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CURRENT PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES[1]

May 20–June 16, 1934

The prevalence of certain important communicable diseases, as indicated by weekly telegraphic reports from State health departments to the United States Public Health Service, is summarized in this report. The underlying statistical data are published weekly in the Public Health Reports, under the section entitled "Prevalence of Disease."

Poliomyelitis.—The poliomyelitis situation in California, to which attention was called in the previous summary,[2] has grown more serious. The number of cases reported in that State rose from 80 for the 4 weeks ended May 19 to 801 for the 4 weeks ended June 16, of which latter number 416 occurred in Los Angeles City, 270 in Los Angeles County outside Los Angeles City, and 36 in San Francisco. For the last week of the current period the number of cases in the entire State was 273, the same as for the preceding week; later reports gave for the week ended June 23 a total of 340 cases for California and 36 for the remainder of the United States.

For the 4 weeks ended June 16, 110 cases were reported in other States, representing an increase of approximately 48 percent over the figure for the corresponding period last year.

The accompanying table shows the California situation for recent weeks.

[1] From the Office of Statistical Investigations, U.S. Public Health Service. The numbers of States included for the various diseases are as follows: Typhoid fever, 48; poliomyelitis, 48; meningococcus meningitis, 48; smallpox, 48; measles, 47; diphtheria, 48; scarlet fever, 48; influenza, 43 States and New York City. The District of Columbia is counted as a State in these reports. These summaries include only the 8 important communicable diseases for which the Public Health Service receives regular weekly reports from the State health officers.

[2] Public Health Reports, June 8, 1934, p. 677.

Poliomyelitis cases reported in California and in other States during recent weeks of 1934

Week ended	1934					Comparative week of 1933	
	Los Angeles City	Los Angeles County outside of city	San Francisco	Total, State of California [1]	46 other States [2]	California State	46 other States [2]
May 5	2	3	0	13	23	1	25
12	7	8	0	20	26	1	15
19	9	29	0	36	10	4	14
26	51	44	3	92	26	2	18
June 2	110	62	4	163	16	0	14
9	156	64	9	273	21	2	14
16	99	100	20	273	47	1	10
23				340	36	4	22

[1] Figures from the weekly telegraphic reports. The apparent discrepancy in these totals for certain weeks is probably due to the fact that they do not include all of the cases finally reported for the Los Angeles district. All of the figures in this table should be considered preliminary.
[2] No reports available from Nevada.

Within geographic areas the current incidence ranges from 2 to 12 times last year's reports for this period. States in the Mountain area reported 22 cases (15 in Arizona) for the 4 weeks ended May 26 and 12 for the current 4 weeks (6 in Arizona) as against 1 in that section for each of these periods last year. The New England States reported fewer cases than for the same period last year, and the East South Central group reported approximately the same number as last year.

Typhoid fever.—The number of cases of typhoid fever reported for the 4 weeks ended June 16 was 1,058. Only 1 case was reported from Vermont as compared with 57 cases for the preceding 4 weeks, when a water-borne epidemic due to a broken sewer was reported. Missouri continued to report cases considerably in excess of last year, and Arizona reported 30 cases as compared with none for the preceding period and only 3 for the same period last year. No information was given as to where the cases occurred.

For the country as a whole the typhoid situation was very satisfactory. The seasonal increase this year was less than in corresponding periods of 1933; the total number of cases (1,058) was only about 80 percent of the number for the corresponding period in the years 1933 and 1932 and approximately the same as that in 1931. In all areas except the Mountain the current incidence fell below that of last year. In general, the disease appeared to be most prevalent in the South Atlantic and South Central sections; more than one-half of the total number of cases occurred in those groups of States.

Measles.—The incidence of measles continued to decline. For the 4 weeks ended June 16 the number of cases totaled 90,542, approximately 35,000 less than were reported for the preceding 4-week period. The current incidence was, however, 1.8 times that for the corresponding period last year and about 1.4 times the number for the same

period in 1932 and 1931. Each geographic area except the Mountain showed a decline from the preceding 4-week period. Colorado, in that area, reported the highest incidence of the season during the current period, while apparently in all other regions the peak was reached several weeks earlier. The number of cases reported from each geographic area was the highest in recent years.

Diphtheria.—The number of cases of diphtheria reported for the current 4-week period was 1,732, the lowest recorded for this period in the 6 years for which data are available. The incidence very closely approximated that of last year (1,857 cases). Of the various geographic areas, 5 reported decreases from last year's figure and 4 reported slight increases.

Scarlet fever.—The incidence of scarlet fever followed the usual seasonal decline during the current 4-week period. However, the number of cases (16,187) was about 10 percent above that for the corresponding period last year and was the highest for this period in recent years. The East and West North Central groups of States, where the disease has been unusually prevalent during the current year, appeared to be mostly responsible for the current excess incidence. Other sections of the country reported about the normal seasonal incidence.

Smallpox.—For smallpox, the comparison with previous years was very favorable. The number of cases reported for the 4 weeks ended June 16 was 379, as compared with 519, 900, and 3,001 for the corresponding period in the years 1933, 1932, and 1931, respectively. The incidence declined from that of last year in all regions except the East North Central and West South Central. In the former group of States the number of cases (88) was 1.2 times that of last year, due to a rather high incidence of the disease in Wisconsin, and in the latter group Texas was responsible for a 50 percent increase in that area over last year's figure. In the West North Central region, where the disease has also been unusually prevalent, the number of cases dropped about 50 percent from last year's total for this period.

Influenza.—The incidence of influenza was about normal. For the entire reporting area there were reported 1,881 cases, which was close to the average for recent years. An increase of approximately 40 percent over last year's figure for this period was reported from the South Atlantic and South Central sections, but the number of cases was not large in either area. In other regions the current incidence closely approximated that of last year.

Meningococcus meningitis.—The number of cases of meningococcus meningitis reported for the current 4-week period was 178, about 88 percent of the incidence for the corresponding period last year. For this period in 1932 and 1931 the numbers of cases were 216 and 338, respectively. The situation in most of the geographic areas did not

differ greatly from that of last year. The greatest decrease was reported from the East North Central section, where at this time last year the disease was unusually prevalent in Illinois. For the current period there were 54 cases for the whole East North Central area as against 79 for last year.

Mortality, all causes.—The mortality rate for large cities as reported by the Bureau of the Census was slightly above the 1933 and 1932 levels, but about the same as for 1931. The average rate (annual basis) was 11.1 per 1,000 inhabitants for the 4 weeks ended June 16, as compared with 10.6, 10.7, and 11.0 for the corresponding period of 1933, 1932, and 1931, respectively.

EFFECTIVENESS OF FILTRATION IN REMOVING FROM WATER, AND OF CHLORINE IN KILLING, THE CAUSATIVE ORGANISM OF AMOEBIC DYSENTERY

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The outbreak of amoebic dysentery in a hotel in Chicago in 1933, and the possibility that it was a water-borne outbreak caused by contamination of the hotel water from some unknown source, emphasizes the importance of knowing more about *Endamoeba histolytica,* especially about its life outside the human body, the manner in which it is transmitted, and the means of safeguarding the public from infection. Experiments were conducted on the removal of the *E. histolytica* cysts from water by filtration, and upon the amount of chlorine and chloramine necessary to kill the cysts. The cysts were used because they are generally regarded as the transmittible stage of the organism.

Seven experiments were conducted on the removal of cysts from water highly contaminated with the organisms, by coagulation and filtration with rapid sand filters, seven experiments on sterilization with various concentrations of chlorine, and three experiments on sterilization with various concentrations of chloramine. The experiments showed that the cysts were removed completely by coagulation and filtration, and that the amount of chlorine or chloramine required to kill the cysts is considerably more than may be used for sterilizing the water of a public supply.

EXPERIMENTS ON THE REMOVAL OF ENDAMOEBA HISTOLYTICA CYSTS BY COAGULATION AND FILTRATION

The experiments on the removal of the *E. histolytica* cysts from water by coagulation and filtration through rapid sand filter beds were conducted at the Chicago Experimental Filtration Plant during

February and March 1934. Suspensions containing a large number of the cysts were prepared from feces of persons infected with the organism. The suspensions were mixed with clear water, treated with aluminum sulphate, and then filtered through rapid sand filters having 24 inches of sand of an effective size of approximately 0.5 millimeter diameter. The depth of the filter bed and the size of the sand are the same as those found in many of the filtration plants throughout the country. In most of the experiments the water, after coagulation, was allowed to settle for a short period so as to remove part of the coagulated matter. The filters were operated at a rate of 2 gallons per square foot per minute, which is customary filtration practice.

