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SICKNESS ABSENTEEISM AMONG MALE AND FEMALE INDUSTRIAL WORKERS DURING 1943, AND AMONG MALES DURING THE FIRST AND SECOND QUARTERS OF 1944, WITH A NOTE ON THE RESPIRATORY EPIDEMIC OF 1943–44 [1]

By W. M. GAFAFER, *Principal Statistician, United States Public Health Service*

The quarterly reports for the year 1943 on the frequency of sickness and nonindustrial injuries causing disability for 8 consecutive calendar days or longer among a group of over 265,000 male members of industrial sick benefit organizations have appeared (*1–4*), the organizations including sick benefit associations, group insurance plans, and company relief departments. The present report is concerned with the experience of male and female workers during 1943 and earlier years, and of males during the first and second quarters of 1944, an inquiry also being made into the respiratory epidemic of 1943–44. The last report of the series referring to the experience among females appeared in 1943 (*5*) and covers the 10 years 1933-42.

MALES AND FEMALES, 1943 AND EARLIER YEARS

Year 1943.—Table 1 shows for males and females the frequency rates by cause for 1943, 1942, and the 10-year period 1934–43, the corresponding rates for the single years 1934–41 appearing in reference *5*. The male rate of 138.1 in 1943 for all causes is the highest recorded annual rate of the 10 years and is 43 percent in excess of the 10-year average of 96.7. The female rate of 204.1 for 1943 for all causes is likewise the highest recorded annual rate since 1934 and is 31 percent greater than the 10-year average of 155.4. In each year of the past 10 years, 1934–43, the female rate for all causes and each of the broad cause groups (exclusive of nonindustrial injuries) is higher than the corresponding male rate, the largest excess in the total frequency (84 percent) occurring in 1934 and the smallest (48 percent) in 1943.

Years 1934–43.—The 10 annual rates for all causes and the broad cause groups are shown graphically in figure 1. It will be observed that in 1943 the rates for all causes, as well as the male rates for the

[1] From the Industrial Hygiene Division, Bureau of State Services.

TABLE 1.—*Average annual number of absences per 1,000 persons on account of sickness and nonindustrial injuries disabling for 8 consecutive calendar days or longer, by sex and cause, experience of* MALE *and* FEMALE *employees in various industries, 1943, 1942, and 1934–42, inclusive* [1]

Cause. (Numbers in parentheses are disease title numbers from International List of Causes of Death, 1939)	Annual number of absences per 1,000 persons					
	Males			Females		
	1943	1934–43 [2]	1942	1943	1934–43 [2]	1942
Sickness and nonindustrial injuries	138.1	96.7	106.1	204.1	155.4	168.4
Percent of female rate	*68*	*62*	*63*			
Percent of male rate				*148*	*161*	*159*
Nonindustrial injuries (169–195)	11.9	11.6	11.7	11.3	13.0	12.8
Sickness	126.2	85.1	94.4	192.8	142.4	155.6
Respiratory diseases	66.6	37.5	41.4	100.1	63.2	63.9
Tuberculosis of respiratory system (13)	.8	.8	.8	.6	.7	.6
Influenza and grippe (33)	29.7	16.8	15.7	43.9	27.2	19.0
Bronchitis, acute and chronic (106)	10.4	5.2	6.5	10.8	7.8	8.3
Pneumonia, all forms (107–109)	8.8	3.7	5.5	4.2	1.9	2.9
Diseases of pharynx and tonsils (115b,115c)	6.7	5.1	5.4	14.5	12.7	13.4
Other respiratory diseases (104,105,110–114)	10.2	5.9	7.5	26.1	12.9	19.7
Digestive diseases	17.5	14.3	16.4	29.0	24.1	25.5
Diseases of stomach except cancer (117, 118)	5.9	4.1	4.7	2.8	2.5	2.4
Diarrhea and enteritis (120)	2.1	1.4	1.8	3.8	2.7	3.1
Appendicitis (121)	4.6	4.4	5.0	16.4	12.6	13.5
Hernia (122a)	2.0	1.6	1.9	.2	.4	.4
Other digestive diseases (115a, 115d, 116, 122b–129)	2.9	2.8	3.0	5.8	5.9	6.1
Nonrespiratory-nondigestive diseases	37.7	30.8	34.4	59.0	50.7	62.0
Infectious and parasitic diseases (1–12, 14–24, 26–29, 31, 32, 34–44) [3]	2.4	2.4	2.5	5.2	3.8	4.8
Cancer, all sites (45–55)	.4	.5	.4	.4	.4	.5
Rheumatism, acute and chronic (58,59)	4.5	4.0	3.9	2.9	3.2	3.1
Neurasthenia and the like (part of 84d)	1.6	1.1	1.1	9.7	6.5	8.6
Neuralgia, neuritis, sciatica (87b)	2.7	2.2	2.2	1.8	2.3	2.8
Other diseases of nervous system (80–85, 87, except part of 84d, and 87b)	1.5	1.2	1.2	.9	1.1	1.1
Diseases of heart (90–95)	3.2	2.6	2.7	1.7	1.6	1.4
Diseases of arteries and high blood pressure (96–99, 102)	1.6	1.1	1.2	.8	.7	.9
Other diseases of circulatory system (100, 101, 103)	3.7	2.4	3.1	3.4	2.8	3.7
Nephritis, acute and chronic (130–132)	.5	.4	.4	.3	.3	0
Other diseases of genitourinary system (133–139)	2.7	2.5	2.6	12.6	10.4	11.6
Diseases of skin (151–153)	3.2	2.9	3.1	4.5	3.6	4.6
Diseases of organs of movement except diseases of joints (156b)	3.5	2.9	3.0	3.7	2.2	3.7
All other diseases (56, 57, 60–79, 88, 89, 154, 155, 156a, 157, 162)	6.2	4.6	7.0	11.1	11.8	15.2
Ill-defined and unknown causes (200)	4.4	2.5	2.2	4.7	4.4	4.2
Average number of persons	293,960	2,127,104	287,548	28,519	175,021	18,835

[1] Industrial injuries and venereal diseases are not included.
[2] Average of the 10 annual rates.
[3] Exclusive of influenza and grippe, respiratory tuberculosis, and venereal diseases.

three broad sickness groups, and the female rates for the respiratory and digestive groups of diseases have never been equalled or exceeded in the 10-year period. Of particular interest is the striking increase in frequency in 1943 of the respiratory group of diseases, the male and female rates being 61 and 57 percent in excess of the corresponding rates for 1942, and 78 and 58 percent in excess of their 10-year means.

It will be noted in table 1 that four respiratory causes, namely, influenza and grippe; bronchitis, acute and chronic; pneumonia, all forms; and "other respiratory diseases," including colds, sinusitis, laryngitis, pleurisy, asthma, and "respiratory infection," are chiefly responsible for the increased total respiratory rate. The variation of the frequency of these specific causes throughout the 10-year period is presented graphically for each sex in figure 2. For both

males and females the 1943 rate for each cause is the highest recorded rate of the 10 years, the percentage excesses over the corresponding 10-year means being for males and females, respectively: influenza and grippe, 77 and 61 percent; bronchitis, acute and chronic, 100 and

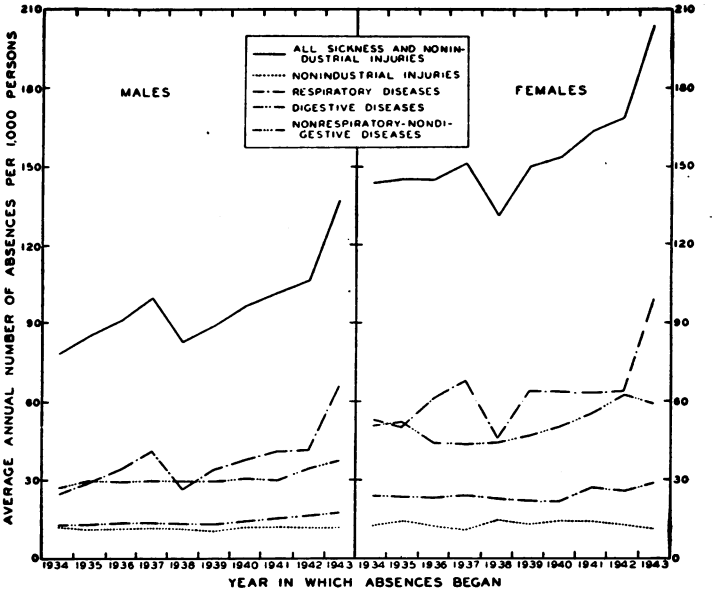

FIGURE 1.—Average annual number of absences per 1,000 persons on account of sickness and nonindustrial injuries disabling for 8 consecutive calendar days or longer, by sex and broad cause group; variation of rates with time; experience of MALE and FEMALE employees in various industries, 1934–43, inclusive.

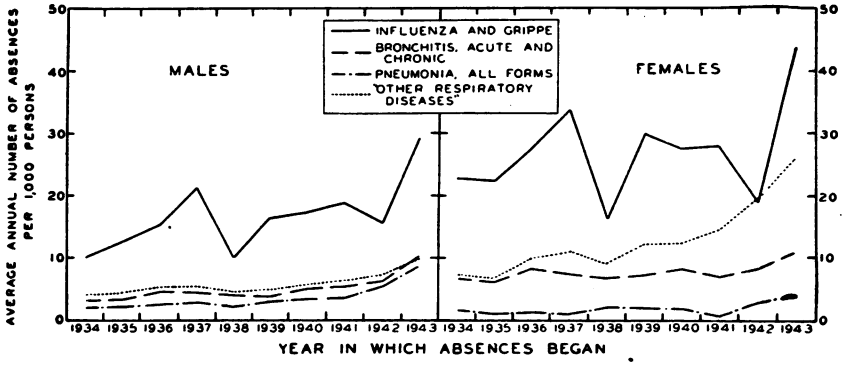

FIGURE 2.—Average annual number of absences per 1,000 persons on account of selected respiratory causes disabling for 8 consecutive calendar days or longer, by sex; variation of rates with time; experience of MALE and FEMALE employees in various industries, 1934–43, inclusive.

38 percent; pneumonia, all forms, 138 and 121 percent; and "other respiratory diseases," 73 and 102 percent. Noteworthy is the almost parallel course of the male curves for pneumonia, bronchitis, and "other respiratory diseases" generally rising since 1938, and the increase over the 10 years in the female frequency of "other respiratory

diseases," the 1943 rate being three and one-half times the rate for 1934.

Absence duration, 1941–43.—Table 2, covering only those organizations reporting absences by duration, shows by sex the frequency of ended absences from all causes disabling for the indicated number of calendar days or longer. The rates for a particular year indicate the ability of absences beginning in that year to continue to contribute to the frequency rate as the lower limit of duration is increased. In general, the presence of a relatively large number of absences of long duration is reflected in a relatively slow decline in the rates for a particular year. For both males and females each of the 1943 rates is higher than the corresponding rate for 1942; among males the frequency of 8-day or longer absences is 33 percent greater than the 8-day or longer frequency for 1942, while the 1943 frequency of absences of 92 days or longer is 22 percent greater than the 1942 rate, the corresponding percentage excesses for the females being 25 and 9. A comparison of the year 1943 with 1941 shows excesses for the males, while for females the excesses become slight defects beyond durations of 57 days or longer. Thus the year 1943, for both males and females, is characterized by a relatively large number of absences of long duration.

