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DISABLING SICKNESS IN COTTON MILL COMMUNITIES OF SOUTH CAROLINA IN 1917.

A STUDY OF SICKNESS PREVALENCE AND ABSENTEEISM, AS RECORDED IN REPEATED CANVASSES, IN RELATION TO SEASONAL VARIATION, DURATION, SEX, AGE, AND FAMILY INCOME.*

By DOROTHY WIEHL, Junior Statistician, and EDGAR SYDENSTRICKER, Statistician, United States Public Health Service.

In connection with a study of the relation of dietary, economic, and sanitary conditions to pellagra made during 1916 in seven cotton mill villages of South Carolina, the opportunity was afforded of recording the prevalence of disabling illness among the population under observation.¹ These data were collected during a single canvass of about 4,000 persons.

In 1917 the study of pellagra in cotton mill villages included a much larger population and extended over a longer period of time, so that the opportunity was afforded for enlarging the record of disabling sickness. In all, five separate canvasses were made. The following were the dates on which they were begun and ended and the number of villages included in each:

Date of canvass.	Number of villages included in canvass.
Apr. 2-8.....	2
Apr. 10-June 9.....	24
June 18-Aug. 18.....	24
Oct. 8-Oct. 27.....	5
Nov. 26-Dec. 22.....	5

Two villages were canvassed 5 separate times, 3 villages were canvassed 4 times, and 19 villages were canvassed twice.

The inquiry had two specific objectives: (1) To ascertain the amount of disabling sickness on the date of the canvass, or, more specifically, on the day the information was obtained in the course of the enumerator's visit to the household; (2) to record the amount of absenteeism from work in the cotton mills, more particularly of absences due to sickness, during the two months preceding the date of each canvass.

* From Field Investigations of Pellagra, United States Public Health Service. This is the second of a series of papers relating to disabling sickness in South Carolina cotton mill villages, the first being—

Sydenstricker, E., Wheeler, G. A., and Goldberger, J.: Disabling sickness among the population of seven cotton mill villages of South Carolina in relation to family income (1916). Pub. Health Rep. Nov. 22, 1918. Reprint No. 492.

¹ An analysis of these records was published in the first article of the series.

The maximum population included in the 24 villages was approximately 22,000 persons, and the number of observations made for sickness prevalence was 55,067, in the course of which 1,241 cases of illnesses were recorded as disabling. The maximum number of wage earners recorded for any month for absenteeism was 5,034, and the minimum was 381.

The method of the canvass was as follows:

Enumerators visited each household, and from a responsible member of the household, usually the housewife, secured, among other data, facts as to the sex, age, occupation, earnings, and regularity of employment of each individual member of the household and as to other sources of family income. Specific inquiry was made as to the prevalence of "sickness" in the household at the time of the visit and absenteeism from work in the cotton mill during the two months preceding the date of inquiry.

"Sickness" for the purpose of this study, and to make it comparable with this term as used in other "sickness-surveys," was defined as any disability, other than industrial accident, which prevented the person from working or attending to any other customary pursuit. Accordingly, wage earners were "sick" when they were unable to work, even though they might be up and about. The definition had to be interpreted for children and nonwage earners in such a way that the data for all classes would be comparable, and in this some difficulties were experienced. For persons confined to bed, the definition was easily applied; but in the case of housewives and other women who said they were sick but were doing housework or at least were not confined to bed, the judgment of the enumerators had to be depended upon. It was emphasized in the instructions given the enumerators that disabling sickness only was to be recorded, so that the results of the census undoubtedly give a minimum amount of disability rather than a maximum.

In recording absenteeism from work, the statement of the housewife or other responsible member of the family was accepted. The date of each absence was recorded as well as whether or not it was due to sickness or other causes.

In setting forth the results of this study, we have not felt that the data warranted more than a very elementary presentation. The method of manifold classification has been resorted to exclusively, but without any attempt to express the relationships in terms of coefficients. We have not thought it necessary to present the probable errors of the rates or of their differences. The number of observations included in several of the classes appearing in the analysis is obviously small and the significance of any results depends, perhaps, more on the degree of their consistency than on the statistical reliability of any particular rate.

I. SICKNESS PREVALENCE.

1. IN RELATION TO SEX, AGE, AND SEASON OF YEAR.

In Table 1 are shown the rates of disabling sickness among persons of different sexes at each of these six periods. These rates properly may be termed "prevalence rates," since they indicate the proportion of the population observed who were sick on the day of the enumerator's visit.

TABLE 1.—*Prevalence of disabling sickness in the population of several cotton-mill villages on dates of canvasses made during 1917, by sex.*

Sex.	Disability per 1,000 persons ^a in specified period.					
	April 2- May 5.	May 7- June 9.	June 18- July 14.	July 16- Aug. 18.	Oct. 8-27.	Nov. 26- Dec. 22.
All persons ^b	25.3	36.5	26.6	23.0	18.6	18.1
Males.....	26.9	37.7	28.9	22.3	18.8	18.9
Females (except confinements).....	23.8	34.4	24.5	23.5	18.3	17.5
Females (including confinements).....	26.0	35.9	26.6	24.6	19.9	18.1

^a Adjusted to a standard age distribution. For unadjusted rates and figures see Appendix, Table A.

^b Excluding confinements.

It is possible to regard the rates at the various periods of the canvass as indicating roughly the seasonal variation in disabling sickness. Thus considered, the rates are found to vary from 18.8 to 36.5 per 1,000 persons observed. Contrary to the results afforded from other sickness records,² a period of rising sickness prevalence is indicated during April and May, and a falling prevalence in the latter part of June and the first part of July and thereafter. Just when the crest of this "wave" of ill health, if it may be so termed, was reached, can not, of course, be determined from our data; the fact that a period of high prevalence did occur in the late spring and early summer is quite evident and is unusual. It will be recalled that the usual seasonal curve of sickness, in the absence of marked epidemics, generally reaches its peak in the late winter and early spring and follows a fairly consistent downward course until the summer low level is reached.

¹ Cf various studies of records of sickness and wage-earning adults from Statistical Office and published in the Public Health Reports during 1920, 1921, and 1922:

Dean K. Brundage: Sickness and absenteeism during 1919 in a large industrial establishment. Sept. 10, 1920. (Reprint No. 611.)

— Diseases prevalent among steel workers in a Pennsylvania city. Dec. 31, 1920. (Reprint No. 622.)

— Sickness among office workers. Mar. 10, 1922. (Reprint No. 733.)

— Sickness frequency among industrial employees. Dec. 3, 1920; Mar. 4, 1921; July 1, 1921; and Jan. 6, 1922. (Reprints Nos. 624, 644, 671, and 721.)

— Disabling sickness among employees of a rubber manufacturing establishment in 1918, 1919, and 1920. Dec. 15, 1922. (Reprint No. 804.)

— Incidence of serious morbidity among a group of wage earners. Dec. 29, 1922. (Reprint No. 807.)

Also, B. S. Warren and Edgar Sydenstricker: Statistics of disability. Apr. 21, 1916. (Reprint No. 335.)

Edgar Sydenstricker and Dean K. Brundage: Industrial establishment disability records as a source of morbidity statistics. Quart. Pub. Am. Stat. Assoc., March, 1924.

The rate for males was found to be higher than for females, if confinement cases are excluded, at every period save one (July 16–August 18), the greatest differences being at the first three periods, which are made during April, May, and June–July. We do not feel that this difference may be accepted entirely without question, on account of certain deficiencies in the data, to which reference will be made later.

For convenience in making certain comparisons, the average number of days of sickness per person may be estimated on an annual basis.³ While our surveys may be considered as fairly representative of the period April 2–December 22 (176 days of actual canvass), the annual figures thus estimated are probably too low, since three months of relatively high prevalence, as shown by other experience, are not included; but they properly may be compared with each other.

Using the adjusted rates in Table 1 as a basis, the indicated annual average days of disabling sickness per person for males and females are given in Table 2. The reservation already made regarding a comparison of the male and female rate should be kept in mind in interpreting the above figures.

TABLE 2.—Average annual number of days of disabling sickness per person in the population of South Carolina, 1917, by sex.

Sex.	Average number of days of disability per person per year. ¹
All persons ²	9.3
Males.....	9.6
Females (excluding confinements).....	8.9
Females (including confinements).....	9.4

¹ Estimated on sickness prevailing at 6 canvasses made during a period of 176 days from Apr. 2–Dec. 22, 1922.

² Excluding confinements.

In considering the specific (age) rates obtained in the different canvasses, the two summer periods and the two autumn periods were combined. In each case the groups which were combined had fairly similar rates and there was no other indication that sickness prevalence varied widely for the periods thus combined. Furthermore, it was

³ The method used *weights* the sickness prevalence rates for the six periods according to the number of days covered by the canvass and thus presumably according to their value as indicators of the prevalence of sickness during the specific season of the year. The arithmetic procedure may be illustrated as follows: $(0.0253 \times 34) + (0.0365 \times 34) + (0.0266 \times 27) + (0.0230 \times 34) + (0.0186 \times 20) + (0.0181 \times 27) = 4.4621$, which, when multiplied by the factor $\frac{365}{176}$, gives 9.3 as the average number of days of sickness per person per year.

It may be noted that an *unweighted* average of the six rates (0.0247) multiplied by the factor $\frac{365}{1}$ gives nearly the same result (9.02 days).

found that the age distributions of the population canvassed in each of the six periods used in Table 1 were so similar that any combination of periods would not be affected by the age factor.⁴

TABLE 3.—*Prevalence of disabling sickness in the population of several cotton-mill villages on dates of canvasses made during 1917, by sex and age.*

Age group.	Rate per 1,000 persons in specified period. ¹			
	Apr. 2 to May 5.	May 7 to June 9.	June 18 to Aug. 18.	Oct. 8 to Dec. 22.
ALL PERSONS.				
—5.....	21.9	39.3	20.1	11.6
5-14.....	12.0	16.9	8.0	6.5
15-24.....	23.7	30.0	22.2	10.7
25-44.....	24.8	29.9	25.8	21.7
45+.....	42.9	69.1	45.5	37.9
MALES.				
—5.....	16.4	51.4	19.7	12.5
5-14.....	11.7	15.5	8.8	7.7
15-24.....	22.5	27.6	15.0	9.9
25-44.....	24.4	23.2	21.1	23.2
45+.....	55.7	80.9	60.3	35.7
FEMALES. ²				
—5.....	27.9	27.0	20.5	10.6
5-14.....	12.2	18.5	7.2	5.2
15-24.....	24.8	31.8	28.1	11.5
25-44.....	25.2	36.6	30.3	20.3
45+.....	30.7	56.6	30.8	40.1

¹ For figures see Appendix II.

² Excluding confinements.

Table 3 gives the rates of disabling sickness per 1,000 for persons of different ages at each of these four periods of the year 1917. Practically the same seasonal variation is indicated for each age group and for each of the sexes with one marked exception, males of the age group 25-44, which group had about the same amount of sickness throughout the four periods. Our data are not of a nature to suggest any explanation for the apparent freedom of this group from the effects of those factors which brought about a definite seasonal variation in sickness among all other persons.

The indicated average number of days of disabling sickness per year for persons of different ages and of each sex is given in Table 4 and Figure 1. These averages were obtained by the method already described.

⁴ The age distribution of the populations at each of the six periods and also of the population of the United States is given in Table C of the Appendix. The large number of children and young people and the small number of old people in the mill villages as compared with the United States as a whole is very marked.

TABLE 4.—*Estimated annual number of days of disabling sickness for persons of different age and sex among families of cotton-mill employees in South Carolina mill villages in 1917.*¹

Age group (years).	Number of days of disability per person.		
	Both sexes.	Males.	Females. ²
Under 5.....	8.0	8.5	7.5
5-9.....	3.1	3.3	2.9
10-14.....	4.4	4.3	4.4
15-24.....	7.6	6.4	8.7
25-34.....	9.2	7.7	10.7
35-44.....	9.4	9.2	9.5
45-54.....	12.7	12.5	13.1
55 and over.....	22.1	29.9	14.8

¹ Based on successive canvasses in 24 villages. Visits made between Apr. 2 and Dec. 22; only persons ill on day of visit recorded.

² Exclusive of confinements.

In general, both sexes show the characteristic age curves of morbidity. Practically no difference between the sexes is shown in the age group, "under 15," but in the age group "15-34" the women were sick from two to three days more a year than males of similar ages, in spite of the fact that disability due to confinement is excluded. If reference be made again to Table 3, it will be seen that the excess in the female disability rate at the ages 15-44 occurred almost entirely during the period May 7-August 18, which is, roughly, the period of pellagra prevalence. The higher rate among males at the older ages is probably due in some degree to the interpretation of "disabling sickness" by the enumerators. It is evident that a man 60 years old and unable to work might be considered disabled, though the cause was nothing more than old age, while a woman of similar age had no "occupation" and was not likely to be considered disabled unless evidently suffering from some specific disease.⁵

2. IN RELATION TO FAMILY INCOME.

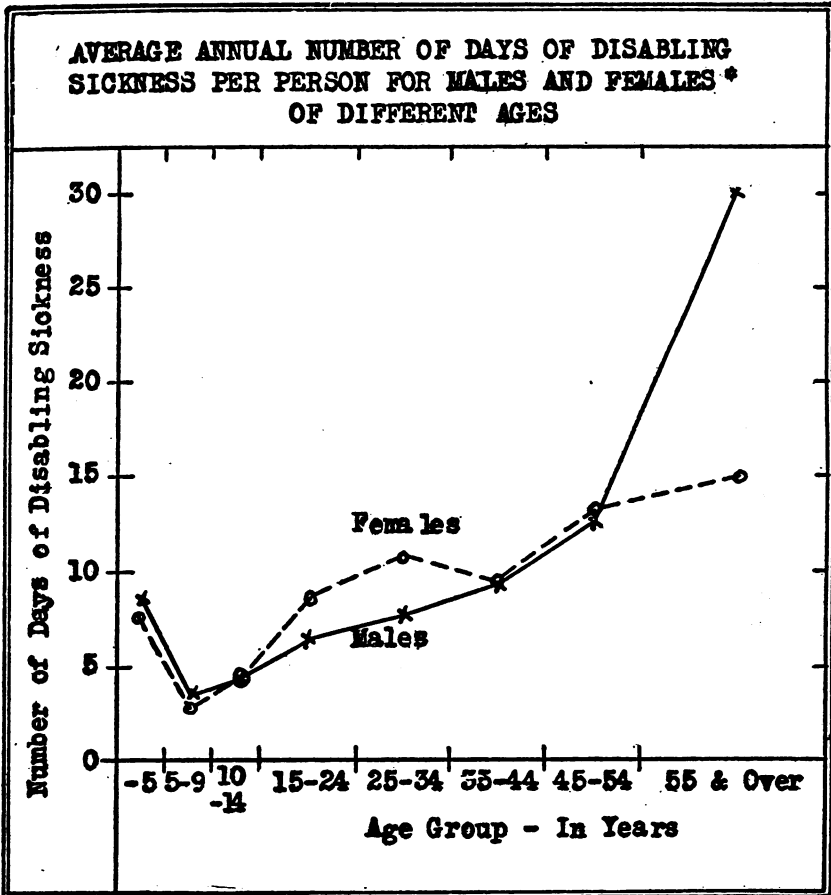
In the study of 1916, based on a single canvass of approximately 4,000 persons in seven cotton-mill villages in South Carolina,⁶ it was found that a very definite association existed between family income and the rate for prevalence of sickness. The results of the repeated canvasses of a very much larger population in 1917 corroborates fully the results of the earlier study.

From the association between low income and a high sickness rate it can *not* be assumed, of course, that low income is *per se* a cause of ill health. It seems to us, however, that the knowledge that such an association does exist constitutes an important step in an analysis of

⁵ Morbidity surveys made by the Metropolitan Life Insurance Co., covering half a million people, showed an average annual disability of 25.3 days per person for males 55 years of age or older, and 20.7 days for females of the same ages. See "Some recent morbidity data," compiled by Margaret Loomis Stecker; published by the Metropolitan Life Insurance Co., 1919.

⁶ *Supra cit.*

the conditions which affect the health of a population. It suggests the importance of further study of what those conditions actually are which affect that considerable proportion of our population which is really poor. Is this high sickness rate a reflection only of the results of a selective process by which the less healthy members of the population, including those with a poor physical and mental



* Exclusive of confinement.

FIG. 1.

inheritance, naturally gravitate toward a lower economic level because of their inability to earn an adequate living? Or can we assume that low income—the lack of an adequate power to purchase the things which make for more healthful conditions of living—is the sole cause of a high sickness rate? The reasonable hypothesis, of course, is that there is an important element of truth in both assumptions. And the obvious next step, it would seem, is a determination and evaluation, by carefully planned and scientifically

conducted studies, of the relative importance of the various factors that are involved.

The present inquiry does not go beyond a very simple analysis of the data collected, namely, a comparison of the sickness rates for persons of different sex and age classified according to family incomes and for persons with different family incomes at several seasons of the year. So far as we are aware, no other study so far has afforded even crude material in so much detail and the results are interesting and at times suggestive.

In classifying the population of these 24 villages according to their economic status in 1917, the family income was taken as a basis. Nearly all of the population were dependent economically on the families with which they lived. A small percentage were boarders with individual incomes; but since they were subject to the same living conditions as the families with which they boarded, it seemed fair to classify them according to economic status of the families. Furthermore, we may, in general, expect a person to choose to board with a family of approximately his own economic status.

The total family income was computed for the two calendar months preceding the enumerator's visit. Individual earnings were obtained by multiplying the daily wage, as shown by the mill pay rolls, by the total working days less the days lost from work reported to the enumerator. For wage-earning persons not employed by the mill, the informant's statement as to earnings was used. Income from other sources also was considered. In case of boarders, data concerning the amount paid weekly and the cost of the family's food supply were obtained, so that it was possible to compute the net income from boarders. Some families supplemented their earnings by keeping a cow, or having a garden, or raising poultry or hogs; in all such cases the net income from each source for the particular two months was computed. Each family was questioned carefully for complete data regarding income from all miscellaneous sources. It is believed that the total income has been determined with a fairly high degree of accuracy. The family income for a two-months' period was then reduced to an average weekly income. This was still further refined to the weekly income "per ammain"—a unit scale prepared to evaluate the needs of persons of any age or sex as a percentage of the total requirements of an adult male at the time that his requirements are a maximum. Thus, maintenance for the young adult male is 1.00, and, for convenience, it was called an "ammain." By means of the "ammain" scale, families of any size or composition may be reduced to a common denominator, in terms of which the incomes for all are strictly comparable.⁷ Income as

⁷ For a full discussion of "income per ammain" see "A method of classifying families according to incomes in studies of disease prevalence." *Pub. Health Rep.*, Nov. 26, 1920. (Reprint No. 623.)

used in this paper is always the average weekly income of the family per annum.

This association of income and the prevalence of disabling sickness, as shown by the 1917 study, is brought out by Table 5. In every period save one (Oct. 8-27) the rate is distinctly higher among persons of low income than among those in the highest income group. In October the rates for women do not vary regularly according to income; this, however, is one of the smaller groups and the sickness rate is low, only a few cases being included.

TABLE 5.—Prevalence of disabling sickness in the population of several cotton-mill villages on dates of canvasses made during 1917, by family income.

Family income per annum per week.	Disability rate per 1,000 persons. ¹					
	Apr. 2 to May 5.	May 7 to June 9.	June 18 to July 14.	July 16 to Aug. 18.	Oct. 8 to Oct. 27.	Nov. 26 to Dec. 22.
ALL PERSONS. ²						
All incomes.....	25.3	36.5	26.6	23.0	18.6	18.1
Under \$4.50.....	35.9	51.8	43.3	30.2	16.9	21.9
\$4.50 to \$6.49.....	17.0	27.9	22.0	21.6	20.4	14.0
\$6.50 and over.....	15.5	25.1	10.9	16.9	13.2	10.3
MALES.						
All incomes.....	26.9	37.7	28.9	22.3	18.8	18.9
Under \$4.50.....	44.0	58.4	49.9	30.5	23.3	31.9
\$4.50 to \$6.49.....	15.1	27.4	20.5	17.6	17.9	20.4
\$6.50 and over.....	11.4	19.8	10.6	16.7	9.0	7.1
FEMALES (EXCLUSIVE OF CONFINEMENT CASES).						
All incomes.....	23.8	34.4	24.5	23.5	18.3	17.5
Under \$4.50.....	28.4	44.4	35.0	28.7	10.0	18.4
\$4.50 to \$6.49.....	18.1	25.4	23.6	24.7	22.8	17.9
\$6.50 and over.....	19.7	30.3	11.1	17.4	16.3	13.3
FEMALES (INCLUSIVE OF CONFINEMENT CASES).						
All incomes.....	26.0	35.9	26.6	21.6	19.9	18.1
Under \$4.50.....	30.3	45.6	37.1	28.6	14.2	19.5
\$4.50 to \$6.49.....	19.7	26.8	25.7	27.2	23.5	17.9
\$6.50 and over.....	23.5	31.1	12.6	17.6	16.3	14.4

¹ Adjusted to a standard age distribution.

² Excluding disability due to confinements.

It may be noted that the marked rise in the prevalence of sickness during May, which has been commented upon, is characteristic of each of the three income classes.

By the same method we have already employed, the average number of days of disabling sickness per year per person has been estimated for persons of different sexes and incomes, after adjusting to a standard age distribution. The results are shown in Figure 2.

TABLE 6.—Average number of days annually of disabling sickness by age, sex, and family income for persons residing in 24 cotton mill villages of South Carolina in 1917.¹

Age group.	Average days of disability for persons of specified weekly family income per annum.		
	Less than \$4.50.	\$4.50 to \$6.49.	\$6.50 and over.

ALL PERSONS.

Under 5 years.....	10.1	5.5	6.8
5-14.....	4.5	2.5	2.9
15-24.....	10.6	6.7	5.3
25-44.....	12.6	7.6	5.7
45 and over.....	25.2	15.3	8.8

MALES.

Under 5 years.....	11.0	6.3	5.5
5-14.....	4.8	2.4	2.9
15-24.....	8.1	6.3	4.0
25-44.....	14.7	5.4	3.4
45 and over.....	33.4	16.1	9.2

FEMALES (EXCLUSIVE OF CONFINEMENT).

Under 5 years.....	9.2	4.8	8.3
5-14.....	4.1	2.8	2.9
15-24.....	12.6	7.0	6.5
25-44.....	10.5	9.9	8.3
45 and over.....	16.5	14.5	8.4

¹ Annual days of disabling sickness is based on successive canvasses in different villages, at which time the number of persons ill at time of visit was recorded.

The relation of family income to disabling sickness among persons of different ages is shown in Table 6. The income classification used in Table 5 is followed, the same method of computing the average annual days of disability per person was employed, and the individuals were grouped into five broad age groups in order to include a large enough number in each group to give a fair amount of regularity in the results. The indications obtained from Table 6 are consistent in that for all age groups the average number of days of disability per person was greater for persons of low income than for persons of relatively high income.

3. DURATION OF ILLNESSES ACCORDING TO SEASON, INCOME, AND AGE.

Some idea of the duration of disabling sickness may be gained by utilizing the records of the length of time between the onset of sickness up to and including the date the household was visited. Obviously the record can not be an exact one from the point of view of the total length of each illness recorded, since the record is a "cross-section" of the illness as it prevailed at the time of the canvass; but upon the assumption that, on the average, the cross-section was taken at the middle of the period of illness.

The following summary shows the prevalence rates and percentage distribution of illness according to convenient duration classes:

TABLE 7.—*Distribution of illnesses observed among the population of several cotton-mill villages in South Carolina in 1917 according to duration, and rate per 1,000 observations.*

Duration of illness from onset up to and including date of record.	Number of illnesses.	Rate per 1,000. ¹	Per cent.
All durations.....	1,210	22.0	100.0
Less than 1 week.....	397	7.2	32.8
1 week but less than 2 weeks.....	152	2.8	12.6
2 weeks but less than 2 months.....	280	5.1	23.1
2 months or longer.....	381	6.9	31.5

¹ Per 1,000 observations, a total of 55,067 observations having been made.

Roughly a third of the illnesses were less than one week in duration, another third one week but less than two months, and another third had lasted two months or longer. The number and proportion of illnesses which had lasted two months or more are undoubtedly too large, however, since to some extent the same chronic cases, or cases of quite long duration, were recorded more than once. There is, therefore, a slight accumulation of records of the same cases which would tend to smooth out certain possible seasonal variations in the rates, on the one hand, and, on the other hand, to swell the total number of these cases unduly. This fault in the data must, of course, be kept in mind in making specific interpretations.

In spite of the shortcomings of the material, however, it is possible to make certain comparisons from the point of view of the length of illness in relation to the age of persons afflicted, their economic status, and, roughly, the season of the year. In Table 8, the prevalence of sickness is classified according to the four durations already given for each of the four general periods and expressed as a rate per 1,000 persons observed.

TABLE 8.—*Seasonal variation in the illnesses of different durations as determined by several canvasses in 24 cotton-mill villages in South Carolina, 1917.*

Duration to date of visit.	Period of canvass.			
	Apr. 2- May 5 (Pop., 12,909).	May 7- June 9 (Pop., 9,987).	June 18- Aug. 18 (Pop., 21,627).	Oct. 8- Dec. 22 (Pop., 10,544).
NUMBER OF ILLNESSES OF SPECIFIED DURATION.				
Any duration.....	290	316	444	160
Under 1 week.....	118	118	135	26
1 week, under 2 weeks.....	34	46	51	21
2 weeks, under 2 months.....	48	83	112	37
2 months or longer.....	90	69	146	76
RATE PER 1,000 PERSONS.				
Any duration.....	22.5	31.6	20.5	15.2
Under 1 week.....	9.2	11.8	6.2	2.5
1 week, under 2 weeks.....	2.6	4.6	2.4	2.0
2 weeks, under 2 months.....	3.7	8.3	5.2	3.5
2 months or longer.....	7.0	6.9	6.8	7.2

It is evident that the duration of sickness, within the limitations of the data, indicates in a general way the severity of the attack, very roughly in the following manner: Illnesses of less than one week, which may be termed *slight*; of one week but under two months,

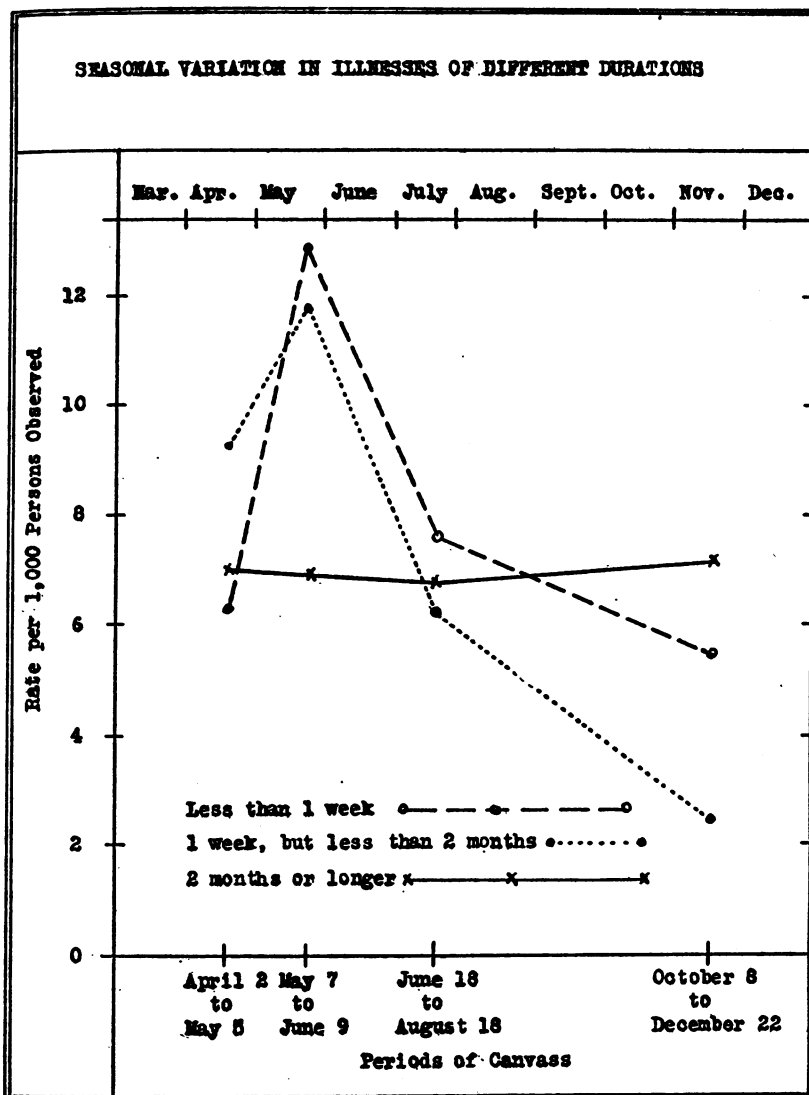


FIG. 3.

severe; and of two months or more, more or less *chronic*. In Figure 3 the prevalence of illnesses so classified has been plotted for the four periods. While the curves can not be assumed to show in detail the seasonal variation of any of the three durations or degrees of severity, since only four points in the calendar are given they

indicate, as one may expect, (1) that the incidence of illnesses of long duration varied very slightly during the year, and (2) that illnesses of short duration, especially those which had lasted less than a week up to the time the household was visited, showed a quite marked variation. A definite rise in April–May, a high peak in May–June, and a marked decline for the two later periods are evident.

