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PSYCHIATRIC STUDIES OF DELINQUENTS.

PART II. A STUDY OF PHYSICAL AND MENTAL CONDITIONS OF 100 DELINQUENT WHITE WOMEN IN LOUISVILLE, KY.

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(EDITORIAL NOTE.—Part I, A Psychiatric Study of Delinquent Women in Lansing, Kans., was published in Public Health Reports for May 21, 1920.)

The work represented by the following report was undertaken by direction of the Surgeon General of the United States Public Health Service, under authority of the Chamberlain-Kahn Act of July 9, 1918. The investigation was carried on during the months of March and April, 1919, in the city of Louisville, Ky., in connection with the activities of the division of venereal diseases, United States Public Health Service, for the control of venereal diseases in the extra-cantonment civil health zone about Camp Taylor.

Most of the subjects examined were inmates of the Jefferson County, Ky., jail; a few, perhaps 10 per cent, were from other institutions in Louisville, such as the Union Gospel Mission, the City Hospital, and the Home for the Friendless. However, it is neither possible nor advisable to separate this latter number into a distinct group, since some of the women had been transferred from the jail, and others were in these institutions for conduct similar to that which had caused the incarceration of many jail inmates.

Immediate treatment and general oversight of venereal disease cases in these institutions were under the direction of the jail physician of the Jefferson County Jail, who was also a medical officer of the United States Public Health Service, assisted by a Public Health Service nurse.

The laboratory work in connection with these cases was performed at the Louisville City Hospital Laboratory, in charge of the director of the laboratory, a medical officer of the Public Health Service.

The sociological records, which were as full as possible in each case, were obtained from the matron of the Louisville city police court, whose duty it was to obtain such information for use in court, in connection with the trial of cases and in the subsequent disposal of the subjects. Similar data were collected in the cases of those women not arrested but detained in quarantine as persons likely to have a venereal disease and conducting themselves in such a manner as probably to lead to its dissemination.

Women arrested on charges involving sexual immorality were usually at once placed under quarantine, in order that they might be held pending the receipt of the laboratory report upon which their further disposition depended, so far as the venereal disease element in the case was concerned. Quarantine was imposed by county or city health officers, under authority of regulations of the State board of health, put into force in June, 1918, and enacted into a city ordinance by the Louisville board of aldermen in July, 1918.

The following general plan was followed in carrying out the investigation: Family histories were obtained from the subjects themselves and depend, therefore, upon the powers of observation and the memory of individual subjects; personal and social history obtained from subjects and frequently supplemented from court records; personal traits, such as mood, energy, general interest, were studied to some degree. Physical examinations, psychometric and psychiatric tests, and laboratory findings were included in the plan of study and are reported in these pages.

Although the examination of women while in detention doubtless eliminates the immediate effects of alcohol and drugs and the fatigue incident to irregular hours, it is undoubtedly true that imprisonment does produce certain subtle mental changes which are often difficult properly to evaluate.

It is believed that this group of women, including, as it does, individuals from the "beginner" class to the older inmate of the formerly licensed house of prostitution, is fairly representative of the sexually immoral women in Louisville. Especially interesting is the fact that the percentage of native-born subjects was relatively high.

1. Family Histories.

Family history includes general information concerning the father, mother, brothers, and sisters, with particular reference to any nervous or mental disorders, alcoholism, drug habituation, and peculiar or unusual reactions to social difficulties. This information was obtained from the subject herself, and it is believed to be approximately correct in practically all instances so far as such history was known to the subject. In many instances it was possible to compare the family history as the subject gave it, with records of the police court matron, and rarely was there found any difference of importance. This relative truthfulness in such a connection is probably explainable on the ground that many of these persons take a rather impersonal and detached viewpoint in regard to their relatives. The lack of feeling thus manifested is believed to be a deep-seated and important defect in make-up on the affective side of such individuals. Occasional failures to give information may be explained by a subject's limited power of observation or by her lack of interest. An attempt to go

into the history of more distant relatives yielded such meager and indefinite information that it was discontinued as being without value.

