

PUBLIC HEALTH REPORTS

VOL. 40

MARCH 27, 1925

No. 13

Results Obtained with the Dick Test Before and After Immunization With the Toxin of the Hemolytic Streptococcus of Scarlet Fever

By R. E. DYER, Surgeon, with the assistance of B. T. SOCKRIDER, Laboratory Assistant, Hygienic Laboratory, United States Public Health Service

In the latter part of November, 1924, scarlet fever appeared among the 328 inmates of a boys' school located in the District of Columbia. On the request of the authorities of the school and in cooperation with the health department of the District of Columbia, the Dick test¹ was made on each of the boys, and those showing positive reactions were given injections of the scarlet fever streptococcus toxin for purposes of immunization against scarlet fever.² Three weeks after the last immunizing dose of toxin, a retest was made to determine the degree of immunity produced against the toxin.

The original tests to determine susceptibility were made with a toxin made and standardized by Drs. George F. and Gladys H. Dick, to whom we are particularly indebted. The toxin of this particular batch was of sufficient strength to give the Dick standard skin reaction when 0.1 cubic centimeter of a 1:1,750 dilution was injected intracutaneously. Phenol, 0.5 per cent, had been added to the toxin at the time of its manufacture, some six months before this study was undertaken. Final dilution of this toxin was made on December 7, and the tests were performed on the three succeeding days.

One-half cubic centimeter Record syringes, graduated in tenths of a cubic centimeter, with luer tips and fitted with one-half inch 26-gauge Summit needles, were used.^{1,3} Care was taken to inject 0.1 cubic centimeter amounts. The injections were made in the skin over the flexor surface of the forearm, about the junction of the upper and middle thirds.

¹ Dick, G. F., and Dick, Gladys H.: A Skin Test for Susceptibility to Scarlet Fever. *J. A. M. A.*, 82:265, Jan. 26, 1924.

² Dick, G. F., and Dick, Gladys H.: Scarlet Fever Toxin in Preventive Immunization. *J. A. M. A.* 82:544, Feb. 16, 1924.

³ Dick, G. F., and Dick, Gladys H.: Scarlet Fever. *Amer. Jour. Pub. Health*, XIV, 1022, December, 1924.

Two controls were used. A heated control,⁴ consisting of toxin diluted for use and immersed in water, which was then brought to boiling and kept at that temperature for one hour. For the second control the uninoculated diluted Dick medium was used.¹

The test toxin was injected in the right forearm by one operator and the two controls in the left forearm by a second. All syringes and needles were boiled one hour at the close of each day's work in order to destroy any remaining toxin.

The skin was cleansed with acetone or alcohol and allowed to dry. Before each injection the needles were wiped with gauze saturated with the solution used for cleansing the skin. Frequent change of needles was made, but not usually before each injection. During the course of the study nothing of the nature of an infection was noted.

A little less than half of the boys tested were negroes, and it was found that the reactions in the darker-skinned negroes were often difficult to read. In some it was noted that the skin, in addition to showing some shade of red in the reacting area, had a shiny, smoothed-out appearance, probably caused by slight swelling.

In judging the reactions the conclusion of Drs. George F. and Gladys H. Dick,³ was followed, i. e., that an area of reddening 1 centimeter or more in diameter 24 hours after injection constitutes some degree of a positive reaction, and that an area of reddening less than 1 centimeter in diameter is a negative test. Consequently only those reactions were considered as positive which measured 1 centimeter in at least one diameter; and in determining a pseudo, or positive combined, reaction, those reactions caused by the control solution which measured less than 1 centimeter in both diameters were disregarded.

TABLE 1

Total number tested on original test.....	328
Average age..... years..	16. 8
Per cent positive.....	17. 1
Average age of those positive..... years..	16. 2
Number of white boys tested.....	189
Average age..... years..	17. 0
Per cent positive.....	14. 3
Average age of those positive..... years..	16. 7
Number of colored boys tested.....	139
Average age..... years..	16. 6
Per cent positive.....	20. 9
Average age of those positive..... years..	16. 6

¹ Dick, G. F., and Dick, Gladys H.: A Skin Test for Susceptibility to Scarlet Fever. J. A. M. A., 82:265, Jan. 26, 1924.

³ Dick, G. F., and Dick, Gladys H.: Scarlet Fever. Amer. Jour. Pub. Health, XIV, 1022, December, 1924.

⁴ Zingher, A.: The Dick Test in Normal Persons and in Acute and Convalescent Cases of Scarlet Fever. J. A. M. A. 83:432, Aug. 9, 1924.

The length of residence of the boys at the school prior to the date of testing varied from a few days to three years, the average length of residence being about 12 months. The majority of the boys came from city homes; and in regard to possible exposure to infections prior to coming to the school, it is thought that the group as a whole was comparable to the average public-school group of like age in a large city.

In the positive reactions a slight degree of swelling of the skin and a moderate degree of redness were the rule. In the larger reactions the redness was of a deeper shade; and in one with outside measurements of 23 by 32 millimeters the center over an area 14 by 14 millimeters was of a deeper red and was elevated above the rest of the reacting area.

Disregarding the reactions of the control solutions which measured less than 1 centimeter in diameter, only one reaction was noted in the original test which might fall into the group described by Zingher as "positive combined" and one which would fall into Zingher's "pseudo" group.⁴

The boys showing positive reactions were divided into two groups. One group was immunized with toxin to which no preservative had been added, while the second group was immunized with the same toxin containing 0.5 per cent phenol.

Dilutions for immunization were made the day before each immunizing injection, the dose for the day being contained in 1 cubic centimeter of solution. Physiological saline solution was used as a diluent. The first immunizing dose contained 125, the second 500, and the third, 1,000 skin test doses.

The immunizing doses were given at weekly intervals, and on the day following each injection each boy was seen, the reacting areas were measured, and other notes were made of local and general reactions. (See Tables 2 and 3.)

Three weeks from the date of the final immunizing dose each immunized boy was retested with a test toxin to which no preservative had been added and with the same toxin containing 0.5 per cent phenol. Three controls were used on the final test, each of the two test toxins immersed in boiling water one hour before using, and a medium control.

For various reasons 11 of the boys who gave positive reactions on the original test were not given all of the immunizing doses and 1 boy was not retested. These 12 boys have been left out of Tables 2 and 3.

⁴ Zingher, A.: The Dick Test in Normal Persons and in Acute and Convalescent Cases of Scarlet Fever. *J. A. M. A.* 83:432, Aug. 9, 1924.

TABLE 2.—*Showing original test reactions, reactions to immunizing doses, and retest reactions. (Toxin without preservative was used in immunizing this group)*

Test No.	First test made with phenolized toxin		Immunizing doses and reactions			Retest after immunization					
	Toxin	Heated control	Me-dium control	First dose, 125 skin-test doses	Second dose, 500 skin-test doses	Third dose, 1,000 skin-test doses	Toxin without phenol	Toxin with phenol	Heated, non-phenolized control	Heated, phenolized control	Me-dium control
186	28X35	0	0	20X30, red, swollen.	55X50, red, swollen, hard.	60X70, pink, slight swelling.	0	0	0	0	0
240	25X33	0	4X6	50X40, red, swollen.	70X30, red, swollen, hard, sore in axilla.	75X80, pink, slight swelling.	0	0	0	0	6X6
119	23X32	0	5X5	50X70, red, swollen, malaise.	65X30, red, swollen, hard.	75X100, red, swollen, hard.	18X18	12X17	0	0	0
24	28X27	10X10	10X8	60X60, red, swollen.	83X100, red, swollen, hard.	90X100, red, swollen.	4X0	0	0	0	0
21	25X25	0	2X3	60X70, red, swollen.	60X100, red, swollen.	80X80, red, swollen.	0	13X13	0	0	0
30	23X23	0	6X5	60X70, red, swollen.	73X35, red, swollen, hard.	85X80, red, swollen.	0	0	0	0	0
14	23X23	0	8X8	40X40, red, swollen.	43X40, red, swollen.	50X20, pink.	9X9	17X17	11X11	12X12	19X21
245	22X19	0	4X7	25X40, pink.	75X100, red, swollen, hard, sore in axilla.	55X50, pink, slight swelling.	15X15	0	0	0	0
275	20X20	0	0	40X50, red, slight swelling.	80X30, pink.	75X100, pink, slight swelling.	13X13	15X18	0	0	12X12
57	20X20	0	3X3	45X70, red, swollen.	63X85, pink, slight swelling.	80X80, red, sore throat, malaise.	0	0	0	10X10	0
74	18X13	0	4X6	50X70, red, swollen.	40X65, pink, slight swelling.	70X80, pink, swollen.	17X17	16X17	0	0	0
256	18X18	0	0	50X30, pink, slight swelling.	40X60, pink, slight swelling.	None.	0	0	0	0	0
201	18X18	0	0	40X40, red, swollen.	55X50, red, swollen, hard.	40X50, slight swelling.	18X18	10X16	0	0	0
263	17X15	0	0	None.	36X30, slight swelling.	None.	0	0	4X4	4X4	4X4
125	13X15	0	0	30X40, pink, slight swelling.	40X55, red, swollen.	35X45, pink, slight swelling.	0	0	0	0	0
268	14X14	3X6	0	None.	Not seen.	30X40, pink	0	0	0	0	8X8
235	12X11	5X3	2X5	25X25, pink.	20X40, slight swelling.	30X40, slight swelling.	0	11X15	0	0	0
202	10X13	0	5X5	20X30, red, swollen.	50X40, pink, slight swelling.	40X45, pink	0	0	0	0	0
231	11X9	5X7	3X5	25X25, pink.	35X45, pink, slight swelling.	35X40, pink	0	7X7	0	0	8X9
272	10X9	4X4	6X6	None.	40X60, red, swollen, hard.	None.	6X6	13X13	4X4	8X8	0
188	10X8	5X6	5X5	25X30, red, swollen.	45X77, pink.	20X30, slight swelling.	4X4	0	0	0	0

1 All measurements in this and following tables are expressed in millimeters.

In Table 2, No. 24 is classed as combined on the original test. The result recorded on retest in No. 14 with the phenolized toxin and controls is confusing. For the purpose of tabulation, the retest of this case has been considered as negative with the nonphenolized and pseudo with the phenolized toxin. No. 275 is still positive with both toxins on retest when compared with the heated controls, while comparison with the medium control changes the reading to pseudo or combined. No. 263 gives a history of having had scarlet fever in 1921.

TABLE 3.—*Showing original test reactions, reactions to immunizing doses, and retest reactions. (Toxin with 0.5 per cent phenol was used in immunizing this group.)*

Test No.	First test made with phenolized toxin		Immunizing doses and reactions			Retest after immunization				
	Toxin	Heated phenol control	First dose, 125 skin test doses	Second dose, 500 skin test doses	Third dose, 1,000 skin test doses	Toxin without phenol	Toxin with phenol	Heated non-phenol control	Heated phenol control	Medium control
201	21×28	0	50×60, red, swollen.	40×70, slight swelling.	None.	0	0	0	0	0
173	20×28	0	40×30, red, swollen.	70×90, red, swollen.	75×100, pink.	0	0	0	0	0
22	22×26	2×4	4×6	55×75, red, swollen, hard.	75×80, pink.	0	0	0	3×3	10×10
140	23×23	5×7	4×3	50×60, red, swollen, headache.	60×90, red, swollen, headache.	17×23	9×9	6	6	0
27	24×22	0	50×50, red, swollen.	50×55, pink, slight swelling.	50×55, pink, slight swelling.	0	0	0	6×8	11×13
199	20×22	0	50×40, red, swollen.	40×60, red, swollen, hard.	None.	0	0	0	0	0
264	21×20	0	40×30, red, swollen.	65×80, red, swollen, hard, sore in axilla.	40×60, slight swelling.	0	0	0	0	5×5
231	20×20	0	do.	70×90, red, swollen, hard.	70×95, pink, slight swelling.	0	0	0	0	0
100	17×23	6×7	5×6	50×50, slightly red.	65×80, red, swollen.	0	0	0	0	0
123	17×20	4×6	4×5	40×30, red, swollen.	22×25, pink, slight swelling.	0	0	0	0	0
257	17×19	4×4	5×6	None.	85×100, red, swollen.	0	0	0	0	0
273	17×17	2×7	4×7	45×60, pink, swollen.	50×60, pink, slight swelling.	0	0	0	0	0
292	16×18	0	40×40, slight swelling.	25×30, pink, slight swelling.	75×90, pink, slight swelling.	0	13×13	0	0	5×5
298	15×18	0	None.	25×30, slight swelling.	30×30, slight swelling.	5×5	0	0	0	0
65	15×11	0	20×30, pink, slight swelling.	45×50, pink, slight swelling.	25×20, faint.	5×3	0	0	0	4×4
277	13×13	0	None.	40×40, pink, slight swelling.	40×45, slight swelling.	0	0	0	0	0
289	11×12	4×6	25×25, pink, slight swelling.	40×50, red, swollen, hard, sore in axilla.	None.	0	0	0	0	0
103	10×12	5×5	25×25, pink.	45×50, red, swollen, hard.	45×45, faint.	0	0	0	0	8×8
496	10×12	7×8	3×5, do.	40×45, pink, swollen.	30×40, pink, swollen.	0	0	0	3×3	4×6
579	10×11	5×7	30×30, pink.	35×45, pink, swollen.	None.	0	0	0	0	0
117	10×10	0	30×40, red, swollen.	40×50, pink, slight swelling.	40×50, pink, slight swelling.	0	11×11	0	10×10	12×12
145	10×9	0	25×25, red, swollen.	40×30, pink.	35×40, faint.	0	0	0	0	0
265	10×9	0	25×25, red, swollen.	40×30, pink.	25×30, faint.	0	0	0	0	0
135	10×9	7×7	20×50, pink.	40×55, pink, swollen.	25×30, faint.	0	7×7	0	4×4	0

NOTE.—In this table Nos. 22 and 27 on retest give reactions with the medium control, for which no explanation is offered. (See No. 87, Table 2, heated phenolized control.) Case No. 65 gives history of scarlet fever in 1913; case No. 103 gives history of scarlet fever in 1907; case No. 159 gives history of scarlet fever in 1922.

TABLE 4.—*Summary of results of Dick tests three weeks after prophylactic inoculations*

Number of cases immunized with toxin without a preservative.....	22
Number of cases giving pseudo reactions to the phenolized toxin on retest (No. 14, No. 275).....	2
Number of cases giving pseudo reactions to the nonphenolized toxin on retest (No. 275).....	1
Number of cases found negative to both toxins on retest.....	13
Number of cases found negative to the unpreserved toxin on retest.....	17
Number of cases found negative to the preserved toxin on retest.....	14
Number of cases immunized with toxin which had been preserved with 0.5 per cent phenol.....	23
Number of cases giving pseudo reaction to the phenolized toxin on retest (No. 145).....	1
Number of cases found negative to both toxins on retest.....	20
Number of cases found negative to the unpreserved toxin on retest.....	22
Number of cases found negative to the preserved toxin on retest.....	20

On study of the two groups it will be noted that the preserved toxin used in immunization seems to have given better results than the toxin which contained no preservative. It is thought, however, that the groups are too small to draw any definite conclusion to that effect. It may safely be said that there is no indication in this study that the addition of the 0.5 per cent phenol to the toxin in any way vitiated its immunizing potency.

In the great majority of the 45 cases recorded in Tables 2 and 3, the reactions caused by the immunizing doses were local only. Malaise was noted in one instance after the first immunizing dose, headache was noted in one case after the second dose, and sore throat coupled with malaise was noted in one case after the third dose. In four instances the boys complained of "soreness" in the axilla after the second dose. In some cases the swelling occasioned by the immunizing dose was fairly hard to the touch. In general, the more severe reactions occurred after the second dose.

It is not thought that the data here presented can be interpreted in favor either of a medium control alone or of a heated control. As far as practical results are concerned it would have made no difference had no controls been used in the original test and, in the retest after immunization, the use of controls changed the readings in only three cases (Nos. 145, 14, and 275).

In addition to the boys who were positive on the original test, 38 boys who gave negative reactions on the original test were given the immunizing doses of the toxin. One of these was not retested; 31 were negative on retest. The reactions of the remaining six are given in Table 5.

The 38 cases referred to immediately above gave in each instance a mild local and no suggestion of a general reaction to the immunizing doses.

TABLE 5.—Showing original test reactions, doses of toxin given in immunization, and retest reactions in certain cases.

