

# PUBLIC HEALTH REPORTS

VOL. 39.

MARCH 28, 1924.

No. 13

## EPIDEMIC OF TYPHOID FEVER AND OTHER INTESTINAL DISEASES IN EVERETT, WASH., JULY, 1923.

By C. E. DORISY, State Sanitary Engineer.

Everett, Wash., a seaport of approximately 30,000 inhabitants, obtains its water from the Sultan River, a mountain stream, through a long wood-stave pipe line. In 1922, as a result of floods, forest fires, and breaks in the pipe-line, contamination began to occur frequently in the water; and, upon the order of the State Health Department, the city commissioners installed two Wallace & Tiernan chlorinators at the intake. Since that time, the water has been of good sanitary quality, as shown by the following bacteriological averages found in the State laboratory:

|                                   |     |
|-----------------------------------|-----|
| <i>B. coli</i> per 100 c. c. .... | 0   |
| 37° C.: Bacteria per c. c. ....   | 5   |
| 20° C.: Bacteria per c. c. ....   | 145 |

On or about July 12, 1923, numerous cases of diarrhea began to appear in the Riverside district, along Pine, Maple, Cedar, Walnut, and Chestnut Streets. The area extended gradually, until a large portion of the city became involved. The prevalence of the disease soon gave rise to a rumor that the city water was contaminated, and prompted the acting local health officer (the health officer being on leave of absence at that time) to consult with the water superintendent concerning the possible contamination of the city water.

That official had already, as a matter of routine, caused to be analyzed in a commercial laboratory of Everett, several samples of water taken from the business section of the city. They were reported as contaminated in every 10 c. c. portion of sample. Previous analyses of samples of chlorinated water from the reservoir had shown that the water at that place was satisfactory, and the possibility of contamination after chlorination had not been considered.

Up to this time none of the cases of intestinal trouble had appeared to be serious enough to warrant reporting to the State Board of

Health. However, on July 17 four samples of the city water, collected from various taps in the Riverside district, were forwarded to the State laboratory. The reasons for forwarding the samples were not stated, and the department was not aware that an outbreak of intestinal trouble was under way in Everett.

On July 20, the State Board of Health was informed by telephone by a local physician, a former member of the State Board of Health, that a considerable number of diarrhea cases were occurring in his practice. The State Board of Health immediately communicated with the city authorities of Everett, who stated that reports had been heard of a few scattered cases of diarrhea of a mild type, but that there was no cause for concern as such cases were not unusual at that season of the year.

On July 23 this physician reported that the situation was growing serious and requested that some one be sent to Everett as soon as possible to determine the cause of this sickness.

On the morning of July 23 the analyses of the four samples collected in Everett on the 17th were completed and showed the following results:

| Laboratory No. | Tap where collected.                | B. coli<br>per<br>100 c. c. | 37° C.:<br>Bact.<br>per c. c. | 20° C.:<br>Bact.<br>per c. c. |
|----------------|-------------------------------------|-----------------------------|-------------------------------|-------------------------------|
| W 564.....     | 2606 Harrison Street.....           | 100                         | 375                           | 7,000                         |
| W 562.....     | 3130 Maple Street.....              | 100                         | 130                           | 675                           |
| W 561.....     | 3202 Maple Street.....              | 100                         | 160                           | 1,700                         |
| W 563.....     | 3311 Pine Street <sup>1</sup> ..... | 1,000                       | 8,000                         | 10,000+                       |

<sup>1</sup> The nearest point to the 6-inch connection described below.

The same day (July 23) Dr. Paul A. Turner, director of health of the State of Washington, Dr. A. U. Simpson, epidemiologist, and the writer, proceeded to Everett to investigate the outbreak.

It was ascertained that although the epidemic had already spread in a milder form to the business section of the city, it had its origin in the Riverside district, on the banks of the Snohomish River, and that many of the workers in the numerous mills located in that vicinity were already affected by it.

As a number of the mills in the Riverside district along the Snohomish River were provided with dual fire protection systems which enabled them to run the polluted water of the river and the chlorinated water from the reservoir into a common main in case of fire, the investigators immediately suspected that the drinking water was being polluted by river water which gained access to the drinking water mains through a faulty cross-connection.

The opinion that local contamination was occurring following chlorination was borne out by the analyses of samples of water col-

lected by the State Board of Health on July 23. The analyses were as follows:

| Laboratory No. | Source of sample.                    | B. coli<br>per<br>100 c. c. | 37° C.:<br>Bact.<br>per c. c. | 20° C.:<br>Bact.<br>per c. c. |
|----------------|--------------------------------------|-----------------------------|-------------------------------|-------------------------------|
| W 594.....     | Reservoir inlet.....                 | 0                           | 7                             | 8                             |
| W 597.....     | Reservoir No. 2.....                 | 2                           | 21                            | 1                             |
| W 598.....     | Faucet, 1316 Grant Avenue.....       | 0                           | 3                             | 105                           |
| W 598.....     | Running faucet, 2318 Cleveland.....  | 100                         | 60                            | 200                           |
| W 599.....     | 3218 Maple.....                      | 1,000                       | 3,700                         | 6,900                         |
| W 595.....     | Eclipse Mill, drinking fountain..... | 1,000                       | 130                           | 650                           |

A glance at the city map showed that cases of the disease were most numerous in the vicinity of the Eclipse Mill, in which cross-connections of the character above described were present. The Eclipse Mill, therefore, was made the starting point of a general investigation which lasted three days and established the following facts:

For the purpose of improving their means of combating fire, the Eclipse Mill Co. had, during the first part of 1923, requested the city commission to lay an additional 6-inch main connecting a dead end at Thirty-third and Pine Streets with an existing hydrant located on the Northern Pacific Railway tracks, in a city block adjacent to the mill.

On March 19, 1923, the city commission had authorized this work, which was completed during the first days of July, when the chlorinated city water was permitted to flow through the new main. A gate valve installed on this new line was kept open because, as the water superintendent said, "the water department wanted to get the benefit of the circulation system." For the same reason, no check valve was installed there at that time.

On July 10, 1923, and in connection with some dredging operations conducted on the Snohomish River, a pump of a capacity of 1,000 gallons per minute (part of the Eclipse dual fire-protection system) was put into service by the mill company. The suction of this pump was located on the Snohomish, in tidewater, between the outfalls of 60-inch and 36-inch sanitary trunk sewers draining the same bank of the stream. In 1906, a by-pass had been laid around the meter by the water department to connect this pump with the city water mains. A gate valve was at that time installed on the by-pass; but for some time previous to the epidemic it had been kept open, which, however, was of no great consequence until the new 6-inch connection mentioned above was made, as the only danger then existing was the pumping of contaminated water into a dead end never used for drinking purposes.

The mill pump delivered water under a pressure of approximately 95 pounds; whereas, on account of some repairs being made at the

reservoir, the pressure in the city mains was unusually low at the time of the epidemic (82 pounds on July 23).

The map at the water department's office did not show the recently completed 6-inch connection, of which no permanent record had apparently been made previous to its construction. For that reason, a defective check valve was at first assumed to be the cause of the trouble, but the testing of both gate valves and check valves failed to reveal any mechanical defect. This, however, was not conclusive, as a chip or pebble which might have prevented the functioning of a check valve could have later been crushed or dislodged through variations of pressure, thus permitting the valve to close again.

In the meantime the following measures were taken with the cooperation of the local health, water, fire, and police departments, which the city commission had placed at the disposal of the sanitary engineer:

(1) The drinking fountains in the district affected were closed and barrels of ice water sterilized with calcium hypochlorite were at once supplied for the use of the mill workers.

(2) The dose of liquid chlorine introduced at the intake was increased to 4 pounds per million gallons.

(3) The fire department started a systematic and intensive flushing of the mains, the result of which was controlled by daily bacteriological tests. This flushing was carried on until all the samples from the various parts of the city showed the complete absence of *B. coli* and a very low bacterial count.

(4) Notice to boil the water was published daily in the local papers.

(5) Several contaminated wells and springs from which many residents were carrying their water were placarded or closed.

(6) An inspection was made of all the mills along the river and it was ascertained that the cross-connections at these various establishments were in good order. The manager of each plant was given the necessary instructions regarding the precautions to be taken against intestinal diseases, which, up to that time, consisted only of diarrhea and dysentery.

On July 24 the engineer of the Eclipse Mill Co. informed the State authorities of the 6-inch connection recently installed by the city and mentioned the fact that the large pump at the mill had for some time been "running faster than usual." Further investigation verified this statement and disclosed that the connection really afforded the means by which large quantities of polluted water had for 14 days entered the city mains. The connection was immediately ordered shut off and sealed.

On July 25 the first case of typhoid fever was reported to the local health officer, and in all, 77 cases were reported, the last contact cases occurring in the latter part of October. This total includes

one case at Raymond, Wash., and one in Tacoma, which were traced to the same source. At least 2,000 cases of diarrhea and dysentery were also due to this pollution of the water mains.

That the infection was severe is shown by the case fatality rate in this epidemic, there having been nine deaths from typhoid and two from dysentery.

As a result of the epidemic, the department issued the following order, dated July 30, 1923, and addressed to the mayor of Everett:

“Therefore, in virtue of section 5406 R. and R. Code, it is the order of this department—

“(1) That all check valves now in use for the purpose stated above (dual systems of fire protection) shall be immediately eliminated.

“(2) That all gate valves on dual systems shall immediately be sealed, it being understood that if such gate valves must be opened in a fire emergency, the person breaking this seal shall forthwith report the fact to the city health officer.

“(3) That the sealing of the gate valves shall be considered sufficient only for a period not exceeding 90 days from date, after which each mill shall be provided with an individual water tank, in order that even the gate valves may be eliminated.

“(4) That the city department of health shall be given absolute control over the chlorination of the water supply.

“(5) That the water superintendent shall not be permitted to construct any extensions to the water system without first submitting to the State Board of Health or to the city of Everett department of health, plans showing the transmission and distribution system for such an extension. (Sec. 70-d, State Board of Health, Rules and Regulations.)”

On January 14, 1924, the State Board of Health passed the following regulation prohibiting the use of cross-connections for any purpose unless both water supplies are of safe sanitary quality and the connection has received the approval of the State Board of Health.

#### WASHINGTON STATE DEPARTMENT OF HEALTH.

##### REGULATION PROHIBITING WATER CROSS-CONNECTIONS.

SECTION 70 (*k*) For the purpose of this regulation, a cross-connection is a physical arrangement whereby a public water-supply system is connected with another water-supply system, either public or private, in such a manner that a flow of water into such public water-supply system from such other water-supply system is possible.

(*l*) For the purpose of this regulation, a by-pass is a physical arrangement whereby water may be diverted around any feature of the purification process of a public water supply.

(*m*) For the purpose of this regulation, an emergency intake is an intake or other device capable of introducing water into the public

water system from a source of supply which, because of its unsafe characteristics, has not been approved for drinking and culinary purposes by the State Department of Health.

(n) All cross-connections are hereafter prohibited within the limits of the State of Washington unless both water supplies are of safe sanitary quality, and both supplies and the connection thereof have received the approval of the State Department of Health. All persons, firms, or corporations now having or maintaining any cross-connections as defined in paragraph (k) of this section, whether or not such cross-connections are controlled by automatic devices such as check valves, or by hand-operated mechanisms, such as gate valves or stop cocks, which may or may not be sealed, shall, on or before the 15th day of April, 1924, discontinue and physically separate all such cross-connections, unless both supplies and the connection thereof have received the approval of the State Department of Health.

(o) Failure on the part of persons, firms, or corporations to discontinue the use of any and all cross-connections and to physically separate such cross-connections before the 15th day of April, 1924, will be sufficient cause for the discontinuance of the public water service to the premises on which the cross-connections exist, unless the quality of the water from the two supplies used has been approved by the State Department of Health.

Provided, that, in the case of persons, firms, or corporations having installed before April 15, 1924, cross-connections consisting of two gate valves with indicator posts, two check valves of the factory mutual type with drip cocks and gauges for testing, all to be placed in a vault of water-tight construction accessible to ready inspection; the date of discontinuance of the same shall be extended until January 1, 1927: Provided further, that such cross-connections are subjected to such inspections as the State Department of Health deems proper, the expense of such inspections to be borne by the person, firm, or corporation using such a cross-connection.

(p) After January 1, 1927, public water supplies shall be made available for fire protection by the following methods only:

1. Construction of a pump well, or reservoir, to which the city mains are connected, pumps taking suction from well or reservoir and pumping to an elevated tank for storage and pressure; or
2. An elevated tank or standpipe supplied at the top and above the overflow by a connection from the city main. Such tank or standpipe may then be connected to the fire-protection system; or
3. Two independent systems or piping without any connection whatsoever, one being supplied from the city mains and the other from the independent water supply.

(q) No by-pass shall be established or maintained whereby water may be diverted around any feature of a purification process of a

public water-supply system, provided that with the specific approval of the State Department of Health, by-passes may be permitted around primary sedimentation basins, aerators, or mixing chambers.

(r) No emergency intake as defined in paragraph (m) of this section shall be established or maintained in connection with a public water-supply system.

---

## THE EFFECT OF *CHARA ROBBINSII* ON MOSQUITO LARVÆ.

By M. A. BARBER, Special Expert, United States Public Health Service.

The publications of Caballero on a supposed toxic effect of *Chara fetida* and of other species of *Chara* on mosquito larvæ have, of late years, aroused considerable interest respecting the possible use of these plants in the prevention of the breeding of *Anopheles*.

According to Caballero (1, 2, 3, 4) various pools and ponds occurring in certain regions of Spain did not harbor mosquito larvæ if *Chara fetida* grew abundantly in them, while pools lacking these plants contained larvæ plentifully. Larvæ of *Anopheles* and of *Aedes ægypti* developed poorly or not at all in aquaria containing *Chara*, but grew normally in controls. Larvæ developed in the crushed thallus of the plant, but failed to grow normally in water taken from pools in which *Chara* was growing. The author concluded that the harmful effect of *Chara* on larvæ was due to some toxin excreted by the living plant. Not only *Chara fetida* but also other species of *Chara* common in Spain produced this toxic effect.

Pardo (5), working in the rice fields of Valencia, reported that he had confirmed the theory of the value of *Chara* in destroying mosquito larvæ; that *Chara hispida* has a stronger larvicidal power than *Chara fetida* and is more suitable for propagation, since it may live at the bottom of water 10 ft. in depth. Alluaud (6) made a study of the use of *Chara* in antimosquito work in Morocco. He concluded that this plant does not bring about a complete elimination of mosquitoes, but that its use is a very valuable accessory control measure. He found no mosquito larvæ in the presence of *Chara connivens*. Vasconcelos (7) experimented with *Chara gymnohylla* in Mexico and concluded that this species has some toxic effect on mosquito larvæ. Officers (8) engaged in antimalaria work in Palestine have reported the finding of both *Culex* and *Anopheles* larvæ in ponds where *Chara fetida* was growing luxuriantly. Hacker (9) experimented on two species of *Chara* in the Federated Malay States and found that larvæ pupated normally in dishes containing these plants. A third species, however, seemed to act as a deterrent to mosquito breeding. Galamini (10) states that larvæ of *Anopheles bifurcatus* in Italy may hibernate in collections of water containing *Chara fetida*.

Some 50 species of *Chara* have been reported by Robinson (11) as occurring in North America; and of these, 36 species have been found in the United States, some of them abundantly. Little has been published regarding a possible larvicidal power of any species indigenous to this country. Metz (12) states that *Chara* is a relatively poor food for *Anopheles* larvæ, but that one specimen of *Anopheles quadrimaculatus* developed to maturity in it. Smith (13) found larvæ of *Anopheles punctipennis* in great numbers in fruiting *Chara*. Rucker (14) states that *Chara foliorosa*, growing abundantly in lakes of the Isthmus of Panama, has no inhibitory effect on the larvæ of *Anopheles albimanus*. On the contrary, it stimulates mosquito production. (*Chara foliorosa* is not listed by Robinson. *C. foliolosa* Muhl. is listed, with a distribution "Pennsylvania to South America.")

An opportunity was offered to make some observations on a local species of *Chara* by the appearance, in early August, 1923, of large amounts of *Chara robbinsii* Halstead<sup>1</sup> in the rice plots of the Rice Experiment Station at Crowley, La. This species was very plentiful at the margins of rice plots, within plots where the rice was short, and in pools and ditches near the rice. It was especially abundant where the water was exposed to the sun. It was fruiting freely, had a strong odor, and was often so thick as to form mats at the surface of the water. Larvæ of *Anopheles* and of various culicines could be found everywhere in the presence of this *Chara*. An attempt was made by dipping, to determine approximately the number of anopheline larvæ found in the presence of the *Chara*. A pan of about 1½ quarts' capacity was used, and each dip swept larvæ from a surface averaging roughly 50 square inches. An average of nearly 1,000 dips made in water containing *Chara* gave nearly one (0.8) anopheline larvæ per dip. Over 100 control dips made where *Chara* was not present, or present in very small quantity, gave an average of 0.7 anopheline larvæ per dip. Pupæ and larvæ of all sizes were found with the *Chara* and were especially abundant where the matted plant extended slightly above the surface of the water, affording more abundant food for the larvæ and more adequate protection against minnows. In such mats sometimes 4 or 5 larvæ could be taken at one dip.

Anopheline larvæ were also plentiful in ditches where *Chara* was very thick and in a pool where the water was not changed in the course of irrigation. In one plot of the Experiment Station the rice remained short throughout the summer and *Chara* was continually abundant all over it. Here anopheline larvæ averaged somewhat over one per dip. Anopheline larvæ in the presence of *Chara* were found in

---

<sup>1</sup> Specimens were identified by Mr. W. C. Purdy, Special Expert United States Public Health Service, and by Dr. W. R. Taylor of the Department of Botany, University of Pennsylvania.



various other rice fields in the neighborhood of Crowley, and in none of them was there any evidence of a harmful effect produced by the plant on mosquito larvæ.

Many laboratory experiments were done in aquaria varying in size from teacups to battery jars of 5 to 6 quarts capacity. The quantity of *Chara* tested in them varied in amount from a sprig or two to a mass nearly filling the container. *Chara* fresh from the field and that which had grown in the container for weeks was tested. In all, anopheline larvæ grew well, in many experiments from egg to adult, provided sufficient food was supplied them. *Anopheles* also developed to adults from eggs, or from larvæ just hatched, in an extract of green *Chara* crushed in a mortar and in the dried powdered plant. Washed and crushed oöspores of *Chara* were fed to anopheline larvæ. Fragments of oöspores, recognized by the large starch grains present in them, were found in the feces of the larvæ, proving that the oöspores had been ingested. No apparent harm resulted to the larvæ from this diet. *Anopheles* escaped in the laboratory laid eggs in a large container in which there had long grown an abundance of thriving *Chara*, and the eggs developed to imagoes. Food and temperature conditions being equal, there seemed to be no difference between the growth rate of *Anopheles* larvæ in *Chara*-containing aquaria and that observed in controls containing various other plants.

In cultures in which the *Chara* remained green and freshly growing, larvæ often developed slowly and frequently died out, provided their food supply was not supplemented. But if small quantities of rotten *Chara*, *Spirogyra*, or any decomposing plant were placed on small floats within convenient reach of the larvæ, the mosquitoes thrived well, notwithstanding the presence of the green *Chara* in the container. *Chara* alone, unless partly rotting, was apparently a poor source of food for larvæ, not furnishing a sufficient supply of disorganized plant cells or of microorganisms to support the larvæ properly. Certain other water plants, more or less tough in texture, were equally inhospitable. It is hardly conceivable that the products of decay formed by the small amounts of decomposing plants placed on the floats in our *Chara*-anopheline cultures could interfere with a toxic action of the green *Chara*. At all events, such products of decay are common under field conditions and would be quite as likely to interfere there with any toxic action of *Chara* when used in anti-anopheline work.

*Chara* alone proved an excellent culture medium for mosquito larvæ when enough of it was placed in a receptacle so that a portion of it would rot. *Anopheles quadrimaculatus* developed from egg to imago in this medium in 11 days, summer temperature, counting time from the night of oviposition to that during which imagoes

were formed. Part of the *Chara* remained fresh and living, as proved by its green color and by the microscopic examination of the thallus in which the rotation of the protoplasm could be observed. In some of our cultures a comparatively tough pellicle, largely bacterial in composition, formed and hindered the development of larvæ, especially of the newly hatched ones. *Chara*, however, seemed less likely to produce such pellicles than other plants used as controls. In the mixtures of rotting and green *Chara* a thick pellicle usually formed, but soon broke, allowing free admission of air and abundant food for the larvæ.

All three of the species of *Anopheles* common in this region, *A. quadrimaculatus*, *A. crucians*, and *A. punctipennis*, developed from egg to imago in *Chara*-containing cultures. *Aedes ægypti* developed imagoes within 16 days from eggs placed in a large beaker containing an abundance of green *Chara* and a few rotting leaves. *Culex quinquefasciatus* also developed normally in *Chara* cultures.

In all, over 50 laboratory experiments were done, and in none of them was there any evidence of the production by *Chara* of a toxin or of other substance harmful to mosquito larvæ. The mixture of living and rotting *Chara* proved to be such a good culture medium that we used it as a routine for developing mosquito larvæ.

Two species of *Nitella*, *N. gracilis* (Sm.) Ag. and *N. tenuissima* (Desv.) Kütz.<sup>2</sup>, occurred in considerable amount in rice fields and ditches in this region. Neither in the field nor in the laboratory did this genus, a member of the *Characeæ*, show any evidence of harmful influence on mosquito larvæ.

#### SUMMARY.

It is evident that whatever larvicidal power may be possessed by some species of *Chara*, this property is not common to the whole genus. It is recommended that in any test of the possible larvicidal effect of *Chara*, or of any other plant, the food requirements of the larvæ should be taken into consideration.

#### REFERENCES.

- (1) Caballero, Arturo.: Bol. R. Soc. Españ. de Hist. Nat. Madrid. 1919. Vol. 19, pp. 449-455.
- (2) ———: Anales d. Inst. Gen. y Téc. d. Valencia. 1920, Vol. 7, pp. 5-17.
- (3) ———: Revista de Hig. y de Tuberculosis. Valencia. September, 1920, p. 15.
- (4) ———: Bol. R. Soc. Españ. de Hist. Nat. Madrid. 1922. Vol. 22, pp. 61-64.
- (5) Pardo, L.: Bol. R. Soc. Españ. de Hist. Nat. Madrid. 1923, Vol. 23, pp. 154-157.
- (6) Alluaud, C.: Bull. Soc. Sci. Nat. Maroc. 1922, Vol. 2, pp. 3-6.
- (7) Vasconcelos, Angel Briosio: Am. Jour. Pub. Health. 1923, Vol. 13, pp. 543-546.

<sup>2</sup> Specimens were identified by Dr. Marshall A. Howe, curator of the New York Botanical Garden, New York City.

- (8) Proc. Sixth Meeting Anti-malaria Advisory Commission, Palestine. Nov. 30, 1922.
- (9) Hacker, H. P.: Supp. to F. M. S. Govt. Gaz. July 27, 1923, pp. 16-22.
- (10) Galamini, A.: Ann. d'Igiene. 1923, Vol. 33, pp. 627-639.
- (11) Robinson, Charles B.: The Chæreæ of North America. Bull. N. Y. Botan. Garden. Vol. 4, No. 13. 1906.
- (12) Metz, C. W.: Pub. Health Rep., 1919. Vol. 34, No. 32, pp. 1783-1791.
- (13) Smith, Cora A.: Psyche. 1914. Vol. 21, pp. 1-19.
- (14) Rucker, William Colby: The Nation's Health. 1924. Vol. 6, No. 1, p. 18.

## WORK OF THE MADISON COUNTY (ALA.) HEALTH DEPARTMENT.

The annual report of the Madison County (Ala.) Health Department for the calendar year 1923 presents a striking example of the work of a reasonably adequate and highly efficient whole-time county health service. Accurate morbidity and mortality records have been kept since the establishment of the health department in 1918, and these records picture the actual results which the health department is securing, measured by lives saved and sickness prevented.

*Vital Statistics.*—The following death rates per 1,000 population have been recorded for the county for the years 1916 to 1923, inclusive:

|           |       |  |           |       |
|-----------|-------|--|-----------|-------|
| 1916----- | 19. 6 |  | 1920----- | 15. 0 |
| 1917----- | 19. 0 |  | 1921----- | 12. 6 |
| 1918----- | 26. 2 |  | 1922----- | 13. 6 |
| 1919----- | 15. 4 |  | 1923----- | 14. 3 |

The death rate for the white population only for 1923 was 12.5 per 1,000; the colored rate, 17.0.

