration area, which comprises 85 per cent of the total population of the United States. The death rate in 1922 from this disease was 7.5 per 100,000 population, the lowest ever shown for the registration area.

Of the 34 States shown for 1922 and 1921, only 4 show higher rates in 1922 than in 1921, as follows:

State.	1922	1921
California.....	4.7	4.3
Colorado.....	11.4	10.1
Mississippi.....	19.0	18.6
New Hampshire.....	5.2	3.6

In 1922 Rhode Island had the lowest adjusted rate (1.2 per 100,000 population), while South Carolina had the highest (23). Of the 9 States showing adjusted rates by color, the lowest rate for the white population in 1922 was 5.9 and the lowest for the colored was 13, both for Maryland, while the highest adjusted rate for the white population was 18.4 for Kentucky and for the colored 30.8 for South Carolina.

Deaths and death rates from typhoid and paratyphoid fever in the registration area (exclusive of Hawaii) and in the registration States.

Area.	Number of deaths.			Death rate per 100,000 population.					
	1922	1921	1920	Ad-justed, ¹ 1922.	Crude. ²				
					1922	1921	1920	1919	1918
Registration area.....	6,981	8,007	6,805	(*)	7.5	9.0	7.8	9.2	12.6
Registration States of 1918 (including District of Columbia).....	5,518	7,159	6,023	(*)	6.6	8.6	7.4	8.8	12.2
California.....	172	153	166	4.7	4.7	4.3	4.8	5.4	6.0
Colorado.....	111	97	87	11.6	11.4	10.1	9.2	8.5	15.4
Connecticut.....	45	51	57	3.0	3.1	3.6	4.1	4.0	5.4
Delaware.....	25	26	25	11.3	10.9	11.5	11.2	17.6	(*)
Florida (total).....	163	179	143	16.0	15.9	17.9	14.6	18.3	(*)
White.....	83	112	86	12.4	12.1	16.8	13.3	17.7	(*)
Colored.....	80	67	57	23.9	23.8	20.1	17.2	19.4	(*)
Georgia (total).....	697	(*)	(*)	(*)	23.5	(*)	(*)	(*)	(*)
White.....	316	(*)	(*)	(*)	18.0	(*)	(*)	(*)	(*)
Colored.....	381	(*)	(*)	(*)	31.4	(*)	(*)	(*)	(*)
Idaho.....	41	(*)	(*)	(*)	8.9	(*)	(*)	(*)	(*)
Illinois.....	282	396	380	4.2	4.2	6.0	5.8	5.9	8.2
Indiana.....	235	366	284	8.1	7.9	12.3	9.7	11.4	13.8
Kansas.....	110	153	141	6.2	6.1	8.6	8.0	7.3	16.6
Kentucky (total).....	466	632	490	19.3	19.0	25.9	20.2	26.9	27.2
White.....	401	538	419	18.4	18.1	24.4	19.1	24.7	25.0
Colored.....	65	94	71	28.4	28.3	40.5	30.2	47.2	46.2
Louisiana (total).....	329	326	280	18.0	17.9	17.9	15.5	22.8	39.9
White.....	160	158	129	14.5	14.1	14.1	11.7	20.3	35.4
Colored.....	169	168	151	24.0	24.2	24.0	21.5	26.6	46.7
Maine.....	49	59	69	6.2	6.3	7.6	9.0	5.7	7.7
Maryland (total).....	106	152	100	7.1	7.1	10.3	6.9	11.8	17.0
White.....	73	91	68	5.9	5.9	7.4	5.6	9.4	13.3
Colored.....	33	61	32	13.0	13.3	24.7	13.0	23.7	35.0
Massachusetts.....	88	122	95	2.1	2.2	3.1	2.5	2.7	4.1
Michigan.....	192	292	294	5.0	4.9	7.7	7.9	7.6	9.4
Minnesota.....	54	88	71	2.1	2.2	3.6	3.0	3.3	3.7
Mississippi (total).....	340	333	333	19.0	19.0	18.6	18.6	20.3	(*)
White.....	115	108	99	14.2	13.5	12.6	11.5	15.3	(*)
Colored.....	225	225	234	23.4	24.0	24.0	25.1	24.9	(*)

¹ The adjusted rate makes allowance for the differences in the age and sex composition of the populations in the different States, and shows what the death rate would be if all States had the same proportion of males and females and the same proportion of the total population in each age group.

² The crude rate is based on total population and all deaths occurring within the given area.

³ Rate not computed.

⁴ Not added to registration area until a later date.

Deaths and death rates from typhoid and paratyphoid fever in the registration area (exclusive of Hawaii) and in the registration States—Continued.

Area.	Number of deaths.			Death rate per 100,000 population.					
	1922	1921	1920	Ad-justed, 1922.	Crude.				
					1922	1921	1920	1919	1918
Missouri.....	335	443	341	10.0	9.8	12.9	10.0	12.5	19.6
Montana.....	21	20	27	3.4	3.5	3.5	4.8	7.2	10.1
Nebraska.....	50	66	58	3.8	3.8	5.0	4.5	(¹)	(¹)
New Hampshire.....	23	16	30	5.4	5.2	3.6	6.8	3.4	4.5
New Jersey.....	128	147	105	3.9	3.9	4.5	3.3	3.2	5.5
New York.....	323	386	379	3.0	3.0	3.6	3.6	3.6	5.7
North Carolina (total).....	298	314	322	11.2	11.2	12.0	12.5	17.5	22.8
White.....	154	158	167	8.5	8.3	8.6	9.3	14.4	17.6
Colored.....	144	156	155	17.7	18.2	19.8	19.9	24.5	34.4
Ohio.....	333	542	435	5.4	5.5	9.2	7.5	8.0	13.6
Oregon.....	34	47	39	3.9	4.2	5.9	4.9	4.9	9.5
Pennsylvania.....	424	653	503	4.7	4.7	7.4	5.7	7.1	10.9
Rhode Island.....	8	17	17	1.2	1.3	2.8	2.8	3.3	5.7
South Carolina (total).....	391	445	379	23.0	22.6	26.0	22.4	26.3	35.5
White.....	124	141	131	15.0	14.5	16.8	15.9	16.0	26.0
Colored.....	267	304	248	30.8	30.6	35.0	28.6	35.9	44.3
Tennessee (total).....	483	617	434	20.2	20.3	26.1	18.5	28.0	30.2
White.....	345	431	311	18.0	17.9	22.5	16.4	24.6	26.8
Colored.....	138	186	123	30.3	30.9	41.5	27.3	42.2	43.9
Utah.....	22	42	31	4.6	4.7	9.1	6.8	9.4	9.4
Vermont.....	16	19	37	4.7	4.5	5.4	10.5	3.1	8.5
Virginia (total).....	270	379	260	11.5	11.4	16.1	11.2	15.5	17.9
White.....	140	229	157	8.5	8.3	13.9	9.6	13.1	15.7
Colored.....	130	150	103	18.4	18.7	21.6	14.9	21.3	23.0
Washington.....	68	75	76	4.7	4.8	5.4	5.6	4.2	7.4
Wisconsin.....	80	81	65	2.9	3.0	3.0	2.5	3.1	3.8
Wyoming.....	27	(¹)	(¹)	(²)	13.1	(¹)	(¹)	(¹)	(¹)

¹ Rate not computed.

² Not added to registration area until a later date.

MORTALITY FROM DIABETES IN THE UNITED STATES REGISTRATION AREA, 1922.

The Department of Commerce announces over 17,000 deaths in 1922 from diabetes mellitus in the registration area, which comprises 85 per cent of the population of the United States. Within this area the death rate from diabetes per 100,000 population was 18.4, as compared with 16.8 in 1921.

To permit better interstate comparisons in 1922, the table gives for 34 States adjusted rates (allowances having been made for differences in the sex and age distribution of the population in the various States). In these 34 States the highest adjusted rate (25.1) appears for New York and the lowest (8.1) for Kentucky and also for Tennessee.

Of the 9 States showing adjusted rates by color, the highest rate from diabetes for the white population is 19.1 per 100,000 for Maryland and the highest for the colored is 15.9 for the same State. The lowest adjusted rate for the white population is 7.5 for Kentucky and the lowest for the colored is 5.9 for Mississippi.

For the 30 States in the registration area of 1918, the death rate from diabetes per 100,000 population was 16 in 1918 and 19.1 in 1922.

Deaths and death rates from diabetes mellitus in the registration area (exclusive of Hawaii) and in the registration States.

Area.	Number of deaths.				Death rate per 100,000 population.				
	1922	1921	1920	Ad-justed, ¹ 1922.	Crude. ²				
					1922	1921	1920	1919	1918
Registration area.....	17, 182	14, 933	14, 062	(*)	18.4	16.8	16.1	14.9	15.9
Registration States of 1918 (including District of Columbia).....	16, 058	14, 184	13, 416	(*)	19.1	17.1	16.4	15.3	16.0
California.....	824	727	596	18.3	22.3	20.3	17.1	17.3	16.4
Colorado.....	142	137	137	14.4	14.6	14.3	14.5	10.8	13.1
Connecticut.....	327	316	294	21.3	22.6	22.2	21.1	19.5	19.8
Delaware.....	37	33	24	14.5	16.2	14.6	10.7	11.3	(*)
Florida (total).....	105	104	86	10.6	10.3	10.4	8.8	7.2	(*)
White.....	89	89	74	12.3	12.9	13.3	11.4	9.9	(*)
Colored.....	16	15	12	6.8	4.8	4.5	3.6	2.1	(*)
Georgia (total).....	266	(*)	(*)	(*)	9.0	(*)	(*)	(*)	(*)
White.....	194	(*)	(*)	(*)	11.1	(*)	(*)	(*)	(*)
Colored.....	72	(*)	(*)	(*)	5.9	(*)	(*)	(*)	(*)
Idaho.....	67	(*)	(*)	(*)	14.6	(*)	(*)	(*)	(*)
Illinois.....	1, 400	1, 194	1, 169	20.2	20.9	18.0	17.9	15.9	16.8
Indiana.....	580	483	485	16.1	19.4	16.3	16.5	16.5	17.1
Iowa.....	356	278	294	17.7	19.9	15.6	16.6	15.2	15.3
Kentucky (total).....	198	213	182	8.1	8.1	8.7	7.5	7.8	7.5
White.....	172	187	158	7.6	7.7	8.5	7.2	7.8	7.0
Colored.....	26	26	24	10.3	11.3	11.2	10.2	7.6	12.1
Louisiana (total).....	168	172	141	11.6	9.2	9.4	7.8	6.6	6.3
White.....	132	133	105	14.1	11.6	11.9	9.5	7.9	8.5
Colored.....	36	39	36	6.6	5.2	5.6	5.1	4.7	2.8
Maine.....	196	201	168	18.6	25.3	26.0	21.8	20.9	21.9
Maryland (total).....	302	252	248	18.8	20.3	17.1	17.0	16.2	16.8
White.....	265	227	220	19.1	21.3	18.5	18.2	17.1	17.6
Colored.....	37	25	28	15.9	14.9	10.1	11.4	11.9	12.8
Massachusetts.....	954	792	810	21.0	24.0	20.2	20.9	19.5	20.9
Michigan.....	696	627	605	17.0	17.9	16.5	16.3	15.7	16.8
Minnesota.....	527	440	415	21.3	21.4	18.1	17.3	13.6	16.8
Mississippi (total).....	130	104	103	8.6	7.3	5.8	5.8	5.0	(*)
White.....	85	73	65	11.1	10.0	8.5	7.6	6.0	(*)
Colored.....	45	31	38	5.9	4.8	3.3	4.1	4.0	(*)
Missouri.....	625	545	413	16.4	18.2	15.9	12.1	13.9	14.6
Montana.....	71	57	60	14.4	12.0	9.9	10.8	10.0	14.9
Nebraska.....	303	256	269	22.5	22.9	19.5	20.7	(*)	(*)
New Hampshire.....	139	129	104	22.9	31.1	29.0	23.4	16.0	22.0
New Jersey.....	711	641	594	21.6	21.4	19.7	18.6	17.4	18.5
New York.....	2, 882	2, 476	2, 439	25.1	26.9	23.4	23.3	21.2	22.4
North Carolina (total).....	231	195	193	9.7	8.7	7.5	7.7	6.2	7.2
White.....	184	151	154	10.6	9.9	8.3	8.6	7.2	7.9
Colored.....	47	44	44	7.3	5.9	5.6	5.6	3.9	5.4
Ohio.....	1, 066	1, 067	1, 025	16.3	18.2	18.0	17.6	16.3	15.9
Oregon.....	191	170	138	22.2	23.5	21.2	17.5	21.1	17.1
Pennsylvania.....	1, 614	1, 539	1, 430	17.8	17.9	17.3	16.3	14.5	15.5
Rhode Island.....	144	121	123	21.2	23.2	19.7	20.2	24.5	18.3
South Carolina (total).....	131	124	105	9.9	7.6	7.3	6.2	6.0	7.1
White.....	89	86	74	12.2	10.4	10.2	9.0	9.0	10.2
Colored.....	42	38	31	6.7	4.8	4.4	3.6	3.1	4.2
Tennessee (total).....	184	145	145	8.1	7.7	6.1	6.2	6.6	6.8
White.....	153	121	116	8.0	7.9	6.3	6.1	6.8	7.2
Colored.....	31	24	29	7.8	6.9	5.4	6.4	5.7	5.3
Utah.....	75	66	60	18.7	16.0	14.3	13.2	11.2	14.6
Vermont.....	95	87	69	20.5	27.0	24.7	19.6	24.7	22.1
Virginia (total).....	282	236	217	12.7	11.9	10.1	9.3	8.4	8.5
White.....	216	179	170	13.3	12.9	10.8	10.4	9.3	9.8
Colored.....	66	57	47	11.5	9.5	8.2	6.8	6.1	5.7
Washington.....	289	210	190	20.5	20.5	15.1	13.9	15.4	16.9
Wisconsin.....	542	468	495	18.7	20.0	17.5	18.7	15.1	15.5
Wyoming.....	23	(*)	(*)	(*)	11.1	(*)	(*)	(*)	(*)

¹ The adjusted rate makes allowance for the differences in the age and sex composition of the populations in the different States, and shows what the death rate would be if all States had the same proportion of males and females and the same proportion of the total population in each age group.