TABLE 2.—*Average annual number of* ENDED *absences per 1,000 persons on account of sickness and nonindustrial injuries disabling for the indicated number of consecutive calendar days or longer, experience of male and female employees of companies* REPORTING ABSENCES BY DURATION, *absences beginning during 1941, 1942, and 1943* [1]

Duration of absences in days	Annual number of absences per 1,000 persons					
	Year in which absences began					
	1941	1942	1943	1941	1942	1943
	Males			Females		
8 days or longer	111.2	124.0	164.7	165.5	169.5	212.0
15 days or longer	66.4	75.2	94.7	108.8	109.0	126.8
22 days or longer	47.6	53.2	65.7	81.1	78.3	89.6
29 days or lonegr	36.3	41.1	50.0	64.1	60.2	69.1
36 days or longer	28.7	32.5	38.9	50.8	46.5	55.6
43 days or longer	22.6	26.2	31.0	41.0	37.8	44.5
50 days or longer	18.1	21.3	24.8	32.4	29.5	32.9
57 days or longer	15.2	17.4	20.6	25.7	23.2	26.1
64 days or longer	12.8	14.9	17.5	21.8	20.1	21.6
71 days or longer	10.8	12.7	15.1	18.7	17.2	18.2
78 days or longer	9.9	12.0	14.3	17.9	16.3	17.0
92 days or longer	7.7	9.0	11.0	14.3	12.2	13.3
Not ended absences [2]	1.7	2.1	2.0	2.2	2.2	1.7
Total, ended and not ended absences	112.9	126.1	166.7	167.7	171.7	213.7

[1] Industrial injuries and venereal diseases are not included.
[2] Termination not reported prior to June 1 of the following year.

In each year and for each of the indicated duration periods the female rate is higher than the male rate, the differences tending to decrease as absences of shorter duration drop out.

MALES, FIRST AND SECOND QUARTERS

Year 1944.—The morbidity experience of males for the first and second quarters of 1944 and 1943 is given in table 3. In both the first and second quarters of 1944 the rate for all causes maintained the high level recorded for 1943. Interest in the first quarter centers around the frequency of influenza and grippe, 29 percent above the rate for 1943, while in the second quarter the frequency of rheumatic diseases [2] is noteworthy with an excess of 19 percent. Attention is also directed to the 1944 rates for diseases of heart and arteries, and nephritis, showing excesses over the rates for 1943 of 44 and 28 percent for the first and second quarters, respectively.

TABLE 3.—*Average annual number of absences per 1,000 males on account of sickness and nonindustrial injuries disabling for 8 consecutive calendar days or longer, by cause, experience of* MALE *employees in various industries, the first and second quarters of 1944 compared with the first and second quarters of 1943, and the first half of 1944 compared with the first halves of the years 1939–43, inclusive* [1]

Cause. (Numbers in parentheses are disease title numbers from International List of Causes of Death, 1939)	Annual number of absences per 1,000 males						
	Second quarter		First quarter		First half		
	1944	1943	1944	1943	1944	1943	1939–43
Sickness and nonindustrial injuries	122.5	126.2	172.0	164.9	147.9	145.2	119.3
Nonindustrial injuries (160–195)	9.7	11.0	12.1	12.8	10.9	11.9	11.2
Sickness	112.8	115.2	159.9	152.1	137.0	133.3	108.1
Respiratory diseases	44.6	56.0	94.5	97.7	70.2	76.5	56.4
Tuberculosis of respiratory system (13)	.9	1.1	.6	.5	.8	.8	.7
Influenza and grippe (33)	14.6	20.2	52.9	40.9	34.3	30.4	26.1
Bronchitis, acute and chronic (106)	8.4	9.1	11.5	16.7	10.0	12.8	7.9
Pneumonia, all forms (107–109)	5.9	9.2	11.1	16.2	8.5	12.6	7.0
Diseases of pharynx and tonsils (115b, 115c)	6.5	6.7	6.5	10.0	6.5	8.3	6.6
Other respiratory diseases (104, 105, 110–114)	8.3	9.7	11.9	13.4	10.1	11.6	8.1
Digestive diseases	18.3	16.5	17.4	14.7	17.8	15.6	15.2
Diseases of stomach except cancer (117, 118)	5.6	5.7	5.9	4.7	5.7	5.2	4.3
Diarrhea and enteritis (120)	2.5	1.7	2.2	1.6	2.3	1.6	1.4
Appendicitis (121)	4.8	4.4	4.2	3.8	4.5	4.1	4.8
Hernia (122a)	2.0	1.9	1.7	2.0	1.9	2.0	1.8
Other digestive diseases (115a, 115d, 116, 122b–129)	3.4	2.8	3.4	2.6	3.4	2.7	2.9
Nonrespiratory-nondigestive diseases	44.4	38.5	42.0	36.1	43.2	37.3	33.8
Infectious and parasitic diseases (1–12, 14–24, 26–29, 31, 32, 34–44) [3]	2.9	3.4	2.4	2.7	2.6	3.0	2.8
Rheumatism, acute and chronic (58, 59)	6.1	4.9	5.8	4.4	6.0	4.7	4.4
Neurasthenia and the like (part of 84d)	2.0	1.4	1.8	1.2	1.9	1.3	1.1
Neuralgia, neuritis, sciatica (87b)	3.0	2.6	3.0	3.0	3.0	2.8	2.5
Other diseases of nervous system (80–85, 87 except part of 84d, and 87b)	1.8	1.4	1.6	1.5	1.7	1.5	1.2
Diseases of heart and arteries, and nephritis (90–99, 102, 130–132)	6.8	5.3	7.5	5.2	7.2	5.3	4.8
Other diseases of genitourinary system (133–138)	3.4	2.8	3.3	2.5	3.4	2.6	2.5
Diseases of skin (151–153)	3.8	3.1	2.9	2.7	3.3	2.9	2.6
Diseases of organs of movement except diseases of joints (156b)	4.1	3.6	3.2	3.5	3.6	3.5	3.1
All other diseases (45–57, 60–79, 88, 89, 100, 101, 103, 154, 155, 156a, 157, 162)	10.5	10.0	10.5	9.4	10.5	9.7	8.8
Ill-defined and unknown causes (200)	5.5	4.2	6.0	3.6	5.8	3.9	2.7
Average number of males	244,065	271,998	256,806	265,428	250,436	268,713	222,772
Number of organizations	17	18	17	18	17	18	-------

[1] Industrial injuries and venereal diseases are not included.
[2] Exclusive of influenza and grippe, respiratory tuberculosis, and venereal diseases.

[3] Rheumatism, acute and chronic; neuralgia, neuritis, and sciatica; and diseases of organs of movement except diseases of joints.

Years 1935–44.—The variation of the first- and second-quarter rates for the broad cause groups, and for influenza and grippe over the the 10 years 1935–44 are shown graphically in figure 3. In each quarter the rates for the digestive and nonrespiratory-nondigestive diseases have never been equalled or exceeded during the 10-year

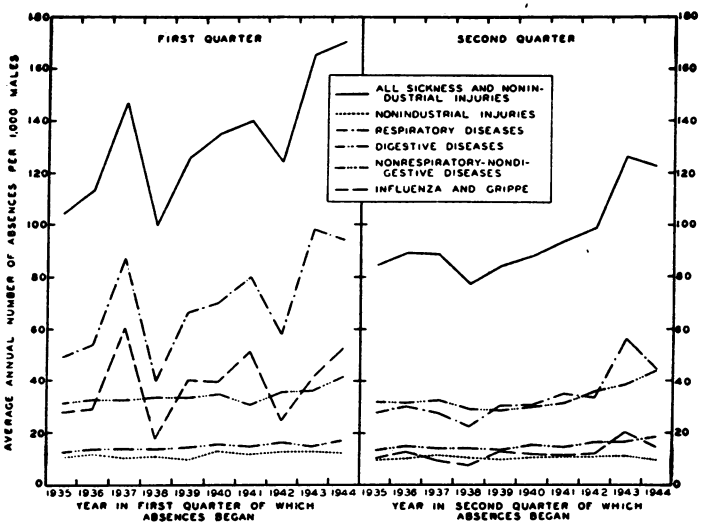

FIGURE 3.—Average annual number of absences per 1,000 males on account of sickness and nonindustrial injuries disabling for 8 consecutive calendar days or longer, by broad cause group; variation of first and second quarter rates with time; experience of MALE employees in various industries, 1935–44, inclusive.

period, the 1944 frequency of respiratory diseases in each quarter being surpassed only by the corresponding frequency for 1943.

RESPIRATORY EPIDEMIC, 1943–44

A small contribution to the epidemiology of the respiratory epidemic of 1943–44, in terms of three general morbidity indexes, is afforded by the use of data generously made available by seven plants in the eastern United States. The plants reported daily information on sickness and sickness absenteeism occurring among their employees during the period November 1943 to January 1944. Of these plants two were located in Washington, two in Pittsburgh, and one each in Baltimore, Boston, and New York. The effect of the respiratory epidemic on the three indexes, based on all sickness and nonindustrial injuries, is shown graphically in figure 4, the time period extending from November 22, 1943, through January 15, 1944. The indexes for those days, namely, Sunday, or Saturday and Sunday, on which plants did not work with a full labor force are not shown graphically. However, the curves are made continuous by connecting the points for Saturday and Monday, or for Friday and Monday.

The uppermost part of figure 4 shows the daily percentage of workers out sick for those plants whose data permitted the computation of this index. These plants include the two in Washington, one of two in Pittsburgh, and the one in Boston. The middle part of the figure presents for the Baltimore plant only the daily percentage of workers visiting the plant infirmary, while the lowermost part shows for the second Pittsburgh plant, the New York plant, and the Boston plant, the daily percentage of workers becoming incapacitated for work.