Parents' birthplace.—The parents of only 3 of the subjects were known by them to be of foreign birth, the parents of 21 were of American origin, but the State in which they were born was not known to the subjects. In 18 instances, the country of their parents' birth was unknown. The largest number, 84, were said to be natives of Kentucky; 23 came from the adjoining State of Indiana. Birthplaces by States, so far as known, were given as follows:

TABLE XIV.—*Parents' birthplace.*

Birthplace.	Fathers.	Mothers.	Birthplace.	Fathers.	Mothers.
Unknown	8	10	Indiana	10	13
Born in United States, but State unknown	14	7	Ohio	3	1
Kentucky	40	44	Louisiana	1	1
Tennessee	6	3	Maine	1	1
Georgia	2	0	West Virginia	1	1
Missouri	1	3	Pennsylvania	1	0
Virginia	1	0	Illinois	0	1
Texas	1	1	Oklahoma	0	1
Mississippi	0	1	Ireland	1	1
Florida	0	1	Switzerland	0	1
South Carolina	0	1	Germany	4	2
			England	0	1

Parents' education.—Causes given by the subjects in explanation of the relatively high percentage of defective education in the parents were usually poverty, inaccessibility of schools, and "unknown." The large number of instances in which the extent of their parents' education was unknown to the subjects may be traceable to the early death or separation of parents, or to ignorance and lack of interest in matters of education on the part of the subjects themselves. It is safe to assume, however, that the education of these parents was limited. Details ascertained may be indicated thus:

TABLE XV.—*Parents' education.*

Education.	Fathers.	Mothers.
Could not read or write	15	9
Could read and write only	38	37
Grades attained:		
Third	1	0
Fourth	1	4
Fifth	0	3
Sixth	2	2
Seventh	0	1
Eighth	1	3
Ninth	1	5
Entered high school	1	4
Completed high school	0	1
Entered college	2	0
Unknown	33	26
	95	95

Parents' occupations.—The following list represents the principal occupations engaged in by the parents of the subjects. In many instances, however, various other occupations had been followed for varying periods of time. The predominance of farming in this list of occupations is natural in a study of an agricultural State. It does not necessarily imply that prostitution is especially common among women originating in rural districts.

TABLE XVI.—*Parents' Occupation.*

Occupation.	Fathers.	Mothers.	Occupation.	Fathers.	Mothers.
Farmers	43	.....	Railroad car repairer	1	.....
Housekeeper	.....	72	Railroad brakeman	1	.....
Laborer	12	.....	Fish peddler	1	.....
Factory worker (tobacco)	2	4	Bookkeeper	1	.....
Carpenter	3	.....	Painter	1	.....
Seamstress	.....	3	Coal miner	1	.....
Locomotive engineer	3	.....	Machinist	1	.....
School-teacher	.....	2	Rate clerk	1	.....
Railroad foremen	2	.....	Stationery engineer	1	.....
Physician	2	.....	River pilot	1	.....
Mechanic	2	.....	City fireman	1	.....
Saloon-keeper	1	.....	Brick mason	1	.....
Factory worker (wagon)	1	.....	Motorman (railroad)	1	.....
Upholsterer	1	.....	Blacksmith	1	.....
Minister	1	.....	Domestic	.....	1
Night watchmen	1	.....	Milliner	.....	1
Shoemaker	1	.....	Laundress	.....	1
Railroad conductor	1	.....	Clerk	.....	1
Railroad switchman	1	.....	Unknown	4	10

Alcoholic habits of parents.—The following table shows the alcoholic habits of the parents:

TABLE XVII.—*Alcoholic habits of parents.*

	Fathers.	Mothers.
Habitually alcoholic	31	4
Alcoholic habits unknown	21	15
Alcohol used sparingly or not at all	43	76

A history of drug habituation was not obtained in the case of a parent of any subject.

Insanity in parents.—A history of definite insanity was obtained in the case of 3 fathers; of convulsions in the case of 3 mothers; repeated losses of consciousness in 6 mothers and 1 father; and unusual "nervousness" in 14 mothers and 11 fathers. This "nervousness" was generally described as consisting of tremulousness, weakness, and pallor, which came on at any unusual event, and lasted usually from a few minutes to a few hours.

It is believed that the above represent only the more marked neurotic and psychotic manifestations, those of lesser degree probably escaping the poor observation of the subjects who gave this information.

Parents' court records.—A history of 7 fathers and 3 mothers having been arrested one or more times was obtained. All arrests were on misdemeanor charges.

Sexual immorality.—A history of sexual immorality, while living in the married state, was obtained in the case of 2 fathers and 2 mothers. A history of commercial prostitution was obtained in the case of 3 mothers.

Families.—The following number of children, living and dead, were produced by the 95 families from which the 100 subjects of this study came—living, 398; dead, 153; total, 551. Families varied in number from 1 to 15 children. No conclusions could be drawn as to any relation between the size of families and any tendency toward prostitution; the hardened prostitute was found as an only child as well as in families of 5, 7, and 12 children.