EQUIPMENT

1. Glass tube sand filters, about 1⅝ inches inside diameter, and 5 feet long. (See fig. 1.)
2. Filter rate controllers. (See fig. 1.)
3. Mercury gages for determining loss of head. (See fig. 1.)
4. Funnels about 6 inches in diameter. (See fig. 1.)
5. Five-gallon bottles. (See fig. 1.)
6. One-gallon bottles for collecting filtrate. (See fig. 1.)
7. Rubber stopper with glass tube about 4 inches long. (See fig. 1.)
8. Rubber tubing for connecting funnels to filters, for providing overflows away from the filters while being washed, for connecting mercury gages, for connecting filter effluent from filter to rate controller, and for connecting wash water line to filter. (See fig. 1.)
9. Orifices for float tanks accurately calibrated to give proper flow through the filter. (See fig. 1.)
10. Water under pressure at a convenient point to the filter. There should be a needle valve on the pipe line so that the amount of wash water may be regulated, and also a connection to which the rubber tubing connecting the wash water line to the filter may be attached.
11. A convenient number of flasks, small bottles, beakers, pipettes, etc., for preparing solutions of the coagulant, adding the coagulant to the water, collecting samples, etc.
12. A strong lysol solution for disinfecting all glassware and equipment coming in contact with the infected water, and for sterilizing the filters and material removed by filtration. A hot-air sterilizer or an autoclave may be used for sterilizing part of the glassware.
13. Rubber gloves for employees.
14. Microscope with Rafter's counting cell for enumerating the organisms.
15. Centrifuge for concentrating the organisms in the filtrate.
16. Iodine stain for staining the *E. histolytica* cysts to make identification easier.

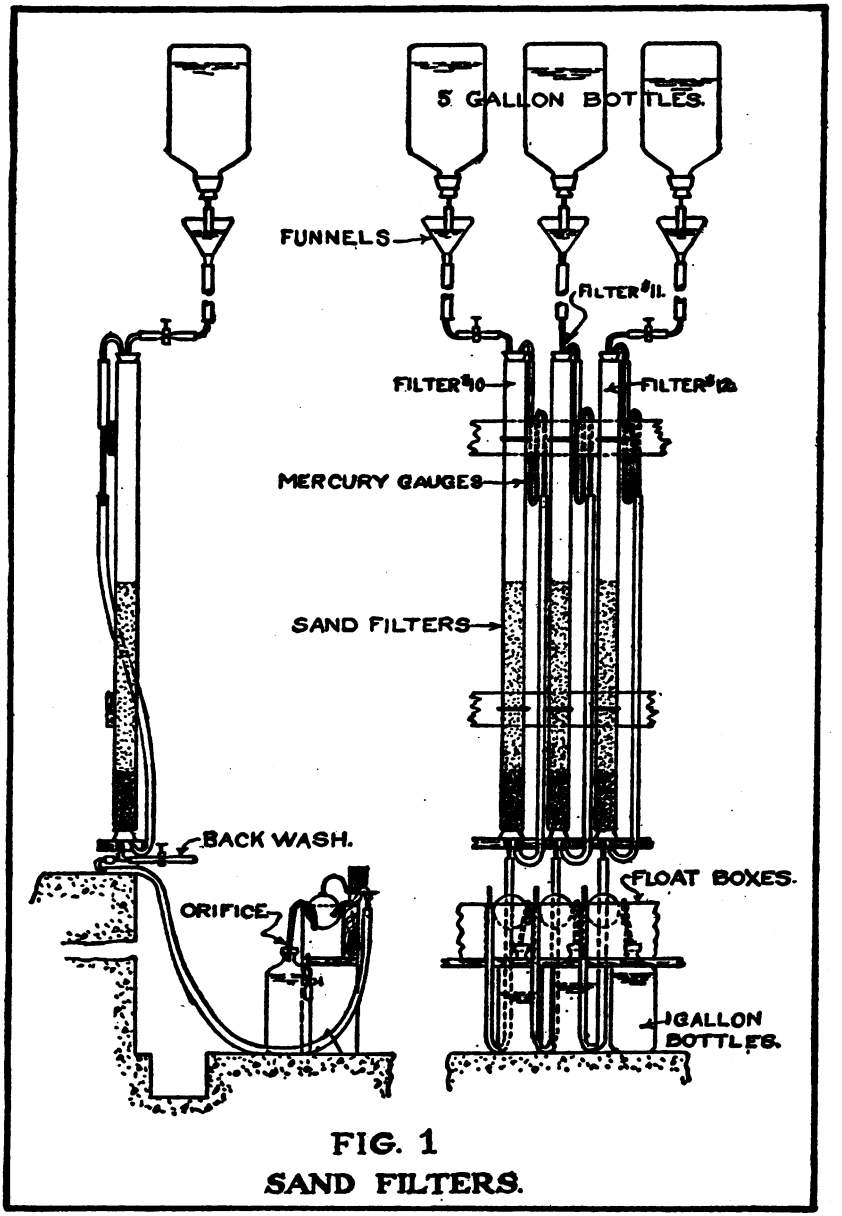

FIG. 1
SAND FILTERS.

PROCEDURE

The fecal suspensions containing the *E. histolytica* cysts were mixed with 5 or 10 gallons of clear water, free from microorganisms or other suspended material which would make enumeration of the *Amoebae* organisms more difficult. Enough of the suspension was used so that the water contained a sufficient number of cysts to be easily enumerated. After mixing the suspension with the water, a sample was collected for determining the number of cysts before treatment and filtration. The water was then coagulated with aluminum sulphate and agitated for about 15 minutes to form a good coagulum. Enough of the coagulant was added so that the water, following customary practice, filtered to a turbidity less than 1. More coagulant usually was required than is necessary for coagulating water of the same turbidity, because there was a larger amount of colloidal material in the sample. The coagulated water was then either filtered directly, or was allowed to stand about 30 minutes and a large portion of the sediment was siphoned off, or the water was siphoned from one bottle to another without removing the sediment. Thus clogging the filters too rapidly was avoided, so that the entire 5 or 10 gallons were filtered without having to wash the filter.

As soon as the sample was prepared for filtration, a rubber stopper containing a short glass tube about 4 inches long was inserted in the 5-gallon bottle. A short rubber tube with a clamp on the end was placed over the end of this glass tube, so that the 5-gallon bottle could be inverted without danger of spilling any of the water. The end of the rubber tube was cut on a slope of about 45°. The bottle was placed over a funnel about 6 inches in diameter, in the manner illustrated in figure 1. The clamp on the rubber tubing was then removed, which allowed the funnel to fill to the height of the end of the tube. The same tube allowed air to pass up into the bottle at the same time that the water was flowing out, until the water in the funnel rose to a point where it prevented air from getting into the bottle. In this manner the water level in the funnel was held almost constant. Previous to filling the funnel, the filter was filled with water so that the water flowing down from the funnel would not disturb the top of the sand bed. The filter was then ready to start operating.

FILTERING

Details of the construction of the sand filters are shown in figure 1. These were Pyrex glass tubes 50 millimeters outside diameter and 5 feet long. Rubber stoppers were provided at both ends of the tube, as shown in the illustration, with the necessary connections for allowing the water to flow into and from the filter, for washing, and connections to the mercury gage to indicate the loss of head. The filter

beds were composed of 24 inches of sand supported on about 8 inches of gravel ranging from a size of about three-fourths inch in diameter at the bottom to about one-eighth inch in diameter at the top of the gravel. The filters had been in use several months prior to these tests, filtering coagulated Lake Michigan water.

The surface areas of the sand beds varied from 2.20 to 2.69 square inches, and the orifices on the rate controllers were calibrated to give the desired rate of flow. After the filters had begun operating, the first gallon of water which passed through was discarded, as it required approximately 3 liters of water to replace that already in the filter. The filtered water was collected in 1-gallon bottles for testing for *Amoebae* cysts, and these were numbered A_1, A_2, etc., in order of collection. The water was allowed to stand at least 1 day so that any cysts which might be present would settle to the bottom of the bottles. The supernatant liquid was siphoned off, using care not to disturb any sediment. The remaining liquid, together with the sediment, was then centrifuged and the sediment was examined for cysts. It is believed that if any cysts passed the filter they would have been detected in this manner.

EXPERIMENTS

A summary of the experiments on the removal of the cysts by coagulation and filtration are given in table 1. All cysts were removed from the water by the treatment. In the tests where counts were not made to determine the number of cysts in the water before treatment and after sedimentation, the examination showed a number about equivalent to those in the tests in which counts were made. The experiments marked "B" contained the same concentration of cysts and, in addition, the same number of *B. coli*, as in the experiments marked "C."

In addition to experiments on the removal of cysts by coagulation and filtration, tests were made on the removal of *B. coli* by the same treatment. The *B. coli* results are summarized in table 2. The reduction in *B. coli* by coagulation, sedimentation, and filtration is about what should be expected under normal operating conditions of a large filtration plant. Probably the only value of the *B. coli* experiments is in showing that there was nothing unusual about the manner of conducting the filtration tests and that some bacteria will pass the filters.

The large variety of cysts was used in all filtration experiments, except experiment 4, in which case the small variety was used.