Attention is called to the fact that there has not been an epidemic of any of the contagious diseases (excepting influenza) since the establishment of the county health department. This is attributed to improved sanitary conditions, prompt reports of notifiable diseases by practicing physicians, and proper measures of control, as regards both the patient and general measures. The following table gives the number of notifiable diseases reported from 1917 to 1923:

|                               | 1917 | 1918   | 1919 | 1920 | 1921 | 1922 | 1923 |
|-------------------------------|------|--------|------|------|------|------|------|
| Typhoid fever-----            | 120  | 69     | 61   | 50   | 57   | 58   | 51   |
| Tuberculosis (new cases)----- |      | 70     | 37   | 39   | 33   | 35   | 43   |
| Diphtheria-----               |      | 60     | 43   | 101  | 117  | 123  | 81   |
| Scarlet fever-----            |      | 76     | 138  | 33   | 31   | 32   | 13   |
| Smallpox-----                 |      | 8      | 37   | 30   | 37   | 122  | 5    |
| Influenza-----                |      | 25,000 | 826  | 955  | 10   | 30   | 24   |
| Syphilis-----                 |      |        | 149  | 158  | 155  | 109  | 116  |
| Gonorrhœa-----                |      |        | 112  | 209  | 163  | 191  | 224  |

*Sanitation.*—There are approximately 13,000 homes in Madison County, 9,120, or 70 per cent, of which have sanitary toilets. Every home in the towns of Huntsville, Gurley, and Madison has a sanitary toilet, and there are three rural communities in which every home is provided with a sanitary toilet. Every school in the county is furnished with sanitary toilets and improved water supplies.

The four pumping stations that supply water to Huntsville and three mill villages are constantly supervised by the health department.

Sanitary inspections of all food-handling establishments were made during 1923 and their scores were published at least once a month. Improvement in garbage collection was made in Huntsville. All garbage is now required to be placed in covered cans, and daily collections are made on every street.

*Milk supply.*—Early in 1923 an effort was begun to get the dairymen to improve their methods of handling milk. As a result, the city of Huntsville passed the State's model milk ordinance, with the sanction of the dairymen. Since the passage of the ordinance, Huntsville has secured the services of a veterinarian as meat and milk inspector. During the year 42 milk supplies were radically improved, 400 dairy inspections were made, and 3,000 cows were tested for tuberculosis.

*Meat supply.*—All meat sold in Huntsville and the police jurisdiction is killed at the city abattoir and is inspected by the meat and milk inspector, who also inspects meat markets, the scores of which are published once a month.

*Malaria control.*—Malaria-control work has been carried on under the supervision of the sanitary inspector, and seven surveys have been made by the consulting sanitary engineer from the State board of health. Screening of homes, drainage of mosquito-breeding places, where feasible, and oiling or stocking with top minnows where drainage was impossible were all employed.

Ordinances prohibiting mosquito-breeding places were passed in Huntsville, Gurley, and Madison, and the enforcement of these ordinances was very effective. The following is a list of the malaria control activities for the year 1923:

|   |         |
|---|---------|
| Miles of new ditching.....                | 9½      |
| Miles of clearing and brushing.....       | 6½      |
| Miles of maintenance of ditches.....      | 4       |
| Square yards of oiling per week.....      | 20, 503 |
| Places stocked with <i>Gambusia</i> ..... | 6       |
| Number of newspaper articles.....         | 12      |
| Number of conferences.....                | 700     |
| Number of field demonstrations.....       | 400     |

*Laboratory.*—It is stated that all the physicians throughout the county availed themselves of the services of the laboratory in aiding

them in making diagnoses, and that hundreds of specimens of milk and water from every section of the county were examined during the year. The bacteriologist of the department also performs the duties of statistician and secretary to the health department.

*Child hygiene and school health work.*—By no means least among the activities of the health department was the work relating to child health. This work consisted of health lectures, physical examinations, and correction of defects, after examination notices were sent out to the parents informing them of the defects found in their children and urging them to have these defects corrected. Follow-up by the nurses and classroom charts aided in the success of this work. The following table gives a summary of this work and the results accomplished:

|                                  |        |
|----------------------------------|--------|
| Schools visited.....             | 42     |
| Number of children examined..... | 7, 546 |
| Number found defective.....      | 5, 350 |
| Defects corrected.....           | 1, 546 |

*Maternity and infancy work.*—A maternity and infancy nurse was added to the personnel of the department of health during 1923, and an automobile was provided for her by the civic and women's clubs of Huntsville. During the year 113 "better baby" clinics were held in various sections of the county. The following table summarizes this work:

|                                    |        |
|------------------------------------|--------|
| Prenatal—                          |        |
| Cases given advice.....            | 490    |
| Home visits.....                   | 617    |
| Infant and preschool—              |        |
| Babies and children examined.....  | 1, 719 |
| Office consultations, mothers..... | 206    |
| Home visits.....                   | 2, 882 |
| Miscellaneous nursing visits.....  | 8, 346 |

*Venereal disease control.*—The venereal disease clinic is supported by the bureau of venereal disease control of the Alabama State Board of Health. It is open daily from 2 to 5 p. m. Treatments are given free of cost to indigent patients and to prisoners. Lectures are given, motion pictures are shown, and literature is distributed in an effort to educate the people concerning the importance of stamping out venereal diseases.

During the year 950 patients were treated for syphilis and 1,066 for gonorrhoea; 1,100 doses of arsphenamine and 2,154 other treatments were given.

*Other activities.*—An educational program was carried on throughout the year to acquaint the people with the services of the health department, to teach school children and teachers health rules, to teach proprietors of food-handling establishments how to handle foods in a sanitary manner, and to teach "health" to the public. In

this work 243 lectures were given, at which there was a total attendance of over 19,000 people; 9,446 health bulletins were distributed; and 334 newspaper articles were published. A portable moving-picture machine was purchased, and 27 shows of health films were given in various sections of the county.

Among the other activities of the department during the year were the following: Two hundred and eighty-two life extension examinations, 327 physical examinations for marriage, 276 children examined for work certificates, 1,581 complete antityphoid inoculations, and 942 smallpox vaccinations.

This work was done in a county of 811 square miles area, having a population of 52,535, and at a cost as shown below:

*Receipts.*

|  |              |
|--|--------------|
| Rural sanitation fund (U. S. Public Health Service)..... | \$2, 070. 00 |
| State.....   | 2, 619. 99   |
| County.....  | 6, 459. 66   |
| Municipalities.....                                      | 4, 813. 38   |
| Other agencies.....                                      | 3, 119. 70   |
|  | 19, 082. 73  |

*Disbursements.*

|  |             |
|--|-------------|
| Salaries.....                                  | 13, 913. 00 |
| Office rent.....                               | 690. 00     |
| Laboratory supplies, vaccines, etc.....        | 546. 32     |
| Printing.....                                  | 221. 15     |
| Labor.....                                     | 81. 38      |
| Automobile expense (5 cars).....               | 2, 634. 62  |
| Miscellaneous, light, gas, telephone, etc..... | 996. 26     |
|  | 19, 082. 73 |

**RURAL HEALTH WORK IN NEW YORK STATE.**

**CATTARAUGUS COUNTY DEMONSTRATION ESTABLISHES FIRST COUNTY HEALTH UNIT IN THE STATE.**

The first county health unit to be established in New York State has recently been created and the first county health officer of the State appointed. These developments in rural health work are the result of the Cattaraugus County Demonstration, one of three public health demonstrations being carried out in New York, through the aid of the Milbank Memorial Fund. The other two are in the city of Syracuse and in a district of New York City, respectively. Under the authority of a recent statute enacted in New York, a county is permitted to establish its own health board and have its own health officer. Cattaraugus County is the first county to act under this law and to establish a county board of health and appoint a county health officer—the only county health officer in the State. Dr. Leverett D. Bristol, former commissioner of health of the State of Maine, was appointed to this position.

At the meeting of the Advisory Council of the Milbank Memorial Fund in November, 1923, Doctor Bristol said that the demonstration was being received with favor by the people of Cattaraugus County, that the development of the clinical services indicated the marked appreciation of these services, people coming from more than 40 miles for examination, and that the county board of supervisors had increased the county health budget from \$9,300 in 1923 to \$16,000 in 1924. He stated that the president of the county medical society and most of the members were in harmony with the work and that the local authorities of the towns of the county were cooperating. At the meeting of the advisory council, Mr. Homer Folks, secretary of the State Charities Aid Association, said:

"A very important phase of public health work is that connected with the schools. In approaching this problem in Cattaraugus County we were confronted with the individual school district, the logical unit of school health work, but one which is still smaller than the town or village.

"Although there was a crying need for a wider unit for the school health work in the rural districts, no provision was made by the law for either an individual district unit or a larger one. As a result, without having any law, warrant, or authority, or anything at all except the good offices of the Milbank Memorial Fund and some of its resources, there was created in Cattaraugus County an office of county superintendent of school health. Without any legal status, this official called together a few months ago the trustees of all of the rural and village schools in the county and invited them to establish a county council of school health. Under this council the trustees were to see that every child received an adequate medical examination. Fifty-three hundred of these children, living in the least accessible parts of the county, have already been examined, and letters have gone to their parents telling of the defects discovered. For the first time in this State we have here really effective county-wide harmonious administration of the health of school children."

Dr. Matthias Nicoll, jr., Commissioner of Health of the State of New York, expressed his opinion of the need for county health work as follows:

"These demonstrations come at a very opportune time in the progress of the work of the State department of health. As I have said on many a previous occasion, it is my personal opinion that under the present organization we have about reached our limit in the methods of control of disease and the improvement of health in the State of New York. It has always been necessary to administer the affairs of health in the 57 counties of the State practically from Albany. That was very important in the beginning, but, as I say, we have reached the limit of results by any such method. I think we who have had any experience in rural public health work are agreed that the only way to accomplish efficient work is by moving the direct unit of control nearer to where the work is to be done—in other words, to establish the county unit."

## DEATH RATES IN A GROUP OF INSURED PERSONS.

COMPARISON OF PRINCIPAL CAUSES OF DEATH, JANUARY, 1924, JANUARY, DECEMBER,  
AND YEAR 1923, AND LAST QUARTER OF 1923.

The accompanying tables are taken from the Statistical Bulletin of the Metropolitan Life Insurance Co. for February, 1924. They present the mortality experience of the industrial insurance department of the company for January, 1924, January, December, and year 1923, and for the last quarter of 1923. The rates are based on a strength of approximately 15,000,000 insured persons.

The health record for this group of persons for the month of January, 1924, is auspicious, and the best ever recorded for January of any year, the death rate being 9.7 per 1,000, as compared with 10.6 for the same month last year. The comparison is even more favorable for this year than these figures indicate, as the rate for January, 1924, is based on the number of deaths occurring at all ages, whereas that for January of last year excluded infant deaths. It is stated that no business was written on infant lives during the early period of 1923, and that if the 1,120 infant deaths occurring in January of this year were excluded, the death rate, based on persons 1 year of age and over, would be 9 per 1,000, or 15 per cent below the figure for January, 1923.

*Death rates (annual basis) for principal causes per 100,000 lives exposed, January, 1924, and January, December, and year 1923.*

[Industrial department, Metropolitan Life Insurance Co.]

| Cause of death.   | Death rate per 100,000 lives exposed. <sup>1</sup> |                    |                   |                            |
|---|--|--------------------|-------------------|----------------------------|
|   | January,<br>1924.                                  | December,<br>1923. | January,<br>1923. | Year<br>1923. <sup>2</sup> |
| Total, all causes.....  | 971.0  | 901.0              | 1,062.7           | 923.9                      |
| Typhoid fever.....  | 2.9  | 4.5                | 4.2               | 5.1                        |
| Measles.....  | 8.5  | 5.1                | 8.5               | 9.4                        |
| Scarlet fever.....  | 6.8  | 5.4                | 6.0               | 4.4                        |
| Whooping cough.....   | 5.7  | 5.6                | 3.8               | 7.4                        |
| Diphtheria.....   | 19.9   | 19.5               | 27.6              | 15.5                       |
| Influenza.....  | 16.1   | 15.5               | 38.4              | 30.2                       |
| Tuberculosis (all forms).....                                 | 107.0  | 90.1               | 116.5             | 109.6                      |
| Tuberculosis of respiratory system.....                       | 97.4   | 82.0               | 108.6             | 99.2                       |
| Cancer.....   | 72.3   | 72.3               | 72.9              | 71.5                       |
| Diabetes mellitus.....  | 17.2   | 14.1               | 20.3              | 15.9                       |
| Cerebral hemorrhage.....                                      | 65.9   | 65.8               | 73.2              | 61.0                       |
| Organic disease of heart.....                                 | 135.9  | 124.7              | 159.7             | 126.7                      |
| Pneumonia (all forms).....                                    | 122.6  | 90.3               | 133.8             | 83.5                       |
| Other respiratory diseases.....                               | 15.7   | 15.0               | 20.8              | 13.9                       |
| Diarrhea and enteritis.....                                   | 17.8   | 20.8               | 6.3               | 28.1                       |
| Bright's disease (chronic nephritis).....                     | 71.4   | 69.2               | 81.9              | 68.5                       |
| Puerperal state.....  | 16.8   | 15.9               | 18.2              | 17.6                       |
| Suicides.....   | 5.5  | 6.6                | 7.2               | 7.3                        |
| Homicides.....  | 5.6  | 6.9                | 7.3               | 7.2                        |
| Other external causes (excluding suicides and homicides)..... | 62.3   | 64.0               | 57.6              | 62.7                       |
| Traumatism by automobile.....                                 | 12.9   | 17.4               | 11.0              | 15.2                       |
| All other causes.....   | 195.4  | 189.7              | 198.4             | 178.6                      |

<sup>1</sup> With the exception of January, 1923, figures include mortality of infants under 1 year of age.

<sup>2</sup> Based on provisional estimate of lives exposed to risk in 1923.

Practically every important cause of death registered a lower mortality than in the corresponding month of 1923, particularly



those causes of greatest numerical importance, such as organic heart disease, which dropped from 159.7 to 135.9 per 100,000; pneumonia, from 133.8 to 122.6; tuberculosis, from 116.5 to 107; Bright's disease, from 81.9 to 71.4; cerebral hemorrhage, from 73.2 to 65.9; influenza, from 38.4 to 16.1; and diphtheria, from 27.6 to 19.9.

The cancer rate was practically unchanged from that for January, 1923.

On the other hand, apparent increases are shown for scarlet fever, whooping cough, and diarrheal diseases. These increases, however, are stated to be due entirely to deaths in infants, and, accordingly, the figures are not fairly comparable with those for a period in which infants were not included.

The following table presents the death rates among white and colored policyholders for the final quarter of the years 1923, 1922, and 1921:

*Death rates (annual basis) per 100,000 persons exposed, last quarter of 1921, 1922, and 1923, compared for white and colored policyholders, for principal causes of death.*

[Industrial department, Metropolitan Life Insurance Co.]

| Cause of death.                                | Death rate per 100,000 persons exposed. |                         |                         |                         |                         |                         |
|--|---|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
|  | White.                                  |                         |                         | Colored.                |                         |                         |
|  | Oct.-<br>Dec.,<br>1923.                 | Oct.-<br>Dec.,<br>1922. | Oct.-<br>Dec.,<br>1921. | Oct.-<br>Dec.,<br>1923. | Oct.-<br>Dec.,<br>1922. | Oct.-<br>Dec.,<br>1921. |
| All causes of death.....                       | 720.0                                   | 748.4                   | 771.9                   | 1,342.0                 | 1,258.2                 | 1,292.8                 |
| Typhoid fever.....                             | 5.0                                     | 6.2                     | 6.6                     | 10.7                    | 14.1                    | 17.1                    |
| Measles.....                                   | 2.3                                     | 3.1                     | .8                      | 1.3                     | 2.1                     | .5                      |
| Scarlet fever.....                             | 4.0                                     | 4.6                     | 5.6                     | 1.1                     | 2.1                     | .7                      |
| Whooping cough.....                            | 1.7                                     | 2.2                     | 1.3                     | 4.5                     | 2.9                     | 2.2                     |
| Diphtheria and croup.....                      | 19.8                                    | 26.5                    | 32.8                    | 5.1                     | 10.0                    | 17.6                    |
| Influenza.....                                 | 7.8                                     | 8.1                     | 5.4                     | 19.2                    | 15.5                    | 12.5                    |
| Meningococcus meningitis.....                  | .5                                      | .4                      | .4                      | .7                      | ( <sup>1</sup> )        | .2                      |
| Tuberculosis (all forms).....                  | 75.9                                    | 81.3                    | 83.2                    | 220.8                   | 216.4                   | 239.4                   |
| Tuberculosis of respiratory system.....        | 69.5                                    | 73.6                    | 75.1                    | 201.9                   | 196.6                   | 219.8                   |
| Tuberculosis of the meninges, etc.....         | 2.6                                     | 3.3                     | 3.0                     | 5.8                     | 6.0                     | 4.6                     |
| Other forms of tuberculosis.....               | 3.9                                     | 4.4                     | 5.1                     | 13.2                    | 13.8                    | 14.9                    |
| Cancer.....                                    | 73.6                                    | 69.8                    | 74.0                    | 81.7                    | 66.5                    | 65.3                    |
| Diabetes.....                                  | 13.5                                    | ( <sup>2</sup> )        | ( <sup>2</sup> )        | 14.1                    | ( <sup>2</sup> )        | ( <sup>2</sup> )        |
| Cerebral hemorrhage; apoplexy.....             | 54.7                                    | 53.8                    | 60.0                    | 98.0                    | 88.4                    | 94.4                    |
| Organic diseases of the heart.....             | 107.3                                   | 106.1                   | 110.0                   | 202.1                   | 178.0                   | 170.4                   |
| Total respiratory diseases.....                | 59.7                                    | 67.3                    | 68.5                    | 123.3                   | 125.8                   | 122.3                   |
| Bronchitis.....                                | 3.9                                     | 4.7                     | 5.8                     | 8.9                     | 8.1                     | 9.5                     |
| Broncho-pneumonia.....                         | 18.6                                    | 21.2                    | 20.1                    | 30.1                    | 22.9                    | 28.9                    |
| Pneumonia (lobar and undefined).....           | 31.1                                    | 33.4                    | 34.5                    | 72.1                    | 84.4                    | 71.2                    |
| Other diseases of respiratory system.....      | 6.1                                     | 8.0                     | 8.1                     | 12.1                    | 10.5                    | 12.7                    |
| Diarrhea and enteritis.....                    | 7.1                                     | 9.6                     | 12.6                    | 9.8                     | 10.7                    | 10.8                    |
| Under 2 years.....                             | 2.6                                     | 5.0                     | 5.7                     | 2.5                     | 3.1                     | 1.7                     |
| 2 years and over.....                          | 4.4                                     | 4.5                     | 6.9                     | 7.4                     | 7.6                     | 9.0                     |
| Acute nephritis.....                           | 4.5                                     | 5.1                     | 5.4                     | 15.4                    | 18.6                    | 17.1                    |
| Chronic nephritis.....                         | 58.1                                    | 63.4                    | 61.6                    | 113.7                   | 104.4                   | 110.5                   |
| Total puerperal state.....                     | 14.3                                    | 15.0                    | 15.6                    | 25.0                    | 22.6                    | 25.4                    |
| Puerperal septicemia.....                      | 5.7                                     | 5.3                     | 6.0                     | 12.3                    | 10.5                    | 8.6                     |
| Puerperal albuminuria and convulsions.....     | 3.3                                     | 4.0                     | 4.0                     | 4.7                     | 4.5                     | 8.6                     |
| Other diseases of puerperal state.....         | 5.4                                     | 5.8                     | 5.6                     | 8.0                     | 7.6                     | 8.3                     |
| Total external causes.....                     | 72.0                                    | 66.1                    | 63.0                    | 122.6                   | 101.8                   | 91.5                    |
| Suicides.....                                  | 0.8                                     | 6.5                     | 7.5                     | 4.9                     | 3.6                     | 6.6                     |
| Homicides.....                                 | 3.4                                     | 2.2                     | 4.5                     | 44.9                    | 34.3                    | 29.6                    |
| Accidental and unspecified violence.....       | 61.7                                    | 57.4                    | 50.9                    | 72.8                    | 63.9                    | 55.0                    |
| Accidental drowning.....                       | 3.4                                     | 3.0                     | 2.4                     | 2.2                     | 4.3                     | 2.9                     |
| Automobile accidents.....                      | 19.0                                    | 16.4                    | 14.4                    | 16.3                    | 10.7                    | 9.5                     |
| All other and ill-defined causes of death..... | 138.2                                   | 159.6                   | 165.2                   | 272.9                   | 278.3                   | 294.9                   |

<sup>1</sup> No deaths.

<sup>2</sup> Not available.

The table below shows the per cent of the total amount disbursed by the company during the years 1922 and 1923 on account of deaths from certain specified causes:

| Disease or condition.                   | Per cent of total. |       |
|---|--------------------|-------|
|   | 1923               | 1922  |
| All causes of death.....                | 100.0              | 100.0 |
| Typhoid fever.....                      | 0.7                | 0.8   |
| Influenza and pneumonia.....            | 11.5               | 10.0  |
| Influenza.....                          | 3.4                | 2.7   |
| Pneumonia (all forms).....              | 8.1                | 7.3   |
| Tuberculosis (all forms).....           | 12.8               | 13.1  |
| Tuberculosis of respiratory system..... | 12.0               | 12.2  |
| Cancer (all forms).....                 | 8.8                | 9.0   |
| Cerebral hemorrhage (apoplexy).....     | 6.8                | 6.7   |
| Diseases of the heart.....              | 12.7               | 13.0  |
| Chronic nephritis.....                  | 7.0                | 7.4   |
| Puerperal state.....                    | 1.7                | 2.0   |
| Total external causes.....              | 11.8               | 12.4  |
| Suicides.....                           | 2.1                | 2.0   |
| Homicides.....                          | 1.2                | 1.2   |
| Accidents.....                          | 8.4                | 9.2   |
| Accidental drowning.....                | .9                 | 1.0   |
| Traumatism by fall.....                 | .9                 | .9    |
| Railroad accidents.....                 | 1.0                | .8    |
| Automobile accidents.....               | 1.9                | 1.7   |
| Other accidents.....                    | 3.8                | 4.8   |
| All other causes of death.....          | 26.2               | 25.6  |

**MILK ORDINANCE HELD VALID.<sup>1</sup>**

The Supreme Court of Arizona has held valid a milk ordinance of Yuma. The defendant violated the ordinance by offering for sale milk containing boric acid.

**DEATHS DURING THE WEEK ENDED MARCH 15, 1924.**

*Summary of information received by telegraph from industrial insurance companies for week ended March 15, 1924, and corresponding week of 1923. (From the Weekly Health Index, March 19, 1924, issued by the Bureau of the Census, Department of Commerce.)*

|  | Week ended<br>March 15, 1924. | Corresponding<br>week, 1923. |
|--|-------------------------------|------------------------------|
| Policies in force.....                                     | 56, 883, 519                  | 52, 447, 299                 |
| Number of death claims.....                                | 11, 919                       | 13, 000                      |
| Death claims per 1,000 policies in force, annual rate..... | 10. 9                         | 12. 9                        |

<sup>1</sup> Gardenhire v. State, 221 Pac. 228.