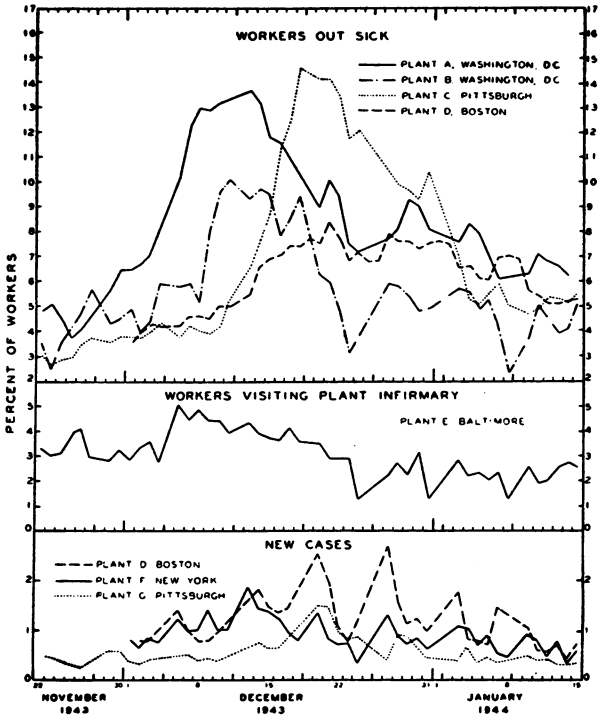

FIGURE 4.—Effect of respiratory epidemic of 1943–44 on certain daily indexes of sickness and nonindustrial injuries; experience of employees (male and female) in 7 plants located in 5 different cities of eastern United States, November 22, 1943, through January 15, 1944.

It will be noted that the Boston plant only is represented by more than one index.

Attention is also directed to the fact that the index based on *workers out sick* reflects the duration, as well as the date of beginning, of the absence, while the index representing *new cases* reflects only the date of beginning of the absence. Thus for a particular day and plant, in a universe of one-day absences, the magnitudes of these indexes are equal.

Workers out sick.—The occurrence, chiefly in December, of relatively high values of the different indexes is clearly shown in the figure. The daily percentages of workers out sick for the two Washington

plants (A and B) move at different levels but show a notable parallelism, the index for one plant (B) reaching the maximum peak of 10.1 on Saturday, December 11, and for the other (A) 13.7 on Monday, December 13. The maximum peak of 14.6 in Pittsburgh is reached almost a week later on Saturday, December 18. The relatively flat curve of the Boston plant shows a maximum peak of 8.4 which appeared still later on Tuesday, December 21. Thus, of interest are the parallelism of the two Washington curves, the lag of the Pittsburgh and Boston curves, and the relative flatness of the Boston curve.

Workers visiting plant infirmary.—The daily percentage of workers visiting the plant infirmary was determinable for the Baltimore plant only. The movement of this index is extremely interesting in that it shows the epidemic in terms of nondisabling sickness and injuries. A maximum peak of 4.1 was reached on Friday, November 26, the previous minimum being 3.0 on Tuesday, November 23. The maximum peak of 5.0, after a series of fluctuating movements, was attained on Monday, December 6, following which there was a gradual decline in the movement of the index.

New cases.—The daily percentage of workers becoming disabled was computable for three plants. Attention is directed to the relatively large number of maximum values of the index occurring on Mondays, showing the effect of Sundays, or Saturdays and Sundays, on which days a full working force was not at the plants. The general movement of the index for each plant, however, is noteworthy. It will be observed that the maximum peak for the Pittsburgh plant (G) is not unreasonable when compared with the percentage of workers out sick for the other plant in Pittsburgh (C). The highest value of the index for the New York plant occurs approximately at the time of the maximum peak for the percentage of workers out sick in Washington. The Boston index of new cases shows considerable fluctuation but its general movement agrees well with the movement of the plant's percentage of workers out sick.

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A MEASUREMENT OF THE TOXICITY TO MOSQUITO LARVAE OF THE VAPOR OF CERTAIN LARVICIDES [1]

By M. A. Barber, *Volunteer Worker, United States Public Health Service*

That the vapor of certain larvicides may be toxic to mosquito larvae has been long known. For example, Ramsay and Carpenter (*1*) mention the fact that mosquito larvae and pupae exposed to petrol vapor overnight under a bell jar are killed—"purely an effect caused by breathing."

The aim of the present work was to devise a simple apparatus for the study of the action on mosquito larvae of certain vapors and to measure approximately that effect. Such technique requires the presence of vapors in a sufficient degree of intensity and constancy and in a device which excludes any factor other than the vapor. The following apparatus seems to meet these requirements and is very simple in construction and operation.

From the tip of a folded circular filter paper 11 cm. in diameter, approximately 15 mm. are clipped off. The paper is then unfolded and placed in the bottom of a petri dish 90 mm. in diameter and pressed into close contact with the bottom and sides of the dish by means of an Erlenmeyer flask, a beaker, or any convenient close-fitting utensil. On removal of the flask or beaker the bottom and sides of the petri dish are lined with the filter paper, except for a circular opening in the bottom about 30 mm. in diameter. Mosquito larvae to be tested are pipetted into an ordinary watch glass about 50 mm. in diameter with a rounded base. The filter paper is then saturated with the larvicide to be tested, and the watch glass containing the larvae immediately placed inside and over the opening at the bottom of the petri dish. The lid of the petri dish is then replaced and the apparatus is ready for use. The window at the bottom of the apparatus makes it convenient to study the larvae, and the dish is so shallow that larvae may be examined with the naked eye, with a hand lens, or on the stage of a compound microscope. The intensity of the vapor can be roughly estimated by the amount of surface of the liquid larvicide exposed.

For convenience and for some special purposes certain changes in the procedure may be employed:

Paper other than filter paper may be used if it is more convenient. We have used papers of the cleansing tissue or paper towel type. These papers should be absorbent and for comparison of larvicides the same type of paper should be used for a whole series. The more folds in the paper the greater the surface of the larvicide exposed, and for special experiments requiring a greater vapor intensity, the top of the petri dish may be lined with paper similarly perforated.

[1] From the Office of Malaria Investigations, National Institute of Health.

Canton flannel in place of the paper was found to be less convenient and offered no special advantages. Of course, a large petri dish with two or more openings in the lining paper may serve for comparing larvae of different instars or of different species all in the same vapor. The smaller petri dishes are more conveniently observed on the stage of a microscope. After the application of the larvicide it is well to add a wetted pledget of cotton or piece of filter paper in order to prevent the drying up of the water in the larva culture, a precaution especially useful with certain larvicides. After the preliminary examination the petri dish may be covered with a bell jar to maintain a constant degree of moisture or vapor.

Controls are prepared in a similar manner. We always include a control of larvae in a petri dish with the paper wet with water only, and usually one with kerosene. The sample of kerosene is first standardized with respect to the action of its vapor on larvae and serves as a basis of comparison with different larvicides.

The selection of the mosquito larvae which are to serve as tests is important. The younger the larvae the more sensitive to vapor, and anophelines are more sensitive than culicines, possibly on account of the more frequent intake of vapor in anophelines. Culicines are more active in cultures than anophelines, and, since muscular activity is affected by larvicide vapor, they offer a better measurement of vapor effect than do anophelines. As a standard we commonly used larvae of *Aedes aegypti* 2 days old. A fresh batch was prepared every day to insure an abundant supply always on hand. Temperature is also a factor; the higher the room temperature the more pronounced the vapor effect.

The characteristic movements of the larvae in a culture offer one of the best criteria of the vapor effect. *Aedes aegypti* larvae usually move freely from one side of the dish to the other. The first effect of a toxic vapor is to inhibit this movement. Spasmodic movements continue for a time, then larvae become wholly inert. These movements permit the use of two convenient standards: The time required for a vapor to render the larvae "NT," nontraveling, i. e., not exhibiting the movement of translation, and that required to render them inert. Larvae of the same batch vary greatly in respect to size and activity and the same is true of their reaction to vapors; we therefore usually measure the earlier effect on the majority rather than on all the larvae. It is advisable to include 10 or more larvae to each watch glass, as it may be desirable to distinguish four classifications: "majority NT," "all NT," "majority inert," "all inert." We can express results in terms of the number of minutes required for a given vapor to produce any of these measurable effects at a given temperature, and we can express vapor toxicity as a fraction with the number of minutes required to attain a certain effect (as "NT") with the given

vapor as the numerator and that of a standardized kerosene as the denominator. The most sensitive single criterion would be the number of minutes required to render small larvae "NT."

Further manifestations of vapor effect can be utilized for study of vapors if not for their standardization. For example, some vapors, as that of kerosene, will render larvae inert but the larvae will revive when placed in a moist chamber free from vapor. Other vapors, as that of benzene, are quickly fatal. The rapidity of the heartbeat of the larvae may also be observed by placing a small petri dish on the stage of a compound microscope.

We had planned to use this technique as a means of testing different petroleums or other liquid larvicides to be used as films on mosquito-breeding places. If such test is to be useful the toxicity of the vapor of a larvicide would have to approximate its toxicity as a film, the reason for using a vapor instead of the film itself in testing a larvicide being its greater convenience.

Work of more immediate wartime value interfered with these tests. Enough was done to indicate that such vapor tests may have some value in the standardization of larvicides. At all events, it appears that this apparatus is useful for the study of the physiology of larvae as regards their reaction to different vapors. For the observation of the heartbeat and other characteristics visible under the compound microscope the rounded watch glass seemed to be the most convenient, and the larvae are most conveniently got into the field of the microscope if only a small amount of water is pipetted into the watch glass with them. We used as a rule about $\frac{2}{10}$ cc. for the smaller larvae. All larvae containers may easily be modified to suit the study of larger larvae, anopheline, or culicine.

Certain sources of error should be kept in mind. Obviously the watch glass should be carefully lowered into the petri dish, if one is to avoid getting any liquid larvicide on the water surface, a precaution which should offer no difficulties. Again we must consider the possibility of the vapor forming a pellicle on the water surface which might act on larvae by liquid intake, contact, or other means, and that the observed effects are not due to vapor inhalation. This seems the less probable when the very rapid effect of vapors of carbon disulfide, gasoline, or benzene is considered. But we did some special experiments to test the matter: Larvae were exposed to certain vapors until they became "NT" or inert. The watch glass was removed, fresh active larvae added to the inert ones, and the watch glass containing both sorts quickly placed in a fresh petri dish lined with paper wet with water only. The fresh larvae remained active, giving no indication of any effect by a pellicle or other factor left by the vapor. Nor could any trace of such pellicle be seen on the water surface during

the short time occupied by the experiment. So it is probable that the vapor acted directly on the larvae through inhalation.

A few of the results of vapor on larvae may be mentioned. The most rapid action evident in a period of less than a minute was observed in carbon disulfide. Almost as rapid were the vapors of toluene, carbon tetrachloride, and benzene. Slower but very rapid, acting within 2 or 3 minutes, were xylene and gasoline. Phenol, and the kerosene samples tested, required 12 to 30 minutes to attain the "NT" stage, fuel oil and Deobase much longer. Of course, different samples of the same reagent, such as kerosene, may vary in quality. As might be expected, certain vaporless larvicides, although highly toxic to larvae, showed no effect on larvae in this apparatus.

Kerosene vapor caused a slowing of the action of the larva heart with subsequent recovery, an effect somewhat like that of chloroform.

If ever the destruction of mosquito larvae by gases is contemplated, as might possibly be the case in the treatment of deep wells, reservoirs, or pits, the apparatus described might be useful in testing the toxicity of various gases.

SUMMARY

A very simple device for studying the action of vapors on mosquito larvae is here described.