TESTS TO DETERMINE THE AMOUNT OF CHLORINE OR CHLORAMINE NECESSARY TO KILL E. HISTOLYTICA AND E. COLI CYSTS

PROCEDURE

Chlorine or chloramine and the suspension containing the *E. histolytica* or *E. coli* cysts were added to distilled water in several 1-liter Erlenmeyer flasks. Sodium bicarbonate was used in some tests to neutralize the acid produced by the chlorine. The sodium bicarbonate was added to the distilled water first, the chlorine, in the form of a strong chlorine solution, next, and then 2 to 4 cubic centimeters of a suspension of feces containing the cysts were added and mixed thoroughly with the water. The volume was then made up to 800 cubic centimeters. It was intended to have the pH of the solution between 5.0 and 6.5, but it was not possible to determine the exact pH with the color standards, owing to the high residual chlorine.

Tests were made at various intervals to determine whether the cysts were dead or alive. For testing at each time interval, about 50 cubic centimeters of the solution were withdrawn from each sample, placed in centrifuge tubes, and concentrated by centrifuging at about 1,400 revolutions per minute for 3 minutes. The supernatant liquid was poured off and used for making residual chlorine tests. The sediment was diluted with about 10 cubic centimeters of distilled water, to which about 5 drops of a concentrated solution of peptone had been added. This was to dechlorinate the solution remaining in the tubes. The tubes were again centrifuged, the supernatant liquid was poured off, and the sediment used in making the counts. One drop of the sediment was mixed on a slide with a drop of 1:1000 aqueous eosin solution. A cover glass was placed over this mixture and the living and dead cysts were counted under the microscope. The cysts recorded as living were those which remained colorless; those that absorbed the stain were recorded as dead. This method of distinguishing between dead and live cysts has been generally accepted as being reasonably accurate.

The residual chlorine tests were made by titrating with $\frac{N}{200}$ thiosulphate, using starch-iodide as the indicator. When the residual chlorine was low enough to be determined with orthotolidine, this method was used. Usually only the solution to which 10 parts per million of chlorine had been added could be tested with the orthotolidine.

It was impossible to have exactly 10 minutes' contact time on the first samples tested. The time may have varied from about 8 minutes to 15 minutes, but the tests were made as near the 10-minute time as possible. No attempt was made to have exactly the same number of cysts in each portion of solution. The suspensions were

made with concentrations giving a fairly large number of cysts on the slide, so that the ratio between the living and dead cysts could be determined fairly accurately.

EXPERIMENTS

The results of the experiments are given in tables 3 to 13. It is difficult, from the data, to state the exact amount of chlorine or chloramine which should be used to kill the cysts. Certainly more chlorine is required than would be permissible in a public water supply. Much larger quantities of chloramine than chlorine are required, indicating that chlorine is more effective in killing the cysts. The total number of cysts present usually decreases with the increase in concentration of the chlorine and with the time of contact. This is probably due to the fact that some of the dead cysts are disintegrated by action of the chlorine.

SUMMARY

1. *Endamoeba histolytica* cysts are removed completely from water by coagulation and filtration through rapid sand filter beds.

2. The amount of chlorine or chloramine required to kill the *Endamoeba histolytica* or *Endamoeba coli* cysts is much more than could be used in a public water supply. Chlorine is more effective than chloramine in killing the cysts.

3. *Endamoeba coli* cysts have no greater resistance to chlorine than *Endamoeba histolytica* cysts.

APPENDIX

(Tables)

TABLE 1.—*Removal of E. histolytica cysts by coagulation and filtration*

Experiment no.	Cysts per gallon of water	Aluminum sulphate (p.p.m.)	Time of settling in minutes	Cysts per gallon of settled water	Sample no.	Cysts per gallon of filtered water
1-A	Not counted	60	0		A-2	0
					A-3	0
					A-4	0
					A-5	0
1-B	do	60	0		B-2	0
					B-4	0
					B-5	0
2-A	643,000	60	30	Not counted	A-2	0
					A-3	0
					A-4	0
					A-5	0
2-B	Not counted	60	30	do	B-2	0
					B-3	0
					B-4	0
					B-5	0
3-A	870,000	60	30	189,000	A-2	0
					A-3	0
					A-4	0
					A-5	0

TABLE 1.—*Removal of E. histolytica cysts by coagulation and filtration*—Continued

Experiment no.	Cysts per gallon of water	Aluminum sulphate (p.p.m.)	Time of settling in minutes	Cysts per gallon of settled water	Sample no.	Cysts per gallon of filtered water
3-B	Not counted	60	30	Not counted	B-2	0
					B-3	0
					B-4	0
					B-5	0
4-A	636,000	60	30	257,000	A-2	[1] 0
					A-3	0
					A-4	0
					A-5	0
4-B	Not counted	60	30	Not counted	B-2	0
					B-3	0
					B-4	0
					B-5	0
5-A	568,000	60	30	416,000	A-2	0
					A-3	0
					A-4	0
					A-5	0
					A-6	0
					A-7	0
					A-8	0
					A-9	0
					A-10	0
6-A	568,000	40	30	341,000	A-2	0
					A-3	0
					A-4	0
					A-5	0
					A-6	0
					A-7	0
					A-8	0
					A-9	0
					A-10	0
7-A	511,000	30	30	341,000	A-2	0
					A-3	0
					A-4	0
					A-5	0
					A-6	0
					A-7	0
					A-8	0
					A-9	0
					A-10	0

[1] The samples stood several days before being tested. No cysts were present, but there were a few free-living flagellated organisms. As the water was not sterilized, it is probable that the organisms developed in the filtered water from a few of the organisms per gallon passing the filters.

TABLE 2.—*Removal of B. coli by coagulation and filtration*

Experiment no.	*B. coli* per cubic centimeter before treatment	Aluminum sulphate (p.p.m.)	Time of settling in minutes	*B. coli* per cubic centimeter in filtered water
1-C	No test	60	0	3
2-C	do	60	30	2
3-C	45,000,000	60	30	101
4-C	73,600,000	60	30	5
5-C	116,000,000,000	60	30	696
6-C	3,000,000	40	30	699
7-C	6,000,000	30	30	353

TABLE 3.—*Chlorine death point of E. histolytica cysts*

[176,000 *E. histolytica* cysts (Ruse strain) were added to each sample o 800 cubic centimeters of chlorinated distilled water. Apr. 17, 1934]

Chlorine added (p.p.m.)	Time of contact	Residual chlorine (p.p.m.)	Number *E. histolytica* cysts	
			Living	Dead
ROOM TEMPERATURE (ABOUT 27° C.)				
100	10 minutes	78.1	40	1
50	do	30.5	25	0
25	do	14.2	72	0
100	1 hour	74.5	36	1
50	do	28.4	10	1
25	do	13.3	30	12
100	4 hours	74.5	47	8
50	do	27.8	37	7
25	do	8.9	30	29
100	24 hours	63.9	42	7
50	do	21.3	28	2
25	do	4.4	30	1
100	48 hours	57.8	69	8
50	do	20.1	42	25
25	do	3.5	39	8
OUTSIDE TEMPERATURE (AVERAGE 17° C.)				
100	10 minutes	93.9	33	2
50	do	38.5	40	6
25	do	9.7	51	2
100	1 hour	81.7	44	3
50	do	33.7	32	12
25	do	8.9	27	9
100	4 hours	78.1	36	4
50	do	27.8	20	13
25	do	7.1	42	17
100	24 hours	49.7	13	2
50	do	19.5	28	5
25	do	3.6	28	14
100	48 hours	38.8	60	5
50	do	17.7	47	3
25	do	1.8	23	29
ICE-BOX TEMPERATURE (1° C.)				
100	10 minutes	76.3	30	10
50	do	40.8	40	12
25	do	18.4	50	1
100	1 hour	74.5	24	4
50	do	39.1	27	11
25	do	12.4	27	3
100	4 hours	74.5	13	1
50	do	30.5	33	22
25	do	13.9	34	29
100	24 hours	71.7	31	5
50	do	30.2	31	1
25	do	9.8	53	0
100	48 hours	65.9	56	6
50	do	30.2	41	8
25	do	8.2	25	6

TABLE 4.—*Chlorine death point of E. histolytica cysts*

[176,000 *E. histolytica* cysts (Ruse strain) were added to each sample of 800 cubic centimeters of chlorinated distilled water. Apr. 18, 1934]

AVERAGE TEMPERATURE, 19° C.

Chlorine added (p.p.m.)	Time of contact	Residual chlorine (p.p.m.)	Number *E. histolytica* cysts	
			Living	Dead
10	10 minutes	3.0	65	1
25	do	13.3	51	1
500	do	408.0	0	51
10	1 hour	2.0	32	11
25	do	10.6	31	17
500	do	385.0	0	60
10	4 hours	1.5	24	4
25	do	9.2	5	26
500	do	350.0	0	27
10	24 hours	.6	41	6
25	do	8.0	27	2
500	do	280.0	0	(1)
10	48 hours	.5	2	55
25	do	3.6	3	62
500	do	165.0	2	30

[1] Few cells disintegrated.