² The crude rate is based on total population and all deaths occurring within the given area.

³ Rate not computed.

⁴ Not added to registration area until a later date.

DEATH RATES OF MOTHERS FROM CHILDBIRTH IN THE BIRTH REGISTRATION AREA, 1922.

The Department of Commerce announces lower death rates of mothers from childbirth or puerperal causes in 1922 than in any year since 1916.

For the 9 States and the District of Columbia (constituting the "birth registration area" of 1915, exclusive of Rhode Island), the death rate from puerperal causes in 1922 was 6.2 per 1,000 live births as compared with 6.5 in 1921, 7.6 in 1920, 6.8 in 1919, 8.9 in 1918, 6.3 in 1917, 6.2 in 1916, and 6.1 in 1915.

The relatively high rates for the years 1920, 1919, and 1918 were doubtless due, for the most part at least, to the epidemics of influenza which prevailed in those years and which took heavy toll of pregnant women. The ratio of deaths from childbirth to the number of women bearing children in 1922 was 1 to 150.

Of the 30 States for which figures are available, South Carolina has the highest 1922 death rate from puerperal causes (10.7 per 1,000 live births), and Minnesota the lowest (4.9). Separate rates for the white and colored are shown for only the six States of Kentucky, Maryland, Mississippi, North Carolina, South Carolina, and Virginia. For 1922 the highest rate for the white appears for South Carolina (8.5) and the lowest (5.3) for Maryland, while for the colored the highest rate (18.5) is for Kentucky, and lowest (8.4) for Maryland.

Death rates from puerperal causes per 1,000 live births in the birth registration area and each registration State: 1915 to 1922.

ALL PUERPERAL CAUSES.

Area.	1922	1921	1920	1919	1918	1917	1916	1915
The birth registration area.....	6.6	6.8	8.0	7.4	9.2	6.6	6.2	6.1
The birth registration area as of 1915 ¹ (excluding Rhode Island).....	6.2	6.5	7.6	6.8	8.9	6.3	6.2	6.1
REGISTRATION STATES.								
California.....	7.2	6.8	7.7	8.0	(?)	(?)	(?)	(?)
Connecticut.....	5.7	5.3	6.8	6.2	7.5	5.1	4.9	5.6
Delaware.....	6.6	6.3	(?)	(?)	(?)	(?)	(?)	(?)
Illinois.....	6.3	(?)	(?)	(?)	(?)	(?)	(?)	(?)
Indiana.....	6.6	6.9	8.7	8.4	10.4	7.2	(?)	(?)
Kansas.....	7.6	6.4	8.4	8.2	11.4	7.6	(?)	(?)
Kentucky (total).....	6.1	6.3	6.4	6.3	8.0	6.0	(?)	(?)
White.....	5.4	5.7	6.0	5.8	7.5	5.6	(?)	(?)
Colored.....	18.5	14.8	13.0	12.5	15.4	10.8	(?)	(?)
Maine.....	7.6	7.4	8.5	8.6	8.6	6.7	7.8	6.8
Maryland (total).....	5.9	6.7	7.6	8.4	9.5	6.8	6.4	(?)
White.....	5.3	6.0	6.6	7.6	8.6	6.1	5.6	(?)
Colored.....	8.4	9.6	11.8	11.5	13.8	9.8	9.8	(?)
Massachusetts.....	6.8	6.5	7.5	7.1	9.2	6.5	6.0	5.7
Michigan.....	6.9	6.9	9.3	7.7	8.6	7.4	6.8	6.7
Minnesota.....	4.9	5.7	7.9	6.7	7.8	5.6	5.5	5.2
Mississippi (total).....	8.3	9.5	(?)	(?)	(?)	(?)	(?)	(?)
White.....	6.5	7.1	(?)	(?)	(?)	(?)	(?)	(?)
Colored.....	10.0	12.0	(?)	(?)	(?)	(?)	(?)	(?)
Montana.....	7.9	(?)	(?)	(?)	(?)	(?)	(?)	(?)
Nebraska.....	5.8	6.6	7.1	(?)	(?)	(?)	(?)	(?)
New Hampshire.....	6.5	6.2	7.1	8.0	7.8	7.0	7.2	6.1
New Jersey.....	6.4	5.9	(?)	(?)	(?)	(?)	(?)	(?)
New York.....	6.0	6.3	6.9	6.2	8.0	5.7	5.4	5.9

¹ Includes District of Columbia.

² Not added to registration area until a later date.

³ Dropped from the registration area.

Death rates from puerperal causes per 1,000 live births in the birth registration area and each registration State: 1915 to 1922—Continued.

ALL PUERPERAL CAUSES—Continued.

Area.	1922	1921	1920	1919	1918	1917	1916	1915
REGISTRATION STATES—continued.								
North Carolina (total).....	8.0	7.3	10.0	9.3	10.8	8.2	(?)	(?)
White.....	7.0	6.1	8.6	8.2	9.4	6.8	(?)	(?)
Colored.....	9.9	10.2	13.2	11.8	13.9	11.5	(?)	(?)
Ohio.....	6.6	7.2	8.0	7.4	9.7	7.1	(?)	(?)
Oregon.....	8.3	7.4	9.4	10.1	(?)	(?)	(?)	(?)
Pennsylvania.....	6.2	6.8	7.8	6.8	10.5	6.5	7.0	6.4
Rhode Island.....	5.5	7.1	(?)	(?)	9.8	6.3	5.8	6.6
South Carolina (total).....	10.7	9.8	12.2	11.2	(?)	(?)	(?)	(?)
White.....	8.5	7.8	9.0	7.8	(?)	(?)	(?)	(?)
Colored.....	12.8	11.8	15.4	14.4	(?)	(?)	(?)	(?)
Utah.....	5.5	7.3	7.9	8.4	8.6	5.9		
Vermont.....	7.4	7.3	7.0	8.0	8.0	6.3	7.8	6.1
Virginia (total).....	7.2	7.0	8.6	8.2	10.7	8.2	(?)	(?)
White.....	5.8	5.7	7.5	6.6	9.6	6.4	(?)	(?)
Colored.....	10.2	9.9	11.2	11.9	13.2	12.1	(?)	(?)
Washington.....	7.9	7.8	9.2	8.6	9.9	7.4	(?)	(?)
Wisconsin.....	5.6	5.8	6.7	4.8	6.0	5.7	(?)	(?)
Wyoming.....	7.1	(?)	(?)	(?)	(?)	(?)	(?)	(?)

PUERPERAL SEPTICEMIA.

Area.	1922	1921	1920	1919	1918	1917	1916	1915
The birth registration area.....	2.4	2.7	2.7	2.5	2.5	2.7	2.5	2.4
The birth registration area as of 1915 ¹ (excluding Rhode Island).....	2.2	2.6	2.6	2.3	2.3	2.6	2.5	2.4
REGISTRATION STATES.								
California.....	2.6	3.0	2.6	2.5	(?)	(?)	(?)	(?)
Connecticut.....	2.0	2.2	2.2	2.0	1.5	2.1	2.1	1.9
Delaware.....	3.0	3.0	(?)	(?)	(?)	(?)	(?)	(?)
Illinois.....	2.4	(?)	(?)	(?)	(?)	(?)	(?)	(?)
Indiana.....	3.1	3.4	4.0	3.6	4.2	3.6	(?)	(?)
Kansas.....	3.3	2.9	3.5	3.1	4.3	3.4	(?)	(?)
Kentucky (total).....	2.8	2.9	2.8	2.3	2.7	2.7	(?)	(?)
White.....	2.4	2.6	2.5	2.0	2.5	2.5	(?)	(?)
Colored.....	9.4	7.0	7.0	6.1	5.3	5.6	(?)	(?)
Maine.....	2.1	1.9	1.6	1.9	1.3	1.8	1.9	2.1
Maryland (total).....	2.0	2.4	2.4	2.7	2.5	2.6	2.7	(?)
White.....	1.6	2.0	1.8	2.4	2.0	2.2	2.4	(?)
Colored.....	3.6	3.7	5.0	4.0	4.9	4.5	4.3	(?)
Massachusetts.....	2.1	2.2	2.4	2.1	2.1	2.7	2.4	1.7
Michigan.....	2.5	3.1	3.4	3.0	2.6	3.3	3.1	2.5
Minnesota.....	1.8	2.6	2.9	2.0	2.1	2.4	2.1	1.8
Mississippi (total).....	2.7	3.1	(?)	(?)	(?)	(?)	(?)	(?)
White.....	1.8	2.2	(?)	(?)	(?)	(?)	(?)	(?)
Colored.....	3.6	4.0	(?)	(?)	(?)	(?)	(?)	(?)
Montana.....	3.8	(?)	(?)	(?)	(?)	(?)	(?)	(?)
Nebraska.....	2.3	2.7	2.5	(?)	(?)	(?)	(?)	(?)
New Hampshire.....	.9	1.7	1.3	1.9	1.7	2.1	2.2	1.9
New Jersey.....	2.6	2.4	(?)	(?)	(?)	(?)	(?)	(?)
New York.....	2.2	2.5	2.3	2.1	2.1	2.3	2.2	2.6
North Carolina (total).....	2.0	1.9	2.1	1.9	2.1	2.2	(?)	(?)
White.....	1.6	1.4	1.7	1.5	1.5	1.6	(?)	(?)
Colored.....	2.8	3.0	3.1	2.9	3.3	3.6	(?)	(?)
Ohio.....	2.5	3.4	3.4	2.9	3.2	3.5	(?)	(?)
Oregon.....	2.7	3.0	3.3	4.1	(?)	(?)	(?)	(?)
Pennsylvania.....	2.4	2.9	2.7	2.6	2.8	2.8	3.0	2.7
Rhode Island.....	1.5	3.2	(?)	(?)	2.1	2.4	1.4	1.9
South Carolina (total).....	3.1	2.6	2.8	3.2	(?)	(?)	(?)	(?)
White.....	1.8	1.7	1.8	1.8	(?)	(?)	(?)	(?)
Colored.....	4.5	3.4	3.7	4.5	(?)	(?)	(?)	(?)
Utah.....	1.5	2.9	2.0	2.1	2.1	2.2	(?)	(?)
Vermont.....	1.5	2.5	1.9	1.7	1.3	2.0	6	1.5
Virginia (total).....	2.2	2.3	2.3	2.1	2.6	3.1	(?)	(?)
White.....	1.6	1.8	1.9	1.5	2.1	2.3	(?)	(?)
Colored.....	3.6	3.5	3.1	3.3	3.8	5.0	(?)	(?)
Washington.....	3.0	3.6	2.3	2.8	3.3	3.4	(?)	(?)
Wisconsin.....	1.9	2.2	2.1	1.6	1.9	2.1	(?)	(?)
Wyoming.....	2.1	(?)	(?)	(?)	(?)	(?)	(?)	(?)

¹ Includes District of Columbia.
² Not added to registration area until a later date.
³ Dropped from the registration area.

Death rates from puerperal causes per 1,000 live births in the birth registration area and each registration State: 1915 to 1922—Continued.

OTHER PUERPERAL CAUSES.