REFERENCES

(1) Ramsay, G. C., and Carpenter, J. A.: An Investigation on Petroleum Oils for Malaria Control Purposes. Records of the Malaria Survey of India, Vol. III, No. 2, p. 216. Calcutta, 1932. Published for the Indian Research Fund Association by Thacker (1927–37).

PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

August 13–September 9, 1944

The accompanying table (table 1) summarizes the prevalence of nine important communicable diseases, based on weekly telegraphic reports from State health departments. The reports from each State for each week are published in the Public Health Reports under the section "Prevalence of disease." The table gives the number of cases of these diseases for the 4 weeks ended September 9, 1944, the number reported for the corresponding period in 1943, and the median number for the years 1939–43.

DISEASES ABOVE MEDIAN PREVALENCE

Meningococcus meningitis.—The number of cases of meningococcus meningitis dropped from 712 during the preceding 4-week period to 536 for the 4 weeks ended September 9. The number of cases was

about 20 percent below that reported for the corresponding period in 1943, but it was 4.4 times the 1939–43 median. As the present epidemic of this disease has been in progress for about 2 years, the 5-year median falls within 1 of the 3 preceding low years for this disease. For the years 1934-38 the median for this period was 216 cases. The incidence was lower than in 1943 in all sections except the East South Central, but in each section the number of cases was considerably above the preceding 5-year median. The largest excesses were reported from the North Atlantic, East North Central, and Pacific regions.

Poliomyelitis.—The number of cases of poliomyelitis rose from 3,253 during the 4 weeks ended August 12 to 5,971 during the 4 weeks ended September 9. The number of cases was 1.7 times the number reported for the corresponding period in 1943 and 3.6 times the 1939–43 median. For the country as a whole the current incidence is the highest recorded for this period in the 16 years for which these data are available. Twelve States reported more than 80 percent of the total poliomyelitis cases, viz, New York 2,297 cases, Pennsylvania 539, Ohio 386, Michigan 344, Virginia 261, Minnesota 183, New Jersey 177, South Carolina 163, Illinois 154, Massachusetts 150, Maryland 149, and Kentucky 140 cases. The Mountain and Pacific sections have shown only the normal seasonal increase, but some States in every other section of the country have reported an unusually high incidence. In North Carolina where the outbreak first appeared the number of cases dropped from 94 during the week ended July 8 to 27 for the week ended September 9, in Kentucky the number dropped from 79 during the week ended July 29 to 33 for the week ended September 9, while in other States where the disease has been unusually prevalent the peak was not reached until the week ended September 2. During the week ended September 9 there were 200 fewer cases reported than occurred during the preceding week and for the country as a whole there was a further decline during the week ended September 16, the latest date available. The disease has declined in the 3 Atlantic Coast regions and in the East South Central States. The East North Central region reported the highest weekly incidence in that region during the week ended September 16, and while the numbers of cases were not large in the Mountain and Pacific regions they represent the highest incidence in those regions during the current epidemic.

Table 2 shows by weeks for each geographic section the cases reported during 1944, 1943, and 1941. The present epidemic started in North Carolina and, with the exception of a few States, has been confined mostly to the Atlantic Coast and East North Central regions. The epidemic of 1943 first appeared in the Pacific region and affected practically every section of the country except the South Atlantic

TABLE 1.—*Number of reported cases of 9 communicable diseases in the United States during the 4-week period August 13–September 9, 1944, the number for the corresponding period in 1943, and the median number of cases reported for the corresponding period, 1939–43*

Division	Current period	1943	5-year median	Current period	1943	5-year median	Current period	1943	5-year median
	Diphtheria			Influenza [1]			Measles [2]		
United States	871	957	957	2,207	2,233	1,974	2,533	4,429	3,149
New England	21	12	13	11	3	3	228	343	349
Middle Atlantic	38	56	60	21	11	17	346	971	809
East North Central	95	113	113	74	84	95	481	1,497	631
West North Central	51	86	86	29	39	35	109	267	184
South Atlantic	204	265	300	628	816	831	329	337	191
East South Central	158	152	152	41	69	70	42	115	118
West South Central	171	128	150	1,178	986	563	168	219	165
Mountain	60	48	48	159	154	154	94	228	207
Pacific	73	97	48	66	71	71	736	452	380
	Meningococcus meningitis			Poliomyelitis			Scarlet fever		
United States	536	650	122	5,971	3,481	1,648	2,746	3,255	2,740
New England	36	69	7	267	234	33	231	329	213
Middle Atlantic	166	169	30	3,013	258	258	392	423	429
East North Central	93	127	19	1,062	907	484	621	730	730
West North Central	38	46	14	360	570	209	222	283	283
South Atlantic	54	83	33	805	35	130	449	482	367
East South Central	48	32	15	214	75	80	162	217	217
West South Central	26	29	9	58	392	55	126	105	113
Mountain	10	17	4	55	306	42	138	385	114
Pacific	64	78	8	137	674	143	405	301	223
	Smallpox			Typhoid and paratyphoid fever			Whooping cough [2]		
United States	10	11	19	675	759	1,356	6,984	11,056	11,056
New England	0	0	0	34	39	35	580	503	765
Middle Atlantic	0	0	0	97	94	148	1,088	2,140	2,704
East North Central	0	8	10	75	93	158	1,719	3,260	3,260
West North Central	3	0	6	49	55	72	543	904	536
South Atlantic	3	0	2	120	150	300	1,189	1,725	1,297
East South Central	3	2	1	72	129	247	307	407	408
West South Central	0	1	2	178	149	275	742	692	631
Mountain	0	0	3	31	20	43	475	554	406
Pacific	1	0	1	19	30	43	341	871	871

[1] Mississippi and New York excluded; New York City included.
[2] Mississippi excluded.

and West South Central sections, while the highest incidence in 1941 occurred in the Atlantic Coast and East South Central sections. There was no epidemic of this disease in 1942 and the number of cases for the comparative period totaled 2,398.

Scarlet fever.—For the 4 weeks ended September 9 there were 2,746 cases of scarlet fever reported, as compared with 3,255 for the corresponding period in 1943. For the first time in almost 2 years the incidence during a current 4-week period has fallen below the corresponding period in the preceding year. The incidence stood at the median level, which was represented by the 1942 figure. Five of the 9 geographic regions reported increases over the preceding 5-year medians, and in 4 sections the disease was less prevalent than in recent years.

TABLE 2.—*Number of cases of poliomyelitis reported in each geographic area during 1944, 1943, and 1941*[1]

Division	Total Jan. 1–Sept. 16	Week ended— July 22	July 29	August 5	August 12	August 19	August 26	September 2	September 9	September 16	September 23	September 30
All regions:												
1944	12,419	570	738	932	1,015	1,260	1,529	1,683	1,499	1,439		
1943	7,812	329	361	450	545	747	872	956	906	1,020	818	679
1941	5,798	246	302	326	422	549	611	624	586	595	596	592
New England:												
1944	446	9	12	36	37	54	74	75	64	49		
1943	475	3	11	32	36	62	62	77	63	91	85	84
1941	233	0	4	16	7	22	21	40	27	48	37	33
Middle Atlantic:												
1944	5,361	216	304	413	449	601	756	895	761	674		
1943	516	12	13	20	38	46	57	72	83	91	83	67
1941	1,240	17	21	32	60	111	173	163	169	213	210	210
East North Central:												
1944	2,043	63	111	143	178	215	271	321	255	329		
1943	1,424	12	21	46	79	144	241	249	273	288	207	171
1941	790	13	30	45	58	81	82	102	71	93	96	117
West North Central:												
1944	627	25	22	28	54	67	104	77	112	76		
1943	1,023	12	40	61	117	118	131	183	138	148	114	88
1941	278	7	10	10	13	24	17	32	38	28	37	32
South Atlantic:												
1944	2,059	128	136	167	167	195	214	208	188	169		
1943	153	9	7	5	8	7	10	8	10	23	14	18
1941	1,473	128	113	122	127	139	139	133	115	80	79	81
East South Central:												
1944	855	92	101	84	67	53	56	48	57	59		
1943	183	6	14	11	5	29	20	14	12	7	6	10
1941	1,279	74	103	78	134	145	147	121	132	86	93	83
West South Central:												
1944	375	18	22	27	23	16	11	14	17	14		
1943	1,605	148	141	122	119	104	117	81	90	89	67	49
1941	179	4	8	10	10	10	11	13	8	12	9	12
Mountain:												
1944	135	1	4	4	9	12	16	12	15	18		
1943	559	11	4	29	23	43	47	123	93	92	85	46
1941	92	2	4	3	3	5	2	9	11	13	8	5
Pacific:												
1944	518	18	26	30	31	47	27	33	30	51		
1943	1,874	116	110	124	120	194	187	149	144	191	157	146
1941	234	1	9	10	10	12	19	11	15	22	27	19

[1] A similar table with earlier data appeared in PUBLIC HEALTH REPORTS for Aug. 4, 1944, p. 1024.

Influenza.—The incidence of influenza during the current period was about normal for this season of the year, the number of cases (2,207) being about on the level with the incidence in 1943 and only about 200 cases above the 1939–43 median. Of the total cases, Texas reported 1,115, South Carolina 362, and Virginia 170—about 75 percent of the total cases were reported from those 3 States. In the New England section the number of cases (11) was 3 times the 1939–43 median and in the West South Central section the number (1,178) was twice the median, but in all other sections the incidence either closely approximated or fell considerably below the median.

DISEASES BELOW MEDIAN PREVALENCE

Diphtheria.—For the 4 weeks ended September 9 there were 871 cases of diphtheria reported, as compared with 957 in 1943. The 1939–43 median was represented by the 1943 figure. The largest

increases over the medians were reported from the West South Central, Mountain, and Pacific regions, with minor increases in the New England and East South Central sections. In the Middle Atlantic, North Central, and South Atlantic regions the incidence was considerably below the normal seasonal expectancy.

Measles.—The incidence of measles was also relatively low, 2,533 cases being reported during the current 4 weeks, as compared with 4,429 cases in 1943 and a median of 3,149 cases for the corresponding period in the 5 preceding years. The incidence was comparatively low in all sections except the South Atlantic, West South Central, and Pacific sections.

Smallpox.—The incidence of smallpox continued at a relatively low level, only 10 cases being reported during the 4 weeks ended September 9, which was less than one-third of the 1939–43 median. Three of the cases were reported from Georgia, but no more than 1 case was reported from any other State. For the country as a whole the current incidence is the lowest on record for this period. This disease has been exceptionally low for the past 5 years; the median for the years 1934–38 is 141 cases.

Typhoid and paratyphoid fever.—The number of cases (675) of this disease was about 90 percent of the number reported for the corresponding period in 1943 and less than 50 percent of the 1939–43 median. In the New England region the incidence stood at about the normal seasonal level, but in all other sections the incidence was comparatively low.