TABLE 5.—*Chlorine death point of E. histolytica cysts*

[176,000 *E. histolytica* cysts (Ruse strain) were added to each sample of 800 cubic centimeters of chlorinated water. A proportionate amount of sodium bicarbonate was added to each flask to counteract acidity produced by the chlorine. Residual chlorine was destroyed by peptone solution in samples withdrawn for making the counts. Apr. 23, 1934]

HELD AT OUTSIDE TEMPERATURE (ABOUT 16° C.)

Chlorine added (p.p.m.)	Time of contact	Residual chlorine (p.p.m.)	Number *E. histolytica* cysts	
			Living	Dead
0	10 minutes	0	108	3
10	do	2.6	115	8
25	do	17.6	38	13
100	do	81.7	0	100
10	1 hour	1.7	21	57
25	do	14.5	6	59
100	do	79.4	0	45
10	4 hours	1.5	20	36
25	do	13.2	1	49
100	do	76.8	0	66
0	24 hours	0	44	77
10	do	1.0	6	86
25	do	9.4	0	165
100	do	76.8	0	212
0	48 hours	0	43	6
10	do	.8	14	3
25	do	8.6	1	28
100	do	76.8	4	57

TABLE 6.—*Chlorine death point of E. histolytica cysts*

[90,000 *E. histolytica* cysts (Foster strain) were added to each sample of 800 cubic centimeters of chlorinated distilled water. Sodium bicarbonate was added to each flask before the addition of chlorine to neutralize excess acidity. Samples withdrawn for counts were dechlorinated with peptone solution. May 2, 1934]

HELD AT OUTSIDE TEMPERATURE (23° C. TO 26° C.)

Chlorine added (p.p.m.)	Time of contact	Residual chlorine (p.p.m.)	Number *E. histolytica* cysts	
			Living	Dead
0	10 minutes	0	146	7
10	do	6.5	168	35
25	do	17.8	15	74
50	do	41.7	6	77
100	do	98.4	0	78
10	1 hour	5.2	216	31
25	do	16.9	185	54
50	do	39.1	11	106
100	do	88.7	7	41
0	4 hours	0	250	54
10	do	4.0	210	31
25	do	16.9	98	40
50	do	39.1	5	91
100	do	84.2	0	51
0	24 hours	0	56	9
10	do	2.2	39	26
25	do	12.4	13	34
50	do	25.0	0	17
100	do	78.1	0	25
0	48 hours	0	51	17
10	do	.4	74	50
25	do	4.4	30	52
50	do	19.6	0	39
100	do	53.3	0	36

TABLE 7.—*Chlorine death point of E. histolytica cysts*

[152,000 *E. histolytica* cysts (Keeler strain) were added to each sample of chlorinated distilled water. Sodium bicarbonate was added to neutralize the excess acidity produced by the chlorine. Samples withdrawn for counts were dechlorinated with peptone solution. May 2, 1934]

HELD AT OUTSIDE TEMPERATURE (AVERAGE 24° C.)

Chlorine added (p.p.m.)	Time of contact	Residual chlorine (p.p.m.)	Number *E. histolytica* cysts	
			Living	Dead
0	10 minutes	0	112	4
10	do	6.0	161	12
25	do	19.5	70	33
50	do	44.5	23	55
100	do	89.0	17	120
0	1 hour	0	135	12
10	do	5.5	37	15
25	do	18.6	14	19
50	do	40.8	0	54
100	do	85.2	0	34
0	4 hours	0	146	8
10	do	4.5	38	16
25	do	18.6	0	47
50	do	39.0	0	51
100	do	82.0	0	41
0	24 hours	0	101	10
10	do	.8	106	44
25	do	8.8	25	70
50	do	33.8	0	99
100	do	71.0	0	147
0	48 hours	0	51	3
10	do	.5	8	34
25	do	3.6	0	34
50	do	24.9	0	47
100	do	60.4	0	57

TABLE 8.—*Chlorine death point of E. histolytica cysts*

[90,000 *E. histolytica* cysts (Foster strain) were added to each sample of 800 cubic centimeters of chlorinated distilled water. Sodium bicarbonate was added to each flask to neutralize excess acidity. Samples withdrawn for counts were dechlorinated with peptone solution. May 3, 1934]

HELD AT OUTSIDE TEMPERATURE (AVERAGE 24° C)

Chlorine added (p.p.m.)	Time of contact	Residual chlorine (p.p.m.)	Number *E. histolytica* cysts	
			Living	Dead
0	10 minutes	0	149	9
10	do	7.0	180	13
25	do	19.5	89	18
50	do	40.8	51	37
100	do	85.2	17	41
10	1 hour	5.5	138	20
25	do	19.5	36	9
50	do	39.0	17	57
100	do	82.0	0	43
0	24 hours	0	83	16
10	do	1.5	96	16
25	do	4.4	6	31
50	do	37.3	0	42
100	do	60.4	0	38
0	48 hours	0	58	3
10	do	.2	51	16
25	do	3.6	2	36
50	do	16.0	0	34
100	do	46.1	0	26

TABLE 9.—*Chlorine death point of E. histolytica cysts (small variety)*

[A large number of *E. histolytica* cysts of the small variety were added to each sample of 800 cubic centimeters of chlorinated water. Sodium bicarbonate was used to neutralize excess acidity produced by the chlorine. Samples withdrawn for counts were dechlorinated with peptone solution. May 4, 1934]

HELD AT OUTSIDE TEMPERATURE (AVERAGE 25° C)

Chlorine added (p.p.m.)	Time of contact	Residual chlorine (p.p.m.)	Number *E. histolytica* cysts	
			Living	Dead
0	10 minutes	0	101	10
10	do	3.5	189	10
25	do	8.8	62	16
100	do	71.0	10	43
10	1 hour	2.8	22	7
25	do	8.0	18	14
100	do	67.5	1	46
0	4 hours	0	14	3
10	do	2.0	22	8
25	do	6.2	16	19
100	do	61.0	0	43
0	24 hours	0	49	4
10	do	.5	14	30
25	do	5.3	2	28
100	do	35.5	1	49
0	48 hours	0	51	7
10	do	.4	24	11
25	do	4.4	10	20
100	do	43.0	0	33

TABLE 10.—*Chlorine death point of E. coli cysts*

[A large number of *E. coli* cysts were added to 800 cubic centimeter portions of chlorinated distilled water. Sodium bicarbonate was added to neutralize excess acidity produced by the chlorine. Samples withdrawn for counts were dechlorinated with peptone solution. May 5, 1934]

HELD AT OUTSIDE TEMPERATURE (AVERAGE 24° C.)

Chlorine added (p.p.m.)	Time of contact	Residual chlorine (p.p.m.)	Number *E. coli* cysts	
			Living	Dead
0	10 minutes	0	117	0
10	do	8.0	152	0
50	do	32.2	75	8
100	do	64.0	71	16
10	1 hour	6.5	151	0
50	do	24.8	17	65
100	do	60.4	0	47
0	4 hours	0	164	1
10	do	5.5	183	1
50	do	16.0	1	51
100	do	64.0	0	36
10	24 hours	1.3	155	4
50	do	5.2	9	108
100	do	39.0	0	78
0	48 hours	0	113	1
10	do	0	176	5
50	do	5.2	4	59
100	do	32.0	2	53

TABLE 11.—*Chloramine death point of E. histolytica cysts*

[*E. histolytica* cysts (Kesler strain) were added to 800 cubic centimeters of distilled water containing ammonia and chlorine as a chloramine treatment. Samples withdrawn for counts were dechlorinated with peptone solution. Apr. 25, 1934]

HELD AT OUTSIDE TEMPERATURE (14° C.)

Chlorine added (p.p.m.)	Ammonia (NH_3) added (p.p.m.)	Time of contact	Residual chlorine (p.p.m.)	Number *E. histolytica* cysts	
				Living	Dead
0	0	10 minutes	0	151	6
10	5	do	9.5	203	23
25	12.5	do	21.3	184	15
50	25	do	47.0	192	12
100	50	do	96.5	82	7
250	125	do	96.0	101	26
500	250	do	142.0	8	75
10	5	1 hour	9.0	129	9
25	12.5	do	20.4	110	20
50	25	do	40.9	119	17
100	50	do	81.7	104	30
250	125	do	96.0	67	43
500	250	do	46.0	0	120
0	0	4 hours	0	135	6
10	5	do	9.0	113	25
25	12.5	do	20.4	51	17
50	25	do	40.9	59	21
100	50	do	81.7	49	29
250	125	do	93.7	13	28
500	250	do	40.0	0	205
0	0	24 hours	0	151	6
10	5	do	8.5	45	23
25	12.5	do	19.8	61	58
50	25	do	38.5	11	107
100	50	do	76.8	2	176
250	125	do	81.7	5	107
500	250	do	33.0	0	121
0	0	48 hours	0	158	14
10	5	do	7.5	80	78
25	12.5	do	19.8	31	104
50	25	do	38.5	13	178
100	50	do	72.5	0	203
250	125	do	[1] 78.4	0	45
500	250	do	[1] 20.5	0	77

[1] Excess acidity.