Area.	1922	1921	1920	1919	1918	1917	1916	1915
The birth registration area.....	4.2	4.1	5.3	4.9	6.6	3.9	3.7	3.7
The birth registration area as of 1915 ¹ (excluding Rhode Island).....	4.0	3.9	5.1	4.5	6.6	3.7	3.7	3.7
REGISTRATION STATES.								
California.....	4.6	3.9	5.1	5.5	(2)	(2)	(2)	(2)
Connecticut.....	3.7	3.1	4.6	4.2	6.0	3.0	2.8	3.7
Delaware.....	3.6	3.4	(3)	(2)	(2)	(2)	(2)	(2)
Illinois.....	3.9	(2)	(3)	(2)	(2)	(2)	(2)	(2)
Indiana.....	3.5	3.5	4.7	4.8	6.2	3.7	(2)	(2)
Kansas.....	4.3	3.6	5.0	5.1	7.1	4.2	(2)	(2)
Kentucky (total).....	3.3	3.3	3.7	4.0	5.3	3.3	(2)	(2)
White.....	3.0	3.0	3.5	3.8	5.0	3.1	(2)	(2)
Colored.....	9.1	7.7	6.0	6.4	10.1	5.2	(2)	(2)
Maine.....	3.5	5.5	6.9	6.6	7.3	4.9	5.9	4.7
Maryland (total).....	3.9	4.3	5.2	5.7	7.0	4.2	3.7	(2)
White.....	3.7	3.9	4.8	5.2	6.6	3.9	3.2	(2)
Colored.....	4.8	5.9	6.8	7.5	8.9	5.3	5.5	(2)
Massachusetts.....	4.6	4.3	5.1	5.0	7.1	3.8	3.5	4.1
Michigan.....	4.3	3.8	5.9	4.8	6.0	4.2	3.7	4.1
Minnesota.....	3.1	3.0	5.0	4.8	5.7	3.1	3.3	3.4
Mississippi (total).....	5.6	6.4	(2)	(2)	(2)	(2)	(2)	(2)
White.....	4.6	4.9	(2)	(2)	(2)	(2)	(2)	(2)
Colored.....	6.5	8.0	(2)	(2)	(2)	(2)	(2)	(2)
Montana.....	4.1	(2)	(2)	(2)	(2)	(2)	(2)	(2)
Nebraska.....	3.5	3.9	4.7	(2)	(2)	(2)	(2)	(2)
New Hampshire.....	5.5	4.5	5.8	6.0	6.1	4.9	5.1	4.2
New Jersey.....	3.8	3.4	(2)	(2)	(2)	(2)	(2)	(2)
New York.....	3.8	3.8	4.6	4.1	5.9	3.4	3.2	3.3
North Carolina (total).....	6.0	5.5	7.9	7.3	8.7	6.0	(2)	(2)
White.....	5.5	4.7	6.9	6.7	7.9	5.2	(2)	(2)
Colored.....	7.2	7.2	10.1	8.9	10.6	7.8	(2)	(2)
Ohio.....	4.2	3.8	4.5	4.5	6.5	3.6	(2)	(2)
Oregon.....	5.5	4.5	6.1	6.0	(2)	(2)	(2)	(2)
Pennsylvania.....	3.8	3.9	5.0	4.2	7.7	3.7	4.0	3.7
Rhode Island.....	4.0	3.9	(3)	(2)	7.7	4.0	4.4	4.7
South Carolina (total).....	7.6	7.2	9.4	8.0	(2)	(2)	(2)	(2)
White.....	6.8	6.0	7.1	6.0	(2)	(2)	(2)	(2)
Colored.....	8.3	8.4	11.7	9.9	(2)	(2)	(2)	(2)
Utah.....	4.0	4.3	5.9	6.2	6.5	3.7	(2)	(2)
Vermont.....	6.0	4.8	5.1	6.3	6.7	4.4	7.2	4.6
Virginia (total).....	5.0	4.7	6.4	6.2	8.1	5.0	(2)	(2)
White.....	4.3	3.9	5.6	5.1	7.5	4.2	(2)	(2)
Colored.....	6.5	6.4	8.0	8.6	9.4	7.0	(2)	(2)
Washington.....	4.9	4.2	6.9	5.8	6.6	4.0	(2)	(2)
Wisconsin.....	3.7	3.6	4.6	3.2	4.1	3.6	(2)	(2)
Wyoming.....	5.0	(2)	(2)	(2)	(2)	(2)	(2)	(2)

¹ Includes District of Columbia.

² Not added to registration area until a later date.

³ Dropped from the registration area.

DEATHS DURING WEEK ENDED DECEMBER 22, 1923.

Summary of information received by telegraph from industrial insurance companies for week ended December 22, 1923, and corresponding week of 1922. (From the Weekly Health Index, December 26, 1923, issued by the Bureau of the Census, Department of Commerce.)

	Week ended Dec. 22, 1923.	Corresponding week, 1922.
Policies in force.....	55, 770, 557	50, 966, 343
Number of death claims.....	10, 275	9, 203
Death claims per 1,000 policies in force, annual rate.....	9. 6	9. 4

Deaths from all causes in certain large cities of the United States during the week ended December 22, 1923, infant mortality, annual death rate, and comparison with corresponding week of 1922. (From the Weekly Health Index, December 26, 1923, issued by the Bureau of the Census, Department of Commerce.)

City.	Week ended Dec. 22, 1923.		Annual death rate per 1,000, corresponding week, 1922.	Deaths under 1 year.		Infant mortality rate, week ended Dec. 22, 1923. ²
	Total deaths.	Death rate. ¹		Week ended Dec. 22, 1923.	Corresponding week, 1922.	
Total.....	6,776	12.5	13.9	816	979	.....
Akron, Ohio.....	28	7.0	9.3	6	6	71
Albany, N. Y. ³	29	12.9	16.6	3	4	66
Atlanta, Ga.....	86	20.1	14.0	8	10	.....
Baltimore, Md. ²	212	14.3	15.3	28	20	82
Birmingham, Ala.....	56	14.9	13.6	3	4	.....
Boston, Mass.....	227	15.4	18.2	34	40	97
Bridgeport, Conn.....	28	10.2	13.1	4	4	55
Buffalo, N. Y.....	138	13.4	12.4	18	20	75
Cambridge, Mass.....	31	14.5	18.8	4	8	71
Camden, N. J. ³	27	11.3	17.1	6	4	99
Chicago, Ill. ¹	677	12.2	14.1	75	108	67
Cincinnati, Ohio.....	125	16.0	18.5	14	13	92
Cleveland, Ohio ²	174	10.2	11.9	23	18	63
Columbus, Ohio.....	55	11.0	17.7	4	9	42
Dallas, Tex.....	40	11.8	13.0	6	6	.....
Dayton, Ohio.....	38	12.0	11.6	4	6	66
Denver, Colo.....	85	16.3	16.0	9	9	.....
Des Moines, Iowa.....	20	7.4	.....	2	.....	.....
Detroit, Mich.....	227	11.9	12.4	46	51	92
Duluth, Minn.....	19	9.3	8.5	3	1	68
Erie, Pa.....	20	9.3	12.9	4	3	81
Fall River, Mass. ²	29	12.5	14.2	7	9	99
Flint, Mich.....	25	11.1	11.7	3	11	60
Fort Worth, Tex.....	27	9.8	10.9	3	2	.....
Grand Rapids, Mich.....	30	10.7	13.4	1	5	16H
Houston, Tex.....	37	12.4	9.7	4	12	.....
Indianapolis, Ind.....	64	9.7	14.5	10	12	77
Jacksonville, Fla.....	38	19.8	15.0	6	4	.....
Kansas City, Kans.....	24	10.8	10.5	2	4	46
Kansas City, Mo.....	90	13.3	15.3	13	10	.....
Los Angeles, Calif.....	208	16.3	15.4	14	14	52
Louisville, Ky.....	79	16.0	15.8	6	1	65
Lowell, Mass.....	18	8.2	11.4	6	4	104
Lynn, Mass.....	26	13.2	13.8	4	4	105
Memphis, Tenn.....	65	19.9	19.6	3	5	.....
Milwaukee, Wis.....	86	9.3	11.7	15	19	74
Minneapolis, Minn.....	88	11.2	12.0	5	20	27
Nashville, Tenn. ²	45	19.4	18.2	4	3	.....
New Bedford, Mass.....	34	13.6	11.4	8	8	125
New Haven, Conn.....	36	10.9	8.9	5	5	65
New Orleans, La.....	135	17.4	17.1	10	20	.....
New York, N. Y.....	1,243	10.9	13.0	151	190	60
Bronx boro.....	162	10.0	10.2	15	14	53
Brooklyn boro.....	408	9.9	12.1	55	71	58
Manhattan boro.....	568	13.1	15.4	73	89	71
Queens boro.....	80	7.8	9.4	7	7	37
Richmond Borough.....	25	10.2	15.9	1	9	18
Newark, N. J.....	83	9.9	14.3	11	20	52
Norfolk, Va.....	33	10.8	12.5	4	3	71
Oakland, Calif.....	54	11.7	10.3	8	6	103
Omaha, Nebr.....	55	14.0	12.2	10	13	108
Paterson, N. J.....	22	8.2	16.2	3	5	48
Philadelphia, Pa.....	477	12.9	17.0	62	80	80
Portland, Ore.....	66	12.6	11.6	3	4	30
Providence, R. I.....	57	12.3	15.1	6	7	49
Richmond, Va.....	57	16.4	14.0	8	5	98
Rochester, N. Y.....	60	9.8	11.5	7	9	55
St. Louis, Mo.....	213	13.8	13.1	21	19	.....
St. Paul, Minn.....	66	14.2	13.9	6	7	55
Salt Lake City, Utah ²	39	16.1	11.4	5	6	81
San Antonio, Tex.....	57	16.1	16.7	5	13	.....
San Francisco, Calif.....	160	15.5	13.8	9	12	54
Seattle, Wash.....	53	8.8	11.9	3	3	27
Springfield, Mass.....	30	10.8	17.9	5	9	71
Syracuse, N. Y.....	57	16.1	10.9	8	8	104

¹ Annual rate per 1,000 population.

² Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1922. Cities left blank are not in the registration area for births.

³ Deaths for week ended Friday, Dec. 21, 1923.

Deaths from all causes in certain large cities of the United States during the week ended December 22, 1923, infant mortality, annual death rate, and comparison with corresponding week of 1922. (From the Weekly Health Index, December 26, 1923, issued by the Bureau of the Census, Department of Commerce)—Continued.

City.	Week ended Dec. 22, 1923.		Annual death rate per 1,000, corresponding week, 1922.	Deaths under 1 year.		Infant mortality rate, week ended Dec. 22, 1923.
	Total deaths.	Death rate.		Week ended Dec. 22, 1923.	Corresponding week, 1922.	
Tacoma, Wash.....	17	8.7	9.9	1	1	25
Toledo, Ohio.....	69	13.4	11.6	4	4	40
Trenton, N. J.....	30	12.3	18.3	6	8	102
Utica, N. Y.....	20	10.1	.....	2	.....	42
Washington, D. C.....	126	15.0	14.3	19	18	109
Wilmington, Del.....	32	14.2	10.8	9	5	183
Worcester, Mass.....	49	13.3	15.2	5	5	57
Yonkers, N. Y.....	25	12.1	10.9	2	3	43

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 STATE SUMMARIES.

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

Reports for Week Ended December 29, 1923.

ALABAMA.		Cases.	CALIFORNIA.		Cases.
Chicken pox.....	59	Cerebrospinal meningitis—San Francisco....	1	Diphtheria.....	300
Diphtheria.....	33	Los Angeles.....	1	Influenza.....	36
Influenza.....	74	Los Angeles County.....	1	Measles.....	311
Malaria.....	21	Taft.....	1	Poliomyelitis:	
Measles.....	340	Colusa County.....	1	Colusa County.....	1
Pellagra.....	4	Los Angeles.....	1	Los Angeles County.....	1
Pneumonia.....	82	Los Angeles County.....	1	Taft.....	1
Scarlet fever.....	24	Scarlet fever.....	244	Smallpox:	
Smallpox.....	15	Long Beach.....	13	Long Beach.....	13
Tuberculosis.....	41	Los Angeles.....	79	Los Angeles.....	79
Typhoid fever.....	7	Los Angeles County.....	27	Los Angeles County.....	27
Whooping cough.....	43	Scattering.....	16	Scattering.....	16
		Typhoid fever.....	8		
ARIZONA.			COLORADO.		
Chicken pox.....	2		(Exclusive of Denver.)		
Diphtheria.....	1	Chicken pox.....	16	Diphtheria.....	29
Measles.....	19	Diphtheria.....	29	Measles.....	133
Scarlet fever.....	5	Measles.....	133	Mumps.....	17
		Mumps.....	17	Pneumonia.....	3
		Pneumonia.....	3	Poliomyelitis.....	1
		Poliomyelitis.....	1	Scarlet fever.....	56
		Scarlet fever.....	56	Typhoid fever.....	9
		Typhoid fever.....	9	Whooping cough.....	3
		Whooping cough.....	3		
ARKANSAS.			CONNECTICUT.		
Cerebrospinal meningitis.....	2	Cerebrospinal meningitis.....	2	Chicken pox.....	108
Chicken pox.....	18	Chicken pox.....	108	Diphtheria.....	63
Diphtheria.....	20	Diphtheria.....	63	German measles.....	1
Hookworm disease.....	2	German measles.....	1	Influenza.....	2
Influenza.....	106	Influenza.....	2	Measles.....	136
Malaria.....	39	Measles.....	136		
Measles.....	150				
Mumps.....	5				
Ophthalmia neonatorum.....	1				
Pellagra.....	8				
Scarlet fever.....	6				
Smallpox.....	8				
Trachoma.....	6				
Tuberculosis.....	16				
Typhoid fever.....	6				
Whooping cough.....	34				

CONNECTICUT—continued.