2. Personal Histories.

Personal history was obtained from the subject in all cases, and supplemented by information in possession of the police court matron. In only 2 instances did the writer have the opportunity of interviewing near relatives. Inquiry under this heading included age, birthplace, physical condition, with particular reference to mental and nervous disorders, alcoholism, drug habituation, and various acts of an antisocial nature that may have been committed.

It was in this field of inquiry, and in that of social history, that most untruthfulness was encountered, the information as given ranging all the way from frank and truthful statements to an absolute denial of any sexual immorality, even when the subject was confronted with what might fairly be regarded as incontrovertible evidence of guilt.

In regard to reliability of statement by these delinquents, it is believed that the 100 cases may be roughly divided into 3 groups: First, those who gave what was apparently approximately the whole truth in regard to their histories as determined by cross-questioning and the records of social agencies, numbering 19; second, those who gave partly reliable information, but with considerable apparent attempt to cover up or deny sexual immorality or other antisocial conduct, numbering 33; and third, those who denied any sexual immorality or whose statements were so indefinite as to be clearly unreliable in this respect, numbering 48. Three individuals who did not cooperate well were not considered further from this standpoint.

Factors tending to make the statements of these subjects unreliable seem to be faulty observation, traceable both to intellectual defect and to a lack of proper interest in the various events of their lives; fear that the information given would affect their period of detention; possibly a certain amount of resentment at inquiry into such intimate

personal affairs; and the desire, common to us all, to minimize defects and failures.

Age at loss of parents.—The following table gives the number of subjects in each age group at the time of losing father, mother, or both, by death, or separation:

TABLE XVIII.—*Age of subjects at time of parents' death or separation.*

Age of subject, 5-year groups.	Number of subjects whose mother was dead.	Number of subjects whose father was dead.	Number of subjects both of whose parents were dead.	Number of subjects whose parents were separated.
5 years	7	5	6	4
5–10	3	4	11	4
11–15	2	2	13	2
16–20	3	5	19	2
20–25	2	1	23	1
25 and over			24	

One subject reported desertion by father when she was 2 years of age; one desertion by both parents when only a few weeks old. Four had had stepmothers in their early years; 11 had stepfathers. Nine had been adopted into families; 7 had spent periods varying from months to years in orphanages.

Age at time of examination.—The women examined ranged from 17 to 52 years of age, the majority being between 18 and 24 years. The number at each age is shown as follows:

TABLE XIX.—*Age of subjects at time of examination.*

Years.	Number.	Years.	Number.
17	1	30	2
18	7	31	1
19	5	32	1
20	8	33	3
21	10	34	1
22	8	36	5
23	6	39	2
24	10	41	1
25	5	42	3
26	3	43	2
27	5	44	1
28	5	52	1
29	4		

Birthplace of subjects.—As in the case of the parents, the subjects were chiefly natives of the State; 12 States other than Kentucky and 1 foreign country were represented; 1 subject did not know her birthplace.

TABLE XX.—*Birthplace by State and country.*

Kentucky	60	Virginia	1
Indiana	13	Oklahoma	1
Tennessee	6	Alabama	1
Missouri	4	Iowa	1
Ohio	4	New York	1
Texas	2	Illinois	2
Louisiana	2	Ireland	1

The 46 women who came from farming districts stated that they left the farm at the following ages: Nine left when between 10 and 14 years; 20 when between 15 and 20 years, and 17 when more than 20 years.

3. Social History.

The following section gives certain information of a sociological nature gathered in conversation with the subjects themselves and supplemented from court records. The data secured are reported under such headings as civil status, school history, occupation, and court history—previous arrests as well as present charges.

Civil status.—There is given below the information available regarding the civil status of the 100 women at time of the examination.

TABLE XXI.—*Marriage record.*

Marriages:	
Married once	56
Married twice	18
Married three times	1
Single	25
Results:	
Separations	55
Divorces	4
Divorced from one husband, or separated from one	4
Husbands dead	8
Considered as still living with husband	4

Among 64 of these women there had been 151 pregnancies, these pregnancies resulting in 63 children now living, 39 dead, 43 miscarriages or abortions, and 4 stillbirths. Two were pregnant at the time of the examination. Seventeen of these pregnancies occurred in women who were either single or not living in wedlock. Although the majority of these women becoming pregnant became so only once or twice, it is of interest to note that one woman, aged 42, who had been an alcoholic prostitute for the past 10 years, was the mother of 4 living and 6 dead children. Also one woman, aged 34, who had for some time been alcoholic and had conducted a disorderly house, was the mother of 7 living children.