Case No.	Original test			Immunizing doses	Retest after immunization				
	Toxin	Heated control	Medium control		Toxin without phenol	Toxin with phenol	Heated non-phenol control	Heated phenolized control	Medium control
312	9×9	0	0	First dose, 250 skin test doses. Second dose, 500 skin test doses. No third dose given	12×12	13×13	4×4	0	0
4	8×9	5×8	8×8	First dose, 125 skin test doses. Second dose, 500 skin test doses. No third dose given	0	10×10	10×10	9×9	0
278	7×8	4×4	5×5	First dose, 125 skin test doses. Second dose, 500 skin test doses. Third dose, 1,000 sk in test doses.	0	13×13	4×4	5×5	12×12
266	6×5	3×3	0	Same as No. 278	12×12	13×18	13×13	7×7	15×15
271	5×6	0	0	do	0	10×10	0	0	0
46	4×5	0	0	do	9×9	11×11	10×10	15×15	13×13

Cases 312 and 266 received immunizing doses of non-phenolized toxin; the others received phenolized toxin. Cases 4, 278, and 266 gave history of having had scarlet fever prior to admission to the school.

In Table 6 are given the results of tests made on the cases diagnosed as scarlet fever by the attending physician. All of the cases were mild in type, the rash in some instances lasting less than 24 hours. The main clinical observations are recorded in the table.

In cases 5, 66, 54, 84, and 29, the onset of illness was within 48 hours after an immunizing dose of the toxin had been given. It is possible that the symptoms noted in these cases may have been caused by severe reactions to the immunizing toxin. The fact that in two (5 and 66) only the first immunizing dose was given and the retest later resulted in negative reactions may be taken as evidence that the illness was scarlet fever and not a severe reaction to the immunizing dose of toxin. Case 54 was not retested with the heated controls, but from the reaction noted with the medium control it is possible that the retest reaction is pseudo in character as was the original test reaction in this case.

In case 113 the rash lasted less than 24 hours; the illness was mild and the desquamation not typical.

The reaction noted at the site of the immunizing injection in case 41, after the development of the rash of scarlet fever, is somewhat similar to that noted by Zingher in two cases where scarlet fever developed in individuals who had had positive Dick reactions a short time previously.⁴

As stated earlier in this paper, all reactions showing more than the needle puncture were measured and recorded in millimeters, those less than 10 millimeters in one diameter being considered negative. A tabulation of these negative reactions is given in Table 7.

⁴Zingher, A.: The Dick Test in Normal Persons and in Acute and Convalescent Cases of Scarlet Fever. J. A. M. A., 83, 432, Aug. 9, 1924.

TABLE 6.—*Showing Dick test reactions on cases diagnosed as scarlet fever. Two cases (9 and 15) are included, although no diagnosis of scarlet fever was made on either case*

Case No.	Original test			Clinical notes	Retest on Jan. 16, 1925				
	Date (1924)	Toxin	Heated control		Me- dium control	Non-phenol-ized toxin	Heated phenol-ized control	Heated phenol-ized control	Me- dium control
302	Dec. 10.	0	0	0	Sick Nov. 18; headache, sore throat, vomiting. Rash on Nov. 19 to 27. Desquamation began Nov. 27.	(1)			
307	.do.	0	0	0	Sick Nov. 26; sore throat, vomiting. Slight rash noted on Nov. 28. Fever Nov. 28 to Dec. 5.				
303	.do.	0	0	0	Slight desquamation noted Dec. 3.				
305	.do.	0	0	0	Sick Dec. 1; headache, sore throat. Rash Dec. 3. First temp. record on Dec. 4—99.4° F. Normal temp. thereafter. Desquamation Dec. 8.				
306	.do.	0	0	0	Sick Dec. 4; headache. Admitted to hospital Dec. 6 with headache; temp. 100° F. Slight rash on Dec. 7. Temp. normal. Slight desquamation noted on hands and feet on Dec. 10. Desquamation noted again on Jan. 5.				
304	.do.	5X7	4X7	4X7	Sick Dec. 6; headache, sore throat, rash. Temp. 102° F. Temp. normal thereafter. Urticaria on Dec. 12. Desquamation noted Dec. 14.				
5	Dec. 8	21X20	3X5	4X4	Sick Dec. 7; headache, sore throat. Temp. 104° F. on Dec. 9, 99° F. on Dec. 10. Normal thereafter. No rash. Desquamation slight on Jan. 8.				
66	.do.	18X18	3X5	4X6	Immunization started with 125 skin test doses on Dec. 12. Sick Dec. 13; headache, sore throat. Rash on Dec. 14. Fever Dec. 13 to 19. Desquamation noted Dec. 23.				
54	.do.	13X13	15X15	14X13	Immunization started with 125 skin test doses on Dec. 12. Sick Dec. 13; sore throat, headache. Rash on Dec. 15. No fever. Desquamation Jan. 6.				
41	.do.	19X20	0	0	Immunization started with 125 skin test doses on Dec. 12. Sick Dec. 14; sore throat. Rash on Dec. 17. Fever Dec. 16 to 18. Desquamation Jan. 8.	6X6	10X10		9X9
83	.do.	18X33	0	0	Immunization started with 125 skin test doses on Dec. 12. Sick Dec. 16; sore throat. Rash on Dec. 18. Temp. 100° F. on Dec. 18. Normal thereafter. Desquamation Jan. 12.				
113	Dec. 9	0	0	3X5	Immunizing injection of Dec. 12 caused a moderate local reaction which measured 40 by 50 in. in. on Dec. 13. Two days after the appearance of the scarlet fever rash and while the rash was still present, though fading, the area which had reacted to the immunizing dose was a darker red than the surrounding skin, with a pale area of normal skin in the center.				
92	Dec. 8	17X23	0	4X4	Immunization started with 125 skin test doses on Dec. 12. Sick Dec. 17; headache, sore throat, rash. Fever recorded Dec. 18 to 20. Desquamation on face Dec. 20. Desquamation noted on Jan. 7.	0	0	0	0
84	.do.	10X10	0X7	8X8	Sick Dec. 17; sore throat, rash. Temp. 101.8° F. on Dec. 18, 99.4° F. on Dec. 19. Normal thereafter. Desquamation noted Jan. 7.	0	0	0	0
					Immunization started with 125 skin test doses on Dec. 12. Sick Dec. 19; headache, sore throat. Slight rash noted Dec. 19. Disappeared in 24 hours. Temp. 100.9° F. on Dec. 19, 99.6° F. on Dec. 20. Normal thereafter. Desquamation noted Jan. 19.	0	0	0	0
					Immunizing doses given as follows: 125 skin test doses on Dec. 12; 500 skin test doses on Dec. 19. Sick Dec. 18; headache, sore throat. Rash Dec. 19. Temp. 102.4° F. on Dec. 19 and 99.8° F. on Dec. 20. Normal there after. Desquamation Jan. 10.	4X4	0	0	0

29	do	23×23	0	6×5	Immunizing doses given as follows: 125 skin test doses on Dec. 12; 500 skin test doses on Dec. 19; 1,000 skin test doses on Dec. 26. Sick Dec. 27, headache, sore throat. Rash on Dec. 28. Temp. 100° F. on Dec. 29, 101° F. on Dec. 30, 100.4° F. on Dec. 31. Normal thereafter. Discharge Jan. 8.	0	0	0	0
9	do	10×8	8×6	5×5	Immunization started with 125-skin test doses on Dec. 12; sore throat at that time. Left ear painful on Dec. 15. Drum lanced on Dec. 18. No further immunization given.	3×6	0	0	5×5
15	do	17×20	3×4	3×4	Immunization started with 125 skin test doses on Dec. 12. Sore throat on Dec. 20 and was isolated in scarlet fever ward over night. Discharged as not having scarlet fever on Dec. 21. 500 skin test doses given on Dec. 26.	16×20	16×17	0	4×4

¹ Not retested.

Cases 5, 66, 41, 85, 84, and 9 received immunizing toxin containing phenol. Cases 54, 29 and 92 received immunizing doses of toxin which did not contain phenol.

TABLE 7.—*Negative reactions*

Total negative reactions considered.....	272
Showing only needle puncture.....	78
Test toxin and both controls reacting.....	64
Test toxin and medium control reacting, with the heated control not reacting.....	37
Test toxin and heated control reacting, with the medium control not reacting.....	13
Both controls reacting, with the test toxin not reacting.....	12
Test toxin alone reacting.....	25
Medium control alone reacting.....	31
Heated control alone reacting.....	12

With few exceptions (see Table 8) the small reactions tabulated above consisted of slight, elevated, indurated areas, deep pink in color, with an average diameter of 5 millimeters. It seems probable that many of these small reactions were caused by traumatism. On retesting this group after a lapse of six weeks the same reactions did not, as a rule, occur in the same individuals.

TABLE 8.—*Showing certain atypical reactions*

Case No.	Original test			Retest		
	Test toxin	Heated control	Medium control	Test toxin	Heated control	Medium control
299.....	7×8	6×10	6×7	0	0	0
8.....	5×5	0	10×7	0	6×8	3×3
219.....	5×5	3×5	10×8	0	0	0
68.....	3×6	7×8	10×10	0	0	0
212.....	0	10×11	0	0	0	0

At the time of retesting the boys who had been immunized and those who had had scarlet fever, the entire school was retested with two dilutions (1:1,750 and 1:1,000) of the toxin made and standardized by Drs. G. F. and G. H. Dick and two other toxins which will be referred to as toxins A and B. The Dicks' standard toxin in the 1:1,000 dilution was not used on the boys who had received the immunizing injections nor on the scarlet fever convalescents. As some of the boys had left the school after the original test and before the retest, there were only 315 boys tested with the three toxins.

Toxin A and toxin B were produced by hemolytic streptococci of scarlatinal origin, but not by the two strains used by Drs. G. F. and G. H. Dick in the production of their standard toxin. Toxin A was prepared with a nonblood medium and had been standardized to give a skin test dose when 0.1 cubic centimeter of a 1:400 dilution was injected. Toxin B was prepared with a medium containing blood and had been standardized at a dilution of 1:5,000 for skin test.

Table 9 shows the results of the tests with the three toxins.

TABLE 9.—*Summary of tests with three toxins*

Tested with three toxins, Dicks' standard toxin (dilution 1:1,750), toxin A, and toxin B.....	315
Tested with the Dicks' standard toxin in two dilutions (1:1,000 and 1:1,750), toxin A, and toxin B.....	214
Negative to the Dicks' standard toxin in two dilutions and to toxin A and toxin B.....	100
Negative to the Dicks' standard toxin in dilution 1:1,750 and to toxin A and toxin B.....	136
Negative to the Dicks' standard toxin in dilution 1:1,750, pseudo to toxin A, and negative to toxin B.....	126
Negative to the Dicks' standard toxin in two dilutions (1:1,000 and 1:1,750), pseudo to toxin A, and negative to toxin B.....	89
Cases showing other variations in reactions.....	53

The pseudo reactions caused by toxin A measured from 1 to 2 centimeters in at least one diameter. The most probable explanation for the high number of pseudo reactions caused by this toxin seems to be the low dilution of the medium used.

The 53 cases referred to in the last line of Table 9 are listed below in Table 10. For convenience the reactions have been divided into groups.

In group 1 of Table 10 the reactions produced by the various toxins are positive and in practical agreement. Groups 2 and 4 show 12 cases in which the Dicks' standard toxin in the 1:1,750 dilution is positive or pseudo, while toxin B is negative. In 9 of these cases toxin A shows pseudo reactions. In group 3 are 3 cases in which the 1:1,750 dilution of the Dicks' standard toxin is positive or pseudo, toxin B positive, and toxin A negative. Group 5 shows 8 cases in which toxin A has given rise to pseudo or positive combined reactions, while the 1:1,750 dilution of the Dicks' standard toxin and toxin B have developed no reactions. In these 8 cases it will be noted that the 1:1,000 dilution of the Dicks' standard toxin has caused positive or pseudo reactions. Group 6 shows 22 cases where toxin A alone was positive. In 14 of these both dilutions of the Dicks' standard toxin gave negative results.

Among the reasons that have suggested themselves in explanation of the discrepancies shown in Table 10 are the following:

Incorrect standardization of toxins A and B, resulting in the use of toxin A in too low dilution and toxin B in too high dilution.

Difference in the toxins caused by the difference in the organisms used in the production of the toxins.

Difference in the toxins caused by the difference in the mediums employed in toxin production.

The cases are tabulated as indicative of the necessity for careful standardization and as suggestive of further work on toxin production by different strains of hemolytic streptococci of scarlatinal origin and by the same strain on different mediums.

TABLE 10.—Showing certain reactions produced by different toxins

Case No.	Test toxins				Heated controls				Remarks	
	Dicks' standard, 1:1,600	Dicks' standard, 1:1,750	Toxin A	Toxin B	Dicks' standard, 1:1,000	Dicks' standard, 1:1,750	Toxin A	Toxin B		
275		15×18	20×20	19×19		0	12×12	0	See Table 2. Do. See Table 6. See Table 3. See Table 2. See Table 5. See Table 2.	
74		16×17	15×15	17×20		0	4×4	0		
15		16×17	22×20	15×15		4×4	7×7	0		
140		13×20	19×23	20×20		0	4×6	0		
322	14×18	17×15	14×14	15×14	5×5	4×4	7×6	3×3		
291		16×16	21×21	18×18		0	0	0		
312		13×13	12×12	15×15		0	9×9	0		
149		12×17	19×19	15×15		0	15×15	0		
266 ¹		13×18	15×20	0		7×7	16×16	0		See Table 5. See Table 2. See Table 5. See Table 5. See Table 5. Do. Do.
231		13×13	15×15	7×7		8×8	15×15	0		
278 ¹		13×13	10×10	0		5×5	13×13	0		
268		11×15	11×11	0		0	12×12	0		
46		11×11	13×13	3×3		15×15	16×16	10×10		
271		10×10	16×16	0		0	15×15	0		
241	8×8	10×10	13×13	0	9×9	0	14×14	0		
41		10×10	10×10	0		9×9	10×10	0		
21	10×10	10×8	18×18	3×3	16×16	13×13	23×23	6×6		
6	12×12	10×10	0	14×14	0	0	0	0	See Table 3. Do.	
145		11×11	9×9	10×10		10×10	5×5	0		
273		13×13	0	14×14		0	0	0		
14		17×17	0	0		12×12	8×8	5×5	See Table 2. Do. See Table 6.	
21		13×13	0	0		0	0	0		
54		10×10	6×6	0		17×26	18×20	0		
283	15×15	0	20×20	0	10×10	0	15×15	0		
244	15×15	0	18×18	0	0	0	16×16	0		
325	11×11	0	18×19	0	3×3	0	14×14	3×3		
250	11×11	0	16×16	0	18×18	0	16×16	0		
287	10×10	0	17×17	0	0	10×10	15×15	5×5		
106	10×10	0	16×15	0	0	0	14×14	0		
212	10×10	0	12×12	0	0	0	10×10	0		
8	10×10	0	11×11	0	14×14	6×8	16×16	4×4		
257		0	20×20	0		0	0	0		See Table 3. See Table 6. See Table 2. Do. See Table 6. Do. Do. Do. Do. See Table 3.
306		0	16×16	0		0	0	0		
245		0	16×16	0		0	0	0		
240		0	12×13	0		0	7×7	0		
84		0	11×11	0		0	0	0		
66		0	11×11	0		0	0	0		
169		0	11×11	0		0	0	0		
41	0	0	10×10	0		0	0	0		
195 ¹		7×7	10×10	0		4×4	8×8	2×5		
225 ¹	0	0	18×18	0	0	0	0	0		
209	0	0	14×14	0	0	0	0	0		
173	0	0	14×14	0	0	0	7×7	0		
309 ¹	0	0	13×13	0	0	0	0	0		
194	0	0	12×12	0	0	0	7×7	0		
172	0	0	12×12	0	0	0	0	0		
295	4×4	5×5	12×12	0	0	4×4	9×9	0		
228 ¹	0	0	11×11	0		0	0	0		
238	0	0	11×11	0	0	0	8×7	0		
117	8×8	0	10×10	0		0	5×5	0		
222	0	0	10×10	0	0	0	5×5	0		
328 ¹	0	0	10×10	0		0	0	4×4		
16	0	0	9×10	0	3×3	0	5×5	0		

¹ History of scarlet fever prior to admission to the school.