	Cases.
Mumps.....	47
Pneumonia (lobar).....	20
Poliomyelitis.....	1
Scarlet fever.....	130
Tetanus.....	1
Tuberculosis (pulmonary).....	16
Typhoid fever.....	8
Whooping cough.....	16

DELAWARE.

Chicken pox.....	7
Diphtheria.....	8
Measles.....	1
Pneumonia.....	6
Scarlet fever.....	12
Tuberculosis.....	2
Whooping cough.....	3

DISTRICT OF COLUMBIA.

Chicken pox.....	41
Diphtheria.....	15
Influenza.....	1
Measles.....	10
Scarlet fever.....	26
Tuberculosis.....	17
Whooping cough.....	13

FLORIDA.

Cerebrospinal meningitis.....	1
Diphtheria.....	58
Influenza.....	28
Malaria.....	141
Paratyphoid fever.....	1
Pneumonia.....	163
Scarlet fever.....	2
Smallpox.....	13
Trachoma.....	9
Typhoid fever.....	51

GEORGIA.

Chicken pox.....	8
Diphtheria.....	25
German measles.....	3
Hookworm disease.....	3
Influenza.....	8
Malaria.....	1
Measles.....	172
Pneumonia.....	31
Scarlet fever.....	3
Smallpox.....	49
Tetanus.....	2
Tuberculosis (pulmonary).....	9
Typhoid fever.....	5
Typhus fever.....	1
Whooping cough.....	10

ILLINOIS.

Cerebrospinal meningitis—Chicago.....	1
Diphtheria:	
Cook County.....	149
Kane County.....	9
La Salle County.....	8
Scattering.....	63
Influenza:	
Chicago.....	13
Scattering.....	4

ILLINOIS—continued.

	Cases.
Lethargic encephalitis—Chicago.....	1
Measles.....	427
Pneumonia:	
Chicago.....	219
Scattering.....	101
Poliomyelitis:	
Bureau County.....	1
Cook County.....	1
Lake County.....	1
Scarlet fever:	
Cook County.....	118
Kane County.....	15
Scattering.....	117
Smallpox.....	6
Tuberculosis.....	222
Typhoid fever.....	31
Whooping cough.....	100

INDIANA.

Cerebrospinal meningitis:	
Indianapolis.....	1
Marion.....	1
Odin.....	4
Chicken pox.....	76
Diphtheria:	
Allen County.....	10
Marion County.....	9
Noble County.....	13
St. Joseph County.....	12
Scattering.....	86
Influenza.....	27
Measles:	
Clinton County.....	29
Grant County.....	10
Jay County.....	18
Madison County.....	169
Rush County.....	61
Tipton County.....	9
Scattering.....	70
Pneumonia.....	20
Scarlet fever:	
Lake County.....	18
St. Joseph County.....	11
Scattering.....	54
Smallpox:	
Delaware County.....	14
Marion County.....	9
Scattering.....	33
Tuberculosis.....	10
Typhoid fever:	
Allen County.....	8
Scattering.....	2
Whooping cough.....	95

IOWA.

Diphtheria.....	31
Scarlet fever.....	71
Smallpox.....	11
Typhoid fever.....	8

KANSAS.

Cerebrospinal meningitis.....	2
Chicken pox.....	125
Diphtheria.....	79
German measles.....	6

KANSAS—continued.

	Cases.
Influenza.....	14
Lethargic encephalitis.....	1
Malaria.....	2
Measles.....	165
Mumps.....	79
Pneumonia.....	43
Scarlet fever.....	111
Septic sore throat.....	1
Smallpox.....	23
Tuberculosis.....	33
Typhoid fever.....	5
Whooping cough.....	103

LOUISIANA.

Diphtheria.....	22
Influenza.....	30
Measles.....	145
Pncumonia.....	29
Scarlet fever.....	5
Smallpox.....	21
Tuberculosis.....	23
Typhoid fever.....	5

MAINE.

Anthrax.....	1
Chicken pox.....	63
Diphtheria.....	26
German measles.....	5
Influenza.....	2
Measles.....	45
Mumps.....	3
Pneumonia.....	11
Scarlet fever.....	34
Smallpox.....	1
Tuberculosis.....	6
Typhoid fever.....	5
Whooping cough.....	40

MARYLAND.¹

Anthrax.....	1
Chicken pox.....	96
Diphtheria.....	46
Dysentery.....	2
German measles.....	2
Impetigo contagiosa.....	1
Influenza.....	20
Malaria.....	1
Measles.....	55
Mumps.....	7
Ophthalmia neonatorum.....	1
Pneumonia (all forms).....	68
Scarlet fever.....	73
Septic sore throat.....	1
Tuberculosis.....	63
Typhoid fever.....	6
Vincent's angina.....	2
Whooping cough.....	39

MASSACHUSETTS.

Cerebrospinal meningitis.....	2
Chicken pox.....	300
Conjunctivitis (suppurative).....	18
Diphtheria.....	258
German measles.....	8

MASSACHUSETTS—continued.

	Cases.
Influenza.....	4
Measles.....	332
Mumps.....	118
Ophthalmia neonatorum.....	1½
Pellagra.....	1
Pneumonia (lobar).....	66
Poliomyelitis.....	2
Scarlet fever.....	416
Septic sore throat.....	2
Tetanus.....	1
Tuberculosis (all forms).....	90
Typhoid fever.....	4
Whooping cough.....	78

MICHIGAN.

Diphtheria.....	175
Measles.....	426
Pneumonia.....	108
Scarlet fever.....	306
Smallpox.....	74
Tuberculosis.....	81
Typhoid fever.....	3
Whooping cough.....	69

MINNESOTA.

Cerebrospinal meningitis.....	1
Chicken pox.....	128
Diphtheria.....	98
Measles.....	129
Pneumonia.....	9
Poliomyelitis.....	3
Scarlet fever.....	261
Smallpox.....	41
Tuberculosis.....	41
Typhoid fever.....	6
Whooping cough.....	3

MISSISSIPPI.

Diphtheria.....	18
Influenza.....	102
Scarlet fever.....	2
Smallpox.....	15
Typhoid fever.....	2

MISSOURI.

(Exclusive of Cape Girardeau.)

Chicken pox.....	75
Diphtheria.....	77
Epidemic sore throat.....	9
Influenza.....	6
Measles.....	345
Mumps.....	37
Ophthalmia neonatorum.....	1
Pneumonia.....	16
Poliomyelitis.....	2
Scarlet fever.....	140
Smallpox.....	19
Tetanus.....	1
Trachoma.....	97
Tuberculosis.....	33
Typhoid fever.....	5
Whooping cough.....	64

¹ Week ended Friday.

MONTANA.		NORTH CAROLINA—continued.	
	Cases.		Cases.
Diphtheria.....	9	Scarlet fever.....	44
Scarlet fever.....	33	Septic sore throat.....	1
Smallpox.....	14	Smallpox.....	54
Typhoid fever.....	1	Typhoid fever.....	4
		Whooping cough.....	217
NEBRASKA.		OREGON.	
Cerebrospinal meningitis.....	2	Chicken pox.....	21
Chicken pox.....	25	Diphtheria:	
Diphtheria.....	35	Corvallis.....	22
Influenza.....	1	Portland.....	32
Measles.....	263	Scattering.....	16
Mumps.....	4	Lethargic encephalitis.....	2
Pneumonia.....	2	Measles.....	552
Poliomyelitis.....	1	Mumps.....	5
Scarlet fever.....	31	Pneumonia.....	18
Septic sore throat.....	1	Scarlet fever.....	24
Typhoid fever.....	1	Smallpox.....	5
Whooping cough.....	4	Tuberculosis.....	9
		Typhoid fever.....	7
NEW JERSEY.		Whooping cough.....	5
Cerebrospinal meningitis.....	2	SOUTH DAKOTA.	
Chicken pox.....	212	Chicken pox.....	20
Diphtheria.....	129	Diphtheria.....	4
Influenza.....	11	Influenza.....	4
Malaria.....	1	Measles.....	71
Measles.....	166	Mumps.....	15
Pneumonia.....	156	Pneumonia.....	9
Scarlet fever.....	127	Scarlet fever.....	27
Smallpox.....	1	Smallpox.....	1
Typhoid fever.....	8	Tuberculosis.....	40
Whooping cough.....	89	Typhoid fever.....	2
		Whooping Cough.....	2
NEW MEXICO.		TEXAS.	
Chicken pox.....	11	Chicken pox.....	34
Diphtheria.....	7	Diphtheria.....	35
Measles.....	17	Influenza.....	21
Mumps.....	1	Measles.....	215
Pneumonia.....	1	Mumps.....	4
Scarlet fever.....	5	Pneumonia.....	5
Trachoma.....	1	Scarlet fever.....	26
Tuberculosis.....	17	Smallpox.....	1
Typhoid fever.....	3	Tuberculosis.....	9
Whooping cough.....	2	Typhoid fever.....	6
		Whooping cough.....	2
NEW YORK.		VERMONT.	
(Exclusive of New York City and Buffalo. Rochester included for two weeks.)		Chicken pox.....	45
Cerebrospinal meningitis.....	1	Diphtheria.....	3
Diphtheria.....	171	Measles.....	99
Influenza.....	22	Mumps.....	7
Measles.....	704	Pneumonia.....	1
Pneumonia.....	196	Scarlet fever.....	5
Poliomyelitis.....	3	Smallpox.....	4
Scarlet fever.....	283	Typhoid fever.....	1
Smallpox.....	3	Whooping cough.....	82
Typhoid fever.....	20	WASHINGTON.	
Whooping cough.....	231	Chicken pox.....	55
		Diphtheria.....	33
NORTH CAROLINA.		Lethargic encephalitis—Snohomish County..	1
Cerebrospinal meningitis.....	1	Measles.....	1,186
Chicken pox.....	95	Mumps.....	6
Diphtheria.....	52	Pneumonia.....	1
German measles.....	3		
Measles.....	899		

WASHINGTON—continued.

	Cases.
Poliomyelitis—Whitman County	1
Scarlet fever.....	36
Smallpox:	
Cowlitz County.....	22
Scattering.....	16
Tuberculosis.....	8
Typhoid fever.....	7
Whooping cough.....	8

WEST VIRGINIA.

Diphtheria.....	8
Poliomyelitis.....	1
Scarlet fever.....	26
Smallpox.....	1
Typhoid fever.....	3

WISCONSIN.

Milwaukee:	
Chicken pox.....	42
Diphtheria.....	19
Measles.....	1
Pneumonia.....	3

WISCONSIN—continued.

Milwaukee—Continued.	Cases.
Poliomyelitis.....	2
Scarlet fever.....	23
Smallpox.....	2
Tuberculosis.....	6
Typhoid fever.....	1
Whooping cough.....	29
Scattering:	
Cerebrospinal meningitis.....	1
Chicken pox.....	183
Diphtheria.....	91
German measles.....	4
Influenza.....	19
Lethargic encephalitis.....	1
Measles.....	308
Pneumonia.....	31
Scarlet fever.....	243
Smallpox.....	29
Tuberculosis.....	28
Typhoid fever.....	2
Whooping cough.....	143

Reports for Week Ended December 22, 1923.

DISTRICT OF COLUMBIA.

	Cases.
Cerebrospinal meningitis.....	1
Chicken pox.....	51
Diphtheria.....	15
Influenza.....	4
Measles.....	8
Scarlet fever.....	25
Smallpox.....	2
Tuberculosis.....	21
Typhoid fever.....	1
Whooping cough.....	13

GEORGIA.

Chicken pox.....	31
Diphtheria.....	5
Hookworm disease.....	5
Influenza.....	9
Malaria.....	4
Measles.....	303
Mumps.....	11
Pneumonia.....	39
Poliomyelitis.....	1
Scarlet fever.....	7
Septic sore throat.....	2
Smallpox.....	46
Tuberculosis (all forms).....	7
Typhoid fever.....	2
Whooping cough.....	24

NORTH CAROLINA.