Occupations of the husbands of the women married were reported as follows:

TABLE XXII.—*Occupation of Husbands.*

Laborer	36	Fireman (R. R.)	1
Farmer	7	Conductor (R. R.)	1
Mechanic	6	Policeman	1
Soldier	4	Bartender	1
Molder	4	Salesman	1
Teamster	3	Mail carrier	1
Chauffeur	2	Pool-hall manager	1
Carpenter	2	Restaurant keeper	1
Factory worker	2	Real estate dealer	1
Coal miner	2	Cook	1
Plumber	2	Harness maker	1
Electrician	2	Blacksmith	1
Painter	2	Enameler	1
Box maker	2	Unknown	3
Tinsmith	1		
Printer	1	Total	95
Foreman (R. R.)	1		

Thirty-nine husbands were said to have been addicted to the excessive use of alcohol, 2 were addicted to the use of morphine, 1 used both alcohol and morphine, and 1 used alcohol, morphine, cocaine, and heroin.

School record.—Seven of the women could not read or write. Of these, 1 stated that she had never attended school; the other 6 had attended schools for periods varying from a few weeks to a few years. Twenty-two could read and write only and in most instances could do that but poorly.

The number attaining various grades in school was thus reported:

Third grade	6
Fourth grade	11
Fifth grade	15
Sixth grade	8
Seventh grade	11
Eighth grade	11
Ninth grade	1

Three entered the first year of high school, 3 entered the second year, 2 completed the high-school course and took courses in business schools. One claimed to have been a student nurse in a training school for two and a half years but gave up the course because of a "nervous breakdown." Forty-five stated that they always disliked school. Arithmetic was by far the most difficult school subject, with geography and history holding second and third places of aversion.

Probably well over 50 per cent of these persons attended country schools in a section where the school standards were very inferior. This absence of adequate schools and the defective mentality of the individuals play varying and, in many cases, indefinable parts in the resulting lack of education and the life history of the subject.

It is considered worthy of note that 3 individuals, who were immoral prior to entering a convent, spent therein 3 years, 4 years, and 6 years, respectively, and shortly after leaving the convent became street prostitutes. These were defective or inferior persons, and 2 were considered as such while in the convent. The long period spent in a religious atmosphere probably explains the Bible reading and praying by these women frequently observed while they were in jail—doubtless a regressive phenomenon in the face of a difficulty.

Occupation.—The following table sets forth the occupations represented and numbers engaged in each:

TABLE XXIII.—*Occupation of the women.*

Factory worker	36	Milliner	2
Domestic	24	Cash girl	2
Waitress	15	Musician (piano)	2
Housework at home	9	Wrapper (department store)	1
Laundress	5	Bookkeeper	1
Seamstress	2	Stenographer	1

While practically all the women had changed their occupations frequently, performing various kinds of work at different times, the list above fairly represents their capabilities when engaged in legitimate occupations. At intervals, practically all of them had relied on sexual immorality for their support. Twenty-eight had depended wholly on prostitution as a means of livelihood for relatively long periods of time.

As to wages received for legitimate employment, 81 per cent made $10 or less per week; 15 per cent made between $10 and $15 per week; and 4 per cent made between $15 and $25 per week.

In regard to sexual immorality, these women can be roughly divided into 3 groups: First, those who had for varying periods of time been inmates of regular houses of prostitution, numbering 20. In this group there was 1 woman, age 44, who gave a history of having been in a licensed house 21 years previously; second, those who had confined their activities mainly to street soliciting, numbering 28; and third, those who were more or less intermittently immoral, depending on an occupation or a husband for support during intervals. These numbered 52.

Court history.—It will be recalled that the subjects of this paper were under detention chiefly in the Jefferson County jail, though a few came from hospitals or homes in the city of Louisville. They were detained in quarantine for the treatment of venereal infection, or held upon other charges, their infectious condition being later discovered. The reasons for their detention, with the number held upon each charge, are thus shown:

Court charges and number detained under each charge.

Disorderly conduct	61
Quarantine	21
Drunkenness	6
Conducting disorderly house	4
Grand larceny	2
Petit larceny	1
Breach of peace	1
Forgery	1
Begging on streets	1
Contempt of court	1
Illegitimate pregnancy	1

The term "disorderly conduct" as applied in the Louisville police courts covers street soliciting and other actions relating to prostitution.