The prevalence rates of illnesses of different durations when the observed persons are classified according to weekly family income do not suggest any significant differences for short illnesses from the point of view of economic status. On the other hand, differences are clearly manifested for illnesses which had lasted as long as two weeks but under two months (which we may roughly term *severe* illnesses) and are considerably greater, even, for illnesses which had lasted two months or longer (or, roughly, chronic cases). The rates are given in Table 9.

TABLE 9.—*Frequency of disabling sickness of different durations among persons classified according to family income in several cotton-mill villages of South Carolina, 1917.^a*

Duration from onset of illness through date of record.	Rate per 1,000 persons classified according to weekly family income per annum.		
	Less than \$5.00.	\$5.00 to \$6.49.	\$6.50 or more.
Less than 1 week.....	7.8	6.4	7.2
1 week but less than 2 weeks.....	3.5	2.1	2.3
2 weeks but less than 2 months.....	7.4	3.7	3.0
2 months or longer.....	9.7	5.5	3.2

^a The use, in this table and Table 10, of a slightly different lowest income class from that used in the other tables ("less than \$5.00" instead of "less than \$4.50") has no significance.

This fact may be interpreted in quite a general way by saying that persons of all incomes in the population studied were affected by slight illnesses to about the same extent, but those in the lower income classes were affected in a much greater degree by severe and chronic illnesses than those in the higher income classes. This general statement, however, may be considered true only for the entire period of observation and for persons of all ages, sexes, and other conditions. Quite different results might be found were it possible to subdivide the individuals within each income class, and their incident illnesses, according to duration as well as income, into sex, age, or other groups, and to consider these various classes separately for each canvass period. Unfortunately the data were not found to be adequate for so manifold a tabulation. We have, however, prepared a manifold tabulation by income, duration, and period (roughly, season of the year) from which prevalence rates have been computed.

These data are given in Table 10, and the rates have been plotted as graphs in Figure 4.

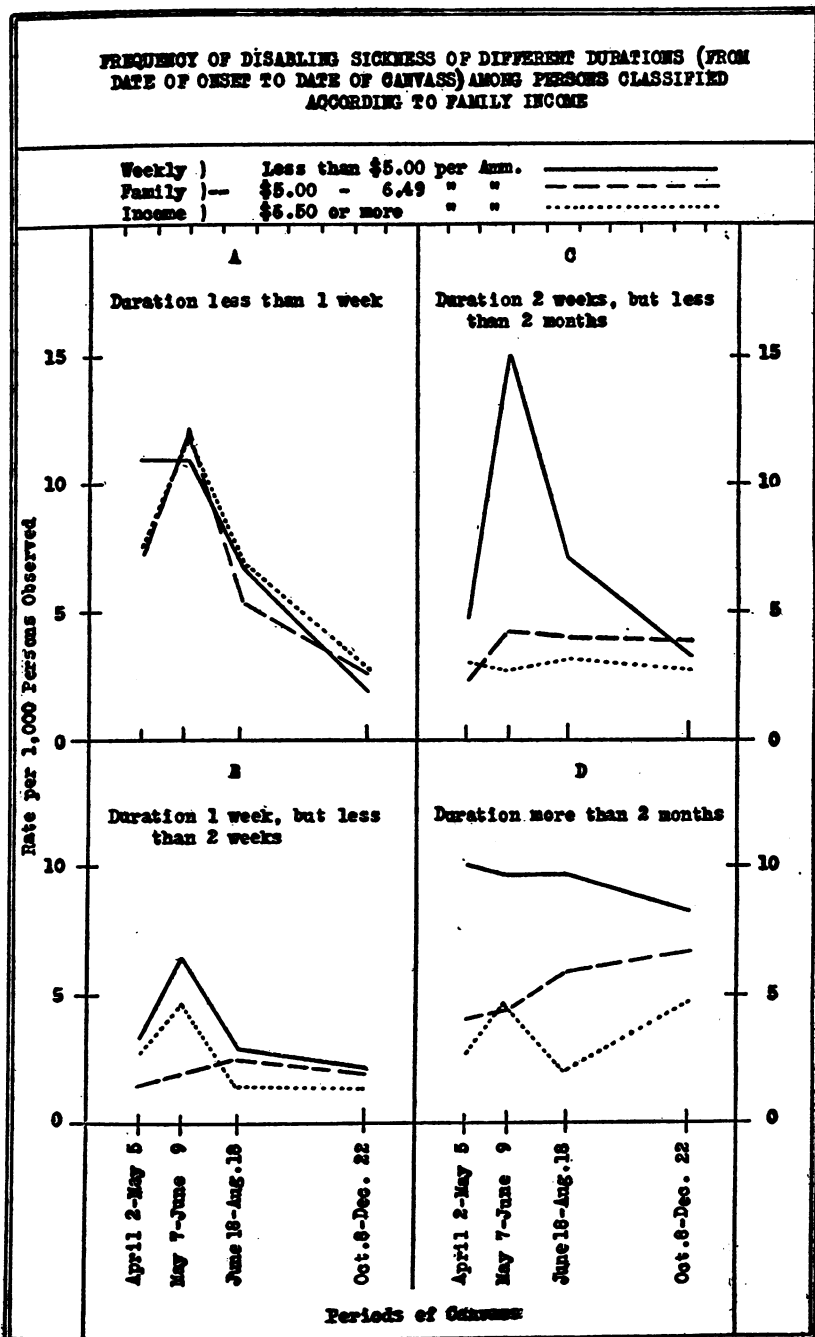


FIG. 4.

TABLE 10.—Frequency of disabling sicknesses of different durations among persons of different incomes at each of four periods, in several cotton-mill villages of South Carolina, in 1917.

Date of visit.	Weekly family income per annum.	Rate per 1,000 persons for cases of specified duration.				
		Any duration.	Under 1 week.	1 week but under 2 weeks.	2 weeks but under 2 months.	2 months or longer.
Apr. 2 to May 5.....	(\$5.00 or less.....)	29.2	11.0	3.4	4.8	10.1
	(\$5.00 to \$6.49.....)	15.2	7.2	1.5	2.4	4.1
	(\$6.50 and over.....)	15.9	7.5	2.7	3.1	2.7
May 7 to June 9.....	(\$5.00 or less.....)	42.2	11.0	6.4	15.1	9.7
	(\$5.00 to \$6.49.....)	22.6	12.1	1.9	4.3	4.3
	(\$6.50 and over.....)	23.8	11.7	4.7	2.8	4.7
June 18 to Aug. 18.....	(\$5.00 or less.....)	26.6	6.7	2.9	7.3	9.7
	(\$5.00 to \$6.49.....)	18.0	5.4	2.5	4.1	6.0
	(\$6.50 and over.....)	13.8	7.0	1.5	3.2	2.1
Oct. 8 to Dec. 22.....	(\$5.00 or less.....)	15.8	1.9	2.2	3.3	8.3
	(\$5.00 to 6.49.....)	15.3	2.6	2.0	3.9	6.8
	(\$6.50 and over.....)	11.7	2.8	1.4	2.8	4.7

While the number of observations upon which each rate is based has been reduced considerably by subdividing the total observations into 48 categories, and the probable errors are large, the consistency of the results in certain particulars is worth consideration. In Figure 4A it is again quite evident that income has little, if any, effect upon the rate of prevalence of brief illnesses at any period shown. In Figures 4B and 4C, however, the May-June wave in the rate of illnesses of longer duration, particularly those lasting two weeks and as long as two months, is associated almost exclusively with low income, no very consistent variations being apparent for persons of the relatively higher incomes. In Figure 4D the wide divergence of the prevalence rates for illnesses of long duration is shown between the lower and the higher income classes at all periods, as was also clearly manifested in Figure 4C and suggested in Figure 4B for the early part of the year. Further refinements in our analysis are perhaps unwarranted by the data. The general statement based on Table II, therefore, may be put into more exact language by saying that persons in each of the income classes were affected by slight illnesses to about the same extent, but persons with relatively low incomes were affected in a much greater degree than the economically better-off by severe illnesses *in the late spring and early summer* and by even more severe or chronic illnesses at all times.

This observation, however, throws some light upon the very interesting question which has already been mentioned, namely, whether or not low economic status is in itself responsible for a high sickness

incidence. The fact that the differences in the rate of sickness among persons of different family incomes are seen chiefly for severe and chronic illnesses would at once appear to add to the arguments against low economic status as a causative factor and in favor of the hypothesis that a low constitutional resistance to disease is the

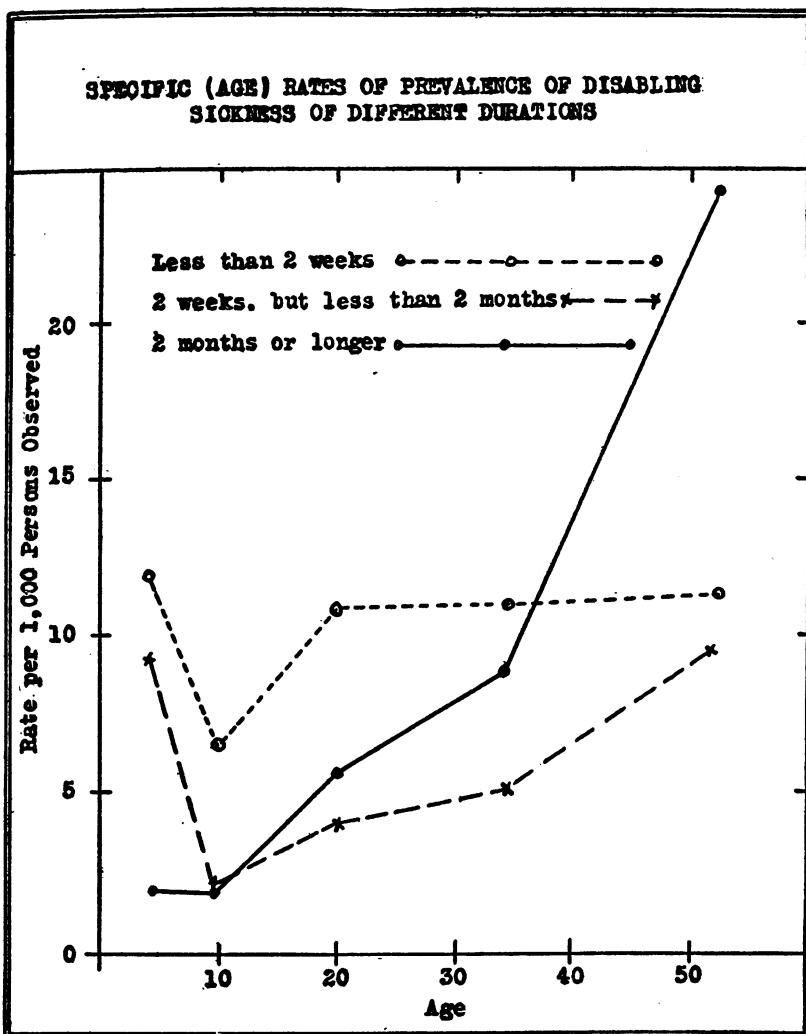


FIG. 5.

only factor. But if we analyze the data a little further we discover that the lowest income class suffered from serious illnesses (one week but less than two months in duration) to a greater degree than other income classes chiefly at a *specific season* of the year, and the suggestion is afforded that in this instance, at least, some specific condition

which was associated definitely with income caused a difference in the rate.⁸

A classification of the illnesses by duration and age shows that the age curves for short, severe, and long (chronic) illnesses were quite different. The curves have been plotted in Figure 5. The principal observation which suggests itself is the marked tendency for the severe and chronic illnesses to rise as age advances. The curve for short illnesses presents a marked contrast to that for long (chronic) cases, the latter, excepting the ages under 10, being similar to the usual mortality curve, and the former presenting an entirely different age incidence. Our data do not, of course, allow us to carry this interesting inquiry further into specific diagnoses.

TABLE 11.—*Specific (age) rates of prevalence of disabling sickness of different durations in the population of several cotton mill villages in South Carolina, 1917.*

Age period (years).	Duration.				
	Any duration.	Less than 1 week.	1 week but less than 2 weeks.	2 weeks but less than 2 months.	2 months or longer.
NUMBER OF ILLNESSES.					
Under 5.....	185	64	32	74	15
5-14.....	145	76	17	28	24
15-24.....	267	97	41	47	82
25-44.....	345	117	37	74	117
45 and older.....	266	43	24	57	142
RATE PER 1,000 PERSONS.					
Under 5.....	22.4	7.8	3.9	9.0	1.8
5-14.....	10.1	5.3	1.2	1.9	1.7
15-24.....	21.2	7.7	3.3	3.7	6.5
25-44.....	24.8	8.4	2.7	5.3	8.4
45 and older.....	45.1	7.3	4.1	9.7	24.0

In view of the rather unusually high prevalence of sickness in the late spring, which, as we have already pointed out, occurred among persons of relatively low economic status (Fig. 4), a comparison of the durations of illness at different ages prevalent in the late spring with those prevalent in the late autumn suggested itself. This comparison is given in Table 12 and is graphically shown in Figure 6.

⁸ In the third paper of this series, certain probably unusual features of the wave of illness in the spring and early summer will be discussed in connection with more detailed and continuous records for a single village during 1918.

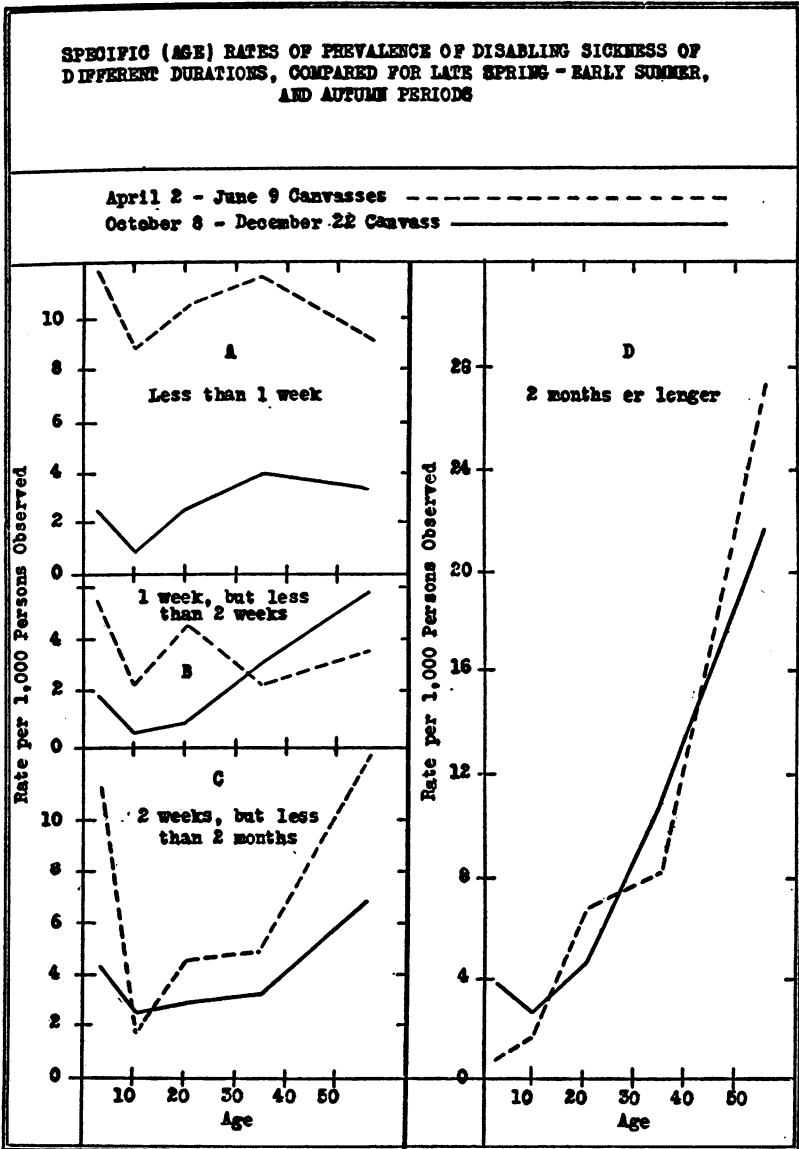


FIG. 6.

TABLE 12.—*Specific (age) rates of prevalence of disabling sickness of different durations in the population of several cotton mill villages in South Carolina, 1917, compared for late spring, early summer, and autumn periods.*

Age period (years).	Rate per 1,000 persons for cases of specified duration.							
	Less than 1 week.		1 week but under 2 weeks.		2 weeks but under 2 months.		2 months or longer.	
	Apr. 2 to June 9.	Oct. 8 to Dec. 22.	Apr. 2 to June 9.	Oct. 8 to Dec. 22.	Apr. 2 to June 9.	Oct. 8 to Dec. 22.	Apr. 2 to June 9.	Oct. 8 to Dec. 22.
Under 5.....	11.9	2.4	5.6	1.8	11.3	4.3	0.9	3.7
5-14.....	8.6	.7	2.3	.4	1.7	2.5	1.5	2.5
15-24.....	10.4	2.5	4.6	.8	4.6	2.9	6.7	4.5
25-44.....	11.6	3.0	2.4	3.2	4.9	3.2	8.0	10.7
45 or older.....	9.1	3.4	3.7	6.0	12.4	6.9	27.0	21.5

Marked differences in the age curves for sicknesses prevailing in the two seasons are indicated for all except illnesses of a more or less chronic type (having lasted two months or longer). Aside from the higher rate per 1,000 persons observed in the late spring, the most interesting difference is the shape of the curves. For illnesses of less than one week in duration up to the day of visit, the age curves are again very similar. For more serious illnesses (i. e., those having had a duration of one week but less than two weeks) the rate of prevalence was high in the younger ages, particularly in the age period 15-24, in the late spring as compared with the late autumn. The incidence of some specific disease is suggested, such as pellagra, which is prevalent at this season and among persons of this age group.

II. Sickness and Absenteeism of Mill Workers, January-December, 1917.

In addition to the records which were made of sickness prevailing among the population of the several cotton mill villages, a record was made of the number of days lost from work and the cause (i. e., whether sickness or personal reasons) was obtained for the two months immediately preceding the enumerator's visit. These data have been tabulated in Table 13, which shows the per cent of time lost on account of sickness and all causes in each month by men and women workers.

TABLE 13.—Per cent of total possible working days lost from all causes and from disabling sickness in each month of 1917 by wage earners in cotton mills of South Carolina.

Month.	Number of wage earners recorded.	Per cent of possible working days lost.		Per cent of total days of absence due to sickness.
		From causes other than sickness.	From sickness.	
MALES.				
January.....	5,019	6.7	2.8	20.6
February.....	5,036	7.6	3.6	31.8
March.....	5,034	6.9	3.2	32.2
April.....	4,822	6.1	4.1	40.4
May.....	4,453	5.8	3.6	38.7
June.....	3,541	5.7	4.0	40.8
July.....	1,974	7.6	2.9	27.3
August.....	1,129	6.3	2.2	25.7
September.....	1,092	6.2	2.4	28.3
October.....	960	5.2	1.6	22.9
FEMALES.				
January.....	2,203	10.4	3.2	23.5
February.....	2,213	11.0	4.6	29.4
March.....	2,218	9.9	4.7	32.0
April.....	2,124	9.8	4.2	29.8
May.....	1,923	9.7	4.2	30.1
June.....	1,499	10.3	3.9	27.8
July.....	839	10.4	2.8	21.4
August.....	461	9.0	1.8	17.0
September.....	450	8.9	2.2	19.6
October.....	381	8.3	2.9	25.6

The monthly variation in the time lost is graphically shown in Figure 7. The peak of absenteeism occurred in February for both men and women; and although the time lost because of sickness was high in this month, absenteeism was due more to causes other than sickness. There was an abrupt drop in time lost in July, and it continued low through October, and the proportion of absenteeism due to sickness was at a minimum during the late summer and early fall months.

The percentage of time lost by employees of these cotton mills is about twice as high as the average that was reported for an Eastern manufacturing plant in 1919.⁹ The average for men and women at this plant was 5.65 per cent monthly. For the cotton-mill employees in every month except one the per cent of time lost was higher than the highest monthly per cent (7.69) in the manufacturing plant.

⁹ See Public Health Reports, Sept. 10, 1920, or Reprint No. 611.

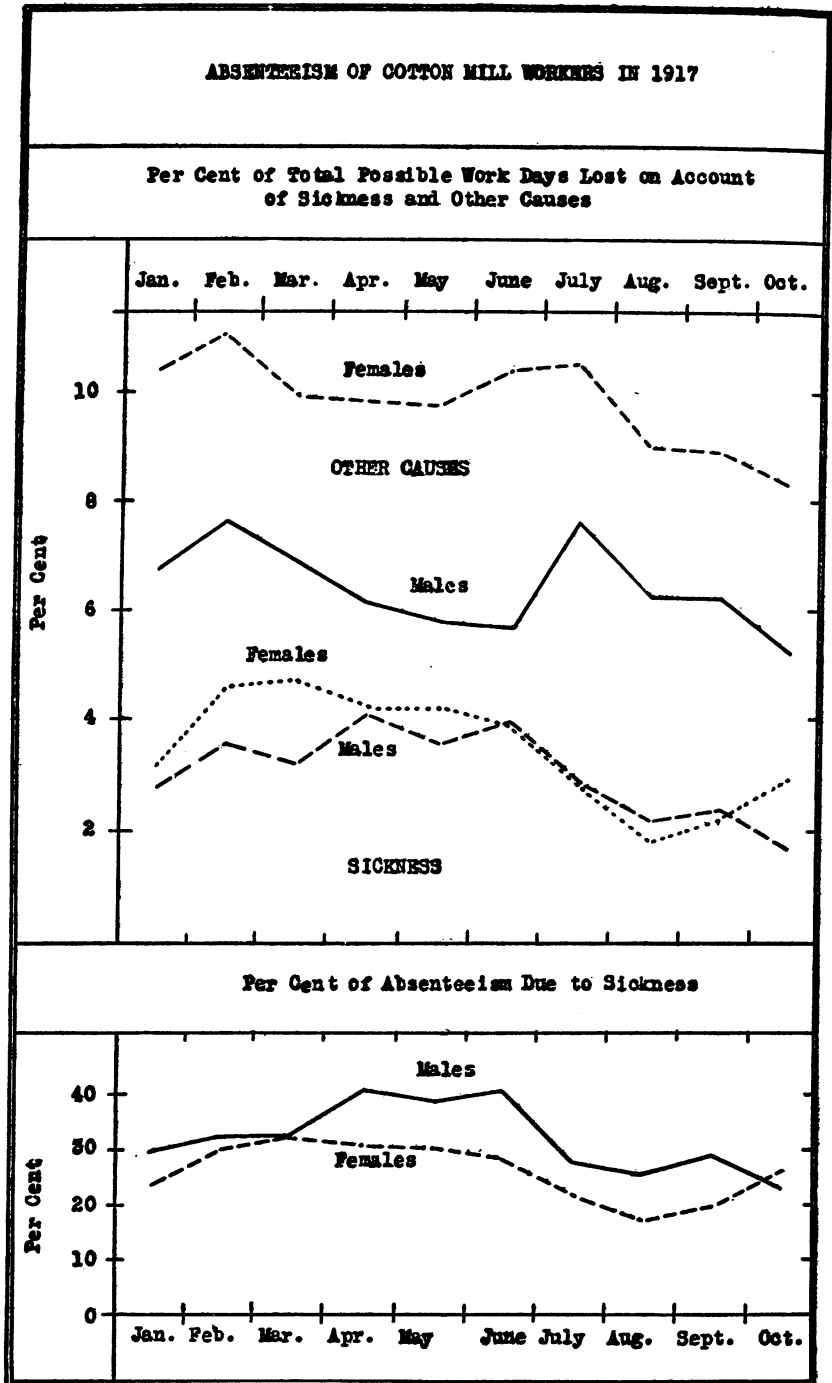


FIG. 7.

TABLE 14.—Days lost from work by male and female earners in 24 cotton mills of South Carolina. Classified according to cause, family income, and month of the year.¹

Month of the year (1917).	Annual days lost on account of sickness by persons of specified income.				Annual days lost on account of personal reasons by persons of specified income.			
	All incomes.	\$4.49 or less.	\$4.50- \$6.49	\$6.50 and over.	All incomes.	\$4.49 or less.	\$4.50- \$6.49.	\$6.50 and over.
MALES.								
January.....	8.7	12.2	7.8	6.0	20.8	21.8	20.7	19.6
February.....	11.1	15.6	9.0	8.6	23.7	23.3	25.4	21.2
March.....	10.0	14.8	8.0	7.0	21.2	22.0	21.8	19.1
April.....	12.7	13.5	8.5	6.8	18.8	23.4	22.4	19.2
May.....	11.3	16.1	7.3	5.9	17.8	20.9	19.7	16.9
June.....	12.3	15.7	9.0	5.5	17.8	23.9	19.7	17.5
July.....	8.9	14.7	6.4	6.8	23.7	25.7	23.8	22.3
August.....	6.8	12.4	4.8	1.7	19.5	17.5	18.4	27.0
September.....	7.5	12.6	6.2	2.5	19.1	20.0	18.5	17.8
October.....	4.8	4.9	4.8	4.5	16.3	17.3	14.8	16.8
All 10 months.....	9.4	13.2	7.2	5.5	19.8	21.5	20.5	19.7
FEMALES.								
January.....	9.9	12.8	9.2	8.6	32.1	29.2	31.5	34.5
February.....	14.2	21.4	11.4	11.8	34.1	32.9	32.6	36.1
March.....	14.5	21.4	14.1	10.0	30.7	30.1	29.9	31.9
April.....	12.9	18.3	12.5	9.7	30.5	32.6	26.6	33.2
May.....	12.9	19.5	12.4	9.0	30.1	32.2	28.2	30.9
June.....	12.2	20.3	11.6	8.1	31.8	31.9	31.0	33.2
July.....	8.8	14.1	5.6	8.6	32.3	33.1	29.5	35.4
August.....	5.7	7.7	3.6	5.8	27.9	26.1	27.7	31.4
September.....	6.7	8.0	4.7	7.2	27.8	22.9	28.9	25.5
October.....	8.9	12.0	7.4	3.6	25.7	24.0	26.7	23.0
All 10 months.....	10.6	15.5	9.3	8.2	30.2	29.4	29.2	31.4

¹ Number of persons of record and total days absent from work in each month will be found in Table E of the Appendix.

Women lost a little more time than men because of sickness and about 50 per cent more time than men for personal reasons. No vacations and very few holidays were allowed on pay.

The relation of income to time lost on account of sickness is brought out in Table 14, which gives the average number of days lost per person, all persons being classified according to their family income. Wage earners of low family income lost, on the average, about twice as many days as those of high incomes. Absenteeism for personal reasons does not show any association with the family income.

SUMMARY.

1. In connection with a study of pellagra in 24 cotton mill villages of South Carolina during 1917, records were made of the number of persons in the mill workers' households who were found to be disabled on account of sickness on the day each household was visited. The population was enumerated with distinction as to sex, age, and family income, and the duration of illness up to and including the day of visit was recorded. In all, 55,067 observations regarding illness were made in 24 villages, with a population of approximately 22,000 persons, and 1,241 cases of disabling illness were recorded during the course of the various canvasses, which were commenced on April 2 and discontinued on December 22.

2. The prevalence rate for disabling sickness was found to vary from 18.1 to 36.5 per 1,000 according to season of the year. An annual average of the number of days of disabling sickness per person was indicated to be 9.3 for all persons. A definite wave of disabling sickness appeared in the late spring and early summer.

3. The usual age curve of morbidity was found, but it appeared that the excess of the female disability rate, after excluding confinements, occurred in a specific season of the year, namely, May-August, which, it is pointed out, is the period of high pellagra prevalence.

4. The conclusions suggested by a previous study (1916) regarding the inverse correlation of the disabling illness and family income were further confirmed by the larger study (1917) for persons of both sexes, all ages, and for practically all seasons of the year.