Deaths from all causes in certain large cities of the United States during the week ended March 15, 1924, infant mortality, annual death rate, and comparison with corresponding week of 1923. (From the Weekly Health Index, March 19, 1924, issued by the Bureau of the Census, Department of Commerce.)

| City.                             | Week ended Mar. 15, 1924. |                          | Annual death rate per 1,000, corresponding week, 1923. | Deaths under 1 year.      |                           | Infant mortality rate, week ended Mar. 15, 1924. <sup>1</sup> |
|-----------------------------------|---------------------------|--------------------------|--|---------------------------|---------------------------|---|
|                                   | Total deaths.             | Death rate. <sup>1</sup> |  | Week ended Mar. 15, 1924. | Corresponding week, 1923. |   |
| Total (65 cities).....            | 7,501                     | 14.4                     | 16.0   | 969                       | 959                       | -----   |
| Akron.....                        | 34                        | -----                    | -----  | 6                         | 9                         | 63  |
| Albany <sup>3</sup> .....         | 40                        | 17.6                     | 25.3   | 2                         | 3                         | 44  |
| Atlanta.....                      | 90                        | 20.6                     | 17.1   | 16                        | 9                         | -----   |
| Baltimore <sup>3</sup> .....      | 230                       | 15.3                     | 19.1   | 28                        | 33                        | 81  |
| Birmingham.....                   | 67                        | 17.4                     | 14.1   | 17                        | 5                         | -----   |
| Boston.....                       | 231                       | 15.5                     | 19.8   | 30                        | 37                        | 83  |
| Bridgeport.....                   | 39                        | -----                    | -----  | 8                         | 8                         | 125   |
| Buffalo.....                      | 126                       | 12.0                     | 16.0   | 14                        | 29                        | 59  |
| Cambridge.....                    | 32                        | 14.9                     | 20.1   | 3                         | 9                         | 52  |
| Camden.....                       | 39                        | 16.1                     | 16.4   | 1                         | 6                         | 16  |
| Chicago <sup>3</sup> .....        | 696                       | 12.3                     | 14.7   | 116                       | 101                       | 107   |
| Cincinnati.....                   | 132                       | 16.9                     | 17.6   | 21                        | 12                        | 132   |
| Cleveland.....                    | 208                       | 11.9                     | 12.6   | 43                        | 28                        | 113   |
| Columbus.....                     | 80                        | 15.6                     | 18.6   | 5                         | 8                         | 48  |
| Dallas.....                       | 47                        | 13.0                     | 14.6   | 12                        | 10                        | -----   |
| Dayton.....                       | 40                        | 12.3                     | 15.1   | 2                         | 4                         | 34  |
| Denver.....                       | 95                        | -----                    | -----  | 13                        | 11                        | -----   |
| Des Moines.....                   | 35                        | 12.6                     | 17.0   | 5                         | 2                         | -----   |
| Detroit.....                      | 269                       | -----                    | -----  | 52                        | 61                        | 97  |
| Duluth.....                       | 21                        | 10.1                     | 11.8   | 4                         | 1                         | 86  |
| Erie.....                         | 35                        | -----                    | -----  | 5                         | 8                         | 103   |
| Fall River <sup>3</sup> .....     | 40                        | 17.2                     | 19.8   | 11                        | 8                         | 155   |
| Flint.....                        | 25                        | -----                    | -----  | 9                         | 3                         | 155   |
| Fort Worth.....                   | 29                        | 10.2                     | 7.6  | 2                         | 4                         | -----   |
| Grand Rapids.....                 | 30                        | 10.5                     | 14.3   | 5                         | 5                         | 78  |
| Houston.....                      | 42                        | -----                    | -----  | 3                         | 7                         | -----   |
| Indianapolis.....                 | 108                       | 16.1                     | 15.8   | 13                        | 14                        | 98  |
| Jacksonville, Fla.....            | 40                        | 20.4                     | 20.3   | 6                         | 1                         | -----   |
| Jersey City.....                  | 99                        | 16.5                     | 15.7   | 12                        | 13                        | 87  |
| Kansas City, Kans.....            | 33                        | 14.6                     | 11.3   | 4                         | 5                         | 80  |
| Kansas City, Mo.....              | 97                        | 14.1                     | 17.0   | 15                        | 16                        | -----   |
| Los Angeles.....                  | 239                       | -----                    | -----  | 22                        | 13                        | 68  |
| Louisville.....                   | 74                        | 14.9                     | 21.2   | 7                         | 15                        | 67  |
| Lowell.....                       | 34                        | 15.3                     | 20.8   | 7                         | 7                         | 125   |
| Lynn.....                         | 21                        | 10.6                     | 15.2   | 5                         | 5                         | 127   |
| Memphis.....                      | 62                        | 18.8                     | 26.4   | 13                        | 5                         | -----   |
| Milwaukee.....                    | 116                       | 12.3                     | 15.5   | 23                        | 20                        | 105   |
| Minneapolis.....                  | 86                        | 10.7                     | 12.6   | 7                         | 18                        | 38  |
| Nashville <sup>3</sup> .....      | 65                        | 27.5                     | 19.1   | 7                         | 6                         | -----   |
| New Bedford.....                  | 33                        | 13.0                     | 15.6   | 8                         | 6                         | 125   |
| New Haven.....                    | 63                        | 18.7                     | 18.7   | 6                         | 8                         | 78  |
| New Orleans.....                  | 165                       | 21.0                     | 18.8   | 14                        | 14                        | -----   |
| New York.....                     | 1,614                     | 14.0                     | 15.5   | 199                       | 177                       | 80  |
| Bronx Borough.....                | 214                       | 12.8                     | 12.1   | 22                        | 20                        | 78  |
| Brooklyn Borough.....             | 539                       | 12.8                     | 14.7   | 68                        | 59                        | 73  |
| Manhattan Borough.....            | 719                       | 16.6                     | 18.2   | 97                        | 87                        | 95  |
| Queens Borough.....               | 107                       | 10.1                     | 12.1   | 9                         | 9                         | 49  |
| Richmond Borough.....             | 35                        | 14.0                     | 17.6   | 3                         | 2                         | 55  |
| Newark, N. J.....                 | 110                       | 12.9                     | 15.6   | 9                         | 10                        | 42  |
| Norfolk.....                      | 37                        | 11.8                     | 13.1   | 3                         | 8                         | 55  |
| Oakland.....                      | 66                        | 13.9                     | 11.3   | 6                         | 4                         | 75  |
| Oklahoma City.....                | 19                        | 9.5                      | -----  | 1                         | -----                     | -----   |
| Omaha.....                        | 56                        | 14.0                     | 18.9   | 8                         | 13                        | 86  |
| Paterson.....                     | 30                        | 11.1                     | 13.4   | 3                         | 5                         | 49  |
| Philadelphia.....                 | 529                       | 14.1                     | 16.5   | 76                        | 63                        | 97  |
| Pittsburgh.....                   | 256                       | 21.3                     | 19.2   | 34                        | 33                        | 115   |
| Portland, Oreg.....               | 67                        | 12.6                     | 10.5   | 6                         | 4                         | 62  |
| Providence.....                   | 90                        | 19.3                     | 21.5   | 13                        | 11                        | 106   |
| Richmond.....                     | 42                        | 11.9                     | 18.4   | 6                         | 4                         | 71  |
| Rochester.....                    | 76                        | 12.2                     | 12.9   | 3                         | 7                         | 24  |
| St. Louis.....                    | 246                       | 15.8                     | 16.9   | 21                        | 26                        | -----   |
| St. Paul.....                     | 68                        | 14.5                     | 15.5   | 3                         | 12                        | 26  |
| Salt Lake City <sup>3</sup> ..... | 39                        | 15.8                     | 16.9   | 3                         | 2                         | 50  |
| San Antonio.....                  | 65                        | 17.7                     | 18.3   | 15                        | 13                        | -----   |
| San Francisco.....                | 150                       | 14.3                     | 14.4   | 16                        | 14                        | 96  |

<sup>1</sup> Annual rate per 1,000 population.

<sup>2</sup> Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births of 1923. Cities left blank are not in the registration area for births.

<sup>3</sup> Deaths for week ended Friday, March, 14, 1924.

*Deaths from all causes in certain large cities of the United States during the week ended March 15, 1924, infant mortality, annual death rate, and comparison with corresponding week of 1923—Continued.*

| City.                  | Week ended Mar. 15, 1924. |             | Annual death rate per 1,000, corresponding week, 1923. | Deaths under 1 year.      |                           | Infant mortality rate, week ended Mar. 15, 1924. |
|------------------------|---------------------------|-------------|--|---------------------------|---------------------------|--|
|                        | Total deaths.             | Death rate. |  | Week ended Mar. 15, 1924. | Corresponding week, 1923. |  |
| Schenectady.....       | 29                        | 15.1        | 7.9  | 1                         | 4                         | 28   |
| Seattle.....           | 75                        |             |  | 4                         | 8                         | 39   |
| Somerville.....        | 21                        | 10.9        | 21.6   | 1                         | 9                         | 27   |
| Spokane.....           | 25                        |             |  | 4                         | 0                         | 85   |
| Springfield, Mass..... | 47                        | 16.5        | 14.8   | 4                         | 3                         | 68   |
| Syracuse.....          | 58                        | 16.1        | 14.1   | 7                         | 6                         | 87   |
| Tacoma.....            | 31                        | 15.7        | 9.2  | 4                         | 4                         | 92   |
| Toledo.....            | 67                        | 12.6        | 13.7   | 12                        | 10                        | 114  |
| Trenton.....           | 52                        | 20.9        | 17.2   | 8                         | 4                         | 131  |
| Utica.....             | 35                        | 17.3        | 12.1   | 2                         | 2                         | 43   |
| Washington, D. C.....  | 157                       | 16.8        | 16.9   | 6                         | 11                        | 35   |
| Waterbury.....         | 18                        |             |  | 5                         | 4                         | 112  |
| Wilmington, Del.....   | 28                        | 12.2        | 12.0   | 3                         | 5                         | 65   |
| Worcester.....         | 47                        | 12.5        | 17.1   | 4                         | 13                        | 43   |
| Yonkers.....           | 22                        | 10.5        | 11.6   | 3                         | 3                         | 66   |
| Youngstown.....        | 38                        | 12.8        | 20.1   | 5                         | 12                        | 72   |



CONNECTICUT.

|                               | Cases. |
|-------------------------------|--------|
| Cerebrospinal meningitis..... | 2      |
| Chicken pox.....              | 80     |
| Diphtheria.....               | 45     |
| German measles.....           | 4      |
| Influenza.....                | 16     |
| Lethargic encephalitis.....   | 2      |
| Measles.....                  | 263    |
| Mumps.....                    | 165    |
| Ophthalmia neonatorum.....    | 1      |
| Paratyphoid fever.....        | 1      |
| Pneumonia (lobar).....        | 52     |
| Poliomyelitis.....            | 1      |
| Scarlet fever.....            | 161    |
| Septic sore throat.....       | 3      |
| Smallpox.....                 | 6      |
| Tetanus.....                  | 1      |
| Trichinosis.....              | 1      |
| Tuberculosis (all forms)..... | 35     |
| Whooping cough.....           | 48     |

DELAWARE

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

FLORIDA.

|                    |    |
|--------------------|----|
| Diphtheria.....    | 12 |
| Influenza.....     | 4  |
| Malaria.....       | 3  |
| Pneumonia.....     | 10 |
| Scarlet fever..... | 11 |
| Smallpox.....      | 4  |
| Trachoma.....      | 2  |
| Typhoid fever..... | 7  |

GEORGIA.

|                               |     |
|-------------------------------|-----|
| Chicken pox.....              | 7   |
| Diphtheria.....               | 26  |
| German measles.....           | 1   |
| Hookworm disease.....         | 2   |
| Influenza.....                | 59  |
| Malaria.....                  | 6   |
| Measles.....                  | 219 |
| Mumps.....                    | 4   |
| Pneumonia.....                | 14  |
| Poliomyelitis.....            | 1   |
| Scarlet fever.....            | 2   |
| Smallpox.....                 | 5   |
| Tuberculosis (pulmonary)..... | 4   |
| Typhoid fever.....            | 1   |
| Whooping cough.....           | 3   |

ILLINOIS

|                           |     |
|---------------------------|-----|
| Cerebrospinal meningitis: |     |
| Champaign County.....     | 1   |
| Cook County.....          | 3   |
| De Kalb County.....       | 1   |
| Diphtheria:               |     |
| Cook County.....          | 106 |
| Madison County.....       | 10  |
| Scattering.....           | 55  |
| Influenza.....            | 45  |

ILLINOIS—continued.

|   | Cases. |
|---|--------|
| Lethargic encephalitis—Cook County..... | 1      |
| Measles.....                            | 540    |
| Pneumonia.....                          | 410    |
| Poliomyelitis—Cook County.....          | 1      |
| Scarlet fever:                          |        |
| Cook County.....                        | 170    |
| De Kalb County.....                     | 22     |
| Kane County.....                        | 16     |
| La Salle County.....                    | 13     |
| Lake County.....                        | 10     |
| Livingston County.....                  | 8      |
| Peoria County.....                      | 12     |
| St. Clair County.....                   | 12     |
| Scattering.....                         | 81     |
| Smallpox:                               |        |
| Cook County.....                        | 11     |
| Scattering.....                         | 12     |
| Tuberculosis.....                       | 242    |
| Typhoid fever.....                      | 8      |
| Whooping cough.....                     | 123    |

INDIANA.

|   |       |
|---|-------|
| Cerebrospinal meningitis—Montgomery County..... | 1     |
| Chicken pox.....                                | 109   |
| Diphtheria.....                                 | 56    |
| Influenza.....                                  | 34    |
| Measles.....                                    | 1,026 |
| Poliomyelitis—Vanderburg County.....            | 1     |
| Scarlet fever:                                  |       |
| DeKalb County.....                              | 9     |
| Fayette County.....                             | 10    |
| Lake County.....                                | 31    |
| St. Joseph County.....                          | 14    |
| Wabash County.....                              | 10    |
| Scattering.....                                 | 74    |
| Smallpox:                                       |       |
| Fayette County.....                             | 35    |
| Jay County.....                                 | 9     |
| Marion County.....                              | 84    |
| Kosciusko County.....                           | 15    |
| Scattering.....                                 | 39    |
| Trachoma—Marion County.....                     | 1     |
| Tuberculosis.....                               | 13    |
| Typhoid fever.....                              | 9     |
| Whooping cough.....                             | 107   |

IOWA.

|                    |    |
|--------------------|----|
| Diphtheria.....    | 20 |
| Scarlet fever..... | 51 |
| Smallpox.....      | 14 |

KANSAS.

|                               |       |
|-------------------------------|-------|
| Cerebrospinal meningitis..... | 1     |
| Chicken pox.....              | 127   |
| Diphtheria.....               | 41    |
| German measles.....           | 12    |
| Influenza.....                | 14    |
| Measles.....                  | 1,342 |
| Mumps.....                    | 294   |
| Pneumonia.....                | 51    |
| Scarlet fever.....            | 52    |
| Smallpox.....                 | 48    |
| Tuberculosis.....             | 31    |
| Typhoid fever.....            | 5     |
| Whooping cough.....           | 132   |

| LOUISIANA.                         |        | MICHIGAN—continued.            |        |
|------------------------------------|--------|--------------------------------|--------|
|                                    | Cases. |                                | Cases. |
| Diphtheria .....                   | 19     | Scarlet fever .....            | 417    |
| Hookworm disease .....             | 33     | Smallpox .....                 | 114    |
| Influenza .....                    | 35     | Tuberculosis .....             | 53     |
| Malaria .....                      | 4      | Typhoid fever .....            | 19     |
| Measles .....                      | 338    | Whooping cough .....           | 90     |
| Pneumonia .....                    | 57     |                                |        |
| Scarlet fever .....                | 9      | MINNESOTA.                     |        |
| Smallpox .....                     | 16     | Cerebrospinal meningitis ..... | 1      |
| Tuberculosis .....                 | 24     | Chicken pox .....              | 104    |
| Typhoid fever .....                | 7      | Diphtheria .....               | 67     |
| Whooping cough .....               | 4      | Influenza .....                | 2      |
|                                    |        | Measles .....                  | 210    |
| MAINE.                             |        | Pneumonia .....                | 5      |
| Chicken pox .....                  | 52     | Poliomyelitis .....            | 1      |
| Diphtheria .....                   | 9      | Scarlet fever .....            | 277    |
| German measles .....               | 23     | Smallpox .....                 | 97     |
| Influenza .....                    | 14     | Tuberculosis .....             | 68     |
| Measles .....                      | 185    | Typhoid fever .....            | 4      |
| Mumps .....                        | 63     | Whooping cough .....           | 24     |
| Pneumonia .....                    | 22     |                                |        |
| Scarlet fever .....                | 27     | MISSISSIPPI.                   |        |
| Smallpox .....                     | 2      | Diphtheria .....               | 6      |
| Typhoid fever .....                | 4      | Scarlet fever .....            | 6      |
| Tuberculosis .....                 | 18     | Smallpox .....                 | 7      |
| Whooping cough .....               | 39     | Typhoid fever .....            | 7      |
|                                    |        |                                |        |
| MARYLAND. <sup>1</sup>             |        | MISSOURI.                      |        |
| Chicken pox .....                  | 191    | (Exclusive of Cape Girardeau.) |        |
| Diphtheria .....                   | 44     | Cerebrospinal meningitis ..... | 3      |
| Dysentery .....                    | 2      | Chicken pox .....              | 69     |
| German measles .....               | 85     | Diphtheria .....               | 58     |
| Influenza .....                    | 97     | Influenza .....                | 11     |
| Lethargic encephalitis .....       | 4      | Measles .....                  | 509    |
| Measles .....                      | 351    | Mumps .....                    | 128    |
| Mumps .....                        | 48     | Pneumonia .....                | 33     |
| Ophthalmia neonatorum .....        | 2      | Scarlet fever .....            | 176    |
| Pneumonia (all forms) .....        | 137    | Septic sore throat .....       | 1      |
| Scarlet fever .....                | 181    | Smallpox .....                 | 52     |
| Septic sore throat .....           | 2      | Tuberculosis .....             | 49     |
| Tuberculosis .....                 | 59     | Typhoid fever .....            | 5      |
| Typhoid fever .....                | 9      | Whooping cough .....           | 57     |
| Whooping cough .....               | 69     |                                |        |
|                                    |        | MONTANA.                       |        |
| MASSACHUSETTS.                     |        | Diphtheria .....               | 13     |
| Cerebrospinal meningitis .....     | 4      | Scarlet fever .....            | 27     |
| Chicken pox .....                  | 252    | Smallpox .....                 | 31     |
| Conjunctivitis (suppurative) ..... | 15     |                                |        |
| Diphtheria .....                   | 163    | NEW JERSEY.                    |        |
| German measles .....               | 42     | Cerebrospinal meningitis ..... | 2      |
| Influenza .....                    | 13     | Chicken pox .....              | 221    |
| Lethargic encephalitis .....       | 2      | Diphtheria .....               | 103    |
| Measles .....                      | 983    | Influenza .....                | 29     |
| Mumps .....                        | 426    | Measles .....                  | 590    |
| Ophthalmia neonatorum .....        | 21     | Pneumonia .....                | 147    |
| Pneumonia (lobar) .....            | 118    | Poliomyelitis .....            | 1      |
| Poliomyelitis .....                | 3      | Scarlet fever .....            | 160    |
| Scarlet fever .....                | 476    | Smallpox .....                 | 17     |
| Septic sore throat .....           | 14     | Trachoma .....                 | 1      |
| Tuberculosis (all forms) .....     | 168    | Typhoid fever .....            | 11     |
| Typhoid fever .....                | 4      | Whooping cough .....           | 117    |
| Whooping cough .....               | 114    |                                |        |
|                                    |        | NEW MEXICO.                    |        |
| MICHIGAN.                          |        | Chicken pox .....              | 23     |
| Diphtheria .....                   | 139    | Conjunctivitis .....           | 8      |
| Measles .....                      | 650    | Diphtheria .....               | 9      |
| Pneumonia .....                    | 149    | Influenza .....                | 10     |

<sup>1</sup> Week ended Friday.

NEW MEXICO—continued.

|                     | Cases. |
|---------------------|--------|
| Measles.....        | 228    |
| Pneumonia.....      | 23     |
| Scarlet fever.....  | 7      |
| Smallpox.....       | 1      |
| Tuberculosis.....   | 20     |
| Whooping cough..... | 3      |

NEW YORK.

(Exclusive of New York City.)

|                               |       |
|-------------------------------|-------|
| Cerebrospinal meningitis..... | 4     |
| Diphtheria.....               | 114   |
| Influenza.....                | 44    |
| Lethargic encephalitis.....   | 1     |
| Measles.....                  | 1,677 |
| Pneumonia.....                | 373   |
| Poliomyelitis.....            | 2     |
| Scarlet fever.....            | 467   |
| Smallpox.....                 | 18    |
| Typhoid fever.....            | 15    |
| Whooping cough.....           | 308   |

NORTH CAROLINA.

|                               |       |
|-------------------------------|-------|
| Cerebrospinal meningitis..... | 2     |
| Chicken pox.....              | 225   |
| Diphtheria.....               | 17    |
| Measles.....                  | 2,061 |
| Poliomyelitis.....            | 1     |
| Scarlet fever.....            | 37    |
| Septic sore throat.....       | 1     |
| Smallpox.....                 | 143   |
| Typhoid fever.....            | 2     |
| Whooping cough.....           | 380   |

OREGON.

|                               |     |
|-------------------------------|-----|
| Cerebrospinal meningitis..... | 1   |
| Chicken pox.....              | 12  |
| Diphtheria:                   |     |
| Portland.....                 | 16  |
| Washington County.....        | 12  |
| Scattering.....               | 14  |
| Influenza.....                | 10  |
| Leprosy.....                  | 1   |
| Measles.....                  | 201 |
| Mumps.....                    | 14  |
| Pneumonia.....                | 26  |
| Scarlet fever.....            | 14  |
| Smallpox:                     |     |
| Portland.....                 | 15  |
| Scattering.....               | 9   |
| Tuberculosis.....             | 19  |
| Typhoid fever.....            | 2   |
| Whooping cough.....           | 10  |

SOUTH DAKOTA.

|                     |     |
|---------------------|-----|
| Chicken pox.....    | 9   |
| Diphtheria.....     | 8   |
| Measles.....        | 155 |
| Pneumonia.....      | 7   |
| Scarlet fever.....  | 53  |
| Smallpox.....       | 4   |
| Whooping cough..... | 1   |

TEXAS.

|                  |    |
|------------------|----|
| Chicken pox..... | 34 |
| Diphtheria.....  | 20 |

TEXAS—continued.

|                        | Cases. |
|------------------------|--------|
| Influenza.....         | 10     |
| Measles.....           | 480    |
| Mumps.....             | 51     |
| Paratyphoid fever..... | 1      |
| Pneumonia.....         | 21     |
| Scarlet fever.....     | 20     |
| Smallpox.....          | 8      |
| Trachoma.....          | 5      |
| Tuberculosis.....      | 17     |
| Typhoid fever.....     | 2      |
| Whooping cough.....    | 16     |

VERMONT.

|                     |     |
|---------------------|-----|
| Chicken pox.....    | 13  |
| Measles.....        | 128 |
| Mumps.....          | 7   |
| Scarlet fever.....  | 5   |
| Smallpox.....       | 2   |
| Whooping cough..... | 10  |

WASHINGTON.

|                                   |     |
|-----------------------------------|-----|
| Chicken pox.....                  | 90  |
| Diphtheria:                       |     |
| Cowlitz County.....               | 12  |
| Seattle.....                      | 12  |
| Scattering.....                   | 13  |
| Measles.....                      | 409 |
| Mumps.....                        | 53  |
| Pneumonia.....                    | 2   |
| Scarlet fever:                    |     |
| Seattle.....                      | 10  |
| Spokane.....                      | 11  |
| Scattering.....                   | 33  |
| Smallpox:                         |     |
| Cowlitz County.....               | 27  |
| Spokane.....                      | 31  |
| Scattering.....                   | 23  |
| Tuberculosis.....                 | 27  |
| Typhoid fever.....                | 4   |
| Vincent's angina—Walla Walla..... | 1   |
| Whooping cough.....               | 23  |

WEST VIRGINIA.

|                               |    |
|-------------------------------|----|
| Cerebrospinal meningitis..... | 1  |
| Diphtheria.....               | 8  |
| Scarlet fever.....            | 20 |
| Smallpox.....                 | 26 |
| Typhoid fever.....            | 8  |

WISCONSIN.

|                               |     |
|-------------------------------|-----|
| Milwaukee:                    |     |
| Chicken pox.....              | 39  |
| Diphtheria.....               | 14  |
| Measles.....                  | 26  |
| Pneumonia.....                | 9   |
| Scarlet fever.....            | 22  |
| Smallpox.....                 | 1   |
| Tuberculosis.....             | 11  |
| Whooping cough.....           | 55  |
| Scattering:                   |     |
| Cerebrospinal meningitis..... | 1   |
| Chicken pox.....              | 186 |
| Diphtheria.....               | 45  |
| German measles.....           | 8   |
| Influenza.....                | 51  |
| Lethargic encephalitis.....   | 1   |

\* Deaths.