	Cases.
Chicken pox.....	194
Diphtheria.....	76
German measles.....	5
Measles.....	1,081
Scarlet fever.....	55
Septic sore throat.....	1
Smallpox.....	69
Typhoid fever.....	9
Whooping cough.....	319

NORTH DAKOTA.

Cerebrospinal meningitis.....	1
Chicken pox.....	19
Diphtheria.....	21
German measles.....	1
Lethargic encephalitis.....	1
Measles.....	276
Pneumonia.....	13
Poliomyelitis.....	1
Scarlet fever.....	72
Smallpox.....	12
Trachoma.....	3
Tuberculosis.....	12
Typhoid fever.....	5
Whooping cough.....	9

SUMMARY OF CASES REPORTED MONTHLY BY STATES.

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

State.	Cerebrospinal meningitis.	Diphtheria.	Influenza.	Malaria.	Measles.	Pellagra.	Pollomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
<i>November, 1923.</i>										
Hawaii.....	1	15	121		12			1		6
Idaho.....		6	1		93			96		3
Kansas.....	3	476	5	1	419			436	60	49
Maine.....	1	62	3		117			67	1	30
Mississippi.....		290	1,266	5,539	641	184		3	88	40
Montana.....		56	3		672		4	16	187	32
Oregon.....		155			1,614			101	59	15
South Dakota.....		88	4		332		3	185	7	1
Virginia ¹	9	721	802	174	1,016	13	7	374	16	106
West Virginia.....	11	276	39		45			315	9	93
Wisconsin.....	6	707	73		937		6	924	65	53

¹ Figures published in Public Health Reports for Dec. 21, 1923, are erroneous.

Number of Cases of Certain Communicable Diseases Reported for the Month of October, 1923, by State Health Officers.

State.	Chicken pox.	Diphtheria.	Measles.	Mumps.	Scarlet fever.	Small-pox.	Tuberculosis.	Typhoid fever.	Whooping cough.
Alabama.....	37	322	292	42	145	8		165	96
Arizona.....	7	19	14	8	25	1	124	16	
Arkansas.....	47	110	81	3	48	10	82	121	85
California.....	289	1,056	1,217	71	630	190	866	119	137
Colorado ²									
Connecticut.....	115	203	241	50	201		137	60	100
Delaware.....	15	11	25		71		19	18	13
District of Columbia.....	23	74	9		68	4		14	53
Florida.....	1	96	176		11		89	37	11
Georgia ³									
Idaho.....	11	32	6	1	88	3		7	19
Illinois.....	749	1,114	363	281	768	28	1,385	259	490
Indiana.....		456	91		235	61		84	
Iowa.....	22	230	27	7	220	18	1	(⁴)	37
Kansas.....	156	420	322	123	435	33	261	76	231
Kentucky ³									
Louisiana.....		155	208		27	11	129	65	24
Maine.....	80	63	94	6	68		30	13	167
Maryland.....	107	278	77	24	296	4	208	196	191
Massachusetts.....	561	1,067	660	253	677		626	89	335
Michigan.....	412	1,002	736	102	969	184	353	156	331
Minnesota.....	245	447	812		1,039	132	258	65	106
Mississippi.....	171	417	285	49	67	8	217	148	585
Missouri ⁵									
Montana.....	121	49	305	3	59	62	99	16	23
Nebraska.....	33	98	77	37	171	10	9	5	24
Nevada ⁵									
New Hampshire ⁵									
New Jersey.....	253	569	421		242		453	87	185
New Mexico.....	25	68	58	12	37		88	85	10
New York.....	938	1,462	1,675	332	905	2	1,783	281	1,033
North Carolina.....	80	1,320	669		539	94		135	874
North Dakota.....	21	56	262		183	12	12	12	25
Ohio ⁵									
Oklahoma ²									
Oregon.....	55	131	413	5	73	35	44	39	7
Pennsylvania.....	1,372	1,907	1,037	282	1,389	27	471	392	883
Rhode Island.....	28	95	77	4	59		47	9	16
South Carolina.....	9	421	33	13	22	35		48	45
South Dakota.....	23	116	258	1	173	24	11	11	19

¹ 150 additional cases reported at U. S. Veterans' Bureau hospitals (Tucson and Prescott).

² Reports not received at time of going to press.

³ Reports received weekly.

⁴ Not notifiable.

⁵ Reports received annually.

SUMMARY OF CASES REPORTED MONTHLY BY STATES—Continued.

Number of Cases of Certain Communicable Diseases Reported for the Month of October, 1923, by State Health Officers—Continued.

State.	Chicken pox.	Diph- theria.	Meas- les.	Mumps.	Scarlet fever.	Small- pox.	Tuber- culosis.	Ty- phoid fever.	Whoop- ing cough.
Tennessee ⁵									
Texas ³									
Utah ²									
Vermont.....	39	36	302	13	35	35	29	2	262
Virginia.....	134	874	713		337	8	259	200	585
Washington.....	165	109	388	24	178	50	166	75	78
West Virginia.....	106	356	41		340		51	285	126
Wisconsin.....	459	719	817	12	736	111	180	46	470
Wyoming ²									

Case Rates per 1,000 Population (Annual Basis) for the Month of October, 1923.

State.	Chicken pox.	Diph- theria.	Meas- les.	Mumps.	Scarlet fever.	Small- pox.	Tuber- culosis.	Ty- phoid fever.	Whoop- ing cough.
Alabama.....	0.18	1.56	1.42	0.20	0.70	0.04		0.80	0.47
Arizona.....	.22	.59	.43	.25	.77	.03	¹ 0.74	.49	
Arkansas.....	.30	.71	.53	.02	.31	.06	.53	.78	.55
California.....	.89	3.27	3.77	.22	1.95	.59	2.68	.37	.42
Colorado ²									
Connecticut.....	.92	1.62	1.92	.40	1.60		1.09	.48	.80
Delaware.....	.77	.56	1.28		3.63		.97	.92	.66
District of Columbia.....	.62	1.99	.24		1.83	.11		.38	1.43
Florida.....	.01	1.08	1.99		.12		1.00	.42	.12
Georgia ³									
Idaho.....	.28	.80	.15	.03	2.20	.08		.18	.48
Illinois.....	1.30	1.93	.63	.49	1.33	.05	2.40	.45	.85
Indiana.....		1.78	.36		.92	.24		.33	
Iowa.....	.10	1.19	.13	.03	1.05	.09	.00	(⁴)	.18
Kansas.....	1.02	2.75	2.11	.81	2.86	.22	1.71	.50	1.51
Kentucky ³									
Louisiana.....		.99	1.32		.17	.07	.82	.41	.15
Maine.....	1.21	.95	1.42	.09	1.03		.45	.20	2.53
Maryland.....	.84	2.17	.60	.19	2.32	.03	1.63	1.53	1.49
Massachusetts.....	1.64	3.12	1.93	.71	1.98		1.83	.26	.98
Michigan.....	1.22	2.97	2.18	.30	2.87	.54	1.04	.46	.98
Minnesota.....	1.15	2.11	3.83		4.89	.62	1.22	.31	.50
Mississippi.....	1.12	2.74	1.87	.32	.44	.05	1.43	.97	3.85
Missouri ³									
Montana.....	2.33	.94	5.88	.06	1.14	1.19	1.91	.31	.44
Nebraska.....	.29	.87	.68	.33	1.51	.09	.08	.04	.21
Nevada ²									
New Hampshire ⁵									
New Jersey.....	.89	1.98	1.47		.84		1.58	.30	.64
New Mexico.....	.79	2.15	1.83	.38	1.17		2.78	2.69	.32
New York.....	1.02	1.59	1.82	.36	.98	.00	1.94	.31	1.12
North Carolina.....	.35	5.79	2.93		2.36	.41		.60	3.83
North Dakota.....	.37	.98	4.59		3.21	.21	.21	.21	.44
Ohio ³									
Oklahoma ²									
Oregon.....	.79	1.87	5.91	.07	1.04	.51	.63	.56	.10
Pennsylvania.....	1.78	2.47	1.34	.36	1.80	.03	.61	.51	1.14
Rhode Island.....	.53	1.78	1.45	.08	1.11		.88	.17	.30
South Carolina.....	.06	2.84	.22	.09	.15	.24		.32	.30
South Dakota.....									
Tennessee ⁵									
Texas ³									
Utah ²									
Vermont.....	1.30	1.20	10.09	.43	1.20	1.17	.97	.07	8.75
Virginia.....	.66	4.29	3.50		1.65	.04	1.27	.98	2.88
Washington.....	1.35	.89	3.19	.20	1.46	.41	1.36	.62	.64
West Virginia.....	.80	2.70	.31		2.58		.39	2.16	.96
Wisconsin.....	1.97	3.09	3.51	.05	3.16	.48	.77	.20	2.02
Wyoming ²									

¹ 150 cases (not included) reported at U. S. Veterans' Bureau hospitals.

² Reports not received at time of going to press.

³ Reports received weekly.

⁴ Not notifiable.

⁵ Reports received annually.

CITY REPORTS FOR WEEK ENDED DECEMBER 15, 1923.

CEREBROSPINAL MENINGITIS.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Dec. 15, 1923.		City.	Median for previous years.	Week ended Dec. 15, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
California:				Montana:			
Los Angeles.....	0	1		Missoula.....	0	1	1
Connecticut:				New York:			
Norwich.....	0	1	1	New York.....	3	3	1
Illinois:				Pennsylvania:			
Chicago.....	2	1		Philadelphia.....	1		1
Kentucky:				Texas:			
Louisville.....	0		1	San Antonio.....	0		1
Louisiana:				Washington:			
New Orleans.....	0		1	Tacoma.....	0	2	
Massachusetts:				West Virginia:			
Winchester.....	0	1		Charleston.....	0		2
Michigan:							
Detroit.....	0	2	1				

DENGUE.

City.	Cases.	Deaths.
Alabama:		
Birmingham.....	2	

DIPHThERIA.

See p. 35; also Current State summaries, p. 22, and Monthly summaries by States, p. 27.

INFLUENZA.

City.	Cases.		Deaths, week ended Dec. 15, 1923.	City.	Cases.		Deaths, week ended Dec. 15, 1923.
	Week ended Dec. 16, 1922.	Week ended Dec. 15, 1923.			Week ended Dec. 16, 1922.	Week ended Dec. 15, 1923.	
Alabama:				Georgia—Continued.			
Birmingham.....	1	15	2	Brunswick.....	10		
Mobile.....		4		Macon.....	75		
Montgomery.....		1		Savannah.....	45		
Tuscaloosa.....			3	Valdosta.....	2		
Arkansas:				Illinois:			
Little Rock.....		1		Chicago.....	18	14	7
California:				Danville.....	3		
Berkeley.....	1			Decatur.....	1		
Los Angeles.....	12	17	3	La Salle.....			1
Riverside.....	3			Oak Park.....	1		
San Diego.....		1		Springfield.....			1
San Francisco.....	3	6	1	Indiana:			
Colorado:				Bloomington.....	1		
Denver.....		3		Indianapolis.....			1
Connecticut:				Kentucky:			
New Britain.....	4			Louisville.....	2	4	1
Waterbury.....	1	2	2	Louisiana:			
District of Columbia:				New Orleans.....	3	5	3
Washington.....	1			Maine:			
Georgia:				Sanford.....	2		
Albany.....	4			Maryland:			
Atlanta.....	14	9		Baltimore.....	34	14	2
Augusta.....		1		Cumberland.....	1	1	

CITY REPORTS FOR WEEK ENDED DECEMBER 15, 1923—Continued.

INFLUENZA—Continued.

City.	Cases.		Deaths, week ended Dec. 15, 1923.	City.	Cases.		Deaths, week ended Dec. 15, 1923.
	Week ended Dec. 16, 1922.	Week ended Dec. 15, 1923.			Week ended Dec. 16, 1922.	Week ended Dec. 15, 1923.	
Massachusetts:				New York—Continued.			
Boston.....	2	2	3	New York.....	43	12	7
Chelsea.....		2		Syracuse.....	1		
Everett.....	1			North Carolina:			
Fall River.....	2			Raleigh.....	5		
Haverhill.....	1			Ohio:			
Saugus.....	4			Akron.....	2		
Springfield.....		1		Cincinnati.....	1		
Worcester.....		2		Cleveland.....	4	4	1
Michigan:				Columbus.....			1
Detroit.....	2	1	1	Oklahoma:			
Minnesota:				Oklahoma.....			1
Minneapolis.....			1	Pennsylvania:			
Missouri:				Philadelphia.....	3	3	1
Kansas City.....	2	2		Pittsburgh.....		3	2
St. Louis.....	3			Rhode Island:			
New Jersey:				Providence.....	1		1
Garfield.....		2		South Carolina:			
Jersey City.....	1	1		Charleston.....	9		
Kearny.....	1	3		Columbia.....	106		
Montclair.....	1			South Dakota:			
Newark.....	17	14	2	Sioux Falls.....	1		
Orange.....		1		Texas:			
Phillipsburg.....	1			Amarillo.....		1	
Trenton.....	1			Dallas.....		1	
New York:				Houston.....			3
Albany.....	1			San Antonio.....	1		
Buffalo.....		1		Virginia:			
Cohoes.....	1			Petersburg.....	1		
Glens Falls.....		1	1	Roanoke.....	8		
Jamestown.....	1			West Virginia:			
				Fairmont.....	5	1	

LEPROSY.