5. When illnesses were classified according to duration (prior to and including the day of record) in such a way as to indicate roughly the severity of illness, it appeared that chronic illness varied but slightly during the year, while illnesses of short duration showed a marked variation, a definite peak occurring in May-June. The incidence (as indicated) of severe illnesses was in inverse relationship to family income, but no significant differences of this nature were shown for illness of short duration. The incidence of serious illnesses, however, in the late spring and early summer was greater among those whose income was relatively low than among the better off. These severe illnesses of late spring occurred relatively more frequently in the age period 15-24.

6. A record was also kept of the number of days not at work for wage earners during 1917. The peak of absenteeism occurred in February for both men and women in the cotton mills. Absence from work on account of sickness was highest during the spring and early summer, and relatively highest, as compared with absences from other causes, during the late spring-early summer period, thus reflecting the prevalence of sickness as shown by records of canvasses.

APPENDIX.

TABLE A.—Cases of disabling sickness and rate per 1,000 persons as ascertained by a series of canvasses made in cotton-mill villages in South Carolina during the year 1917.

Family income per annum per week.	Total number canvassed from—												Number found disabled on day of canvass.												Disability rate per 1,000 persons.																																																				
	Apr. 2 to May 5			May 7 to June 9			June 14 to July 16			July 18 to Aug. 18			Apr. 2 to May 5			May 7 to June 9			June 14 to July 16			July 18 to Aug. 18			Apr. 2 to May 5			May 7 to June 9			June 14 to July 16			July 18 to Oct. 27			Oct. 8 to Dec. 22																																								
	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to																																									
All incomes ¹	12,909	9,987	9,989	11,628	5,206	5,338	298	319	236	231	83	79	79	22.7	32.0	23.6	19.9	15.9	14.8	Under \$4.50.....	5,644	3,910	3,854	4,203	1,635	1,966	168	166	127	102	24	34	34	29.8	42.5	33.0	24.3	14.7	17.3	\$4.50-\$6.49.....	4,604	3,715	3,944	4,570	2,361	2,203	70	84	79	82	40	32	15.2	22.6	20.0	17.9	16.9	14.5	\$6.50 and over.....	2,259	2,145	2,018	2,634	1,068	1,074	36	51	22	43	14	11	15.9	23.8	10.9	16.0	13.1	10.2
ALL PERSONS.																																																																													
All incomes.....	6,340	4,837	4,844	5,795	2,604	2,667	144	160	118	101	43	40	40	22.7	32.4	24.4	17.4	16.5	15.0	Under \$4.50.....	2,782	1,968	1,904	2,083	851	906	92	93	68	46	18	20	20	33.1	47.2	35.7	22.1	21.1	20.1	\$4.50-\$6.49.....	2,265	1,839	1,903	2,282	1,175	1,112	31	41	36	33	18	16	13.7	22.3	18.9	14.5	15.3	14.4	\$6.50 and over.....	1,105	1,035	958	1,335	514	514	13	19	10	20	4	4	11.8	18.4	10.4	15.0	7.9	7.8
MALES.																																																																													
All incomes.....	6,569	5,050	5,155	5,833	2,602	2,671	149	139	118	130	40	39	39	22.7	31.5	22.9	22.3	15.4	14.6	Under \$4.50.....	2,862	1,942	1,950	2,120	784	970	76	73	59	56	6	14	14	20.6	37.6	30.3	26.4	7.7	14.4	\$4.50-\$6.49.....	2,339	1,876	2,041	2,288	1,186	1,001	39	43	43	49	22	16	16.7	22.9	21.1	21.4	18.6	14.7	\$6.50 and over.....	1,154	1,110	1,000	1,349	563	560	23	32	12	23	10	7	19.9	28.8	11.3	17.0	17.8	12.5
FEMALES (EXCLUDING DISABILITY DUE TO CONFINEMENT).																																																																													
All incomes.....	6,553	5,058	5,165	5,840	2,606	2,673	163	167	128	137	44	41	41	24.7	33.0	24.8	23.5	16.9	15.3	Under \$4.50.....	2,867	1,944	1,953	2,120	787	971	81	75	67	56	9	15	15	28.3	38.6	31.7	26.4	11.4	15.5	\$4.50-\$6.49.....	2,343	1,879	2,045	2,294	1,187	1,091	43	46	47	55	23	16	18.2	24.5	23.0	24.0	19.4	14.7	\$6.50 and over.....	1,159	1,111	1,062	1,350	563	561	28	33	14	24.2	23.7	13.2	17.8	17.8	14.3			

¹ Includes persons of unknown income; therefore not the sum of the three income groups.

TABLE B.—Number of persons canvassed and number found disabled on day of visit, classified by four periods of the year and by five age periods.

Age group (years).	Total number canvassed during—				Number disabled on day of visit.			
	April 2 to May 5.	May 7 to June 9.	June 18 to Aug. 18.	Oct. 8 to Dec. 22.	April 2 to May 5.	May 7 to June 9.	June 18 to Aug. 18.	Oct. 8 to Dec. 22.
ALL PERSONS.								
Under 5.....	1,872	1,500	3,239	1,636	41	59	65	19
5-14.....	3,428	2,598	5,612	2,791	41	44	45	18
15-24.....	2,907	2,201	4,970	2,423	69	69	110	26
25-44.....	3,303	2,575	5,477	2,531	82	77	141	55
45 or over.....	1,399	1,013	2,329	1,161	60	70	106	44
MALES.								
Under 5.....	977	759	1,676	880	16	39	33	11
5-14.....	1,710	1,354	2,832	1,436	20	21	25	11
15-24.....	1,335	1,013	2,262	1,116	30	28	34	11
25-44.....	1,636	1,292	2,708	1,251	40	30	57	29
45 or over.....	682	519	1,161	588	38	42	70	21
FEMALES.								
Under 5.....	895	741	1,563	758	25	20	32	8
5-14.....	1,718	1,244	2,780	1,355	21	23	20	7
15-24.....	1,572	1,288	2,708	1,307	39	41	76	15
25-44.....	1,667	1,283	2,769	1,280	42	47	84	26
45 or over.....	717	494	1,168	573	22	28	36	23

TABLE C.—Age distribution of the populations canvassed at various periods of 1917 for morbidity prevalence and of the total population of continental United States in 1910.

Age group.	Per cent of total persons in each age group.						
	April 2 to May 5.	May 7 to June 9.	June 18 to July 14.	July 16 to Aug. 18.	Oct. 8 to Oct. 28.	Nov. 26 to Dec. 22.	Continental United States, 1910.
All ages.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 5 years.....	14.5	15.0	14.6	15.3	15.4	15.7	11.6
5-9.....	14.6	14.1	14.4	13.9	14.4	14.3	10.6
10-14.....	11.9	11.9	12.0	11.7	12.1	12.1	9.9
15-24.....	22.5	23.0	22.5	23.4	22.7	23.2	19.7
25-34.....	15.4	15.7	14.9	15.4	14.1	13.4	16.5
35-44.....	10.2	10.1	10.2	10.2	10.2	10.3	12.7
45-54.....	5.6	5.3	5.9	5.4	5.5	5.3	9.1
55 and over.....	5.2	4.8	5.6	4.8	5.6	5.6	9.8

TABLE D.—Rate per 1,000 for cases of different durations for persons of various ages at each of four periods during 1917 in 24 cotton mill villages in South Carolina.

Date of visit.	Age group (years).	Total persons of record.	Number of cases of specified duration.					Rate per 1,000 persons for cases of specified duration.				
			Any duration.	Under 1 week.	1 week but under 2 weeks.	2 weeks but under 2 months.	2 months or longer.	Any duration.	Under 1 week.	1 week but under 2 weeks.	2 weeks but under 2 months.	2 months or longer.
Apr. 2 to May 5.	Under 5.....	1,872	41	22	7	11	1	21.9	11.8	3.7	5.9	0.5
	5-14.....	3,428	41	28	6	2	5	12.0	8.2	1.7	0.6	1.5
	15-24.....	2,907	69	27	10	11	21	23.7	9.3	3.4	3.8	7.2
	25-44.....	3,303	82	31	8	13	30	24.8	9.4	2.4	3.9	9.1
	45 or over.....	1,390	57	10	3	11	33	40.7	7.1	2.1	7.9	23.6
May 7 to June 9.	Under 5.....	1,590	59	18	12	27	2	39.3	12.0	8.0	18.0	1.3
	5-14.....	2,598	44	24	8	8	4	16.9	9.2	3.1	3.1	1.5
	15-24.....	2,301	68	27	14	13	14	29.6	11.7	6.1	5.7	6.1
	25-44.....	2,575	76	37	6	16	17	29.5	14.4	2.3	6.2	6.6
	45 or over.....	1,013	69	12	6	19	32	68.1	11.8	5.9	18.8	31.6
June 18 to Aug. 18.	Under 5.....	3,239	.65	20	10	29	6	20.1	6.2	3.1	9.0	1.9
	5-14.....	5,612	43	22	2	11	8	7.7	3.9	0.4	2.0	1.4
	15-24.....	4,970	104	37	15	16	36	20.9	7.4	3.0	3.2	7.2
	25-44.....	5,477	134	39	15	37	43	24.5	7.1	2.7	6.8	7.9
	45 or over.....	2,329	96	17	8	19	52	41.2	7.3	3.4	8.2	22.3
Oct. 8 to Dec. 22.	Under 5.....	1,638	20	4	3	7	6	12.2	2.4	1.8	4.3	3.7
	5-14.....	2,791	17	2	1	7	7	6.1	0.7	0.4	2.5	2.5
	15-24.....	2,423	26	6	2	7	11	10.7	2.5	0.8	2.9	4.5
	25-44.....	2,531	53	10	8	8	27	20.9	3.9	2.2	3.2	10.7
	45 or over.....	1,164	44	4	7	8	25	37.9	3.4	6.0	6.9	21.5

TABLE E.—Number of persons of record and total days lost from work on account of sickness and other causes by male and female employees of cotton mills in South Carolina in 1917.

Month.	Average weekly family income per annum.									
	All classes.		Under \$4.50.		\$4.50-\$6.49.		\$6.50 or more.			
	Number of persons re- corded.	Days lost from— Sick- ness. Other causes.	Number of persons re- corded.	Days lost from— Sick- ness. Other causes.	Number of persons re- corded.	Days lost from— Sick- ness. Other causes.	Number of persons re- corded.	Days lost from— Sick- ness. Other causes.	Number of persons re- corded.	Days lost from— Sick- ness. Other causes.

MALE WAGE EARNERS.

January.....	5,019	3,821	9,109	1,555	1,648	2,962	2,063	1,406	3,723	1,223	636	2,086
February.....	5,036	4,313	9,247	1,564	1,889	2,823	2,066	1,447	4,071	1,228	821	2,018
March.....	5,034	4,401	9,282	1,566	2,016	3,094	2,062	1,429	3,922	1,225	746	2,035
April.....	4,822	4,936	7,314	1,468	1,601	2,773	1,986	1,363	3,586	1,191	652	1,843
May.....	4,453	4,368	6,911	1,353	1,895	2,467	1,836	1,167	3,150	1,098	565	1,621
June.....	3,541	3,646	5,279	991	1,305	1,985	1,483	1,116	2,453	921	424	1,351
July.....	1,974	1,415	3,775	550	650	1,141	811	419	1,554	475	261	856
August.....	1,139	664	1,920	333	360	508	466	193	748	197	30	464
September.....	1,092	663	1,684	324	330	523	451	226	673	185	37	266
October.....	960	405	1,363	289	124	435	400	168	516	160	63	234

FEMALE WAGE EARNERS.

January.....	2,203	1,893	6,167	528	590	1,343	843	674	2,310	750	561	2,251
February.....	2,213	2,428	5,836	533	882	1,357	847	747	2,136	751	686	2,101
March.....	2,218	2,792	5,923	536	1,001	1,465	848	1,041	2,204	752	655	2,083
April.....	2,124	2,218	5,218	492	724	1,294	824	828	1,766	730	569	1,954
May.....	1,923	2,169	5,045	449	764	1,260	784	804	1,826	665	519	1,791
June.....	1,490	1,525	3,972	313	532	837	562	547	1,460	556	378	1,546
July.....	839	584	2,179	171	194	456	322	146	767	204	203	839
August.....	464	231	1,126	114	76	259	181	57	437	124	63	339
September.....	450	245	1,008	115	74	212	175	67	408	116	67	239
October.....	381	294	853	102	107	213	149	96	347	100	31	200

CITY HEALTH OFFICERS, 1924.

Directory of Those in Cities of 10,000 or More Population.

Directories of the city health officers in the cities of the United States having a population of 10,000 or more have been published in the Public Health Reports ¹ for each year from 1916 to 1923, for the information of health officers and others interested in public health activities. These directories have been compiled from data furnished by the health officers. The cities included in this directory are those having 10,000 population or more on July 1, 1923, as estimated by the Bureau of the Census.

The asterisk (*) indicates that the officer so designated has been reported to be a "whole-time" health officer. For this purpose a "whole-time" officer is defined as "one who does not engage in the practice of medicine or in any other business, but devotes all his time to official duties."

City.	Name of health officer.	Official title.
Alabama:		
Anniston.....	.....	.....
Bessemer.....	.....	.....
Birmingham.....	*J. D. Dowling, M. D.....	County health officer.
Dothan.....	*T. E. Tucker, M. D.....	City and county health officer.
Florence.....	*W. D. Hubbard, M. D.....	Field agent, U. S. P. H. S.
Gadsden.....	*Claude L. Murphree, M. D.....	County health officer.
Mobile.....	*C. A. Mohr, M. D.....	Do.
Montgomery.....	*J. L. Bowman, M. D.....	Health officer, Montgomery County, unit No. 3.
Selma.....	*L. T. Lee, M. D.....	County health officer.
Tuscaloosa.....	*Arthur A. Kirk, M. D.....	City health officer.
Arizona:		
Douglas.....	Z. Causey, M. D.....	Do.
Phoenix.....	L. D. Dameron, M. D.....	Do.
Tucson.....	A. G. Schnabel, M. D.....	Do.
Arkansas:		
Fort Smith.....	.....	.....
Hot Springs.....	.....	.....
Jonesboro.....	Walter C. Overstreet, M. D.....	Do.
Little Rock.....	*William Leland Holt, M. D.....	Do.
North Little Rock.....	V. L. Eason, M. D., P. H. D.....	Do.
Pine Bluff.....	Wm. H. Blankenship, M. D.....	Do.
California:		
Alameda.....	Arthur Hieronymus, M. D.....	Health officer.
Alhambra.....	*Arthur S. Baker, M. D.....	District health officer.
Bakersfield.....	P. J. Cuneo, M. D., LL. B.....	Health commissioner.
Berkeley.....	Frank L. Kelly, M. D.....	Health officer.
Chico.....	*C. E. Tovee.....	Chief of police.
Eureka.....	John W. Chain, M. D.....	City physician and health officer.
Fresno.....	.....	.....
Glendale.....	G. Kaemmerling, M. D.....	Health officer.
Long Beach.....	*G. E. McDonald, M. D.....	City health officer.
Los Angeles.....	*L. M. Powers, M. D.....	Health commissioner.
Modesto.....	J. W. Morgan, M. D.....	City health officer.
Oakland.....	H. E. Foster, M. D.....	Health officer.
Pasadena.....	*Frank W. Hodgdon, jr., M. D.....	City health officer.
Pomona.....	Eugene F. Fontaine, M. D.....	Deputy county health officer.
Richmond.....	Charles R. Blake, M. D.....	Commissioner of health.
Riverside.....	W. B. Wells, M. D.....	Health officer.
Sacramento.....	George J. Hall, M. D.....	Do.
San Bernardino.....	C. C. Owen, M. D.....	City health officer.
San Diego.....	Alex. M. Lesem, M. D.....	Health officer and superintendent.
San Francisco.....	*William C. Hassler, M. D.....	Health officer.
San Jose.....	Henry C. Brown, M. D.....	Do.
Santa Ana.....	*W. Leland Mitchell, M. D.....	County health officer.
Santa Barbara.....	*William H. Eaton, M. D.....	Health officer.
Santa Cruz.....	Willis R. Congdon, M. D.....	City health officer.
Santa Monica.....	A. C. Weaver, M. D.....	City health physician.
Stockton.....	*John J. Sippy, M. D.....	District health officer.
Vallejo.....	E. A. Peterson, M. D.....	Health officer.
Venice.....	I. L. Magee, M. D.....	City health officer.

¹Reprints Nos. 346, 416, 494, 539, 599, 702, 767, and 876 from the Public Health Reports.

City.	Name of health officer.	Official title.
Colorado:		
Boulder.....	J. H. Bush, M. D.....	Director of public health.
Colorado Springs.....	O. R. Gillett, M. D.....	Health officer.
Denver.....	*Geo. A. Collins.....	Manager of health and charity.
Greeley.....	Florence Fezer, M. D.....	City physician.
Pueblo.....	W. E. Buck, M. D.....	Chief, department of health, inspection, and sanitation.
Trinidad.....	Bernard M. Cowley, M. D.....	City health officer.
Connecticut:		
Ansonia.....	Frederick C. Goldstein, M. D.....	Health officer.
Bridgeport.....	*William Hall Coon, M. D.....	Do.
Bristol.....	Jos. J. Woisard, M. D.....	Do.
Danbury.....	Everett J. S. Scofield, M. D.....	Do.
Derby.....	Thomas F. Plunkett, M. D.....	Do.
East Hartford.....	Franklin H. Mayberry, M. D.....	Do.
Enfield.....	*Geo. F. Finch, M. D.....	Town health officer.
Fairfield.....	*Laurence E. Poole, M. D.....	Health officer.
Greenwich.....	Albert E. Austin, M. D.....	Do.
Groton.....	F. W. Hewes, M. D.....	Do.
Hartford.....	*C. P. Botsford, M. D.....	Superintendent of health.
Manchester.....	D. C. Y. Moor, M. D.....	Chairman, board of health.
Meriden.....	Joseph A. Cooke, M. D.....	Health officer.
Middletown.....		
Milford.....	Willis S. Putney, M. D.....	Town health officer.
Naugatuck.....		
New Britain.....	*R. W. Pullen, M. D.....	Superintendent of health.
New Haven.....	*John L. Rice, M. D.....	Health officer.
New London.....	*B. N. Pennell, D. V. S.....	Do.
Norwalk.....		
Norwich.....	Edward J. Brophy, M. D.....	Do.
Orange.....		
Shelton.....	Edward J. Finn, M. D.....	Do.
Stamford.....	*Raymond Fear, M. D.....	Commissioner of health.
Stonington.....	Charles F. Congdon, M. D. ¹	Town health officer.
Stratford.....	George F. Lewis, M. D.....	Do.
Torrington.....		
Wallingford.....	William J. Riordan, M. D.....	Health officer.
Waterbury.....	*Thomas J. Kilmartin, M. D.....	Do.
West Hartford.....	R. W. E. Alcutt, M. D.....	Town health officer.
Williamantic.....	W. P. S. Keating, M. D.....	City health officer.
Windham.....	Frederick E. Wilcox, M. D.....	Town health officer.
Delaware:		
Wilmington.....	*Robert S. McBirney, M. D.....	Secretary, board of health.
District of Columbia:		
Washington.....	*William C. Fowler, M. D.....	Health officer.
Florida:		
Jacksonville.....	*William W. MacDonell, M. D.....	City health officer.
Key West.....	Eugene C. Lowe, M. D.....	Do.
Miami.....	*William T. Lanier, M. D.....	Chief health division.
Orlando.....	Sylvan McElroy, M. D.....	City physician.
Pensacola.....	Wm. H. Nobles, M. D.....	City health officer and physician.
St. Petersburg.....		
Tampa.....	*A. C. Hamblin, M. D.....	City health officer.
West Palm Beach.....	*Earle D. Clawson.....	Do.
Georgia:		
Albany.....	*Hugo Robinson, M. D.....	Commissioner of health.
Athens.....	*J. D. Applewhite, M. D.....	Do.
Atlanta.....	*J. P. Kennedy, M. D.....	City health officer.
Augusta.....	*Harry B. Nagle, M. D.....	Commissioner of health.
Brunswick.....	*H. L. Akridge, M. D.....	Health commissioner.
Columbus.....	*J. A. Thrash, M. D.....	Health officer.
Lagrange.....	*C. S. Kinzer, M. D.....	Commissioner of health.
Macon.....	*Charles L. Ridley, M. D.....	Health officer.
Rome.....	*B. V. Elmore, M. D.....	Commissioner of health.
Savannah.....	*Victor H. Bassett, M. D.....	Health officer.
Valdosta.....	*Gordon T. Crozier, M. D.....	City health officer.
Waycross.....		
Idaho:		
Boise.....	*Robert H. Pratt.....	Health officer.
Pocatello.....		
Illinois:		
Alton.....	Daniel F. Duggan, M. D.....	Health commissioner.
Aurora.....	Geo. W. Haan, M. D.....	Do.
Belleville.....		
Berwyn.....	*H. L. Wright, M. D.....	Health director.
Bloomington.....	*Harold B. Wood, M. D.....	Do.
Blue Island.....	L. A. Burkhardt.....	Health commissioner.
Cairo.....	B. S. Hutcheson, M. D. ¹	City physician.
Canton.....		
Centralia.....	J. W. Armstrong, M. D.....	Health officer.
Champaign.....	W. E. Schowengerdt, M. D.....	Do.
Chicago.....	*Hermann N. Bundesen, M. D.....	Commissioner of health.
Chicago Heights.....	G. F. Schreiber, M. D.....	Health commissioner.

¹Address, Mystic, Conn.

City.	Name of health officer	Official title.
Illinois—Continued.		
Cicero.....	Bret L. Vilna, M. D.	Health commissioner.
Collinsville.....	R. H. Greaves, M. D.	Health officer.
Danville.....	J. B. Hundley, M. D.	Health commissioner.
Decatur.....	*Wm. Harding	Health officer.
East Moline.....	James P. Johnston, M. D.	City physician.
East St. Louis.....	*John T. Connors.	Commissioner of health.
Elgin.....	*A. L. Mann, M. D.	City physician.
Evanston.....	C. T. Roome, M. D.	Commissioner of health.
Forest Park.....	H. P. A. Carstens, M. D.	Health commissioner.
Freeport.....	Robert J. Burns, M. D.	Commissioner of health.
Galesburg.....	*E. M. Ellsworth	Health officer.
Granite.....	J. J. Fitzgerald, M. D.	City physician.
Herrin.....	Harry Herrin	President, board of health.
Jacksonville.....	*Thomas A. Mann, M. D.	Director of health.
Joliet.....	*Ed. J. Higgins, M. D.	Commissioner of health.
Kankakee.....	Wm. Yates, M. D.	City health officer.
Kewanee.....	H. N. Hefflin, M. D.	Commissioner of health.
La Salle.....	*E. W. Weis, M. D.	Health commissioner.
Lincoln.....	L. R. Branom, M. D.	Health officer.
Marion.....	David H. Harris, M. D.	President, board of health.
Mattoon.....	R. J. Coultas, M. D.	City health officer.
Maywood.....	R. L. Reynolds, M. D.	Health officer.
Moline.....	E. A. Edlen, M. D.	City physician.
Mount Vernon.....	C. O. Hamilton, M. D.	Do.
Murphysboro.....	Boyd Thorp	Commissioner of health and safety.
Oak Park.....	Frank S. Needham, M. D.	Commissioner of health.
Ottawa.....	Enos E. Palmer, M. D.	Health officer.
Pekin.....	L. R. Clary, M. D.	City health officer.
Peoria.....	Sandor Horwitz, M. D.	Health commissioner.
Quincy.....	*John W. H. Pollard, M. D.	Health officer.
Rock Island.....	Harry Frey, M. D.	Health commissioner.
Rockford.....	*N. O. Gunderson, M. D.	Commissioner of health.
Springfield.....	*Raymond V. Brokaw, M. D.	Superintendent of health.
Streator.....		
Urbana.....	Geo. F. Way, M. D.	Health officer.
Waukegan.....	H. C. Hoag, M. D.	City physician.
West Frankfort.....	H. L. Davis, M. D.	Do.
Indiana:		
Anderson.....	E. M. Conrad, M. D.	Secretary, board of health.
Bloomington.....	C. E. Harris, M. D.	City health officer.
Clinton.....	I. D. White, M. D.	Secretary, board of health.
Connersville.....	B. R. Smith, M. D.	Do.
Crawfordsville.....	Aubrey L. Loop, M. D.	City health officer.
East Chicago.....	Milton A. Given, M. D.	Secretary, department of health.
Elkhart.....		Do.
Elwood.....	Harry W. Fitzpatrick, M. D.	Do.
Evansville.....	W. C. Dyer, M. D.	Secretary, board of health.
Fort Wayne.....	John H. Gilpin, M. D.	Health officer.
Frankfort.....	H. N. Oliphant, M. D.	Secretary, board of health.
Gary.....	Wm. J. White, M. D.	Do.
Hammond.....	William A. Buchanan, M. D.	Do.
Huntington.....	R. F. Frost, M. D.	Do.
Indianapolis.....	*Herman G. Morgan, M. D.	City sanitarian.
Jeffersonville.....	Davis L. Field, M. D.	Secretary, board of health.
Kokomo.....	T. C. Cochran, M. D.	Do.
La Fayette.....	A. J. Bauer, M. D.	City health commissioner.
Laporte.....	*John Fracher, M. D.	Do.
Logansport.....	*Fred G. Six	Health inspector.
Marion.....	V. V. Cameron, M. D.	City health officer.
Michigan City.....	Nelle C. Reed, M. D.	Health officer.
Mishawaka.....	Leo Paul Van Rie, M. D.	Secretary, board of health.
Muncie.....	U. G. Poland, M. D.	Do.
New Albany.....	Chester C. Funk, M. D.	Do.
Newcastle.....	William C. Heilman, M. D.	Do.
Peru.....	D. C. Ridenour, M. D.	Do.
Richmond.....	Charles E. Duffin, M. D.	City health officer.
South Bend.....	Charles S. Bosenbury, M. D.	Secretary, board of health.
Terre Haute.....	Geo. T. Johnson, M. D.	Do.
Vincennes.....	Clarke E. Steward, M. D.	Do.
Wabash.....	L. O. Sholty, M. D.	Health officer.
Whiting.....	E. L. Dewey, M. D.	Secretary, board of health.
Iowa:		
Boone.....	Wm. Woodburn, M. D.	Health officer.
Burlington.....	George H. Steinle, M. D.	Do.
Cedar Rapids.....	W. E. Brown, M. D.	City physician.
Clinton.....	H. R. Sugg, M. D.	Health officer.
Council Bluffs.....	A. A. Robertson, M. D.	Do.
Davenport.....	*Theodore J. Myers	Do.
Des Moines.....	*H. L. Saylor, M. D.	Health commissioner.
Dubuque.....	*D. C. Steelsmith, M. D., C. P. H.	Health officer.
Fort Dodge.....		
Fort Madison.....	J. M. Casey, M. D.	Physician to board of health.
Iowa City.....	T. L. Hazard, M. D.	Health officer.
Keokuk.....	Bruce L. Guilfillan, M. D.	Physician to board of health.