Whooping cough.—For the 4 weeks ended September 9 there were 6,984 cases of whooping cough reported, as compared with a 1939–43 median of approximately 11,000 cases. A few more cases than might normally be expected occurred in the West South Central and Pacific sections and in the West North Central section the current incidence closely approximated the 5-year median, but in all other sections the numbers of cases were relatively low. In the Middle Atlantic section the number of cases (1,088) was about 40 percent of the 5-year median and in the East North Central section the number (1,719 cases) was slightly more than 50 percent of the median.

MORTALITY, ALL CAUSES

For the 4 weeks ended September 9 there were 31,412 deaths from all causes reported to the Bureau of the Census by 93 large cities. The average number of deaths reported for the corresponding period in 1941–43 was 30,270. During the first week of the period (week ended August 19) the number of cases was 15.5 percent above the 3-year average, the next 2 weeks were below the average and in the last week the number of deaths was 2.2 percent above the preceding 3-year

average. For the 4-week period the average was higher than for the corresponding period in the 3 preceding years in all sections except the South Atlantic and East South Central; in the former region the number of deaths declined and in the latter the number was the same as the average.

The death rate from all causes among persons insured in the industrial department of the Metropolitan Life Insurance Co. for the first 7 months of the year (the latest data available) was 8.4, as compared with 8.1 and 7.5 for the corresponding period in the years 1943 and 1942, respectively.

INCIDENCE OF HOSPITALIZATION, AUGUST 1944

Through the cooperation of the Hospital Service Plan Commission of the American Hospital Association, data on hospital admissions among members of Blue Cross Hospital Service Plans are presented monthly. These plans provide prepaid hospital service. The data cover hospital service plans scattered throughout the country, mostly in large cities.

Item	August	
	1943	1944
1. Number of plans supplying data	71	74
2. Number of persons eligible for hospital care	10,821,657	13,670,371
3. Number of persons admitted for hospital care	109,425	133,758
4. Incidence per 1,000 persons, annual rate, during current month (daily rate × 365)	119.0	115.5
5. Incidence per 1,000 persons, annual rate for the 12 months ending August 31	105.3	104.5

DEATHS DURING WEEK ENDED SEPTEMBER 16, 1944

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

	Week ended September 16, 1944	Corresponding week, 1943
Data for 93 large cities of the United States:		
Total deaths	7,793	7,979
Average for 3 prior years	7,729	
Total deaths, first 37 weeks of year	334,568	341,169
Deaths under 1 year of age	602	572
Average for 3 prior years	571	
Deaths under 1 year of age, first 37 weeks of year	22,850	24,603
Data from industrial insurance companies:		
Policies in force	66,723,443	65,829,690
Number of death claims	12,759	10,232
Death claims per 1,000 policies in force, annual rate	10.0	8.1
Death claims per 1,000 policies, first 37 weeks of year, annual rate	10.1	9.8

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

REPORTS FROM STATES FOR WEEK ENDED SEPT. 23, 1944

Summary

Decreases in the incidence of poliomyelitis were recorded during the week ended September 23, 1944, in all areas of the United States except the New England, West North Central, and Mountain sections. A total of 1,159 cases was reported, as compared with 1,440 for the preceding week, 818 for the corresponding week last year, and a 5-year (1939–43) median of 599. The largest number of cases reported for a corresponding week for which records are available (since 1927) was 1,095 in 1931.

An aggregate of 1,004 cases, or about 87 percent of the total, was reported currently in the 17 States reporting 15 or more cases each, as follows (last week's figures in parentheses): *Increases*—Massachusetts 34 (28), Connecticut 17 (12), Minnesota 45 (40), Missouri 15 (4), Virginia 48 (46), West Virginia 18 (10); *decreases*—New York 383 (497), New Jersey 40 (54), Pennsylvania 82 (123), Ohio 77 (118), Indiana 20 (24), Illinois 38 (44), Michigan 75 (112), Wisconsin 26 (31), Maryland 31 (54), North Carolina 24 (28), Kentucky 31 (40).

The total number of cases reported to date this year is 13,572, as compared with a 5-year median of 5,652, and 8,630 and 11,295, respectively, for the corresponding periods of last year and 1931. The total for the whole of 1943 was 12,439, and that for 1931 was 15,745.

Of a total of 120 cases of meningococcus meningitis, as compared with 126 last week and a 5-year median of 31, 63 occurred in the 6 States reporting 6 to 14 cases each. The cumulative total is 13,727, as compared with 14,331 (80 percent of the total for the year) for the same period last year and a 5-year median of 1,575.

Current reports of diphtheria, influenza, measles, scarlet fever, smallpox, typhoid fever, and whooping cough are below both the respective 5-year medians and the corresponding figures for last year.

Of a total of 159 cases of typhus fever, Texas reported 52, Georgia and Alabama 29 each, and Louisiana 14. The cumulative total is 3,600, as compared with 2,946 last year and a 5-year median of 2,025.

Deaths recorded for the week in 93 large cities of the United States totaled 8,025, as compared with 7,817 last week and a 3-year (1941–43) average of 7,871. The cumulative figure is 343,524, as compared with 350,471 for the same period last year.

Telegraphic morbidity reports from State health officers for the week ended Sept. 23, 1944, and comparison with corresponding week of 1943 and 5-year median

In these tables a zero indicates a definite report, while leaders imply that, although none was reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Median 1939–43	Week ended—		Median 1939–43	Week ended—		Median 1939–43	Week ended—		Median 1939–43
	Sept. 23, 1944	Sept. 25, 1943		Sept. 23, 1944	Sept. 25, 1943		Sept. 23, 1944	Sept. 25, 1943		Sept. 23, 1944	Sept. 25, 1943	
NEW ENGLAND												
Maine	1	0	0	------	1	------	3	20	13	3	3	0
New Hampshire	0	1	0	------	------	------	3	5	0	0	1	0
Vermont	0	0	0	------	------	------	2	2	2	0	0	0
Massachusetts	3	4	4	------	------	------	26	31	31	1	16	3
Rhode Island	0	0	0	2	------	------	0	18	1	1	2	0
Connecticut	1	1	1	1	3	1	6	10	5	2	5	0
MIDDLE ATLANTIC												
New York	10	10	7	(1)	[1] 3	[1] 3	17	43	43	13	17	3
New Jersey	4	1	1	------	1	3	9	34	32	5	5	1
Pennsylvania	5	8	8	------	2	------	51	25	25	8	15	3
EAST NORTH CENTRAL												
Ohio	7	5	6	------	4	4	5	27	14	3	5	0
Indiana	4	11	11	4	4	12	2	10	10	1	2	1
Illinois	6	6	15	4	1	4	8	19	19	11	19	2
Michigan [2]	3	6	1	2	------	2	13	110	22	4	8	1
Wisconsin	0	2	0	12	12	23	21	82	34	3	2	2
WEST NORTH CENTRAL												
Minnesota	13	8	4	------	------	------	4	36	9	2	3	0
Iowa	4	11	5	------	1	1	1	8	8	1	2	0
Missouri	1	3	9	------	2	1	5	0	3	14	3	1
North Dakota	7	2	1	1	------	1	1	41	2	0	0	0
South Dakota	7	1	4	------	------	------	0	0	1	0	0	0
Nebraska	0	5	4	4	3	------	1	1	3	1	0	0
Kansas	4	3	3	2	1	1	6	3	3	2	1	1
SOUTH ATLANTIC												
Delaware	0	0	0	------	------	------	0	1	2	0	2	0
Maryland [2]	7	4	3	------	------	1	7	7	5	4	8	2
District of Columbia	2	0	1	------	------	------	1	0	1	1	1	0
Virginia	6	12	19	62	63	58	4	11	10	2	2	2
West Virginia	4	6	9	1	3	2	0	8	2	3	1	1
North Carolina	21	37	47	------	------	------	3	7	7	1	4	0
South Carolina	7	16	27	113	146	146	4	8	5	0	1	1
Georgia	14	26	35	7	6	6	5	2	3	0	0	0
Florida	10	6	7	2	5	2	8	2	2	1	0	0
EAST SOUTH CENTRAL												
Kentucky	11	10	11	1	1	1	0	1	4	4	2	0
Tennessee	12	25	15	5	16	16	3	3	4	1	4	2
Alabama	14	18	20	10	23	20	3	4	5	1	4	0
Mississippi [2]	19	5	13	------	------	------	------	------	------	1	0	1
WEST SOUTH CENTRAL												
Arkansas	6	4	10	21	12	9	2	2	2	1	0	0
Louisiana	13	5	8	------	1	2	2	4	3	2	1	1
Oklahoma	12	5	8	23	17	10	6	0	2	2	1	1
Texas	36	25	32	363	442	231	32	15	15	6	4	1
MOUNTAIN												
Montana	7	5	1	3	------	1	2	17	5	0	0	0
Idaho	0	0	0	------	------	------	1	4	4	0	0	0
Wyoming	0	0	0	3	2	2	1	12	7	0	0	0
Colorado	3	5	5	2	50	23	0	13	6	2	2	0
New Mexico	12	1	1	------	------	------	1	3	1	1	0	0
Arizona	1	3	1	34	28	30	2	2	8	1	1	0
Utah [2]	0	0	0	------	------	------	5	5	2	0	0	0
Nevada	0	0	0	------	------	------	0	0	0	0	0	0
PACIFIC												
Washington	8	5	2	1	1	------	14	9	11	2	8	1
Oregon	3	3	3	2	3	6	19	11	18	0	9	0
California	17	12	13	10	12	12	107	35	49	11	14	1
Total	325	326	385	695	869	728	416	711	626	122	178	31
38 weeks	8,054	8,638	9,137	341,582	84,920	153,627	593,495	541,518	469,401	13,729	14,331	1,575

[1] New York City only.

[2] Period ended earlier than Saturday.

Telegraphic morbidity reports from State health officers for the week ended Sept. 23, 1944, and comparison with corresponding week of 1943 and 5-year median—Con.