City.	Cases.	Deaths.
Massachusetts:		
Somerville.....	1	

LETHARGIC ENCEPHALITIS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
California:			Missouri:		
San Francisco.....		1	Kansas City.....	1	1
Massachusetts:			New York:		
Boston.....	1		New York.....	8	
Michigan:					
Detroit.....	2	1			

MALARIA.

Alabama:			Georgia:		
Montgomery.....		1	Augusta.....	1	
California:					
Oakland.....	1				

MEASLES.

See p. 35; also Current State summaries, p. 22; and Monthly summaries by States, p. 27.

CITY REPORTS FOR WEEK ENDED DECEMBER 15, 1923—Continued.

PELLAGRA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			South Carolina, continued—		
Birmingham	1		Columbia		3
Louisiana:			Tennessee:		
Shreveport		1	Memphis	1	1
Maryland:			Texas:		
Baltimore		1	Fort Worth	1	1
South Carolina:			Virginia:		
Charleston		2	Norfolk		1

PNEUMONIA (ALL FORMS).

Alabama:			Kentucky:		
Anniston	4	2	Covington		3
Birmingham	19	10	Lexington		4
Dothan	2		Louisville		13
Mobile		3	Louisiana:		
Montgomery		3	New Orleans	13	10
Tuscaloosa		3	Maine:		
California:			Bangor	3	1
Alameda	1		Biddeford		2
Berkeley	1		Lewiston		1
Eureka		1	Portland		2
Glendale		2	Sanford	1	
Long Beach		3	Maryland:		
Los Angeles	41	22	Baltimore	50	25
Oakland		5	Massachusetts:		
Pasadena	4	1	Boston	52	24
Sacramento	3	2	Brocton		1
San Bernardino		1	Cambridge		2
San Diego	7	6	Chelsea	3	1
San Francisco		14	Chicopee		1
Santa Ana		1	Easthampton	2	
Colorado:			Everett	2	
Boulder		1	Fall River		2
Denver		7	Gardner		1
Connecticut:			Greenfield		1
Bridgeport	2		Haverhill	4	1
Hartford		4	Lawrence	1	
Meriden	1		Lowell		4
New Haven		5	Lynn	4	3
Waterbury		3	Medford		1
District of Columbia:			New Bedford		1
Washington		9	Pittsfield		1
Florida:			Plymouth		1
Tampa		1	Salem		2
Georgia:			Somerville	3	2
Atlanta	18	16	Southbridge	1	
Augusta		1	Watertown	2	
Brunswick		3	Winthrop	1	
Savannah		5	Worcester		9
Illinois:			Michigan:		
Aurora	5	2	Ann Arbor	1	
Berwyn	1		Detroit	52	25
Bloomington		1	Flint	4	3
Chicago	202	49	Grand Rapids	2	
East St. Louis		1	Hamtramck	1	
Elgin	3		Highland Park		2
Forest Park	2		Holland	1	
Freeport	1		Jackson		1
Galesburg	2		Kalamazoo	2	1
Kewanee		3	Marquette		2
Oak Park	3	2	Muskegon	1	
Quincy	3	1	Pontiac		1
Rockford		2	Port Huron	1	
Springfield	5	1	Minnesota:		
Indiana:			Duluth	4	3
East Chicago		1	Minneapolis		7
Elwood		1	St. Paul		4
Fort Wayne		4	Missouri:		
Gary		5	Kansas City	21	18
Hammond		3	St. Joseph		2
Indianapolis		10	Montana:		
La Fayette		1	Great Falls		2
South Bend		1	Missoula	2	
Terre Haute		1	Nebraska:		
Kansas:			Omaha		16
Coffeyville	1		Nevada:		
Hutchinson	2	1	Reno	2	
Lawrence		1	New Hampshire:		
Topeka		3	Dover		1

CITY REPORTS FOR WEEK ENDED DECEMBER 15, 1923—Continued.

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
New Jersey:			Ohio—Continued.		
Atlantic City.....		3	Lima.....		2
Bayonne.....	3		Mansfield.....		1
Camden.....	6	5	Newark.....		1
Clifton.....		1	Piqua.....	2	1
East Orange.....	2		Sandusky.....	1	
Elizabeth.....		3	Springfield.....		10
Englewood.....		1	Toledo.....		7
Garfield.....	2		Oklahoma:		
Hackensack.....		2	Oklahoma.....		3
Harrison.....	1		Oregon:		
Hoboken.....		5	Portland.....		13
Jersey City.....	3		Pennsylvania:		
Montclair.....	3	2	Philadelphia.....	73	66
Morristown.....		1	Pittsburgh.....		28
Newark.....	89	10	Rhode Island:		
Orange.....	2	1	Cumberland.....	1	
Passaic.....		2	Pawtucket.....		1
Paterson.....	1		Providence.....		5
Summit.....		1	South Carolina:		
West Orange.....	2		Charleston.....		4
New York:			Columbia.....		1
Buffalo.....	26	10	Greenville.....		2
Geneva.....		2	Tennessee:		
Hornell.....	1		Memphis.....		9
Lackawanna.....	1		Nashville.....		6
Little Falls.....		1	Texas:		
Middletown.....		1	Beaumont.....		2
Mount Vernon.....	4	2	Dallas.....	4	2
New York.....	293	106	El Paso.....		1
Niagara Falls.....		1	Fort Worth.....		2
North Tonawanda.....		1	Houston.....		10
Olean.....		1	San Antonio.....		6
Peekskill.....	2		Waco.....		2
Poughkeepsie.....		2	Virginia:		
Rochester.....	16	2	Alexandria.....		1
Saratoga Springs.....	2	1	Lynchburg.....		1
Schenectady.....	7	3	Newport News.....		2
Syracuse.....	11	3	Norfolk.....		2
Troy.....		3	Petersburg.....		2
Watertown.....	1		Portsmouth.....		1
North Carolina:			Richmond.....		3
Greensboro.....		2	West Virginia:		
Raleigh.....		1	Bluefield.....		1
Rocky Mount.....		1	Huntington.....		3
Wilmington.....	6	2	Wheeling.....		3
Winston-Salem.....		4	Wisconsin:		
Ohio:			Ashland.....		3
Akron.....	4		Eau Claire.....	2	
Barberton.....		1	Janesville.....	1	
Cambridge.....	1		Kenosha.....	2	1
Cincinnati.....		10	Madison.....	1	
Cleveland.....	34	13	Milwaukee.....		5
Columbus.....		7	Racine.....		2
Dayton.....	2		Superior.....		3
Findlay.....		1			

POLIOMYELITIS (INFANTILE PARALYSIS).

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Dec. 15, 1923.		City.	Median for previous years.	Week ended Dec. 15, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
Alabama:				New Jersey:			
Birmingham.....	0	1	1	Elizabeth.....	0	1	
California:				Montclair.....	0	1	1
Los Angeles.....	0	1		New York:			
District of Columbia:				New York.....	1	6	2
Washington.....	0	1		Poughkeepsie.....	0	1	
Illinois:				Ohio:			
Oak Park.....	0	7		Cleveland.....	0	1	
Indiana:				Washington.....			
South Bend.....	0	1	1	Bellingham.....	0	1	
Massachusetts:				Wisconsin:			
Lawrence.....	0	2		Milwaukee.....	0	1	
Lowell.....	0	4					
Lynn.....	0	1					

CITY REPORTS FOR WEEK ENDED DECEMBER 15, 1923—Continued.

RABIES IN ANIMALS.

City.	Cases.	City.	Cases.
California:		New Jersey:	
Los Angeles.....	13	West Orange.....	1
Georgia:		Tennessee:	
Savannah.....	1	Memphis.....	1
Massachusetts:			
Methuen.....	1		

SCARLET FEVER.

See p. 35; also Current State summaries, p. 22, and Monthly summaries by States, p. 27.

SMALLPOX.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City	Median for previous years.	Week ended Dec. 15, 1923.		City.	Median for previous years.	Week ended Dec. 15, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
Alabama:				Montana:			
Dothan.....		3		Great Falls.....	1	1	
Selma.....		1		Nebraska:			
Arkansas:				Omaha.....	3	2	
Little Rock.....	0	1		New York:			
California:				Schenectady.....	0	1	
Long Beach.....	0	11		North Carolina:			
Los Angeles.....	0	55		Greensboro.....	0	3	
Pasadena.....	0	2		Ohio:			
District of Columbia:				Dayton.....	0	1	
Washington.....	0	3		Steubenville.....	0	1	
Georgia:				Youngstown.....	0	3	
Atlanta.....	0	40		Zanesville.....	0	12	
Augusta.....	0	1		Pennsylvania:			
Illinois:				Braddock.....	0	3	
Chicago.....	2	6		Johnstown.....	0	1	
Indiana:				Philadelphia.....	0	1	
Fort Wayne.....	1	1		Pittsburgh.....	0	1	
Gary.....	0	4		South Carolina:			
Hammond.....	0	3		Columbia.....	0	1	
Indianapolis.....	0	5		Greenville.....	0	1	
Muncie.....	0	10		Tennessee:			
Iowa:				Knoxville.....	0	5	
Clinton.....	0	5		Texas:			
Kansas:				El Paso.....	0	1	
Hutchinson.....	0	1		Fort Worth.....	0	1	
Lawrence.....	0	1		Waco.....	0	1	
Wichita.....	1	2		Vermont:			
Louisiana:				Burlington.....	0	6	
Shreveport.....		6		Virginia:			
Michigan:				Roanoke.....	0	1	
Detroit.....	3	20		Washington:			
Flint.....	0	5		Spokane.....	6	9	
Grand Rapids.....	0	1		Tacoma.....	0	5	
Hamtramck.....	0	1		Walla Walla.....	4	1	
Highland Park.....	0	12		West Virginia:			
Jackson.....	0	4		Bluefield.....	0	1	
Kalamazoo.....	0	3		Wisconsin:			
Minnesota:				Milwaukee.....	2	1	
Duluth.....	0	6		Oshkosh.....	1	1	
Minneapolis.....	10	6					
St. Paul.....	12	10					

TETANUS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Georgia:			Kentucky:		
Savannah.....		3	Louisville.....		1

CITY REPORTS FOR WEEK ENDED DECEMBER 15, 1923—Continued.

TUBERCULOSIS.

See p. 35; also Current State summaries, p. 22.

TYPHOID FEVER.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years arc incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Dec. 15, 1923.		City.	Median for previous years.	Week ended Dec. 15, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
Alabama:				New Hampshire:			
Birmingham.....	2	.....	1	Keene.....	0	.....	1
Mobile.....	0	1	.....	New Jersey:			
California:				Bayonne.....	0	1	.....
Long Beach.....	0	1	.....	Camden.....	0	2	.....
Los Angeles.....	2	2	.....	Elizabeth.....	0	1	.....
San Diego.....	0	1	.....	Jersey City.....	0	1	.....
San Francisco.....	1	2	2	Newark.....	0	2	.....
Connecticut:				New York:			
Danbury.....	0	1	.....	Ithaca.....	0	1	.....
Greenwich.....	0	1	.....	New York.....	13	20	2
District of Columbia:				North Tonawanda.....	0	1	.....
Washington.....	3	1	1	Rochester.....	0	1	.....
Florida:				North Carolina:			
St. Petersburg.....	0	1	.....	Rocky Mount.....	0	.....	1
Georgia:				Ohio:			
Atlanta.....	0	.....	1	Cleveland.....	3	2	.....
Augusta.....	1	1	.....	Toledo.....	1	1	.....
Brunswick.....	0	1	.....	Oklahoma:			
Savannah.....	1	2	.....	Shawnee.....	.....	1	.....
Illinois:				Oregon:			
Chicago.....	4	41	5	Portland.....	0	1	1
Cicero.....	0	2	.....	Pennsylvania:			
Evanston.....	0	1	.....	Allentown.....	0	2	.....
Galesburg.....	0	1	.....	Dickson City.....	0	1	.....
Kewanee.....	0	1	1	Erie.....	0	2	.....
Oak Park.....	0	2	.....	Philadelphia.....	4	7	.....
Quincy.....	0	1	.....	Shenandoah.....	0	1	.....
Indiana:				Washington.....	0	2	.....
Fort Wayne.....	0	13	5	Tennessee:			
Hammond.....	0	1	.....	Knoxville.....	0	2	2
Indianapolis.....	1	.....	1	Memphis.....	0	1	.....
Louisiana:				Texas:			
New Orleans.....	2	1	1	Beaumont.....	0	1	.....
Shreveport.....	.....	1	.....	Dallas.....	1	3	2
Maryland:				Galveston.....	0	1	.....
Baltimore.....	3	2	.....	San Antonio.....	0	1	.....
Frederick.....	0	1	.....	Vermont:			
Massachusetts:				Burlington.....	0	.....	1
Boston.....	1	4	.....	Virginia:			
Springfield.....	0	1	.....	Newport News.....	.....	1	.....
Michigan:				Richmond.....	0	2	1
Detroit.....	3	2	1	West Virginia:			
Flint.....	0	.....	1	Charleston.....	0	2	.....
Minnesota:				Wheeling.....	1	1	.....
St. Paul.....	0	2	.....	Wisconsin:			
Missouri:				Ashland.....	0	.....	1
St. Louis.....	2	1	1	Green Bay.....	0	1	.....