## WISCONSIN—continued.

| Scattering—Continued. | Cases. |
|-----------------------|--------|
| Measles.....          | 408    |
| Pneumonia.....        | 45     |
| Scarlet fever.....    | 284    |
| Smallpox.....         | 15     |
| Trachoma.....         | 1      |
| Tuberculosis.....     | 32     |
| Typhoid fever.....    | 10     |
| Whooping cough.....   | 136    |

## WYOMING.

|                     | Cases. |
|---------------------|--------|
| Chicken pox.....    | 13     |
| Influenza.....      | 1      |
| Measles.....        | 120    |
| Mumps.....          | 3      |
| Pneumonia.....      | 9      |
| Scarlet fever.....  | 1      |
| Tuberculosis.....   | 2      |
| Typhoid fever.....  | 4      |
| Whooping cough..... | 3      |

## Reports for Week Ended March 15, 1924.

## DISTRICT OF COLUMBIA.

|                     | Cases. |
|---------------------|--------|
| Chicken pox.....    | 55     |
| Diphtheria.....     | 7      |
| Influenza.....      | 2      |
| Measles.....        | 14     |
| Scarlet fever.....  | 27     |
| Smallpox.....       | 8      |
| Tuberculosis.....   | 29     |
| Typhoid fever.....  | 1      |
| Whooping cough..... | 11     |

## NEBRASKA—continued.

|                         | Cases. |
|-------------------------|--------|
| Septic sore throat..... | 1      |
| Smallpox.....           | 4      |
| Tuberculosis.....       | 1      |
| Whooping cough.....     | 4      |

## NORTH DAKOTA.

|                     | Cases. |
|---------------------|--------|
| Chicken pox.....    | 15     |
| Diphtheria.....     | 8      |
| German measles..... | 1      |
| Influenza.....      | 1      |
| Measles.....        | 224    |
| Mumps.....          | 31     |
| Pneumonia.....      | 24     |
| Scarlet fever.....  | 43     |
| Smallpox.....       | 1      |
| Tuberculosis.....   | 5      |
| Whooping cough..... | 14     |

## NEBRASKA.

|                     | Cases. |
|---------------------|--------|
| Chicken pox.....    | 19     |
| Diphtheria.....     | 12     |
| Influenza.....      | 2      |
| Measles.....        | 475    |
| Mumps.....          | 11     |
| Polio-myelitis..... | 1      |
| Scarlet fever.....  | 14     |

## 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.                 | Cerebro-spinal meningitis. | Diphtheria. | Influenza. | Malaria. | Measles. | Pellagra. | Polio-myelitis. | Scarlet fever. | Smallpox. | Typhoid fever. |
|------------------------|----------------------------|-------------|------------|----------|----------|-----------|-----------------|----------------|-----------|----------------|
| <i>January, 1924.</i>  |                            |             |            |          |          |           |                 |                |           |                |
| New Mexico.....        |                            | 80          | 9          | 1        | 203      | 0         | 1               | 38             | 3         | 15             |
| Oklahoma.....          | 2                          | 57          | 121        | 44       | 973      |           |                 | 59             | 334       | 49             |
| <i>February, 1924.</i> |                            |             |            |          |          |           |                 |                |           |                |
| Arizona.....           |                            | 11          |            |          | 436      |           |                 | 24             | 4         | 2              |
| Delaware.....          | 3                          | 24          | 17         |          | 11       |           |                 | 54             | 1         | 2              |
| Florida.....           | 3                          | 62          | 29         | 34       | 815      | 1         |                 | 11             | 19        | 48             |
| Idaho.....             | 0                          | 5           | 0          | 0        | 0        | 0         | 0               | 48             | 6         | 3              |
| Louisiana.....         | 2                          | 80          | 313        | 17       | 2,334    | 2         | 0               | 29             | 80        | 50             |
| Maryland.....          | 1                          | 137         | 371        | 1        | 707      | 0         | 1               | 670            | 3         | 30             |
| Minnesota.....         | 3                          | 306         | 6          | 0        | 1,416    | 0         | 0               | 1,234          | 277       | 18             |
| Missouri.....          | 3                          | 291         | 117        | 0        | 2,729    | 0         | 1               | 580            | 51        | 17             |
| New Mexico.....        | 2                          | 73          | 7          | 1        | 438      | 1         | 0               | 48             | 5         | 9              |
| New Jersey.....        | 11                         | 422         | 126        | 0        | 1,918    |           | 3               | 776            | 14        | 28             |
| New York.....          | 19                         | 1,524       | 634        | 5        | 9,956    |           | 12              | 2,760          | 49        | 131            |
| Rhode Island.....      | 0                          | 68          | 1          | 4        | 6        | 0         |                 | 409            |           | 0              |
| South Carolina.....    | 1                          | 111         | 88         | 19       | 1,348    | 3         | 6               |                | 50        | 6              |
| Vermont.....           | 0                          | 26          | 0          | 0        | 736      | 0         | 0               |                | 82        | 11             |
| Wyoming.....           | 1                          | 7           |            |          | 384      |           |                 |                | 21        | 4              |

**RECIPROCAL NOTIFICATION, FEBRUARY, 1924.**

*Cases of communicable diseases referred during February, 1924, to other State health departments by departments of health of certain States.*

| Referred by—     | Diphtheria. | Scarlet fever. | Small-pox. | Tuberculosis. | Typhoid fever. |
|------------------|-------------|----------------|------------|---------------|----------------|
| Connecticut..... |             | 1              |            |               |                |
| Illinois.....    |             |                | 1          | 2             |                |
| Minnesota.....   |             |                | 1          | 21            | 2              |
| New Jersey.....  |             |                |            |               | 1              |
| New York.....    | 1           | 1              | 1          |               | 2              |

**MORBIDITY REPORTS FROM CITIES.**

*Diphtheria.*—The reports from 37 States and 105 cities in all sections of the United States for the week ended March 8, 1924, show very nearly the same number of cases of diphtheria as were reported for the corresponding week of last year and very little variation from the estimated expectancy, which is based on the experience of the last nine years, excluding epidemics. The number reported by the cities gradually decreased from 1,453 cases for the week ended January 19, 1924, to 1,024 cases for the week ended March 8, 1924.

*Measles.*—The State health officers reported about twice as many cases of measles for the week ended March 8, 1924, as they reported for the corresponding week of the year 1923, but the number of cases reported in the 105 cities was only about 17 per cent more than were reported for the same week last year.

*Scarlet fever.*—Both States and cities reported more cases of scarlet fever for the week in 1924 than for the corresponding week of 1923, and an increase of about 75 per cent over the estimated expectancy was shown by the reports from the cities.

*Smallpox.*—Reports of cases of smallpox for the week ended March 8, 1924, indicate that vaccination has been neglected in many parts of the country. State health officers reported more than twice as many cases as they reported for the corresponding week of 1923. The number of cases reported for the week in 1924 by city health officers is more than double the estimated expectancy.

*Deaths from influenza and pneumonia.*—The number of deaths from these diseases reported from the 105 cities for the week ended March 8, 1924, increased somewhat over the number reported for preceding weeks, but is less than it was for the corresponding week of 1923.

## City reports for week ended March 8, 1924.

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

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1915 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

| Division, State, and city. | Chick-<br>en pox,<br>cases re-<br>ported. | Diphtheria.                            |                      | Influenza.           |                       | Meas-<br>les,<br>cases re-<br>ported. | Mumps,<br>cases re-<br>ported. | Pneu-<br>monia,<br>deaths re-<br>ported. | Scarlet fever.                         |                      |
|----------------------------|---|--|----------------------|----------------------|-----------------------|---------------------------------------|--------------------------------|--|--|----------------------|
|                            |   | Cases, es-<br>timated ex-<br>pectancy. | Cases re-<br>ported. | Cases re-<br>ported. | Deaths re-<br>ported. |                                       |                                |  | Cases, es-<br>timated ex-<br>pectancy. | Cases re-<br>ported. |
| NEW ENGLAND.               |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Maine:                     |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Lewiston.....              | 1   | 2                                      | 0                    | 0                    | 0                     | 2                                     | 0                              | 0  | 2                                      | 2                    |
| Portland.....              | 21  | 2                                      | 2                    | 0                    | 0                     | 0                                     | 18                             | 1  | 2                                      | 0                    |
| New Hampshire:             |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Nashua.....                |   | 1                                      | 0                    | 0                    | 0                     | 0                                     |                                | 1  | 1                                      | 3                    |
| Vermont:                   |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Barre.....                 | 3   | 0                                      | 0                    | 0                    | 0                     | 2                                     | 1                              | 2  | 1                                      | 0                    |
| Burlington.....            | 3   | 0                                      | 0                    | 0                    | 0                     | 0                                     | 0                              | 4  | 1                                      | 2                    |
| Massachusetts:             |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Boston.....                | 65  | 62                                     | 40                   | 6                    | 1                     | 181                                   | 35                             | 30                                       | 53                                     | 148                  |
| Fall River.....            | 6   | 5                                      | 4                    | 1                    | 0                     | 3                                     | 4                              | 4  | 3                                      | 14                   |
| Springfield.....           | 8   | 4                                      | 5                    |                      | 1                     | 105                                   | 6                              | 2  | 5                                      | 13                   |
| Worcester.....             |   | 3                                      | 3                    | 1                    | 0                     | 7                                     |                                | 9  | 7                                      | 28                   |
| Rhode Island:              |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Pawtucket.....             |   | 1                                      | 1                    | 0                    | 0                     | 0                                     |                                | 4  | 1                                      | 11                   |
| Providence.....            | 0   | 12                                     | 11                   | 0                    | 0                     | 3                                     | 0                              | 7  | 9                                      | 93                   |
| Connecticut:               |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Bridgeport.....            | 0   | 8                                      | 11                   | 1                    | 3                     | 1                                     | 0                              | 2  | 6                                      | 14                   |
| Hartford.....              |   | 9                                      | 6                    | 0                    | 0                     | 25                                    |                                | 1  | 5                                      | 44                   |
| New Haven.....             | 6   | 3                                      | 3                    | 0                    | 0                     | 6                                     | 116                            | 9  | 6                                      | 22                   |
| MIDDLE ATLANTIC.           |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| New York:                  |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Buffalo.....               | 0   | 18                                     | 19                   | 1                    | 0                     | 41                                    | 0                              | 10                                       | 15                                     | 23                   |
| New York.....              | 285                                       | 268                                    | 175                  | 98                   | 27                    | 1,679                                 | 271                            | 281                                      | 189                                    | 268                  |
| Rochester.....             | 12  | 9                                      | 1                    |                      | 1                     | 3                                     | 9                              | 6  | 13                                     | 13                   |
| Syracuse.....              | 30  | 7                                      | 10                   | 0                    | 0                     | 57                                    | 5                              | 6  | 14                                     | 55                   |
| New Jersey:                |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Camden.....                |   | 3                                      | 7                    | 0                    | 0                     | 0                                     |                                | 10                                       | 4                                      | 5                    |
| Newark.....                | 57  | 21                                     | 13                   | 8                    | 1                     | 66                                    | 139                            | 13                                       | 23                                     | 36                   |
| Trenton.....               | 3   | 5                                      | 3                    | 1                    | 0                     | 36                                    | 2                              | 3  | 3                                      | 4                    |
| Pennsylvania:              |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Philadelphia.....          | 173                                       | 75                                     | 89                   | 7                    | 6                     | 73                                    | 0                              | 84                                       | 59                                     | 88                   |
| Pittsburgh.....            | 88  | 22                                     | 29                   |                      | 10                    | 11                                    | 105                            | 99                                       | 19                                     | 37                   |
| Reading.....               | 0   | 3                                      | 5                    | 0                    | 0                     | 6                                     | 0                              | 4  | 3                                      | 3                    |
| Scranton.....              | 11  | 5                                      | 2                    |                      | 1                     | 5                                     | 2                              | 8  | 6                                      | 0                    |
| EAST NORTH CENTRAL.        |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Ohio:                      |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Cincinnati.....            | 16  | 12                                     | 16                   | 1                    | 2                     | 126                                   | 12                             | 11                                       | 12                                     | 8                    |
| Cleveland.....             | 86  | 31                                     | 17                   | 10                   | 3                     | 47                                    | 339                            | 25                                       | 40                                     | 17                   |
| Columbus.....              | 5   | 3                                      | 3                    | 0                    | 0                     | 3                                     | 0                              | 7  | 7                                      | 6                    |
| Toledo.....                | 0   | 5                                      | 3                    |                      | 1                     | 36                                    | 0                              | 9  | 13                                     | 23                   |
| Indiana:                   |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Fort Wayne.....            |   | 3                                      | 4                    | 0                    | 0                     | 4                                     |                                | 1  | 2                                      | 7                    |
| Indianapolis.....          | 45  | 10                                     | 6                    |                      | 1                     | 43                                    | 268                            | 13                                       | 13                                     | 4                    |
| South Bend.....            |   | 1                                      | 10                   | 0                    | 0                     | 3                                     |                                | 2  | 3                                      | 10                   |
| Terre Haute.....           | 3   | 1                                      | 0                    | 0                    | 0                     | 10                                    | 0                              | 1  | 3                                      | 0                    |
| Illinois:                  |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Chicago.....               | 177                                       | 123                                    | 71                   | 46                   | 7                     | 109                                   | 131                            | 102                                      | 133                                    | 116                  |
| Cicero.....                | 11  | 2                                      | 0                    | 0                    | 0                     | 0                                     | 34                             | 0  | 1                                      | 0                    |
| Peoria.....                |   | 1                                      | 2                    | 0                    | 0                     | 1                                     |                                | 3  | 4                                      | 4                    |
| Springfield.....           | 11  | 1                                      | 0                    | 0                    | 0                     | 0                                     | 0                              | 4  | 1                                      | 1                    |
| Michigan:                  |   |  |                      |                      |                       |                                       |                                |  |  |                      |
| Detroit.....               | 84  | 63                                     | 59                   | 1                    | 4                     | 133                                   | 106                            | 41                                       | 78                                     | 104                  |
| Flint.....                 | 7   | 7                                      | 3                    |                      | 2                     | 24                                    | 33                             | 9  | 6                                      | 5                    |
| Grand Rapids.....          |   | 2                                      | 11                   | 1                    | 0                     | 1                                     |                                | 5  | 8                                      | 10                   |
| Saginaw.....               | 1   | 1                                      | 0                    | 0                    | 0                     | 20                                    | 3                              | 0  | 3                                      | 62                   |

City reports for week ended March 8, 1924—Continued.

| Division, State, and city. | Chick-<br>en pox,<br>cases<br>re-<br>ported. | Diphtheria.                                  |                         | Influenza.              |                          | Meas-<br>les,<br>cases<br>re-<br>ported. | Mumps,<br>cases re-<br>ported. | Pneu-<br>monia,<br>deaths re-<br>ported. | Scarlet fever                                |                         |
|----------------------------|--|--|-------------------------|-------------------------|--------------------------|--|--------------------------------|--|--|-------------------------|
|                            |  | Cases,<br>esti-<br>mated<br>expect-<br>ancy. | Cases<br>re-<br>ported. | Cases<br>re-<br>ported. | Deaths<br>re-<br>ported. |  |                                |  | Cases,<br>esti-<br>mated<br>expect-<br>ancy. | Cases<br>re-<br>ported. |
| EAST NORTH CENTRAL—contd.  |  |  |                         |                         |                          |  |                                |  |  |                         |
| Wisconsin:                 |  |  |                         |                         |                          |  |                                |  |  |                         |
| Madison.....               | 15   | 1  | 1                       | 0                       | 0                        | 2  | 1                              | 0  | 2  | 4                       |
| Milwaukee.....             | 58   | 15   | 14                      | 0                       | 0                        | 36                                       | 0                              | 0  | 33   | 32                      |
| Racine.....                | 10   | 1  | 3                       | 0                       | 0                        | 0  | 2                              | 0  | 4  | 21                      |
| Superior.....              |  | 1  | 0                       | 0                       | 0                        | 0  | 0                              | 0  | 2  | 2                       |
| WEST NORTH CENTRAL.        |  |  |                         |                         |                          |  |                                |  |  |                         |
| Minnesota:                 |  |  |                         |                         |                          |  |                                |  |  |                         |
| Duluth.....                |  | 2  | 0                       | 0                       | 0                        | 2  | 0                              | 0  | 4  | 9                       |
| Minneapolis.....           |  | 15   | 19                      | 0                       | 1                        | 18                                       | 0                              | 11                                       | 31   | 66                      |
| St. Paul.....              |  | 12   | 23                      | 0                       | 0                        | 42                                       | 0                              | 10                                       | 22   | 67                      |
| Iowa:                      |  |  |                         |                         |                          |  |                                |  |  |                         |
| Davenport.....             |  | 1  | 6                       | 0                       | 0                        | 0  | 0                              | 0  | 4  | 3                       |
| Des Moines.....            | 0  | 3  | 7                       | 0                       | 0                        | 9  | 0                              | 0  | 10   | 1                       |
| Sioux City.....            | 0  | 2  | 1                       | 0                       | 0                        | 2  | 0                              | 0  | 2  | 0                       |
| Waterloo.....              | 0  | 1  | 0                       | 0                       | 0                        | 3  | 17                             | 0  | 4  | 5                       |
| Missouri:                  |  |  |                         |                         |                          |  |                                |  |  |                         |
| St. Joseph.....            | 2  | 2  | 2                       | 0                       | 0                        | 14                                       | 0                              | 10                                       | 3  | 0                       |
| St. Louis.....             | 38   | 55   | 43                      | 0                       | 0                        | 31                                       | 46                             | 0  | 26   | 84                      |
| North Dakota:              |  |  |                         |                         |                          |  |                                |  |  |                         |
| Fargo.....                 | 0  | 1  | 0                       | 0                       | 0                        | 0  | 0                              | 0  | 3  | 0                       |
| Grand Forks.....           | 0  | 0  | 0                       | 0                       | 0                        | 9  | 0                              | 0  | 0  | 0                       |
| South Dakota:              |  |  |                         |                         |                          |  |                                |  |  |                         |
| Sioux Falls.....           | 2  | 2  | 0                       | 0                       | 0                        | 5  | 0                              | 0  | 4  | 0                       |
| Nebraska:                  |  |  |                         |                         |                          |  |                                |  |  |                         |
| Lincoln.....               |  | 1  | 2                       | 0                       | 0                        | 73                                       | 0                              | 2  | 4  | 2                       |
| Omaha.....                 | 5  | 6  | 4                       | 0                       | 0                        | 141                                      | 0                              | 7  | 14   | 2                       |
| Kansas:                    |  |  |                         |                         |                          |  |                                |  |  |                         |
| Topeka.....                | 4  | 1  | 2                       | 0                       | 0                        | 358                                      | 0                              | 1  | 2  | 2                       |
| Wichita.....               | 15   | 1  | 10                      | 0                       | 0                        | 350                                      | 213                            | 6  | 2  | 1                       |
| SOUTH ATLANTIC.            |  |  |                         |                         |                          |  |                                |  |  |                         |
| Delaware:                  |  |  |                         |                         |                          |  |                                |  |  |                         |
| Wilmington.....            |  | 2  | 2                       | 0                       | 0                        | 0  | 0                              | 4  | 1  | 12                      |
| Maryland:                  |  |  |                         |                         |                          |  |                                |  |  |                         |
| Baltimore.....             | 223  | 24   | 21                      | 43                      | 5                        | 184                                      | 25                             | 45                                       | 34   | 108                     |
| Cumberland.....            |  | 1  | 0                       | 0                       | 0                        | 0  | 0                              | 1  | 1  | 3                       |
| Frederick.....             |  | 1  | 0                       | 2                       | 0                        | 27                                       | 0                              | 0  | 0  | 4                       |
| District of Col.:          |  |  |                         |                         |                          |  |                                |  |  |                         |
| Washington.....            | 73   | 12   | 8                       | 4                       | 2                        | 5  | 0                              | 35                                       | 20   | 48                      |
| Virginia:                  |  |  |                         |                         |                          |  |                                |  |  |                         |
| Lynchburg.....             | 2  | 0  | 2                       | 0                       | 0                        | 1  | 0                              | 0  | 0  | 0                       |
| Norfolk.....               | 11   | 1  | 1                       | 0                       | 0                        | 79                                       | 1                              | 5  | 2  | 3                       |
| Richmond.....              | 5  | 2  | 0                       | 1                       | 1                        | 34                                       | 1                              | 9  | 3  | 4                       |
| Roanoke.....               | 7  | 1  | 0                       | 0                       | 1                        | 0  | 3                              | 1  | 1  | 0                       |
| West Virginia:             |  |  |                         |                         |                          |  |                                |  |  |                         |
| Charleston.....            | 6  | 1  | 0                       | 0                       | 0                        | 0  | 0                              | 1  | 1  | 2                       |
| Huntington.....            |  | 0  | 0                       | 0                       | 0                        | 0  | 0                              | 4  | 1  | 0                       |
| Wheeling.....              | 6  | 1  | 3                       | 0                       | 0                        | 7  | 3                              | 7  | 1  | 3                       |
| North Carolina:            |  |  |                         |                         |                          |  |                                |  |  |                         |
| Raleigh.....               | 20   | 0  | 0                       | 1                       | 0                        | 9  | 0                              | 4  | 0  | 1                       |
| Wilmington.....            | 5  | 1  | 1                       | 0                       | 0                        | 77                                       | 11                             | 5  | 0  | 0                       |
| Winston-Salem.....         | 3  | 0  | 1                       | 1                       | 1                        | 91                                       | 7                              | 5  | 1  | 10                      |
| South Carolina:            |  |  |                         |                         |                          |  |                                |  |  |                         |
| Charleston.....            | 1  | 1  | 1                       | 0                       | 0                        | 0  | 0                              | 8  | 0  | 1                       |
| Columbia.....              | 9  | 1  | 1                       | 0                       | 0                        | 57                                       | 13                             | 5  | 1  | 0                       |
| Greenville.....            | 2  | 0  | 0                       | 0                       | 0                        | 107                                      | 10                             | 4  | 0  | 0                       |
| Georgia:                   |  |  |                         |                         |                          |  |                                |  |  |                         |
| Atlanta.....               | 3  | 2  | 2                       | 4                       | 2                        | 7  | 3                              | 26                                       | 4  | 6                       |
| Brunswick.....             | 0  | 0  | 0                       | 0                       | 0                        | 71                                       | 0                              | 0  | 0  | 0                       |
| Savannah.....              | 0  | 1  | 0                       | 6                       | 2                        | 21                                       | 0                              | 6  | 2  | 0                       |
| Florida:                   |  |  |                         |                         |                          |  |                                |  |  |                         |
| St. Petersburg.....        | 5  | 0  | 0                       | 0                       | 0                        | 10                                       | 0                              | 1  | 0  | 4                       |
| Tampa.....                 | 3  | 3  | 0                       | 0                       | 0                        | 14                                       | 0                              | 5  | 0  | 0                       |