Division and State	Poliomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever [2]		
	Week ended—		Median 1939–43	Week ended—		Median 1939–43	Week ended—		Median 1939–43	Week ended—		Median 1939–43
	Sept. 23, 1944	Sept. 25, 1943		Sept. 23, 1944	Sept. 25, 1943		Sept. 23, 1944	Sept. 25, 1943		Sept. 23, 1944	Sept. 25, 1943	
NEW ENGLAND												
Maine	6	1	0	24	10	6	0	0	0	0	1	0
New Hampshire	5	2	1	0	2	2	0	0	0	0	0	0
Vermont	8	4	2	0	0	3	0	0	0	0	0	0
Massachusetts	34	29	6	68	97	51	0	0	0	4	11	2
Rhode Island	1	20	0	8	4	3	0	0	0	0	0	0
Connecticut	17	29	4	9	11	11	0	0	0	1	2	1
MIDDLE ATLANTIC												
New York	383	57	57	59	109	85	0	0	0	8	7	15
New Jersey	40	12	17	21	19	26	0	0	0	2	2	2
Pennsylvania	82	14	14	56	85	85	0	0	0	7	18	17
EAST NORTH CENTRAL												
Ohio	77	7	13	71	113	79	1	1	0	8	8	9
Indiana	20	10	10	19	32	28	2	0	0	4	5	6
Illinois	38	140	50	78	59	73	0	3	1	3	5	12
Michigan [3]	75	28	28	49	58	76	0	0	0	4	9	9
Wisconsin	26	22	6	52	73	49	0	1	0	0	1	1
WEST NORTH CENTRAL												
Minnesota	45	23	23	26	29	29	0	0	0	1	1	2
Iowa	13	16	5	14	51	34	0	0	0	2	1	2
Missouri	15	10	5	35	29	18	0	0	0	6	4	13
North Dakota	3	1	1	5	3	4	0	0	0	0	0	0
South Dakota	1	2	0	1	14	11	0	0	0	1	0	0
Nebraska	3	10	10	3	10	10	0	0	0	0	0	0
Kansas	5	52	11	37	64	35	0	0	0	1	0	6
SOUTH ATLANTIC												
Delaware	8	2	1	1	1	4	0	0	0	1	0	1
Maryland [3]	31	3	2	11	16	16	0	0	0	1	4	4
District of Columbia	14	1	1	6	5	5	0	0	0	0	2	1
Virginia	48	2	4	45	28	20	0	0	0	4	11	11
West Virginia	18	3	3	44	60	34	0	0	0	6	2	9
North Carolina	24	1	3	44	90	63	0	0	0	1	4	7
South Carolina	2	0	2	6	6	6	0	0	0	5	4	6
Georgia	3	0	1	19	19	23	0	0	0	5	3	15
Florida	1	2	2	5	4	3	0	0	0	1	1	1
EAST SOUTH CENTRAL												
Kentucky	31	5	7	14	19	19	0	0	0	13	9	15
Tennessee	12	0	3	35	31	44	0	0	0	3	9	15
Alabama	1	1	1	27	18	26	0	0	0	0	4	6
Mississippi	9	0	1	10	3	3	0	0	0	5	3	6
WEST SOUTH CENTRAL												
Arkansas	1	4	2	11	3	6	0	0	0	7	2	14
Louisiana	5	4	2	4	5	4	0	0	0	11	7	17
Oklahoma	2	18	3	6	5	5	0	0	0	1	7	7
Texas	5	41	5	28	20	17	0	1	0	16	8	22
MOUNTAIN												
Montana	8	2	1	5	5	8	0	0	0	0	0	0
Idaho	0	4	0	12	0	3	0	0	0	0	2	2
Wyoming	0	1	1	4	4	2	0	0	0	0	0	0
Colorado	2	28	4	10	10	11	0	0	0	2	6	7
New Mexico	1	3	2	3	3	3	0	0	0	6	4	4
Arizona	9	4	2	4	2	2	0	0	0	0	3	2
Utah	0	42	2	4	12	4	0	0	0	0	1	1
Nevada	1	1	0	0	0	0	0	0	0	0	0	0
PACIFIC												
Washington	5	22	5	27	27	15	0	0	0	2	1	3
Oregon	12	18	8	28	16	6	0	0	0	4	0	1
California	9	117	10	80	79	66	0	0	0	3	4	8
Total	1,159	818	599	1,128	1,363	1,216	3	6	6	149	176	304
38 weeks	13,572	8,630	5,652	151,709	102,603	102,603	317	625	1,210	4,073	4,184	6,182

[2] Period ended earlier than Saturday.

[3] Including paratyphoid fever cases reported separately as follows: Massachusetts, 4; New York, 3; Michigan, 1; South Carolina, 2; Georgia, 1; Louisiana, 1; Washington, 1; California, 1.

Telegraphic morbidity reports from State health officers for the week ended Sept. 23, 1944, and comparison with corresponding week of 1943 and 5-year median—Con.

Division and State	Whooping cough			Week ended Sept. 23, 1944								
	Week ended—				Dysentery			Encephalitis, infectious	Leprosy	Rocky Mt. spotted fever	Tularemia	Typhus fever
	Sept. 23, 1944	Sept. 25, 1944	Median 1939–43	Anthrax	Amebic	Bacillary	Unspecified					
NEW ENGLAND												
Maine	3	14	14	1	0	0	0	0	0	0	0	0
New Hampshire	0	2	3	0	0	0	0	0	0	0	0	0
Vermont	20	17	17	0	0	0	0	0	0	0	0	0
Massachusetts	79	64	123	1	0	15	0	1	0	0	0	0
Rhode Island	11	129	32	0	0	0	0	0	0	0	0	0
Connecticut	33	25	47	0	0	0	0	0	0	0	0	0
MIDDLE ATLANTIC												
New York	119	266	324	0	2	81	0	0	0	0	0	1
New Jersey	68	120	120	0	0	0	0	0	1	1	0	0
Pennsylvania	82	133	214	0	0	0	0	0	0	0	0	0
EAST NORTH CENTRAL												
Ohio	110	178	220	0	0	0	0	0	0	0	0	0
Indiana	10	51	25	0	0	0	0	0	0	1	0	0
Illinois	115	146	197	0	2	2	0	4	0	3	0	0
Michigan [2]	97	191	263	0	1	15	0	1	0	0	0	0
Wisconsin	145	204	199	0	0	0	0	0	0	0	0	0
WEST NORTH CENTRAL												
Minnesota	40	36	49	0	3	1	0	1	0	0	0	0
Iowa	15	16	21	0	0	0	0	0	0	0	0	0
Missouri	9	16	16	0	0	0	1	1	0	0	0	0
North Dakota	6	31	10	0	0	0	6	1	0	0	0	0
South Dakota	3	5	5	0	0	0	0	0	0	0	0	0
Nebraska	3	2	8	0	0	0	0	0	0	0	0	0
Kansas	19	10	33	0	0	0	0	0	0	0	0	0
SOUTH ATLANTIC												
Delaware	0	2	2	0	0	0	0	0	0	0	0	0
Maryland [2]	53	69	69	0	0	0	1	0	0	0	0	0
District of Columbia	1	19	17	0	0	0	0	0	0	0	0	0
Virginia	18	54	34	0	0	0	278	1	0	3	1	3
West Virginia	5	22	22	0	0	0	0	0	0	0	0	0
North Carolina	141	50	50	0	0	0	0	0	0	0	0	6
South Carolina	25	52	37	0	0	18	0	0	0	1	0	4
Georgia	20	7	10	0	0	3	0	0	0	0	0	29
Florida	29	16	6	0	0	0	1	1	0	0	0	11
EAST SOUTH CENTRAL												
Kentucky	58	31	58	0	0	0	0	0	0	1	1	0
Tennessee	32	36	24	0	1	0	11	0	0	1	2	3
Alabama	14	24	14	0	0	0	0	0	0	1	0	29
Mississippi	------	------	------	0	0	0	0	0	0	0	0	7
WEST SOUTH CENTRAL												
Arkansas	30	13	10	0	0	30	0	0	0	0	4	0
Louisiana	0	13	5	0	1	1	0	0	0	0	0	14
Oklahoma	7	9	5	0	0	0	0	0	0	2	0	0
Texas	108	156	93	0	19	377	9	1	0	0	0	52
MOUNTAIN												
Montana	54	36	12	0	0	0	0	1	0	0	0	0
Idaho	0	2	2	0	0	0	0	0	0	0	0	0
Wyoming	6	6	24	0	0	0	0	0	0	0	1	0
Colorado	10	96	35	0	0	1	0	2	0	0	0	0
New Mexico	3	9	18	0	0	2	3	0	0	0	0	0
Arizona	16	10	13	0	0	0	12	1	0	0	0	0
Utah	20	31	27	0	0	0	0	0	0	0	2	0
Nevada	0	0	0	0	0	0	0	0	1	0	0	0
PACIFIC												
Washington	11	51	34	0	0	0	0	0	0	0	0	0
Oregon	8	42	8	0	0	0	0	0	0	0	0	0
California	81	122	170	0	1	15	0	3	0	0	0	0
Total	1,737	2,634	2,722	2	30	561	322	19	2	14	11	159
Same Week 1943	2,634	------	------	1	46	435	213	15	0	4	9	150
Same Week 1942	136,936	------	------	0	29	2,785	209	18	0	6	9	146
38 Weeks 1944	71,887	------	------	34	1,275	16,656	6,637	491	23	430	430	3,600
38 Weeks 1943	145,326	------	------	48	1,582	12,414	6,047	540	19	408	655	2,946
38 Weeks 1942	136,936	------	[4] 139,425	63	847	9,357	5,296	420	35	[4] 427	709	[4] 2,025

[2] Period ended earlier than Saturday.

[4] 5-year median 1939–43.

WEEKLY REPORTS FROM CITIES

City reports for week ended September 9, 1944

This table lists the reports from 88 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
NEW ENGLAND												
Maine:												
Portland	0	0	-----	0	0	0	1	1	2	0	0	1
New Hampshire:												
Concord	0	0	-----	0	0	0	3	0	0	0	0	0
Vermont:												
Barre	0	0	-----	0	0	0	0	0	0	0	0	0
Massachusetts:												
Boston	2	0	-----	0	6	0	8	15	18	0	1	8
Fall River	0	0	-----	0	1	0	0	0	1	0	0	4
Springfield	0	0	-----	0	0	0	0	1	2	0	0	0
Worcester	0	0	-----	0	1	0	3	0	4	0	0	6
Rhode Island:												
Providence	1	0	-----	0	4	0	3	0	2	0	0	5
Connecticut:												
Bridgeport	0	0	-----	0	0	1	0	3	0	0	0	0
Hartford	0	0	-----	0	1	0	1	2	0	0	0	2
New Haven	0	0	-----	0	0	0	0	0	0	0	0	6
MIDDLE ATLANTIC												
New York:												
Buffalo	0	0	-----	0	0	1	1	45	1	0	1	1
New York	6	0	-----	0	12	9	41	232	25	0	8	65
Rochester	0	0	-----	0	5	0	0	21	1	0	0	11
Syracuse	0	0	-----	0	0	0	2	6	4	0	0	8
New Jersey:												
Camden	2	0	-----	0	0	1	1	1	1	0	0	0
Newark	0	0	1	0	0	0	4	2	1	0	0	1
Trenton	0	0	-----	0	0	0	1	0	1	0	0	0
Pennsylvania:												
Philadelphia	0	0	4	0	5	1	9	34	2	0	2	10
Pittsburgh	0	0	-----	0	0	1	4	9	1	0	0	7
Reading	0	0	-----	0	1	0	1	1	0	0	0	0
EAST NORTH CENTRAL												
Ohio:												
Cincinnati	2	0	-----	0	0	1	0	22	2	0	0	5
Cleveland	0	0	-----	0	2	0	8	22	10	0	0	16
Columbus	0	0	-----	0	0	1	0	2	2	0	0	8
Indiana:												
Fort Wayne	0	0	-----	0	0	0	1	0	0	0	1	0
Indianapolis	2	0	-----	0	1	0	2	0	1	0	0	10
South Bend	0	0	-----	0	1	0	0	1	1	0	0	0
Terre Haute	0	0	-----	0	0	0	0	0	0	0	0	0
Illinois:												
Chicago	2	0	-----	0	4	3	17	16	8	0	1	53
Springfield	0	0	-----	0	0	0	0	0	1	0	0	0
Michigan:												
Detroit	2	0	-----	1	2	5	2	48	13	0	0	45
Grand Rapids	0	0	-----	0	0	0	0	2	1	0	0	0
Wisconsin:												
Kenosha	0	0	-----	0	0	0	0	0	0	0	0	11
Milwaukee	0	0	-----	0	3	1	1	10	5	0	0	30
Racine	0	0	-----	0	1	0	0	0	0	0	0	14
Superior	0	0	-----	0	3	0	0	0	1	0	0	3
WEST NORTH CENTRAL												
Minnesota:												
Duluth	0	0	-----	0	1	0	0	3	3	0	0	6
Minneapolis	7	0	-----	0	0	1	2	15	2	0	0	3
St. Paul	0	0	-----	0	0	0	4	11	3	0	1	28
Missouri:												
Kansas City	0	0	-----	0	1	0	6	1	2	0	1	0
St. Joseph	0	0	-----	0	0	0	0	0	1	0	0	0
St. Louis	0	0	-----	0	0	1	2	5	1	0	1	6
North Dakota:												
Fargo	0	0	-----	0	0	0	1	1	0	0	0	3
Nebraska:												
Omaha	0	0	-----	0	0	0	0	2	1	0	1	0
Kansas:												
Topeka	1	0	-----	0	0	0	0	0	0	0	0	3
Wichita	0	0	-----	0	0	0	4	1	2	0	0	5