With the exception of cases 241, 6, and 2 (see Table 10), there was no disagreement in the results of the original and final tests with the Dicks' standard toxin in the 1:1,750 dilution among those boys who had not received immunizing doses of toxin and those who had not had scarlet fever.

The results of the original tests on these three exceptions are given below in Table 11.

TABLE 11.—*Showing original test reactions in three cases in which later tests gave different results (see Table 10 for retests)*

Case No.	Test toxin, dilution 1:1,750	Heated control	Medium control
241	0	0	0
6	5×6	0	5×5
2	5×6	7×10	8×8

It will be noted that 12 boys whose test reactions are listed in Tables 2, 3, and 10 gave a history of having had scarlet fever at some time prior to entering the school. A small number, including cases 65 and 263 (see Tables 2 and 3), described the attacks as moderately severe and stated that desquamation occurred. In the majority of cases no account of the illness reported as scarlet fever could be elicited.

In addition to the cases already noted, 20 boys giving negative reactions to the Dicks' standard toxin gave histories of having had scarlet fever. Eleven of these gave pseudo reactions to toxin A.

CONCLUSIONS

- (1) Toxin containing 0.5 per cent phenol was found to be as effective in producing immunity as a toxin to which no preservative had been added, when judged by skin tests made three weeks after the last immunizing dose.
- (2) The necessity for further work on methods of toxin production and standardization is indicated.

A FURTHER REPORT ON FOOT DEFECTIVENESS IN SCHOOL CHILDREN

A preliminary report on foot defectiveness observed in 356 New York City public-school children by Dr. Maurice J. Lewi was published in the Public Health Reports for November 4, 1921. Of the children examined, 6 per cent of the boys and 13 per cent of the girls had flat foot.

Much has been written regarding the posture of the school child, and yet the average school medical inspector and school nurse seem to have been given very incomplete information regarding the underlying causative factors of faulty posture. Also, a satisfactory practical standard of classification and comparison is yet to be devised. Further investigation is required on this problem.

Postural deformity in the minds of many persons is largely attributable to the action of gravity. Since this action affects everyone, however, it alone can not account for the occurrence of deformity in an otherwise normal person. Studies by Bankart,¹ Sherrington, and others, indicate that postural deformity is the result of faulty position and a deformity resulting therefrom due to default of the

¹ Postural or so-called Static Deformities. By A. S. B. Bankart. Br. Med. Jour., Apr. 23, 1921.

normal mechanism for counteracting the influence of gravity and maintaining the body in an upright position. This mechanism is a nervous mechanism; for the position of the body is maintained by continuous reflex muscular activity.² There is evidence that different parts of the muscle fibers are concerned in phasic and tonic muscle activity, respectively, each having individual nerve supplies, and that the sympathetic activity probably is concerned in tonic or postural contractions.

The chief characteristics of postural activity are defined by Sherrington as—

- (a) The low degree of tension that usually develops;
- (b) The long periods for which it can be maintained without fatigue;
- (c) The relative ease with which it is interrupted by reflex inhibition;
- (d) The "lengthening" and "shortening" reaction obtained from muscles exhibiting postural contraction, i. e., the property which a skeletal muscle has of adapting itself to different lengths without change in tension.

The body is maintained in the erect position by reason of reciprocal innervation of antagonistic muscles. Normally, change in position is accompanied by a finely balanced adjustment, lengthening and shortening opposing muscles without undue tension. In paralysis the break in the arc of reciprocal innervation is caused by an organic lesion, whereas in simple postural cases it is functional and may be induced by many factors.

A very high percentage of postural defect has been observed among school children. An analysis of the tracings of the standing positions of 746 Harvard freshmen, reported by Lee,³ showed that 80 per cent of them habitually assumed a standing position that was unsatisfactory, and in 25 per cent the method of standing was distinctly unsatisfactory. That is, they had poor use of the feet. It is obvious that the development of most of the cases of foot defect could be prevented by adequate attention during childhood.

Postural activity is not of late development, but is acquired early in life. Bankart called attention to the position assumed by the child just learning to stand. The feet are flattened and inverted by the body weight, not because the muscles are weak, but because postural activity is not yet developed. When he learns to walk, postural activity becomes established and the feet are adducted and inverted. The tendency to passive abduction and eversion, characteristics of flat foot, is resisted by reflex tonic muscular activity. In other words, according to Bankart, flat foot is either caused or accompanied by deficient postural activity which appears to be modified by mental fatigue, inertia, temperament, anemia, consti-

² Sherrington: *Brain*, 1915, Vol. XXXVIII, p. 19.

³ *Bodily Mechanics in Harvard Freshmen*. By Roger I. Lee, Wm. H. Greer, and Lloyd T. Brown. *Amer. Phys. Ed. Rev.*, Vol. XXV, No. 8, November, 1920.

pation, adenoids, and the general state of health. The tendency to flat foot should be resisted by relieving the postural muscles from strain, reestablishing the postural reflex, correcting hampering physical defects that lower vitality, and improving the physical and mental health.

It is important that parents and responsible official agencies should cooperate for the discovery of existing or impending foot defects among school children with a view to their correction and prevention. This is quite clearly shown in a report by Doctor Lewi on the results of a more recent foot survey made by the Foot Clinics of New York, of the pupils attending the Bryant High School, Long Island City, New York. Each pupil was examined on the basis of the following queries, which appeared on the record forms:

RECORD OF THE FIRST INSTITUTE OF PODIATRY FOR THE EXAMINATION OF THE FEET AND CARRIAGE OF SCHOOL CHILDREN

Date School Age
 Name Address
 Race Nationality
 Sex: M F

Student complains of—

Pain in feet or legs when walking
 State exact location of pain
 Fatigued easily when walking

EXAMINATION

Mode of walking	Fit of shoes	Superficial defects	
Toes out	Short	Corns	
Toes in	Long	Callosities	
Correct	Narrow	Verruca	
<i>Carriage</i>	Wide	Abnormal nails	
	Correct	Skin lesions	
Good	<i>Style of shoes</i>	Hyperidrosis	
Fair		Bromidrosis	
Poor			
	Pointed	NOTE.—State the location of the first four defects on the foot. Use abbreviations.	
	Semipointed		
	Orthopedic		
	High heel		
	<i>Fit of socks</i>		
			Short
			Long
	Correct		

DEFORMITIES AND MECHANICAL DISTURBANCES

	Recommendations
Strained foot
Weak foot
Acquired flat foot
Weak ankles
Shaffer's foot
Club foot (type)
Restriction of flexion
Extension
Inversion
Eversion
Functionally impaired metatarsal arch
Metatarsalgia
Morton's toe
Hallux valgus
Hallux rigidus
Hammer toe
	Remarks
NOTE.—State whether condition is bilateral or unilateral and, if the latter, state which foot.	

The following data were collected:

Foot defects among Long Island City high-school children

Condition	Percentage			Number		
	Both sexes	Boys	Girls	Both sexes	Boys	Girls
MODE OF WALKING						
Total observed.....				1,505	551	954
Toes in.....	2.86	4.17	2.10	43	23	20
Toes out.....	49.97	51.72	48.95	752	285	467
Correct.....	47.18	44.10	48.95	710	243	467
FIT OF SHOES ¹						
Total observed.....				1,505	551	954
Short.....	44.45	52.81	39.62	669	291	378
Long.....	2.79	1.63	3.46	42	9	33
Narrow.....	23.99	21.42	25.47	361	118	243
Wide.....	3.46	1.63	4.51	52	9	43
Correct.....	34.55	31.40	36.37	520	173	347
STYLE OF SHOES ²						
Total observed.....				1,502	548	954
Pointed.....	30.69	14.78	39.83	461	81	380
Semipointed.....	45.41	47.63	44.13	682	261	421
Orthopedic.....	22.90	37.59	14.47	344	206	138
High heel.....	2.60		4.09	39		39
SOCKS						
Total observed.....				1,485	550	935
Short.....	42.76	59.09	33.16	635	325	310
Long.....	1.01	.91	1.07	15	5	10
Correct.....	56.23	40.00	65.78	835	220	615
CARRIAGE						
Total observed.....				1,273	333	940
Good.....	44.62	53.45	41.49	568	178	390
Fair.....	40.93	36.94	42.34	521	123	398
Poor.....	14.45	9.61	16.17	184	32	152
DEFECTS						
Total observed.....				1,505	551	954
Weak foot.....	76.68	73.14	78.72	1,154	403	751
Flat foot.....	1.13	2.36	.42	17	13	4
Strained foot.....	1.06	2.00	.52	16	11	5
Hallux valgus.....	1.93	.91	2.52	29	5	24
Hammertoe.....	1.00	2.36	.21	15	13	2
Shaffer's foot.....	.47	.73	.31	7	4	3
Clubfoot.....	.07		.10	1		1
Shortened leg.....	.07	.18		1	1	
Bromidrosis.....	2.52	6.90		38	38	
Callouses.....	10.90	10.89	10.90	164	60	104
Corns.....	23.06	23.77	22.64	347	131	216
Hyperidrosis.....	16.94		26.73	255		255
Nails.....	13.02	11.80	13.73	196	65	131
Metatarsalgia.....	2.26	3.63	1.47	34	20	14
Verruca.....	.20	.36	.10	3	2	1

¹ Inasmuch as the same shoe might be long and narrow or short and narrow, etc., the percentages do not add up to 100.

² The same shoe might be both pointed or semipointed and high heeled; therefore, the percentages do not add up to 100.

On reference to the table it will be observed that 1,154 children, 403 boys and 751 girls, or 73.14 per cent of the former and 78.72 per cent of the latter, were found to have "weak foot."

This condition is defined as a foot that flattens out on weight bearing, being the stage preceding acquired flat foot. Weak foot can be corrected in almost every instance; but when neglected, deformity will follow. "Children and adolescents afflicted with weak foot need the care of the specialist much more than those afflicted with acquired flat foot in order to prevent them from falling into the latter group." This being the case, it is highly important that the routine physical inspection of school children should include examinations for foot defects.

"CLEAN-UP" TOWN CONTEST IN TEXAS

The State Board of Health of Texas has designated the week of April 5-11 as State-wide "clean-up" week, and, in keeping with the program, the Hill County Federation of Women's Clubs has sponsored a "cleanest-town" contest for Hill County for that week. The purpose is to arouse enthusiasm and create a friendly rivalry among the towns of the county in an intensive "clean-up" campaign. Similar campaigns in the past two years, conducted by the federation in cooperation with civic organizations, business men's clubs, Boy Scout organizations, and the school children, have proved very successful. Public markets, dairies, and slaughterhouses were inspected and recommendations for improvements were made where unsatisfactory sanitary conditions were found. The Boy Scouts and the school children took an active part in making a thorough clean-up of rubbish.

The State board of health cooperates in the work and furnishes inspectors free of charge to grade the towns at the end of the contest.

DIGEST OF CURRENT PUBLIC HEALTH COURT DECISIONS

Typhoid fever held compensable under workmen's compensation act.—(Maine Supreme Judicial Court.) Typhoid fever, contracted by an employee of the State highway commission from drinking polluted water furnished him by the commission while in its employ, is a personal injury by accident within the terms of the Maine workmen's compensation act, and therefore compensable. (Brodin's Case, 126 Atl. 829.)

Massachusetts filled-milk act construed.—(United States Circuit Court of Appeals, First Circuit.) The Massachusetts so-called filled-milk act does not proscribe the addition of egg yolk, but of fat or oil, as such, other than milk fat, to any milk, cream, or skimmed

milk for purposes of sale or exchange. The act does not prohibit the manufacture and sale of "Carolene," a compound of skimmed milk and egg yolk subjected to partial evaporation and containing about one-tenth of 1 per cent of fat derived from the egg yolk. (*Mahoney et al. v. Carolene Products Co.*, 2 F. (2d) 366.)

Village board of health milk ordinance held valid and violation thereof restrained.—(New York Supreme Court.) A village board of health milk ordinance, which, among other things, designates the various grades which may be sold and the requirements for each grade, and which requires a permit to sell at retail, requires the bottling of all milk, and requires that certified and raw milk of all grades shall come from tuberculin-tested cows, is valid and the village is entitled to an injunction to restrain its violation. (*Village of Herkimer v. Potter*, 207 N. Y. S. 35.)

Right to compel issuance of permit by city board of health denied.—(New Jersey Supreme Court.) A writ of mandamus, to compel a city board of health and city health officer to issue a permit to engage in the business of preparing live fowl for sale or selling live fowl or slaughtering poultry upon the payment of the required fee, was denied where a city ordinance provided that "such permit *may* be issued" by the board of health, because such board had a discretion in the matter of issuing or refusing permits. (*Doben v. Board of Health of City of Paterson et al.*, 127 Atl. 38.)

Piggery held not to be a public nuisance.—(Michigan Supreme Court.) A piggery, where garbage collected from the city of Kalamazoo was disposed of by feeding to hogs, was held not to be a public nuisance, even though there were offensive odors from it, particularly in hot weather, where it was quite isolated and passers-by on the highway could not see it and where there were only a very few houses within half a mile of it.

The statutory authority of a township board to assign places for conducting offensive trades is not ground for injunctive relief against a piggery not on an appointed place where the board has taken no action to assign places for conducting piggeries. (*Township of Kalamazoo et al. v. Kalamazoo Garbage Co.*, 200 N. W. 953.)

DEATHS DURING WEEK ENDED MARCH 14, 1925

Summary of information received by telegraph from industrial insurance companies for week ended March 14, 1925, and corresponding week of 1924. (From the Weekly Health Index, March 17, 1925, issued by the Bureau of the Census, Department of Commerce)

	Week ended Mar. 14, 1925	Corresponding week, 1924
Policies in force.....	58, 976, 770	55, 275, 589
Number of death claims.....	12, 722	11, 662
Death claims per 1,000 policies in force, annual rate.....	11. 2	11. 0

Deaths from all causes in certain large cities of the United States during the week ended March 14, 1925, infant mortality, annual death rate, and comparison with corresponding week of 1924. (From the Weekly Health Index, March 17, 1925, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Mar. 14, 1925		Annual death rate per 1,000 corresponding week, 1924	Deaths under 1 year		Infant mortality rate, week ended Mar. 14, 1925 ²
	Total deaths	Death rate ¹		Week ended Mar. 14, 1925	Corresponding week, 1924	
Total (64 cities).....	7,865	14.9	14.4	955	964	
Akron.....	62			10	6	110
Albany ⁴	40	17.4	17.6	6	2	133
Atlanta.....	79	17.7	20.6	8	16	
Baltimore ⁴	260	17.0	15.3	26	28	76
Birmingham.....	85	21.5	17.4	9	17	
Boston.....	259	17.2	15.5	29	30	77
Bridgeport.....	41			5	8	79
Buffalo.....	155	14.6	12.4	26	14	106
Cambridge.....	26	12.1	14.9	3	3	52
Camden.....	39	15.8	16.1	6	1	98
Chicago ⁴	816	14.2	12.3	116	116	103
Cincinnati.....	127	16.2	16.9	12	21	71
Cleveland.....	226	12.6	11.9	40	43	99
Columbus.....	93	17.7	15.6	8	5	75
Dallas.....	43	11.6	13.0	8	12	
Denver.....	88			4	13	
Des Moines.....	38	13.3	12.6	5	5	86
Detroit.....	299			57	52	96
Duluth.....	25	12.3	10.1	3	4	63
Erie.....	29			9	5	176
Fall River ⁴	40	17.2	17.2	12	11	173
Flint.....	18			7	9	115
Fort Worth.....	33	11.3	10.2	3	2	
Grand Rapids.....	36	12.5	10.5	1	5	16
Houston.....	48			8	3	
Indianapolis.....	122	17.7	15.3	15	13	103
Jacksonville, Fla.....	35	17.4	20.4	4	6	89
Jersey City.....	75	12.4	16.5	5	12	35
Kansas City, Kans.....	35	14.7	14.1	6	4	127
Kansas City, Mo.....	140	19.9	14.1	24	15	
Los Angeles.....	230			21	22	58
Louisville.....	93	18.7	14.9	8	7	70
Lowell.....	43	19.3	15.3	7	7	122
Lynn.....	20	10.0	10.6	1	5	27
Memphis.....	69	20.6	18.8	7	13	
Milwaukee.....	113	11.7	12.2	16	23	73
Minneapolis.....	113	13.8	10.7	20	7	107
Nashville ⁴	68	28.5	27.5	9	7	
New Bedford.....	40	15.4	13.0	8	8	133
New Haven.....	40	11.7	18.7	5	6	65
New Orleans.....	179	22.5	21.0	20	14	
New York.....	1,608	13.7	14.0	176	199	70
Bronx Borough.....	193	11.2	12.8	17	22	59
Brooklyn Borough.....	524	12.2	12.8	57	68	60
Manhattan Borough.....	704	16.3	16.6	80	97	80
Queens Borough.....	133	12.1	10.1	18	9	89
Richmond Borough.....	54	21.0	14.0	4	3	72
Newark, N. J.....	108	12.4	12.9	6	9	27
Norfolk.....	39	12.0	12.1	7	3	124
Oakland.....	60	12.3	13.9	9	6	105
Oklahoma City.....	28	13.7	9.5	3	1	
Omaha.....	48	11.8	14.0	5	8	48
Paterson.....	37	13.6	11.1	7	3	117
Philadelphia.....	613	16.1	14.1	70	76	88
Pittsburgh.....	306	25.3	21.3	51	34	179
Portland, Oreg.....	64	11.8	12.6	4	6	41
Providence.....	64	13.6	19.3	14	13	112
Richmond.....	56	15.7	11.9	5	6	61
Rochester.....	72	11.3		7		55
St. Louis.....	259	16.4	15.8	20	21	
St. Paul.....	55	11.7	14.5	5	3	43
Salt Lake City ⁴	34	13.5	15.8	8	3	63
San Antonio.....	63	16.6	17.7	4	15	

¹ Annual rate per 1,000 population.

² Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1924. Cities left blank are not in the registration area for births.

³ Data for 63 cities.

⁴ Deaths for week ended Friday, March 13, 1925.

Deaths from all causes in certain large cities of the United States during the week ended March 14, 1925, infant mortality, annual death rate, and comparison with corresponding week of 1924. (From the Weekly Health Index, March 17, 1925, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Mar. 14, 1925		Annual death rate per 1,000 corresponding week, 1924	Deaths under 1 year		Infant mortality rate, week ended Mar. 14, 1925
	Total deaths	Death rate		Week ended Mar. 14, 1925	Corresponding week, 1924	
San Francisco.....	147	13.7	14.3	10	16	53
Schenectady.....	28	14.3	15.1	4	1	113
Seattle.....	72			3	4	31
Somerville.....	34	17.4	10.9	4	1	107
Spokane.....	36			5	4	109
Springfield, Mass.....	37	12.6	16.5	3	4	45
Syracuse.....	45	12.2	16.1	11	7	138
Tacoma.....	13	6.5	15.7	0	4	0
Toledo.....	84	15.2	12.5	11	12	100
Trenton.....	42	16.6	20.9	6	8	97
Utica.....	28	13.6	17.3	5	2	103
Washington, D. C.....	136	14.2	16.8	12	6	67
Waterbury.....	24			6	5	133
Wilmington, Del.....	34	14.5	12.2	4	3	91
Worcester.....	67	17.6	12.5	4	4	46
Yonkers.....	20	9.3	10.5	3	3	66
Youngstown.....	30	9.8	12.8	3	5	38

PREVALENCE OF DISEASE

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

UNITED STATES

CURRENT WEEKLY STATE REPORTS

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

Reports for Week Ended March 21, 1925

ALABAMA		Cases	ARKANSAS—continued		Cases
Cerebrospinal meningitis.....		3	Mumps.....		44
Chicken pox.....		67	Pellagra.....		18
Diphtheria.....		12	Scarlet fever.....		10
Dysentery.....		2	Smallpox.....		21
Influenza.....		657	Trachoma.....		6
Lethargic encephalitis.....		1	Tuberculosis.....		13
Malaria.....		17	Typhoid fever.....		13
Measles.....		10	Whooping cough.....		33
Mumps.....		60			
Ophthalmia neonatorum.....		1	CALIFORNIA		
Pellagra.....		10	Cerebrospinal meningitis:		
Pneumonia.....		236	Los Angeles.....		1
Poliomyelitis.....		2	Oakland.....		1
Scarlet fever.....		32	Diphtheria.....		143
Smallpox.....		169	Influenza.....		156
Tetanus.....		4	Jaundice (epidemic)—San Francisco.....		3
Tuberculosis.....		104	Lethargic encephalitis:		
Typhoid fever.....		12	San Diego.....		1
Whooping cough.....		20	San Francisco.....		1
			Measles.....		114
ARIZONA			Poliomyelitis:		
Cerebrospinal meningitis.....		1	Alameda.....		1
Chicken pox.....		10	Oakland.....		1
Diphtheria.....		7	Scarlet fever.....		148
Influenza.....		150	Smallpox:		
Leprosy.....		1	Huntington Park.....		8
Measles.....		28	Los Angeles.....		34
Mumps.....		15	Los Angeles County.....		15
Scarlet fever.....		11	Oakland.....		10
Trachoma.....		1	Ojai.....		12
Tuberculosis.....		82	San Diego.....		17
Whooping cough.....		8	San Francisco.....		15
			San Jose.....		12
ARKANSAS			Scattering.....		40
Cerebrospinal meningitis.....		1	Typhoid fever.....		6
Chicken pox.....		34			
Diphtheria.....		3	COLORADO		
Hookworm disease.....		2	(Exclusive of Denver)		
Influenza.....		460	Chicken pox.....		8
Malaria.....		33	Diphtheria.....		12
Measles.....		40	Influenza.....		13

COLORADO—continued

	Cases
Measles.....	1
Mumps.....	10
Pneumonia.....	3
Scarlet fever.....	12
Smallpox.....	1
Tuberculosis.....	54
Typhoid fever.....	3
Whooping cough.....	4

CONNECTICUT

Cerebrospinal meningitis.....	2
Chicken pox.....	46
Diphtheria.....	49
Dysentery (bacillary).....	1
German measles.....	33
Influenza.....	21
Measles.....	167
Mumps.....	22
Pneumonia (all forms).....	90
Scarlet fever.....	138
Septic sore throat.....	5
Tuberculosis (all forms).....	37
Whooping cough.....	54

DELAWARE

Chicken pox.....	1
Diphtheria.....	2
Measles.....	3
Mumps.....	4
Pneumonia.....	4
Scarlet fever.....	4
Tuberculosis.....	2
Whooping cough.....	1

DISTRICT OF COLUMBIA

Chicken pox.....	10
Diphtheria.....	14
Influenza.....	2
Measles.....	38
Pneumonia.....	52
Poliomyelitis.....	1
Scarlet fever.....	27
Tuberculosis.....	25
Typhoid fever.....	3
Whooping cough.....	18

FLORIDA

Chicken pox.....	8
Dengue.....	1
Diphtheria.....	7
Influenza.....	53
Lethargic encephalitis.....	3
Malaria.....	14
Measles.....	4
Mumps.....	58
Pneumonia.....	106
Rabies.....	1
Scarlet fever.....	8
Smallpox.....	4
Tetanus.....	3
Tuberculosis.....	79
Typhoid fever.....	9
Whooping cough.....	14

GEORGIA

Cerebrospinal meningitis.....	1
Chicken pox.....	46
Diphtheria.....	16
Dysentery (amebic).....	4
Hookworm disease.....	6

GEORGIA—continued

	Cases
Influenza.....	1,292
Lethargic encephalitis.....	1
Malaria.....	32
Measles.....	42
Mumps.....	111
Pellagra.....	7
Pneumonia.....	176
Scarlet fever.....	12
Septic sore throat.....	19
Smallpox.....	18
Tetanus.....	1
Trachoma.....	9
Tuberculosis.....	23
Typhoid fever.....	7
Whooping cough.....	66

ILLINOIS

Cerebrospinal meningitis:	
Cook County.....	2
Sangamon County.....	1
Diphtheria:	
Cook County.....	70
Scattering.....	40
Influenza.....	382
Lethargic encephalitis—Cook County.....	3
Measles.....	1,075
Pneumonia.....	448
Scarlet fever:	
Cook County.....	349
Kane County.....	14
Kankakee County.....	15
Knox County.....	12
Lake County.....	9
Marion County.....	18
Peoria County.....	10
St. Clair County.....	20
Will County.....	9
Scattering.....	93
Smallpox:	
St. Clair County.....	15
Scattering.....	24
Tuberculosis.....	238
Typhoid fever.....	5
Whooping cough.....	267

INDIANA

Chicken pox.....	86
Diphtheria.....	26
Influenza.....	155
Measles.....	97
Mumps.....	10
Pneumonia.....	27
Poliomyelitis—Cass County.....	1
Scarlet fever:	
Cass County.....	10
Delaware County.....	21
Elkhart County.....	13
Huntington County.....	24
Lake County.....	11
St. Joseph County.....	75
Vigo County.....	15
Scattering.....	90
Smallpox:	
Cass County.....	16
Marion County.....	12
Vigo County.....	8
Scattering.....	31

INDIANA—continued		MARYLAND—continued	
	Cases		Cases
Tuberculosis.....	25	Typhoid fever.....	5
Typhoid fever.....	5	Vincent's angina.....	1
Whooping cough.....	15	Whooping cough.....	116
IOWA		MASSACHUSETTS	
Diphtheria.....	14	Anthrax.....	1
Scarlet fever.....	24	Cerebrospinal meningitis.....	1
Smallpox.....	17	Chicken pox.....	170
Typhoid fever.....	1	Conjunctivitis (suppurative).....	6
KANSAS		Diphtheria.....	73
Chicken pox.....	131	German measles.....	233
Diphtheria.....	36	Influenza.....	143
German measles.....	6	Lethargic encephalitis.....	2
Influenza.....	180	Measles.....	597
Measles.....	4	Mumps.....	100
Mumps.....	423	Ophthalmia neonatorum.....	20
Pneumonia.....	78	Pneumonia (lobar).....	186
Poliomyelitis.....	1	Scarlet fever.....	308
Scarlet fever.....	143	Septic sore throat.....	5
Smallpox.....	9	Trachoma.....	4
Tetanus.....	1	Trichinosis.....	1
Tuberculosis.....	95	Tuberculosis (all forms).....	162
Typhoid fever.....	2	Typhoid fever.....	11
Whooping cough.....	43	Whooping cough.....	157
LOUISIANA		MICHIGAN	
Diphtheria.....	9	Diphtheria.....	66
Hookworm disease.....	6	Measles.....	168
Influenza.....	272	Pneumonia.....	172
Malaria.....	5	Scarlet fever.....	382
Pneumonia.....	56	Smallpox.....	25
Scarlet fever.....	19	Tuberculosis.....	218
Smallpox.....	28	Typhoid fever.....	5
Tuberculosis.....	43	Whooping cough.....	90
Typhoid fever.....	11	MINNESOTA	
Whooping cough.....	8	Chicken pox.....	97
MAINE		Diphtheria.....	48
Chicken pox.....	43	Influenza.....	3
Conjunctivitis.....	1	Lethargic encephalitis.....	1
Diphtheria.....	4	Measles.....	35
German measles.....	4	Pneumonia.....	9
Influenza.....	51	Scarlet fever.....	240
Measles.....	14	Smallpox.....	31
Mumps.....	215	Tuberculosis.....	87
Pneumonia.....	18	Typhoid fever.....	4
Scarlet fever.....	32	Whooping cough.....	19
Tuberculosis.....	5	MISSISSIPPI	
Typhoid fever.....	3	Diphtheria.....	10
Vincent's angina.....	2	Influenza.....	136
Whooping cough.....	7	Poliomyelitis.....	1
MARYLAND ¹		Scarlet fever.....	2
Chicken pox.....	82	Smallpox.....	15
Diphtheria.....	41	Typhoid fever.....	6
Dysentery.....	4	MISSOURI	
German measles.....	8	(Exclusive of Kansas City)	
Influenza.....	64	Chicken pox.....	66
Lethargic encephalitis.....	1	Diphtheria.....	89
Measles.....	47	Influenza.....	101
Mumps.....	68	Measles.....	17
Pneumonia (all forms).....	172	Mumps.....	164
Scarlet fever.....	71	Ophthalmia neonatorum.....	1
Septic sore throat.....	4	Pneumonia.....	39
Smallpox.....	1	Scarlet fever.....	276
Tuberculosis.....	77		

¹ Week ended Friday.

MISSOURI—continued		NEW YORK—continued	
	Cases		Cases
Smallpox.....	27	Poliomyelitis.....	2
Tetanus.....	1	Scarlet fever.....	344
Trachoma.....	3	Smallpox.....	5
Tuberculosis.....	42	Typhoid fever.....	14
Typhoid fever.....	3	Whooping cough.....	201
Whooping cough.....	33		
MONTANA		NORTH CAROLINA	
Chicken pox.....	22	Chicken pox.....	123
Diphtheria.....	3	Diphtheria.....	29
German measles.....	83	Measles.....	58
Measles.....	23	Scarlet fever.....	21
Mumps.....	39	Septic sore throat.....	2
Scarlet fever.....	32	Smallpox.....	67
Smallpox.....	11	Typhoid fever.....	1
Tuberculosis.....	2	Whooping cough.....	135
Whooping cough.....	8		
NEBRASKA		OKLAHOMA	
Cerebrospinal meningitis.....	1	(Exclusive of Oklahoma City and Tulsa)	
Chicken pox.....	17	Cerebrospinal meningitis—Haskell County.....	1
Diphtheria.....	4	Chicken pox.....	17
Influenza.....	27	Diphtheria.....	8
Measles.....	1	Influenza.....	288
Mumps.....	24	Mumps.....	23
Pneumonia.....	1	Pneumonia.....	111
Poliomyelitis.....	1	Scarlet fever.....	23
Scarlet fever.....	22	Smallpox:	
Smallpox.....	26	Custer County.....	23
Tuberculosis.....	1	Scattering.....	10
Whooping cough.....	3	Typhoid fever.....	7
		Whooping cough.....	20
NEW JERSEY		OREGON	
Cerebrospinal meningitis.....	2	Chicken pox.....	16
Chicken pox.....	125	Diphtheria:	
Diphtheria.....	102	Portland.....	11
Influenza.....	44	Scattering.....	9
Measles.....	224	Influenza.....	88
Pneumonia.....	154	Measles.....	4
Scarlet fever.....	320	Mumps.....	31
Smallpox.....	1	Ophthalmia neonatorum.....	1
Typhoid fever.....	10	Pneumonia.....	15
Whooping cough.....	295	Scarlet fever.....	18
		Smallpox:	
NEW MEXICO		Portland.....	11
Chicken pox.....	14	Scattering.....	12
Conjunctivitis.....	1	Tuberculosis.....	18
Diphtheria.....	3	Typhoid fever.....	4
Influenza.....	7	Whooping cough.....	24
Lethargic encephalitis.....	1		
Measles.....	23	SOUTH DAKOTA	
Mumps.....	10	Chicken pox.....	6
Pneumonia.....	6	Diphtheria.....	10
Scarlet fever.....	13	Measles.....	5
Smallpox.....	1	Pneumonia.....	10
Tuberculosis.....	40	Scarlet fever.....	48
Typhoid fever.....	1	Smallpox.....	14
Whooping cough.....	10	Tuberculosis.....	1
		Typhoid fever.....	5
NEW YORK		Whooping cough.....	1
(Exclusive of New York City)		TEXAS	
Cerebrospinal meningitis.....	3	Cerebrospinal meningitis.....	2
Diphtheria.....	93	Chicken pox.....	55
Influenza.....	213	Diphtheria.....	37
Lethargic encephalitis.....	1	Dysentery (epidemic).....	4
Measles.....	506	Influenza.....	406
Pneumonia.....	457	Measles.....	96
		Mumps.....	89

TEXAS—continued

	Cases
Pellagra.....	3
Pneumonia.....	88
Rabies in man.....	1
Scarlet fever.....	16
Smallpox.....	94
Tetanus.....	1
Tuberculosis.....	19
Typhoid fever.....	8
Whooping cough.....	68

VERMONT

Chicken pox.....	27
Diphtheria.....	3
Measles.....	28
Mumps.....	66
Scarlet fever.....	19
Whooping cough.....	12

WASHINGTON

Chicken pox.....	112
Diphtheria.....	45
German measles.....	90
Measles.....	3
Mumps.....	185
Pneumonia.....	1
Polio-myelitis—Aberdeen.....	1
Scarlet fever.....	44
Smallpox.....	52
Trichinosis.....	8
Tuberculosis.....	29
Typhoid fever.....	4
Whooping cough.....	68