City.	Name of health officer.	Official title.
Iowa—Continued.		
Marshalltown.....	Robert Crichton Molison, M. D.....	City health officer.
Mason City.....	C. W. Hubbard, M. D.....	Superintendent of health.
Muscataine.....	Edmond B. Fulliam, jr., M. D.....	City health officer.
Ottumwa.....	*M. Mills, M. D.....	City physician.
Sioux City.....		
Waterloo.....	H. W. Sigworth, M. D.....	Health officer.
Kansas:		
Arkansas City.....	Ernest F. Day, M. D.....	Chairman, board of health.
Atchison.....	Charles W. Robinson, M. D.....	Health officer.
Chanute.....	M. A. Duncan, M. D.....	City physician.
Coffeyville.....	W. H. Wells, M. D.....	Do.
El Dorado.....	*J. W. Buckley.....	City health officer.
Emporia.....	*J. S. Fulton, M. D.....	County health officer.
Fort Scott.....	C. L. Mosley, M. D.....	Assistant collaborating epidemiologist, U. S. P. H. S.
Hutchinson.....		
Independence.....		
Kansas City.....	*L. B. Gloyne, M. D.....	Commissioner of health.
Lawrence.....	*Arthur W. Clark, M. D.....	Superintendent of public health.
Leavenworth.....	C. D. Lloyd, M. D.....	City health officer.
Newton.....	H. M. Glover, M. D.....	County health officer.
Parsons.....	L. B. Kackley, M. D.....	Health officer.
Pittsburg.....	Ralph E. Jenkins, M. D.....	Do.
Salina.....	J. E. Miller, M. D., D. D. S.....	County health officer.
Topeka.....	*Earle G. Brown, M. D.....	City health officer.
Wichita.....	*D. H. Cooper, M. D.....	Director, public welfare.
Kentucky:		
Ashland.....	J. P. Riffe, M. D.....	City health officer.
Covington.....	Wm. V. Neel, M. D.....	Do.
Henderson.....	*Charles H. Voorhies, M. D.....	Do.
Lexington.....	*Ellis Owen, M. D.....	Do.
Louisville.....	John Todd, M. D.....	Do.
Newport.....	*George W. Duvall, M. D.....	Director, department of health.
Owensboro.....	J. E. Fox, M. D.....	City health officer.
Paducah.....		
Louisiana:		
Alexandria.....	J. A. Packer, M. D.....	Chairman, board of health.
Baton Rouge.....	T. Jeff McHugh, M. D.....	President, board of health.
Lake Charles.....	John G. Martin, M. D.....	City health officer.
Monroe.....	D. I. Hirsh, M. D.....	President, board of health.
New Orleans.....	Edmund L. Leckert, M. D.....	Superintendent, public health.
Shreveport.....	Arthur G. Heath, M. D.....	President, board of health.
Maine:		
Auburn.....	*L. F. Hall, M. D.....	Health officer.
Augusta.....	George A. Coombs, M. D.....	Do.
Bangor.....	*Harry D. McNeil, M. D.....	Do.
Bath.....	*Chester S. Kingsley.....	City sanitarian.
Biddeford.....	*John W. Mahoney.....	Health officer.
Lewiston.....	*L. J. Dumont, M. D.....	Do.
Portland.....	*Thomas Tetreau, M. D.....	Do.
Sanford.....	*C. W. Blagden, M. D.....	Do.
Waterville.....	*William J. Young, M. D.....	Do.
Maryland:		
Annapolis.....		
Baltimore.....	*Charles Hampson Jones, M. D.....	Commissioner of health and registrar of vital statistics.
Cumberland.....	*Harvey H. Weiss.....	Health officer and registrar of vital statistics.
Frederick.....	Ira J. McCurdy, M. D.....	City health officer.
Hagerstown.....	S. M. Wagaman, M. D.....	County health officer.
Massachusetts:		
Adams.....		
Amesbury.....	Otis P. Mudge, M. D.....	Secretary, board of health.
Arlington.....	*William H. Bradley.....	Agent, board of health.
Athol.....		
Attleboro.....	William O. Hewitt, M. D.....	Health officer.
Belmont.....	*Henry Berger, jr., C. P. H.....	Agent, board of health.
Beverly.....	*Alonzo O. Woodbury.....	Do.
Boston.....	*Francis X. Mahoney, M. D.....	Health commissioner.
Braintree.....	*Edward O. Pierson.....	Secretary, board of health.
Brockton.....	David B. Tuholski, M. D.....	Health officer.
Brookline.....	Francis P. Denny, M. D.....	Do.
Cambridge.....	Simon B. Kelleher, M. D.....	Medical inspector.
Chelsea.....	*John F. Welsh.....	Health officer.
Chicopee.....	*Gertrude M. DeWitt.....	Agent and secretary.
Clinton.....	*Frederick E. Murphy.....	Agent, board of health.
Danvers.....	*Hugo Nappe.....	Health officer.
Dedham.....		
Easthampton.....	Clemence C. Buckner.....	Agent, board of health.
Everett.....	*William Gess.....	Do.
Fall River.....	*Samuel B. Morriss.....	Do.
Fitchburg.....	*Fred R. Brigham.....	Do.
Framingham.....	*Fred S. Dodson.....	Health officer.
Gardner.....	*William P. O'Donnell.....	Agent, board of health.

City.	Name of health officer.	Official title.
Massachusetts—Contd.		
Gloucester	*Patrick E. Curley	Sanitary inspector.
Greenfield	*Geo. P. Moore	Health agent.
Haverhill	*George T. Lennon	Agent and clerk.
Holyoke	*J. Sidney Wright	Agent and health officer.
Lawrence	Elias J. Hayes	Chairman, board of health.
Leominster	*Hugh E. Crain	Agent, board of health.
Lowell	*Francis J. O'Hare	Do.
Lynn	Michael R. Donovan, M. D.	Commissioner, public health.
Malden	*Frederick Walmsley	Health inspector.
Marlboro	*John J. Cassidy	Agent, board of health.
Medford	William N. Lanigan, M. D.	Medical inspector.
Melrose	Clarence P. Holden, M. D.	Chairman, board of health.
Methuen	*John M. Laing	Clerk, board of health.
Milford	James J. Birmingham	Inspector.
Natick	Thomas F. Morris	Health officer.
New Bedford	*Wm. G. Kirschbaum	Agent and executive officer.
Newburyport	*William Thurston	Agent and clerk.
Newton	*Francis Geo. Curtis, M. D.	Chairman, board of health.
North Adams	*D. W. Hyde	Agent, board of health.
Northampton	*George R. Turner	Do.
Northbridge	Daniel C. Duggan	Do.
Norwood	*James J. Mulvehill, M. D.	Health officer.
Palmer	J. P. Schneider, M. D.	Do.
Peabody	*James J. Ray	Agent, board of health.
Pittsfield	*Willys M. Monroe, M. D.	City health officer.
Plymouth	Walter D. Shurtleff, M. D.	Chairman, board of health.
Quincy	M. T. Sweeney, M. D.	Health commissioner.
Revere		
Salem	*John J. McGrath	Agent, board of health.
Saugus	Chas. F. Light	Chairman, board of health.
Somerville	Frank L. Morse, M. D.	Medical inspector and bacteriologist.
Southbridge	*Albert R. Brown	Agent.
Springfield	*William L. Young	Agent, board of health.
Taunton	T. F. Cusick, M. D.	Chairman, board of health.
Wakefield		
Waltham	C. B. Fuller, M. D.	Director public welfare.
Watertown	*John W. Tapper	Health officer.
Webster	Fred W. Taft	Agent, board of health.
West Springfield	J. J. Lysaght	Do.
Westfield	R. M. Marr, M. D.	Chairman, board of health.
Weymouth	F. L. Doucett, M. D.	Health officer.
Winchester	*Maurice Dinneen	Do.
Winthrop	*H. Clay Daniels	Do.
Woburn	*Edward T. Gorman	Agent and secretary.
Worcester		
Michigan:		
Adrain		
Alpena	D. A. Cameron, M. D.	City physician.
Ann Arbor	John A. Wessinger, M. D.	Health officer.
Battle Creek	*A. A. Hoyt, M. D.	Do.
Bay City	John A. Keno, M. D.	Do.
Benton Harbor	Carl A. Mitchell, M. D.	Director public health.
Cadillac	D. Ralston, M. D.	Health officer.
Detroit	*Henry F. Vaughn, D. P. H.	Commissioner of health.
Escanaba	*Harry J. Defnet, M. D.	Do.
Flint	*Robert A. Stephenson, M. D.	Health officer.
Grand Rapids	*C. C. Slemmons, M. D.	Do.
Hamtrac	T. T. Dysarz, M. D.	Health commissioner.
Highland Park	William N. Braley, M. D.	Health officer.
Holland	Byron B. Godfrey, M. D.	Do.
Ironwood	*Louis Dorpat, M. D.	Do.
Ishpeming	*Geo. G. Barnett, M. D.	City health officer.
Jackson	*F. R. Town, M. D.	Health officer.
Kalamazoo	*Aloin H. Rockwell, M. D.	Do.
Lansing	*S. Rowland Hill, M. D.	Health director.
Marquette	*Lowell L. Youngquist, M. D.	Health officer.
Monroe	Chas. T. Southworth, M. D.	City physician.
Mount Clemens	Edward G. Folsom, M. D.	Health officer.
Muskegon	R. J. Harrington, M. D.	Do.
Muskegon Heights	Carl Pangerl, M. D.	City health officer.
Owosso	B. C. Mahaney, M. D.	Health officer.
Pontiac	*C. A. Neafie, M. D.	Director of public health.
Port Huron	*Gertrude O'Sullivan, M. D.	Health officer.
River Rouge	Claude A. Smith, M. D.	Do.
Saginaw	*William De Kleine, M. D.	Do.
Sault Ste. Marie	*John J. Griffin, M. D.	City health officer.
Traverse City	George A. Holliday, M. D.	Health officer.
Wyandotte		
Minnesota:		
Austin	Clifford C. Leek, M. D.	Do.
Duluth	L. A. Sukeforth, M. D.	Director of health.
Faribault	Frederick U. Davis, M. D.	Health commissioner.
Hibbing	Hugh W. Reynolds, M. D.	Chairman, board of health.
Mankato	A. F. Kemp, M. D.	Health commissioner.

City.	Name of health officer.	Official title.
Minnesota—Continued.		
Minneapolis.....	*F. E. Harrington, M. D.....	Commissioner of health.
Rochester.....	C. H. Mayo, M. D. ¹	Health officer.
St. Cloud.....	P. E. Stangl, M. D.....	City physician.
St. Paul.....	*Benjamin F. Simon, M. D.....	Chief health officer.
Virginia.....		
Winona.....	William Vardaman Lindsay, M. D.....	Health officer.
Mississippi:		
Biloxi.....	Geo. F. Carroll, M. D.....	City health officer.
Columbus.....	Thomas Toxey Box, M. D.....	Do.
Greenville.....	*A. J. Ware, M. D.....	City and county health officer.
Hattiesburg.....	J. D. Donald, M. D.....	Do.
Jackson.....	T. P. Sparks, Jr., M. D.....	City health officer.
Laurel.....	P. C. Risher, M. D.....	Do.
Meridian.....	T. J. Houston, M. D.....	Do.
Natchez.....	W. H. Aikman, M. D.....	County and city health officer.
Vicksburg.....	Sylvan Myers, M. D.....	County health officer.
Missouri:		
Cape Girardeau.....	*Robert Wilson.....	Health officer.
Carthage.....	Lloyd B. Clinton, M. D.....	Deputy State health commissioner
Columbia.....	W. A. Norris, M. D.....	Do.
Hannibal.....	*E. E. Waldo, M. D.....	City physician.
Independence.....	Calvin Atkins, M. D.....	City health officer.
Jefferson City.....	Hugh Granville Dallas, M. D.....	City physician.
Joplin.....	*M. B. Harutum, M. D.....	Commissioner of health.
Kansas City.....	*Eugene H. Bullock, M. D.....	Health commissioner.
Moberly.....	C. H. Dixon, M. D.....	Do.
St. Joseph.....	Leroy Beck, M. D.....	City health officer.
St. Louis.....	*Mac C. Starkloff, M. D.....	Health commissioner.
Sedalia.....	*C. T. Robinson.....	Sanitary officer.
Springfield.....	*Lon Sharp.....	Commissioner of health.
Webster Grove.....	Arthur W. Westrup, M. D.....	Health commissioner.
Montana:		
Anaconda.....		
Billings.....	James I. Wernham, M. D.....	Health officer.
Butte.....	J. B. Freund, M. D.....	Do.
Great Falls.....	*William H. Pickett, M. D.....	City-county health officer.
Helena.....	*Arthur Jordan, M. D.....	Field agent, U. S. P. H. S.
Missoula.....	*F. D. Pease, M. D.....	Health officer.
Nebraska:		
Grand Island.....	Frank D. Ryder, M. D.....	City physician.
Hastings.....	James V. Beghtol, M. D.....	Do.
Lincoln.....	*Chauncey F. Chapman, M. D.....	Superintendent of health.
North Platte.....		
Omaha.....	A. S. Pinto, M. D.....	Health commissioner.
Nevada:		
Reno.....	Albert F. Adams, M. D.....	Secretary board of health.
New Hampshire:		
Berlin.....		
Claremont.....	William P. Prescott.....	Health officer.
Concord.....	*Charles E. Palmer.....	Sanitary officer.
Dover.....	*Wm. E. Whitney.....	Executive officer.
Keene.....	*Fred C. Nims.....	Health officer.
Laconia.....		
Manchester.....	*Howard A. Streeter, M. D.....	Do.
Nashua.....	P. J. McLaughlin, M. D.....	Do.
Portsmouth.....	L. R. Hazzard, M. D.....	Sanitary inspector.
New Jersey:		
Asbury Park.....	*B. H. Obert.....	Health officer and registrar of vital statistics.
Atlantic City.....	Samuel L. Salasin, M. D.....	Health officer.
Bayonne.....	William W. Brooke, M. D.....	Do.
Belleville.....	W. Brand Smith.....	Do.
Bloomfield.....	*Joseph C. Saile.....	Do.
Bridgeton.....	*Charles E. Bellows, Ph. G.....	Sanitary inspector.
Camden.....	*A. L. Stone, M. D.....	Director of public health.
Carteret.....		
Clifton.....	J. P. Quinlan.....	Health officer.
Collingswood.....		
Dover.....	*John G. Taylor.....	Do.
East Orange.....		
Elizabeth.....	*Louis J. Richards.....	Do.
Engelwood.....	*John A. Manson.....	Sanitary inspector.
Garfield.....	Chas. B. Bleasby, M. D.....	Health officer.
Gloucester.....	J. Alonzo Beck, M. D.....	Do.
Hackensack.....	*L. Van D. Chandler.....	Do.
Harrison.....	*John T. McClure.....	Do.
Hoboken.....	J. F. X. Stack, M. D.....	Health commissioner.
Irvington.....	*Paul C. Schotte.....	Health officer.
Jersey City.....	*James J. Hagan.....	Do.
Kearny.....	*Henry V. Amerman.....	Do.
Long Branch.....	*R. Clifford Errickson.....	Do.

¹ A full-time deputy health officer employed.

City.	Name of health officer.	Official title.
New Jersey—Continued.		
Millville.....	Frank Bullock	Health inspector.
Montclair.....	*Carl T. Pomeroy, C. P. H.	Health officer.
Morristown.....	*John F. Kilkenny	Sanitary inspector.
New Brunswick.....	E. I. Cronk, M. D.	Health officer.
Newark.....	*Charles V. Craster, M. D., D. P. H.	Do.
Nutley.....	*Eugene H. Sullivan	Do.
Orange.....	*Lenore Young, R. N.	Health officer and registrar of vital statistics.
Passaic.....	John N. Ryan, M. D.	Health officer.
Paterson.....	*Frederick P. Lee, M. D.	Do.
Perth Amboy.....	*Chas. S. Thompson, D. V. S.	Do.
Phillipsburg.....	*Alma L. Williston, M. D.	Do.
Plainfield.....	*N. J. Randolph Chandler	Do.
Rahway.....	Frederick William Sell, M. D., D. P. H.	Do.
Ridgefield Park.....	William F. Reynolds, D. V. M.	Sanitary inspector.
Rutherford.....	Clarence W. Byers, M. D.	Medical director.
Summit.....	Henry P. Dengler, M. D.	Executive officer.
Trenton.....	Alton S. Fell, M. D.	Health officer.
Union.....	Charles Hopkins	Chief of police and health officer.
West Hoboken.....	*Frank A. Frederick	Health officer.
West New York.....	*Rudolph Kunze	Chief health inspector.
West Orange.....	*David E. Buckley	Health officer.
Westfield.....	*Andrew Carney	Executive officer.
New Mexico:		
Albuquerque.....	*James R. Scott, M. D.	County health officer.
New York:		
Albany.....	James W. Wiltse, M. D.	Health officer.
Amsterdam.....	Julius Schiller, M. D.	Commissioner of health.
Auburn.....	Thomas Conant Sawyer, M. D.	Health officer.
Batavia.....	John W. Baker, M. D.	City health officer.
Beacon.....		
Binghamton.....	C. J. Longstreet, M. D.	Health officer.
Buffalo.....	*Francis E. Fronczak, M. D.	Health commissioner.
Cohoes.....	E. M. Bell, M. D.	Health officer.
Corning.....	Frank S. Swain, M. D.	Do.
Cortland.....	A. C. Knapp, M. D.	Do.
Dunkirk.....	G. E. Ellis, M. D.	Do.
Elmira.....	Reeve B. Howland, M. D.	Do.
Endicott.....	*Dorr W. Hardy, M. D.	Do.
Fulton.....	C. L. Fessenden, M. D.	Do.
Geneva.....	C. W. Grove, M. D.	Do.
Glens Falls.....	*Virgil D. Belleck, M. D., C. P. H.	Do.
Gloversville.....	Alexander L. Johnson, M. D.	City health officer.
Herkimer.....	Albert L. Fagan, M. D.	Health officer.
Hornell.....	Bertis R. Wakeman, M. D.	Do.
Hudson.....	Chalres R. Skinner, M. D.	Do.
Illion.....	Frank B. Conterman, M. D.	Do.
Ithaca.....	*Lewell T. Genung, M. D.	Do.
Jamestown.....	*John J. Mahoney, M. D.	Superintendent of public health.
Johnson City.....	Rollin O. Crosier, M. D.	Health officer.
Johnstown.....	F. M. Neuendorf, M. D.	City physician.
Kingston.....	Daniel Connelly, M. D.	Health officer.
Lackawanna.....	A. S. Culkowski, M. D.	Do.
Little Falls.....	A. B. Sautry, M. D.	Health officer.
Lockport.....	Thomas E. Spalding, M. D.	City physician.
Middletown.....	H. J. Shelley, M. D.	Health officer.
Mount Vernon.....	Wm. H. Purdy, M. D.	Commissioner of health.
New Rochelle.....	*Edwin H. Codding, M. D.	Health officer.
New York.....	*Frank J. Monaghan, M. D.	Commissioner of health.
Newburgh.....	Thomas J. Burke, M. D.	Health officer.
Niagara Falls.....	Edward E. Gillick, M. D.	Do.
North Tonawanda.....	Henry C. Lapp, M. D.	Do.
Ogdensburg.....		
Olean.....		
Oneida.....	Nelson O. Brooks, M. D.	Do.
Oneonta.....		
Ossining.....	Amos O. Squire, M. D.	Do.
Oswego.....	Harvey S. Albertson, M. D.	Do.
Peekskill.....	Fred A. Snowden, M. D.	Do.
Plattsburg.....	Leo A. Schiff, M. D.	Do.
Port Chester.....	W. J. Sheehan, M. D.	Do.
Port Jervis.....	G. Otto Pobe, M. D.	Do.
Poughkeepsie.....	*William H. Conger, M. D.	Do.
Rensselaer.....		
Rochester.....	*George W. Goler, M. D.	Do.
Rome.....	Roy J. Marshall, M. D.	Do.
Salamanca.....	L. D. Gunn, M. D.	Health commissioner.
Saratoga Springs.....	Charles B. Small, M. D.	City health officer.
Schenectady.....	John H. Collins, M. D.	Commissioner of health.
Syracuse.....	Thomas P. Farmer, M. D.	Do.
Tonawanda.....		
Troy.....	W. N. Campaigne, M. D.	Health officer.
Utica.....	Hugh H. Shaw, M. D.	Do.
Watertown.....		

City.	Name of health officer.	Official title.
New York—Continued.		
Watervliet	Wm. B. D. Van Auken, M. D.	Health commissioner.
White Plains	Edwin G. Ramsdell, M. D.	Health officer.
Yonkers	Clarence W. Buckmaster, M. D., C. P. H.	Commissioner of health.
North Carolina:		
Asheville	*Daniel E. Sevier, M. D.	Health officer.
Charlotte		Do.
Concord	*S. E. Buchanan, M. D.	Superintendent of health.
Durham	*J. H. Epperson	City physician.
Gastonia	James A. Anderson, M. D.	
Goldsboro		Health officer.
Greensboro	*Oliver L. Sharp, M. D.	Do.
High Point	*Claude Hussey	Do.
Kinston	*Robert S. McGeachy, M. D.	County health officer.
New Bern	*D. E. Ford, M. D.	Health officer.
Raleigh	*A. C. Bulla, M. D.	Superintendent, department of health.
Rocky Mount	*H. Lee Large, M. D.	Health officer.
Salisbury	*C. W. Armstrong, M. D.	County health officer.
Wilmington	*John H. Hamilton, M. D.	Health officer.
Wilson	*L. J. Smith, M. D.	City health officer.
Winston-Salem	*R. L. Carlton, M. D.	
North Dakota:		
Fargo	*B. K. Kilbourne, M. D.	Do.
Grand Forks		
Minot		
Ohio:		
Akron	*Donald D. Shira, M. D.	Director of health.
Alliance	Floyd R. Stamp	Health commissioner.
Ashland	Paul R. Ensign, M. D.	Director public welfare.
Ashtabula	A. J. Pardee, M. D.	Health officer.
Barberton	W. A. Mansfield, M. D.	Health commissioner.
Bellaire	Wm. J. Shepherd, M. D.	Do.
Bucyrus	A. H. McCrory, M. D.	Do.
Cambridge	C. L. Vorhies, M. D.	Do.
Canton	F. M. Sayre, M. D.	Do.
Chillicothe	*Gilbert E. Robbins, M. D.	Do.
Cincinnati	*Win. H. Peters, M. D.	Do.
Cleveland	*H. L. Rockwood, M. D.	Do.
Cleveland Heights	*Robert Lockhart, M. D.	Director of health.
Columbus	*James Anderson Beer, M. D.	Health commissioner.
Conneaut	Inez Hyatt, M. D.	Do.
Coshocton		Do.
Cuyahoga Falls	*R. H. Markwith, M. D. ¹	Do.
Dayton	*A. O. Peters, M. D.	Do.
East Cleveland	George W. Stober, M. D.	Director of health.
East Liverpool	*John A. Fraser, M. D.	Health commissioner.
East Youngstown		
Elyria	G. E. French, M. D.	Do.
Findlay	*Edw. W. Misamore, M. D.	Do.
Fostoria	*W. N. Caldwell	Do.
Fremont		
Hamilton	M. F. Vereker, M. D.	Do.
Ironton	O. U. O'Neill, M. D.	Do.
Kenmore	*R. H. Markwith, M. D. ¹	Do.
Lakewood	Walter J. Benner, M. D.	Do.
Lancaster		
Lima	J. B. Poling, M. D.	Do.
Lorain	Valloyd Adair, M. D.	Do.
Mansfield	John Maglett, M. D.	Do.
Marietta	John W. Donaldson, M. D.	Do.
Marion		
Martins Ferry	*Charles Keller	Do.
Massillon		
Middletown	G. D. Lummis, M. D.	Do.
New Philadelphia	*Joseph Blickensderfer, M. D.	Do.
Newark	William H. Knauss, M. D.	Do.
Niles	W. A. Werner, M. D.	Do.
Norwood	*Harry J. Wittenberg, M. D.	Do.
Piqua	J. G. Freshour, M. D.	Do.
Portsmouth	Oral D. Tatje, M. D.	Do.
Salem	*Thomas Teasdale Church, M. D.	Do.
Sandusky	*F. M. Houghtaling, M. D.	Do.
Springfield	*Oscar M. Craven, M. D.	Director of public health.
Steuensville	*Theodore W. Smith	Health commissioner.
Tiffin	J. A. Gosling, M. D.	Do.
Toledo	Daniel W. Iford, M. D.	Do.
Warren	Geo. N. Simpson, M. D.	Do.
Youngstown	H. E. Welch, M. D.	Commissioner of health and welfare.
Zanesville	Beatrice Todd Hagen, M. D.	Superintendent of health.
Oklahoma:		
Ardmore	A. Y. Easterwood, M. D.	City health officer.
Bartlesville	G. F. Woodring, M. D.	City superintendent of health.
Chickasha	E. L. Dawson, M. D.	Do.

¹ Commissioner of health for Cuyahoga Falls, Kenmore and Summit County.

City.	Name of health officer.	Official title.
Oklahoma—Continued.		
Enid.....	R. C. Baker, M. D.	City superintendent of health
Guthrie.....	Wm. C. Miller, M. D.	Do.
McAlester.....	W. C. Graves, M. D.	City health officer.
Muskogee.....	F. W. Ewing, M. D.	Do.
Oklahoma.....	Cary W. Townsend, M. D.	Health commissioner.
Okmulgee.....		
Sapulpa.....	Geo. H. Wetzel, M. D.	City health officer.
Shawnee.....	Thos. C. Sanders, M. D.	Superintendent of health.
Tulsa.....	D. A. Beard, M. D.	Do.
Oregon:		
Astoria.....	Nellie S. Vernon, M. D.	City and county health officer.
Eugene.....		
Portland.....	*George Parrish, M. D.	City health officer.
Salem.....	Wm. B. Mott, M. D.	Do.
Pennsylvania:		
Allentown.....	*J. Treichler Butz, M. D., D. D. S.	Health officer.
Altoona.....	*T. G. Herbert.	Chief bureau of health.
Ambridge.....	*Louis Hermann.	Health officer.
Beaver Falls.....	*Nelson W. Osmond.	Do.
Berwick.....	P. T. Groh.	Do.
Bethlehem.....	H. A. Conahan, M. D.	City physician.
Braddock.....	*Jas. E. Wills.	Health officer.
Bradford.....	*Carl L. Peterson.	Do.
Bristol.....	John M. Wright.	Do.
Butler.....	*H. M. Stanley.	Do.
Canonsburg.....	*Andrew H. Neebling.	Do.
Carbondale.....	*W. J. Morgan.	Sanitary officer.
Carlisle.....	*A. P. Litzman.	Health officer.
Carnegie.....	Harvey Keisling.	Do.
Carrick.....	Arthur W. Lowe.	Do.
Chambersburg.....	Walter J. Fahnestock.	Do.
Charleroi.....	*W. M. Darby.	Health inspector.
Chester.....	*John W. Shaw.	Health officer.
Clairton.....	*Wm. P. Davidson.	Do.
Coatesville.....	Charles V. Peace, V. S.	Do.
Columbia.....	G. M. Rodenbauer.	Do.
Connellsville.....	*George Hetzel.	Sanitary police.
Dickson City.....	*Frank J. Meehan.	Health officer.
Donora.....	J. B. McCune.	Do.
Dubois.....	Luther W. Quinn, M. D.	Do.
Dunmore.....		
Duquesne.....		
Easton.....	J. James Condran, M. D.	City health officer.
Ellwood City.....	*William T. Jones.	Health officer.
Erie.....	J. W. Wright, M. D.	Do.
Farrell.....	*Wm. C. Heinze.	Do.
Franklin.....		
Greensburg.....		
Harrisburg.....	John M. J. Raunick, M. D.	Health officer and director.
Hazleton.....	*P. J. Bonner.	Health officer.
Homestead.....	*James L. King.	Do.
Jeannette.....	*A. T. Coon.	Do.
Johnstown.....		
Kingston.....	*J. F. Seward.	Do.
Lancaster.....	*Benj. F. Charles.	Do.
Lansford.....	Wm. J. Early.	Do.
Lebanon.....	E. H. Gingrich, M. D.	City health officer.
Lewistown.....	*H. E. Fetterolf.	Do.
McKee's Rocks.....	*B. V. Anderson.	Do.
McKeesport.....	*Daniel F. Marsh.	Do.
Mahanoy City.....	*John Sullivan.	Do.
Meadville.....		
Monessen.....	*Francis E. Gibson.	Inspector public safety.
Mount Carmel.....	*F. Gross.	Health officer.
Nanticoke.....	*Edward J. Humphreys.	Do.
New Castle.....	William L. Steen, M. D.	Do.
New Kensington.....	A. L. Davis.	Do.
Norristown.....	*Chas. E. White.	Do.
North Braddock.....	*Robert M. Sylves.	Do.
Oil City.....	*Wm. J. Lewis.	Do.
Old Forge.....		
Olyphant.....	*James F. O'Malley.	Do.
Philadelphia.....	*Wilmer Krusen, M. D.	Director, department of public health.
Phoenixville.....	Eugene Fogarty.	Health officer.
Pittsburgh.....	*C. J. Vaux, M. D.	Director, department of public health.
Pittston.....	*Matthew A. Hurst.	Health officer.
Plymouth.....		
Pottstown.....	*A. John Andre.	Do.
Pottsville.....	*O. L. Kleckner.	Do.
Punxsutawney.....	J. Frank Boney.	Do.
Reading.....	*Ira J. Hain, M. D.	Do.
Scranton.....	F. R. Wheelock, M. D.	Director.