TABLE 12.—*Chloramine death point of E. histolytica cysts*

[185,000 *E. histolytica* cysts (Keeler strain) were added to 800 cubic centimeters of distilled water containing chlorine and ammonia as indicated. Sodium bicarbonate solution was added to neutralize excess acidity. The samples withdrawn for counts were dechlorinated with peptone solution. Apr. 28, 1934]

HELD AT OUTSIDE TEMPERATURES (21.5° C.)

Chlorine added (p.p.m.)	Ammonia (NH_3) added (p.p.m.)	Time of contact	Residual chlorine (p.p.m.)	Number *E. histolytica* cysts	
				Living	Dead
0	0	10 minutes	0	111	8
10	5	do	9.5	190	23
25	12.5	do	20.4	181	21
50	25	do	40.9	136	32
100	50	do	81.7	165	50
250	125	do	192.0	81	36
500	250	do	334.0	135	53
10	5	1 hour	9.0	125	16
25	12.5	do	19.2	136	20
50	25	do	41.6	121	36
100	50	do	81.7	98	42
250	125	do	188.0	81	74
500	250	do	262.0	43	57
0	0	4 hours	0	114	9
10	5	do	8.5	161	32
25	12.5	do	20.4	129	35
50	25	do	41.6	122	38
100	50	do	81.7	106	76
250	125	do	188	26	69
500	250	do	248	17	97
0	0	24 hours	0	157	17
10	5	do	8.0	123	33
25	12.5	do	17.0	142	36
50	25	do	38.4	88	73
100	50	do	74.2	58	78
250	125	do	177	18	81
500	250	do	222	9	144
0	0	48 hours	0	122	23
10	5	do	8.0	171	59
25	12.5	do	20.4	133	73
50	25	do	42.6	90	104
100	50	do	88.8	65	168
250	125	do	181.0	31	141
500	250	do	234.0	10	178

TABLE 13.—*Chloramine death point of E. histolytica cysts*

[76,000 *E. histolytica* cysts (Foster strain) were added to 800 cubic centimeters of distilled water to which sodium bicarbonate, ammonia, and chlorine had been previously added. Samples withdrawn for counts were dechlorinated with peptone solution. May 2, 1934]

HELD AT OUTSIDE TEMPERATURE (15.5° C.)

Chlorine added (p.p.m.)	Ammonia (NH_3) added (p.p.m.)	Time of contact	Residual chlorine (p.p.m.)	Number *E. histolytica* cysts	
				Living	Dead
0	0	10 minutes	0	74	6
10	5	do	5	109	5
25	12.5	do	14.3	95	13
50	25	do	34.4	85	17
100	50	do	81.6	66	35
250	125	do	234.3	50	44
500	250	do	440	19	23
10	5	1 hour	4.5	102	18
25	12.5	do	13.0	130	34
50	25	do	34.4	105	37
100	50	do	81.6	59	74
250	125	do	206.0	5	95
500	250	do	426	10	154

TABLE 13.—*Chloramine death point of E. histolytica cysts*

HELD AT OUTSIDE TEMPERATURE (15.5° C)

Chlorine added (p.p.m.)	Ammonia (NH_3) added (p.p.m.)	Time of contact	Residual chlorine (p.p.m.)	Number *E. histolytica* cysts	
				Living	Dead
0	0	3 hours	0	397	59
10	5	do	4	337	95
25	12.5	do	11.7	164	61
50	25	do	30.2	165	161
100	50	do	84.2	19	119
250	125	do	198.0	3	114
500	250	do	405	0	208
0	0	24 hours	0	124	21
10	5	do	2.8	69	32
25	12.5	do	11.7	56	39
50	25	do	30.2	38	63
100	50	do	78.1	3	[1] 7
250	125	do	181	18	113
500	250	do	348	3	56
0	0	48 hours	0	96	15
10	5	do	2.5	77	76
25	12.5	do	9.8	93	117
50	25	do	30.2	28	133
100	50	do	78.1	7	46
250	125	do	181.0	4	85
500		do	342	0	43

[1] Many cysts disintegrated.

COURT DECISION ON PUBLIC HEALTH

Death resulting from infection following vaccination held compensable under workmen's compensation act.—(Ohio Supreme Court; *Spicer Mfg. Co.* v. *Tucker*, 188 N.E. 870; decided Jan. 10, 1934.) An employee of a manufacturing company, after working for several days, was ordered by his foreman to go, during working hours, to the first-aid plant hospital to be vaccinated by the company physician. After being so vaccinated he resumed his work. Later his arm became so inflamed, swollen, and painful that he could not continue at work, and approximately 3 weeks after being vaccinated he died. The employee's widow filed a claim under the workmen's compensation act and the supreme court sustained her claim, holding that the employee had received an accidental physical injury arising out of or in the course of his employment.

DEATHS DURING WEEK ENDED JUNE 16, 1934

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended June 16, 1934	Corresponding week, 1933
Data from 86 large cities of the United States:		
Total deaths	7,388	7,636
Deaths per 1,000 population, annual basis	10.3	10.6
Deaths under 1 year of age	523	552
Deaths under 1 year of age per 1,000 estimated live births	49	[1] 47
Deaths per 1,000 population, annual basis, first 24 weeks of year	12.2	11.6
Data from industrial insurance companies:		
Policies in force	67,771,847	67,756,926
Number of death claims	12,523	12,942
Death claims per 1,000 policies in force, annual rate	9.6	10.0
Death claims per 1,000 policies, first 24 weeks of year, annual rate	10.7	10.5

[1] Data for 81 cities.

PREVALENCE OF DISEASE

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

UNITED STATES

CURRENT WEEKLY STATE REPORTS

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

Reports for Weeks Ended June 23, 1934, and June 24, 1933

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended June 23, 1934, and June 24, 1933

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended June 23, 1934	Week ended June 24, 1933	Week ended June 23, 1934	Week ended June 24, 1933	Week ended June 23, 1934	Week ended June 24, 1933	Week ended June 23, 1934	Week ended June 24, 1933
New England States:								
Maine	----	1	1	1	2	2	0	0
New Hampshire	----	----	----	----	69	14	0	0
Vermont	3	----	----	----	25	37	0	0
Massachusetts	11	13	----	----	580	478	1	0
Rhode Island	1	2	----	----	46	5	0	0
Connecticut	6	3	----	----	178	134	0	0
Middle Atlantic States:								
New York	54	48	[1] 1	[1] 6	794	1,215	1	6
New Jersey	24	16	2	1	521	533	1	2
Pennsylvania	53	47	----	----	1,870	826	0	2
East North Central States:								
Ohio	12	16	3	3	472	254	1	0
Indiana	19	11	9	18	240	64	0	1
Illinois [2]	14	17	6	10	1,308	34	5	8
Michigan	8	30	1	----	283	343	3	2
Wisconsin	10	3	7	14	1,432	182	3	0
West North Central States:								
Minnesota	2	6	----	----	53	103	0	1
Iowa [3] [4]	6	6	----	----	129	40	0	1
Missouri	27	17	20	----	123	93	2	0
North Dakota	----	1	----	----	102	21	0	0
South Dakota	----	4	----	----	86	----	0	0
Nebraska	6	----	----	----	30	7	0	0
Kansas	8	1	----	----	188	94	0	1
South Atlantic States:								
Delaware [4]	----	----	----	----	31	5	0	0
Maryland [2] [3] [4]	2	3	1	1	397	35	2	0
District of Columbia	3	1	----	----	21	16	2	0
Virginia [4]	6	8	----	----	742	174	8	1
West Virginia	10	6	----	----	100	87	0	1
North Carolina [4]	8	8	3	5	343	273	0	0
South Carolina	1	2	99	65	62	99	0	0
Georgia [3]	13	11	----	----	----	120	0	0
Florida [3]	5	8	----	3	115	16	0	0
East South Central States:								
Kentucky	8	6	----	----	321	20	3	1
Tennessee	3	4	5	8	131	128	2	1
Alabama [2]	8	7	18	3	191	17	0	1
Mississippi [3]	5	1	----	----	----	----	0	0

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended June 23, 1934, and June 24, 1933—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended June 23, 1934	Week ended June 24, 1933	Week ended June 23, 1934	Week ended June 24, 1933	Week ended June 23, 1934	Week ended June 24, 1933	Week ended June 23, 1934	Week ended June 24, 1933
West South Central States:								
Arkansas	3	6	4		9	91	0	1
Louisiana	7	8	4	14	73	31	0	1
Oklahoma [5]	1	2	20	11	79	45	0	1
Texas [2]	34	62	31	40	176	202	0	2
Mountain States:								
Montana [4]				1	21	44	0	0
Idaho [4]	1		2		2	2	0	0
Wyoming [4]					65	2	5	0
Colorado [4]	3	2			456	7	0	0
New Mexico	1	3			33	11	0	0
Arizona	2			4	13	31	0	0
Utah [5]					6	60	0	0
Pacific States:								
Washington	3				198	42	0	0
Oregon [4]	2	1	17	11	24	13	0	1
California	35	26	37	10	490	558	2	2
Total	428	417	291	229	12,630	6,608	41	37