TYPHUS FEVER.

City.	Cases.	Deaths.
California:		
Los Angeles.....	1	.....

CITY REPORTS FOR WEEK ENDED DECEMBER 15, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Alabama:										
Anniston.....	17,734	5	1						1	
Birmingham.....	178,806	60	4		8		4		9	5
Dothan.....	10,034	3	1		24					
Mobile.....	60,777	19					1			
Montgomery.....	43,464	17	2		5		6		1	
Selma.....	15,589		1		22				1	
Tuscaloosa.....	11,996		1		2					
Arkansas:										
Fort Smith.....	28,870		1				1			
Little Rock.....	65,142		4		1		1		1	
North Little Rock.....	14,045		1						2	
California:										
Alameda.....	28,806	3	9		2					
Bakersfield.....	18,638	8	3							
Berkeley.....	56,036	7	1		22		1		2	1
Eureka.....	12,923	8			1		1			
Glendale.....	13,536	14		1						
Long Beach.....	55,593	26	8	1	1		8			
Los Angeles.....	576,673	258	73	4	6		48		53	25
Oakland.....	216,261	65	33	4	5		14			2
Pasadena.....	45,354	13	2						2	
Richmond.....	16,843	3			2					
Riverside.....	19,341	9			3		6			
Sacramento.....	65,908	28	8		1		3		1	1
San Bernardino.....	18,721	14	2		2		6			3
San Diego.....	74,683	38	3		3		9		1	3
San Francisco.....	506,676	171	36	3	136		49		22	16
Santa Ana.....	15,485	8	1		1		2			1
Santa Cruz.....	10,917	4			15		1	1		
Vallejo.....	21,107	3	1		1		7			
Colorado:										
Boulder.....	11,006	3			48					
Denver.....	256,491	57	21		17		23			10
Pueblo.....	43,050	9	6	1	5		3			1
Trinidad.....	10,906		1		2					
Connecticut:										
Bridgeport.....	143,555	34	9				10		10	4
Bristol.....	20,620	1					2			
Danbury (city).....	18,943	7					3		1	
Fairfield (town).....	11,475	1							1	
Greenwich (town).....	22,123				47					
Hartford.....	138,036	35	9	1			9		5	3
Manchester (town).....	18,370	0	1				1			
Meriden (city).....	29,867				67					
Milford (town).....	10,193	0	1							
New Haven.....	162,537	50	3	1	5		10		4	5
New London.....	25,688	7					1		1	
Norwich (city).....	22,304	9	3	1					1	1
Waterbury.....	91,715	17	13	1			22	1		1
District of Columbia:										
Washington.....	437,571	111	14	1	7		26		22	11
Florida:										
St. Petersburg.....	14,237	9		1	35					
Tampa.....	51,608	15	1		14				1	2
Georgia:										
Atlanta.....	200,616	71	2		73	1	7		1	4
Augusta.....	52,548	20							1	4
Brunswick.....	14,413	4							1	
Macon.....	52,995				20				3	
Rome.....	13,252				30		1			
Savannah.....	83,252	42			6				2	4
Idaho:										
Boise.....	21,393	1			1		1			
Illinois:										
Alton.....	24,682	4	3	1						
Aurora.....	36,397	12	8				9		2	
Berwyn.....	14,150	3	1		9		1		1	
Bloomington.....	28,725	5			1		5			
Centralia.....	12,491	1	1							
Chicago.....	2,701,705	586	135	7	74	1	112	5	130	34
Cicero.....	44,995	8			2				1	
Darville.....	33,776	11	1				1			
East St. Louis.....	66,767	12	1				1			
Elgin.....	27,454	4			2		2			1

CITY REPORTS FOR WEEK ENDED DECEMBER 15, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Illinois—Continued.										
Evanston.....	37,234	7	8				8			
Forest Park.....	10,768	0	1			3				
Freeport.....	19,669	5					2		2	
Galesburg.....	21,834	7	1			3			1	
Jacksonville.....	15,713	3					4		1	
Kewanee.....	16,026	7				2	5			
La Salle.....	13,050	4	1							
Mattoon.....	13,552		3				2		1	
Murphysboro.....	10,703	4							1	
Oak Park.....	39,858	15			1		7			1
Pekin.....	12,086		2				1			
Quincy.....	35,978	5								
Rock Island.....	25,177	7	6	1	104				1	
Rockford.....	65,651	19					1			
Springfield.....	59,183	22	2	1			2		7	1
Indiana:										
Anderson.....	29,767	11			46		6			
Bloomington.....	11,595	5	1				1			1
Crawfordsville.....	10,139	3			1					
East Chicago.....	35,967	11			4		2			1
Elwood.....	10,790	3			33					
Evansville.....	85,264		2				4			
Fort Wayne.....	86,549	31	10				5			3
Frankfort.....	11,585	3			13					
Gary.....	55,378	18	8				15		1	
Hammond.....	36,034	5	2				3			
Huntington.....	14,000	3								
Indianapolis.....	314,194	111	15		1		2		16	4
Kokomo.....	30,067	7	9	1	2					
La Layette.....	22,486	8	1				1			
Logansport.....	21,626	3	2						1	
Mishawaka.....	15,195	2			1		2			
Muncie.....	36,524	7	3				1			3
Newcastle.....	14,458	3	1							
Richmond.....	26,765						1			
South Bend.....	70,983	12	17		1		14		1	
Terre Haute.....	66,983	13	4				4			1
Iowa:										
Burlington.....	24,057	15	1							
Cedar Rapids.....	45,566		4				9			
Clinton.....	24,151		12							
Davenport.....	56,727		6		35					
Dubuque.....	39,141		7		1		2			
Iowa City.....	11,267		1				3			
Muscatine.....	16,068	3	1		5		1			
Sioux City.....	71,227		9		40		5			
Waterloo.....	36,230	1	2				5			
Kansas:										
Atchison.....	12,630		1		9					
Coffeyville.....	13,452	2	1						1	
Fort Scott.....	10,693	4	2							
Hutchinson.....	21,298						3			
Lawrence.....	12,456	2					2			
Leavenworth.....	16,912				7		1			
Parsons.....	16,028		17		1		1			
Topeka.....	50,022	10	4						2	1
Wichita.....	72,217	23	12		7		4		2	
Kentucky:										
Covington.....	57,121	10	4		2		3		1	
Henderson.....	12,169	3								
Lexington.....	41,534	22			1		1		2	2
Louisville.....	234,891	72	11	1	3		3		8	1
Owensboro.....	17,424		1							
Louisiana:										
New Orleans.....	387,219	151	2		22		6	1	21	13
Shreveport.....	43,874	15	1	1	20					
Maine:										
Auburn.....	16,985	5								1
Bangor.....	25,978		2		4					
Bath.....	14,731	1								
Biddeford.....	18,008	5	2		1				2	
Lewiston.....	31,791	17	1		2				2	
Portland.....	69,272	15	4		7		2			
Sanford (town).....	10,691	2	1				2		2	
Waterville.....	13,351				5		2			

CITY REPORTS FOR WEEK ENDED DECEMBER 15, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Maryland:										
Baltimore.....	733,826	216	34	1	22		43	1	24	17
Cumberland.....	29,837	3			1		1		1	
Frederick.....	11,066	4	4		1					
Massachusetts:										
Amesbury (town).....	10,036	2								
Arlington (town).....	18,665	4	1						4	
Attleboro.....	19,731	4								
Belmont (town).....	10,749	7								
Beverly.....	22,561	4			7		2			
Boston.....	748,060	180	88	4	52	1	96	1	40	9
Braintree (town).....	10,580	2					1			1
Brockton.....	66,254	11	10				6		2	
Brookline.....	37,748	10			1		3		2	
Cambridge.....	109,694	30	4		7		28		2	2
Chelsea.....	43,184	10	1		4		2		2	
Chicopee.....	36,214	5								
Clinton.....	12,979	2			2		3			
Danvers.....	11,108				6		3		1	
Dedham.....	10,792	0								
Easthampton.....	11,261				10		4		3	
Everett.....	40,120	5	6				6		2	
Fall River.....	120,485	23	5				5		3	
Gardner.....	16,971	4			1		1			
Greenfield.....	15,462	6	1							
Haverhill.....	53,884	17	6		2		4		2	2
Lawrence.....	94,270	18	9	1	7				1	1
Leominster.....	19,744	1			3		3		2	
Lowell.....	112,759	30	3		1		2		6	3
Lynn.....	99,148	22	2		3		8		3	4
Malden.....	49,103	7	1		2		3			
Medford.....	39,038	10	4	1			8		3	
Malrose.....	18,204	6					1		1	
Methuen.....	15,189	6	3	1					1	
New Bedford.....	121,217	15	1				1		5	3
Newburyport.....	15,618	6							1	1
Newton.....	46,054	8	7	2	4		9		2	
Northampton.....	21,951	12					1		1	
Peabody.....	19,552	1	2				8			
Pittsfield.....	41,763	12	4	1	33		5			
Plymouth.....	13,045	2								
Quincy.....	47,876	4	7				4		3	1
Salem.....	42,529	14	1		3		12			1
Somerville.....	93,091	17	7		1		10		4	1
Southbridge.....	14,245	2	1							
Springfield.....	129,614	23	4		6		10	1	1	1
Wakefield.....	13,025	1					3		1	
Waltham.....	30,915	6	11		6		2			
Watertown.....	21,457	3	3		3		1			
Webster.....	13,258		1							
West Springfield.....	13,443	4								
Westfield.....	18,604	2							1	
Winchester.....	10,485	2	3				2			
Winthrop.....	15,455	4			1		2		1	
Woburn.....	16,574	2								
Worcester.....	179,754	41	15	1	2		27		9	2
Michigan:										
Alpena.....	11,101				24					
Ann Arbor.....	19,516	13	1		7					1
Battle Creek.....	36,164		5				14			
Benton Harbor.....	12,233	0			1		1			
Detroit.....	993,678	253	69	9	71		78	2	14	18
Flint.....	91,599	21	14	1	27		3			1
Grand Rapids.....	137,634	25	6		3		15		4	1
Hamtramck.....	48,615	4	7				2			
Highland Park.....	46,499	9			2		7		2	
Holland.....	12,183				1		5			
Ironwood.....	15,739	1					7			
Ishpeming.....	10,500	0					3			
Jackson.....	48,374	5	2				9		1	
Kalamazoo.....	48,487		8	1	1		4		2	2
Marquette.....	12,718	3			17		1			
Muskegon.....	36,570	5	4				7			
Pontiac.....	34,273	12	5		1		12			1