City.	Name of health officer.	Official title
Pennsylvania—Contd.		
Shamokin.....		
Sharon.....	*L. C. Brainard.....	Sanitary officer.
Shenandoah.....	*Cyrus Geise.....	Health officer.
Steelton.....	*E. G. Butler.....	Do.
Sunbury.....	*Victor A. Koble.....	Do.
Swissvale.....	*L. F. Howard.....	Do.
Tamaqua.....	Lamont Perrine.....	Do.
Taylor.....	E. E. Edwards, M. D.....	Do.
Uniontown.....	*W. C. Hall.....	Do.
Vandergrift.....		
Warren.....	*Ralph N. Brown.....	Do.
Washington.....	*J. G. Dinsmore.....	Do.
Waynesboro.....	*Percy H. Snowberger.....	Do.
West Chester.....	Jos. Scuttlegood, M. D.....	Medical director.
Wilkes-Barre.....		
Wilkesburg.....	*J. M. Snyder.....	Health officer.
Williamsport.....	Robert F. Trainer, M. D.....	City health officer.
Woodlawn.....	*James E. Tanner.....	Health officer.
York.....	J. Frank Small, M. D.....	Director of public health.
Rhode Island:		
Bristol.....	John Magee.....	Health officer.
Central Falls.....	Q. R. V. Fenwick, M. D.....	Superintendent of health.
Cranston.....	Daniel S. Latham, M. D.....	Do.
Cumberland.....	Stephen A. Kenney, M. D.....	Health officer.
East Providence.....	William H. T. Hamill, M. D.....	Do.
Newport.....	*J. W. Sampson.....	Executive officer.
Pawtucket.....	Florian A. Ruest, M. D.....	Superintendent of health.
Providence.....	*Charles V. Chapin, M. D.....	Do.
Warwick.....		
West Warwick.....	H. Barton Bryer, M. D.....	Health officer.
Westerly.....	Samuel C. Webster, M. D.....	Superintendent of health.
Woonsocket.....	C. B. Barry, M. D.....	Health officer.
South Carolina:		
Anderson.....	Lee M. Milford, M. D.....	Do.
Charleston.....	*J. Merceir Green, M. D.....	Do.
Columbia.....	*Jean B. LaBorde, M. D.....	City health officer.
Florence.....	*P. H. Brigham, M. D.....	Health commissioner.
Greenville.....	*Clarence E. Smith, D. V. M.....	Do.
Spartanburg.....		
Sumter.....	*D. O. Browning, D. V. M.....	Health officer.
South Dakota:		
Aberdeen.....	*Geo. M. Boteler, M. D.....	Do.
Sioux Falls.....	*W. M. Barnes, M. D.....	Director of public health.
Watertown.....		
Tennessee:		
Chattanooga.....	E. B. Wise, M. D.....	Director of health.
Jackson.....		
Johnson City.....		
Knoxville.....	Marvin F. Haygood, M. D., C. P. H.....	Health officer.
Memphis.....	J. J. Durrett, M. D.....	Superintendent of health.
Nashville.....	*W. E. Hibbett, M. D.....	City health officer.
Texas:		
Abilene.....	W. Auda Vee Cash, M. D.....	County-city health officer.
Amarillo.....	A. H. Lindsay, M. D.....	City physician.
Austin.....	Zeno T. Martin, M. D.....	City health officer.
Beaumont.....	Dru McMicken, M. D.....	Do.
Brownsville.....	W. E. Spivey, M. D.....	Do.
Cleburne.....	Wm. E. Lucey, M. D.....	Do.
Corpus Christi.....	W. E. Wills, M. D.....	Do.
Corsicana.....		
Dallas.....	*Lane B. Cooke, M. D.....	Director of public health.
Del Rio.....	B. F. Orr, M. D.....	City health officer.
Denison.....	Alex W. Acheson, M. D.....	Health officer.
Eastland.....	L. C. Brown, M. D.....	County health officer.
El Paso.....	*Jno. W. Brown, M. D.....	City health officer.
Fort Worth.....	A. W. Montague, jr., M. D.....	Do.
Galveston.....	H. O. Sappington, M. D.....	Do.
Greenville.....	W. M. Dickens, M. D.....	Health officer.
Houston.....	*Arthur H. Flickwir, M. D.....	Do.
Laredo.....		
Marshall.....	Galen Eads, M. D.....	City physician.
Orange.....	F. W. Lawson, M. D.....	City health officer.
Palestine.....	R. H. McLeod, M. D.....	Do.
Paris.....	Lewis Melvin Gooch, M. D.....	Do.
Port Arthur.....	J. P. Reed, M. D.....	City physician.
Ranger.....		
San Angelo.....	A. C. DeLong, M. D.....	City health officer.
San Antonio.....	W. A. King, M. D.....	Do.
Sherman.....		
Temple.....		
Texarkana.....	Wm. Hibbetts, M. D.....	Do.
Tyler.....	Albert Woldert, M. D.....	Do.
Waco.....	R. F. Minnock, M. D.....	Do.
Wichita Falls.....	*A. H. Douglas, D. V. M.....	Director, health department

City.	Name of health officer.	Official title.
Utah:		
Logan.....	P. W. Eliason, M. D.....	City physician.
Ogden.....	*Roy H. Wilson, M. D.....	Health commissioner.
Provo.....	Arnold E. Robinson, M. D.....	City physician.
Salt Lake City.....	W. Christopherson, M. D.....	Commissioner of health.
Vermont:		
Barre.....	Marshal D. Lamb, M. D.....	Health officer.
Bennington.....	*Joseph M. Ayers.....	Do.
Burlington.....	*J. W. Courtney, M. D.....	Do.
Rutland.....	Geo. Rustedt, M. D.....	Do.
Virginia:		
Alexandria.....	*Louis E. Foulks, M. D.....	Do.
Charlottesville.....	*Wm. S. Keister, M. D.....	Director, health department.
Danville.....	*R. W. Garrett, M. D.....	Health officer.
Lynchburg.....	*Mosby G. Perrow, M. D.....	Director, public welfare.
Newport News.....	*Coleman Bernard Ransone, M. D.....	Health officer.
Norfolk.....	*Powhatan S. Schenck, M. D.....	Health commissioner.
Petersburg.....	*Robert A. Martin, M. D.....	Chief executive of health center.
Portsmouth.....	*Lonsdale J. Roper, M. D.....	Director, public welfare.
Richmond.....	*C. C. Hudson, M. D.....	Health officer.
Roanoke.....	*W. Brownley Foster, M. D.....	Do.
Staunton.....	J. Fairfax Fulton, M. D.....	City health officer.
Washington:		
Aberdeen.....	J. B. Kinne, M. D.....	Health officer.
Bellingham.....	W. W. Ballantine, M. D.....	City health officer.
Bremerton.....	T. H. Holmes, M. D.....	Do.
Everett.....	J. Spencer Purdy, M. D.....	Do.
Hoquiam.....	H. C. Watkins, M. D.....	Do.
Seattle.....	*George N. McLoughlin, M. D.....	Commissioner of health.
Spokane.....	*Ralph Hendricks, M. D.....	Health officer.
Tacoma.....	C. F. Engels, M. D.....	Do.
Vancouver.....	R. D. Wiswall, M. D.....	City physician.
Walla Walla.....	*Joseph P. Kane, M. D.....	Health officer.
Yakima.....	*H. H. Smith, M. D.....	Do.
West Virginia:		
Bluefield.....	*David Littlejohn, M. D.....	Director health and welfare.
Charleston.....	J. B. Lohan, M. D.....	Health commissioner.
Clarksburg.....	*Robert Linn Osborn, M. D.....	City physician.
Fairmont.....	*J. A. Jamison, M. D.....	City health officer.
Huntington.....	Earl B. Gerlach, M. D.....	Do.
Martinsburg.....	J. F. Farr, M. D.....	Executive officer, board of health.
Morgantown.....	R. H. Edmondson, M. D.....	Health officer.
Moundsville.....	A. F. Compton, M. D.....	Do.
Parkersburg.....	Horace D. Price, M. D.....	Do.
Wheeling.....	*William Hay McLain, M. D.....	Health commissioner.
Wisconsin:		
Appleton.....	Wm. C. Felton, M. D.....	City physician.
Ashland.....	C. O. Heitzman, M. D.....	Health commissioner.
Beloit.....	*L. M. Field, M. D.....	Health officer.
Eau Claire.....	J. F. Farr, M. D.....	Executive officer, board of health.
Fond du Lac.....	A. C. Dana, M. D.....	Health officer.
Green Bay.....	*Geo. F. Goggins, M. D.....	Commissioner of health.
Janesville.....	Fred B. Welch, M. D.....	Health officer.
Kenosha.....	*G. Windesheim, M. D.....	Director of health.
La Crosse.....	*Anthony M. Murphy.....	Health commissioner.
Madison.....	*E. V. Brumbaugh, M. D.....	Health officer.
Manitowoc.....	Max Staehle, M. D.....	Commissioner of health.
Marinette.....	S. Berglund, M. D.....	Health officer.
Milwaukee.....	*Geo. C. Ruhland, M. D.....	Commissioner of health.
Oshkosh.....	*Arthur Henri Broche, M. D.....	Health officer.
Racine.....	*William Waldo Bauer, M. D.....	Do.
Sheboygan.....	*Joseph C. Elfers, M. D.....	Commissioner of public health.
Stevens Point.....	F. H. Southwick, M. D.....	Health commissioner.
Superior.....	P. G. McGill, M. D.....	Do.
Waukesha.....	Geo. E. Peterson, M. D.....	Do.
Wausau.....	*Leigh F. Bugbee.....	Health officer.
West Allis.....	*Samuel C. McCorkle, M. D.....	Health commissioner.
Wyoming:		
Casper.....	*Ralph J. Malott, M. D.....	Director of health department.
Cheyenne.....	J. W. Conway, M. D.....	Health officer.

CURRENT COURT DECISIONS PERTAINING TO PUBLIC HEALTH.

Massachusetts filled milk act construed.—Chapter 170 of the 1923 acts of Massachusetts, the so-called “filled milk” act, which prohibits, for the purposes of sale or exchange, adding to or blending or compounding with milk or cream any fat or oil other than milk fat, has been held by the United States District Court for Massachusetts not to apply to “Carolene,” a compound of skimmed milk and egg yolk subjected to partial evaporation and containing about one-tenth of 1 per cent of fat derived from the egg yolk. It was admitted that “Carolene” is a wholesome and desirable food product sold for use in coffee, baking, and other culinary purposes, and the court enjoined the enforcement of the act as against plaintiffs on the ground that, properly construed, it did not cover “Carolene,” falling under the principle that “a thing may be within the letter of the statute and yet not within the statute, because not within its spirit nor within the intention of its makers.” (*Carolene Products Co. v. Mahoney et al.*, 294 Fed. 902.)

Milk ordinance held valid.—An ordinance of Tarboro, N. C., prohibiting the sale of milk or cream unless pasteurized in accordance with the standard set forth in the ordinance, and also prohibiting the sale of milk by unlicensed persons, has been held valid by the Supreme Court of North Carolina in a case where a judgment of conviction for violation of the ordinance was affirmed. (*State v. Edwards*, 121 S. E. 444.)

DEATHS DURING WEEK ENDED MAY 31, 1924.

Summary of information received by telegraph from industrial insurance companies for week ended May 31, 1924, and corresponding week of 1923. (From the Weekly Health Index, June 3, 1924, issued by the Bureau of the Census, Department of Commerce.)

	Week ended May 31, 1924.	Corresponding week, 1923.
Policies in force.....	56, 075, 942	52, 292, 756
Number of death claims.....	8, 266	8, 185
Death claims per 1,000 policies in force, annual rate.....	7. 7	8. 2

Deaths from all causes in certain large cities of the United States during the week ended May 31, 1924, infant mortality, annual death rate, and comparison with corresponding week of 1923. (From the Weekly Health Index, June 3, 1924, issued by the Bureau of the Census, Department of Commerce.)

City.	Week ended May 31, 1924.		Annual death rate per 1,000, corresponding week, 1923.	Deaths under 1 year.		Infant mortality rate, week ended May 31, 1924. ¹
	Total deaths.	Death rate. ¹		Week ended May 31, 1924.	Corresponding week, 1923.	
Total (65 cities).....	6,353	12.2	12.3	786	764	
Akron.....	29			11	6	116
Albany ⁴	36	15.8	10.2	3	2	66
Atlanta.....	78	17.9	18.0	8	15	
Baltimore ⁴	197	13.1	14.2	20	26	58
Birmingham.....	60	15.6	14.4	11	10	
Boston.....	197	13.2	13.9	25	26	69
Bridgeport.....	23			4	4	63
Buffalo.....	119	11.4	15.3	18	18	76
Cambridge.....	25	11.6	13.1	4	2	69
Camden.....	37	15.3	9.7	3	2	47
Chicago ⁴	627	11.1	11.1	92	90	85
Cincinnati.....	121	15.5	17.3	12	11	76
Cleveland.....	168	9.6	12.1	31	22	81
Columbus.....	70	13.7	13.4	7	5	67
Dallas.....	48	13.3	13.4	5	7	
Dayton.....	38	11.7	11.0	8	2	134
Denver.....	63			7	6	
Des Moines.....	33	11.9	12.6	1	6	
Detroit.....	259			54	50	101
Duluth.....	16	7.7	15.7	2	6	43
Erie.....	23			2	2	41
Fall River ⁴	36	15.5	16.0	7	3	99
Flint.....	21			3	1	52
Fort Worth.....	24	8.4	7.6	3	3	
Grand Rapids.....	26	9.1	15.0	3	4	47
Houston.....	40			4	8	
Indianapolis.....	101	15.0	16.0	8	8	60
Jacksonville, Fla.....	38	19.3	9.4	7	2	
Jersey City.....	83	13.9	11.3	9	8	65
Kansas City, Kans.....	25	11.1	11.7	2	3	40
Kansas City, Mo.....	69	10.0	15.0	6	16	
Los Angeles.....	230			31	22	97
Louisville.....	76	15.3	16.2	4	12	38
Lowell.....	29	13.1	10.0	4	4	71
Lynn.....	18	9.1	9.6	1	2	25
Memphis.....	62	18.8	22.4	6	8	
Milwaukee.....	92	9.7	10.0	12	19	55
Minneapolis.....	82	10.2	11.3	13	12	70
Nashville ⁴	50	21.1	12.8	5	8	
New Bedford.....	25	9.8	8.4	5	1	78
New Haven.....	39	11.6	8.7	2	2	26
New Orleans.....	149	19.0	18.0	17	23	
New York.....	1,368	11.9	10.6	160	132	65
Bronx Borough.....	165	9.9	7.4	18	11	63
Brooklyn Borough.....	440	10.4	9.9	53	43	57
Manhattan Borough.....	645	14.9	12.7	79	66	77
Queens Borough.....	91	8.6	8.1	9	9	49
Richmond Borough.....	27	10.8	16.8	1	3	18
Newark, N. J.....	82	9.6	9.2	9	5	42
Norfolk.....	24	7.6	11.1	3	8	55
Oakland.....	54	11.4	9.8	8	6	100
Oklahoma City.....	19	9.5		0		
Omaha.....	41	10.3	13.3	3	3	32
Paterson.....	31	11.5	13.1	2	4	33
Philadelphia.....	469	12.5	12.6	60	56	76
Pittsburgh.....	166	13.8	14.9	22	28	75
Portland, Oreg.....	62	11.6	10.5	3	5	31
Providence.....	70	15.0	16.3	4	8	114
Richmond.....	44	12.5	9.5	6	7	71
Rochester.....	80	12.8		11		86
St. Louis.....	182	11.7	13.8	17	22	
St. Paul.....	55	11.8	13.4	8	6	69
Salt Lake City ⁴	29	11.8	12.4	5	9	83

¹ Annual rate per 1,000 population.

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

³ Data for 63 cities.

⁴ Deaths for week ended Friday, May 30, 1924.

Deaths from all causes in certain large cities of the United States during the week ended May 31, 1924, infant mortality, annual death rate, and comparison with corresponding week of 1923—Continued.

City.	Week ended May 31, 1924.		Annual death rate per 1,000, corresponding week, 1923.	Deaths under 1 year.		Infant mortality rate, week ended May 31, 1924.
	Total deaths.	Death rate.		Week ended May 31, 1924.	Corresponding week, 1923.	
San Antonio.....	54	14.7	15.2	10	13	-----
San Francisco.....	141	13.4	11.7	11	5	28
Schenectady.....	13	6.7	13.2	1	1	23
Seattle.....	56			4	7	39
Somerville.....	15	7.8	10.6	1	5	27
Spokane.....	25			1	5	21
Springfield, Mass.....	30	10.5	13.0	4	3	68
Syracuse.....	50	13.9	10.5	10	4	124
Tacoma.....	18	9.1	8.7	2	0	46
Toledo.....	63	11.9	10.3	10	6	95
Trenton.....	34	13.7	15.1	4	4	66
Utica.....	29	14.4	13.1	2	3	43
Washington, D. C.....	117	12.5	12.7	10	16	78
Waterbury.....	12			3	4	67
Wilmington, Del.....	27	11.7	12.4	3	3	65
Worcester.....	31	8.3	11.4	4	2	48
Yonkers.....	23	13.3	7.3	5	3	109
Youngstown.....	35	11.8	11.8	6	4	87

COLORADO—continued.		ILLINOIS—continued.	
	Cases.		Cases.
Scarlet fever.....	6	Influenza.....	6
Smallpox.....	11	Lethargic encephalitis:	
Tuberculosis.....	44	Chicago.....	2
Whooping cough.....	37	Jo Daviess County.....	1
CONNECTICUT.		Measles.....	833
Chicken pox.....	39	Pneumonia.....	227
Diphtheria.....	31	Scarlet fever:	
German measles.....	15	Cook County.....	139
Influenza.....	1	Kane County.....	8
Measles.....	110	La Salle County.....	9
Mumps.....	103	Scattering.....	87
Pneumonia (lobar).....	25	Smallpox:	
Scarlet fever.....	99	Douglas County.....	11
Tetanus.....	1	Lake County.....	13
Tuberculosis (all forms).....	34	Madison County.....	15
Whooping cough.....	19	Scattering.....	21
DELAWARE.		Tuberculosis.....	298
Chicken pox.....	1	Typhoid fever.....	14
Diphtheria.....	1	Whooping cough.....	133
Malaria.....	1	INDIANA.	
Measles.....	14	Chicken pox.....	63
Mumps.....	3	Diphtheria.....	36
Scarlet fever.....	3	Influenza.....	13
Typhoid fever.....	2	Measles.....	196
Whooping cough.....	1	Pneumonia.....	4
DISTRICT OF COLUMBIA.		Scarlet fever:	
Chicken pox.....	41	Kosciusko County.....	10
Diphtheria.....	7	Scattering.....	55
Influenza.....	2	Smallpox:	
Measles.....	22	Clinton County.....	26
Scarlet fever.....	23	Marion County.....	36
Smallpox.....	3	Wabash County.....	11
Tuberculosis.....	21	Scattering.....	85
Whooping cough.....	3	Tuberculosis:	
FLORIDA.		Marion County.....	18
Cerebrospinal meningitis.....	1	Scattering.....	11
Diphtheria.....	9	Typhoid fever:	
Malaria.....	15	Lake County.....	9
Smallpox.....	1	Scattering.....	8
Typhoid fever.....	14	Whooping cough.....	47
GEORGIA.		IOWA.	
Chicken pox.....	11	Diphtheria.....	13
Diphtheria.....	12	Scarlet fever.....	31
Dysentery (bacillary).....	7	Smallpox.....	14
Hook worm disease.....	11	KANSAS.	
Influenza.....	1	Cerebrospinal meningitis.....	4
Malaria.....	13	Chicken pox.....	62
Measles.....	10	Diphtheria.....	18
Mumps.....	21	German measles.....	2
Paratyphoid fever.....	1	Influenza.....	3
Pneumonia.....	11	Measles.....	594
Poliomyelitis.....	2	Mumps.....	150
Scarlet fever.....	13	Pneumonia.....	26
Smallpox.....	44	Poliomyelitis.....	1
Tuberculosis (pulmonary).....	8	Scarlet fever.....	43
Typhoid fever.....	5	Smallpox.....	25
Whooping cough.....	21	Tuberculosis.....	23
ILLINOIS.		Typhoid fever.....	9
Diphtheria:		Whooping cough.....	109
Cook County.....	61	LOUISIANA. ¹	
Scattering.....	32	Diphtheria.....	25
		Dysentery.....	2

¹Including New Orleans for the two weeks ended June 7, 1924.

LOUISIANA—continued.

	Cases.
Hookworm disease.....	45
Influenza.....	7
Malaria.....	58
Measles.....	135
Pneumonia.....	38
Scarlet fever.....	7
Smallpox.....	3
Tuberculosis.....	78
Typhoid fever.....	25
Whooping cough.....	6

MAINE.

Chicken pox.....	17
Diphtheria.....	21
German measles.....	78
Measles.....	86
Mumps.....	89
Pneumonia.....	9
Scarlet fever.....	21
Smallpox.....	2
Tuberculosis.....	24
Typhoid fever.....	3
Whooping cough.....	20

MARYLAND.¹

Cerebrospinal meningitis.....	1
Chicken pox.....	70
Diphtheria.....	29
Dysentery.....	2
German measles.....	15
Influenza.....	8
Malaria.....	1
Measles.....	185
Mumps.....	28
Pneumonia (all forms).....	37
Poliomyelitis.....	1
Scarlet fever.....	71
Smallpox.....	2
Trachoma.....	1
Tuberculosis.....	49
Typhoid fever.....	17
Whooping cough.....	20

MASSACHUSETTS.

Cerebrospinal meningitis.....	3
Chicken pox.....	110
Conjunctivitis (suppurative).....	16
Diphtheria.....	122
German measles.....	66
Influenza.....	6
Lethargic encephalitis.....	3
Malaria.....	1
Measles.....	835
Mumps.....	237
Ophthalmia neonatorum.....	30
Pneumonia (lobar).....	77
Poliomyelitis.....	1
Scarlet fever.....	272
Tetanus.....	2
Trachoma.....	1
Tuberculosis (all forms).....	155
Typhoid fever.....	4
Whooping cough.....	69

¹ Week ended Friday.

MICHIGAN.

	Cases.
Diphtheria.....	135
Measles.....	713
Pneumonia.....	130
Scarlet fever.....	357
Smallpox.....	252
Tuberculosis.....	79
Typhoid fever.....	14
Whooping cough.....	113

MINNESOTA.

Cerebrospinal meningitis.....	1
Chicken pox.....	29
Diphtheria.....	46
Influenza.....	3
Measles.....	125
Pneumonia.....	3
Poliomyelitis.....	1
Scarlet fever.....	163
Smallpox.....	39
Tuberculosis.....	76
Typhoid fever.....	3
Whooping cough.....	10

MISSISSIPPI.

Diphtheria.....	7
Scarlet fever.....	2
Smallpox.....	15
Typhoid fever.....	9

MISSOURI.

Cerebrospinal meningitis.....	2
Chicken pox.....	68
Diphtheria.....	43
Influenza.....	24
Measles.....	156
Mumps.....	69
Ophthalmia neonatorum.....	1
Pneumonia.....	6
Scarlet fever.....	103
Smallpox.....	12
Trachoma.....	57
Tuberculosis.....	44
Typhoid fever.....	6
Whooping cough.....	61

MONTANA.

Diphtheria.....	15
Rocky Mountain spotted fever—Townsend.....	1
Scarlet fever.....	14
Smallpox.....	21
Tularæmia—Whitefish.....	1
Typhoid fever.....	1

NEBRASKA.

Chicken pox.....	17
Diphtheria.....	4
Measles.....	110
Pneumonia.....	1
Scarlet fever.....	11
Smallpox.....	3

NEW JERSEY.

Cerebrospinal meningitis.....	2
Chicken pox.....	173

NEW JERSEY—continued.

	Cases.
Diphtheria.....	86
Influenza.....	9
Malaria.....	4
Measles.....	627
Pneumonia.....	89
Scarlet fever.....	182
Smallpox.....	19
Typhoid fever.....	10
Whooping cough.....	150

NEW MEXICO.

Chicken pox.....	7
Diphtheria.....	21
Measles.....	74
Mumps.....	7
Pneumonia.....	4
Scarlet fever.....	4
Trachoma.....	1
Tuberculosis.....	4
Typhoid fever.....	1
Whooping cough.....	3

NEW YORK.

(Exclusive of New York City.)

Cerebrospinal meningitis.....	2
Diphtheria.....	109
Influenza.....	11
Lethargic encephalitis.....	7
Measles.....	1,394
Pneumonia.....	220
Poliomyelitis.....	3
Scarlet fever.....	250
Smallpox.....	8
Typhoid fever.....	35
Whooping cough.....	334

NORTH CAROLINA.

Cerebrospinal meningitis.....	1
Chicken pox.....	94
Diphtheria.....	19
German measles.....	4
Measles.....	391
Ophthalmia neonatorum.....	1
Scarlet fever.....	49
Septic sore throat.....	6
Smallpox.....	82
Typhoid fever.....	26
Whooping cough.....	196

OREGON.

Chicken pox.....	12
Diphtheria.....	17
Influenza.....	1
Lethargic encephalitis.....	1
Measles.....	25
Mumps.....	3
Pneumonia.....	14
Scarlet fever.....	16
Smallpox:	
Portland.....	8
Scattering.....	2
Tuberculosis.....	9
Typhoid fever.....	2
Whooping cough.....	2

¹ Deaths.

SOUTH DAKOTA.

	Cases.
Chicken pox.....	1
Diphtheria.....	6
Measles.....	52
Pneumonia.....	2
Rocky Mountain spotted fever.....	1
Scarlet fever.....	60
Smallpox.....	3
Tuberculosis.....	3
Whooping cough.....	1

TEXAS.

Anthrax.....	2
Chicken pox.....	71
Dengue.....	7
Diphtheria.....	17
Dysentery (epidemic).....	2
Influenza.....	20
Measles.....	150
Mumps.....	121
Paratyphoid fever.....	5
Pneumonia.....	7
Scarlet fever.....	23
Smallpox.....	50
Trachoma.....	3
Tuberculosis.....	87
Typhoid fever.....	3
Whooping cough.....	61

VERMONT.

Chicken pox.....	10
Diphtheria.....	2
Measles.....	54
Mumps.....	2
Poliomyelitis.....	1
Scarlet fever.....	14
Smallpox.....	1
Whooping cough.....	17

VIRGINIA.

Smallpox:	
Fairfax County.....	1
King and Queen County.....	1

WASHINGTON.

Chicken pox.....	77
Diphtheria.....	29
Measles.....	74
Mumps.....	24
Poliomyelitis—King County.....	1
Rocky Mountain spotted fever—Odessa.....	3
Scarlet fever.....	40
Smallpox.....	38
Tuberculosis.....	57
Typhoid fever.....	2
Whooping cough.....	7

WEST VIRGINIA.

Diphtheria.....	2
Scarlet fever.....	10
Smallpox.....	1

WISCONSIN.

Milwaukee:	
Chicken pox.....	131
Diphtheria.....	14
Measles.....	26
Ophthalmia neonatorum.....	1

WISCONSIN—continued.

Milwaukee—Continued.	Cases.
Pneumonia.....	2
Scarlet fever.....	14
Smallpox.....	2
Tuberculosis.....	20
Whooping cough.....	35
Scattering:	
Chicken pox.....	122
Diphtheria.....	27
German measles.....	40
Influenza.....	11
Lethargic encephalitis.....	2
Measles.....	197
Pneumonia.....	18
Scarlet fever.....	136

WISCONSIN—continued.

Scattering—Continued.	Cases.
Smallpox.....	60
Tuberculosis.....	38
Typhoid fever.....	4
Whooping cough.....	86
WYOMING.	
Chicken pox.....	12
Diphtheria.....	3
Measles.....	61
Mumps.....	14
Pneumonia.....	4
Rocky Mountain spotted fever.....	6
Scarlet fever.....	3
Tuberculosis.....	1
Whooping cough.....	4

Report for week ended May 31, 1924.

DISTRICT OF COLUMBIA.

	Cases.		Cases.
Chicken pox.....	22	Smallpox.....	4
Diphtheria.....	4	Tuberculosis.....	28
Influenza.....	2	Typhoid fever.....	2
Measles.....	22	Whooping cough.....	12
Scarlet fever.....	25		

SUMMARY OF MONTHLY REPORTS FROM STATES.

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

State	Cerebro-spinal meningitis.	Diphtheria.	Influenza.	Malaria.	Measles.	Pellagra.	Polio-myelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
<i>May, 1924.</i>										
Connecticut.....	4	126	15	6	625		1	495	12	15
Oklahoma.....		34			1,186			31	115	18

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES.

Diphtheria.—Thirty-four States reported 1,545 cases of diphtheria for the week ended May 24, 1924. The same States reported 1,441 cases of this disease for the week ended May 26, 1923. One hundred and one cities, situated in all parts of the United States and having an aggregate population of nearly 28,600,000, reported 922 cases of diphtheria for the week this year, and 908 cases for the corresponding week last year. The estimated expectancy for these cities was 983 cases. The estimated expectancy was based on the experience of the last nine years, excluding epidemics.