Those women arrested on the other charges were either engaged in prostitution, or had some relation thereto, or had lived with men while not married, with the exception of 1 woman arrested for drunkenness, of whom it could not be definitely proved that she had engaged in sexual immorality, although this was strongly suspected

by the husband and by a social-service worker who had seen the woman in jail on a previous occasion.

The available records showed, or the individuals themselves admitted, previous arrests as follows:

Number of previous arrests:	Number of individuals.
1	21
2	9
3	4
4	2
5	2
6	3
9	1
17	1
"Several"	4

In this connection it is believed that it will be of interest to give a résumé of the histories of 2 of these individuals. The subject referred to in the above table, as having had 9 prior arrests, gave the following history:

Her father, a laborer, was an alcoholic and could neither read nor write. The mother could barely write her name and is said to have been "nervous." Two brothers, both laborers, were also alcoholic. One had been arrested for stealing, and about 4 years previously had killed the subject's husband in a drunken brawl. Of the 4 sisters, 2 had spent time in an industrial school, one is alcoholic, and the other has had convulsions frequently during the greater part of her life. Three of the sisters, including the subject, can read and write; the others can not do either. They are all married.

The subject herself was born on a farm in Kentucky, is 32 years of age, and has lived in the city of Louisville since the age of 10. It seems that she attended school very little, although the reason for this is not clear, and she barely learned to write her name. As a child she is said to have had "St. Vitus dance" and to have walked in her sleep. At 15, she married a laborer, an alcoholic, who was killed 4 years before this study was made. The subject herself served a sentence of 1 year in jail as an accessory to the murder. She has worked at times as a domestic and in various factories.

Shortly after completing the above-mentioned jail sentence, she married a laborer, who was a drug habitué, and a thief, with whom she lived for about a month. She stated that she had been drinking heavily for about 4 years, and the police matron's records showed that she had been arrested 9 times during the past 18 months for drunkenness and disorderly conduct. She has 3 children living and 4 dead. She made a Binet age of 8.4 years. Her Wassermann test was negative, but she was found to be infected with gonorrhea.

The following history is that of the person noted in the above chart as having been arrested 17 times:

Her father was an alcoholic laborer who could neither read nor write, although the cause of his illiteracy is not known. The mother could neither read nor write, had convulsions frequently after the age of 12, and gave birth to 2 children prior to her marriage. The subject knows nothing of these 2 half-sisters except that they are living and married. She had 1 sister who had convulsions and died at the age of 19.

The subject herself lived on a farm until about 4 years previous to these studies and has since lived in Louisville. She claims to have attended school for 4 terms, but says

she was often a truant. She can now read and write, but poorly. She thinks she had spasms in childhood, and has had attacks of unconsciousness frequently during most of her life. She has a violent temper and is combative when angry. She has worked at times as a domestic and waitress, but has followed mainly the life of a street prostitute during the past 3 years. She states that she used morphine for 2½ years, but has used none during the past 3 years. During the past year she has been markedly alcoholic.

At the age of about 17 she killed a man by striking him on the head with a hatchet after he and her father had had a fight. For this crime she served 9 months in the penitentiary. At 21 she married a laborer, an alcoholic, and was arrested once for attempting to cut his throat. Her other arrests were on charges of drunkenness and disorderly conduct. She has 1 child living. She made a Binet age of 8.8 years. In May, 1918, her blood Wassermann was 4 plus, and she was found to be infected with gonorrhea.

These cases illustrate the very ineffective way in which the courts often handle our defectives. The early and permanent segregation of such persons would do much to prevent the spread of venereal diseases, lessen crime, and save the community the burden of worthless offspring.

In connection with the legal phase of these cases, the following brief record of a case is given as illustrating the difficulty in committing defectives to institutions under the present laws and practices in some States:

A woman, aged 19, single, was arrested on the streets on the night of July 5, 1918, for disorderly conduct and lodged in jail. At the time of the examination she stated that she had attended a country school between the ages of 7 to 14, but she could barely read and write. She had lived on a farm until 3 days prior to her arrest, when she came to Louisville with another woman. They lived in a Salvation Army house for 3 days, then went out on the streets, met 2 soldiers, with whom they had sexual relations, and were arrested on the same night.