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended June 23, 1934	Week ended June 24, 1933	Week ended June 23, 1934	Week ended June 24, 1933	Week ended June 23, 1934	Week ended June 24, 1933	Week ended June 23, 1934	Week ended June 24, 1933
New England States:								
Maine	0	0	10	7	0	0	0	4
New Hampshire	1	0	5	3	0	0	1	0
Vermont	0	0	10	4	0	0	0	0
Massachusetts	2	0	168	226	0	0	0	0
Rhode Island	0	0	12	13	0	0	2	0
Connecticut	0	1	17	56	0	0	0	2
Middle Atlantic States:								
New York	8	1	344	321	0	0	15	14
New Jersey	2	1	84	82	0	0	4	4
Pennsylvania	1	1	359	236	0	0	29	27
East North Central States:								
Ohio	1	2	221	162	1	4	15	15
Indiana	0	0	35	33	1	1	3	13
Illinois [3]	1	3	290	178	1	2	27	20
Michigan	0	0	212	183	0	2	8	4
Wisconsin	1	0	242	59	7	20	3	4
West North Central States:								
Minnesota	0	2	49	34	2	1	1	1
Iowa [3 4]	0	1	16	6	0	2	1	3
Missouri	0	0	20	27	1	1	18	12
North Dakota	0	1	26	3	0	1	1	0
South Dakota	0	1	5	7	0	0	0	2
Nebraska	0	0	10	5	5	4	1	0
Kansas	0	1	21	21	4	2	4	4
South Atlantic States:								
Delaware [4]	0	0	4	0	0	0	0	0
Maryland [2 3 4]	0	0	26	40	0	0	7	8
District of Columbia	0	0	7	7	0	0	0	1
Virginia [4]	0	1	11	21	0	0	7	40
West Virginia	1	0	24	13	0	5	13	9
North Carolina [4]	0	1	15	10	0	0	13	37
South Carolina	0	1	1	4	0	0	15	32
Georgia [2]	0	0	2	6	0	0	59	55
Florida [2]	6	0	1	3	0	1	1	1
East South Central States:								
Kentucky	0	0	13	16	5	0	23	38
Tennessee	0	0	2	6	0	1	13	48
Alabama [2]	5	0	10	7	0	0	19	13
Mississippi [2]	0	0	1	8	0	1	9	20

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended June 23, 1934, and June 24, 1933—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended June 23, 1934	Week ended June 24, 1933	Week ended June 23, 1934	Week ended June 24, 1933	Week ended June 23, 1934	Week ended June 24, 1933	Week ended June 23, 1934	Week ended June 24, 1933
West South Central States:								
Arkansas	0	1	2	1	0	0	14	22
Louisiana	1	1	6	10	0	0	25	29
Oklahoma [5]	1	0	5	9	2	0	6	20
Texas [2]	0	1	22	41	22	64	29	56
Mountain States:								
Montana [4]	1	0	8	9	0	1	2	3
Idaho [4]	0	0	----	2	4	0	2	2
Wyoming [4]	0	0	2	11	2	0	1	1
Colorado [4]	0	0	15	8	4	0	1	0
New Mexico	1	0	9	14	0	1	7	2
Arizona	0	0	6	8	0	0	3	0
Utah [3]	0	1	2	6	0	0	0	0
Pacific States:								
Washington	2	0	35	22	6	6	1	3
Oregon [4]	1	0	20	10	7	19	2	4
California	340	4	134	113	1	12	11	9
Total	376	26	2,539	2,071	75	151	416	582

[1] New York City only.
[2] Typhus fever, week ended June 23, 1934, 19 cases, as follows: Illinois, 1; Maryland, 1; Georgia 10, Florida, 1; Alabama, 4; Texas, 2.
[3] Week ended earlier than Saturday.
[4] Rocky Mountain spotted fever, week ended June 23, 1934, 19 cases, as follows: Iowa, 1; Delaware, 2; Maryland, 2; Virginia, 1; North Carolina, 1; Montana, 5; Idaho, 2; Wyoming 3; Colorado, 1; Oregon, 1.
[5] Exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

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

State	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
April 1934										
Delaware	1	6	1	----	488	----	0	32	0	5
Georgia	2	29	286	126	2,555	21	0	36	----	40
May 1934										
Alabama	10	30	149	198	2,799	29	1	28	0	20
Idaho	2	6	6	----	419	----	9	14	10	----
Illinois	34	139	130	19	10,890	2	4	2,210	10	16
Kansas	1	40	12	1	2,662	----	1	141	14	14
Louisiana	4	74	37	158	884	18	2	61	7	70
Montana	2	11	94	----	410	----	1	39	6	5
New Mexico	2	14	30	33	538	1	0	50	0	10
Oklahoma [1]	6	29	104	49	745	1	3	26	14	17
Oregon	1	4	93	5	222	----	3	137	8	6
Puerto Rico	----	47	50	1,677	105	----	0	----	0	37
Rhode Island	----	6	2	----	180	----	0	95	0	3
Texas	10	256	783	1,481	3,664	61	4	269	195	65
Virginia	7	41	101	6	5,061	16	0	101	0	30
Washington	8	12	21	----	935	----	4	251	9	19
West Virginia	6	22	63	----	587	----	1	259	2	27

[1] Exclusive of Oklahoma City and Tulsa.

Summary of monthly reports from States—Continued

April 1934

Anthrax:	Cases
Delaware	1
Chicken pox:	
Delaware	23
Georgia	141
Conjunctivitis:	
Georgia	20
Dysentery:	
Georgia (amoebic)	17
Georgia (bacillary)	6
Mumps:	
Delaware	32
Georgia	355
Septic sore throat:	
Georgia	102
Tularaemia:	
Georgia	10
Typhus fever:	
Georgia	17
Undulant fever:	
Delaware	1
Georgia	10
Whooping cough:	
Delaware	60
Georgia	291

May 1934

Chicken pox:	
Alabama	128
Idaho	12
Illinois	1,740
Kansas	275
Louisiana	50
Montana	106
New Mexico	29
Oklahoma [1]	27
Oregon	173
Puerto Rico	138
Rhode Island	104
Texas	715
Virginia	214
Washington	291
West Virginia	121
Conjunctivitis:	
Illinois	1
Dengue:	
Texas	1
Dysentery:	
Alabama	2
Illinois (amoebic)	25
Illinois (amoebic carriers)	262
Illinois (bacillary)	3
Kansas	1
Louisiana	5
New Mexico	1
Oklahoma [1]	5
Oregon (amoebic)	1
Puerto Rico	106
Texas	89
Virginia	69
Virginia (amoebic)	1
Filariasis:	
Puerto Rico	7
Food poisoning:	
New Mexico	1
German measles:	
Alabama	134
Illinois	1,380
Kansas	337
Montana	106
German measles—contd.	Cases
New Mexico	113
Rhode Island	4
Washington	55
Hookworm disease:	
Louisiana	12
Impetigo contagiosa:	
Oregon	28
Lead poisoning:	
Illinois	1
Leprosy:	
Louisiana	3
Puerto Rico	1
Lethargic encephalitis:	
Alabama	1
Illinois	3
Kansas	3
Montana	2
Oklahoma [1]	1
Texas	6
Virginia	2
Washington	1
Mumps:	
Alabama	110
Idaho	35
Illinois	2,016
Kansas	365
Louisiana	11
Montana	20
New Mexico	13
Oklahoma [1]	94
Oregon	50
Puerto Rico	39
Rhode Island	2
Texas	168
Virginia	176
Washington	664
West Virginia	9
Ophthalmia neonatorum:	
Illinois	6
New Mexico	1
Oregon	1
Puerto Rico	8
Rhode Island	2
Washington	1
Paratyphoid fever:	
Illinois	1
Louisiana	4
Oregon	4
Rhode Island	1
Texas	10
Puerperal septicemia:	
Illinois	4
New Mexico	4
Oregon	1
Puerto Rico	11
Rabies in animals:	
Alabama	115
Illinois	36
Kansas	12
Louisiana	51
Washington	10
Rabies in man:	
Alabama	1
Rocky Mountain Spotted fever:	
Idaho	16
Montana	17
Oregon	18
Virginia	5
Washington	4
Scabies:	Cases
Kansas	2
Montana	3
Oklahoma [1]	1
Oregon	20
Septic sore throat:	
Idaho	3
Illinois	14
Kansas	3
Louisiana	7
New Mexico	7
Oklahoma [1]	19
Oregon	5
Rhode Island	4
Virginia	20
Washington	2
West Virginia	1
Tetanus:	
Alabama	1
Louisiana	3
Puerto Rico	24
Tetanus, infantile:	
Puerto Rico	7
Trachoma:	
Illinois	3
Kansas	1
Oklahoma [1]	6
Puerto Rico	22
Tularaemia:	
Alabama	3
Illinois	1
Louisiana	2
Montana	4
Oregon	1
Typhus fever:	
Alabama	11
Louisiana	2
Texas	17
Virginia	2
Undulant fever:	
Alabama	1
Idaho	1
Illinois	9
Kansas	4
Louisiana	5
Montana	3
Oregon	2
Virginia	2
Washington	1
Vincent's infection:	
Illinois	66
Kansas	8
Oklahoma [1]	2
Oregon	7
Whooping cough:	
Alabama	243
Idaho	26
Illinois	1,953
Kansas	769
Louisiana	43
Montana	59
New Mexico	143
Oklahoma [1]	126
Oregon	149
Puerto Rico	214
Rhode Island	153
Texas	1,641
Virginia	560
Washington	678
West Virginia	437

[1] Exclusive of Oklahoma City and Tulsa.