## City reports for week ended March 8, 1924—Continued.

| Division, State, and city.       | Chick-<br>on pox,<br>cases<br>re-<br>ported. | Diphtheria.                                  |                         | Influenza.              |                          | Meas-<br>les,<br>cases<br>re-<br>ported. | Mumps,<br>cases re-<br>ported. | Pneu-<br>monia,<br>deaths<br>re-<br>ported. | Scarlet fever.                               |                         |
|----------------------------------|--|--|-------------------------|-------------------------|--------------------------|--|--------------------------------|---|--|-------------------------|
|                                  |  | Cases,<br>esti-<br>mated<br>expect-<br>ancy. | Cases<br>re-<br>ported. | Cases<br>re-<br>ported. | Deaths<br>re-<br>ported. |  |                                |   | Cases,<br>esti-<br>mated<br>expect-<br>ancy. | Cases<br>re-<br>ported. |
| <b>EAST SOUTH CEN-<br/>TRAL.</b> |  |  |                         |                         |                          |  |                                |   |  |                         |
| Kentucky:                        |  |  |                         |                         |                          |  |                                |   |  |                         |
| Covington.....                   | 0  | 1  | 1                       | 0                       | 0                        | 2  | 0                              | 4   | 1  | 9                       |
| Lexington.....                   | 1  | 0  | 0                       | 0                       | 0                        | 20                                       | 0                              | 1   | 1  | 2                       |
| Louisville.....                  | 11   | 6  | 1                       | 8                       | 0                        | 5  | 4                              | 16  | 4  | 6                       |
| Tennessee:                       |  |  |                         |                         |                          |  |                                |   |  |                         |
| Memphis.....                     | 31   | 4  | 4                       | 3                       | 4                        | 45                                       | 39                             | 18  | 3  | 9                       |
| Nashville.....                   | 5  | 2  | 2                       | -----                   | 7                        | 13                                       | 0                              | 10  | 3  | 1                       |
| Alabama:                         |  |  |                         |                         |                          |  |                                |   |  |                         |
| Birmingham.....                  | 10   | 2  | 1                       | 7                       | 3                        | 76                                       | 16                             | 12  | 1  | 3                       |
| Mobile.....                      | 3  | 1  | 0                       | 1                       | 1                        | 4  | 0                              | 0   | 0  | 0                       |
| Montgomery.....                  | -----  | 1  | 0                       | 0                       | 0                        | 10                                       | -----                          | 1   | 1  | 0                       |
| <b>WEST SOUTH CEN-<br/>TRAL.</b> |  |  |                         |                         |                          |  |                                |   |  |                         |
| Arkansas:                        |  |  |                         |                         |                          |  |                                |   |  |                         |
| Fort Smith.....                  | 1  | 2  | 0                       | 0                       | -----                    | 217                                      | 1                              | -----                                       | 1  | 0                       |
| Little Rock.....                 | 2  | 1  | 1                       | 3                       | -----                    | 39                                       | 8                              | -----                                       | 1  | 0                       |
| Louisiana:                       |  |  |                         |                         |                          |  |                                |   |  |                         |
| New Orleans.....                 | 0  | 12   | 13                      | 7                       | 7                        | 111                                      | 0                              | 22  | 3  | 9                       |
| Shreveport.....                  | 0  | -----  | 1                       | -----                   | 1                        | 4  | 0                              | 3   | -----  | 0                       |
| Oklahoma:                        |  |  |                         |                         |                          |  |                                |   |  |                         |
| Tulsa.....                       | 7  | 2  | 0                       | 0                       | -----                    | 13                                       | 0                              | -----                                       | 1  | 1                       |
| Texas:                           |  |  |                         |                         |                          |  |                                |   |  |                         |
| Dallas.....                      | 7  | 4  | 8                       | 2                       | 2                        | 131                                      | 34                             | 6   | 1  | 1                       |
| Galveston.....                   | 0  | 1  | 0                       | 0                       | 0                        | 14                                       | 0                              | 1   | 0  | 0                       |
| Houston.....                     | -----  | 1  | 5                       | -----                   | 1                        | 132                                      | -----                          | 10  | 1  | 0                       |
| San Antonio.....                 | 0  | 2  | 6                       | -----                   | 1                        | 45                                       | 1                              | 20  | 0  | 1                       |
| <b>MOUNTAIN.</b>                 |  |  |                         |                         |                          |  |                                |   |  |                         |
| Montana:                         |  |  |                         |                         |                          |  |                                |   |  |                         |
| Billings.....                    | 0  | 1  | 0                       | 0                       | 0                        | 5  | 0                              | 1   | 1  | 1                       |
| Great Falls.....                 | 8  | 1  | 1                       | 0                       | 0                        | 62                                       | 0                              | 0   | 1  | 6                       |
| Helena.....                      | 0  | -----  | 0                       | 0                       | 0                        | 60                                       | 0                              | 1   | -----  | 0                       |
| Missoula.....                    | 0  | 0  | 3                       | 0                       | 0                        | 15                                       | 0                              | 0   | 2  | 0                       |
| Idaho:                           |  |  |                         |                         |                          |  |                                |   |  |                         |
| Boise.....                       | 2  | 0  | 0                       | 0                       | 0                        | 92                                       | 0                              | 0   | 1  | 0                       |
| Colorado:                        |  |  |                         |                         |                          |  |                                |   |  |                         |
| Denver.....                      | 25   | 8  | 17                      | -----                   | 4                        | 107                                      | 5                              | 10  | 10   | 13                      |
| Pueblo.....                      | 6  | 2  | 3                       | 0                       | 0                        | 96                                       | 9                              | 0   | 2  | 4                       |
| New Mexico:                      |  |  |                         |                         |                          |  |                                |   |  |                         |
| Albuquerque.....                 | 4  | 1  | 0                       | 0                       | 0                        | 18                                       | 0                              | 1   | 6  | 0                       |
| Utah:                            |  |  |                         |                         |                          |  |                                |   |  |                         |
| Salt Lake City.....              | 17   | 2  | 0                       | 0                       | 0                        | 367                                      | 10                             | 2   | 5  | 1                       |
| Nevada:                          |  |  |                         |                         |                          |  |                                |   |  |                         |
| Reno.....                        | 0  | 0  | 0                       | 0                       | 0                        | 15                                       | 0                              | 0   | 0  | 0                       |
| <b>PACIFIC.</b>                  |  |  |                         |                         |                          |  |                                |   |  |                         |
| Washington:                      |  |  |                         |                         |                          |  |                                |   |  |                         |
| Seattle.....                     | 4  | 4  | 8                       | 0                       | -----                    | 164                                      | 9                              | -----                                       | 9  | 10                      |
| Spokane.....                     | 15   | 3  | 2                       | 0                       | -----                    | 22                                       | 0                              | -----                                       | 2  | 15                      |
| Tacoma.....                      | 3  | 1  | 4                       | 0                       | -----                    | 120                                      | 7                              | -----                                       | 2  | 6                       |
| Oregon:                          |  |  |                         |                         |                          |  |                                |   |  |                         |
| Portland.....                    | 12   | 3  | 17                      | 0                       | 0                        | 23                                       | 4                              | 17  | 6  | 3                       |
| California:                      |  |  |                         |                         |                          |  |                                |   |  |                         |
| Los Angeles.....                 | -----  | 22   | 85                      | 10                      | 2                        | 299                                      | -----                          | 22  | 13   | 82                      |
| Sacramento.....                  | -----  | 1  | 12                      | 0                       | 0                        | 8  | -----                          | 4   | 2  | 2                       |
| San Francisco.....               | 58   | 25   | 38                      | 3                       | 0                        | 110                                      | 13                             | 8   | 15   | 27                      |

City reports for week ended March 8, 1924—Continued.

| Division, State, and city. | Popula-<br>tion<br>July 1,<br>1923,<br>estimated. | Smallpox.                       |                 |                  | Tuberculosis,<br>deaths<br>reported. | Typhoid fever.                  |                 |                  | Whooping cough, cases<br>reported. | Deaths, all causes. |
|----------------------------|---|---------------------------------|-----------------|------------------|--------------------------------------|---------------------------------|-----------------|------------------|------------------------------------|---------------------|
|                            |   | Cases, estimated<br>expectancy. | Cases reported. | Deaths reported. |                                      | Cases, estimated<br>expectancy. | Cases reported. | Deaths reported. |                                    |                     |
| <b>NEW ENGLAND.</b>        |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Maine:                     |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Lewiston.....              | 33,790  | 0                               | 0               | 0                | 1                                    | 0                               | 0               | 0                | 0                                  | 10                  |
| Portland.....              | 73,129  | 0                               | 0               | 0                | 1                                    | 0                               | 1               | 0                | 5                                  | 11                  |
| New Hampshire:             |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Nashua.....                | 29,234  | 0                               | 0               | 0                | 0                                    | 0                               | 0               | 0                | -----                              | 6                   |
| Vermont:                   |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Barre.....                 | *10,008   | 0                               | 0               | 0                | 0                                    | 0                               | 0               | 0                | 1                                  | 6                   |
| Burlington.....            | 23,613  | 0                               | 1               | 0                | 0                                    | 0                               | 0               | 0                | 0                                  | 9                   |
| Massachusetts:             |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Boston.....                | 770,400   | 0                               | 0               | 0                | 22                                   | 2                               | 5               | 1                | 9                                  | 240                 |
| Fall River.....            | 120,912   | 0                               | 0               | 0                | 4                                    | 1                               | 0               | 0                | 1                                  | 38                  |
| Springfield.....           | 144,227   | 0                               | 0               | 0                | 2                                    | 0                               | 0               | 0                | 1                                  | 45                  |
| Worcester.....             | 191,927   | 0                               | 0               | 0                | 6                                    | 0                               | 0               | 0                | -----                              | 62                  |
| Rhode Island:              |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Pawtucket.....             | 68,799  | 0                               | 0               | 0                | 0                                    | 0                               | 0               | 0                | -----                              | 20                  |
| Providence.....            | 242,378   | 0                               | 0               | 0                | 6                                    | 0                               | 0               | 0                | 0                                  | 88                  |
| Connecticut:               |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Bridgeport.....            | *143,555  | 0                               | 0               | 0                | 0                                    | 0                               | 0               | 0                | 0                                  | 42                  |
| Hartford.....              | *138,036  | 0                               | 0               | 0                | 2                                    | 0                               | 0               | 0                | -----                              | 37                  |
| New Haven.....             | 172,967   | 0                               | 0               | 0                | 2                                    | 0                               | 1               | 0                | 2                                  | 51                  |
| <b>MIDDLE ATLANTIC.</b>    |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| New York:                  |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Buffalo.....               | 536,718   | 0                               | 0               | 0                | 13                                   | 1                               | 0               | 0                | 46                                 | 131                 |
| New York.....              | 5,927,625   | 0                               | 1               | 0                | <sup>1</sup> 103                     | 9                               | 12              | 2                | 137                                | 1,715               |
| Rochester.....             | 171,867   | 0                               | 0               | 0                | 1                                    | 0                               | 0               | 0                | 5                                  | 59                  |
| Syracuse.....              | 184,511   | 0                               | 0               | 0                | 1                                    | 1                               | 0               | 0                | 5                                  | 47                  |
| New Jersey:                |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Camden.....                | 124,157   | 0                               | 0               | 0                | 2                                    | 0                               | 0               | 0                | -----                              | 42                  |
| Newark.....                | 438,699   | 0                               | 0               | 0                | 6                                    | 0                               | 0               | 0                | 11                                 | 122                 |
| Trenton.....               | 127,390   | 0                               | 0               | 0                | 2                                    | 1                               | 0               | 0                | 1                                  | 39                  |
| Pennsylvania:              |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Philadelphia.....          | 1,922,788   | 0                               | 0               | 0                | 50                                   | 4                               | 4               | 0                | 68                                 | 587                 |
| Pittsburgh.....            | 613,442   | 0                               | 0               | 0                | 14                                   | 1                               | 0               | 0                | 61                                 | 274                 |
| Reading.....               | 110,917   | 0                               | 0               | 0                | 1                                    | 0                               | 0               | 0                | 4                                  | 39                  |
| Scranton.....              | 140,636   | 0                               | 0               | 0                | 2                                    | 0                               | 0               | 0                | 0                                  | 49                  |
| <b>EAST NORTH CENTRAL.</b> |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Ohio:                      |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Cincinnati.....            | 406,312   | 2                               | 2               | 0                | 11                                   | 0                               | 0               | 0                | 30                                 | 119                 |
| Cleveland.....             | 888,519   | 2                               | 10              | 0                | 25                                   | 1                               | 5               | 0                | 45                                 | 195                 |
| Columbus.....              | 261,082   | 0                               | 0               | 0                | 5                                    | 0                               | 0               | 0                | 2                                  | 79                  |
| Toledo.....                | 268,338   | 4                               | 36              | 0                | 8                                    | 2                               | 1               | 0                | 0                                  | 77                  |
| Indiana:                   |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Fort Wayne.....            | 93,573  | 1                               | 1               | 0                | 0                                    | 0                               | 0               | 0                | -----                              | 23                  |
| Indianapolis.....          | 342,718   | 3                               | 28              | 0                | 6                                    | 0                               | 0               | 0                | 36                                 | 107                 |
| South Bend.....            | 76,709  | 1                               | 0               | 0                | 0                                    | 0                               | 0               | 0                | -----                              | 17                  |
| Terre Haute.....           | 68,939  | 1                               | 0               | 0                | 0                                    | 0                               | 0               | 0                | 14                                 | 21                  |
| Illinois:                  |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Chicago.....               | 2,886,121   | 2                               | 17              | 0                | 53                                   | 3                               | 3               | 0                | 33                                 | 764                 |
| Cicero.....                | 55,968  | 0                               | 0               | 0                | 0                                    | 0                               | 0               | 0                | 4                                  | 6                   |
| Peoria.....                | 79,675  | 1                               | 1               | 0                | 0                                    | 0                               | 1               | 0                | -----                              | 21                  |
| Springfield.....           | 61,833  | 1                               | 0               | 0                | 1                                    | 0                               | 0               | 0                | 3                                  | 21                  |
| Michigan:                  |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Detroit.....               | 995,668   | 6                               | 81              | 1                | 29                                   | 3                               | 0               | 1                | 19                                 | 281                 |
| Flint.....                 | 117,968   | 1                               | 5               | 0                | 0                                    | 0                               | 0               | 0                | 4                                  | 27                  |
| Grand Rapids.....          | 145,947   | 1                               | 3               | 0                | 5                                    | 1                               | 0               | 0                | -----                              | 40                  |
| Saginaw.....               | 69,754  | 0                               | 0               | 0                | 3                                    | 0                               | 0               | 0                | 7                                  | 18                  |
| Wisconsin:                 |   |                                 |                 |                  |                                      |                                 |                 |                  |                                    |                     |
| Madison.....               | 42,519  | 1                               | 0               | -----            | -----                                | 0                               | 0               | -----            | 2                                  | -----               |
| Milwaukee.....             | 484,595   | 4                               | 0               | 0                | 2                                    | 1                               | 0               | 0                | 42                                 | -----               |
| Racine.....                | 64,393  | 1                               | 3               | 0                | 1                                    | 0                               | 0               | 0                | 1                                  | 16                  |
| Superior.....              | *39,671   | 3                               | 10              | 0                | 1                                    | 0                               | 0               | 0                | 0                                  | 10                  |

\*Population Jan. 1, 1920.

<sup>1</sup> Pulmonary only.

## City reports for week ended March 8, 1924—Continued.

| Division, State, and city. | Population July 1, 1923, estimated. | Smallpox.                    |                 |                  |                                | Typhoid fever.               |                 |                  | Whooping cough, cases reported. | Deaths, all causes. |
|----------------------------|-------------------------------------|------------------------------|-----------------|------------------|--------------------------------|------------------------------|-----------------|------------------|---------------------------------|---------------------|
|                            |                                     | Cases, estimated expectancy. | Cases reported. | Deaths reported. | Tuberculosis, deaths reported. | Cases, estimated expectancy. | Cases reported. | Deaths reported. |                                 |                     |
| WEST NORTH CENTRAL.        |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Minnesota:                 |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Duluth.....                | 106,289                             | 2                            | 7               | 1                | 0                              | 0                            | 0               | 0                |                                 | 15                  |
| Minneapolis.....           | 409,125                             | 20                           | 0               | 0                | 9                              | 1                            | 0               | 0                |                                 | 96                  |
| St. Paul.....              | 241,891                             | 10                           | 32              | 0                | 4                              | 0                            | 1               | 0                |                                 | 69                  |
| Iowa:                      |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Davenport.....             | 61,262                              | 5                            | 11              |                  |                                | 0                            | 0               |                  |                                 |                     |
| Des Moines.....            | 140,923                             | 3                            | 0               |                  |                                | 0                            | 0               |                  |                                 | 0                   |
| Sioux City.....            | 79,662                              | 3                            | 0               |                  |                                | 0                            | 0               |                  |                                 | 0                   |
| Waterloo.....              | 39,667                              | 0                            | 0               |                  |                                | 0                            | 0               |                  |                                 | 11                  |
| Missouri:                  |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| St. Joseph.....            | 78,232                              | 5                            | 0               | 0                | 2                              | 0                            | 0               | 0                | 3                               | 35                  |
| St. Louis.....             | 803,853                             | 3                            | 3               | 0                | 16                             | 1                            | 2               | 0                | 43                              | 220                 |
| North Dakota:              |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Fargo.....                 | 24,841                              | 0                            | 0               | 0                | 0                              | 0                            | 0               | 0                | 0                               | 8                   |
| Grand Forks.....           | 14,547                              | 1                            | 0               |                  |                                | 0                            | 0               |                  | 0                               |                     |
| South Dakota:              |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Sioux Falls.....           | 29,206                              | 1                            | 0               | 0                | 0                              | 0                            | 0               | 0                |                                 | 4                   |
| Nebraska:                  |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Lincoln.....               | 58,761                              | 3                            | 0               | 0                | 2                              | 0                            | 0               | 0                |                                 | 24                  |
| Omaha.....                 | 204,382                             | 9                            | 1               | 0                | 1                              | 0                            | 0               | 0                |                                 | 48                  |
| Kansas:                    |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Topeka.....                | 52,555                              | 2                            | 0               | 0                | 0                              | 0                            | 0               | 0                | 0                               | 10                  |
| Wichita.....               | 79,261                              | 6                            | 13              | 0                | 0                              | 0                            | 0               | 0                | 16                              | 29                  |
| SOUTH ATLANTIC.            |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Delaware:                  |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Wilmington.....            | 117,728                             | 0                            | 0               | 0                | 2                              | 0                            | 0               | 0                |                                 | 37                  |
| Maryland:                  |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Baltimore.....             | 773,580                             | 0                            | 0               | 0                | 25                             | 3                            | 0               | 0                | 29                              | 299                 |
| Cumberland.....            | 32,361                              | 0                            | 0               | 0                | 0                              | 0                            | 0               | 0                |                                 | 11                  |
| Frederick.....             | 11,301                              | 0                            | 0               | 0                | 0                              | 0                            | 0               | 0                |                                 | 5                   |
| District of Columbia:      |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Washington.....            | *437,571                            | 0                            | 3               | 0                | 0                              | 1                            | 0               | 0                | 15                              | 163                 |
| Virginia:                  |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Lynchburg.....             | 30,277                              | 0                            | 0               | 0                | 0                              | 0                            | 0               | 0                | 22                              | 8                   |
| Norfolk.....               | 159,089                             | 0                            | 0               | 0                | 3                              | 0                            | 0               | 0                | 7                               |                     |
| Richmond.....              | 181,044                             | 0                            | 0               | 0                | 5                              | 0                            | 0               | 0                | 1                               | 66                  |
| Roanoke.....               | 65,502                              | 0                            | 0               | 0                | 1                              | 0                            | 0               | 0                | 0                               | 10                  |
| West Virginia:             |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Charleston.....            | 45,597                              | 0                            | 10              | 0                | 0                              | 1                            | 0               | 0                | 6                               | 15                  |
| Huntington.....            | 57,918                              | 0                            | 0               | 0                | 1                              | 0                            | 0               | 0                |                                 | 22                  |
| Wheeling.....              | *56,208                             | 0                            | 0               | 0                | 0                              | 0                            | 0               | 0                | 1                               | 23                  |
| North Carolina:            |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Raleigh.....               | 29,171                              | 0                            | 8               | 0                | 1                              | 0                            | 0               | 0                | 3                               | 14                  |
| Wilmington.....            | 35,719                              | 1                            | 0               | 0                | 1                              | 0                            | 0               | 0                | 1                               | 15                  |
| Winston-Salem.....         | 56,230                              | 4                            | 0               | 0                | 5                              | 0                            | 0               | 0                | 13                              | 24                  |
| South Carolina:            |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Charleston.....            | 71,245                              | 0                            | 5               | 0                | 1                              | 0                            | 0               | 0                | 4                               | 33                  |
| Columbia.....              | 39,688                              | 0                            | 1               | 0                | 0                              | 0                            | 0               | 0                | 1                               | 35                  |
| Greenville.....            | 25,789                              | 1                            | 3               | 0                | 1                              | 0                            | 0               | 0                | 0                               | 15                  |
| Georgia:                   |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| Atlanta.....               | 222,963                             | 3                            | 85              | 0                | 11                             | 1                            | 0               | 0                | 0                               | 105                 |
| Brunswick.....             | 15,937                              | 1                            | 0               | 0                | 0                              | 0                            | 1               | 0                | 0                               | 3                   |
| Savannah.....              | 89,448                              | 0                            | 2               | 0                | 3                              | 0                            | 0               | 0                | 0                               | 46                  |
| Florida:                   |                                     |                              |                 |                  |                                |                              |                 |                  |                                 |                     |
| St. Petersburg.....        | 34,403                              |                              | 0               | 0                | 0                              |                              | 0               | 0                | 0                               | 10                  |
| Tampa.....                 | 56,050                              | 1                            | 0               | 0                | 0                              | 2                            | 2               | 1                | 0                               | 22                  |

\* Population Jan. 1, 1920.

City reports for week ended March 8, 1924—Continued.

| Division, State, and city. | Popula-<br>tion<br>July 1,<br>1923,<br>estimated. | Smallpox.                       |                 |                  | Tubercu-<br>losis,<br>deaths<br>reported. | Typhoid fever.                  |                 |                  | Whooping cough, cases<br>reported. | Deaths,<br>all causes. |
|----------------------------|---|---------------------------------|-----------------|------------------|---|---------------------------------|-----------------|------------------|------------------------------------|------------------------|
|                            |   | Cases, estimated<br>expectancy. | Cases reported. | Deaths reported. |   | Cases, estimated<br>expectancy. | Cases reported. | Deaths reported. |                                    |                        |
| <b>EAST SOUTH CENTRAL.</b> |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| <b>Kentucky:</b>           |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Covington.....             | 57,877  | 0                               | 0               | 0                | 2   | 0                               | 0               | 0                | 1                                  | 18                     |
| Lexington.....             | 43,673  | 0                               | 0               | 0                | 2   | 0                               | 0               | 0                | 1                                  | 14                     |
| Louisville.....            | 257,671   | 1                               | 0               | 0                | 12  | 0                               | 0               | 0                | 2                                  | 97                     |
| <b>Tennessee:</b>          |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Memphis.....               | 170,067   | 4                               | 7               | 0                | 4   | 0                               | 1               | 0                | 13                                 | 81                     |
| Nashville.....             | 121,128   | 1                               | 1               | 0                | 5   | 0                               | 0               | 0                | 2                                  | 63                     |
| <b>Alabama:</b>            |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Birmingham.....            | 195,901   | 1                               | 27              | 0                | 6   | 1                               | 0               | 0                | 0                                  | 73                     |
| Mobile.....                | 63,858  | 2                               | 0               | 0                | 2   | 0                               | 0               | 0                | 0                                  | 12                     |
| Montgomery.....            | 45,383  | 0                               | 0               | 0                | 1   | 0                               | 0               | 0                | 0                                  | 12                     |
| <b>WEST SOUTH CENTRAL.</b> |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| <b>Arkansas:</b>           |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Fort Smith.....            | 30,635  | 1                               | 0               | 0                | 0   | 0                               | 0               | 0                | 15                                 | 0                      |
| Little Rock.....           | 70,916  | 0                               | 0               | 0                | 0   | 1                               | 0               | 0                | 3                                  | 0                      |
| <b>Louisiana:</b>          |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| New Orleans.....           | 404,575   | 2                               | 0               | 0                | 13  | 2                               | 1               | 0                | 0                                  | 178                    |
| Shreveport.....            | 54,590  | 2                               | 2               | 0                | 1   | 1                               | 1               | 0                | 0                                  | 20                     |
| <b>Oklahoma:</b>           |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Tulsa.....                 | 102,018   | 2                               | 4               | 0                | 0   | 0                               | 0               | 0                | 0                                  | 0                      |
| <b>Texas:</b>              |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Dallas.....                | 177,274   | 8                               | 0               | 0                | 5   | 0                               | 0               | 0                | 5                                  | 63                     |
| Galveston.....             | 46,877  | 1                               | 0               | 0                | 1   | 1                               | 0               | 0                | 0                                  | 12                     |
| Houston.....               | 154,970   | 1                               | 0               | 0                | 4   | 0                               | 0               | 0                | 0                                  | 52                     |
| San Antonio.....           | 184,727   | 0                               | 0               | 0                | 8   | 1                               | 0               | 0                | 1                                  | 64                     |
| <b>MOUNTAIN.</b>           |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| <b>Montana:</b>            |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Billings.....              | 16,927  | 0                               | 0               | 0                | 0   | 0                               | 0               | 0                | 0                                  | 3                      |
| Great Falls.....           | 27,787  | 3                               | 3               | 0                | 0   | 0                               | 0               | 0                | 7                                  | 3                      |
| Helena.....                | *12,037   | 0                               | 0               | 0                | 0   | 0                               | 0               | 0                | 0                                  | 9                      |
| Missoula.....              | *12,668   | 0                               | 3               | 0                | 0   | 0                               | 0               | 0                | 0                                  | 12                     |
| <b>Idaho:</b>              |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Boise.....                 | 22,806  | 0                               | 5               | 0                | 0   | 0                               | 0               | 0                | 0                                  | 2                      |
| <b>Colorado:</b>           |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Denver.....                | 272,031   | 8                               | 0               | 0                | 11  | 0                               | 1               | 1                | 6                                  | 82                     |
| Pueblo.....                | 43,519  | 0                               | 0               | 0                | 1   | 0                               | 1               | 0                | 0                                  | 7                      |
| <b>New Mexico:</b>         |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Albuquerque.....           | 16,648  | 0                               | 0               | 0                | 6   | 0                               | 0               | 0                | 0                                  | 10                     |
| <b>Utah:</b>               |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Salt Lake City.....        | 126,241   | 5                               | 0               | 0                | 1   | 0                               | 0               | 0                | 2                                  | 25                     |
| <b>Nevada:</b>             |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Reno.....                  | 12,429  | 1                               | 0               | 0                | 0   | 0                               | 0               | 0                | 0                                  | 6                      |
| <b>PACIFIC.</b>            |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| <b>Washington:</b>         |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Seattle.....               | *315,685  | 8                               | 1               | 0                | 0   | 1                               | 0               | 0                | 5                                  | 0                      |
| Spokane.....               | 104,573   | 18                              | 20              | 0                | 0   | 0                               | 0               | 0                | 3                                  | 0                      |
| Tacoma.....                | 101,731   | 3                               | 2               | 0                | 1   | 1                               | 0               | 0                | 1                                  | 0                      |
| <b>Oregon:</b>             |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Portland.....              | 273,621   | 9                               | 23              | 0                | 3   | 1                               | 1               | 0                | 1                                  | 0                      |
| <b>California:</b>         |   |                                 |                 |                  |   |                                 |                 |                  |                                    |                        |
| Los Angeles.....           | 666,853   | 2                               | 81              | 0                | 34  | 2                               | 1               | 0                | 0                                  | 234                    |
| Sacramento.....            | 69,950  | 1                               | 1               | 0                | 2   | 0                               | 1               | 0                | 0                                  | 23                     |
| San Francisco.....         | 539,038   | 3                               | 1               | 0                | 14  | 2                               | 0               | 0                | 1                                  | 148                    |

\* Population Jan. 1, 1920.