Measles.—Twenty-nine States reported 10,027 cases of measles for the week in 1924 and 23,979 cases for the corresponding week in 1923. One hundred and one cities reported for the week 3,709 cases of measles in 1924 and 9,323 cases in 1923.

Scarlet fever.—Thirty-four States reported 2,663 cases of scarlet fever for the week ended May 24, 1924, and 2,758 cases for the week ended May 26, 1923. The reports for the week from 101 cities were as follows: This year, 1,299 cases; last year, 1,436 cases; estimated expectancy, 869 cases.

Smallpox.—Some improvement is noted in the smallpox reports, but the number of cases is still much too high, in view of the fact that the means for controlling this disease are well known. Thirty-four States reported 1,134 cases of smallpox for the week this year and 541 cases for the corresponding week of last year. One hundred and one cities reported this disease for the week as follows: 1924, 404 cases; 1923, 164 cases; estimated expectancy, 181 cases. During the four weeks ended May 24, 64 deaths from smallpox were registered in Detroit, Mich.

Typhoid fever.—Thirty-three States reported 263 cases of typhoid fever for the week ended May 24, 1924, and 221 cases for the week ended May 26, 1923. The reports for the week from 101 cities were, this year, 76 cases; last year, 73 cases; estimated expectancy, 81 cases.

Influenza and pneumonia.—During April and May there was a decline in the number of deaths from influenza and pneumonia. For the week ended May 24, 1924, 101 cities reported 682 deaths from these diseases combined. For the corresponding week of 1923 they reported 644 deaths from these causes.

City reports for week ended May 24, 1924.

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

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

Division, State, and city.	Chick- en pox, cases re- ported.	Diphtheria.		Influenza.		Meas- les, cases re- ported.	Mumps, cases re- ported.	Pneu- monia, deaths re- ported.	Scarlet fever.	
		Cases, esti- mated expect- ancy.	Cases re- ported.	Cases re- ported.	Deaths re- ported.				Cases, esti- mated expect- ancy.	Cases re- ported.
NEW ENGLAND.										
Maine:										
Lewiston.....	0	0	1	0	0	16	0	0	5	1
Portland.....	7	2	3	0	0	3	34	5	2	1
New Hampshire:										
Concord.....	0	1	0	0	0	14	0	0	1	0
Nashua.....	0	0	0	0	0	0	0	0	1	0
Vermont:										
Barre.....	0	0	0	0	0	0	0	1	1	0
Burlington.....	0	1	1	0	0	12	1	2	1	0

City reports for week ended May 24, 1924—Continued.

Division, State, and city.	Chick- en pox, cases re- ported.	Diphtheria.		Influenza.		Meas- les, cases re- ported.	Mumps, cases re- ported.	Pneu- monia, deaths re- ported.	Scarlet fever.	
		Cases, esti- mated expect- ancy.	Cases re- ported.	Cases re- ported.	Deaths re- ported.				Cases, esti- mated expect- ancy.	Cases re- ported.
NEW ENGLAND— continued										
Massachusetts:										
Boston.....	29	53	57	0	0	183	13	14	43	81
Fall River.....	0	2	4	0	0	12	4	3	3	3
Springfield.....	0	3	2	1	1	34	0	0	6	8
Worcester.....	10	4	6	0	0	12	19	6	6	11
Rhode Island:										
Pawtucket.....	0	1	3	0	0	0	0	2	1	3
Providence.....	0	9	11	0	0	1	0	2	9	33
Connecticut:										
Bridgeport.....	1	5	3	0	0	1	0	0	4	8
Hartford.....	7	6	4	1	1	39	17	2	2	6
New Haven.....	4	4	1	0	0	11	33	1	3	11
MIDDLE ATLANTIC.										
New York:										
Buffalo.....	0	13	5	0	0	28	0	6	20	15
New York.....	173	300	236	5	7	1,135	212	174	172	207
Rochester.....	10	9	1	1	1	29	24	3	11	14
Syracuse.....	20	7	12	0	0	41	8	2	11	33
New Jersey:										
Camden.....	4	3	0	0	0	2	1	1	3	7
Newark.....	26	16	13	1	1	149	83	11	15	23
Trenton.....	4	5	3	0	0	17	3	2	2	3
Pennsylvania:										
Philadelphia.....	49	63	50	1	1	150	127	52	66	70
Pittsburgh.....	61	21	15	0	0	18	136	34	21	31
Reading.....	6	2	2	0	0	2	27	0	1	3
EAST NORTH CENTRAL.										
Ohio:										
Cincinnati.....	5	11	3	1	1	69	18	8	10	8
Cleveland.....	64	19	16	1	3	161	229	12	23	14
Columbus.....	12	3	3	1	1	7	2	4	5	21
Toledo.....	27	4	5	0	0	111	0	6	10	22
Indiana:										
Fort Wayne.....	6	3	5	0	0	42	0	1	1	7
Indianapolis.....	7	3	0	0	0	57	6	6	16	2
South Bend.....	0	4	0	0	0	10	1	1	2	9
Terre Haute.....	10	1	0	0	0	2	0	2	3	0
Illinois:										
Chicago.....	84	115	76	10	4	324	100	56	85	114
Cicero.....	1	2	0	0	0	3	10	0	1	0
Springfield.....	1	0	1	0	0	4	2	2	2	1
Michigan:										
Detroit.....	60	56	42	0	0	150	89	36	62	76
Flint.....	24	4	4	2	0	3	15	0	5	3
Grand Rapids.....	9	3	2	0	0	5	23	0	5	8
Wisconsin:										
Madison.....	16	0	0	0	0	0	4	1	1	1
Milwaukee.....	99	11	16	1	2	33	34	0	26	10
Racine.....	3	1	0	0	0	3	0	4	4	5
Superior.....	1	1	0	0	0	0	3	1	1	0
WEST NORTH CENTRAL.										
Minnesota:										
Duluth.....	4	1	1	0	0	6	1	2	4	13
Minneapolis.....	56	14	10	0	0	16	5	7	25	41
St. Paul.....	12	40	0	0	0	8	1	16	16	22
Iowa:										
Des Moines.....	2	2	3	0	1	0	0	7	4	4
Sioux City.....	0	1	0	0	0	0	0	2	1	1
Waterloo.....	5	0	0	0	0	0	12	3	2	2
Missouri:										
Kansas City.....	13	7	3	3	3	16	27	8	8	10
St. Joseph.....	5	1	2	0	0	4	4	2	1	0
St. Louis.....	40	42	41	0	0	58	39	23	83	83

City reports for week ended May 24, 1924—Continued.

Division, State, and city.	Chicken pox, cases reported.	Diphtheria.		Influenza.		Measles, cases reported.	Mumps, cases reported.	Pneumonia, deaths reported.	Scarlet fever.	
		Cases, estimated expectancy.	Cases reported.	Cases reported.	Deaths reported.				Cases, estimated expectancy.	Cases reported.
WEST NORTH CENTRAL—CON.										
North Dakota:										
Fargo.....	0	0	0	0	0	0	0	2	0	0
Grand Forks....	0	1	1	0	0	4	0	0	0	0
South Dakota:										
Aberdeen.....	0	0	0	0	0	28	0	0	0	0
Sioux Falls....	0	0	0	0	0	0	0	0	1	1
Nebraska:										
Lincoln.....		1	4	0	0	3		0	2	1
Omaha.....	9	3	4	0	0	9	0	12	8	3
Kansas:										
Topeka.....	6	2	3	0	0	3	5	1	2	3
Wichita.....	8	1	1	0	0	4	29	3	2	3
SOUTH ATLANTIC.										
Delaware:										
Wilmington....		1	16			21			4	23
Maryland:										
Baltimore.....	77	17	14	7	1	220	41	26	21	55
Cumberland....	1	1	1	0	0	0	0	0	1	0
Frederick.....	0	0	0	0	0	0	0	0	0	8
District of Columbia:										
Washington....	40	10	7	1	1	18		8	13	25
Virginia:										
Lynchburg....	0	0	0	0	0	0	3	1	1	0
Norfolk.....	8	1	0	0	0	24	6	3	2	1
Richmond.....	7	1	1	1	1	140	2	1	2	3
Roanoke.....	1	1	1	1	1	3	1	1	1	4
West Virginia:										
Charleston....	0	1	0	0	0	11	1	2	1	0
Huntington....	0	0	1	0	0	0	0	2	1	0
Wheeling.....	2	1	1	0	0	10	2	4	1	5
North Carolina:										
Raleigh.....	5	1	0	0	0	10	0	5	0	0
Wilmington....	4	1	0	0	0	22	4	1	1	0
Winston-Salem		1	0	0	0	0		4	1	11
South Carolina:										
Charleston....	0	1	0	0	0	0	3	2	0	0
Columbia.....	3	1	2	0	0	2	18	0	0	0
Greenville....	0	0	0	0	0	2	0	0	0	0
Georgia:										
Atlanta.....	1	2	2	2	1	0	5	4	3	7
Brunswick....	0	0	0	0	0	0	1	0	0	0
Savannah....	0	0	1	0	1	1	0	3	1	0
Florida:										
St. Petersburg.	0	0	0	0	0	0	0	0	0	1
Tampa.....	0	2	0	0	0	0	0	0	1	0
EAST SOUTH CENTRAL										
Kentucky:										
Covington....	1	1	1	0	0	11	1	0	1	1
Lexington....	1	1	0	0	0	10	0	1	1	3
Louisville....	1	4	0	0	1	6	6	9	4	1
Tennessee:										
Memphis.....	14	2	3	0	0	17	37	9	4	5
Nashville....	1	0	0	0	1	6	0	5	2	0
Alabama:										
Birmingham..	18	1	2	6	1	8	22	6	1	2
Mobile.....	0	1	2	0	0	7	0	0	0	0
Montgomery...		0	0	0	0	1		3	1	0

City reports for week ended May 24, 1924—Continued.

Division, State, and city.	Chicken pox, cases reported.	Diphtheria.		Influenza.		Measles, cases reported.	Mumps, cases reported.	Pneumonia, deaths reported.	Scarlet fever.	
		Cases, estimated expectancy.	Cases reported.	Cases reported.	Deaths reported.				Cases, estimated expectancy.	Cases reported.
WEST SOUTH CENTRAL.										
Arkansas:										
Fort Smith.....	2	1	0	0	0	2	1	1	1	1
Little Rock.....	1	1	0	0	0	6	2	3	1	1
Louisiana:										
New Orleans.....	9	6	8	2	0	16	0	7	1	7
Shreveport.....	2	0	0	0	0	0	0	1	0	0
Oklahoma:										
Oklahoma.....	0	1	0	0	0	0	0	6	2	1
Tulsa.....	4	1	0	0	0	2	2	0	0	0
Texas:										
Dallas.....	14	3	7	1	1	9	20	6	1	2
Galveston.....	0	1	0	0	0	0	0	1	0	0
Houston.....	1	3	0	0	0	0	0	3	1	3
San Antonio.....	6	2	0	0	0	0	0	6	1	0
MOUNTAIN.										
Montana:										
Billings.....	3	0	0	0	0	5	0	0	1	0
Great Falls.....	0	2	1	0	0	2	0	0	1	3
Helena.....	0	0	0	0	0	0	0	2	0	0
Missoula.....	0	0	0	0	0	0	9	1	1	1
Idaho:										
Boise.....	4	1	0	0	0	1	9	0	1	0
Colorado:										
Denver.....	24	9	24	1	1	49	9	5	9	24
Pueblo.....	0	1	1	0	0	3	2	1	1	0
New Mexico:										
Albuquerque.....	0	1	0	0	0	8	0	2	1	0
Utah:										
Salt Lake City.....	22	3	4	0	0	18	2	1	4	2
Nevada:										
Reno.....	0	0	0	0	0	1	0	1	0	0
PACIFIC.										
Washington:										
Seattle.....	44	5	5	0	0	3	7	0	6	16
Spokane.....	60	3	2	0	0	16	0	0	3	19
Tacoma.....	14	2	0	0	0	1	2	0	1	4
Oregon:										
Portland.....	8	3	2	0	0	5	5	3	8	7
California:										
Los Angeles.....	54	21	58	10	2	141	9	10	11	33
Sacramento.....	2	2	10	1	1	13	0	2	1	0
San Francisco.....	40	19	49	2	0	24	33	3	14	20

City reports for week ended May 24, 1924—Continued.

Division, State, and city.	Population, July 1, 1923, estimated.	Smallpox.			Tuberculosis, deaths reported.	Typhoid fever.			Whooping cough cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
NEW ENGLAND.										
Maine:										
Lewiston.....	33,790	0	0	0	0	0	0	0	0	10
Portland.....	73,129	0	0	0	2	1	0	0	5	17
New Hampshire:										
Concord.....	22,408	0	0	0	1	0	0	0	0	7
Nashua.....	29,234	0	0	0	0	0	0	0	0	11
Vermont:										
Barre.....	¹ 10,008	0	0	0	0	0	0	0	0	2
Burlington.....	23,613	0	1	0	2	0	0	0	0	11
Massachusetts:										
Boston.....	770,400	0	0	0	18	2	1	0	24	203
Fall River.....	120,912	0	0	0	5	1	1	0	4	31
Springfield.....	144,227	0	0	0	3	0	0	0	0	26
Worcester.....	191,927	0	0	0	3	0	0	0	6	61
Rhode Island:										
Pawtucket.....	68,799	0	0	0	0	0	0	0	0	16
Providence.....	242,378	0	0	0	5	0	0	0	0	51
Connecticut:										
Bridgeport.....	¹ 143,555	0	0	0	1	0	0	0	0	32
Hartford.....	¹ 138,036	0	0	0	2	1	2	0	1	31
New Haven.....	172,967	0	0	0	0	1	2	0	1	27
MIDDLE ATLANTIC.										
New York:										
Buffalo.....	536,718	1	0	0	16	1	0	0	37	122
New York.....	5,927,625	0	0	0	² 110	9	14	0	178	1,398
Rochester.....	317,867	0	0	0	3	0	2	0	6	70
Syracuse.....	184,511	0	0	0	2	0	1	0	0	47
New Jersey:										
Camden.....	124,157	0	0	0	2	0	2	0	0	30
Newark.....	438,699	0	0	0	7	0	0	0	50	92
Trenton.....	127,390	0	0	0	2	1	1	0	8	35
Pennsylvania:										
Philadelphia.....	1,922,788	1	0	0	54	8	4	1	62	450
Pittsburgh.....	613,442	0	1	0	7	1	0	0	45	154
Reading.....	110,917	0	0	0	0	1	0	1	15	36
EAST NORTH CENTRAL.										
Ohio:										
Cincinnati.....	406,312	1	10	0	13	1	0	1	9	121
Cleveland.....	888,519	1	1	0	24	2	0	0	86	186
Columbus.....	261,082	1	1	0	4	0	0	0	3	57
Toledo.....	268,338	3	29	1	4	1	0	0	11	69
Indiana:										
Fort Wayne.....	93,573	4	5	0	4	0	1	0	2	25
Indianapolis.....	342,718	10	35	0	9	1	1	0	0	77
South Bend.....	76,709	0	1	0	2	0	0	0	0	11
Terre Haute.....	68,939	1	2	0	1	0	0	1	0	13
Illinois:										
Chicago.....	2,886,121	2	7	0	48	4	3	1	41	706
Cicero.....	55,968	0	0	0	2	0	0	0	4	5
Springfield.....	61,833	0	0	0	0	0	0	0	0	19
Michigan:										
Detroit.....	995,668	8	113	27	20	3	1	1	45	282
Flint.....	117,968	1	2	0	0	0	0	0	3	13
Grand Rapids.....	145,947	1	0	0	1	1	0	0	4	18
Wisconsin:										
Madison.....	42,519	1	0	0	1	0	0	0	17	7
Milwaukee.....	484,595	5	0	0	5	1	1	0	19	98
Racine.....	64,393	1	1	0	0	0	0	0	0	9
Superior.....	¹ 39,671	2	3	0	0	0	0	0	0	6
WEST NORTH CENTRAL.										
Minnesota:										
Duluth.....	106,289	2	3	0	4	1	0	0	2	29
Minneapolis.....	409,125	22	4	0	11	1	4	0	0	98
St. Paul.....	241,891	7	9	0	2	0	0	0	0	61

¹ Population Jan. 1, 1920.² Pulmonary only.

City reports for week ended May 24, 1924.—Continued.

Division, State, and city.	Population, July 1, 1923, estimated.	Smallpox.			Tuberculosis, deaths reported.	Typhoid fever.			Whooping cough cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
WEST NORTH CENTRAL—contd										
Iowa:										
Des Moines.....	140,923	2	1			0	0		0	
Sioux City.....	79,662	2	0			0	0		0	
Waterloo.....	39,667	0	0			1	0		5	
Missouri:										
Kansas City.....	351,819	9	0	0	5	1	1	0	7	97
St. Joseph.....	78,232	8	0	0	1	0	0	0	0	21
St. Louis.....	803,853	6	5	0	11	4	2	0	33	200
North Dakota:										
Fargo.....	24,841	0	0	0		0	0	0	0	6
Grand Forks.....	14,547	0	0			0	0		0	
South Dakota:										
Aberdeen.....	15,829		0			0	0		6	
Sioux Falls.....	29,206	1	0	0	0	0	0		1	6
Nebraska:										
Lincoln.....	58,761	3	0	0	2	0	0	0		16
Omaha.....	204,382	8	3	0	3	1	0	0	1	50
Kansas:										
Topeka.....	52,555	3	0	0	1	0	1	0	0	16
Wichita.....	79,261	6	2	0	1	0	0	0	8	26
SOUTH ATLANTIC.										
Delaware:										
Wilmington.....	117,728	0				0				
Maryland:										
Baltimore.....	778,580	0	1	0	20	4	1	0	25	213
Cumberland.....	32,361	0	0	0	0	0	0	0	0	10
Frederick.....	11,301	0	0	0	0	0	0	0	0	5
District of Columbia:										
Washington.....	1,437,571	1	7	0	12	3	1	0	11	121
Virginia:										
Lynchburg.....	30,277	0	0	0	0	1	0	0	5	11
Norfolk.....	159,089	0	0	0	2	1	0	0	4	
Richmond.....	181,044	1	1	0	3	1	0	0	6	54
Roanoke.....	55,502	1	0	0	2	0	0	0	0	18
West Virginia:										
Charleston.....	45,597	0	0	0	0	0	0	1	0	17
Huntington.....	57,918	0	0	0	4	1	0	0	0	17
Wheeling.....	156,208	0	0	0	0	0	4	0	2	17
North Carolina:										
Raleigh.....	29,171	0	6	0	0	0	2	0	0	16
Wilmington.....	35,719	0	0	0	1	1	0	0	1	12
Winston-Salem.....	56,230	2	3	0	2	0	0	0		16
South Carolina:										
Charleston.....	71,245	0	5	0	4	1	0	0	0	35
Columbia.....	39,688	0	0	0	2	0	7	0	2	27
Greenville.....	25,789	0	2	0	6	1	0	0	0	8
Georgia:										
Atlanta.....	222,963	5	29	0	6	1	1	0	2	68
Brunswick.....	15,937	0	0	0	0	1	1	0	0	2
Savannah.....	80,448	0	0	0	2	0	0	0	0	28
Florida:										
St. Petersburg.....	24,403		0	0	0		0	0	0	6
Tampa.....	56,050	0	0	0	1	1	1	0	0	16
EAST SOUTH CENTRAL.										
Kentucky:										
Covington.....	57,877	0	0	0	2	0	1	0	0	16
Lexington.....	43,673	0	0	0	1	0	0	0	0	14
Louisville.....	257,671	1	0	0	19	2	1	0	1	99
Tennessee:										
Memphis.....	170,067	3	0	0	7	1	1	0	1	46
Nashville.....	121,128	1	2	0	3	1	0	0	1	46
Alabama:										
Birmingham.....	195,901	2	31	0	3	2	1	1	2	67
Mobile.....	63,858	1	0	0	2	0	2	0	0	20
Montgomery.....	45,383	1	0	0	1	0	0	0	0	17

1 Population Jan. 1, 1920.

City reports for week ended May 24, 1924—Continued.

Division, State, and city.	Population, July 1, 1923, estimated.	Smallpox.			Tuberculosis, deaths reported.	Typhoid fever.			Whooping cough cases reported.	Deaths, all causes.
		Cases, estimated expectancy.	Cases reported.	Deaths reported.		Cases, estimated expectancy.	Cases reported.	Deaths reported.		
WEST SOUTH CENTRAL.										
Arkansas:										
Fort Smith.....	30,635	0	0			0	0	0		
Little Rock.....	70,916	0	1	0	3	0	2	0	0	
Louisiana:										
New Orleans.....	404,575	3	0	0	13	3	1	1	4	148
Shreveport.....	54,560	4	0	1			0	0	0	20
Oklahoma:										
Oklahoma.....	101,150	5	1	0	0	0	0	0		22
Tulsa.....	102,018	4	1	0	0	0	3	1	5	
Texas:										
Dallas.....	177,274	3	0	0	4	1	0	0	7	44
Galveston.....	46,877	0	0	0	0	1	0	0	0	19
Houston.....	154,970	0	0	0	2	1	2	1		39
San Antonio.....	184,727	0	1	0	7	1	0	0	0	65
MOUNTAIN.										
Montana:										
Billings.....	16,927	0	2	0	0	0	0	0	0	7
Great Falls.....	27,787	3	0	0	1	0	0	0	6	20
Helena.....	112,037	0	0	0	0	0	0	0	0	7
Missoula.....	112,668	0	0	0	1	0	0	0	0	4
Idaho:										
Boise.....	22,806	1	1	0	0	0	0	0	2	6
Colorado:										
Denver.....	272,031	10	0	0	12	0	0	0	39	72
Pueblo.....	43,519	0	0	0	0	0	1	1	0	7
New Mexico:										
Albuquerque.....	16,648	0	0	0	6	0	0	0	0	9
Utah:										
Salt Lake City.....	126,241	4	0	0	2	1	1	0	6	30
Nevada:										
Reno.....	12,429	1	0	0	0	0	0	0	0	5
PACIFIC.										
Washington:										
Seattle.....	1,315,685	8	0			0	0		4	
Spokane.....	104,573	10	11			0	0		1	
Tacoma.....	101,761	3	2			0	0		0	
Oregon:										
Portland.....	273,621	6	5	0	4	1	0	0	2	71
California:										
Los Angeles.....	666,853	2	91	0	25	1	1	1	8	227
Sacramento.....	69,950	0	0	0	2	0	1	0	0	23
San Francisco.....	539,038	0	0	0	11	0	0	1	1	115

Division, State, and city.	Cerebrospinal meningitis.		Lethargic encephalitis.		Pellagra.		Poliomyelitis (infantile paralysis).	
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases, estimated expectancy.	Deaths.
NEW ENGLAND.								
New Hampshire:								
Nashua.....	0	1	0	0	0	0	0	0
Massachusetts:								
Boston.....	0	0	0	0	1	0	0	1
Worcester.....	0	2	0	0	0	0	0	0
Rhode Island:								
Pawtucket.....	0	0	0	0	0	0	0	1
Connecticut:								
Bridgeport.....	0	0	1	1	0	0	0	0
Hartford.....	0	0	1	0	0	0	0	0

¹ Population January 1, 1920.

City reports for week ended May 24, 1924—Continued.

Division, State, and city.	Cerebrospinal meningitis.		Lethargic encephalitis.		Pellagra.		Poliomyelitis (infantile paralysis).		
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases, estimated expectancy.	Cases.	Deaths.
MIDDLE ATLANTIC									
New York:									
New York.....	3	3	22	9	0	0	2	1	1
New Jersey:									
Newark.....	1	0	2	0	0	0	1	0	0
Pennsylvania:									
Philadelphia.....	1	0	0	1	0	0	0	0	0
EAST NORTH CENTRAL.									
Illinois:									
Chicago.....	1	1	1	0	0	0	0	0	0
Michigan:									
Detroit.....	1	0	0	1	0	0	0	0	0
Wisconsin:									
Milwaukee.....	1	0	0	0	0	0	0	0	0
WEST NORTH CENTRAL.									
Missouri:									
Kansas City.....	0	0	1	1	0	0	0	0	0
SOUTH ATLANTIC.									
Maryland:									
Baltimore.....	0	1	1	0	0	0	0	0	0
District of Columbia:									
Washington.....	0	0	0	0	0	1	0	0	0
South Carolina:									
Charleston.....	0	0	0	0	0	1	0	0	0
Columbia.....	0	0	0	0	0	2	0	0	0
Georgia:									
Atlanta.....	1	0	0	0	0	0	0	0	0
Savannah.....	0	0	0	0	0	1	0	0	0
Florida:									
Tampa.....	0	0	0	0	1	0	0	0	0
EAST SOUTH CENTRAL.									
Alabama:									
Mobile.....	0	0	0	0	0	1	0	0	0
WEST SOUTH CENTRAL.									
Louisiana:									
New Orleans.....	0	0	1	1	0	0	0	0	0
Texas:									
Houston.....	0	0	0	0	0	1	0	0	0
San Antonio.....	1	1	0	0	0	0	0	0	0
PACIFIC.									
California:									
Los Angeles.....	2	0	0	0	0	0	0	0	0

The following table gives a summary of the reports from 105 cities for the nine-week period ended May 24, 1924. The cities included in this table are those whose reports have been published for all nine weeks in the Public Health Reports. Eight of these cities did not report deaths. The aggregate population of the cities reporting cases was estimated at nearly 29,000,000 on July 1, 1923, which is the latest date for which estimates are available. The cities reporting deaths had more than 28,000,000 population on that date. The number of cities included in each group and the aggregate population are shown in a separate table below.

Summary of weekly reports from cities, March 23 to May 24, 1924.

DIPHTHERIA CASES.

	1924, week ended—								
	Mar. 29.	Apr. 5.	Apr. 12.	Apr. 19.	Apr. 26.	May 3.	May 10.	May 17.	May 24.
Total.....	1,038	1,039	1,006	1,009	988	912	892	929	941
New England.....	103	105	102	99	111	97	83	78	94
Middle Atlantic.....	391	383	384	374	400	344	395	357	340
East North Central.....	200	219	210	211	156	173	157	168	175
West North Central.....	66	74	60	60	71	68	64	110	106
South Atlantic.....	42	61	52	52	50	140	131	141	46
East South Central.....	10	17	8	14	13	6	8	3	8
West South Central.....	32	23	24	31	33	18	26	16	18
Mountain.....	31	30	40	52	31	35	29	18	30
Pacific.....	163	127	126	116	123	131	99	138	124

MEASLES CASES.

Total.....	6,590	6,070	6,237	5,147	5,203	4,720	4,420	4,017	3,732
New England.....	443	374	401	353	354	379	339	271	310
Middle Atlantic.....	2,354	2,394	2,647	2,347	2,184	2,310	1,889	1,868	1,571
East North Central.....	674	806	838	675	829	703	662	781	873
West North Central.....	766	569	415	359	350	257	274	197	128
South Atlantic.....	621	572	626	487	518	1,484	1,455	1,463	484
East South Central.....	173	126	156	159	173	98	73	56	56
West South Central.....	590	354	323	188	127	104	71	51	33
Mountain.....	444	405	241	179	193	113	97	101	79
Pacific.....	525	470	590	400	475	281	360	230	198

SCARLET FEVER CASES.

Total.....	1,966	1,737	1,796	1,658	1,532	1,612	1,555	1,508	1,330
New England.....	363	312	326	253	271	242	210	213	165
Middle Atlantic.....	532	517	498	474	467	473	470	452	406
East North Central.....	370	346	345	334	284	325	318	336	279
West North Central.....	254	184	230	222	195	197	219	223	182
South Atlantic.....	202	200	218	189	168	1,178	1,165	1,123	153
East South Central.....	30	11	18	16	12	16	19	9	9
West South Central.....	17	15	26	27	18	23	15	14	14
Mountain.....	28	16	20	19	23	27	37	25	30
Pacific.....	170	136	115	124	94	131	102	113	92

SMALLPOX CASES.

Total.....	602	544	536	467	568	549	460	529	408
New England.....	0	0	1	1	0	0	0	0	0
Middle Atlantic.....	6	1	1	0	0	0	0	5	1
East North Central.....	162	153	141	164	193	186	165	213	181
West North Central.....	72	52	61	41	62	53	33	39	26
South Atlantic.....	171	116	98	93	98	1,176	1,195	1,511	1,544
East South Central.....	38	49	45	26	55	49	20	54	33
West South Central.....	7	10	4	5	2	4	1	7	6
Mountain.....	7	8	4	10	6	5	6	6	3
Pacific.....	139	155	181	127	152	176	140	154	104

TYPHOID FEVER CASES.