WEST VIRGINIA

Diphtheria.....	9
Scarlet fever.....	14
Smallpox.....	11
Typhoid fever.....	5

WISCONSIN

	Cases
Milwaukee:	
Chicken pox.....	51
Diphtheria.....	11
German measles.....	659
Influenza.....	1
Measles.....	421
Mumps.....	127
Ophthalmia neonatorum.....	1
Pneumonia.....	12
Scarlet fever.....	13
Smallpox.....	15
Trachoma.....	1
Tuberculosis.....	11
Whooping cough.....	18
Scattering:	
Chicken pox.....	203
Diphtheria.....	27
German measles.....	96
Influenza.....	110
Measles.....	320
Mumps.....	353
Pneumonia.....	44
Scarlet fever.....	124
Smallpox.....	37
Tuberculosis.....	16
Typhoid fever.....	2
Whooping cough.....	73

WYOMING

Chicken pox.....	17
Diphtheria.....	1
Influenza.....	1
Measles.....	3
Mumps.....	12
Scarlet fever.....	11
Trachoma.....	3
Tuberculosis.....	2
Typhoid fever.....	6

Reports for Week Ended March 14, 1925

DISTRICT OF COLUMBIA

	Cases
Cerebrospinal meningitis.....	1
Chicken pox.....	20
Diphtheria.....	7
Influenza.....	2
Lethargic encephalitis.....	1
Measles.....	22
Pneumonia.....	38
Scarlet fever.....	42
Smallpox.....	1
Tuberculosis.....	16
Typhoid fever.....	1
Whooping cough.....	20

FLORIDA

Diphtheria.....	9
Influenza.....	10
Malaria.....	5
Pneumonia.....	7

FLORIDA—continued

	Cases
Scarlet fever.....	3
Smallpox.....	4
Typhoid fever.....	12

NORTH DAKOTA

Cerebrospinal meningitis.....	1
Chicken pox.....	33
Diphtheria.....	5
German measles.....	2
Measles.....	2
Mumps.....	21
Pneumonia.....	10
Scarlet fever.....	90
Smallpox.....	10
Trachoma.....	1
Tuberculosis.....	2
Whooping cough.....	5

SUMMARY OF MONTHLY REPORTS FROM STATES

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

State	Cerebro-spinal meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Polio-myelitis	Scarlet fever	Small-pox	Typhoid fever
<i>December, 1924</i>										
California.....	8	952	91	4	185	5	36	737	473	103
<i>January, 1925</i>										
Florida.....		34	113	28	12	1	1	15	8	41
Idaho.....		23	5					31		7
Louisiana.....	0	94	279	18	9	5	2	62	110	75
Maryland.....	2	164	401	1	262	0	1	445		27
Minnesota.....	1	395	7		134		1	998	201	29
Missouri.....	2	325	353	12	63	0	0	1,557	94	9
New Jersey.....	4	410	157	0	614		2	1,281	19	26
New York.....	16	1,220	791	3	1,577		8	2,870	54	147
Oklahoma.....	6	104	2,648	42	42	11	3	155	179	50
Rhode Island.....	0	73	6	7		0	0	140		1
West Virginia.....	1	92	307		149		1	133	123	92
Wisconsin.....	6	165	206	0	1,886	0	6	661	217	8

RECIPROCAL NOTIFICATIONS, FEBRUARY, 1925

Notifications regarding communicable diseases sent during the month of February, 1925, to other State health departments by departments of health of certain States

Referred by—	Cerebro-spinal meningitis	Diphtheria	Scarlet fever	Small-pox	Tuberculosis	Typhoid fever
Illinois.....					4	
Minnesota.....	1		3	1	39	1
New York.....		1	6			1
Ohio.....						2

PLAGUE-ERADICATIVE MEASURES IN THE UNITED STATES

The following items were taken from the reports of plague-eradivative measures from the cities named for the week ended March 7, 1925:

Los Angeles, Calif.

Week ended Mar. 7, 1925:	
Number of rats examined.....	3,719
Number of rats found to be plague infected.....	12
Number of squirrels examined.....	861
Number of squirrels found to be plague infected.....	1
Totals to Mar. 7, 1925:	
Number of rats examined.....	59,815
Number of rats found to be plague infected.....	126
Number of squirrels examined.....	3,870
Number of squirrels found to be plague infected.....	3

Oakland, Calif.

Week ended Mar. 7, 1925:	
Number of rats examined.....	2,871
Number of rats found to be plague infected.....	2

Totals to Mar. 7, 1925:

Number of rats examined	20, 821
Number of rats found to be plague infected	21

New Orleans, La.

Week ended Mar. 7, 1925:

Number of vessels inspected	446
Number of inspections made	1, 110
Number of vessels fumigated with cyanide gas	35
Number of rodents examined for plague	4, 613
Number of rodents found to be plague infected	0

Totals to Mar. 7, 1925:

Number of rodents examined for plague	51, 023
Number of rodents found to be plague infected	12

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

Diphtheria.—For the week ended March 7, 1925, 35 States reported 1,455 cases of diphtheria. For the week ended March 8, 1924, the same States reported 1,848 cases of this disease. One hundred and five cities, situated in all parts of the country and having an aggregate population of approximately 28,900,000, reported 897 cases of diphtheria for the week ended March 7, 1925. Last year for the corresponding week they reported 1,028 cases. The estimated expectancy for these cities was 1,036 cases.

Measles.—Twenty-six States reported 4,267 cases of measles for the week ended March 7, 1925, and 18,351 cases of this disease for the week ended March 8, 1924. One hundred and five cities reported 2,316 cases of measles for the week this year, and 7,110 cases last year.

Scarlet fever.—Scarlet fever was reported for the week as follows: Thirty-five States—this year, 4,528 cases; last year, 4,448 cases; 105 cities—this year, 2,191 cases; last year, 1,934 cases; estimated expectancy, 1,073 cases.

Smallpox.—For the week ended March 7, 1925, 35 States reported 984 cases of smallpox. Last year for the corresponding week they reported 1,460 cases. One hundred and five cities reported smallpox for the week as follows: 1925, 345 cases; 1924, 488 cases; estimated expectancy, 105 cases. These cities reported 13 deaths from smallpox for the week this year, of which 4 occurred in Houston, Tex., 3 in Detroit, Mich., and 3 in Minneapolis, Minn.

Typhoid fever.—Two hundred and one cases of typhoid fever were reported for the week ended March 7, 1925, by 34 States. For the corresponding week of 1924 the same States reported 227 cases. One hundred and five cities reported 62 cases of typhoid fever for the week this year and 46 cases for the week last year. The estimated expectancy for these cities was 43 cases.

Influenza and pneumonia.—Deaths from influenza and pneumonia (combined) were reported for the week by 105 cities as follows: 1925, 1,278 deaths; 1924, 1,336 deaths.

City reports for week ended March 7, 1925

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 nonepidemic 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	Population July 1, 1923, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine:									
Portland.....	73, 129	8	2	2	0	0	0	47	0
New Hampshire:									
Concord.....	22, 408	0	0	0	0	0	0	0	0
Manchester.....	81, 383	3	4	3	3	0	0	2	0
Vermont:									
Barre.....	¹ 10, 008	1	1	0	0	0	0	11	0
Burlington.....	23, 613	6	0	1	0	0	1	11	1
Massachusetts:									
Boston.....	770, 400	52	62	55	16	5	225	9	41
Fall River.....	120, 912	1	5	2	1	0	0	0	6
Springfield.....	144, 227	2	4	2	1	1	23	3	2
Worcester.....	191, 927	11	4	4	2	0	3	0	2
Rhode Island:									
Pawtucket.....	68, 799	6	2	2	0	0	2	0	4
Providence.....	242, 378	0	12	8	0	0	2	0	14
Connecticut:									
Bridgeport.....	¹ 143, 555	0	8	7	1	0	0	0	6
Hartford.....	¹ 138, 036	2	9	12	0	0	1	4	13
New Haven.....	172, 967	18	3	0	1	1	8	0	3
MIDDLE ATLANTIC									
New York:									
Buffalo.....	536, 718	14	19	4	3	1	134	11	17
New York.....	5, 927, 625	160	223	191	109	15	72	21	233
Rochester.....	317, 867	6	8	0	0	0	23	34	8
Syracuse.....	184, 511	7	6	2	1	0	5	15	9
New Jersey:									
Camden.....	124, 157	10	3	2	0	0	18	0	9
Newark.....	438, 699	29	17	6	15	0	56	12	17
Trenton.....	127, 390	1	6	2	4	1	10	0	4
Pennsylvania:									
Philadelphia.....	1, 922, 788	61	78	106	9	233	27	79	79
Pittsburgh.....	613, 442	46	23	15	4	273	18	38	38
Reading.....	110, 917	11	3	2	0	0	22	23	1
Scranton.....	140, 636	1	4	4	0	0	0	0	7
EAST NORTH CENTRAL									
Ohio:									
Cincinnati.....	406, 312	19	10	12	2	0	10	13	13
Cleveland.....	888, 519	76	30	20	17	7	3	4	22
Columbus.....	261, 082	10	4	2	0	1	1	4	12
Toledo.....	268, 338	15	5	5	3	43	1	8	8
Indiana:									
Fort Wayne.....	93, 573	6	4	4	0	4	0	0	1
Indianapolis.....	342, 718	15	11	6	3	3	9	29	29
South Bend.....	76, 709	5	1	1	0	0	9	0	4
Terre Haute.....	68, 939	2	1	0	0	1	0	1	7

¹ Population Jan. 1, 1920.

City reports for week ended March 7, 1925—Continued

Division, State, and city	Population July 1, 1923, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued									
Illinois:									
Chicago	2,866,121	94	116	61	33	14	490	17	117
Cicero	55,968	2	1	0	0	0	4	1	2
Springfield	61,833	6	1	0	0	0	1	48	2
Michigan:									
Detroit	995,668	54	58	30	7	6	12	28	45
Flint	117,968	3	6	1	0	0	1	2	3
Grand Rapids	145,947	12	3	1	2	2	31	0	2
Wisconsin:									
Madison	42,519	6	1	0	0	0	2	155	1
Milwaukee	484,595	47	15	15	0	0	487	65	0
Racine	64,393	5	2	1	0	0	16	10	3
Superior	139,671	7	1	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Duluth	106,289	10	2	0	0	0	1	0	2
Minneapolis	409,125	83	16	39	0	0	6	5	12
St. Paul	241,891	26	12	13	0	0	18	43	10
Iowa:									
Davenport	61,262	0	1	0	0	0	2	0	0
Des Moines	140,923	0	3	3	0	0	14	0	0
Sioux City	79,682	8	2	0	0	0	1	33	0
Waterloo	39,667	2	0	0	0	0	2	1	0
Missouri:									
Kansas City	351,819	10	10	9	14	15	0	30	19
St. Joseph	78,232	1	2	2	0	0	0	0	4
St. Louis	803,853	31	44	57	0	1	5	10	0
North Dakota:									
Fargo	24,841	0	0	0	0	0	0	0	1
Grand Forks	14,547	2	0	0	0	0	0	0	0
South Dakota:									
Aberdeen	15,829	0	0	0	0	0	1	0	0
Sioux Falls	29,206	1	1	2	0	0	0	0	0
Nebraska:									
Lincoln	58,761	26	1	6	0	1	0	4	2
Omaha	204,382	4	5	9	0	0	0	0	10
Kansas:									
Topeka	52,555	9	2	1	0	0	0	165	3
Wichita	79,261	10	1	4	0	0	0	4	3
SOUTH ATLANTIC									
Delaware:									
Wilmington	117,728	1	2	3	0	0	3	0	2
Maryland:									
Baltimore	773,580	60	24	15	25	2	7	41	48
Cumberland	32,361	0	1	0	1	0	0	0	0
Frederick	11,301	0	1	0	3	0	2	0	1
District of Columbia:									
Washington	1,437,571	30	11	15	0	3	13	0	22
Virginia:									
Lynchburg	30,277	2	1	1	0	0	1	35	2
Norfolk	159,089	23	1	0	0	0	0	111	5
Richmond	181,044	9	2	8	0	3	6	1	6
Roanoke	55,502	3	1	1	0	0	1	5	0
West Virginia:									
Charleston	45,597	0	1	0	0	0	11	0	1
Huntington	57,918	0	1	0	0	0	0	0	0
Wheeling	156,208	4	1	1	0	0	0	2	2
North Carolina:									
Raleigh	29,171	5	1	0	0	0	3	0	2
Wilmington	35,719	0	0	0	0	0	0	3	3
Winston-Salem	56,230	2	0	1	0	1	1	0	4
South Carolina:									
Charleston	71,245	1	1	1	0	0	0	0	4
Columbia	39,688	0	1	1	0	0	0	4	5
Greenville	25,789	0	1	0	0	1	0	0	3
Georgia:									
Atlanta	222,963	0	2	0	9	3	1	0	12
Brunswick	15,937	0	0	0	6	0	0	0	0
Savannah	89,448	2	1	1	35	11	0	12	6

1 Population Jan. 1, 1920.

City reports for week ended March 7, 1925—Continued

Division, State, and city	Population July 1, 1923, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC—CON.									
Florida:									
St. Petersburg.....	24,403	0	0	0	0	0	0	0	1
Tampa.....	56,050	3	2	3	2	0	0	3	3
EAST SOUTH CENTRAL									
Kentucky:									
Covington.....	57,877	0	1	2	0	0	0	3	2
Lexington.....	43,673	0	0	0	0	0	0	0	1
Louisville.....	257,671	1	5	1	2	0	1	0	13
Tennessee:									
Memphis.....	170,067	5	5	4	5	2	2	2	13
Nashville.....	121,128	0	1	2	0	1	11	2	5
Alabama:									
Birmingham.....	195,901	6	2	1	9	10	1	3	9
Mobile.....	63,858	0	1	0	5	2	0	1	5
Montgomery.....	45,383	3	0	1	3	0	0	2	0
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith.....	30,635	9	1	0	0	0	0	10	0
Little Rock.....	70,916	0	0	0	9	0	2	0	3
Louisiana:									
New Orleans.....	404,575	8	12	11	51	16	1	0	16
Shreveport.....	54,590	7	0	1	0	0	1	0	7
Oklahoma:									
Oklahoma.....	101,150	0	1	3	15	2	0	3	3
Texas:									
Dallas.....	177,274	23	4	8	51	7	0	2	5
Galveston.....	46,877	2	1	1	0	0	0	0	1
Houston.....	154,970	2	1	7	0	2	0	1	5
San Antonio.....	184,727	0	3	3	3	3	1	1	8
MOUNTAIN									
Montana:									
Billings.....	16,927	1	0	0	0	0	0	6	3
Great Falls.....	27,787	2	1	2	0	0	0	2	0
Helena.....	12,037	0	0	0	0	0	0	0	1
Missoula.....	12,668	0	0	3	0	0	0	1	2
Idaho:									
Boise.....	22,806	1	0	0	0	0	0	0	0
Colorado:									
Denver.....	272,031	26	9	4	2	2	2	117	6
Pueblo.....	43,519	10	2	0	0	0	0	15	2
New Mexico:									
Albuquerque.....	16,648	2	2	0	2	0	0	3	0
Utah:									
Salt Lake City.....	126,241	20	2	0	0	0	1	49	0
Nevada:									
Reno.....	12,429	0	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle.....	1,315,685	57	6	8	0	0	3	49	0
Spokane.....	104,573	14	2	28	0	0	0	0	0
Tacoma.....	101,731	1	1	0	1	0	0	2	1
Oregon:									
Portland.....	273,621	7	4	11	0	0	2	3	5
California:									
Los Angeles.....	666,853	71	33	29	34	4	21	30	27
Sacramento.....	69,950	1	1	2	1	1	1	1	3
San Francisco.....	539,038	29	27	14	14	2	12	56	3

¹ Population Jan. 1, 1920.