City reports for week ended September 9, 1944—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Poliomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
SOUTH ATLANTIC												
Delaware:												
Wilmington	0	0	.....	0	0	0	2	5	0	0	0	0
Maryland:												
Baltimore	1	0	.....	0	1	1	2	16	9	0	0	72
Cumberland	0	0	.....	0	0	0	0	0	0	0	0	0
Frederick	0	0	.....	0	0	0	0	0	0	0	0	0
District of Columbia:												
Washington	0	0	.....	0	2	1	5	17	9	0	0	4
Virginia:												
Lynchburg	1	0	.....	0	0	0	0	6	0	0	0	0
Richmond	0	0	.....	0	0	0	4	4	1	0	0	3
Roanoke	0	0	.....	0	0	0	0	6	1	0	0	0
West Virginia:												
Charleston	0	0	.....	0	0	0	0	0	0	0	0	0
Wheeling	0	0	.....	0	0	0	0	1	0	0	0	4
North Carolina:												
Raleigh	0	0	.....	0	0	0	0	0	0	0	0	2
Wilmington	0	0	.....	0	0	0	0	0	0	0	0	1
Winston-Salem	0	0	.....	0	0	0	1	2	2	0	0	0
South Carolina:												
Charleston	0	0	.....	0	0	1	0	0	0	0	0	0
Georgia:												
Atlanta	0	0	5	0	0	1	4	0	1	0	0	0
Brunswick	0	0	.....	0	0	1	0	0	0	0	0	0
Savannah	0	0	.....	0	0	1	1	0	0	0	0	0
Florida:												
Tampa	0	0	.....	0	0	0	1	0	2	0	1	0
EAST SOUTH CENTRAL												
Tennessee:												
Memphis	1	0	.....	0	0	0	3	1	1	0	1	1
Nashville	0	0	.....	0	0	0	0	1	1	0	0	0
Alabama:												
Birmingham	0	0	.....	0	0	0	3	1	0	0	2	0
Mobile	0	0	.....	0	0	1	2	0	1	0	1	0
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock	0	0	.....	1	0	0	9	0	0	0	0	0
Louisiana:												
New Orleans	0	0	2	0	2	0	5	4	1	0	5	2
Shreveport	1	0	.....	0	0	0	1	0	0	0	0	0
Texas:												
Dallas	3	0	.....	0	0	0	1	0	1	0	3	1
Galveston	0	0	.....	0	0	0	2	0	0	0	0	0
Houston	1	0	.....	0	0	0	6	2	0	0	4	0
San Antonio	4	0	.....	0	1	0	2	0	0	0	0	0
MOUNTAIN												
Montana:												
Billings	0	0	*	0	0	0	0	0	0	0	0	4
Great Falls	0	0	.....	0	0	0	1	0	1	0	0	5
Helena	0	0	.....	0	0	0	0	0	1	0	0	7
Missoula	0	0	.....	0	0	0	2	0	0	0	0	0
Idaho:												
Boise	0	0	.....	0	0	0	0	0	0	0	0	0
Colorado:												
Denver	3	2	1	0	0	2	1	3	8	0	1	12
Pueblo	1	0	.....	0	0	0	1	0	1	0	0	0
Utah:												
Salt Lake City	0	0	.....	0	0	0	2	0	0	0	0	3
PACIFIC												
Washington:												
Seattle	0	0	.....	0	1	0	4	0	6	0	0	2
Spokane	0	0	.....	0	2	0	2	0	0	0	0	0
Tacoma	0	0	.....	0	2	0	0	0	0	0	0	1
California:												
Sacramento	.....	0	.....	0	6	1	1	1	1	0	0	0
San Francisco	2	0	1	0	21	2	3	0	12	0	0	1
Total	45	2	14	2	93	39	195	605	186	0	36	509
Corresponding week, 1943	43	.....	19	6	138	.....	209	.....	210	0	26	754
Average, 1939–43	49	.....	31	[3]	[2]149	.....	[1]212	.....	223	1	41	986

[1] 3-year average, 1941–43. [2] 5-year median, 1939–43.

Dysentery, amebic.—Cases: Boston, 1; New York, 2; Cleveland, 1; Chicago, 3; Denver, 1.

Dysentery, bacillary.—Cases: Providence, 1; Buffalo, 5; Syracuse, 1; Chicago, 2; Detroit, 7; Charleston, S. C., 23; Shreveport, 1; Denver, 3.

Dysentery, unspecified.—Cases: Richmond, 1.

Rocky Mountain spotted fever.—Cases: Winston-Salem, 1; Missoula, 1.

Typhus fever, endemic.—Cases: Milwaukee, 1; Charleston, S. C., 2; Atlanta, 2; Brunswick, 1; Savannah, 4; Tampa, 6; Nashville, 1; Mobile, 3; New Orleans, 6; Galveston, 1; Houston, 6; San Antonio, 3.

Rates (annual basis) per 100,000 population, by geographic groups, for the 88 cities in the preceding table (estimated population, 1943, 32,538,800)

	Diphtheria case rates	Encephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Poliomyelitis case rates	Scarlet fever case rates	Smallpox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
New England	7.8	0.0	-----	0.0	34	2.6	49.7	57.5	76	0.0	2.6	84
Middle Atlantic	3.7	0.0	2.3	0.0	11	6.0	29.6	162.5	17	0.0	5.1	48
East North Central	5.0	0.0	-----	0.6	11	6.8	19.2	76.1	28	0.0	1.2	121
West North Central	15.9	0.0	-----	0.0	4	4.0	37.8	77.6	30	0.0	8.0	107
South Atlantic	3.3	0.0	8.2	0.0	5	9.8	32.7	93.2	41	0.0	1.6	142
East South Central	5.9	0.0	-----	0.0	0	5.9	47.2	17.7	18	0.0	23.6	6
West South Central	25.8	0.0	5.7	2.9	9	0.0	48.8	17.2	6	0.0	34.4	9
Mountain	31.8	15.9	7.9	0.0	0	15.9	55.6	23.8	87	0.0	7.9	246
Pacific	6.5	0.0	3.3	0.0	104	9.8	32.6	3.3	62	0.0	0.0	13
Total	7.2	0.3	2.2	0.3	15	6.3	31.3	97.2	30	0.0	5.8	82

PLAGUE INFECTION IN SAN LUIS OBISPO COUNTY, CALIF.

Plague infection has been reported proved in San Luis Obispo County, Calif., in a pool of 400 fleas from 25 ground squirrels, *C. beecheyi*, submitted to the laboratory on August 28 from a ranch 4 miles north of Alamo Creek Bridge and Highway No. 166, and in a pool of 200 fleas from 40 ground squirrels, same species, submitted to the laboratory on August 23 from a ranch 2 miles east of San Luis Obispo and proved positive for plague on September 12.

TERRITORIES AND POSSESSIONS

Hawaii Territory

Plague (rodent).—A rat found on August 19, 1944, in the Hamakua Mill area, Honokaa, Hamakua District, Island of Hawaii, T. H., was proved positive for plague on August 24, 1944. Plague was also proved positive on August 20, 1944, in a pool of 8 mice found on August 15, 1944, in Paauhau area, Honokaa, Hamakua District, Island of Hawaii, T. H. A rat found in the same location on August 22, 1944, was proved positive for plague on August 31, 1944.

Puerto Rico

Notifiable diseases—4 weeks ended September 9, 1944.—During the 4 weeks ended September 9, 1944, cases of certain notifiable diseases were reported in Puerto Rico as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	1	Ophthalmia neonatorum	3
Chickenpox	11	Poliomyelitis	1
Diphtheria	51	Syphilis	892
Dysentery	19	Tetanus	2
Filariasis	2	Tetanus, infantile	1
German measles	6	Trachoma	1
Gonorrhea	532	Tuberculosis (all forms)	608
Influenza	43	Typhoid fever	44
Malaria	742	Typhus fever (endemic)	14
Measles	40	Undulant fever	1
Mumps	7	Whooping cough	176

FOREIGN REPORTS

CANADA

Provinces—Communicable diseases—Week ended August 26, 1944.—During the week ended August 26, 1944, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Chickenpox		1		11	20	8	7	15	12	74
Diphtheria		3		10	1	2			1	17
Dysentery (bacillary)				6					1	7
German measles				3	6		1	2	5	17
Influenza					10				5	15
Measles			6	51	32	13	6	7	5	120
Meningitis, meningococcus		1		2						3
Mumps				15	27	1	2	12	3	60
Poliomyelitis		1	10	1	32	7	1	7	1	60
Scarlet fever		1	8	40	45	4	3	11	13	125
Tuberculosis (all forms)			12	126	50	12			16	216
Typhoid and paratyphoid fever		1	1	28	3		1		3	37
Undulant fever					3		1			4
Whooping cough		21		63	34	3	4	8	32	165

WORLD DISTRIBUTION OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

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

CHOLERA

[C indicates cases]

NOTE.—Since many of the figures in the following tables are from weekly reports, the accumulated totals are for approximate dates.