## City reports for week ended March 8, 1924—Continued.

| Division, State, and city. | Cerebrospinal meningitis. |         | Lethargic encephalitis. |         | Pellagra. |         | Poliomyelitis (infantile paralysis). |        |         |
|----------------------------|---------------------------|---------|-------------------------|---------|-----------|---------|--------------------------------------|--------|---------|
|                            | Cases.                    | Deaths. | Cases.                  | Deaths. | Cases.    | Deaths. | Cases, est. expectancy.              | Cases. | Deaths. |
| <b>NEW ENGLAND.</b>        |                           |         |                         |         |           |         |                                      |        |         |
| Massachusetts:             |                           |         |                         |         |           |         |                                      |        |         |
| Boston.....                | 2                         | 2       | 1                       | 0       | 0         | 0       | 0                                    | 0      | 0       |
| Fall River.....            | 0                         | 1       | 0                       | 0       | 0         | 0       | 0                                    | 0      | 0       |
| Connecticut:               |                           |         |                         |         |           |         |                                      |        |         |
| Bridgeport.....            | 0                         | 0       | 2                       | 0       | 0         | 0       | 0                                    | 0      | 0       |
| New Haven.....             | 0                         | 0       | 0                       | 0       | 0         | 0       | 0                                    | 1      | 0       |
| <b>MIDDLE ATLANTIC.</b>    |                           |         |                         |         |           |         |                                      |        |         |
| New York:                  |                           |         |                         |         |           |         |                                      |        |         |
| New York.....              | 2                         | 2       | 9                       | 4       | 0         | 0       | 1                                    | 1      | 0       |
| Rochester.....             | 0                         | 0       | 1                       | 0       | 0         | 0       | 0                                    | 0      | 0       |
| New Jersey:                |                           |         |                         |         |           |         |                                      |        |         |
| Newark.....                | 2                         | 2       | 0                       | 0       | 0         | 0       | 0                                    | 1      | 0       |
| Trenton.....               | 0                         | 0       | 0                       | 1       | 0         | 0       | 0                                    | 0      | 0       |
| Pennsylvania:              |                           |         |                         |         |           |         |                                      |        |         |
| Philadelphia.....          | 0                         | 0       | 0                       | 1       | 0         | 0       | 0                                    | 0      | 0       |
| <b>EAST NORTH CENTRAL.</b> |                           |         |                         |         |           |         |                                      |        |         |
| Ohio:                      |                           |         |                         |         |           |         |                                      |        |         |
| Columbus.....              | 0                         | 0       | 0                       | 1       | 0         | 0       | 0                                    | 0      | 0       |
| Michigan:                  |                           |         |                         |         |           |         |                                      |        |         |
| Flint.....                 | 1                         | 0       | 0                       | 0       | 0         | 0       | 0                                    | 0      | 0       |
| Wisconsin:                 |                           |         |                         |         |           |         |                                      |        |         |
| Milwaukee.....             | 0                         | 0       | 1                       | 0       | 0         | 0       | 0                                    | 1      | 1       |
| <b>WEST NORTH CENTRAL.</b> |                           |         |                         |         |           |         |                                      |        |         |
| Minnesota:                 |                           |         |                         |         |           |         |                                      |        |         |
| Duluth.....                | 0                         | 1       | 0                       | 0       | 0         | 0       | 0                                    | 0      | 0       |
| Missouri:                  |                           |         |                         |         |           |         |                                      |        |         |
| St. Joseph.....            | 0                         | 0       | 2                       | 0       | 0         | 0       | 0                                    | 0      | 0       |
| <b>SOUTH ATLANTIC.</b>     |                           |         |                         |         |           |         |                                      |        |         |
| Delaware:                  |                           |         |                         |         |           |         |                                      |        |         |
| Wilmington.....            | 1                         | 1       | 0                       | 0       | 0         | 0       | 0                                    | 0      | 0       |
| Maryland:                  |                           |         |                         |         |           |         |                                      |        |         |
| Baltimore.....             | 0                         | 0       | 1                       | 0       | 0         | 0       | 1                                    | 0      | 0       |
| District of Columbia:      |                           |         |                         |         |           |         |                                      |        |         |
| Washington.....            | 0                         | 0       | 1                       | 1       | 0         | 0       | 0                                    | 0      | 0       |
| North Carolina:            |                           |         |                         |         |           |         |                                      |        |         |
| Winston-Salem.....         | 0                         | 0       | 0                       | 0       | 2         | 0       | 0                                    | 0      | 0       |
| Florida:                   |                           |         |                         |         |           |         |                                      |        |         |
| Tampa.....                 | 0                         | 1       | 0                       | 0       | 0         | 0       | 0                                    | 0      | 0       |
| <b>EAST SOUTH CENTRAL.</b> |                           |         |                         |         |           |         |                                      |        |         |
| Kentucky:                  |                           |         |                         |         |           |         |                                      |        |         |
| Louisville.....            | 0                         | 1       | 0                       | 0       | 0         | 0       | 0                                    | 0      | 0       |
| <b>WEST SOUTH CENTRAL.</b> |                           |         |                         |         |           |         |                                      |        |         |
| Louisiana:                 |                           |         |                         |         |           |         |                                      |        |         |
| New Orleans.....           | 1                         | 0       | 0                       | 0       | 0         | 0       | 0                                    | 0      | 0       |
| <b>PACIFIC.</b>            |                           |         |                         |         |           |         |                                      |        |         |
| California:                |                           |         |                         |         |           |         |                                      |        |         |
| Los Angeles.....           | 0                         | 1       | 0                       | 0       | 0         | 0       | 0                                    | 1      | 0       |
| San Francisco.....         | 1                         | 0       | 1                       | 0       | 0         | 0       | 0                                    | 0      | 0       |

The following table gives a summary of the reports from 105 cities for the eight-week period ended March 8, 1924. The cities included in this table are those whose reports have been published for all eight weeks in the Public Health Reports. Eight of these cities

did not report deaths. The aggregate population of the cities reporting cases was estimated at nearly 29,000,000 on July 1, 1923, which is the latest date for which estimates are available. The cities reporting deaths had more than 28,000,000 population on that date. The number of cities included in each group and the aggregate population are shown in a separate table below.

*Summary of weekly reports from cities, January 13 to March 8, 1924.*

DIPHTHERIA CASES.

|                         | 1924, week ended— |          |         |         |          |          |         |         |
|-------------------------|-------------------|----------|---------|---------|----------|----------|---------|---------|
|                         | Jan. 19.          | Jan. 26. | Feb. 2. | Feb. 9. | Feb. 16. | Feb. 23. | Mar. 1. | Mar. 8. |
| Total.....              | 1,453             | 1,387    | 1,288   | 1,305   | 1,226    | 1,075    | 1,103   | 1,024   |
| New England.....        | 150               | 141      | 161     | 136     | 115      | 109      | 125     | 86      |
| Middle Atlantic.....    | 488               | 479      | 410     | 490     | 434      | 394      | 388     | 351     |
| East North Central..... | 333               | 305      | 291     | 284     | 247      | 225      | 230     | 218     |
| West North Central..... | 125               | 124      | 125     | 97      | 128      | 102      | 86      | 110     |
| South Atlantic.....     | 112               | 72       | 59      | 50      | 57       | 31       | 54      | 43      |
| East South Central..... | 15                | 17       | 19      | 13      | 17       | 13       | 11      | 9       |
| West South Central..... | 38                | 41       | 38      | 33      | 37       | 34       | 34      | 34      |
| Mountain.....           | 19                | 27       | 21      | 21      | 23       | 27       | 19      | 24      |
| Pacific.....            | 193               | 181      | 164     | 181     | 168      | 140      | 156     | 149     |

MEASLES CASES.

|                         |       |       |       |       |       |       |       |       |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total.....              | 5,479 | 5,571 | 5,908 | 5,794 | 6,577 | 6,002 | 7,258 | 7,101 |
| New England.....        | 176   | 170   | 227   | 265   | 334   | 294   | 469   | 353   |
| Middle Atlantic.....    | 699   | 770   | 899   | 1,004 | 1,183 | 1,388 | 1,838 | 1,971 |
| East North Central..... | 328   | 296   | 330   | 292   | 378   | 322   | 476   | 541   |
| West North Central..... | 383   | 411   | 522   | 643   | 814   | 835   | 1,056 | 1,045 |
| South Atlantic.....     | 499   | 507   | 556   | 508   | 655   | 578   | 683   | 801   |
| East South Central..... | 98    | 121   | 118   | 118   | 98    | 163   | 263   | 155   |
| West South Central..... | 370   | 552   | 564   | 511   | 710   | 738   | 781   | 693   |
| Mountain.....           | 434   | 723   | 1,005 | 975   | 1,216 | 871   | 879   | 819   |
| Pacific.....            | 2,492 | 2,021 | 1,687 | 1,498 | 1,169 | 813   | 813   | 723   |

SCARLET FEVER CASES.

|                         |       |       |       |       |       |       |       |       |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Total.....              | 1,883 | 1,925 | 1,858 | 1,934 | 1,798 | 1,677 | 1,873 | 1,928 |
| New England.....        | 330   | 327   | 368   | 307   | 276   | 301   | 330   | 388   |
| Middle Atlantic.....    | 461   | 530   | 492   | 572   | 525   | 450   | 519   | 532   |
| East North Central..... | 487   | 419   | 405   | 426   | 383   | 317   | 380   | 347   |
| West North Central..... | 227   | 245   | 227   | 248   | 258   | 272   | 250   | 246   |
| South Atlantic.....     | 128   | 142   | 145   | 183   | 157   | 142   | 188   | 209   |
| East South Central..... | 26    | 27    | 12    | 18    | 14    | 12    | 12    | 28    |
| West South Central..... | 21    | 15    | 19    | 19    | 12    | 8     | 9     | 11    |
| Mountain.....           | 36    | 24    | 24    | 27    | 41    | 24    | 30    | 25    |
| Pacific.....            | 167   | 196   | 166   | 134   | 132   | 151   | 155   | 142   |

SMALLPOX CASES.

|                         |     |     |     |     |     |     |     |     |
|-------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Total.....              | 454 | 379 | 368 | 427 | 473 | 486 | 521 | 488 |
| New England.....        | 0   | 1   | 0   | 0   | 0   | 0   | 0   | 0   |
| Middle Atlantic.....    | 1   | 6   | 3   | 0   | 0   | 0   | 0   | 1   |
| East North Central..... | 92  | 64  | 74  | 87  | 143 | 101 | 145 | 160 |
| West North Central..... | 45  | 50  | 36  | 59  | 49  | 65  | 51  | 56  |
| South Atlantic.....     | 81  | 55  | 58  | 118 | 117 | 117 | 121 | 117 |
| East South Central..... | 4   | 3   | 5   | 5   | 5   | 9   | 35  | 35  |
| West South Central..... | 6   | 3   | 12  | 6   | 12  | 14  | 4   | 2   |
| Mountain.....           | 4   | 2   | 2   | 4   | 3   | 2   | 11  | 11  |
| Pacific.....            | 221 | 195 | 178 | 145 | 144 | 178 | 154 | 106 |

## Summary of weekly reports from cities, January 13 to March 8, 1924—Continued.

## TYPHOID FEVER CASES.

|                         | 1924, week ended— |          |         |         |          |          |         |         |
|-------------------------|-------------------|----------|---------|---------|----------|----------|---------|---------|
|                         | Jan. 19.          | Jan. 26. | Feb. 2. | Feb. 9. | Feb. 16. | Feb. 23. | Mar. 1. | Mar. 8. |
| Total .....             | 77                | 69       | 78      | 76      | 74       | 52       | 49      | 46      |
| New England.....        | 11                | 1        | 5       | 0       | 3        | 5        | 8       | 7       |
| Middle Atlantic.....    | 30                | 21       | 26      | 24      | 23       | 8        | 11      | 16      |
| East North Central..... | 16                | 18       | 14      | 8       | 18       | 8        | 9       | 8       |
| West North Central..... | 3                 | 2        | 5       | 7       | 2        | 0        | 1       | 3       |
| South Atlantic.....     | 7                 | 11       | 18      | 15      | 7        | 11       | 7       | 3       |
| East South Central..... | 3                 | 8        | 1       | 2       | 2        | 4        | 4       | 1       |
| West South Central..... | 6                 | 4        | 1       | 10      | 3        | 6        | 3       | 2       |
| Mountain.....           | 0                 | 0        | 1       | 1       | 4        | 2        | 1       | 2       |
| Pacific.....            | 1                 | 4        | 7       | 9       | 12       | 8        | 5       | 4       |

## INFLUENZA DEATHS.

| Total .....             | 68 | 70 | 82 | 100 | 92 | 99 | 96 | 119 |
|-------------------------|----|----|----|-----|----|----|----|-----|
| New England.....        | 2  | 6  | 3  | 3   | 5  | 4  | 3  | 5   |
| Middle Atlantic.....    | 32 | 14 | 29 | 33  | 30 | 36 | 33 | 45  |
| East North Central..... | 11 | 23 | 18 | 19  | 13 | 18 | 14 | 19  |
| West North Central..... | 10 | 4  | 5  | 6   | 6  | 4  | 2  | 2   |
| South Atlantic.....     | 1  | 6  | 5  | 14  | 17 | 10 | 13 | 15  |
| East South Central..... | 4  | 3  | 7  | 13  | 6  | 12 | 10 | 15  |
| West South Central..... | 2  | 6  | 10 | 7   | 11 | 8  | 15 | 12  |
| Mountain.....           | 0  | 1  | 0  | 2   | 0  | 2  | 2  | 4   |
| Pacific.....            | 6  | 7  | 5  | 3   | 4  | 5  | 4  | 2   |

## PNEUMONIA DEATHS.

| Total .....             | 1,054 | 1,002 | 1,120 | 1,064 | 1,125 | 1,191 | 1,165 | 1,217 |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| New England.....        | 78    | 51    | 73    | 73    | 79    | 87    | 84    | 73    |
| Middle Atlantic.....    | 422   | 409   | 463   | 421   | 407   | 461   | 469   | 516   |
| East North Central..... | 202   | 177   | 222   | 216   | 255   | 228   | 235   | 221   |
| West North Central..... | 73    | 70    | 64    | 46    | 52    | 50    | 49    | 59    |
| South Atlantic.....     | 132   | 129   | 123   | 134   | 146   | 171   | 166   | 177   |
| East South Central..... | 30    | 50    | 62    | 63    | 65    | 65    | 55    | 61    |
| West South Central..... | 47    | 60    | 64    | 53    | 59    | 71    | 55    | 62    |
| Mountain.....           | 30    | 20    | 21    | 24    | 30    | 27    | 19    | 14    |
| Pacific.....            | 40    | 36    | 28    | 34    | 32    | 33    | 33    | 34    |

Number of cities included in summary of weekly reports and aggregate population of cities in each group, estimated as of July 1, 1923.

| Group of cities.        | Number of cities reporting— |         | Aggregate population of cities reporting— |            |
|-------------------------|-----------------------------|---------|---|------------|
|                         | Cases.                      | Deaths. | Cases.                                    | Deaths.    |
| Total .....             | 105                         | 97      | 28,898,350                                | 28,140,934 |
| New England.....        | 12                          | 12      | 2,098,746                                 | 2,098,746  |
| Middle Atlantic.....    | 10                          | 10      | 10,304,114                                | 10,304,114 |
| East North Central..... | 17                          | 17      | 7,032,535                                 | 7,032,535  |
| West North Central..... | 14                          | 11      | 2,515,330                                 | 2,381,454  |
| South Atlantic.....     | 22                          | 22      | 2,566,901                                 | 2,566,901  |
| East South Central..... | 7                           | 7       | 911,885                                   | 911,885    |
| West South Central..... | 8                           | 6       | 1,124,564                                 | 1,023,013  |
| Mountain.....           | 9                           | 9       | 546,445                                   | 546,445    |
| Pacific.....            | 6                           | 3       | 1,797,830                                 | 1,275,941  |

## FOREIGN AND INSULAR.

### CUBA.

#### Communicable Diseases—Habana.

Communicable diseases have been notified at Habana as follows:

| Disease.                      | Mar. 1-10, 1924. |         | Remain-<br>ing under<br>treatment<br>Mar.<br>10, 1924. |
|-------------------------------|------------------|---------|--|
|                               | New<br>cases.    | Deaths. |  |
| Cerebrospinal meningitis..... |                  |         | 12   |
| Chicken pox.....              | 75               |         | 71   |
| Diphtheria.....               | 4                |         | 4  |
| Leprosy.....                  |                  |         | 14   |
| Malaria.....                  | 3                |         | 15   |
| Measles.....                  | 3                |         | 4  |
| Paratyphoid fever.....        | 1                |         | 1  |
| Typhoid fever.....            | 13               | 5       | 29   |

<sup>1</sup> From the interior, 1.

<sup>2</sup> 50 cases in the Penitentiary (Presidio), isolated.

<sup>3</sup> From the interior, 8.

<sup>4</sup> From the interior, 12.

### DOMINICAN REPUBLIC.

#### Typhoid Fever—Haina.

Under date of January 23, 1924, typhoid fever was reported present, with many cases, among the rural population along the Haina River, Dominican Republic.

### ECUADOR.

#### Plague—Smallpox.

Plague and smallpox have been reported in Ecuador as follows:

*Plague.*—December 1-31, 1923: At Guayaquil, 41 cases, 11 deaths. January, 1924: At Guayaquil, 50 cases, 16 deaths; Quevedo, 3 cases, 2 deaths. February 1-15, 1924: At Guayaquil, 21 cases, 7 deaths.

*Smallpox.*—Guayaquil: December 1-31, 1923, one case; January, 1924, one case; February 1-15, 1924, one case.

#### Plague-Infected Rodents—Guayaquil.

The finding of plague-infected rodents at Guayaquil has been reported as follows: Month of December, 1923—rats taken, 34,924; found infected, 96. January, 1924—rats taken, 36,650; found infected, 247. February 1-15, 1924—rats taken, 20,479; found infected, 90.

## EGYPT.

## Plague—January 1 to December 31, 1923.

During the period January 1 to December 31, 1923, there were reported in Egypt 1,519, cases of plague, with 725 deaths. The occurrence in cities was reported as follows: *Alexandria*, 65 cases, with 33 deaths; *Cairo*, 2 cases, with 2 deaths; *Port Said*, 51 cases, with 29 deaths; *Suez*, 47 cases, with 24 deaths. The remaining cases were distributed in 11 Provinces, with the greatest number of cases notified in the Province of Assiout, viz, 370 cases, deaths 211, and the lowest number in the Province of Dakahlieh, viz, 2 cases, with 2 deaths. For distribution of occurrence according to cities and Provinces, see page 644.

## JAPAN.

## Typhoid Fever—Tokyo—Yokohama.

Typhoid fever prevalence has been reported at Tokyo and Yokohama, Japan, as follows: *Tokyo*—January 27–February 9, 1924, 216 cases, with 41 deaths; *Yokohama*—two weeks ended February 17, 1924, 177 cases, with 41 deaths.

## LATVIA.

## Communicable Diseases—December, 1923.

Communicable diseases were reported in the Republic of Latvia, during the month of December, 1923, as follows:

| Disease.                      | Cases. | Remarks.                    |
|-------------------------------|--------|-----------------------------|
| Cerebrospinal meningitis..... | 1      |                             |
| Diphtheria.....               | 40     |                             |
| Measles.....                  | 38     |                             |
| Scarlet fever.....            | 156    |                             |
| Smallpox.....                 | 2      |                             |
| Typhoid fever.....            | 86     |                             |
| Typhus fever.....             | 9      | Paratyphus fever; cases, 3. |
| Whooping cough.....           | 16     |                             |

Population, 1,503,193.

## Anthrax—Influenza.

During the period under report, 1 case of anthrax and 18 cases of influenza were reported in the Republic of Latvia.

## MADAGASCAR.

## Plague—Tananarive Province—December 16–31, 1923.

During the period December 16–31, 1923, 114 cases of plague, with 96 deaths, were reported in the Province of Tananarive, Madagascar. Of these, 10 cases, with 10 deaths, occurred in the town of Tananarive, the remaining cases having been reported from other localities in the Province. The types of the disease were stated to be bubonic, pneumonic, and septicemic.

**MALTA.****Communicable Diseases—February 1-15, 1924.**

Communicable diseases were reported in the Island of Malta during the period February 1 to 15, 1924, as follows: Bronchopneumonia, 8 cases; chicken pox, 3 cases; influenza, 217 cases; pneumonia, 2 cases; trachoma, 13 cases; undulant fever, 18 cases; whooping cough, 90 cases.

**MEXICO.****Smallpox—Tampico.**

Reports received of disease prevalence at Tampico, Mexico, show the presence from January 21 to February 29, 1924, of 24 cases of smallpox, of which 9 cases were stated to have been brought in from Irapuato by soldiers and 1 case to have originated at La Barra.

**RUSSIA.****Plague.**

Information relative to plague conditions in Soviet Russia, dated February 10, 1924, and transmitted through official sources, shows as follows: In Bukeeve Province, and mainly in the former maritime division of Astrachan Province, 66 plague centers have been reported. From the outbreak of the epidemic, October 1, 1923, to February 4, 1924, 319 cases, with 294 deaths, were notified. In the Ural Provinces, viz, Khrasamarsky, Gorsky, Indersky, and Ispulsky Volosts, four centers have been reported, with 90 cases. At Yidyko, Mochzhny settlement, 85 versts southwest of Astrakhan, six centers have been reported, with 33 cases recorded. One death was reported to have occurred in the person of a physician of the medical working staff. In all, 441 cases of plague have been notified. The outbreak was stated to be the most severe which has occurred since the year 1913.

**SIBERIA.****Pneumonic Plague—Chita (Transbaikalia).**

Information has been received under date of January 15, 1924, of the occurrence at Chita, Transbaikalia, Siberia, of two cases of pneumonic plague among the scientific staff of the veterinary institute at that place. Both cases terminated fatally.

**SPAIN.****Plague—Malaga—December, 1923.**

Information dated January 29, 1924, and received under date of February 5, 1924, shows the occurrence at Malaga, Spain, during the month of December, 1923, of four cases of plague.

**Vital Statistics, 1923—Barcelona.**

During the year 1923 there were reported 16,277 deaths (22.6 per 1,000 population) and 18,309 births (25.4 per 1,000 population) in Barcelona, Spain (population, 721,526). It was stated that both the total number of deaths and the total number of births showed an increase over the figures for 1922. The following table gives the number of deaths by age groups:

| Age group.             | Number of deaths. | Per cent of total deaths. |
|------------------------|-------------------|---------------------------|
| Up to 1 year .....     | 2,105             | 12.9                      |
| 1 to 4 years.....      | 1,448             | 8.9                       |
| 5 to 19 years.....     | 1,121             | 6.9                       |
| 20 to 39 years.....    | 2,582             | 15.9                      |
| 40 to 59 years.....    | 3,403             | 20.9                      |
| 60 years and over..... | 5,618             | 34.5                      |

Tuberculosis was reported to have caused 1,491 deaths, representing a rate of 2.07 per 1,000 population. Of these deaths, 147 were in persons under five years of age.

Typhoid fever caused 379 deaths, the maximum for any one month, viz, 50, being registered in September.

Influenza was reported as the cause of 70 deaths, the maximum number of deaths from this cause occurring in May and the minimum in July.

Smallpox caused 18 deaths. In the municipal dispensaries, 25,171 vaccinations and revaccinations were performed during the year.

Syphilis was reported to have been responsible for 0.36 per cent of the total number of deaths, 40 deaths from this cause occurring in infants under 1 year of age.

**TRINIDAD.****Typhoid Fever—Port of Spain.**

Under date of March 1, 1924, unusually high incidence of typhoid fever was reported at Port of Spain, Trinidad.

**UNION OF SOUTH AFRICA.****Plague—Kroonstad District—Orange Free State.**

During the week ended January 26, 1924, 7 new cases of plague (4 among white population, 3 among natives), with 3 deaths (white, 1; native, 2), were reported in the Kroonstad District, Orange Free State. The cases occurred on three farms and in the village of Honingspruit. One death of a case reported during the previous week was notified. The total number of cases reported from December 16, 1923, was 24 (white, 11; colored, 13), with 15 deaths (white, 4; native, 11).

## Infection Among Wild Rodents.

Plague infection in virulent form has been shown to be widespread among wild rodents in the tract of country bounded by the Kroonstad-Vierfontein-Klerksdorp railway line, the Vaal River, and the Johannesburg-Bloemfontein main line. Veld rodents were stated to be numerous in this area, and fleas were stated to be prevalent. The facts noted in the occurrence of the human cases indicate rodent infection through fleas.