City reports for week ended March 7, 1925—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culosis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine:											
Portland.....	1	2	0	0	0	0	0	0	0	2	10
New Hampshire:											
Concord.....	1	9	0	0	0	0	0	0	0	0	1
Manchester.....	2	14	0	0	0	0	0	0	0	0	19
Vermont:											
Barre.....	1	1	0	0	0	1	0	0	0	0	4
Burlington.....	1	5	0	0	0	1	0	0	0	1	7
Massachusetts:											
Boston.....	55	109	0	0	0	16	2	2	1	61	282
Fall River.....	4	5	0	0	0	3	1	0	0	3	38
Springfield.....	6	26	0	0	0	2	0	0	0	14	28
Worcester.....	10	7	0	0	0	2	1	0	0	4	65
Rhode Island:											
Pawtucket.....	1	3	0	0	0	0	0	0	0	0	23
Providence.....	9	10	0	0	0	2	0	1	0	1	65
Connecticut:											
Bridgeport.....	6	19	0	0	0	1	0	0	1	0	50
Hartford.....	5	11	0	0	0	0	0	0	0	7	51
New Haven.....	6	33	0	0	0	0	0	0	0	14	44
MIDDLE ATLANTIC											
New York:											
Buffalo.....	19	15	0	0	0	11	0	3	1	39	163
New York.....	187	342	0	0	0	110	7	13	2	117	1,531
Rochester.....	12	59	0	0	0	3	1	1	0	5	83
Syracuse.....	16	3	0	0	0	6	0	0	0	2	55
New Jersey:											
Camden.....	3	19	0	0	1	1	0	0	0	0	38
Newark.....	24	47	0	0	0	8	0	1	0	77	128
Trenton.....	4	0	0	0	0	1	0	0	0	0	44
Pennsylvania:											
Philadelphia.....	63	157	1	2	0	37	3	1	0	78	498
Pittsburgh.....	19	81	0	0	0	6	0	0	0	5	167
Reading.....	2	12	0	0	0	2	0	0	0	4	28
Scranton.....	4	1	0	0	0	2	0	0	0	6	0
EAST NORTH CENTRAL											
Ohio:											
Cincinnati.....	11	18	1	2	0	12	2	1	0	1	135
Cleveland.....	36	26	1	0	0	17	2	2	0	25	214
Columbus.....	8	11	1	15	0	3	0	2	0	1	82
Toledo.....	16	30	4	0	0	7	0	0	0	39	83
Indiana:											
Fort Wayne.....	3	8	1	0	0	0	1	0	0	2	22
Indianapolis.....	10	3	3	14	0	9	1	0	0	5	118
South Bend.....	3	8	0	1	0	0	0	0	0	0	16
Terre Haute.....	3	5	0	0	0	1	0	0	0	0	22
Illinois:											
Chicago.....	90	304	3	0	0	62	3	3	1	128	816
Cicero.....	2	5	0	0	0	0	0	0	0	2	6
Springfield.....	1	4	1	0	0	0	1	1	0	0	20
Michigan:											
Detroit.....	88	103	4	1	3	23	2	0	3	43	322
Flint.....	7	1	1	2	0	2	0	0	0	0	14
Grand Rapids.....	8	57	1	1	0	2	0	1	0	3	39
Wisconsin:											
Madison.....	3	6	0	0	0	1	0	0	0	3	6
Milwaukee.....	36	11	1	12	0	5	1	0	0	41	0
Racine.....	5	1	1	3	0	0	0	1	0	0	12
Superior.....	2	13	4	0	0	3	0	0	0	0	19
WEST NORTH CENTRAL											
Minnesota:											
Duluth.....	4	33	1	0	0	0	0	0	0	0	13
Minneapolis.....	36	61	7	18	3	8	0	0	0	1	127
St. Paul.....	28	33	8	2	0	7	1	1	0	5	74

1 Pulmonary tuberculosis only.

City reports for week ended March 7, 1925—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
WEST NORTH CENTRAL—con.											
Iowa:											
Davenport.....	3	0	2	1	-----	0	0	-----	0	-----	
Des Moines.....	9	9	2	2	-----	0	0	-----	0	-----	
Sioux City.....	2	1	1	0	-----	0	0	-----	0	-----	
Waterloo.....	3	1	0	5	-----	0	0	-----	2	-----	
Missouri:											
Kansas City.....	11	118	2	0	0	13	0	0	0	4	125
St. Joseph.....	2	2	0	0	0	1	0	1	0	0	35
St. Louis.....	29	115	2	9	0	12	1	1	0	3	248
North Dakota:											
Fargo.....	1	0	0	0	0	0	0	0	0	0	2
Grand Forks.....	0	0	0	0	-----	0	0	-----	0	-----	
South Dakota:											
Aberdeen.....	-----	4	-----	0	-----	-----	0	-----	0	-----	
Sioux Falls.....	3	0	0	0	0	0	0	0	0	2	
Nebraska:											
Lincoln.....	4	0	0	0	0	0	0	0	0	9	20
Omaha.....	5	3	2	21	0	0	0	0	0	1	55
Kansas:											
Topeka.....	2	3	0	0	0	1	0	0	0	0	22
Wichita.....	2	4	3	0	0	3	0	0	0	14	34
SOUTH ATLANTIC											
Delaware:											
Wilmington.....	2	3	0	0	0	0	0	0	0	3	34
Maryland:											
Baltimore.....	33	35	1	0	0	23	2	0	0	81	258
Cumberland.....	1	1	0	0	0	1	0	0	0	-----	10
Frederick.....	2	0	0	0	0	0	0	0	0	-----	7
District of Columbia:											
Washington.....	23	29	1	1	0	20	0	1	0	2	179
Virginia:											
Lynchburg.....	0	2	0	0	0	0	0	0	0	16	12
Norfolk.....	2	1	1	0	0	7	0	0	0	7	-----
Richmond.....	3	4	0	0	0	4	0	0	0	0	61
Roanoke.....	1	1	1	0	0	1	0	0	0	0	12
West Virginia:											
Charleston.....	1	0	0	1	0	0	0	0	0	0	17
Huntington.....	0	1	1	0	0	0	0	0	0	0	-----
Wheeling.....	1	3	0	0	0	1	0	0	0	5	27
North Carolina:											
Raleigh.....	1	0	1	1	0	0	0	0	0	0	11
Wilmington.....	0	0	0	3	0	0	0	0	0	3	15
Winston-Salem.....	1	0	1	3	0	1	0	1	0	2	21
South Carolina:											
Charleston.....	0	0	0	0	0	2	1	1	0	0	28
Columbia.....	0	1	1	0	0	1	0	0	0	2	27
Greenville.....	0	0	1	16	0	0	0	0	0	0	10
Georgia:											
Atlanta.....	5	3	3	0	0	2	0	0	0	0	77
Brunswick.....	0	0	0	0	0	0	0	0	0	-----	3
Savannah.....	1	0	0	0	0	5	0	0	0	5	46
Florida:											
St. Petersburg.....	2	0	1	0	0	0	0	0	0	0	9
Tampa.....	0	1	0	0	0	0	2	1	0	0	25
EAST SOUTH CENTRAL											
Kentucky:											
Covington.....	2	1	1	0	0	0	0	0	0	0	24
Lexington.....	0	0	0	0	0	0	0	0	0	0	14
Louisville.....	4	6	1	1	0	1	0	1	0	0	107
Tennessee:											
Memphis.....	3	7	1	5	0	3	1	4	0	-----	71
Nashville.....	2	9	1	4	0	6	1	1	0	0	57
Alabama:											
Birmingham.....	1	8	0	98	1	9	1	0	0	0	65
Mobile.....	1	2	1	0	0	2	0	0	0	0	22
Montgomery.....	0	1	0	6	0	0	0	0	0	0	12

City reports for week ended March 7, 1925—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culosis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths, all causes
	Cases, esti- mated expect- ancy	Cases re- ported	Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith.....	0	0	0	2	0	4	0	0	0	6	
Little Rock.....	1	0	0	0	0		0	0	0	0	
Louisiana:											
New Orleans.....	4	29	3	1	0	14	2	3	0	146	
Shreveport.....		1		1	0	0		1	0	32	
Oklahoma:											
Oklahoma.....	3	5	5	0	0	1	0	0	0	27	
Texas:											
Dallas.....	1	4	6	1	0	2	0	0	0	61	
Galveston.....	1	0	0	2	0	2	1	1	1	13	
Houston.....	1	4	1	9	4	4	0	0	0	53	
San Antonio.....	1	2	1	0	0	16	0	1	0		
MOUNTAIN											
Montana:											
Billings.....	1	2	0	0	0	0	0	0	0	8	
Great Falls.....	1	5	1	2	0	0	0	1	0	3	
Helena.....	0	0	0	0	0	0	0	0	0	10	
Missoula.....	1	1	1	0	0	0	0	0	0	6	
Idaho:											
Boise.....	1	1	1	1	0	0	0	0	0	2	
Colorado:											
Denver.....	12	11	3	0	0	15	0	0	0	76	
Pueblo.....	2	0	1	0	0	0	0	0	1	8	
New Mexico:											
Albuquerque.....	2	0	0	0	0	2	0	0	0	7	
Utah:											
Salt Lake City.....	3	5	2	0	0	1	0	0	0	30	
Nevada:											
Reno.....	0	5	0	2	0	0	0	0	0	3	
PACIFIC											
Washington:											
Seattle.....	9	14	1	23			0	2		32	
Spokane.....	4	2	9	1			0	0		5	
Tacoma.....	2	2	2	1	0	4	0	0	0	29	
Oregon:											
Portland.....	6	5	5	7	0	6	0	0	1	3	
California:											
Los Angeles.....	14	44	2	37	0	32	2	3	0	256	
Sacramento.....	1	0	0	0	0	4	0	0	0	21	
San Francisco.....	18	13	4	9	1	11	1	0	0	126	

City reports for week ended March 7, 1925—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)			Typhus fever	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths	Cases	Deaths
NEW ENGLAND											
Massachusetts:											
Boston.....	1	0	3	0	0	0	0	0	0	0	0
Springfield.....	0	0	1	0	0	0	0	0	0	0	0
MIDDLE ATLANTIC											
New York:											
New York.....	4	3	9	3	0	0	1	2	0	1	0
Pennsylvania:											
Philadelphia.....	0	0	2	3	0	0	0	0	0	0	0
Pittsburgh.....	1	0	0	0	0	0	0	0	0	0	0
EAST NORTH CENTRAL											
Ohio:											
Cincinnati.....	1	0	0	0	0	0	0	0	0	0	0
Cleveland.....	0	0	1	0	0	0	0	0	0	0	0
Indiana:											
Fort Wayne.....	0	0	0	0	0	0	0	1	0	0	0
Illinois:											
Chicago.....	0	0	3	0	0	0	0	0	0	0	0
Michigan:											
Detroit.....	3	0	0	0	0	0	0	1	0	0	0
Wisconsin:											
Milwaukee.....	0	0	0	0	0	0	1	0	1	0	0
WEST NORTH CENTRAL											
Missouri:											
Kansas City.....	0	0	0	0	0	0	0	1	0	0	0
St. Joseph.....	1	0	0	0	0	0	0	0	0	0	0
St. Louis.....	2	0	0	0	0	0	0	0	0	0	0
SOUTH ATLANTIC											
South Carolina:											
Columbia.....	0	0	0	0	0	1	0	0	0	0	0
EAST SOUTH CENTRAL											
Alabama:											
Birmingham.....	0	0	0	0	1	0	0	0	0	0	0
WEST SOUTH CENTRAL											
Louisiana:											
New Orleans.....	1	1	0	0	0	0	0	0	0	0	0
Texas:											
Dallas.....	0	0	0	0	0	1	0	0	0	0	0
San Antonio.....	0	2	0	0	0	0	0	0	0	0	0
MOUNTAIN											
Nevada:											
Reno.....	0	1	0	0	0	0	0	0	0	0	0
PACIFIC											
California:											
Los Angeles.....	0	0	0	0	2	0	0	1	0	0	0

The following table gives the rates per hundred thousand population for 105 cities for the 10-week period ended March 7, 1925. The population figures used in computing the rates were estimated as of July 1, 1923, as this is the latest date for which estimates are available. The 105 cities reporting cases had an estimated aggregate population of nearly 29,000,000 and the 97 cities reporting deaths had more than 28,000,000 population. The number of cities included in each group and the aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, December 28, 1924, to March 7, 1925—
Annual rates per 100,000 population¹

DIPHTHERIA CASE RATES

	Week ended—									
	Jan. 3	Jan. 10	Jan. 17	Jan. 24	Jan. 31	Feb. 7	Feb. 14	Feb. 21	Feb. 28	Mar. 7
Total.....	163	169	² 172	² 163	³ 166	² 175	² 168	149	⁴ 169	162
New England.....	258	255	179	171	199	191	246	241	⁵ 189	233
Middle Atlantic.....	140	181	188	175	¹⁵⁵ 171	165	163	178	178	167
East North Central.....	151	132	141	130	³ 135	145	132	123	119	114
West North Central.....	176	143	255	199	251	255	259	209	⁶ 295	282
South Atlantic.....	146	173	² 106	² 138	128	² 153	² 183	156	114	104
East South Central.....	91	120	91	80	97	63	69	80	51	63
West South Central.....	148	144	195	162	148	176	162	125	162	144
Mountain.....	191	239	153	239	134	191	95	162	153	86
Pacific.....	281	194	206	223	293	270	180	165	258	235

MEASLES CASE RATES

	158	215	² 141	² 213	³ 214	² 254	² 297	383	⁴ 358	418
Total.....	158	215	² 141	² 213	³ 214	² 254	² 297	383	⁴ 358	418
New England.....	380	395	440	497	484	576	661	720	⁵ 585	636
Middle Atlantic.....	121	169	157	187	205	205	287	373	343	428
East North Central.....	294	417	127	379	³ 373	453	515	688	632	789
West North Central.....	10	19	12	27	21	17	31	27	⁶ 75	68
South Atlantic.....	53	83	² 43	² 38	37	² 49	² 98	110	81	100
East South Central.....	17	29	46	74	91	51	74	51	46	86
West South Central.....	9	5	23	14	14	37	51	14	51	23
Mountain.....	115	134	267	248	286	782	153	620	916	29
Pacific.....	116	194	160	55	17	61	29	64	61	107

SCARLET FEVER CASE RATES

	300	369	² 355	² 370	³ 364	² 412	² 400	390	⁴ 408	395
Total.....	300	369	² 355	² 370	³ 364	² 412	² 400	390	⁴ 408	395
New England.....	609	661	561	596	534	614	564	606	⁵ 558	584
Middle Atlantic.....	286	324	294	326	322	373	407	376	412	372
East North Central.....	243	383	375	369	³ 379	426	397	432	434	433
West North Central.....	527	757	755	804	779	871	728	742	⁶ 758	775
South Atlantic.....	203	160	² 243	² 189	185	² 255	² 277	167	203	171
East South Central.....	172	229	183	183	217	97	212	223	183	194
West South Central.....	83	148	116	195	204	162	121	125	144	185
Mountain.....	162	382	534	305	258	334	382	248	315	286
Pacific.....	247	189	183	220	226	258	177	186	223	218

SMALLPOX CASE RATES

	48	57	² 58	² 70	³ 67	² 76	² 79	66	⁴ 66	62
Total.....	48	57	² 58	² 70	³ 67	² 76	² 79	66	⁴ 66	62
New England.....	0	0	0	0	0	0	0	0	⁵ 0	0
Middle Atlantic.....	3	3	10	6	9	2	4	2	3	1
East North Central.....	27	40	39	48	³ 35	39	35	5	28	42
West North Central.....	129	220	193	180	195	145	193	126	⁶ 124	114
South Atlantic.....	39	30	² 64	² 38	45	² 62	² 98	67	43	51
East South Central.....	372	395	217	675	652	823	675	532	583	652
West South Central.....	32	65	32	32	60	125	139	83	116	74
Mountain.....	48	29	57	95	48	29	162	86	57	48
Pacific.....	191	148	212	209	177	267	220	215	313	206

¹ The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1923.

² Wilmington, Del., not included. Report not received at time of going to press.

³ Racine, Wis., not included.

⁴ Hartford, Conn., and Wichita, Kans., not included.

⁵ Hartford, Conn., not included.

⁶ Wichita, Kans., not included.