Place		January–June 1944	July 1944	August 1944—week ended—			
				5	12	19	26
ASIA							
Ceylon	C	2					
India	C	113,199	11,909				
Calcutta	C	2,685	178	67	63	54	
Chittagong	C	63					
Madras	C	36					
Negapatam	C	17					
Vizagapatam	C		23	45	138	94	

PLAGUE

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

Place		January–June 1944	July 1944	August 1944—week ended— 5	12	19	26
AFRICA							
Algeria[1]	C		2				
Belgian Congo	C	2					
Plague-infected rats		P					
British East Africa:							
Kenya	C	2	4				
Uganda	C	5					
Egypt	C	597	29				
Port Said	C	35	23	4	5	3	1
Suez	C	157					
French West Africa: Dakar	C	51	94				[2] 141
Madagascar	C	69					
Morocco (French)	C	70	7		62		
Rhodesia, northern	C	1					
Senegal	C	2	15		2		
Tunisia	C						1
Union of South Africa	C	23					
ASIA							
China: Foochow	C	P					
India	C	6,773	58				
Indochina	C	55	2				
Palestine	C	2	2	1	2	8	5
EUROPE							
Portugal: Azores	C	10	3		1		
SOUTH AMERICA							
Bolivia:							
Chuquisaca Department	C	4	1				
Tarija Department	C	6	3				
Ecuador: Chimborazo Department	C	4					
Peru:							
Ancash Department	C	57					
Lambayeque Department	C	1					
Libertad Department	C	5					
Lima Department	C	17					
Piura Department	C	2					
OCEANIA							
Hawaii Territory:							
Hamakua District	D	[3] 4	1				
Plague-infected rats[4]		[5] 42	3	1		[6] 1	[7] 1

[1] For the week ended Sept. 9, 1944, 1 case of plague was reported in Algiers, Algeria.
[2] For 4 weeks ended Aug. 26, 1944.
[3] Includes 1 death from pneumonic plague.
[4] 53 fleas were also proved positive for plague on Mar. 7, 1944.
[5] Includes 12 plague-infected mice.
[6] Plague-infected mouse.
[7] Also plague-infected tissue in a pool of 8 mice.

SMALLPOX

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

AFRICA							
Algeria	C	678	42		12		
Angola	C	24					
Basutoland	C	130					
Belgian Congo	C	1,167	110				
British East Africa:							
Kenya	C	2,684	193	16			
Mombasa	C	142	1				
Tanganyika	C	1,704	722			198	
Uganda	C	2,404	543	102	114		
Cameroon (French)	C	348	17				
Dahomey	C	65	1		11		
Egypt	C	10,458	274	50		22	
French Equatorial Africa	C	1,041					
French Guinea	C	808	54		13		
French West Africa	C	105	4		6		
Gambia	C	13					
Gold Coast	C	6					
Ivory Coast	C	390	13				

SMALLPOX—Continued

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

Place		January–June 1944	July 1944	August 1944—week ended—			
				5	12	19	26
AFRICA—continued							
Mauritania	C	1					
Morocco (French)	C	620	28				
Mozambique	C	1	1				
Nigeria	C	3,095	216	31			
Niger Territory	C	541	9				
Senegal	C	147	15		2		
Sierra Leone	C	393					
Sudan (Anglo-Egyptian)	D	1					
Sudan (French)	C	1,865	18		3		
Tunisia	C	6					
Union of South Africa	C	135	31				
ASIA							
Arabia	C	[1] 9					
Ceylon	C	8					
China: Kunming (Yunnan Fu)	C	44	9				
India	C	201,821	10,364				
Indochina	C	1,517	40				
Iran	C	789					
Iraq	C	31	1				
Palestine	C	143	10	8		1	
Syria and Lebanon	C	176					
EUROPE							
France	C	1					
Gibraltar	C	P					
Great Britain	C	[2] 17	1				
Greece	C	317					
Italy	C	275	240	22		21	11
Portugal	C	28	2	1			
Spain	C	147					
Turkey	C	5,550					
NORTH AMERICA							
Dominican Republic	C	1					
Guatemala	C	4	3				
Honduras	C	9					
Mexico	C	1,695					
SOUTH AMERICA							
Bolivia	C	372	103				
Brazil	C	115	187				[3] 273
Colombia	C	278	36	9	7	5	6
Ecuador	C	5					
Peru	C	203					
Lima	C	19					
Venezuela	C	190	41				

[1] Includes 4 imported cases.
[2] Includes 1 case imported from the Middle East.
[3] For the month of August 1944.

TYPHUS FEVER

[C indicates cases]

AFRICA							
Algeria	C	851	89		8		
Basutoland	C	4					
Belgian Congo	C	10					
British East Africa: Kenya	C	7					
Egypt	C	15,886	618	124		99	
French Guinea	C	2					
French West Africa: Dakar	C	22					
Gold Coast	C	5					
Morocco (French)	C	2,010	320				
Morocco (Spanish)	C	6					
Mozambique	C	2					
Nigeria	C	2					
Rhodesia, northern	C	40	22		3		
Sierra Leone	C	30					
Sudan (Anglo-Egyptian)	C		2				
Tunisia	C	578	34		3		
Union of South Africa	C	4,723	37				

TYPHUS FEVER—Continued

[C indicates cases]

Place		January–June 1944	July 1944	August 1944—week ended— 5	12	19	26
ASIA							
Arabia: Western Aden Protectorate	C	[1] 15					
Ceylon	C	1					
China: Kunming (Yunnan Fu)	C	48	16	3	4		6
India	C	6					
Indochina	C	975	29				
Iran	C	6,310	18				
Iraq	C	542	8				
Palestine	C	391	19			10	4
Syria and Lebanon	C	422	5				
Trans-Jordan	C	29					
EUROPE							
Belgium	C	9	1				
Bulgaria	C	624					
France	C	8					
Greece	C	269					
Hungary	C	2,837	276		[2] 75	25	12
Irish Free State	C	6	1				
Netherlands	C	8					
Norway	C	1					
Portugal	C	4					
Rumania	C	6,000					
Slovakia	C	316	15				
Spain	C	401					
Turkey	C	2,076					
Yugoslavia	C	6,264	713				
NORTH AMERICA [3]							
Costa Rica	C	2					
Dominican Republic	C	10					
Guatemala	C	1,370	175				
Jamaica	C	41	4	1	4	2	2
Mexico	C	1,055					
Panama Canal Zone	C	1					
Puerto Rico (endemic)	C	92	37	15	8	3	5
Salvador	C	4					
Virgin Islands	C	2	4				
SOUTH AMERICA							
Bolivia	C	108	58				
Brazil	C	2		2			
Chile	C	302		[4] 39			
Colombia	C	250					
Curacao	C	1	1				1
Ecuador	C	188					
Peru	C	474					
Venezuela	C	46	14				
OCEANIA							
Australia	C	128	14	1	2	1	
Hawaii Territory	C	34	8		1	1	3

[1] A report dated Mar. 30, 1944, states that an estimated 800 deaths from typhus fever have been reported in Western Aden Protectorate, Arabia.
[2] For 2 weeks.
[3] Cases of typhus fever listed in this area are probably of endemic type.
[4] For the period July 16–Aug. 12, 1944.

YELLOW FEVER

[C indicates cases; D, deaths]

Place		January–June 1944	July 1944	August 1944—week ended—			
				5	12	19	26
AFRICA							
Belgian Congo:							
Babeyru	D	1					
Banzyville	C	1	1		[1] 1	[1] 10	
Bondo	D	1					
Leopoldville	C	1					
Gold Coast:							
Kintampo	C	[1] 1					
Sekondi	C			[1] 1			
Tamale	C	[1] 1					
Yendi	C		[1] 1				
Ivory Coast: Abidjan	C				1		
Portuguese Guinea: Port Bintam	C		1				
EUROPE							
Portugal: Lisbon.[2]							
SOUTH AMERICA							
Bolivia:							
La Paz Department	C	1					
Santa Cruz Department	C	3					
Brazil:							
Acre Territory	D	1					
Matto Grosso State	D	3					
Para State	D	2					
Colombia:							
Boyaca Department	D	2					
Caldas Department	D	1					
Cundinamarca Department	D	1					
Santander Department	D	4					
Venzeuela.[3]							

[1] Suspected.
[2] According to information dated Jan. 21, 1944, it is reported that a vessel which called at the islands of Sao Tome and Cape Verde arrived at Lisbon, Portugal, with cases of yellow fever on board.
[3] For the week ended Sept. 2, 1944, 3 deaths from yellow fever were reported near San Camilo, Apure State, Venezuela.

COURT DECISION ON PUBLIC HEALTH

Milk ordinance recommended by Public Health Service—incorporation by reference in local board of health regulation.—(Ohio Supreme Court; *State* v. *Waller*, 55 N. E. 2d 654; decided June 7, 1944.) The district board of health of Butler County adopted a regulation which provided, among other things, that the sale of milk and milk products should be regulated in accordance with the terms of the unabridged form of the 1939 edition of the United States Public Health Service milk ordinance. The publication of the regulation did not contain the milk ordinance referred to but a certified copy of such ordinance was to be on file in the office of the board of health. The defendant was convicted of violating the regulation of the district board of health in that he sold milk without a permit from the county health officer. The judgment of conviction was affirmed by the court of common pleas but reversed by the county court of appeals, and, from the latter court's judgment, the State appealed to the Supreme Court of Ohio. The supreme court said that the question presented could be stated as follows: "Where a district board of health adopts a regulation and by reference incorporates into such regulation the text of a recommended ordinance

found in a bulletin issued by the United States Public Health Service and advertises the regulation in short form, as adopted, has such regulation been legally adopted and advertised?"

Section 1261–42 of the Ohio General Code provided in part that the board of health of a general health district could make such orders and regulations as it deemed necessary for the public health, the prevention or restriction of disease, and the prevention, abatement, or suppression of nuisances. Such section further provided: "All orders and regulations not for the government of the board, but intended for the general public, shall be adopted, recorded, and certified as are ordinances of municipalities and record thereof shall be given in all courts of the State the same force and effect as is given such ordinances, but the advertisements of such orders and regulations shall be by publication in one newspaper published and of general circulation within the general health district." The supreme court pointed out that reference statutes were in general use throughout the country and that the Ohio Legislature had followed the practice but had, in most instances, limited the incorporation by reference to other sections of the code. The language of a prior case was quoted wherein it was stated that "The effectiveness of legislation by reference has been so generally recognized in Ohio that no very specific declaration appears in the reported cases." Proceeding to the matter of local regulations, the court cited section 4226 of the General Code in which it was stated in part that "No by-law or ordinance, or section thereof, shall be revived or amended unless the new by-law or ordinance contains the entire by-law or ordinance, or section revived or amended, and the by-law or ordinance, section or sections so amended shall be repealed." So long as there was no violation of this section, the court said that it saw no objection to the incorporation by reference in a regulation of a district board of health of a duly enacted statute or a duly enacted ordinance which had been theretofore properly published. However, the supreme court was of the view that a publication of a district board of health regulation which omitted the rules of conduct to be observed and merely referred those who might be affected to a copy of the terms "on file in the office of the board of health" was not a compliance with section 1261–42 of the code and that, until proper publication had been made, such regulation was not effective and no prosecution could be had thereunder.

The judgment of the court of appeals, which reversed the judgment of the court of common pleas and discharged the defendant, was affirmed.

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