## VIRGIN ISLANDS.

## Communicable Diseases—January, 1924.

Communicable diseases were reported in the Virgin Islands of the United States during the month of January, 1924, as follows:

| Island and disease.      | Cases. | Remarks.      |
|--------------------------|--------|---------------|
| St. Thomas and St. John: |        |               |
| Chancroid.....           | 1      | Imported.     |
| Dengue.....              | 2      |               |
| Dysentery.....           | 3      | Unclassified. |
| Gonorrhoea.....          | 7      | Imported, 4.  |
| Sprue.....               | 1      |               |
| St. Croix:               |        |               |
| Dysentery.....           | 1      | Entamebic.    |
| Filariasis.....          | 11     | Bancrofti.    |
| Gonorrhoea.....          | 3      |               |

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, 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 March 28, 1924.<sup>1</sup>

## CHOLERA.

| Place.        | Date.               | Cases. | Deaths. | Remarks.  |
|---------------|---------------------|--------|---------|---|
| India.....    |                     |        |         | Dec. 23-29, 1923: Cases, 1,486; deaths, 1,020.            |
| Do.....       |                     |        |         | Dec. 30, 1923-Jan. 12, 1924: Cases, 2,625; deaths, 1,737. |
| Calcutta..... | Jan. 27-Feb. 9..... | 25     | 23      |   |
| Madras.....   | Feb. 9-16.....      | 4      | 4       |   |
| Rangoon.....  | Feb. 3-9.....       | 1      | 1       |   |

## PLAGUE.

|                 |                |    |    |  |
|-----------------|----------------|----|----|--|
| Ceylon:         |                |    |    |  |
| Colombo.....    | Feb. 3-9.....  | 4  | 7  | Plague rodents, 2.                               |
| Ecuador:        |                |    |    |  |
| Guayaquil.....  | Dec. 1-31..... | 41 | 11 | Rats taken, 34,924; found plague infected, 93.   |
| Do.....         | Jan. 1-31..... | 50 | 16 | Rats taken, 36,650; found infected, 247.         |
| Do.....         | Feb. 1-15..... | 21 | 7  | Rats taken, 20,479; found infected, 90.          |
| Quevedo.....    | Jan. 1-31..... | 3  | 2  |  |
| Egypt.....      |                |    |    | Jan. 1-Dec. 31, 1923: Cases, 1,519; deaths, 725. |
| City.....       |                |    |    |  |
| Alexandria..... |                | 65 | 33 | Last case, Nov. 29.                              |
| Cairo.....      |                | 2  | 2  | Last case, Dec. 25.                              |
| Fort Said.....  |                | 51 | 29 | Last case, Sept. 10.                             |
| Suez.....       |                | 47 | 24 | Last case, Dec. 30.                              |

<sup>1</sup> From medical officers of the Public Health Service, American consuls, and other sources.



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

Reports Received During Week Ended March 28, 1924—Continued.

### PLAGUE—Continued.

| Place.                   | Date.               | Cases. | Deaths. | Remarks.   |
|--------------------------|---------------------|--------|---------|--|
| <b>Egypt—Continued.</b>  |                     |        |         |  |
| Province—                |                     |        |         |  |
| Assiout.....             |                     | 370    | 211     | Last case, Aug. 6.   |
| Beni-Souef.....          |                     | 63     | 23      | Last case, Dec. 2.   |
| Dakhalieh.....           |                     | 2      | 2       | Last case, Aug. 29.  |
| Fayoum.....              |                     | 34     | 9       | Last case, July 27.  |
| Gharbieh.....            |                     | 23     | 9       | Last case, Dec. 12.  |
| Girgah.....              |                     | 337    | 193     | Last case, Dec. 13.  |
| Gizah.....               |                     | 3      | 4       | Last case, May 3.  |
| Kalioubiah.....          |                     | 76     | 10      | Last case, Dec. 16.  |
| Kena.....                |                     | 50     | 34      | Last case, Dec. 5.   |
| Menoufieh.....           |                     | 290    | 98      | Last case, Dec. 27.  |
| Minia.....               |                     | 106    | 44      | Last case, Dec. 30.  |
| India.....               |                     |        |         | Dec. 23-29, 1923: Cases, 2,862; deaths, 2,002.   |
| Do.....                  |                     |        |         | Dec. 30, 1923-Jan. 12, 1924: Cases, 6,555; deaths, 4,706.  |
| Karachi.....             | Feb. 9-16.....      | 1      |         |  |
| Madras Presidency.....   | do.....             | 90     | 64      |  |
| Rangoon.....             | Feb. 3-9.....       | 14     | 14      |  |
| Madagascar:              |                     |        |         |  |
| Tananarive Province..... |                     |        |         | Dec. 16-31, 1923: Cases, 114; deaths, 96. Bubonic, pneumonic, septicemic.  |
| Tananarive.....          | Dec. 16-31.....     | 10     | 10      |  |
| Russia:                  |                     |        |         |  |
| Bukeeve Province.....    |                     |        |         | Oct. 1, 1923-Feb. 4, 1924: Cases, 319; deaths, 294. 66 plague centers.   |
| Ural Provinces.....      |                     |        |         |  |
|                          |                     |        |         | Oct. 1, 1923-Feb. 4, 1924: Cases, 441. 4 plague centers.   |
| Siberia:                 |                     |        |         |  |
| Transbaikalia—           |                     |        |         |  |
| Chita.....               | Jan. 27.....        | 2      | 2       | Pneumonic. Occurring in veterinary laboratory workers.   |
| Spain:                   |                     |        |         |  |
| Malaga.....              | Dec. 1-31.....      | 4      |         |  |
| Straits Settlements:     |                     |        |         |  |
| Singapore.....           | Jan. 27-Feb. 2..... | 4      | 3       |  |
| Union of South Africa:   |                     |        |         |  |
| Orange Free State—       |                     |        |         |  |
| Kroonstad District.....  | Jan. 20-26.....     | 7      | 3       | White, cases 4, deaths 1; colored, cases 3, deaths 2. Total, Dec. 16, 1923-Jan. 26, 1924: Cases, 24; deaths, 15 (white, cases 11, deaths, 4; colored, cases 13, deaths 11). Infection present in wild rodents. |

### SMALLPOX.

|                         |                     |    |   |   |
|-------------------------|---------------------|----|---|---|
| <b>Canada:</b>          |                     |    |   |   |
| New Brunswick—          |                     |    |   |   |
| Gloucester County.....  | Mar. 2-8.....       | 1  |   |   |
| Restigouche County..... | do.....             | 1  |   |   |
| Ontario—                |                     |    |   |   |
| Perth.....              | Mar. 4.....         | 3  |   |   |
| Toronto.....            | Mar. 2-8.....       | 2  |   |   |
| Windsor.....            | Mar. 2-15.....      | 14 | 5 |   |
| Saskatchewan—           |                     |    |   |   |
| Regina.....             | Feb. 17-23.....     | 1  |   |   |
| China:                  |                     |    |   |   |
| Amoy.....               | Feb. 9-16.....      |    | 4 |   |
| Chungking.....          | Jan. 13-26.....     |    |   | Present.                                      |
| Manchuria—              |                     |    |   |   |
| Harbin.....             | Feb. 12-18.....     | 4  |   |   |
| Costa Rica:             |                     |    |   |   |
| Port Limon.....         |                     |    |   | Feb. 25, 1924: One case of Alastrim reported. |
| Ecuador:                |                     |    |   |   |
| Guayaquil.....          | Dec. 1-31.....      | 1  |   |   |
| Do.....                 | Jan. 1-Feb. 15..... | 2  |   |   |
| Haiti:                  |                     |    |   |   |
| Port au Prince.....     | Feb. 24-Mar. 1..... |    | 1 |   |

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

**Reports Received During Week Ended March 28, 1924—Continued.**

**SMALLPOX—Continued.**

| Place.                 | Date.                | Cases. | Deaths. | Remarks.  |
|------------------------|----------------------|--------|---------|---|
| India.....             |                      |        |         | Dec. 23-29, 1923: Cases, 552; deaths, 175.              |
| Do.                    |                      |        |         | Dec. 30, 1923-Jan. 12, 1924: Cases, 2,865; deaths, 929. |
| Calcutta.....          | Jan. 27-Feb. 9.....  | 2      | 2       |   |
| Karachi.....           | Feb. 10-16.....      | 7      |         |   |
| Madras.....            | Feb. 10-16.....      | 6      |         |   |
| Rangoon.....           | Feb. 3-9.....        | 1      | 1       |   |
| Indo-China:            |                      |        |         |   |
| Saigon.....            | Jan. 20-26.....      | 54     | 32      | Including 100 sq. km. of surrounding territory.         |
| Japan:                 |                      |        |         |   |
| Kobe.....              | Feb. 14-20.....      | 6      | 2       |   |
| Latvia.....            |                      |        |         | Dec. 1-31, 1923: Cases, 2.                              |
| Mexico:                |                      |        |         |   |
| Mexico City.....       | Feb. 11-17.....      | 7      |         | Including municipalities in Federal district.           |
| Salina Cruz.....       | Jan. 1-31.....       | 1      |         |   |
| Tampico.....           | Jan. 21-Feb. 29..... | 24     |         | From Irapuato, 9; La Barra, 1.                          |
| Portugal:              |                      |        |         |   |
| Lisbon.....            | Feb. 4-10.....       |        | 1       |   |
| Spain:                 |                      |        |         |   |
| Barcelona.....         |                      |        |         | Year 1923: Deaths, 18.                                  |
| Valencia.....          | Feb. 24-Mar. 1.....  | 17     | 1       |   |
| Union of South Africa: |                      |        |         |   |
| Cape Province.....     | Jan. 20-26.....      |        |         | Outbreaks.  |
| Orange Free State..... | do.....              |        |         | Do.   |
| Transvaal.....         | do.....              |        |         | Do.   |
| Johannesburg.....      | Feb. 3-9.....        | 1      |         |   |

**TYPHUS FEVER.**

|                             |                 |   |   |  |
|-----------------------------|-----------------|---|---|--|
| China:                      |                 |   |   |  |
| Chungking.....              | Jan. 13-26..... |   |   | Present.   |
| Egypt:                      |                 |   |   |  |
| Alexandria.....             | Feb. 12-25..... | 2 |   |  |
| Cairo.....                  | Dec. 17-31..... | 2 | 1 |  |
| Hungary:                    |                 |   |   |  |
| Budapest.....               | Feb. 3-16.....  | 7 | 4 |  |
| Latvia.....                 |                 |   |   | Dec. 1-31, 1923; Cases, 9. Paratyphus fever, cases, 3. |
| Mexico:                     |                 |   |   |  |
| Durango.....                | Feb. 1-29.....  |   | 2 |  |
| Mexico City.....            | Feb. 9-16.....  |   | 8 |  |
| Torreon.....                | Feb. 1-29.....  |   | 2 |  |
| Union of South Africa:      |                 |   |   |  |
| Orange Free State—          |                 |   |   |  |
| Kroonstad District.....     | Jan. 20-26..... |   |   | Outbreaks on two farms.                                |
| Transvaal—                  |                 |   |   |  |
| Johannesburg.....           | Jan. 1-31.....  | 4 | 1 |  |
| Potschefstrom District..... | Jan. 20-26..... |   |   | Outbreaks on seven farms.                              |

**Reports Received from December 29, 1923, to March 21, 1924.<sup>1</sup>**

**CHOLERA.**

|                     |                      |     |    |   |
|---------------------|----------------------|-----|----|---|
| China:              |                      |     |    |   |
| Hongkong.....       | Nov. 18-24.....      | 1   |    |   |
| India:              |                      |     |    |   |
| Bombay.....         | Dec. 23-29.....      | 1   | 1  |   |
| Calcutta.....       | Nov. 11-Dec. 29..... | 85  | 69 | Oct 14-Dec. 22, 1923: Cases, 12,631; deaths, 8,128.     |
| Do.....             | Dec. 30-Jan. 26..... | 113 | 93 |   |
| Madras.....         | Nov. 25-Dec. 29..... | 15  | 5  |   |
| Do.....             | Dec. 30-Feb. 9.....  | 18  | 6  |   |
| Rangoon.....        | Nov. 11-Dec. 29..... | 8   | 5  |   |
| Indo-China:         |                      |     |    |   |
| Saigon.....         | Dec. 31-Jan. 5.....  | 1   | 1  | Including 100 square kilometers in surrounding country. |
| Siam:               |                      |     |    |   |
| Bangkok.....        | Nov. 18-Dec. 8.....  | 4   | 2  |   |
| Do.....             | Dec. 31-Jan. 19..... | 6   | 4  |   |
| Turkey:             |                      |     |    |   |
| Constantinople..... | Dec. 2-8.....        |     | 1  |   |

<sup>1</sup> From medical officers of the Public Health Service, American consuls, and other sources.

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

**Reports Received from December 29, 1923, to March 21, 1924—Continued.**

**PLAGUE.**

| Place.                        | Date.                 | Cases. | Deaths. | Remarks.   |
|-------------------------------|-----------------------|--------|---------|--|
| Azores:                       |                       |        |         |  |
| St. Michael Island .....      | Oct. 20-Nov. 10 ..... | 9      | 5       | At localities 3 to 9 miles from port of Ponta Delgada.   |
| Bolivia:                      |                       |        |         |  |
| La Paz .....                  | Oct. 1-31 .....       |        | 3       |  |
| Brazil:                       |                       |        |         |  |
| Bahia .....                   | Nov. 11-Dec. 22 ..... | 5      | 3       |  |
| Do .....                      | Dec. 30-Jan. 19 ..... | 4      | 5       |  |
| Rio de Janeiro .....          | Jan. 20-26 .....      | 1      |         |  |
| British East Africa:          |                       |        |         |  |
| Kenya—                        |                       |        |         |  |
| Mombasa .....                 | Oct. 14-20 .....      | 1      | 1       | Infected rats, 2. Dec. 9-15, 1923: Cases, 4; deaths, 2; removed from vessel arrived Dec. 11, 1923. |
| Do .....                      | Dec. 30-Jan. 5 .....  | 1      | 1       |  |
| Nairobi .....                 | Nov. 1-21 .....       | 40     |         | In rural districts, several hundred.   |
| Tanganyika .....              |                       |        |         | To Nov. 24, 1923; Cases, 39; deaths, 25.   |
| Uganda .....                  | Aug. 1-Oct. 31 .....  | 734    | 719     |  |
| Entebbe .....                 | Oct. 1-Nov. 30 .....  | 191    | 183     |  |
| Canary Islands:               |                       |        |         |  |
| Las Palmas .....              | Oct. 15-Nov. 15 ..... | 14     | 14      |  |
| Santa Cruz de Teneriffe ..... | Feb. 19 .....         | 2      |         |  |
| San Juan de la Rambla .....   | Dec. 11 .....         | 1      |         | Locality 52 km. from Teneriffe.  |
| Celebes Island .....          | Nov. 30 .....         |        |         | Epidemic.  |
| Ceylon:                       |                       |        |         |  |
| Colombo .....                 | Nov. 11-Dec. 29 ..... | 31     | 21      | Plague rodents; 24.  |
| Do .....                      | Dec. 30-Feb. 2 .....  | 53     | 40      | Do.  |
| China:                        |                       |        |         |  |
| Nanking .....                 | Dec. 16-29 .....      |        |         | Present.   |
| Do .....                      | Dec. 30-Feb. 9 .....  |        |         | Do.  |
| Ecuador:                      |                       |        |         |  |
| Guayaquil .....               | Nov. 16-Dec. 15 ..... | 15     | 6       | Rats taken, 35,070; found infected, 94.  |
| Jipijapa .....                | do .....              |        |         | Present.   |
| Quito .....                   | Nov. 1-30 .....       | 11     | 1       |  |
| Vino del Milagro .....        | Dec. 1-15 .....       | 1      |         |  |
| Egypt:                        |                       |        |         |  |
| City—                         |                       |        |         | Jan. 1-Dec. 27, 1923: Cases, 1,518; deaths, 724.   |
| Alexandria .....              | Jan. 1-Dec. 27 .....  | 65     | 33      |  |
| Cairo .....                   | do .....              | 2      | 2       |  |
| Port Said .....               | do .....              | 51     | 29      |  |
| Suez .....                    | do .....              | 46     | 24      |  |
| Hawaii:                       |                       |        |         |  |
| Honokaa .....                 |                       |        |         | Jan. 8-10, 1924: Three plague-infected rodents.  |
| Paauhau .....                 |                       |        |         | Dec. 14, 1923: One plague rat.   |
| Do .....                      |                       |        |         | Feb. 14, 1923: One plague rat.   |
| Do .....                      |                       |        |         | Oct. 14-Dec. 22, 1923: Cases, 31,680; deaths, 21,776.  |
| India:                        |                       |        |         |  |
| Bombay .....                  | Oct. 28-Dec. 22 ..... | 5      | 5       |  |
| Do .....                      | Dec. 30-Feb. 2 .....  | 6      | 5       |  |
| Calcutta .....                | Dec. 23-29 .....      | 1      | 1       |  |
| Do .....                      | Jan. 6-12 .....       | 1      | 1       |  |
| Karachi .....                 | Nov. 11-Dec. 29 ..... | 42     | 33      |  |
| Do .....                      | Dec. 30-Jan. 12 ..... | 3      | 1       |  |
| Madras Presidency .....       | Nov. 4-Dec. 29 .....  | 1,657  | 1,021   |  |
| Do .....                      | Jan. 27-Feb. 9 .....  | 313    | 177     |  |
| Rangoon .....                 | do .....              | 20     | 15      |  |
| Do .....                      | Dec. 30-Feb. 2 .....  | 21     | 22      |  |
| Indo-China:                   |                       |        |         |  |
| Saigon .....                  | Oct. 28-Dec. 8 .....  | 19     | 6       | Including 100 square kilometers in surrounding country.  |
| Iraq:                         |                       |        |         |  |
| Bagdad .....                  | Nov. 11-Dec. 29 ..... | 8      | 6       |  |
| Do .....                      | Jan. 6-21 .....       | 9      | 3       |  |
| Java:                         |                       |        |         |  |
| Province—                     |                       |        |         | Oct. 1-Dec. 31, 1923: Deaths, 2,908.   |
| Djakakarta .....              | Oct. 1-Dec. 31 .....  |        | 146     |  |
| Kedoe .....                   | do .....              |        | 1,287   |  |
| Pekalongan .....              | do .....              |        | 150     |  |
| Samarang .....                | do .....              |        | 430     |  |
| Soerabaya .....               | do .....              |        | 9       |  |
| Do .....                      | Dec. 26-Jan. 7 .....  | 18     | 18      | Nov. 11-24, 1923: Cases, 2; deaths, 2. Dec. 9-15, 1923: Cases, 2; deaths, 2.                       |
| Soerakarta .....              | do .....              |        | 886     |  |
| Madagascar:                   |                       |        |         |  |
| Tananarive Province .....     | Oct. 1-Dec. 15 .....  | 210    | 176     | Bubonic, pneumonic, septicemic.  |
| Tananarive town .....         | do .....              | 64     | 64      |  |

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

**Reports Received from December 29, 1923, to March 21, 1924—Continued.**

**PLAGUE—Continued.**

| Place.                  | Date.                | Cases. | Deaths. | Remarks.   |
|-------------------------|----------------------|--------|---------|--|
| Paraguay:               |                      |        |         |  |
| Asuncion.....           | Dec. 18.....         | 6      | 4       |  |
| Peru.....               |                      |        |         | Nov. 1-Dec. 31, 1923: Cases, 38; deaths, 24. Jan. 1-31, 1924. Cases, 37; deaths, 15.           |
| Locality—               |                      |        |         |  |
| Callao.....             | Jan. 1-31.....       | 2      |         |  |
| Canete.....             | Nov. 1-30.....       | 1      | 1       |  |
| Chanccay.....           | Dec. 1-31.....       | 2      |         |  |
| Chepen.....             | Nov. 1-30.....       | 1      |         |  |
| Chiclayo.....           | Nov. 1-Dec. 31.....  | 2      | 1       |  |
| Chilca.....             | Jan. 1-31.....       | 1      |         |  |
| Huarmey.....            | do.....              | 6      |         |  |
| Lima (city).....        | Nov. 1-Dec. 31.....  | 22     | 15      |  |
| Do.....                 | Jan. 1-31.....       | 25     | 14      |  |
| Lima (country).....     | Nov. 1-Dec. 31.....  | 8      | 7       |  |
| Do.....                 | Jan. 1-31.....       | 3      | 1       |  |
| Lurin.....              | do.....              | 2      |         |  |
| Portugal:               |                      |        |         |  |
| Lisbon.....             | Dec. 13-21.....      | 7      |         |  |
| Do.....                 | Dec. 31-Jan. 6.....  |        | 1       |  |
| Portuguese West Africa: |                      |        |         |  |
| Angola—                 |                      |        |         |  |
| Loanda.....             | Oct.-Nov.....        | 59     | 23      |  |
| Siam:                   |                      |        |         |  |
| Bangkok.....            | Nov. 4-Dec. 8.....   | 3      | 2       |  |
| Do.....                 | Jan. 13-19.....      | 1      | 1       |  |
| Spain:                  |                      |        |         |  |
| Malaga.....             | Dec. 17.....         | 2      |         |  |
| Straits Settlements:    |                      |        |         |  |
| Singapore.....          | Nov. 11-Dec. 22..... | 4      | 4       |  |
| Do.....                 | Dec. 30-Jan. 12..... | 4      | 4       |  |
| Syria:                  |                      |        |         |  |
| Beirut.....             | Nov. 1-Dec. 10.....  | 3      |         |  |
| Do.....                 | Jan. 1-10.....       | 1      |         |  |
| Turkey:                 |                      |        |         |  |
| Constantinople.....     | Dec. 2-22.....       | 6      | 3       |  |
| Union of South Africa:  |                      |        |         |  |
| Cape Province—          |                      |        |         |  |
| Uitenhage district..... | Dec. 9-15.....       |        |         | Plague rodent found in vicinity Haarhoff's Kraal farm.   |
| Orange Free State—      |                      |        |         |  |
| Kroonstad district..... | Dec. 16-27.....      | 7      | 3       | At Zandfontein farm, Bothaville area: Cases, white, 4; native, 3; deaths, white, 1; native, 2. |
| Do.....                 | Jan. 6-19.....       | 8      | 4       | Occurring on neighboring farms.  |
| Wonderfontein farm..... | Dec. 2-8.....        | 4      |         | Vicinity of Hoopstad. At Hoopstad, Dec. 9-15, 1923, one death of case previously reported.     |
| On vessels:             |                      |        |         |  |
| .....                   | Dec. 11.....         | 4      | 2       | At Mombasa, British East Africa.   |
| .....                   | Jan. 24.....         |        |         | At Varna, Bulgaria, from Syrian port.  |

**SMALLPOX.**

|                     |                     |    |    |           |
|---------------------|---------------------|----|----|-----------|
| Algeria:            |                     |    |    |           |
| Algiers.....        | Nov. 1-30.....      | 1  |    |           |
| Arabia:             |                     |    |    | Imported. |
| Aden.....           | Dec. 16-22.....     | 1  |    |           |
| Do.....             | Jan. 13-19.....     | 1  |    |           |
| Belgium:            |                     |    |    |           |
| Brussels.....       | do.....             | 10 |    |           |
| Bolivia:            |                     |    |    |           |
| La Paz.....         | Oct. 1-Dec. 31..... | 45 | 15 |           |
| Do.....             | Jan. 1-31.....      | 6  | 2  |           |
| Brazil:             |                     |    |    |           |
| Bahia.....          | Jan. 6-12.....      | 2  |    |           |
| Pernambuco.....     | Nov. 4-Dec. 1.....  | 15 | 3  |           |
| Do.....             | Jan. 6-26.....      |    | 6  |           |
| Porto Alegre.....   | Dec. 23-29.....     |    | 1  |           |
| Do.....             | Dec. 30-Jan. 5..... |    | 1  |           |
| Rio de Janeiro..... | Nov. 18-24.....     | 3  | 1  |           |
| Do.....             | Jan. 6-26.....      | 3  | 1  |           |
| Sao Paulo.....      | Sept. 3-9.....      | 1  |    |           |

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

Reports Received from December 29, 1923, to March 21, 1924—Continued.