Summary of weekly reports from cities, December 28, 1924, to March 7, 1925—
Annual rates per 100,000 population—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	Jan. 3	Jan. 10	Jan. 17	Jan. 24	Jan. 31	Feb. 7	Feb. 14	Feb. 21	Feb. 28	Mar. 7
Total.....	37	36	21	17	18	13	13	11	14	11
New England.....	25	15	25	20	7	30	20	0	13	7
Middle Atlantic.....	58	49	21	20	19	13	6	10	8	10
East North Central.....	28	23	23	11	10	8	6	6	7	11
West North Central.....	4	6	10	6	12	0	10	4	17	6
South Atlantic.....	41	55	21	11	37	17	34	8	20	8
East South Central.....	40	51	17	29	23	11	40	34	34	34
West South Central.....	37	70	70	42	60	23	46	42	42	28
Mountain.....	0	10	0	48	19	29	19	38	76	10
Pacific.....	17	26	6	15	3	17	12	23	9	15

INFLUENZA DEATH RATES

Total.....	19	21	22	22	23	30	28	30	34	30
New England.....	3	17	27	10	27	47	27	17	50	17
Middle Atlantic.....	21	20	18	20	16	24	22	21	20	15
East North Central.....	10	16	15	18	12	13	17	18	24	27
West North Central.....	9	13	2	20	15	20	11	22	39	35
South Atlantic.....	26	35	47	23	39	49	55	55	49	53
East South Central.....	63	46	46	63	74	69	63	74	126	103
West South Central.....	51	41	87	92	82	97	122	153	148	143
Mountain.....	38	19	29	10	38	57	57	57	19	19
Pacific.....	12	20	12	12	20	41	4	12	29	29

PNEUMONIA DEATH RATES

Total.....	203	192	215	211	206	225	222	216	201	205
New England.....	174	122	157	216	241	211	239	241	242	226
Middle Atlantic.....	226	228	260	234	230	253	231	216	185	210
East North Central.....	165	152	152	142	145	164	168	184	171	195
West North Central.....	101	90	107	120	118	134	131	131	161	140
South Atlantic.....	250	246	294	275	252	315	270	252	305	268
East South Central.....	303	292	189	320	303	326	320	320	292	269
West South Central.....	341	260	449	362	229	352	464	408	260	229
Mountain.....	229	229	248	324	315	191	277	219	267	162
Pacific.....	188	184	163	208	217	196	192	213	163	139

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 cases	Number of cities reporting deaths	Aggregate population of cities reporting cases	Aggregate population of cities reporting 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	1,275,841

² Wilmington, Del., not included. Report not received at time of going to press.

³ Racine, Wis., not included.

⁴ Hartford, Conn., and Wichita, Kans., not included.

⁵ Hartford, Conn., not included.

⁶ Wichita, Kans., not included.

FOREIGN AND INSULAR

BOLIVIA

Mortality—Smallpox—Typhus fever—La Paz—January 1-31, 1925.—During the month of January, 1925, 216 deaths from all causes were reported at La Paz, Bolivia. Estimated population, 100,000. Five deaths from smallpox and two cases of typhus fever were reported during this period.

CANARY ISLANDS

Plague—Measures for destruction of foci not carried out.—According to information dated February 10, 1925, official declaration was made under date of November 30, 1924, to the effect that the occurrence of plague had been reported in the Canary Islands, at Grand Canary and Teneriffe, since the year 1907; that the measures ordered to be carried out to extinguish the foci of infection had been unsuccessful, owing largely to local indifference; and that commissions had been appointed to study the existing foci and to propose measures for their destruction. It was stated February 10 that the work of extinguishing the plague foci had not been begun.

The last reported occurrence of plague during the year 1924 was for December 19, 1924, with three cases and one fatality at Realejo Alto, Santa Cruz de Teneriffe. On January 3, 1925, a case of plague was reported in the vicinity of Santa Cruz de Teneriffe.

FINLAND

Lethargic encephalitis—Typhoid fever—Paratyphoid fever—January 16-31, 1925.—During the period January 16-31, 1925, 4 cases of lethargic encephalitis, 62 cases of typhoid fever, and 20 cases of paratyphoid fever were reported in Finland. Population, 3, 435,249.

LATVIA

Typhus fever—Other communicable diseases—December, 1924.—During the month of December, 1924, 14 cases of typhus fever were reported in the Republic of Latvia. During the same period, other communicable diseases were reported as follows: Measles, 192 cases; typhoid fever, 88; paratyphoid fever, 2; epidemic mumps, 119; whooping cough, 48. Population, estimated, 2,000,000.

MALTA

Lethargic encephalitis—Malta (undulant) fever—Typhoid fever—February 1-15, 1925.—During the period February 1-15, 1925, 4

cases of lethargic encephalitis, 10 cases of Malta (undulant) fever, and 2 cases of typhoid fever were reported in the Island of Malta. Population, 216,702.

MEXICO

Smallpox—Monterey—Vaccination.—Under date of March 14, 1925, the smallpox situation at Monterey, Mexico, was reported¹ not to be under control and smallpox was stated to have appeared in some of the better sections of the town. At many points in Mexico all persons are required to be vaccinated before departing by train. The health officer of Nuevo Laredo, Mexico, has vaccinated the school children and all persons in hospitals; and in certain sections of the city door-to-door vaccination has been done.

PERU

Plague—Callao—February, 1925—Press dispatches from Callao, Peru, dated February 15, 1925, state that there have occurred recently 6 fatal cases of plague in that city, of which 4 occurred in children of one family.

UNION OF SOUTH AFRICA

Plague—Plague-infected rodent—January 25-31, 1925—During the week ended January 31, 1925, four cases of plague with one death were reported in the Union of South Africa (three cases, one fatal, in the native population, and one case in a European). For distribution of occurrence according to locality, see page 631.

During the same period a plague-infected house mouse was found in the town of Edenburg, Edenburg District. The Province was not stated.

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

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

Reports Received During Week Ended March 27, 1925²

CHOLERA

Place	Date	Cases	Deaths	Remarks
Ceylon.....				Nov. 30-Dec. 27, 1924: Cases, 5; deaths, 5.
India.....				Jan. 11-17, 1925: Cases, 2,675; deaths, 1,623.
Bombay.....	Jan. 18-24.....	1	1	
Calcutta.....	Jan. 25-31.....	18	15	
Madras.....	Feb. 1-14.....	27	17	
Rangoon.....	Jan. 25-31.....	1		
Siam:				
Bangkok.....	Jan. 18-31.....	3	1	

¹ Public Health Reports, Feb. 6, 1925, p. 275.

² 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 27, 1925—Continued

PLAGUE

Place	Date	Cases	Deaths	Remarks
Ceylon:				
Colombo	Feb. 1-7	1	4	November, 1925: Cases, 7; deaths, 6.
Gold Coast				
India:				Jan. 11-17, 1925: Cases, 3,970; deaths, 3,522.
Karachi	Feb. 8-14	1	1	
Madras Presidency	Jan. 11-17	222	177	
Rangoon	Jan. 25-31	10	11	
Indo-China:				Including 100 square kilometers surrounding country.
Saigon	Dec. 25-31	1	1	
Irak	June 29-Dec. 13	18	13	
Japan	Nov. 16-Dec. 6	7		
Java:				
West Java—				Town. Present.
Cheribon	Jan. 30			Province. Epidemic in one locality.
Paseroean	Dec. 27			Province. Epidemic.
Pekalongan	Dec. 25-31		44	Province. Epidemic.
Prabalingga	Dec. 27		16	Province. Epidemic.
Tegal	Dec. 25-31		16	Province. Epidemic.
Nigeria				November, 1924: Cases, 78; deaths, 61.
Peru:				
Callao	February, 1925	6	6	Four of these in children of one family.
Siam:				
Bangkok	Jan. 25-31	1	1	
Straits Settlements:				
Singapore	do.	3	2	
Union of South Africa				Jan. 25-31, 1925: Cases, 4; deaths, 1. Native cases, 3; deaths, 1; white, 1 case.
Cape Province—				
De Aar District—				
Malay Camp	Jan. 25-31	1	1	1 plague rodent; house mouse.
Edenburg (town)	do.			
Transvaal—				
Boshof District	do.	2		Native. On farm.

SMALLPOX

Algeria	Dec. 21-31	37		
Do.	Jan. 1-20	107		
Arabia:				Imported.
Aden	Feb. 8-21	2		
Bolivia:				
La Paz	Jan. 1-31		5	
Brazil:				
Pernambuco	Jan. 11-17	7	6	
British South Africa:				Natives.
Northern Rhodesia	Jan. 27-Feb. 2	3		
Southern Rhodesia	Jan. 29-Feb. 4	1		
Canada:				
British Columbia—				
Vancouver	Mar. 1-7	17		
Ceylon:				
Colombo	Feb. 1-7	1		Port case.
China:				Present.
Amoy	Jan. 25-Feb. 7			
Antung	Jan. 19-Feb. 8	6	1	
Hongkong	Jan. 4-17	4	2	
Manchuria—				
Harbin	Jan. 15-21	1		
Shanghai	Feb. 8-14	1	1	Case, foreign, death, Chinese.
France				December, 1924: Cases, 12.
Great Britain:				
England and Wales				Jan. 25-Feb. 28, 1925: Cases, 734.
Newcastle-on-Tyne	Feb. 15-21	1		
Greece				December, 1924: Cases, 2.
India:				Jan. 11-17, 1925: Cases, 2,597; deaths, 514.
Bombay	Jan. 18-31	55	26	Mar. 5, 1925: Severely epidemic.
Calcutta	Jan. 25-31	97	69	
Karachi	Feb. 8-14	13	1	
Madras	Feb. 1-14	173	54	
Rangoon	Jan. 25-31	40	10	

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

Reports Received During Week Ended March 27, 1925—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Indo-China:				
Saigon.....	do.....	5	2	Including 100 square kilometers of surrounding country.
Iraq.....	June 29-Dec. 13.....	137	66	
Italy.....	Dec. 7-27.....	2		
Java:				
West Java—				
Pekalongan.....	Dec. 25-31.....	3		Province.
Mexico:				
Guadalajara.....	Mar. 3-9.....		1	
Mexico City.....	Feb. 1-14.....	4		Including Federal District.
Monterey.....	Mar. 14.....			Present.
Vera Cruz.....	Mar. 2-8.....		2	
Nigeria.....				November, 1924: Cases, 77; deaths, 23.
Poland.....				Nov. 30-Dec. 20, 1924: Cases, 6.
Siam:				
Bangkok.....	Jan. 18-31.....	4	6	
Spain:				
Malaga.....	Feb. 22-28.....		8	
Tripoli:				
Tripoli.....	July 14-Dec. 12.....	5		
Tunis:				
Tunis.....	Feb. 25-Mar. 3.....	24	29	
Union of South Africa:				
Cape Province—				
De Aar District.....	Jan. 25-31.....			Outbreak at railway camp.
Orange Free State—				
Ladybrand District.....	do.....			Outbreak. On farm.
Uruguay.....				August to October, 1924: Cases, 20; deaths, 1.

TYPHUS FEVER

Bolivia:				
La Paz.....	Jan. 1-31.....	2		
Chile:				
Valparaiso.....	Feb. 1-14.....		5	December, 1924: Cases, 5.
Czechoslovakia.....				Do.
Greece.....				Dec. 1-31, 1924: Cases, 14.
Latvia.....				
Mexico:				
Mexico City.....	Feb. 1-14.....	11		Including Federal District.
Morocco.....				November, 1924: Cases, 5.
Palestine:				
Ramleh.....	Feb. 10-16.....	1		
Poland.....				Dec. 7-20, 1924: Cases, 163; deaths, 11.

YELLOW FEVER

Gold Coast.....				November, 1924: Cases, 1; deaths, 1.
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Reports Received from December 27, 1924, to March 20, 1925¹

CHOLERA

Ceylon.....				June 29-Nov. 29, 1924: Cases, 9; deaths, 8.
Colombo.....	Nov. 16-22.....	1		
Do.....	Jan. 11-24.....	2	2	
India.....				Oct. 19, 1924, to Jan. 3, 1925: Cases, 27,164; deaths, 16,228.
Bombay.....	Nov. 23-Dec. 20.....	4	4	Jan. 4-10, 1925: Cases, 2,322; deaths, 1,320.
Calcutta.....	Oct. 26-Jan. 3.....	59	51	
Do.....	Jan. 4-24.....	39	37	
Madras.....	Nov. 16-Jan. 3.....	69	40	
Do.....	Jan. 4-31.....	94	68	
Rangoon.....	Nov. 9-Dec. 20.....	9	2	
Do.....	Jan. 4-10.....	4	3	
Do.....	Jan. 18-24.....	1	1	

¹ 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 27, 1924, to March 20, 1925—Continued

CHOLERA—Continued

Place	Date	Cases	Deaths	Remarks
Indo-China				Aug. 1-Sept. 30, 1924: Cases, 14; deaths, 10.
Province—				
Anam.....	Aug. 1-31.....	1	1	
Cambodia.....	Aug. 1-Sept. 30.....	6	5	
Cochin-China.....	.....do.....	7	4	
Saigon.....	Nov. 30-Dec. 6.....	1		
Siam:				
Bangkok.....	Nov. 9-29.....	4	2	

PLAGUE

Azores:				
Fayal Island—				
Castelo Branco.....	Nov. 25.....			Present with several cases.
Peteira.....	.....do.....	1		
St. Michael Island.....	Nov. 2-Jan. 3.....	30	13	
British East Africa:				
Tanganyika Territory.....	Nov. 23-Dec. 27.....	17	10	
Uganda.....	Aug.-Nov., 1924.....	242	211	
Canary Islands:				
Las Palmas.....	Feb. 4.....	1		Stated to have been infected with plague Sept. 30, 1924.
Bealejo Alto.....	Dec. 19.....	3	1	Vicinity of Santa Cruz de Teneriffe.
Teneriffe—				
Santa Cruz.....	Jan. 3.....	1		In vicinity.
Celebes:				
Macassar.....	Oct. 29.....			Epidemic.
Ceylon:				
Colombo.....	Nov. 9-Jan. 3.....	12	9	
Do.....	Jan. 4-31.....	3	4	Five plague rodents.
China:				
Foochow.....	Dec. 28-Jan. 3.....			Present.
Nanking.....	Nov. 23-Jan. 31.....			Do.
Shing Hsien.....	October, 1924.....		790	
Ecuador:				
Chimborazo Province—				
Alausi District.....	Jan. 14.....		14	At two localities on Guayaquil and Quito Railway.
Guayaquil.....	Nov. 16-Dec. 31.....	9	3	Rats taken, 27,004; found infected, 92.
Do.....	Jan. 1-Feb. 15.....	31	12	Rats taken, 31,252; rats found infected, 144.
Yaguachi.....	Feb. 1-15.....	1	1	
Egypt:				Year 1924: Cases, 373. Jan. 1-28, 1925: Cases, 15.
City—				
Alexandria.....	Year 1924.....	2	2	Last case, Nov. 26.
Ismailia.....	.....do.....	1	1	Last case, July 6.
Port Said.....	.....do.....	6	4	Last case, Dec. 7.
Suez.....	.....do.....	20	13	Last case, Dec. 20.
Province—				
Dakhalia.....	Jan. 1-8.....	1	1	
Kalioubiah.....	.....do.....	3		
Menoufieh.....	.....do.....	7	3	
Gold Coast				Sept.-Oct., 1924: Deaths, 42.
Hawaii:				
Honokaa.....	Nov. 4.....	1		Plague-infected rodents found Dec. 9, 1924 and Jan. 15, 1925.
India				Oct. 19, 1924, to Jan. 3, 1925: Cases, 28,154; deaths, 21,505.
Bombay.....	Nov. 22-Jan. 3.....	4	3	Jan. 4-10, 1925: Cases, 4,299; deaths, 3,461.
Do.....	Jan. 4-17.....	2	2	
Calcutta.....	Jan. 18-24.....	1	1	
Karachi.....	Nov. 30-Dec. 16.....	2	1	
Do.....	Jan. 4-24.....	19	9	
Madras Presidency.....	Nov. 23-Dec. 20.....	528	379	
Do.....	Dec. 28-Jan. 3.....	157	108	
Do.....	Jan. 4-10.....	214	164	
Rangoon.....	Oct. 26-Jan. 3.....	26	25	
Do.....	Jan. 4-24.....	28	23	