WEEKLY REPORTS FROM CITIES

City reports for week ended June 16, 1934

[This table summarizes the reports received regularly from a selected list of 121 cities for the purpose of showing a cross-section of the current urban incidence of the communicable diseases listed in the table. Weekly reports are received from about 700 cities, from which the data are tabulated and filed for reference]

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Maine:											
Portland	0		0	0	0	10	0	0	0	9	21
New Hampshire:											
Concord	0		0	1	2	0	0	1	0	1	11
Nashua	0			5		1	0		0	0	
Vermont:											
Barre	0		0	0	0	0	0	0	0	0	4
Burlington	0		0	12	0	3	0	1	0	0	9
Massachusetts:											
Boston	0		0	197	13	46	0	10	[1] 1	48	185
Fall River	0		0	0	0	1	0	1	0	4	28
Springfield	0		0	0	0	1	0	0	0	4	36
Worcester	1		0	0	6	6	0	2	0	9	50
Rhode Island:											
Pawtucket	0		0	0	0	0	0	0	0	0	14
Providence	3		0	7	1	8	0	1	0	30	55
Connecticut:											
Bridgeport	0		0	1	1	4	0	3	0	2	32
Hartford	1		0	25	1	4	0	1	0	1	27
New Haven	0		0	1	1	2	0	0	0	8	25
New York:											
Buffalo	1		0	34	17	19	0	1	0	9	118
New York	27	9	2	338	93	162	0	86	9	172	1,344
Rochester	0		0	4	2	34	0	3	0	5	54
Syracuse	0		0	56	4	11	0	0	0	47	55
New Jersey:											
Camden	1		0	0	2	7	0	1	0	0	29
Newark	0	2	0	19	4	10	0	9	0	40	86
Trenton	0		0	23	1	8	0	1	0	0	38
Pennsylvania:											
Philadelphia	7		1	129	11	60	0	28	1	70	412
Pittsburgh	12	3	1	257	18	37	0	4	1	28	147
Reading	0		0	0	1	0	0	0	0	7	26
Scranton	1			7		4	0		0	5	
Ohio:											
Cincinnati	0		0	4	6	10	0	10	1	11	132
Cleveland	10		1	334	17	65	0	6	0	38	182
Columbus	1		0	6	5	30	0	5	0	22	75
Toledo	0		0	67	2	36	0	6	5	80	67
Indiana:											
Fort Wayne	4		0	12	2	2	0	0	0	0	18
Indianapolis	2		0	84	3	6	0	0	0	21	
South Bend	0		0	23	2	0	0	0	0	0	15
Terre Haute	0		0	0	1	0	0	0	0	0	15
Illinois:											
Chicago	5	1	2	580	55	227	0	43	7	111	649
Cicero			0		0			1			3
Springfield	2		0	6	1	1	0	1	1	11	19
Michigan:											
Detroit	4	1	0	123	18	38	0	16	3	53	231
Flint	0		0	0	1	28	0	1	0	13	11
Grand Rapids	0		0	5	0	19	0	0	0	1	27
Wisconsin:											
Kenosha	1		0	5	0	1	0	0	0	5	8
Milwaukee	0	1	1	289	8	157	0	0	0	99	82
Racine	0		0	2	0	4	0	0	0	4	12
Superior	0		0	11	1	0	0	0	0	0	5
Minnesota:											
Duluth	0		1	1	1	2	0	0	0	4	20
Minneapolis	3		0	12	7	19	0	1	0	9	97
St. Paul	0		0	6	0	8	0	2	0	20	58
Iowa:											
Davenport	0			1		1	0		0	0	
Des Moines	0			0	2	0	0		0	0	29
Sioux City	1			40		0	0		0	4	
Waterloo	0			4		0	0		0	1	

[1] Nonresident.

City reports for week ended June 16, 1934—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Missouri:											
Kansas City	1		0	2	7	9	0	7	0	7	116
St. Joseph	1		0	1	1	1	0	0	0	3	10
St. Louis	9		0	2	3	11	0	13	0	37	189
North Dakota:											
Fargo	0		0	9	1	0	0	0	0	28	5
South Dakota:											
Aberdeen	0			37		0	0		0	16	
Nebraska:											
Omaha	2		0	6	9	7	1	4	0	8	50
Kansas:											
Topeka	0		0	26	1	0	0	0	0	54	8
Wichita	2		0	8	3	1	0	0	0	8	26
Delaware:											
Wilmington	2		0	10	2	0	0	1	0	1	26
Maryland:											
Baltimore	2		0	375	8	14	0	3	2	74	182
Cumberland	0		0	6	0	0	0	0	1	0	6
Frederick	0		0	0	0	1	0	0	0	0	5
District of Columbia:											
Washington	8	1	0	27	8	5	0	11	1	28	147
Virginia:											
Lynchburg	0		0	77	0	1	0	0	0	8	7
Norfolk	0		0	4	1	1	0	0	0	12	25
Richmond	0		0	107	1	1	0	5	3	0	49
Roanoke	1	0	0	4	0	0	0	0	0	0	17
West Virginia:											
Charleston	1		0	14	1	0	0	0	0	2	18
Huntington	1			1		3	0		0	0	
Wheeling	0		0	5	1	7	0	0	0	2	12
North Carolina:											
Raleigh											
Wilmington	0		0	5	0	0	0	0	0	37	9
Winston-Salem	0		0	1	0	0	0	1	0	2	12
South Carolina:											
Charleston	0	3	0	4	0	1	0	1	1	0	21
Columbia	0		0	0	3	0	0	0	0	0	22
Greenville	0		0	9	0	0	0	0	0	10	4
Georgia:											
Atlanta	3	2	0	17	1	0	0	1	1	19	64
Brunswick	0		0	0	0	0	0	0	0	0	2
Savannah	0	1	1	4	0	0	0	3	0	5	36
Florida:											
Miami	0		0	33	1	0	0	1	0	6	18
Tampa	3		0	24	0	1	0	1	0	0	16
Kentucky:											
Ashland	0			4		0	0		1	0	
Lexington	1		0	40	3	0	0	2	2	10	16
Louisville	2		0	137	4	5	0	1	0	20	63
Tennessee:											
Memphis	0		0	8	4	0	0	3	2	5	67
Nashville	1		0	2	4	0	0	4	0	2	45
Alabama:											
Birmingham	0		0	40	2	0	0	2	2	4	53
Mobile	0	2	0	0	0	0	0	0	1	2	21
Montgomery	0			10		0	0		0	2	
Arkansas:											
Fort Smith	0			0		0	0		0	1	
Little Rock	0		0	1	2	1	0	3	0	6	6
Louisiana:											
New Orleans	9		0	14	5	5	0	12	6	2	135
Shreveport	0		0	1	0	0	1	5	0	1	39
Oklahoma:											
Oklahoma City	0		0	1	7	1	4	1	0	0	34
Tulsa	0			0		0	0		0	13	
Texas:											
Dallas	3		0		3	1	0	1	0	6	54
Fort Worth	0		0	1	0	3	0	1	1	3	29
Galveston	0		0	0	1	2	0	1	0	0	21
Houston	0		1	2	4	0	1	2	1	0	67
San Antonio	0		1	0	3	1	0	3	0	0	74