## SMALLPOX—Continued.

| Place.                            | Date.                 | Cases. | Deaths. | Remarks.  |
|-----------------------------------|-----------------------|--------|---------|---|
| <b>British East Africa:</b>       |                       |        |         |   |
| Tanganyika Territory.....         | Sept. 30-Oct. 27..... | 14     | 1       |   |
| Do.....                           | Nov. 25-Dec. 29.....  | 8      | 3       |   |
| Uganda.....                       | Sept. 1-30.....       | 6      | 1       |   |
| Entebbe.....                      | Oct. 1-Nov. 30.....   | 4      | 1       |   |
| Zanzibar.....                     | Sept. 1-Oct. 31.....  | 116    | 18      | Sept. 1-30, 1923: In areas 27 miles from town of Zanzibar. Oct. 1-31, 1923: In vicinity, 1 case, 1 death. In Mikotoni district, 30 cases, 14 deaths reported. |
| <b>Canada:</b>                    |                       |        |         |   |
| <b>Alberta—</b>                   |                       |        |         |   |
| Calgary.....                      | Jan. 27-Mar. 1.....   | 15     |         |   |
| <b>British Columbia—</b>          |                       |        |         |   |
| Vancouver.....                    | Dec. 22-29.....       | 10     |         |   |
| Do.....                           | Dec. 30-Feb. 23.....  | 54     |         |   |
| Victoria.....                     | Feb. 10-Mar. 1.....   | 2      |         |   |
| <b>Manitoba—</b>                  |                       |        |         |   |
| Winnipeg.....                     | Nov. 25-Dec. 29.....  | 21     |         |   |
| Do.....                           | Dec. 30-Mar. 8.....   | 60     |         |   |
| <b>New Brunswick—</b>             |                       |        |         |   |
| Frederickton.....                 |                       |        |         | Feb. 1-29, 1924: Cases, 8.  |
| Madawaska County.....             | Dec. 8-15.....        | 1      |         |   |
| Restigouche County.....           |                       |        |         | Jan. 1-Feb. 29, 1924: Cases, 3.   |
| Victoria County.....              | Feb. 10-16.....       | 2      |         |   |
| Westmoreland County.....          | do.....               | 3      |         |   |
| <b>Ontario<sup>1</sup></b>        |                       |        |         |   |
| Port William and Port Arthur..... | Dec. 16-29.....       | 5      |         | Jan. 1-Feb. 29, 1924: Cases, 176. Occurring at Fort William.  |
| London.....                       | Feb. 3-Mar. 1.....    | 2      |         |   |
| North Bay.....                    | do.....               | 1      |         |   |
| Toronto.....                      | Jan. 17-23.....       | 2      |         |   |
| Windsor <sup>2</sup> .....        | Feb. 1-29.....        | 30     | 5       |   |
| <b>Quebec—</b>                    |                       |        |         |   |
| Montreal.....                     | Nov. 30-Feb. 23.....  | 7      |         |   |
| <b>Saskatchewan—</b>              |                       |        |         |   |
| Regina.....                       | Dec. 9-15.....        | 1      |         |   |
| Do.....                           | Dec. 30-Feb. 9.....   | 5      | 1       |   |
| <b>Ceylon:</b>                    |                       |        |         |   |
| Colombo.....                      | Nov. 11-17.....       | 1      |         | Port case.  |
| Do.....                           | Jan. 20-Feb. 2.....   | 5      | 1       |   |
| <b>Chile:</b>                     |                       |        |         |   |
| Antofagasta.....                  | Jan. 6-19.....        | 4      |         |   |
| Concepcion.....                   | Oct. 1-Dec. 31.....   | 1      | 14      |   |
| Talcahuano.....                   | Nov. 26-Dec. 2.....   | 3      |         | Dec. 22, 1923: Five cases present.  |
| Valparaiso.....                   | Dec. 9-15.....        |        | 1       |   |
| <b>China:</b>                     |                       |        |         |   |
| Amoy.....                         | Nov. 18-Dec. 8.....   |        |         | Present.  |
| Do.....                           | Jan. 6-20.....        |        | 2       |   |
| Antung.....                       | Dec. 31-Feb. 3.....   | 2      | 2       |   |
| Canton.....                       | Dec. 23-Jan. 13.....  |        |         | Do.   |
| Chungking.....                    | Nov. 4-Dec. 29.....   |        |         | Present and endemic.  |
| Do.....                           | Dec. 30-Jan. 12.....  |        |         | Present.  |
| Foochow.....                      | Nov. 4-Dec. 15.....   |        |         | Do.   |
| Do.....                           | Dec. 31-Feb. 2.....   |        |         | Do.   |
| Hongkong.....                     | Oct. 28-Dec. 29.....  | 718    | 630     |   |
| Do.....                           | Dec. 30-Jan. 19.....  | 292    | 322     |   |
| <b>Manchuria—</b>                 |                       |        |         |   |
| Dairen.....                       | Dec. 31-Jan. 20.....  | 2      |         |   |
| Harbin.....                       | Nov. 12-Dec. 22.....  | 36     |         |   |
| Do.....                           | Jan. 1-28.....        | 5      | 5       |   |
| Nanking.....                      | Dec. 2-15.....        |        |         | Do.   |
| Do.....                           | Dec. 30-Jan. 26.....  |        |         | Do.   |
| Shanghai.....                     | Dec. 29.....          |        |         | Prevalent.  |
| Do.....                           | Jan. 6-Feb. 9.....    | 19     | 41      | Cases, foreign.   |
| <b>Chosen (Korea):</b>            |                       |        |         |   |
| Chemulpo.....                     | Jan. 1-31.....        | 1      |         |   |
| Seoul.....                        | Nov. 1-30.....        | 1      |         |   |
| <b>Colombia:</b>                  |                       |        |         |   |
| Buenaventura.....                 | Nov. 18-Dec. 15.....  | 8      |         |   |
| <b>Costa Rica:</b>                |                       |        |         |   |
| Port Limon.....                   | Feb. 18-24.....       | 1      |         |   |

<sup>2</sup> A corrected report shows the occurrence of smallpox at Windsor and in the Province of Ontario during February, 1924, as follows: Windsor—30 cases with 5 deaths; Province of Ontario—126 cases, with 15 deaths (see Public Health Reports, Mar. 21, 1924, pp. 591 and 592).

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

**Reports Received from December 29, 1923, to March 21, 1924—Continued.**

**SMALLPOX—Continued.**

| Place.                    | Date.                 | Cases. | Deaths. | Remarks.  |
|---------------------------|-----------------------|--------|---------|---|
| Dominican Republic:       |                       |        |         |   |
| La Romana.....            | Jan. 27-Feb. 2.....   | 8      |         |   |
| Ecuador:                  |                       |        |         |   |
| Esmeraldas.....           | Nov. 16-30.....       | 4      |         |   |
| Quito.....                | Nov. 1-30.....        | 167    | 26      |   |
| Egypt:                    |                       |        |         |   |
| Port Said.....            | Nov. 24-Dec. 2.....   | 1      |         |   |
| Estonia.....              |                       |        |         | Nov. 1-30, 1923: Cases, 32. Dec. 1-31, 1923: Cases, 6.  |
| France:                   |                       |        |         |   |
| Cherbourg.....            | Feb. 9-15.....        | 1      |         | British seaman.   |
| Greece:                   |                       |        |         |   |
| Saloniki.....             | Oct. 22-Dec. 30.....  |        | 11      |   |
| Do.....                   | Dec. 31-Jan. 27.....  | 2      | 1       |   |
| Guadeloupe (West Indies): |                       |        |         | Jan. 2-16, 1924: Present.   |
| Abymes.....               | Feb. 16.....          |        |         | Present. Vicinity of Point à Pitre.   |
| Basse Terre.....          | Dec. 18.....          |        |         | Present.  |
| Do.....                   | Jan. 12-Feb. 16.....  |        |         | Do.   |
| Marie Galante Island..... | Dec. 18.....          |        |         | Off shore island; present.  |
| Do.....                   | Feb. 16.....          |        |         | Present. Estimated 60 cases.  |
| Moule.....                | Jan. 12-Feb. 16.....  |        |         | Present.  |
| Point à Pitre.....        | Dec. 18.....          |        |         | Present in vicinity.  |
| Haiti:                    |                       |        |         |   |
| Cape Haitien.....         | Feb. 3-9.....         | 3      |         |   |
| Hinche.....               | Feb. 10-16.....       | 1      |         |   |
| Port au Prince.....       | Feb. 17-23.....       | 2      |         | Developed at Limbe, Haiti.  |
| India:                    |                       |        |         | Oct. 14-Dec. 22, 1923: Cases, 9,168 deaths, 2,066.  |
| Bombay.....               | Oct. 28-Dec. 29.....  | 55     | 25      |   |
| Do.....                   | Dec. 30-Feb. 2.....   | 113    | 53      |   |
| Calcutta.....             | Dec. 16-29.....       | 4      | 4       |   |
| Do.....                   | Dec. 30-Jan. 26.....  | 3      | 3       |   |
| Karachi.....              | Dec. 30-Feb. 9.....   | 4      | 1       |   |
| Madras.....               | Nov. 4-Dec. 29.....   | 23     | 3       |   |
| Do.....                   | Dec. 30-Feb. 9.....   | 48     | 2       |   |
| Rangoon.....              | Nov. 4-Dec. 29.....   | 12     | 4       |   |
| Do.....                   | Dec. 30-Jan. 26.....  | 4      |         |   |
| Indo-China:               |                       |        |         |   |
| City—                     |                       |        |         |   |
| Saigon.....               | Nov. 4-Dec. 29.....   | 133    | 74      | Including 100 square kilometers of surrounding country.   |
| Do.....                   | Dec. 31-Jan. 19.....  | 85     | 56      |   |
| Iraq:                     |                       |        |         |   |
| Bagdad.....               | Oct. 24-Dec. 29.....  | 46     | 28      |   |
| Do.....                   | Dec. 30-Jan. 21.....  | 37     | 27      |   |
| Italy:                    |                       |        |         |   |
| Trieste.....              | Feb. 17-23.....       | 4      |         |   |
| Turin.....                | Feb. 18-24.....       | 1      |         |   |
| Jamaica:                  |                       |        |         | Nov. 25-Dec. 29, 1923: Cases, 115. Dec. 30, 1923-Feb. 16, 1924: Cases, 153. Reported as alastrim. |
| Do.....                   |                       |        |         |   |
| Kingston.....             | Nov. 25-Dec. 29.....  | 3      |         |   |
| Do.....                   | Dec. 30-Feb. 2.....   | 6      |         |   |
| Japan:                    |                       |        |         |   |
| Taiwan.....               | Jan. 1-10.....        | 6      |         |   |
| Tokyo.....                | Jan. 1-Feb. 3.....    | 79     |         |   |
| Java:                     |                       |        |         |   |
| East Java—                |                       |        |         |   |
| Soerabaya.....            | Oct. 23-Dec. 29.....  | 348    | 60      |   |
| Do.....                   | Dec. 30-Jan. 5.....   | 37     | 10      |   |
| West Java—                |                       |        |         |   |
| Batavia.....              | Oct. 27-Dec. 28.....  | 65     | 13      |   |
| Do.....                   | Dec. 29-Jan. 18.....  | 19     | 4       |   |
| Latvia.....               |                       |        |         | Oct. 1-31, 1923: Cases, 3. Nov. 1-30, 1923: Cases, 1. Dec. 1-31, 1923: Cases, 2.                  |
| Mexico:                   |                       |        |         |   |
| Guadalajara.....          | Jan. 27-Feb. 23.....  |        | 3       |   |
| Manzanillo.....           | Dec. 4-10.....        | 5      | 1       |   |
| Mexico City.....          | Nov. 25-Dec. 29.....  | 32     |         | Including municipalities in Federal District.   |
| Do.....                   | Jan. 30-Feb. 9.....   | 65     | 23      | Do.   |
| Tampico.....              | Jan. 27.....          |        |         | Present among military.   |
| Vera Cruz.....            | Nov. 3-Dec. 30.....   |        | 4       |   |
| Do.....                   | Jan. 6-27.....        | 1      | ?       |   |
| Netherlands:              |                       |        |         |   |
| Rotterdam.....            | Jan. 20-26.....       | 3      |         |   |
| Palestine:                |                       |        |         |   |
| Jaffa.....                | Jan. 15-28.....       | 3      |         |   |
| Persia:                   |                       |        |         |   |
| Teheran.....              | Sept. 24-Dec. 23..... |        | 4       |   |

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

Reports Received from December 29, 1923, to March 21, 1924—Continued.

## SMALLPOX—Continued.

| Place.                  | Date.                | Cases. | Deaths. | Remarks.  |
|-------------------------|----------------------|--------|---------|---|
| Poland.....             |                      |        |         | Sept. 23-Dec. 8, 1923: Cases, 46; deaths, 7.  |
| Portugal:               |                      |        |         | Corrected report.   |
| Lisbon.....             | Nov. 11-Dec. 29..... | 19     | 10      |   |
| Do.....                 | Dec. 31-Feb. 16..... | 45     | 8       |   |
| Oporto.....             | Nov. 25-Dec. 29..... | 39     | 23      |   |
| Do.....                 | Dec. 30-Feb. 23..... | 56     | 32      |   |
| Portuguese East Africa: |                      |        |         |   |
| Lourenco Marques.....   | Dec. 30-Jan. 5.....  | 2      |         |   |
| Siam:                   |                      |        |         | Nov. 25-Dec. 1, 1923: Epidemic.   |
| Bangkok.....            | Oct. 28-Dec. 8.....  | 33     | 18      |   |
| Do.....                 | Dec. 30-Jan. 12..... | 2      | 1       |   |
| Siberia:                |                      |        |         | Present. Locality on Chita Railway, Manchurian frontier.  |
| Dauria Station.....     | Oct. 21.....         |        |         |   |
| Sierra Leone:           |                      |        |         |   |
| Sherbro District—       |                      |        |         |   |
| Tagball.....            | Nov. 1-15.....       | 3      |         |   |
| Spain:                  |                      |        |         |   |
| Barcelona.....          | Nov. 15-Dec. 26..... |        | 2       |   |
| Do.....                 | Jan. 3-9.....        |        | 2       |   |
| Valencia.....           | Nov. 25-Dec. 29..... | 152    | 12      |   |
| Do.....                 | Dec. 30-Feb. 23..... | 196    | 20      |   |
| Straits Settlements:    |                      |        |         |   |
| Singapore.....          | Dec. 16-29.....      | 2      | 1       |   |
| Do.....                 | Dec. 30-Jan. 26..... | 3      |         |   |
| Switzerland:            |                      |        |         | Corrected.  |
| Basel.....              | Jan. 27-Feb. 9.....  | 4      |         |   |
| Berne.....              | Nov. 18-Dec. 22..... | 12     |         |   |
| Do.....                 | Jan. 6-Feb. 16.....  | 11     |         |   |
| Lucerne.....            | Nov. 1-30.....       | 34     |         |   |
| Do.....                 | Dec. 1-31.....       | 26     |         |   |
| Zurich.....             | Jan. 27-Feb. 2.....  | 1      |         |   |
| Syria:                  |                      |        |         | In vicinity, at Djisir Chonghour.   |
| Aleppo.....             | Nov. 25-Dec. 1.....  | 1      |         |   |
| Damascus.....           | Nov. 16-Dec. 15..... | 7      |         |   |
| Tunis:                  |                      |        |         |   |
| Tunis.....              | Oct. 27-Nov. 2.....  | 5      | 1       |   |
| Do.....                 | Jan. 8-Feb. 4.....   | 3      | 2       |   |
| Turkey:                 |                      |        |         |   |
| Constantinople.....     | Nov. 11-Dec. 8.....  | 3      |         |   |
| Do.....                 | Jan. 6-12.....       | 1      |         |   |
| Union of South Africa:  |                      |        |         | Oct. 1-31, 1923: Colored, cases, 41; deaths, 2; white, cases, 3. Outbreaks.   |
| Cape Province.....      | Oct. 28-Dec. 8.....  |        |         | Do.   |
| Natal.....              | Oct. 28-Nov. 3.....  |        |         | Do.   |
| Northern Rhodesia.....  | Dec. 4-31.....       | 40     | 5       | Jan. 1-31, 1924: Cases, 50; deaths, 11; reported from Balovale, Kalabo, and Mankoya districts.  |
| Do.....                 |                      |        |         | Do.   |
| Orange Free State.....  | Oct. 28-Nov. 24..... |        |         | Do.   |
| Transvaal.....          | Nov. 18-Dec. 1.....  |        |         | Do.   |
| Johannesburg.....       | Nov. 25-Dec. 15..... | 3      |         |   |
| Uruguay:                |                      |        |         |   |
| Montevideo.....         | Oct. 1-31.....       | 1      |         |   |
| Venezuela:              |                      |        |         | Epidemic.   |
| Caracas.....            | Jan. 22.....         |        |         |   |
| On vessels:             |                      |        |         |   |
| S. S. Torres.....       | Jan. 14.....         | 1      |         | At New Orleans quarantine station from Tampico, Mexico, via ports. Case in seaman signed on at Galveston, Tex., on outward voyage.                            |
| S. S. Tupper.....       | Jan. 20-26.....      | 1      |         | At Gonaives, Haiti.   |
| S. S. Vasari.....       | Dec. 31.....         | 1      |         | At Trinidad, West Indies, from Buenos Aires, Argentina. Vessel left Buenos Aires Dec. 15, 1923, for New York, via Santos, Rio de Janeiro, Trinidad, Barbados. |

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

**Reports Received from December 29, 1923, to March 21, 1924—Continued.**

**TYPHUS FEVER.**

| Place.                  | Date.                | Cases. | Deaths. | Remarks.   |
|-------------------------|----------------------|--------|---------|--|
| Algeria:                |                      |        |         |  |
| Algiers.....            | Nov. 1-Dec. 31....   | 7      | 3       |  |
| Do.....                 | Jan. 1-Feb. 10....   | 8      | 5       |  |
| Bolivia:                |                      |        |         |  |
| La Paz.....             | Oct. 1-Dec. 31....   | 43     | 5       |  |
| Do.....                 | Jan. 1-31.....       | 4      | 1       |  |
| Bulgaria:               |                      |        |         |  |
| Sofia.....              | .....                |        |         | Nov. 18-Dec. 15, 1923: Paratyphus fever, cases, 17. Jan. 6-Feb. 9, 1924: Paratyphus fever, cases, 6.   |
| Canary Islands:         |                      |        |         |  |
| Teneriffe.....          | Jan. 14-Feb. 17....  |        | 2       |  |
| Chile:                  |                      |        |         |  |
| Antofagasta.....        | Dec. 2-8.....        | 4      |         |  |
| Concepcion.....         | Oct. 1-Nov. 30....   |        | 4       | Dec. 11-24, 1923: Deaths, 3.   |
| Do.....                 | Jan. 8-28.....       | 2      | 2       | In district, at 12 localities, 92 cases.   |
| Iquique.....            | Jan. 20-26.....      |        | 1       |  |
| Talcahuano.....         | .....                |        |         | Dec. 5, 1923: 3 cases under treatment. Jan. 12, 1924: 1 case under treatment.  |
| Do.....                 | Dec. 31-Feb. 9....   | 3      |         |  |
| Valparaiso.....         | Nov. 25-Dec. 15....  |        | 29      | Dec. 24, 1923: In hospital, 34 cases.  |
| China:                  |                      |        |         |  |
| Antung.....             | Nov. 12-Dec. 30....  | 5      |         |  |
| Chungking.....          | Nov. 18-24.....      |        |         | Present.   |
| Do.....                 | Dec. 16-29.....      |        |         | Endemic  |
| Do.....                 | Dec. 30-Jan. 12....  |        |         | Do.  |
| Ecuador:                |                      |        |         |  |
| Quito.....              | Nov. 1-30.....       | 14     | 1       |  |
| Egypt:                  |                      |        |         |  |
| Alexandria.....         | Nov. 19-Dec. 23....  | 3      |         |  |
| Do.....                 | Jan. 8-28.....       | 2      |         |  |
| Cairo.....              | Sept. 10-Dec. 16.... | 37     | 10      |  |
| Estonia.....            | .....                |        |         | Nov. 1-30, 1923: Paratyphus fever, cases, 8. Dec. 1-31, 1923: Typhus fever, cases, 15. Paratyphus, cases, 4.   |
| Finland.....            | .....                |        |         | Dec. 1-15, 1923: Paratyphus fever, cases, 15.  |
| Germany:                |                      |        |         |  |
| Coblenz.....            | Jan. 27-Feb. 2....   | 1      |         |  |
| Greece:                 |                      |        |         |  |
| Athens.....             | Jan. 11-20.....      |        | 1       |  |
| Saloniki.....           | Nov. 26-Dec. 30....  | 7      | 3       |  |
| Hungary:                |                      |        |         |  |
| Budapest.....           | Jan. 27-Feb. 2....   | 4      | 2       | July 1-Aug. 31, 1923: Cases, 24.   |
| Java:                   |                      |        |         |  |
| East Java—              |                      |        |         |  |
| Scrabaya.....           | Dec. 9-29.....       | 12     |         |  |
| Do.....                 | Dec. 30-Jan. 5....   | 2      |         |  |
| Latvia.....             | .....                |        |         | Oct. 1-31, 1923: Cases, 12; paratyphus fever, 7; recurrent typhus, 3. Nov. 1-30, 1923: Cases, 1; paratyphus fever, 2 cases. Dec. 1-31, 1923: Cases, 9; paratyphus, cases, 3. |
| Mexico:                 |                      |        |         |  |
| Durango.....            | Dec. 1-31.....       |        | 2       |  |
| Do.....                 | Jan. 1-31.....       |        | 1       |  |
| Guadalajara.....        | Jan. 27-Feb. 16....  |        | 2       |  |
| Mexico City.....        | Nov. 25-Dec. 29....  | 86     |         | Including municipalities in Federal district.  |
| Do.....                 | Dec. 30-Feb. 9....   | 27     |         | Do.  |
| San Luis Potosi.....    | Jan. 17-23.....      |        | 1       |  |
| Norway:                 |                      |        |         |  |
| Stavanger.....          | Dec. 25-31.....      | 1      |         |  |
| Palestine:              |                      |        |         |  |
| Jaffa.....              | Jan. 1-21.....       | 3      |         |  |
| Persia:                 |                      |        |         |  |
| Teheran.....            | Sept. 24-Oct. 23.... |        | 1       |  |
| Poland.....             | .....                |        |         | Sept. 23-Dec. 8, 1923: Cases, 591; deaths, 49; recurrent typhus, cases, 49; deaths, 1.   |
| Portugal:               |                      |        |         |  |
| Oporto.....             | Jan. 27-Feb. 2....   | 2      |         |  |
| Rumania:                |                      |        |         |  |
| Kishineff District..... | Nov. 1-Dec. 31....   | 15     |         |  |



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

Reports Received from December 29, 1923, to March 21, 1924—Continued.

### TYPHUS FEVER—Continued.

| Place.                     | Date.                | Cases. | Deaths. | Remarks.   |
|----------------------------|----------------------|--------|---------|--|
| Spain:                     |                      |        |         |  |
| Barcelona.....             | Nov. 29-Dec. 12..... |        | 2       |  |
| Do.....                    | Jan. 3-Feb. 13.....  |        | 5       |  |
| Madrid.....                | Dec. 1-31.....       |        | 7       |  |
| Syria:                     |                      |        |         |  |
| Damascus.....              | Jan. 27-Feb. 2.....  | 1      |         |  |
| Tunis:                     |                      |        |         |  |
| Tunis.....                 | Feb. 5-11.....       | 1      |         |  |
| Turkey:                    |                      |        |         |  |
| Constantinople.....        | Nov. 11-Dec. 29..... | 15     | 1       |  |
| Do.....                    | Dec. 30-Jan. 26..... | 6      |         |  |
| Union of South Africa..... |                      |        |         | Oct. 1-31, 1923: Colored, 287 cases, 58 deaths; white, 2 cases; total, 289 cases, 58 deaths.         |
| Cape Province.....         |                      |        |         | Oct. 1-31, 1923: Colored, cases, 245; deaths, 47.  |
| Do.....                    | Oct. 28-Dec. 8.....  |        |         | Outbreaks.   |
| Natal.....                 |                      |        |         | Oct. 1-31, 1923: Colored, cases, 4; deaths, 3.   |
| Do.....                    | Oct. 28-Nov. 3.....  |        |         | Outbreaks.   |
| Durban.....                | Nov. 24-Dec. 1.....  | 73     |         | Cases occurring among native stevedores in the harbor area of the port and confined to one barracks. |
| Orange Free State.....     |                      |        |         | Oct. 1-31, 1923: Colored, cases, 25; deaths, 8.  |
| Do.....                    | Dec. 15.....         |        |         | Outbreaks.   |
| Transvaal.....             |                      |        |         | Oct. 1-31, 1923: Colored, cases, 13; deaths, 3.  |
| Do.....                    | Oct. 28-Dec. 1.....  |        |         | Outbreaks.   |
| Johannesburg.....          | Oct. 1-Dec. 31.....  | 3      | 4       |  |
| Do.....                    | Jan. 6-Feb. 2.....   | 5      |         |  |
| Venezuela:                 |                      |        |         |  |
| Maracaibo.....             | Dec. 16-22.....      |        | 1       |  |
| Yugoslavia:                |                      |        |         |  |
| Croatia—                   |                      |        |         |  |
| Zagreb.....                | Dec. 2-15.....       | 3      |         |  |
| Serbia—                    |                      |        |         |  |
| Belgrade.....              | Nov. 25-Dec. 1.....  | 1      |         |  |

### YELLOW FEVER.

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

86489°—24—4

X