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

Reports Received from December 27, 1924, to March 20, 1925—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Indo-China				Aug. 1-Sept. 30, 1924: Cases, 25; deaths, 20.
Province—				
Anam	Aug. 1-Sept. 30	4	4	
Cambodia	do	18	15	
Cochin-China	do	3	1	
Saigon	Jan. 11-17	2	1	Including 100 square kilometers of surrounding territory.
Japan	Aug. 10-Nov. 15	12		
Java:				
East Java—				Province of Kediri; epidemic.
Blitar	Nov. 11-22			Do.
Pare	Nov. 29			
Soerabaya	Nov. 16-Dec. 13	53	55	
Do	Dec. 21-31	18	17	
West Java—				
Cheribon	Oct. 14-Nov. 3		14	
Do	Nov. 18-Dec. 22		80	
Pekalongan	Oct. 14-Nov. 3		29	
Do	Nov. 18-Dec. 22		133	
Tegal	Oct. 14-Nov. 24		10	
Madagascar				Nov. 1-Dec. 15, 1924: Cases, 254; deaths, 218.
Provinces—				
Itasy	Nov. 1-Dec. 15	4	2	
Moramanga	do	49	34	
Tananarive	Oct. 16-Dec. 31	298	274	Tananarive City (interior), Oct. 16-Nov. 30: Cases, 8; deaths, 7. Bubonic, pneumonic, septicemic.
Do	Jan. 1-15	54	48	
Tananarive (town)	Dec. 16-31	4	4	
Do	Jan. 1-15	1	1	
Other localities	Dec. 16-31	71	62	
Do	Jan. 1-15	53	47	
Towns (ports)—				
Fort Dauphin	Nov. 1-Dec. 15	12	5	
Majunga	Nov. 1-30	1	1	
Tamatave	do	1	1	
Mauritius Island				Sept. 7-Oct. 18, 1924: Cases, 60 deaths, 53.
Morocco:				
Marrakech				Feb. 9, 1925: Present in native quarter of town. Stated to be pneumonic in form and of high mortality.
Nigeria				August-October, 1924: Cases, 309; deaths, 256.
Siam:				
Bangkok	Dec. 28-Jan. 3	1	1	
Siberia:				
Transbaikalia—				
Turga	October, 1924		3	On Chita Railroad.
Straits Settlements:				
Singapore	Nov. 9-15	1	1	
Do	Jan. 4-17	3	2	
Syria:				
Beirut	Jan. 11-20	1		
Turkey:				
Constantinople	Jan. 9-15	5	5	
Union of South Africa	Jan. 4-24	13	4	
Cape Province—				
De Aar District	Nov. 22-Jan. 3	4	1	Native.
Do	Jan. 4-10	2		Natives; on farms.
Dronfield	Dec. 7-13	1		8 miles from Kimberley.
Kimberley	Dec. 7-27	3	2	
Maraisburg District	Nov. 22-Dec. 13	4	2	Bubonic, on Goedshoop Farm.
Orange Free State—				
Bloemfontein District	Dec. 21-Jan. 3	5	2	
Do	Jan. 11-17	1	1	Native; on farm.
Picksburg District	Dec. 28-Jan. 3	1	1	
Hoopstad District	Dec. 7-13	1		On farm.
Kroonstad District	Nov. 22-Jan. 3	2	1	
Do	Jan. 18-24	1	1	Native; on farm.
Philippolis District	Dec. 21-27	1		
Vrededorf District	Dec. 7-20	2	2	On farms.
Steynsburg District	Jan. 4-10	1		Native; on farm. Province not stated.

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

Reports Received from December 27, 1924, to March 20, 1925—Continued

PLAGUE—Continued

Place	Date	Cases	Deaths	Remarks
Union of South Africa:				
Transvaal—				
Boshof District	Dec. 7-Jan. 3	3	3	On farm.
Do.	Jan. 11-24	7	1	Native, 4 cases; white, 1 fatal case. On farms.
Smithfield	do	1	1	On Farm Wolverspruit Vaal River. Native.
Welmaransstad District.	Nov. 22-29	1	1	
On vessel:				
S. S. Conde				At Marseille, France, Nov. 6, 1924. Plague rat found. Vessel left for Tamatave, Madagascar, Nov. 12, 1924.
Steamship	November, 1924	1	1	At Majunga, Madagascar, from Djibuti, Red Sea port.

SMALLPOX

Algeria				July 1-Dec. 20, 1924: Cases, 372.
Algiers	Jan. 1-31	5		
Arabia:				Imported.
Aden	Jan. 25-Feb. 7	3		
Bolivia:				
La Paz	Nov. 1-Dec. 31	20	11	
Brazil:				
Pernambuco	Nov. 9-Jan. 3	100	27	
Do.	Jan. 4-10	15	6	
British East Africa:				
Kenya—				
Mombasa	Jan. 18-24	1		
Uganda—				
Entebbe	Oct. 1-31	4		
British South Africa:				
Northern Rhodesia	Oct. 28-Dec. 15	57	2	
Canada:				
British Columbia—				
Vancouver	Dec. 14-Jan. 3	32		
Do.	Jan. 4-Feb. 28	206		
Victoria	Jan. 18-Feb. 7	2		
Manitoba—				
Winnipeg	Dec. 7-Jan. 3	14		
Do.	Jan. 4-Feb. 27	30		
New Brunswick—				
Bonaventure and Gaspé Counties.	Jan. 1-31	1		
Northern Ontario	Feb. 8-14	1		County. Nov. 30-Dec. 27, 1924: Cases, 33. Dec. 28-Feb. 28, 1925: Cases, 41; death, 1
Hamilton	Jan. 24-30	1		July 27-Nov. 29, 1924: Cases, 27; death, 1.
Ceylon	Jan. 18-31	3		
Colombo				
China:				Present.
Amoy	Nov. 9-Jan. 24			
Antung	Nov. 17-Dec. 28	5		
Do.	Jan. 5-18	4		
Foochow	Nov. 2-Jan. 27			Do.
Hongkong	Nov. 9-Jan. 3	6	2	
Nanking	Jan. 4-17			Do.
Shanghai	Dec. 7-27	1	2	
Do.	Jan. 18-24	1		
Do.	Feb. 1-7	2	3	Deaths among Chinese.
Chosen:				
Seoul	Dec. 1-31	1		
Czechoslovakia				April-June, 1924: Case, 1; occurring in Province of Moravia.
Ecuador:				
Guayaquil	Nov. 16-Dec. 15	4		
Egypt:				
Alexandria	Nov. 12-Dec. 31	10		
Do.	Jan. 8-28	8		
Estonia				Dec. 1-31, 1924: Cases, 2.
France				July-November, 1924: Cases, 69. Believed to have been imported on steamship Ruyth from Sfax, Tunis.
St. Malo	Feb. 2-8	7	1	

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

Reports Received from December 27, 1924, to March 20, 1925—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Germany				June 29–Nov. 8, 1924: Cases, 7.
Frankfort-on-Main	Jan. 1–10	1		
Gibraltar	Dec. 8–14	1		
Gold Coast				July–Sept., 1924: Cases, 82; deaths, 1.
Great Britain:				
England and Wales	Nov. 23–Jan. 3	472		
Do.	Jan. 4–24	351		
Newcastle-on-Tyne	Jan. 18–Feb. 14	8		
Greece				Jan.–June, 1924: Cases, 170; deaths, 27.
Do.				July–Nov., 1924: Cases, 36; deaths, 26.
India				Oct. 19, 1924, to Jan. 3, 1925: Cases, 12,564; deaths, 2,857.
Bombay	Nov. 2–Jan. 3	30	18	Jan. 4–10, 1925: Cases, 2,442; deaths, 497.
Do.	Jan. 4–17	17	11	Mar. 5, 1925: Epidemic.
Calcutta	Oct. 26–Jan. 8	307	170	
Do.	Jan. 4–24	262	164	
Karachi	Nov. 16–Jan. 3	16	2	
Do.	Jan. 4–Feb. 7	39	5	
Madras	Nov. 16–Jan. 3	122	48	
Do.	Jan. 4–31	112	36	
Rangoon	Oct. 26–Jan. 3	86	28	
Do.	Jan. 4–24	156	21	
Indo-China				Aug. 1–Sept. 30, 1924: Cases, 223; deaths, 76.
Province—				
Anam	Aug. 1–Sept. 30	49	11	
Cambodia	do.	40	9	
Cochin-China	do.	115	49	
Saigon	Nov. 16–Jan. 3	17	5	Including 100 sq. km. of surrounding country.
Do.	Jan. 4–10	5	1	
Tonkin	Aug. 1–Sept. 30	19	7	
Iraq:				
Bagdad	Nov. 9–Dec. 27	2	1	
Italy				June 29–Dec. 6, 1924: Cases, 61.
Jamaica				Nov. 30–Jan. 3, 1925: Cases, 50. Reported as alastrim.
Do.				Jan. 4–31, 1925: Cases, 43. Reported as alastrim.
Kingston	Nov. 30–Dec. 27	4		Reported as alastrim.
Japan				Aug. 1–Nov. 15, 1924: Cases, 4.
Nagasaki	Feb. 9–15	3		
Java:				
East Java—				
Pasoeroean	Oct. 26–Nov. 1	9	1	Epidemic in two native villages.
Do.	Nov. 12–19			
Soerabaya	Oct. 19–Dec. 31	685	212	
West Java—				
Batam	Oct. 14–20	2		
Batavia	Oct. 21–Nov. 14	2		
Do.	Dec. 20–Jan. 2	19	4	
Cheribon	Oct. 11–Nov. 24	15		
Pekalongan	do.	22		
Preanger	Nov. 18–24	1		
Latvia				Oct. 1–Nov. 30, 1924: Cases, 5.
Mexico:				
Durango	Dec. 1–31		5	
Do.	Jan. 1–Feb. 28		10	
Guadalajara	Dec. 23–29		1	
Do.	Jan. 6–12		1	
Mexico City	Nov. 23–Dec. 27	5		
Do.	Jan. 11–31	5		
Monterey				Jan. 24, 1925: Outbreak.
Salina Cruz	Dec. 1–31	1	1	
Saltillo	Feb. 22–28		1	
Tampico	Dec. 11–31	5	4	
Do.	Jan. 1–Feb. 28	40	15	
Vera Cruz	Dec. 1–Jan. 3		10	
Do.	Jan. 5–Feb. 15		25	
Do.	Feb. 22–24		6	
Villa Hermosa	Dec. 28–Jan. 10			Present. Locality, capital, State of Tabasco.

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

Reports Received from December 27, 1924, to March 20, 1925—Continued

SMALLPOX—Continued

Place	Date	Cases	Deaths	Remarks
Nigeria.....				Jan.-June, 1924: Cases, 357; deaths, 87.
Do.....				July-Oct., 1924: Cases, 10; deaths, 2.
Persia: Teheran.....				Sept. 23-Dec. 21, 1924: Deaths, 12.
Peru: Arequipa.....	Nov. 24-30.....		1	
Poland.....				Sept. 21-Nov. 29, 1924: Cases, 19; deaths, 2.
Portugal: Lisbon.....	Dec. 7-Jan. 3.....	17		
Do.....	Jan. 4-Feb. 7.....	45		
Oporto.....	Nov. 30-Dec. 27.....	3	2	
Do.....	Jan. 11-17.....	1		
Russia.....				Jan.-June, 1924: Cases, 9,663. July-Sept., 1924: Cases, 1,251.
Siam: Bangkok.....	Dec. 28-Jan. 3.....	1	1	
Spain: Barcelona.....	Nov. 27-Dec. 31.....		5	
Cadiz.....	Nov. 1-Dec. 31.....		51	
Do.....	Jan. 1-31.....		9	
Madrid.....	Year 1924.....		40	
Malaga.....	Nov. 23-Jan. 3.....		97	
Do.....	Jan. 4-Feb. 21.....		68	
Valencia.....	Nov. 30-Dec. 6.....	2		
Do.....	Feb. 15-21.....	2		
Switzerland: Lucerne.....	Nov. 1-Dec. 31.....	19		
Do.....	Jan. 1-31.....	24		
Syria: Aleppo.....	Nov. 23-Dec. 27.....	13		
Do.....	Jan. 4-Feb. 14.....	55	17	
Damascus.....	Jan. 6-13.....	2		
Tunis: Tunis.....	Nov. 25-Dec. 29.....	42	35	
Do.....	Jan. 1-14.....		29	
Do.....	Jan. 22-Feb. 25.....		120	
Turkey: Constantinople.....	Dec. 13-19.....	5		
Union of South Africa: Cape Province.....	Nov. 9-Jan. 17.....			Nov. 1-Dec. 31, 1924: Cases, 14. Outbreaks.
Orange Free State.....	Nov. 2-8.....			Do.
Transvaal.....	Nov. 9-Jan. 10.....			Do.
Uruguay: Do.....				Jan.-June, 1924: Cases, 101; deaths, 2. July, 1924: Cases, 25; deaths, 3.
On vessel: S. S. Habana.....	Feb. 18.....	1		At Santiago de Cuba, from Kingston, Jamaica.
S. S. Ruyth.....				At St. Malo, France, from Sfax, Tunis; believed to have imported smallpox infection.

TYPHUS FEVER

Algeria.....				July 1-Dec. 20, 1924: Cases, 101; deaths, 14.
Algiers.....	Nov. 1-Dec. 31.....	5	1	
Do.....	Jan. 1-31.....	3	3	
Bolivia: La Paz.....	do.....	3		
Bulgaria.....				Jan.-June, 1924: Cases, 191; deaths, 28.
Do.....				July-Oct., 1924: Cases, 5.
Chile: Concepcion.....	Nov. 25-Dec. 1.....		1	
Do.....	Jan. 6-12.....		2	
Iquique.....	Nov. 31-Dec. 1.....		2	
Do.....	Feb. 1-7.....		1	
Talcahuano.....	Nov. 16-Dec. 20.....		5	
Do.....	Jan. 4-10.....		1	
Valparaiso.....	Nov. 25-Dec. 7.....		4	
Do.....	Jan. 11-31.....		4	

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

Reports Received from December 27, 1924, to March 20, 1925—Continued

TYPHUS FEVER—Continued

Place	Date	Cases	Deaths	Remarks
Chosen:				
Seoul	Nov. 1-30	1	1	
Egypt:				
Alexandria	Dec. 3-9	1	1	
Cairo	Oct. 1-Dec. 23	13	8	
Estonia				
France				
Gold Coast				
Greece				
Do				Dec. 1-31, 1924: Cases, 5.
Saloniki	Nov. 17-Dec. 15	3	2	July-Oct., 1924: Cases, 7.
Do	Jan. 25-31	1		Oct. 1-31, 1924: 1 case.
Japan				
Latvia				
Lithuania				
Do				May-June, 1924: Cases, 116; deaths, 8.
Do				July-Nov., 1924: Cases, 35; deaths, 4.
Mexico:				
Durango	Dec. 1-31		1	
Guadalajara	Dec. 23-29		1	
Mexico City	Nov. 9-Jan. 3	80		Including municipalities in Federal District.
Do	Jan. 11-31	29		Do.
Palestine				
Ekron	Dec. 23-29	1		Nov. 12-Dec. 8, 1924: Cases, 7.
Jerusalem	do	2		
Do	Jan. 20-26	1		
Mikveh Israel	do	1		
Peru:				
Arequipa	Nov. 24-30		1	
Poland				
Do				Sept. 28-Dec. 6, 1924: Cases, 379; deaths, 22.
Portugal:				
Lisbon	Dec. 29-Jan. 4		2	
Oporto	Jan. 4-Feb. 7	2		
Rumania				
Do				Jan.-June, 1924: Cases, 2,906; deaths, 328.
Constanza	Dec. 1-10	1		July-Aug., 1924: Cases, 89; deaths, 12.
Russia				
Leningrad	June 29-Nov. 22	12		Jan. 1-June 30, 1924: Cases, 92,000. July-Sept., 1924: Cases 5,225.
Spain:				
Madrid	Year 1924		3	
Malaga	Dec. 21-27		1	
Sweden:				
Goteborg	Jan. 18-24	1		
Tunis				
Turkey:				
Constantinople	Nov. 15-Dec. 19	6	1	
Do	Jan. 2-22	6		
Do	Feb. 1-7	1	1	
Union of South Africa				
Cape Province	Nov. 1-Dec. 31	126	24	Nov. 1-Dec. 31, 1924: Cases, 345; deaths, 87.
East London	Nov. 16-22	1		Dec. 21-Jan. 17: Outbreaks.
Do	Jan. 18-24	1		
Natal	Nov. 1-Dec. 31	130	50	
Do	Jan. 18-24			Outbreaks.
Orange Free State	Nov. 1-Dec. 31	59	8	Dec. 7-Jan. 17, Outbreaks.
Transvaal	do	30	5	
Yugoslavia				
Belgrade	Nov. 24-Dec. 28	5		Aug. 3-Oct. 18, 1924: Cases, 17; deaths, 2.

YELLOW FEVER

Gold Coast	October, 1924	3	3	
Salvador				
San Salvador	June-Oct., 1924	77	28	Last case, Oct. 22, 1924.