Total.....	76	51	52	55	58	49	68	73	79
New England.....	4	1	4	4	7	4	9	2	6
Middle Atlantic.....	26	9	21	17	11	10	25	32	24
East North Central.....	7	7	7	7	10	11	9	12	7
West North Central.....	5	7	2	6	1	3	2	3	8
South Atlantic.....	11	9	10	4	8	1,111	1,111	1,119	1,119
East South Central.....	10	1	1	4	8	3	3	7	6
West South Central.....	8	9	2	4	6	3	3	3	5
Mountain.....	1	2	1	4	0	1	3	0	2
Pacific.....	4	6	4	5	7	3	3	6	2

¹ Figures for Wilmington, Del., estimated.

Summary of weekly reports from cities, March 23 to May 24, 1924—Continued.

INFLUENZA DEATHS.

	1924, week ended—								
	Mar. 29.	Apr. 5.	Apr. 12.	Apr. 19.	Apr. 26.	May 3.	May 10.	May 17.	May 24.
Total.....	96	97	95	80	72	51	60	49	40
New England.....	3	6	3	3	3	2	2	1	2
Middle Atlantic.....	45	44	35	31	30	21	32	25	10
East North Central.....	11	20	25	14	12	7	10	5	11
West North Central.....	4	2	8	4	4	3	3	4	3
South Atlantic.....	10	3	7	6	10	15	17	15	16
East South Central.....	8	13	6	11	8	3	4	4	3
West South Central.....	10	6	3	4	2	4	0	3	1
Mountain.....	2	1	2	4	2	0	1	1	1
Pacific.....	3	2	6	3	0	6	1	1	3

PNEUMONIA DEATHS.

Total.....	1, 204	1, 251	1, 222	1, 101	959	938	785	746	647
New England.....	58	75	71	61	63	69	55	52	26
Middle Atlantic.....	525	500	494	474	430	392	332	345	285
East North Central.....	255	286	258	232	170	190	150	139	136
West North Central.....	72	71	74	64	49	53	42	41	38
South Atlantic.....	111	125	158	118	114	100	96	89	67
East South Central.....	47	61	58	57	42	44	29	22	32
West South Central.....	61	67	43	43	35	24	25	27	27
Mountain.....	37	39	32	25	26	27	24	13	11
Pacific.....	38	27	39	27	30	30	32	20	15

¹ Figures for Wilmington, Del., estimated.

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

Group of cities.	Number of cities reporting cases.	Number of cities reporting deaths.	Aggregate population of cities reporting cases.	Aggregate population of cities reporting deaths.
Total.....	105	97	28, 898, 350	28, 140, 934
New England.....	12	12	2, 098, 746	2, 098, 746
Middle Atlantic.....	10	10	10, 304, 114	10, 304, 114
East North Central.....	17	17	7, 032, 535	7, 032, 535
West North Central.....	14	11	2, 515, 330	2, 381, 454
South Atlantic.....	22	22	2, 566, 901	2, 566, 901
East South Central.....	7	7	911, 885	911, 885
West South Central.....	8	6	1, 124, 564	1, 023, 013
Mountain.....	9	9	546, 445	546, 445
Pacific.....	6	3	1, 797, 830	1, 275, 841

FOREIGN AND INSULAR.

BOLIVIA.

Communicable Diseases—La Paz—April, 1924.

During the month of April, 1924, communicable diseases were reported at La Paz, Bolivia, as follows:

Disease.	Cases.	Deaths.	Disease.	Cases.	Deaths.
Cerebrospinal meningitis.....		3	Tuberculosis.....	26	7
Scarlet fever.....	10	12	Typhoid fever.....	2	1
Smallpox.....	4	6	Typhus fever.....	10	1

Population, officially estimated, 100,000.

Dysentery.

During the same period eight cases of dysentery, with six deaths, were reported at La Paz, Bolivia.

BRITISH GUIANA.

Deaths and Death Rates, 1921 and 1922.

A report from Georgetown, British Guiana, gives the following figures from the Surgeon General's Department.

It is stated that the inhabited portions of the colony are the lowlands near the coast and that the highlands of the interior are practically undeveloped and uninhabited.

Deaths and death rates in British Guiana, 1921 and 1922.

	1921	1922		1921	1922
Population.....	298, 188	297, 817	Death rates per 1,000 population—Continued.		
Births registered.....	10, 287	8, 274	Pneumonia and bronchitis.....	3.6	4.0
Birth rate per 1,000 population.....	34.5	27.8	Kidney diseases.....	3.2	3.0
Deaths registered.....	9, 200	8, 663	Diseases of early in fancy, including premature birth, icterus, etc.....	2.2	2.7
Death rate per 1,000 population.....	30.9	29.1	Tuberculosis (all forms).....	1.3	1.5
Infant mortality per 1,000 registered births.....	195	186	Influenza.....	.4	.4
Death rates per 1,000 population:			Enteric fever.....	.2	.3
Bowel complaints (other than enteric fever).....	4.0	4.6	Filariasis.....		
Malaria.....	4.3	3.7			

CANARY ISLANDS.

Plague—Santa Cruz de Teneriffe.

Under date of May 16, 1924, the occurrence of two cases of plague with one death was reported at Santa Cruz de Teneriffe, Canary Islands. Of these, one case, which terminated fatally, was septi-cemic, and one bubonic.

CHILE.

Mortality—Concepcion—April, 1924.

During the month of April, 1924, 247 deaths (including 16 still-births), of which 94 occurred in children under 1 year of age, were notified at Concepcion, Chile (population, 64,780). The principal causes of death were stated as follows: Broncho-pneumonia, 8 deaths; meningitis, 5; heart disease, 15; pneumonia, 69; tuberculosis, 26; typhoid fever, 2; typhus fever, 3.

CZECHOSLOVAKIA.

Communicable Diseases—January–March, 1924.

During the period January to March, 1924, inclusive, communi-cable diseases were notified in Czechoslovakia as follows:

Disease.	Cases.	Deaths.	Provinces reporting greatest number of cases and deaths.
Cerebrospinal meningitis.....	22	11	Bohemia: Cases, 12; deaths, 6.
Diphtheria.....	944	69	Bohemia: Cases, 486; deaths, 35.
Scarlatina.....	2, 770	156	Bohemia: Cases, 905; deaths, 43.
Smallpox.....	1	-----	Russia.
Trachoma.....	766	-----	Slovakia: Cases, 438.
Typhoid fever.....	1, 209	112	Bohemia: Cases, 421; deaths, 40.
Typhus fever.....	30	2	Russia: Cases, 25; deaths, 1.

Population, 13,595,816.

¹ Paratyphoid, A, 2 cases, in Silesia. Paratyphoid, B, 11; Bohemia, 9; Silesia, 2.

Anthrax—Dysentery—Malaria—Rabies.

During the same period 6 cases of anthrax with 1 death, 103 cases of dysentery with 5 deaths, 3 cases of malaria, and 4 deaths from rabies were reported in Czechoslovakia.

ESTHONIA.

Communicable Diseases—March, 1924.

During the month of March, 1924, communicable diseases were reported in the Republic of Esthonia as follows:

Disease.	Cases.	Disease.	Cases.
Diphtheria.....	45	Tuberculosis.....	234
Measles.....	4	Typhoid fever.....	53
Scarlet fever.....	57	Typhus fever.....	11
Smallpox.....	2		

Population, officially estimated, 1,109,479.

Leprosy—Paratyphus Fever.

During the same period 5 new cases of leprosy and 15 new cases of paratyphus fever were reported in the Republic of Esthonia.

GREAT BRITAIN.

Births and Deaths—England and Wales—January to March, 1924.

The following tables have been prepared from figures given in Quarterly Return No. 301, issued by the registrar general of England and Wales.

The figures are provisional and subject to correction. The rates were calculated on an annual basis. The entire population was included in the computations for England and Wales, but civilians only in those for groups of towns.

Births registered during the quarter numbered 185,486, which was 7,484 less than in the corresponding quarter of 1923. The deaths registered numbered 160,279, which was 35,559 more than in the corresponding quarter of 1923.

Birth and death rates, England and Wales, January to March, inclusive, 1924.

	England and Wales.	105 county boroughs and great towns.	157 smaller towns.
Birth rates per 1,000 population.....	19.4	20.0	19.3
Death rates per 1,000 population:			
All causes.....	16.7	17.0	15.4
Typhoid fever.....	.01	.01	.01
Measles.....	.18	.29	.09
Scarlet fever.....	.03	.03	.03
Whooping cough.....	.19	.20	.21
Diphtheria.....	.08	.10	.08
Influenza.....	1.32	1.23	1.32
Death rates per 1,000 births:			
Diarrhea and enteritis (under 2 years).....	5.6	6.7	5.6
Total under 1 year.....	102	107	99

Populations (estimated as of July 1, 1923): England and Wales, 38,403,000; 105 county boroughs and great towns, 19,263,854; 157 smaller towns (20,000-50,000), 4,962,447.

**Cases of Communicable Diseases Reported in England and Wales During the
13 Weeks Ended March 29, 1924.**

Diphtheria.....	9,487	Scarlet fever.....	18,958
Ophthalmia neonatorum.....	1,529	Smallpox.....	1,003
Pneumonia.....	26,384	Typhoid fever.....	590
Puerperal fever.....	571		

Lethargic Encephalitis.

The figures given in the following table are taken from the weekly returns issued by the Registrar General of England and Wales:

Cases of lethargic encephalitis reported in England and Wales during the first 19 weeks of 1924 and 1923.

Week ended—	Cases.	Week ended—	Cases.
1924.		1923.	
Jan. 5.....	10	Jan. 6.....	13
Jan. 12.....	10	Jan. 13.....	9
Jan. 19.....	18	Jan. 20.....	19
Jan. 26.....	18	Jan. 27.....	25
Feb. 2.....	19	Feb. 3.....	30
Feb. 9.....	37	Feb. 10.....	37
Feb. 16.....	33	Feb. 17.....	40
Feb. 23.....	61	Feb. 24.....	44
Mar. 1.....	86	Mar. 3.....	40
Mar. 8.....	97	Mar. 10.....	53
Mar. 15.....	88	Mar. 17.....	.....
Mar. 22.....	126	Mar. 24.....	45
Mar. 29.....	157	Mar. 31.....	50
Apr. 5.....	190	Apr. 7.....	33
Apr. 12.....	206	Apr. 14.....	29
Apr. 19.....	253	Apr. 21.....	33
Apr. 26.....	212	Apr. 28.....	35
May 3.....	278	May 5.....	25
May 10.....	290	May 12.....	21

HAWAII.**Plague-Infected Rodent—Vicinity of Honokaa.**

A plague-infected rodent was reported found, May 10, 1924, in the vicinity of Honokaa, Hawaii.

LATVIA.**Communicable Diseases—March, 1924.**

Communicable diseases were reported in the Republic of Latvia during the month of March, 1924, as follows:

Disease.	Cases.	Disease.	Cases.
Cerebrospinal meningitis.....	3	Smallpox.....	6
Diphtheria.....	72	Typhoid fever.....	82
Measles.....	221	Typhus fever.....	181
Mumps.....	13	Whooping cough.....	39
Scarlet fever.....	112		

¹ Paratyphus fever, 3.

Dysentery—Leprosy.

During the same period one case of dysentery and three cases of leprosy were reported in the Republic of Latvia. (Population, officially estimated, 1,900,000.)

LITHUANIA.

Communicable Diseases—March, 1924.

During the month of March, 1924, communicable diseases were notified in the Republic of Lithuania as follows:

Disease.	Cases.	Deaths.	Disease.	Cases.	Deaths.
Cerebrospinal meningitis.....	2	.....	Smallpox.....	36	11
Diphtheria.....	18	.....	Typhoid fever.....	50	2
Scarlet fever.....	17	.....	Typhus fever.....	218	18

Population, census of 1923, 2,028,972.

MADAGASCAR.

Plague—March 16–31, 1924.

During the period March 16 to 31, 1924, 81 cases of plague with 79 deaths were reported in the Province of Tananarive, Island of Madagascar. For distribution of occurrence according to locality, see page 1478.

MALTA.

Communicable Diseases—April 16–30, 1924.

During the two weeks period April 16 to 30, 1924, communicable diseases were reported in the Island of Malta as follows:

Disease.	Cases.	Disease.	Cases.
Broncho-pneumonia.....	4	Trachoma.....	7
Chicken pox.....	1	Undulant fever.....	36
Influenza.....	3	Whooping cough.....	7
Measles.....	25		

Population, officially estimated, 216,702.

UNION OF SOUTH AFRICA.

Plague—Cape Province—Orange Free State.

During the week ended April 19, 1924, 24 new cases of plague with 10 deaths were reported in the Union of South Africa. The occurrence was in the Cape Province (Albert District), and the Orange Free State (in six districts). Of the cases, four were among the white population and 20 with 10 deaths among the native population. From the beginning of the outbreak, December 16, 1923, to April 19, 1924, 308 cases and 184 deaths have been reported (White—Cases, 45; deaths, 21; Native—Cases, 263; deaths, 163).

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

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

Reports Received During Week Ended June 13, 1924.¹**CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
India				Apr. 6-12, 1924: Cases, 11,925; deaths, 8,380.
Bombay	Apr. 13-19	1	1	
Calcutta	Apr. 6-12	225	190	
Indo-China:				
Saigon	Apr. 13-19	1	1	
Siam:				
Bangkok	do	2		

PLAGUE.

Canary Islands:				
Santa Cruz de Teneriffe	May 16	2	1	Bubonic and septicemic.
Ceylon:				
Colombo	Apr. 19-26	1	4	
Hawaii:				
Honokaa	May 10, 1924			One plague-infected rodent.
India				Apr. 6-12, 1924: Cases, 16,214; deaths, 12,580.
Bombay	Apr. 6-19	65	54	
Calcutta	Apr. 6-26	9	7	
Karachi	Apr. 27-May 3	8	11	
Madras Presidency	May 1-7	27	15	
Indo-China:				
Saigon	Apr. 13-19			One plague rodent.
Iraq (Mesopotamia):				
Bagdad	Apr. 12-19	12	9	
Madagascar:				
Tananarive Province				Mar. 16-31, 1924: Cases: 81; deaths, 79. Bubonic, pneumonic, septicemic.
Tananarive	Mar. 16-31	2	2	
Other localities	do	77	75	
Union of South Africa				Apr. 13-19, 1924: Cases, 24; deaths, 10. (White, 4 cases; native, 20 cases, 10 deaths. Occurrence in Cape Province and Orange Free State. Total: Dec. 16, 1923-Apr. 19, 1924: Cases, 308; deaths, 184; (White, cases, 45; deaths, 21. Native, cases, 263; deaths, 163.)

SMALLPOX.

Bolivia:				
La Paz	Apr. 1-30	4	6	
Brazil:				
Rio de Janeiro	Apr. 27-May 3	1	1	
Canada:				
Alberta—				
Calgary	May 18-24	1		
British Columbia—				
Vancouver	May 18-24	8		
Manitoba—				
Winnipeg	May 25-31	1		
Ontario—				
Ottawa	May 18-31	8		
Saskatchewan—				
Saskatoon	May 18-24	1		
Chile:				
Antofagasta	Apr. 27-May 3	1		
Valparaiso	Mar. 16-May 10		13	
China:				
Amoy	Apr. 20-26			Present.
Chungking	do			Stated to be endemic.
Foochow	Apr. 13-26			Present.
Hongkong	Mar. 23-29	14	12	
Nanking	Apr. 20-May 3			Present.
Shanghai	Apr. 20-26	2	1	Cases, foreign: Deaths, native and foreign.
Tientsin	Apr. 20-May 3	4		One mission hospital.

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

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

Reports Received During Week Ended June 13, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Czechoslovakia.....				Mar. 1-31, 1924: One case.
Egypt:				
Alexandria.....	Apr. 20-May 6.....	1		
Estonia.....				Mar. 1-31, 1924: Cases, 2.
Great Britain:				
Sheffield.....	May 11-17.....	2		
Greece:				
Saloniki.....	Mar. 24-Apr. 20.....	8	14	
Haiti:				
Port au Prince.....	Apr. 27-May 3.....	3		Developed at Cape Haitien.
India.....				Apr. 6-12, 1924: Cases, 4,007; deaths, 825.
Bombay.....	Apr. 6-19.....	260	136	
Calcutta.....	Apr. 6-26.....	10	9	
Karachi.....	Apr. 27-May 3.....	32	10	
Madras.....	May 1-7.....	13	5	
Indo-China:				
Saigon.....	Apr. 6-19.....	101	62	Including 100 square kilometers of surrounding country.
Iraq (Mesopotamia):				
Bagdad.....	Apr. 6-12.....	1		
Japan:				
Kobe.....	Apr. 24-29.....	1		
Yokohama.....	Apr. 21-May 4.....	2		
Java:				
East Java—Soerabaya.....	Mar. 23-29.....	44	12	
Latvia.....				Mar. 1-31, 1924: Cases, 6.
Lithuania.....				Mar. 1-31, 1924: Cases, 36; deaths, 11.
Mexico:				
Durango.....	Apr. 1-30.....		2	
Portugal:				
Lisbon.....	May 4-17.....	2		
Oporto.....	May 4-10.....	3	1	
Siam:				Imported.
Bangkok.....	Apr. 13-19.....	2		
Spain:				
Valencia.....	May 11-17.....	7	1	
Switzerland:				
Berne.....	May 4-10.....	2		
Lucerne.....	Apr. 1-30.....	21		
Zurich.....	May 4-10.....	1		
Syria:				
Damascus.....	Apr. 23-28.....	2		
Tunis:				
Tunis.....	May 6-19.....	3	1	
Union of South Africa:				
Cape Province.....	Apr. 13-19.....			Outbreaks.
Orange Free State.....	Apr. 3-19.....			Do.

TYPHUS FEVER.

Bolivia:				
La Paz.....	Apr. 1-30.....	10	1	
Bulgaria:				Apr. 6-19, 1924: 2 cases paratyphus fever.
Sofia.....				
Chile:				
Concepcion.....	Apr. 1-30.....		3	
Talcahuano.....	Apr. 27-May 3.....	3	2	
Czechoslovakia.....				Mar. 1-31, 1924: Cases, 30; deaths, 2.
Estonia.....				Mar. 1-31, 1924: Cases, 11.
Latvia.....	March 1-31.....	81		Paratyphus cases, 3.
Lithuania.....				Mar. 1-31, 1924: Cases, 218; deaths, 18.
Palestine:				
Jerusalem.....	Apr. 23-May 5.....	2		

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

Reports Received from December 29, 1923, to June 6, 1924.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Hongkong	Nov. 18-24	1		
India:				
Do.				Oct. 14-Dec. 22, 1923: Cases, 14,117; deaths, 9,148.
Bombay	Dec. 23-29	1	1	Dec. 30, 1923-Mar. 29, 1924: Cases, 24,499; deaths, 15,014.
Do.	Feb. 3-Mar. 29	18	18	
Calcutta	Nov. 11-Dec. 29	85	69	
Do.	Dec. 30-Apr. 5	490	403	
Madras	Nov. 25-Dec. 29	15	5	
Do.	Dec. 30-Apr. 12	26	12	
Rangoon	Nov. 11-Dec. 29	8	5	
Do.	Feb. 24-Apr. 6	17	15	
Indo-China:				
Saigon	Dec. 31-Mar. 29	4	4	Including 100 square kilometers of surrounding country.
Philippine Islands:				
City—				
Manila	Feb. 3-9	1	1	
Province—				
Cebu	Mar. 2-8	1	1	
Siam:				
Bangkok	Nov. 18-Dec. 8	4	2	
Do.	Dec. 31-Mar. 29	13	8	
Turkey:				
Constantinople	Dec. 2-8		1	

PLAGUE.

Azores:				
St. Michael Island	Oct. 20-Nov. 10	9	5	At localities 3 to 9 miles from port of Ponta Delgada.
Bolivia:				
La Paz	Oct. 1-31		3	
Do.	Feb. 1-Mar. 31		10	
Brazil:				
Bahia	Nov. 11-Dec. 22	5	3	
Do.	Dec. 30-Mar. 15		7	
Porto Alegre	Feb. 10-Apr. 26	3	3	
Rio de Janeiro	Jan. 20-26	1		
British East Africa:				
Kenya—				
Kisumu	Feb. 24-Mar. 8	1	1	
Mombasa	Oct. 14-20	1	1	Infected rats, 2; Dec. 9-15, 1923: Cases, 4; 2 removed from vessel arrived Dec. 11, 1923.
Do.	Dec. 30-Jan. 5	1	1	
Nairobi	Nov. 1-21	40		In rural districts, several hundred.
Tanganyika				To Nov. 24, 1923: Cases, 39; deaths, 25
Do.	Jan. 27-Feb. 9	8	5	
Uganda	Aug. 1-Oct. 31	734	719	
Entebbe	Oct. 1-Dec. 31	251	239	
Do.	Jan. 1-31	36	35	
Canary Islands:				
Las Palmas	Oct. 15-Nov. 15	14	14	
Santa Cruz de Teneriffe	Feb. 19-Apr. 8	5		
San Juan de la Rambla	Dec. 11	1		Locality 52 km. from Teneriffe.
Celebes Island	Mar. 30			Epidemic.
Macassar	Feb. 20-Mar. 8	11	7	Including Menado.
Ceylon:				
Colombo	Nov. 11-Dec. 29	31	21	Plague rodents, 24.
Do.	Dec. 30-Apr. 19	103	95	Plague rodents, 44.
Chile:				
Antofagasta	Mar. 16-Apr. 12	10	1	
China:				
Antung	Mar. 31-Apr. 6	1		
Nanking	Dec. 16-29			Present.
Do.	Dec. 30-Apr. 5			Do.

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

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

Reports Received from December 29, 1923, to June 6, 1924—Continued

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Ecuador:				
Eloy Alfaro	Mar. 16-31	1	1	
Guayaquil	Nov. 16-Dec. 31	45	13	Rats taken, 53,240; found infected, 133.
Do.	Jan. 1-Apr. 30	112	35	Rats taken, 119,457; found infected, 520.
Jipijapa	Nov. 16-Dec. 15			Present.
Posorja	Apr. 1-30	6	1	
Quevedo	Jan. 1-31	3	2	
Quito	Nov. 1-30	11	1	
Santa Rosa	Feb. 16-29			Do.
Vino del Milagro	Dec. 1-15	1		
Egypt				Jan. 1-Dec. 31, 1923: Cases, 1,519; deaths, 725. Jan. 1-May 1, 1924: Cases, 264; deaths, 149.
City—				
Alexandria	Year 1923	65	33	
Do.	Apr. 2	1	1	
Cairo	Year 1923	2	2	
Port Said	do.	51	29	
Do.	Apr. 24	1		
Suez	Year 1923	46	24	
Do.	Jan. 2-Apr. 28	14	7	
Province—				
Assiout	Year 1923	370	211	
Do.	Apr. 1-May 1	27	19	
Beni-Souef	Year 1923	63	23	
Charkieh	Jan. 31-Mar. 27	3	3	
Dakhalieh	Year 1923	2	2	
Fayoum	do.	34	9	
Do.	Feb. 18-May 1	48	10	
Gharbieh	Year 1923	23	9	
Do.	Apr. 21	1	1	
Girgeh	do.	337	193	
Do.	Jan. 17-Apr. 25	14	6	
Gizeh	Year 1923	3	4	
Kalioubiah	do.	76	10	
Do.	Jan. 6-Mar. 27	1		
Kena	Year 1923	50	34	
Do.	Apr. 9-29	41	29	
Menoufieh	Year 1923	290	98	
Do.	Jan. 2-Apr. 21	94	58	
Minia	Year 1923	106	44	
Do.	Feb. 5-Apr. 8	11	9	
Greece:				
Kalamata	Apr. 18-24			Several deaths.
Patras	do.			Do.
Hawaii:				
Honokaa				Jan. 8-Mar. 14, 1924: Four plague-infected rodents.
Paauhau				Dec. 14, 1923: One plague rat, Feb. 14, 1924: One plague rat.
India				Oct. 14-Dec. 29, 1923: Cases, 34,542; deaths, 23,778.
Do.				Dec. 30, 1923-Mar. 29, 1924: Cases, 108,452; deaths, 82,972.
Bombay	Oct. 28-Dec. 22	5	5	Corrected report.
Do.	Dec. 30-Apr. 5	246	194	
Calcutta	Dec. 23-29	1	1	
Do.	Jan. 6-Apr. 5	8	7	
Karachi	Nov. 11-Dec. 29	42	33	
Do.	Dec. 30-Apr. 26	83	63	
Madras Presidency	Nov. 4-Dec. 29	1,657	1,021	
Do.	Jan. 27-Apr. 5	642	417	
Rangoon	Jan. 27-Feb. 16	20	15	
Do.	Dec. 30-Apr. 19	169	155	
Indo-China:				
Saigon	Oct. 28-Dec. 8	19	6	Including 100 square kilometers of surrounding country.
Do.	Jan. 27-Apr. 5	2	1	Do.
Iraq:				
Bagdad	Nov. 11-Dec. 29	8	6	
Do.	Jan. 6-Apr. 5	55	29	Corrected report.
Java:				
East Java—				
Djakakarta	Oct. 4-Dec. 31		146	
Do.	Jan. 1-Feb. 29		92	
Kedoe	Oct. 1-Dec. 31		1,287	
Do.	Jan. 1-Feb. 29		626	1,732.

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

Reports Received from December 29, 1923, to June 6, 1924—Continued

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Java—Continued.				
East Java—Continued.				
Pasoeroean.....	Feb. 1-29.....		3	
Pekalongan.....	Oct. 1-Dec. 31.....		150	
Do.....	Jan. 1-Feb. 29.....		107	
Samarang.....	Oct. 1-Dec. 31.....		430	
Do.....	Jan. 1-Feb. 29.....		183	
Soerabaya.....	Oct. 1-Dec. 31.....		9	
Do.....	Jan. 1-Feb. 29.....		17	Plague rats, 5.
Soerakarta.....	Oct. 1-Dec. 31.....		886	
Do.....	Jan. 1-Feb. 29.....		704	Corrected report.
Madagascar.....				
Tananarive Province.....	Oct. 1-Dec. 31.....	324	272	Bubonic, pneumonic, septice- mic. July 1-Dec. 31, 1923— city and Province: Cases, 429; deaths, 367. Jan. 1-Mar. 15, 1924—city and Province: Cases, 648; deaths, 588.
Ambatondrazaka.....	Feb. 1-15.....	8		District. Type pneumonic.
Ambositra.....	Feb. 1-29.....	8	1	Do.
Tananarive town.....	Oct. 1-Dec. 31.....	74	74	
Do.....	Jan. 29-Mar. 15.....	41	40	
Other localities.....	Feb. 1-Mar. 15.....	338	323	
Paraguay.....				
Asuncion.....	Dec. 18.....	6	4	
Peru.....				Nov. 1-Dec. 31, 1923; Cases, 38; deaths, 24. Jan. 1-Mar. 31; 1924: Cases, 162, deaths, 49.
Locality—				
Ayabaca.....	Mar. 1-31.....	4		
Barranco.....	do.....	1		
Callao.....	Jan. 1-Mar. 31.....	7	2	
Cañete.....	Nov. 1-30.....	1	1	
Do.....	Feb. 1-Mar. 31.....	14	5	
Casma.....	Mar. 1-31.....	2	1	
Chanccay.....	Dec. 1-31.....	2		
Chepen.....	Nov. 1-30.....	1		
Chiclayo.....	Nov. 1-Dec. 31.....	2	1	
Chilca.....	Jan. 1-31.....	1		
Guadalupe.....	Feb. 1-Mar. 31.....	3	1	
Huacho.....	do.....	5	3	
Huaral.....	do.....	11	4	
Huarmey.....	Jan. 1-Mar. 31.....	22	4	
Lambayeque.....	Mar. 1-31.....	2		
Lima (city).....	Nov. 1-Dec. 31.....	22	15	
Do.....	Jan. 1-Mar. 31.....	41	21	
Lima (country).....	Nov. 1-Dec. 31.....	8	7	
Do.....	Jan. 1-Mar. 31.....	11	2	
Lurin.....	do.....	2		
Mollendo.....	do.....	3	2	
Moro.....	Mar. 1-31.....	7		
Paíta (city).....	Jan. 1-Mar. 31.....	1	1	
Paíta (country).....	do.....	8	1	
Reque.....	do.....	4		
Salaverry.....	Mar. 1-31.....	1		
Sullana.....	Jan. 1-Mar. 31.....	2		
Trujillo.....	do.....	12	2	Country.
Portugal.....				
Lisbon.....	Dec. 13-21.....	7		
Do.....	Dec. 31-Jan. 6.....		1	
Portuguese West Africa:				
Angola—				
Loanda.....	Oct. 1-Dec. 29.....	59	29	
Do.....	Dec. 30-Feb. 2.....		4	
Russia:				
Bukceve Province.....				Oct. 1, 1923—Mar. 10, 1924: Cases, 339; deaths, 315; 66 plague cen- ters; entire southeast section, cases, 473; deaths, 435.
Ural Provinces.....				Oct. 1, 1923—Feb. 4, 1924: Cases, 441; 4 plague centers.
Kalmuk district.....	Mar. 10.....	3		
Novy Kazanha.....	Mar. 1.....		4	At a locality on the coast; 16 cases, 8 deaths.
Siam:				
Bangkok.....	Nov. 4-Dec. 8.....	3	2	
Do.....	Jan. 13-Mar. 22.....	5	5	
Siberia:				
Transbaikalia—				
Chita.....	Jan. 27.....	2	2	Pneumonic. Occurring in vet- erinary laboratory workers.