CITY REPORTS FOR WEEK ENDED DECEMBER 15, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
New York—Continued.										
Glens Falls.....	16,638	6					1			
Hornell.....	15,025	8								
Hudson.....	11,745	2								
Ithaca.....	17,004	6								
Lackawanna.....	17,918	3	1		4				1	
Little Falls.....	13,029	3								
Lockport.....	21,308	12			13		5			
Mount Vernon.....	42,726	8								
New York.....	5,620,048	1,289	185	18	270	4	182		1,209	194
Newburgh.....	30,366	1					2			1
Niagara Falls.....	50,760	11	2		7		3			
North Tonawanda.....	15,482	5					3			
Olean.....	20,506	7					2			
Ossining.....	10,739	2								
Peekskill.....	15,868	5	1							
Poughkeepsie.....	35,000	9					5		1	
Rochester.....	295,750	54	6	1	1		17	1	8	
Saratoga Springs.....	13,181	5	2		1				4	
Schenectady.....	88,723	16	9		54		5		4	
Syracuse.....	171,717	29	7		21	1	33		7	
Troy.....	72,013	29	14		41		2		7	
Watertown.....	31,285	8			3					
White Plains.....	21,031	6	1		4		1		3	
Yonkers.....	100,176	19	4		1		3			
North Carolina:										
Durham.....	21,719	6	1		3				1	1
Greensboro.....	43,525	10	1		3					1
Raleigh.....	24,418	12	1		1		2			1
Rocky Mount.....	12,742	8								1
Salisbury.....	13,884	2								
Wilmington.....	33,372	10			7		2			1
Winston-Salem.....	48,395	14	1		69	1			1	1
North Dakota:										
Grand Forks.....	14,010		1				3			
Ohio:										
Akron.....	208,435	33	4		1		11		1	
Ashtabula.....	22,082	2	2						1	
Barberton.....	18,811	3								
Bucyrus.....	10,425	5	6				4		2	
Cambridge.....	13,104	5	2	2			1		1	
Canton.....	87,091	21	13		2					1
Chillicothe.....	15,831	3	1				1			
Cincinnati.....	401,247	101	16		10		17	1	11	5
Cleveland.....	796,841	174	46	1	11		33	1	47	11
Cleveland Heights.....	15,236						1			
Columbus.....	237,031	78	16				8		4	4
Dayton.....	152,559	28	14				9		4	
East Liverpool.....	21,411		3				1		1	
East Youngstown.....	11,237	1								1
Findlay.....	17,021	5					3			
Fremont.....	12,468	2					1			
Lancaster.....	14,706	3	2				1		2	1
Lima.....	41,326	11	2		3		2			1
Lorain.....	37,295		6				21		1	
Mansfield.....	27,824	6	1		1		3			
Martins Ferry.....	11,634	3					1		1	
Middletown.....	23,594	2							2	1
New Philadelphia.....	10,718				32		1		1	
Newark.....	26,718	6								
Niles.....	13,080	2	3							
Norwood.....	24,966	2	1				1			
Piqua.....	15,044	6							2	
Salem.....	10,305	2							1	
Sandusky.....	22,897	10					4			
Springfield.....	60,840	29					13		1	
Steubenville.....	28,508	8	1		1		2		7	
Tiffin.....	14,375	5								
Toledo.....	243,164	76	31	1	2		24		8	5
Youngstown.....	132,358	22	15	1	1		5			
Zanesville.....	29,569	9			1		2			

1 Pulmonary only.

CITY REPORTS FOR WEEK ENDED DECEMBER 15, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Oklahoma:										
Oklahoma	91,295	19	2	1	4		3		1	
Shawnee	15,348	7			3					
Tulsa	72,075						2		1	
Oregon:										
Portland	259,288		72	3	561	2			16	4
Pennsylvania:										
Allentown	73,502		7				2			
Altoona	60,331		2				3			
Ambridge	12,730						9			
Berwick	12,181						4			
Bethlehem	50,358		5		2		4		1	
Bradock	20,879		3				1		1	
Bradford	15,525				8					
Butler	23,778		1				1			
Carbondale	18,640				28		1			
Carlisle	10,916						4			
Carrick	10,504		1				3		1	
Chambersburg	13,171						1			
Chester	58,030		2				1			
Coatesville	14,515						2			
Connellsville	13,804		3				1			
Dickson	11,049		1		1					
Dubois	13,681		2				1			
Duquesne	19,011		1		1				3	
Eric	93,372		9		4		16		5	
Farrell	15,566		9				3			
Greensburg	15,033		1		1					
Harrisburg	75,917		3		4		7			
Hazleton	32,277		3				1			
Homestead	20,452		1				1			
Jeannette	10,627		2							
Johnstown	67,327		3		1		4			
McKees Rocks	16,713		8				2			
McKeesport	46,781		1							
Monessen	18,179		1							
Mount Carmel	17,469		2						3	
New Castle	44,938		2							
New Kensington	11,987		2				1		1	
Norristown	32,319		1							
North Braddock	14,928		2		1					
Oil City	21,274						1			
Philadelphia	1,823,779	493	98	6	41	1	41	2	45	29
Pittsburgh	538,343	169	25	3	12		49		12	9
Plymouth	16,500		3							
Pottstown	17,431						1			
Pottsville	21,876				1		1			
Reading	107,784		2				1			
Scranton	137,783		1		8		2			
Sharon	21,747		3				1			
Shenandoah	24,726		2							
Steelton	13,428				2		3			
Sunbury	15,721		2				1			
Uniontown	15,692		2				1			
Warren	14,272		1				9			
Washington	21,480		2		69		2			
West Chester	11,717		2		1					
Wilkes-Barre	73,833		3				3		1	
Wilkesburg	24,403		5				3		1	
York	47,512						2			
Rhode Island:										
Cranston	29,407	6			1		6			
Cumberland (town)	10,077	2	1				4			
Pawtucket	64,248	17	2				1			
Providence	237,595	68	11		3		49			5
South Carolina:										
Charleston	67,957	35	1		44	1	4			1
Columbia	37,524	19			106		1			2
Greenville	23,127	15			1					1
South Dakota:										
Sioux Falls	25,202	3			21		1			
Tennessee:										
Chattanooga	57,895		1							
Knoxville	77,818				16		4	2	4	4
Memphis	162,351	55	2		5		6		8	5
Nashville	118,342	52	6				5		4	4

CITY REPORTS FOR WEEK ENDED DECEMBER 15, 1923—Continued.

DIPHThERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Texas:										
Amarillo.....	15,494	2					1			
Beaumont.....	49,422	13	2				7			
Corpus Christi.....	10,522	4	3	1						
Dallas.....	158,976	30	22		179				1	
El Paso.....	77,560	17	2				7		7	6
Fort Worth.....	106,482	21	5		4		1		4	
Galveston.....	44,255	13								
Houston.....	138,276	41	3	3			5			3
San Antonio.....	161,379	51	3	3	2	1	1		2	8
Waco.....	38,500	16	3							
Utah:										
Salt Lake City.....	118,110	42	1		8				1	1
Vermont:										
Barre.....	10,008	1					2			
Burlington.....	22,779	6	1				1			1
Virginia:										
Alexandria.....	18,060	5								
Charlottesville.....	10,688						1			
Lynchburg.....	30,070	11	2		1					2
Newport News.....	35,596	7	3		5		1			
Norfolk.....	115,777	2	2		12		5		6	3
Petersburg.....	31,012	8			1					
Portsmouth.....	54,387	13	5		1					3
Richmond.....	171,667	37	9		7		7		8	7
Roanoke.....	59,842	13	3				4		2	
Washington:										
Bellingham.....	23,585		2		3					
Evreott.....	27,644				6		1			
Seattle.....	315,312		11		120		13			
Spokane.....	104,437		1		596		14			
Tacoma.....	96,965				21		5			
Vancouver.....	12,637				26		1			
Walla Walla.....	15,501		13							
Yakima.....	18,539				96					
West Virginia:										
Bluefield.....	15,282	3								
Charleston.....	39,608	14	3				1			2
Fairmont.....	17,851						4			
Huntington.....	50,177	25	1				2	1		4
Morgantown.....	12,127		1				3			1
Parkersburg.....	20,050	6					1			
Wheeling.....	56,208	17	3				5		6	1
Wisconsin:										
Appleton.....	19,561	6	3				2			
Ashland.....	11,334	12					1			
Beloit.....	21,284	3	2		1		7		2	
Eau Claire.....	20,906				1		5			
Fond du Lac.....	21,427						7			
Green Bay.....	31,017		3		1		8			
Janesville.....	18,291	2					4			
Kenosha.....	40,472	6	5		1		1			
La Crosse.....	30,421						5			
Madison.....	38,378		8		3		4		1	
Manitowoc.....	17,563	3	3		1					
Marinette.....	13,610	1							5	
Milwaukee.....	457,147		25		1		30		12	5
Oshkosh.....	33,162	8			1		1			
Racine.....	58,593	15	4	1			31		2	
Sheboygan.....	30,955	6	5				6	1		
Stevens Point.....	11,371						7			
Superior.....	39,671	11					3			
Waukesha.....	12,558	3	1							
Wausau.....	18,661	3	10		1					
West Allis.....	13,745		4							

FOREIGN AND INSULAR.

BRAZIL.

Yellow Fever—Pernambuco.

Under date of November 16, 1923, three cases of yellow fever with two deaths were reported in the city of Pernambuco, Brazil. The disease was said to have been contracted in Olinda, a northern suburb of Pernambuco.

JAMAICA.

Smallpox (Reported as Alastrim).

During the week ended December 8, 1923, 13 cases of smallpox (reported as alastrim) were reported in the Island of Jamaica. Of these, one case was reported in the Parish of Kingston.

Typhoid Fever—Kingston and Vicinity.

During the same period, five cases of typhoid fever were reported at Kingston and one case was reported in the surrounding country.

POLAND.

Communicable Diseases—September 23—October 6, 1923.

Communicable diseases have been notified in Poland as follows:

SEPTEMBER 23-29, 1923.

Disease.	Cases.	Deaths.	Districts showing the greatest number of deaths.
Cerebrospinal meningitis.....	5	5	Lodz; Silesia.
Diphtheria.....	98	11	Posen.
Measles.....	212	4	Warsaw.
Scarlet fever.....	429	35	Tarnopol.
Smallpox.....	8	1	Kracow.
Tuberculosis.....	106	131	Warsaw.
Typhoid fever.....	335	25	Wilno.
Typhus fever.....	41	2	Kielce; Lwow.
Typhus fever, recurrent.....	5	-----	
Whooping cough.....	89	10	Lublin.

SEPTEMBER 30-OCTOBER 6, 1923.

Cerebrospinal meningitis.....	4	2	Lodz.
Diphtheria.....	81	12	Lwow.
Measles.....	233	5	Warsaw.
Scarlet fever.....	475	34	Tarnopol.
Smallpox.....	3	1	Kielce.
Tuberculosis.....	86	173	Warsaw.
Typhoid fever.....	477	26	Lodz.
Typhus fever.....	40	4	Galicia and former Russian Poland.
Typhus fever, recurrent.....	20	-----	
Whooping cough.....	65	7	Lodz.

Dysentery.

During the period under report there were notified in Poland 617 cases of dysentery with 105 deaths. The greatest mortality from the disease was reported in the districts of Krakow and Posen.

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

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended January 4, 1924.¹

¹ From medical officers of the Public Health Service, American consuls, and other sources. For reports received from June 30 to Dec. 28, 1923, see Public Health Reports for Dec. 28, 1923. The tables of epidemic diseases are terminated semiannually and new tables begun.

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India: Calcutta.....	Nov. 11-17.....	10	7	

PLAGUE.

Bolivia: La Paz.....	Oct. 1-31.....		3	
Brazil: Bahia.....	Nov. 11-17.....	1	1	
India: Bombay.....	Oct. 28-Nov. 3.....	1		
Karachi.....	Nov. 11-17.....	12	8	
Madras Presidency.....	Nov. 4-10.....	102	62	
Rangoon.....	do.....	3	2	
Syria: Beirut.....	Nov. 1-10.....	1		

SMALLPOX.

Bolivia: La Paz.....	Oct. 1-31.....	10	4	
Canada: Saskatchewan— Regina.....	Dec. 9-15.....	1		
China: Hongkong.....	Oct. 28-Nov. 3.....	47	43	
Colombia: Bucnaventura.....	Nov. 18-Dec. 1.....	6		
Greece: Saloniki.....	Oct. 22-Nov. 4.....		7	
India: Bombay.....	Oct. 28-Nov. 3.....	7	1	
Madras.....	Nov. 4-10.....	3	1	
Rangoon.....	do.....	3	1	
Iraq: Bagdad.....	Oct. 24-Nov. 6.....	5	2	
Jamaica.....				Dec. 2-8, 1923: Cases, 13 (reported as alastrim).
Kingston.....	Dec. 2-8.....	1		
Java: West Java— Batavia.....	Oct. 27-Nov. 2.....	1	3	
Mexico: Vera Cruz.....	Nov. 3-9.....		1	
Portugal: Lisbon.....	Nov. 11-Dec. 1.....	5	1	
Sierra Leone: Sherbro District— Tagbail.....	Nov. 1-15.....	3		
Spain: Valencia.....	Nov. 25-Dec. 1.....	32	4	
Syria: Damascus.....	Nov. 16-22.....	1		
Tunis: Tunis.....	Oct. 27-Nov. 2.....	5	1	
Union of South Africa: Capo Province.....	Oct. 28-Nov. 3.....			Outbreaks.
Natal.....	do.....			Do.
Orange Free State.....	do.....			Do.

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

Reports Received During Week Ended January 4, 1924—Continued.

TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Bolivia:				
La Paz.....	Oct. 1-31.....	6		
Poland.....				Sept. 23-Oct. 6, 1923: Cases, 81; deaths, 6.
Union of South Africa:				
Cape Province.....	Oct. 28-Nov. 3.....			Outbreaks.
Natal.....	do.....			Do.
Transvaal.....	do.....			Do.

YELLOW FEVER.

Brazil:				
Pernambuco City.....	Nov. 16.....	3	2	

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