City reports for week ended June 16, 1934—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Montana:											
Billings	6		0	0	0	0	0	0	0	3	11
Great Falls	0		0	0	1	0	0	0	0	0	5
Helena	0		0	0	0	0	0	0	0	0	2
Missoula	0	1	1	0	0	0	0	0	0	0	2
Idaho:											
Boise	1		0	3	0	0	0	0	0	1	5
Colorado:											
Denver	6	29	1	376	4	15	0	4	0	19	82
Pueblo	0		0	41	1	5	0	0	0	5	6
New Mexico:											
Albuquerque	0		0	7	1	0	0	5	0	6	15
Utah:											
Salt Lake City	0		0	5	0	4	1	0	0	121	37
Nevada:											
Reno	0		0	1	0	0	0	0	0	0	2
Washington:											
Seattle	0			19		17	3	3	1	24	83
Spokane	0		0	11	2	1	0	1	0	45	26
Tacoma	0		0	70	3	1	0	1	0	14	27
Oregon:											
Portland	0		0	16	4	9	0	1	0	4	67
Salem	0	1		1		0	0		0	4	
California:											
Los Angeles	19	25	0	23	7	39	0	15	0	56	274
Sacramento	0		0	1	0	5	0	1	2	9	
San Francisco	1	1	2	401	5	7	0	8	0	15	152

State and city	Meningococcus meningitis		Poliomyelitis cases	State and city	Meningococcus meningitis		Poliomyelitis cases
	Cases	Deaths			Cases	Deaths	
Massachusetts:				Kansas:			
Springfield	1	0	0	Topeka	1	0	0
Connecticut:				Kentucky:			
New Haven	1	0	0	Louisville	0	1	0
New York:				Tennessee:			
New York	3	2	3	Memphis	1	0	0
Pennsylvania:				Arkansas:			
Philadelphia	1	0	0	Little Rock	0	1	0
Pittsburgh	0	0	1	Idaho:			
Ohio:				Boise	0	0	1
Cincinnati	1	2	0	Colorado:			
Toledo	1	1	0	Denver	1	1	0
Illinois:				Washington:			
Chicago	6	1	1	Seattle	0	0	1
Michigan:				Spokane	0	0	1
Detroit	1	1	0	California:			
Nebraska:				Los Angeles	0	1	99
Omaha	0	0	1	Sacramento	0	0	1
				San Francisco	0	0	20

Lethargic encephalitis.—Cases: New York, 3; St. Louis, 2.
Pellagra.—Cases: Savannah, 3; Louisville, 1; Memphis, 1; Birmingham, 2; New Orleans, 1.
Rabies in man.—Houston, 1 death

FOREIGN AND INSULAR

CANADA

Vital statistics—Year 1933, comparative.—The following table shows the number of births, deaths, and marriages reported in Canada, for the year 1933, compared with 1932:

	1933	1932		1933	1932
Live births	222,279	235,666	Deaths from—Continued.		
Birth rate per 1,000 population	20.8	22.5	Influenza	4,021	4,236
Stillbirths	6,824	7,284	Measles	170	330
Deaths under 1 year	16,274	17,263	Nephritis	5,515	5,635
Deaths under 1 year per 1,000 births	73.2	73.3	Pneumonia	6,476	7,045
Total deaths	101,768	104,377	Poliomyelitis	74	164
Death rate per 1,000 population	9.5	9.9	Scarlet fever	156	197
Marriages	63,835	62,531	Smallpox	6	17
Deaths from:			Suicide	917	1,024
Automobile accidents	954	1,120	Tuberculosis	6,901	7,166
Cancer	10,631	10,024	Typhoid fever and paratyphoid fever	285	339
Diarrhea and enteritis	3,390	3,735	Other violence (exclusive of homicides, suicides, and automobile accidents)	4,160	4,343
Diphtheria	238	398			
Heart disease	15,474	15,328			

Ontario Province—Communicable diseases—4 weeks ended May 26, 1934.—The Department of Health of the Province of Ontario, Canada, reports certain communicable diseases for the 4 weeks ended May 26, 1934, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Actinomycosis		1	Pneumonia		118
Chicken pox	645		Scarlet fever	616	4
Diphtheria	26		Septic sore throat	5	
Dysentery		1	Syphilis	205	1
Erysipelas	10	5	Tetanus		1
German measles	16		Trench mouth	1	
Gonorrhea	169		Tuberculosis	166	49
Influenza	51	2	Typhoid fever	22	
Measles	160		Undulant fever	6	1
Mumps	673	1	Whooping cough	813	4
Paratyphoid fever	2				

Quebec Province—Communicable diseases—Two weeks ended June 16, 1934.—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the 2 weeks ended June 16, 1934, as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	2	Measles	873
Chicken pox	193	Ophthalmia neonatorum	1
Diphtheria	28	Puerperal septicemia	1
Dysentery (bacillary)	2	Scarlet fever	162
Erysipelas	3	Tuberculosis	99
German measles	7	Typhoid fever	36
Influenza	4	Whooping cough	161

CHILE

Typhus fever, 1933.—An undated report states that during 1933, 15,000 cases of typhus fever, with 3,557 deaths and a death rate of 26.8 per 1,000 inhabitants, occurred in Chile. The death rate per 100,000 inhabitants from typhus fever declined from 208 in November 1933 to 44 in March 1934.

CUBA

Provinces—Notifiable diseases—5 weeks ended April 28, 1934.—During the 5 weeks ended April 28, 1934, cases of certain notifiable diseases were reported in the Provinces of Cuba, as follows:

Disease	Pinar del Rio	Habana	Matanzas	Santa Clara	Camaguey	Oriente	Total
Cancer	3		1	24		1	29
Chicken pox		2	11	7	8	38	66
Diphtheria		4	1	3	1	1	10
Hookworm disease	1	2	1				4
Leprosy		1		6		8	15
Malaria	81	25	56	221	2	725	1,110
Measles		1		3	1	2	7
Scarlet fever		1		2			3
Tetanus, infantile				1		1	2
Tuberculosis	39	76	46	83	5	27	276
Typhoid fever	2	15	13	44	40	42	156

DENMARK

Communicable diseases—January–March 1934.—During the months of January, February, and March 1934, cases of certain communicable diseases were reported in Denmark, as follows:

Disease	January 1934	February 1934	March 1934	Disease	January 1934	February 1934	March 1934
Cerebrospinal meningitis		4	6	Paratyphoid fever	9	4	4
Chicken pox	114	104	161	Poliomyelitis	23	15	14
Diphtheria and croup	155	166	152	Puerperal fever	10	11	14
Dysentery	42	97	22	Scabies	982	745	739
Epidemic encephalitis	6	4	4	Scarlet fever	427	317	339
Erysipelas	290	295	281	Syphilis	65	65	65
German measles	18	15	23	Tetanus, neonatorum		1	
Gonorrhea	852	739	747	Tetanus, traumatic	2		
Influenza	7,366	6,098	5,016	Typhoid fever	11	4	5
Malaria	7	9	1	Undulant fever (Bact. abort. Bang)	59	43	68
Measles	83	102	125	Whooping cough	909	998	895
Mumps	1,302	1,289	1,211				

GREAT BRITAIN

England and Wales—Infectious diseases—13 weeks ended March 31, 1934.—During the 13 weeks ended March 31, 1934, cases of certain infectious diseases were reported in England and Wales, as follows:

Disease	Cases	Disease	Cases
Diphtheria	16,888	Puerperal pyrexia	1,656
Ophthalmia neonatorum	1,163	Scarlet fever	42,019
Pneumonia	21,238	Smallpox	132
Puerperal fever	702	Typhoid fever	285

England and Wales—Vital statistics—January–March 1934.—During the first quarter of the year 1934, 149,503 live births and 146,009 deaths were registered in England and Wales. The following statistics are taken from the Quarterly Return of Births, Deaths, and Marriages, issued by the Registrar-General of England and Wales. The figures are provisional.

Birth and death rates in England and Wales, January–March 1934

Annual rates per 1,000 population:	
Live births	15.00
Stillbirths	.65
Deaths, all causes	14.70
Deaths from:	
Diphtheria	.11
Influenza	.27
Measles	.19
Annual rates per 1,000 population—Continued.	
Deaths from—Continued.	
Scarlet fever	0.03
Violence	.56
Whooping cough	.07
Deaths per 1,000 live births:	
Diarrhea and enteritis (under 2 years)	5.50
Deaths under 1 year	78.00

JAMAICA

Communicable diseases—4 weeks ended June 16, 1934.—During the 4 weeks ended June 16, 1934, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Cerebrospinal meningitis		1	Leprosy		2
Chicken pox	3	15	Tuberculosis	32	85
Dysentery	11	16	Typhoid fever	15	93
Erysipelas		3			

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

(NOTE.—A table giving current information of the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS for June 29, 1934, pp. 768-781. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued July 27, 1934, and thereafter, at least for the time being, in the issue published on the last Friday of each month.)

Cholera

Ceylon—Colombo.—During the week ended June 16, 1934, 1 case of cholera with 1 death was reported in Colombo, Ceylon.

China—Canton.—During the week ended June 9, 1934, 1 case of cholera with 1 death was reported in Canton, China.

Indo-China.—During the week ended June 16, 1934, cholera was reported in Indo-China, as follows: 2 deaths in Baclieu, and 3 cases and 1 death in Poulo Condor Island.

Plague

Egypt—Province of Minya.—During the week ended June 16, 1934, one case of plague was reported in the Province of Minya, Egypt.

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