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

Reports Received from December 29, 1923, to June 6, 1924—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Spain:				
Malaga.....	Dec. 1-31.....	4		
Straits Settlements:				
Penang.....	Jan. 27-Feb. 2.....	1	1	
Singapore.....	Nov. 11-Mar. 15.....	4	4	
Do.....	Dec. 30-Apr. 12.....	17	13	
Syria:				
Beirut.....	Nov. 1-Dec. 10.....	3		
Do.....	Jan. 1-Mar. 31.....	3		
Turkey:				
Constantinople.....	Dec. 2-22.....	6	3	
Union of South Africa.....				Dec. 16, 1923-Apr. 5, 1924; Cases, 266; deaths, 159. (White, cases, 41; deaths, 20.)
Cape Province.....				Reported Mar. 17, 1924; Cases, 11; deaths, 7.
Uitenhage district.....	Dec. 9-15.....			Plague rodent found in vicinity Haarhoff's Kraal farm.
Orange Free State.....				Jan. 6-Mar. 8, 1924; cases, 132; deaths, 69.
Thaba 'Nchu.....				Mar. 23-29, 1924: One plague rat.
Hoopstad district.....	Feb. 3-9.....	1		
Kroonstad district.....	Dec. 16-27.....	7	3	
Do.....	Jan. 6-Feb. 9.....	43	20	
Winburg district.....	Feb. 3-9.....	1		
Wonderfontein farm.....	Dec. 2-8.....	4		Vicinity of Hoopstad. At Hoopstad, Dec. 9-15, 1923, one death of case previously reported.
Transvaal—				White, one case.
Wolmaransstad district.....	Mar. 2-8.....	3	1	Apr. 2, 1924: Reported present in one locality.
West Africa.....				
On vessels:				
.....	Dec. 11.....	4	2	At Mombasa, British East Africa.
.....	Jan. 24.....	2		At Varna, Bulgaria, from Syrian port.

SMALLPOX.

Algeria:				
Algiers.....	Nov. 1-30.....	1		
Do.....	Mar. 1-Apr. 30.....	2		
Arabia:				Imported.
Aden.....	Dec. 16-22.....	1		Four imported.
Do.....	Jan. 13-Apr. 19.....	8		
Belgium:				
Brussels.....	Jan. 13-Mar. 29.....	10		
Bolivia:				
La Paz.....	Oct. 1-Dec. 31.....	45	15	
Do.....	Jan. 1-Mar. 31.....	35	19	
Brazil:				
Bahia.....	Jan. 6-12.....	2		
Pernambuco.....	Nov. 4-Dec. 1.....	15	3	
Do.....	Jan. 6-Feb. 23.....		8	
Porto Alegre.....	Dec. 23-29.....		1	
Do.....	Dec. 30-Apr. 12.....		3	
Rio de Janeiro.....	Nov. 18-24.....	3	4	
Do.....	Jan. 6-Apr. 12.....	5	2	
Sao Paulo.....	Sept. 3-9.....	1		
British East Africa:				
Tanganyika Territory.....	Sept. 30-Dec. 29.....	30	7	
Do.....	Jan. 6-12.....	2		
Uganda.....	Sept. 1-30.....	6	1	
Entebbe.....	Oct. 1-Dec. 31.....	5	1	
Zanzibar.....	Sept. 1-Oct. 31.....	116	18	Sept. 1-30, 1923: In areas 27 miles from town of Zanzibar. Oct. 1-31, 1923: In vicinity, 1 case, 1 death. In Mikotoni district, 30 cases, 14 deaths reported.
British South Africa:				
Northern Rhodesia.....				Dec. 4-31, 1923: Cases, 40; deaths, 5.
Do.....	Feb. 26-Apr. 7.....	3		Jan. 1-31, 1924: Cases, 50; deaths, 11; reported from Balorale, Kalabo, and Mankoya districts.

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

Reports Received from December 29, 1923, to June 6, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Canada:				
Alberta—				
Calgary.....	Jan. 27-May 17	46		
British Columbia—				
Vancouver.....	Dec. 22-29	10		
Do.....	Dec. 30-May 17	129		
Victoria.....	Feb. 10-Mar. 29	3		
Manitoba—				
Winnipeg.....	Nov. 25-Dec. 29	21		
Do.....	Dec. 30-May 3	81		
New Brunswick—				
Frederickton.....				Feb. 1-29, 1924: Cases, 8.
Gloucester County.....	Mar. 2-Apr. 5	4		
Madawaska County.....	Dec. 8-15	1		
Restigouche County.....	Apr. 20-26	1		Jan. 1-Mar. 31, 1924: Cases, 5.
Victoria County.....	Feb. 10-16	2		
Westmoreland County.....	Feb. 10-Apr. 26	5		
Ontario				
Amherstburg.....	Mar. 1-31	16	8	Jan. 1-Apr. 30, 1924: Cases, 397 deaths, 31.
Chapleau.....	do	13	1	
Cochrane.....	do	15	5	
Essex Border.....	do	12	6	
Fort William and Port Arthur.....	Dec. 16-29	3		Occurring at Fort William.
London.....	Feb. 3-Apr. 5	9		
North Bay.....	do	1		
Perth.....	Mar. 1-31	14		
Toronto.....	Jan. 17-Mar. 31	15		
Ottawa.....	Feb. 17-May 17	11	1	
Windsor.....	Feb. 1-Mar. 15	52	11	
Quebec				
Montreal.....	Nov. 30-Feb. 23	7		
Saskatchewan—				
Regina.....	Dec. 9-15	1		
Do.....	Dec. 30-Feb. 23	6	1	
Ceylon:				
Colombo.....	Nov. 11-17	3	1	
Do.....	Jan. 20-Apr. 12	6	1	
Chile:				
Antofagasta.....	Jan. 6-Apr. 12	6	1	
Concepcion.....	Oct. 1-Dec. 31		14	
Talcahuano.....	Nov. 26-Dec. 2	3		Dec. 22, 1923: Five cases present.
Valparaiso.....	Dec. 9-15		1	
Do.....	Jan. 13-Mar. 15		8	
China:				
Amoy.....	Nov. 18-Dec. 8		11	
Do.....	Jan. 6-Apr. 19		16	
Antung.....	Dec. 31-May 4	6	2	Including Kulangsu, 14 deaths; and in hospital, Feb. 9, 1924, more than 30 cases stated to be present.
Canton.....	Dec. 23-Feb. 23			Present.
Chungking.....	Nov. 4-Dec. 29			Present and endemic.
Do.....	Dec. 30-Apr. 12			Stated to be widespread.
Fochow.....	Nov. 4-Dec. 15			Present.
Do.....	Dec. 31-Apr. 5			Do.
Hongkong.....	Oct. 28-Dec. 29	769	680	
Do.....	Dec. 30-Mar. 22	590	601	
Manchuria—				
Dairen.....	Dec. 31-Jan. 20	2		
Do.....	Mar. 3-Apr. 20	4	1	
Harbin.....	Nov. 12-Dec. 22	36		
Do.....	Jan. 1-Mar. 17	19	5	
Nanking.....	Dec. 2-15			Do.
Do.....	Dec. 30-Apr. 19			Do.
Shanghai.....	Dec. 29			Prevalent.
Do.....	Jan. 6-Apr. 19	31	77	Cases, foreign; deaths, Chinese and foreign.
Tientsin.....	Mar. 23-29	2		Reported by mission and British municipality.
Chosen (Korea):				
Chemulpo.....	Jan. 1-31	1		
Seoul.....	Nov. 1-30	1		
Do.....	Feb. 1-Mar. 31	5		

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

Reports Received from December 29, 1923, to June 6, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Colombia:				
Barranquilla	Apr. 6-12		2	
Buenaventura	Nov. 18-Dec. 15	8		
Do.	Apr. 3-12	3		
Costa Rica:				
Port Limon	Feb. 18-Apr. 5	2		
Czechoslovakia				Oct. 1-Dec. 31, 1923: Cases, 1; deaths 1, occurring in Slovakia.
Dominican Republic:				
La Romana	Jan. 27-Mar. 22	14		
Ecuador:				
Esmeraldas	Nov. 16-30	4		
Guayaquil	Dec. 1-31	1		
Do.	Jan. 1-Feb. 29	3		
Milagro	Apr. 1-15	1		
Quito	Nov. 1-30	167	26	
Egypt:				
Alexandria	Feb. 27-Apr. 15	4	7	
Cairo	Jan. 1-Feb. 11	3	1	
Port Said	Nov. 24-Dec. 2	1		
Do.	Apr. 16-22	2		
Estonia				Nov. 1-Dec. 31, 1923: Cases, 38. Jan. 1-Feb. 29, 1924: Cases, 14. Apr. 1-15, 1924: Cases, 1.
Finland				
France:				
Cherbourg	Feb. 9-15	1		British seaman.
Gibraltar	Mar. 3-Apr. 13	2		
Great Britain:				
Liverpool	Mar. 2-8	1		In family of seaman recently returned from Oporto, Portugal.
Greece:				
Saloniki	Oct. 22-Dec. 30		11	
Do.	Dec. 31-Mar. 23	23	10	
Guadeloupe (West Indies)				
Abymes	Feb. 16			Jan. 2-16, 1924: Present. Present. Vicinity of Point a Pitre.
Basse Terre	Dec. 18			Present.
Do.	Jan. 12-Feb. 16			Do.
Marie Galante Island	Dec. 18			Off shore island: Present.
Do.	Feb. 16			Present. Estimated 60 cases.
Moule	Jan. 12-Feb. 16			Present.
Point à Pitre	Dec. 18			Present in vicinity.
Haiti:				
Cape Haitien	Feb. 3-Apr. 26	4		Mar. 9-15, 1924: Two cases in hospital.
Hinche	Feb. 10-16	1		Developed at Limbe, Haiti.
Port au Prince	Feb. 17-Mar. 1	2	1	Oct. 14-Dec. 29, 1923: Cases, 9,720; deaths, 2,241.
India				Dec. 30, 1923-Mar. 29, 1924: Cases 42,538; deaths, 8,422.
Do.				
Bombay	Oct. 28-Dec. 29	55	25	
Do.	Dec. 30-Apr. 5	922	459	
Calcutta	Dec. 16-29	4	4	
Do.	Dec. 30-Apr. 5	18	16	
Karachi	Dec. 30-Apr. 26	151	58	
Madras	Nov. 4-Dec. 29	23	3	
Do.	Dec. 30-Apr. 19	327	32	
Rangoon	Nov. 4-Dec. 29	12	4	
Do.	Dec. 30-Apr. 19	73	27	
Indo-China:				
City				
Saigon	Nov. 4-Dec. 29	133	74	Including 100 square kilometers of surrounding country.
Do.	Dec. 31-Apr. 5	733	411	
Iraq:				
Bagdad	Oct. 24-Dec. 29	46	28	
Do.	Dec. 30-Feb. 16	44	33	
Italy:				
Treviso	Apr. 1-15	15		Estimated.
Trieste	Feb. 17-23	4		
Turin	Feb. 18-24	1		
Jamaica				
Do.				Nov. 25-Dec. 29, 1923: Cases, 115. Dec. 30, 1923-May 3, 1924: Cases, 443. Reported as alastrim. Delayed report for Feb. 17-23, 1924, 1 case.
Kingston	Nov. 25-Dec. 29	3		
Do.	Dec. 30-Apr. 26	17		

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

Reports Received from December 29, 1923, to June 6, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Japan:				
Kobe.....	Feb. 14-May 12...	17	7	
Nagoya.....	Apr. 6-12.....	3	1	
Taiwan.....	Jan. 1-Mar. 31.....	8		
Tokyo.....	Jan. 1-Apr. 12.....	136		
Yokohama.....	Mar. 30-Apr. 6.....	1		
Java:				
East Java—				
Patjiram.....	Mar. 8.....			Epidemic.
Soerabaya.....	Oct. 31-Dec. 29.....	348	60	
Do.....	Dec. 30-Mar. 22.....	232	49	
West Java—				
Batavia.....	Oct. 27-Dec. 28.....	65	13	
Do.....	Dec. 29-Apr. 11.....	67	8	
Latvia.....				Oct. 1-Dec. 31, 1923: Cases, 6; Jan. 1-Feb. 29, 1924: Cases, 5.
Malta.....	Feb. 1-29.....	1		
Mexico:				
Guadalajara.....	Jan. 27-May 17.....	5	10	
Manzanillo.....	Dec. 4-10.....	5	1	
Mazatlan.....	Mar. 31-Apr. 13.....		4	Apr. 21, 1924: Cases from 25-35, in city and vicinity. No mortality reported.
Mexico City.....	Nov. 25-Dec. 29.....	32		Including municipalities in Federal District.
Do.....	Dec. 30-Apr. 10.....	147	23	Do.
Monterey.....				Mar. 24, 1924, 11 cases officially announced.
Salina Cruz.....	Jan. 1-Apr. 30.....	5	4	Nine cases chicken pox present.
San Luis Potosi.....	Mar. 16-22.....		1	
Tampico.....	Jan. 21-May 20.....	47	4	From Irapuato, 9; La Barra, 1.
Vera Cruz.....	Nov. 3-Dec. 30.....		4	Jan. 21-Apr. 10, 1924: Cases, 36
Do.....	Jan. 6-Apr. 20.....	2	7	(12 in soldiers or soldiers' families); deaths, 5.
Netherlands:				
Rotterdam.....	Jan. 20-26.....	3		
Palestine:				
Jaffa.....	Jan. 15-28.....	3		
Jerusalem.....	Feb. 18-25.....	1		
Persia:				
Teheran.....	Sept. 24-Dec. 23.....		4	
Do.....	Dec. 22-Jan. 31.....		2	
Poland.....				Sept. 23-Dec. 31, 1923: Cases, 63; deaths, 20. Jan. 1-Feb. 9, 1924: Cases, 275; deaths, 27.
Portugal:				
Lisbon.....	Nov. 11-Dec. 29.....	19	10	Corrected report.
Do.....	Dec. 31-May 3.....	99	19	
Oporto.....	Nov. 25-Dec. 29.....	39	23	
Do.....	Dec. 30-May 3.....	108	58	
Portuguese East Africa:				
Lourenco Marques.....	Dec. 30-Jan. 5.....	2		
Portuguese West Africa:				
Angola—				
Loanda.....	Dec. 2-29.....		5	
Russia:				
Ukraine.....				Aug. 1-Sept. 30, 1923: Cases, 143.
Siam:				
Bangkok.....	Oct. 28-Dec. 8.....	33	18	Nov. 25-Dec. 1, 1923; Epidemic
Do.....	Dec. 30-Apr. 5.....	12	2	
Siberia:				
Dauria Station.....	Oct. 21.....			Present. Locality on Chita Railway, Manchurian frontier.
Sierra Leone:				
Sherbro District—				
Tagball.....	Nov. 1-15.....	3		
Spain:				
Barcelona.....	Nov. 15-Dec. 26.....		2	
Do.....	Jan. 3-Mar. 26.....		5	
Cadiz.....	Mar. 1-31.....	2		
Valencia.....	Nov. 25-Dec. 29.....	152	12	
Do.....	Dec. 30-May 10.....	441	37	
Straits Settlements:				
Penang.....	Mar. 16-29.....	2	2	
Singapore.....	Dec. 16-29.....	2	1	
Do.....	Dec. 30-Mar. 29.....	5		

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

Reports Received from December 29, 1923, to June 6, 1924—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases	Deaths.	Remarks.	
Switzerland:					
Basel.....	Jan. 27-Feb. 9.....	4		Corrected.	
Berne.....	Nov. 17-Dec. 22.....	15			
Do.....	Jan. 6-Apr. 28.....	38	1		
Lucerne.....	Nov. 1-Dec. 31.....	60			
Do.....	Jan. 1-Mar. 31.....	29			
Zurich.....	Jan. 27-Mar. 8.....	2			
Syria:					
Aleppo.....	Nov. 25-Dec. 1.....	1		In vicinity, at Djsr Choughour.	
Beirut.....	Jan. 21-Feb. 20.....	2			
Damascus.....	Nov. 16-Dec. 15.....	7			
Do.....	Jan. 29-Apr. 12.....	38			
Tunis:					
Tunis.....	Oct. 27-Nov. 2.....	5	1	Dec. 1-31, 1923: Cases, 120; deaths, 15.	
Do.....	Jan. 8-May 5.....	11	6		
Turkey					
Constantinople.....	Nov. 11-Dec. 8.....	3		Dec. 1-31, 1923: Cases, 120; deaths, 15.	
Do.....	Jan. 6-Apr. 5.....	4	1		
Union of South Africa					
Cape Province.....	Oct. 28-Dec. 8.....			Oct. 1-31, 1923: Colored, cases, 41; deaths, 2; white, cases, 3. Feb. 1-29, 1924: Cases, 71 (white, 6); 1 death. Outbreaks.	
Do.....	Jan. 20-Apr. 12.....				
Natal.....	Oct. 23-Nov. 3.....				
Do.....	Mar. 16-22.....				
Orange Free State.....	Oct. 28-Nov. 24.....				
Do.....	Jan. 20-Apr. 12.....				
Transvaal.....	Nov. 18-Dec. 1.....				
Do.....	Mar. 11-17.....				
Johannesburg.....	Nov. 25-Dec. 15.....	3			
Do.....	Feb. 3-23.....	2			
Uruguay:					
Montevideo.....	Oct. 1-31.....	1			
Venezuela:					
Carcas.....	Jan. 22.....				Epidemic.
Margarita Island— Punta Piedra.....	Mar. 21.....	60			
On vessels:					
Steamship Coppename.....	Mar. 19.....	1			At New Orleans from Puerto Barrios, Guatemala.
U. S. Naval Hospital ship Mercy.....	Apr. 1.....	1		At St. Thomas, Virgin Islands, from Culebra, P. I. Patient had been in Jamaica, W. I., two weeks previous. Case reported as alastrim.	
S. S. Nitokris.....	Apr. 30.....	1		At Guayaquil, from Valparaiso, Chile. Under treatment at lazaretto.	
S. S. Torres.....	Jan. 14.....	1		At New Orleans quarantine station from Tampico, Mexico, via ports. Case in seaman signed on at Galveston, Tex., on outward voyage.	
S. S. Tupper.....	Jan. 20-26.....	1		At Gonaives, Haiti.	
S. S. Vasari.....	Dec. 31.....	1		At Trinidad, West Indies, from Buenos Aires, Argentina. Vessel left Buenos Aires Dec. 15, 1923, for New York, via Santos, Rio de Janeiro, Trinidad, Barbados.	
Sch. Annie M. Parker.....	Jan. 23.....	3		At sea. Vessel abandoned and crew removed to vessel bound for Rotterdam. Patients removed at Liverpool Feb. 28, bound for Newfoundland.	

TYPHUS FEVER.

Algeria:				
Algiers.....	Nov. 1-Dec. 31.....	7	3	
Do.....	Jan. 1-Mar. 31.....	21	7	
Bolivia:				
La Paz.....	Oct. 1-Dec. 31.....	43	5	
Do.....	Jan. 1-Mar. 31.....	31	3	

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

Reports Received from December 29, 1923, to June 6, 1924—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Porto Alegre.....	Feb. 24-Mar. 1.....		1	
Bulgaria:				
Sofia.....				Nov. 18-Dec. 15, 1923: Paratyphus fever, cases, 17. Jan. 6-Mar. 29, 1924: Paratyphus fever, cases, 9.
Canary Islands:				
Santa Cruz de Tenerife.....	Jan. 14-Feb. 17.....		2	
Ceylon:				
Colombo.....	Feb. 24-Mar. 1.....	1	1	Case from port, 1.
Chile:				
Antofagasta.....	Dec. 2-8.....	4		
Do.....	Apr. 6-12.....	2		
Concepcion.....	Oct. 1-Nov. 30.....		4	Dec. 11-24, 1923: Deaths, 3.
Do.....	Jan. 8-Apr. 21.....	2	13	In district, at 12 localities, 92 cases.
Iquique.....	Jan. 20-26.....		1	
Talcahuano.....				Dec. 5, 1923: 3 cases under treatment. Jan. 12, 1924: 1 case under treatment.
Do.....	Jan. 31-Apr. 26.....	6	2	
Valparaiso.....	Nov. 25-Dec. 15.....		29	Dec. 24, 1923: In hospital, 34 cases.
Do.....	Dec. 30-Mar. 15.....		44	Reports from two districts of the Province of Valparaiso.
China:				
Antung.....	Nov. 12-Dec. 30.....	5		
Chungking.....	Nov. 18-24.....			Present.
Do.....	Dec. 16-29.....			Endemic.
Do.....	Dec. 30-Feb. 16.....			Do.
Manchuria—				
Harbin.....	Mar. 18-24.....		1	
Chosen (Korea):				
Chemulpo.....	Feb. 1-Mar. 31.....	5	3	
Seoul.....	do.....	86	7	
Czechoslovakia:				
Danzig-Polish frontier:				
Mühlbanz.....	Mar. 6.....			Oct.-Dec., 1923: Cases, 21.
Present: Origin stated to be focus at Mallinia.				
Ecuador:				
Quito.....	Nov. 1-30.....	14	1	
Egypt:				
Alexandria.....	Nov. 19-Dec. 23.....	3		
Do.....	Jan. 8-Apr. 1.....	7		
Cairo.....	Sept. 10-Dec. 31.....	39	11	
Do.....	Jan. 8-Feb. 4.....	5	3	
Estonia.....				Nov. 1-30, 1923: Paratyphus fever, cases, 8. Dec. 1-31, 1923: Typhus fever, cases, 15; paratyphus fever, cases, 4. January, 1924: Paratyphus fever, cases, 6.
Finland.....				Dec. 1-15, 1923: Paratyphus fever, cases, 15. Feb. 15-Mar. 31, 1924: Paratyphus fever, cases, 12.
Germany:				
Coblenz.....	Jan. 27-Feb. 2.....	1		
Greece:				
Athens.....	Jan. 11-Feb. 20.....		7	
Saloniki.....	Nov. 26-Dec. 30.....	7	3	
Hungary.....				July 1-Aug. 31, 1923: Cases, 24.
Budapest.....	Jan. 27-Apr. 19.....	35	13	
Java:				
East Java—				
Soerabaya.....	Dec. 9-29.....	12		
Do.....	Dec. 30-Jan. 5.....	2		
Latvia.....				Oct. 1-Dec. 31, 1923: Cases, 22. Paratyphus fever, 12; recurrent typhus, 3. Jan. 1-Feb. 29, 1924: Cases, 48. Paratyphus, A, 1; B, 1. Recurrent, 1 case.
Libau.....	Apr. 8-15.....	4		Year, 1923: Cases, 819; deaths, 86; recurrent typhus, 13 cases. Feb. 1-29, 1924: Cases, 51; deaths, 9.
Lithuania.....				

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

Reports Received from December 29, 1923, to June 6, 1924—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Mexico:				
Durango.....	Dec. 1-31.....		2	
Do.....	Jan. 1-Feb. 29.....		3	
Guadalajara.....	Jan. 27-May 10.....	5	9	
Mexico City.....	Nov. 25-Dec. 29.....	86		Feb. 1-29, 1924: Cases, 2; deaths, 1. Including municipalities in Federal district.
Do.....	Dec. 30-Apr. 19.....	90	8	Do.
San Luis Potosí.....	Jan. 17-23.....		1	
Torreon.....	Feb. 1-Mar. 31.....		6	
Netherlands:				
Amsterdam.....	Mar. 2-Apr. 26.....	4		
Norway:				
Stavanger.....	Dec. 25-31.....		1	
Palestine:				
Jaffa.....	Jan. 1-Apr. 15.....		7	
Jerusalem.....	Feb. 19-28.....		2	
Persia:				
Teheran.....	Sept. 24-Oct. 23.....		1	
Poland.....				Sept. 23-Dec. 31, 1923: Cases, 947; deaths, 92; recurrent typhus, cases, 67; deaths, 1. Jan. 1-Feb. 9, 1924: Cases, 1,232, deaths, 102. Recurrent cases, 63. Jan. 6-Feb. 2, 1924: Cases, 341; deaths, 26. Recurrent fever, cases, 27.
Pomerellen.....	Jan. 8-Mar. 25.....	17	4	Locality on Danzig-Polish frontier.
Portugal:				
Oporto.....	Jan. 27-Feb. 2.....		2	
Rumania:				
Kishineff district.....	Nov. 1-Dec. 31.....	15		
Russia.....				Reported present in various sections, Mar. 12, 1924.
Karelian Republic.....	Mar. 12.....			Prevalent.
Novo Cherkarsk.....	do.....			Do.
Rostov-on-Don.....	do.....			Do.
Saratov.....	do.....			Do.
Ukraine.....				Aug. 1-Sept. 30, 1923: Cases, 768. Recurrent typhus: Aug. 1-Sept. 30, 1923: Cases, 2,307.
Siberia:				
Vladivostok.....	Feb. 19.....			Present and verging on epidemic prevalence.
Spain:				
Barcelona.....	Nov. 29-Dec. 12.....		2	
Do.....	Jan. 3-Apr. 2.....		6	
Madrid.....	Dec. 1-31.....		7	
Do.....	Jan. 1-31.....		2	
Syria:				
Damascus.....	Jan. 27-Feb. 2.....		1	
Tunis:				
Tunis.....	Feb. 5-11.....		1	
Turkey.....				Dec. 1-31, 1923: Cases, 41; deaths, 5.
Constantinople.....	Nov. 11-Dec. 29.....	15	1	
Do.....	Dec. 30-Apr. 5.....	11		
Union of South Africa.....				Oct. 1-31, 1923: Colored, 287 cases, 58 deaths; white, 2 cases; total, 289 cases, 58 deaths. Jan. 1-Feb. 29, 1924: Cases, 407; deaths, 75 (colored). Among white population, 7 cases. Total cases, 414; deaths, 75.
Cape Province.....				Oct. 1-31, 1923: Colored, cases, 245; deaths, 47.
Do.....				Jan. 1-Feb. 29, 1924: Cases, 168; deaths, 26. Feb. 24-Apr. 12, 1924: Outbreaks.
Natal.....				Oct. 1-31, 1923: Colored, cases, 4; deaths, 3.
Do.....				Jan. 1-Feb. 29, 1924: Cases, 90; deaths, 14. Feb. 24-Mar. 1, 1924: Outbreaks.
Durban.....	Nov. 24-Dec. 1.....	73		Cases occurring among native stevedores in the harbor area of the port and confined to one barracks.

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

Reports Received from December 29, 1923, to June 6, 1924—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Union of South Africa—Con. Orange Free State.....				Oct. 1-31, 1923: Colored, cases, 25; deaths, 8. Feb. 24-Mar. 1, 1924: Outbreaks.
Do.....				Jan. 1-Feb. 29, 1924: Cases, 59; deaths, 10. Mar. 23-Apr. 5: Outbreaks.
Kroonstad District.....	Jan. 20-26.....			Outbreaks on 2 farms.
Transvaal.....				Oct. 1-31, 1923: Colored, cases, 13.
Do.....				Jan. 1-Feb. 29, 1924: Cases, 90; deaths, 26.
Johannesburg.....	Oct. 1-Dec. 31.....	3	4	
Do.....	Jan. 6-Mar. 29.....	8		
Potschefstrom District.....	Jan. 20-26.....			Outbreaks on 7 farms.
Venezuela:				
Maracaibo.....	Dec. 16-22.....		1	
Do.....	Feb. 17-May 3.....		8	
Yugoslavia:				
Croatia—				
Zagreb.....	Dec. 2-15.....	3		
Do.....	Feb. 17-23.....	1		
Serbia—				
Belgrade.....	Nov. 25-Dec. 1.....	1		
On vessel:				
S. S. Malta Maru.....	Mar. 17.....	1		At Rotterdam, Netherlands, from South America.

YELLOW FEVER.

Brazil:				
Pernambuco City.....	Nov 16.....	3	2	
West Africa (French Dahomey):				
Porto Novo.....				May 26, 1924: Present.