At the jail she was found to have gonorrhea and gave a 3 plus Wassermann reaction, for which she was quarantined. Ordinary conversation showed her to be a defective. She made a Binet age of 7.3 years, although her general manner was rather natural. Her 2 sisters were said to have had illegitimate children and to have been considered defective by their neighbors.

While the subject was held under quarantine an attempt was made to secure her commitment to an institution for the feeble-minded. A man who had taken an interest in her while she was in jail secured a capable lawyer to handle her case, and a jury hearing was demanded for her. The jury decided that she was not feeble-minded.

Such cases are striking examples of the need of the psychiatrist for the proper handling of delinquent persons.

In addition to those persons of this group who had previously been actually arrested, there were 19 others who had been for some time under the observation of the various Louisville social agencies.

4. Physical Examinations.

A complete general physical examination was carried out in each case. One or more blood Wassermann tests were made in each case. One or more urethral and cervical smears for gonococci were made in all but one of the cases. Spinal fluid Wassermann tests were done

in 3 cases, and in 1 case the spinal fluid was subjected to Wassermann and globulin tests and cell count.

Nutrition.—The correct average of weight in relation to height is given by Butler as follows:

TABLE XXIV.—*Standard of height and weight* (Butler).

Inches.	Pounds.	Inches.	Pounds.
57	109	63	130
58	111	64	135
59	113	65	140
60	115	66	145
61	120	67	150
62	125		

At the time of the examination 95 of the women were regarded as having fair or good development, 5 as having poor development. Eighty-five were regarded as having fair or good nutrition and 15 were considered as being in a poor state of general nutrition. Of these 15 individuals, 9 had both syphilis and gonorrhea, 2 had signs of pulmonary tuberculosis, 1 had pulmonary emphysema, several had been users of alcohol, morphine, and cigarettes to excess, and several had badly decayed teeth, with pyorrhea.

According to Van Noorden, states of nutrition may be designated as "emaciated," "underweight," "medium nutrition," "stout," "slightly obese," and "extremely obese," depending upon the relation of weight to height.

The following table gives the number of persons falling in these various groups:

TABLE XXV.—*Nutrition record.*

State of nutrition:	Number.
Emaciated (33 or more pounds below average weight)	0
Underweight (14 to 33 pounds below average weight)	22
Medium nutrition (11 pounds above to 14 pounds below average weight)	58
Stout (11 to 33 pounds above average weight)	12
Slightly obese (33 to 55 pounds above average weight)	8
Extremely obese (55 or more pounds above average weight)	0

Skin conditions.—One subject had a general syphilitic eruption of the macular type; 1 had a fading urticarial eruption; and 1 had a patchy alopecia, dating from a recent attack of influenza. Three individuals had tattoo marks, 2, on the arms, and 1, on the thigh. Two showed scars about the neck, evidently from tubercular glands in childhood. Three showed hypodermic needle scars on the upper extremities.

Hearing.—The conditions listed below resulted in defects ranging from slight loss of acuity of hearing to complete deafness in the ear involved.

TABLE XXVI.—*Type and number of cases of defective hearing.*

	Left.	Right.
Chronic catarrhal otitis media	1	4
Acute catarrhal otitis media	3	.....
Double otitis media, catarrhal chronic	1	.....
Double otitis media, catarrhal acute	1	.....
Double otitis media, suppurative, healed, with defective hearing	2	.....
Otitis media, suppurative, healed, with defect in hearing	.....	1
Otitis media, suppurative	2	.....

One individual had had suppurating otitis media for 29 years.

Vision.—Refractive errors were present in 42 persons, the majority of which were of a minor degree, apparently unknown to the subjects and not interfering with their occupation. Two of these cases had such a high degree of myopia that correction was unsatisfactory. Ten cases were corrected to practically normal vision. One case of central corneal opacity and 2 cases of strabismus were found.

Respiratory system.—The following conditions involving the respiratory system were found:

TABLE XXVII.—*Respiratory defects.*

	Cases.
Deflected nasal septum	2
Nasal polypi	3
Chronic pharyngitis	19
Bronchitis (acute)	3
Pulmonary emphysema	2
Probable pulmonary tuberculosis	5

The last five persons listed in the above table were regarded as probably tuberculous, on the following physical signs; persistent moist râles, change in breath and voice sounds, which were present at one apex in 2, and at both apexes, in 3 individuals. Two of these persons had formerly been pronounced tuberculous, 2 were regarded as doubtful cases of pulmonary tuberculosis, and 1 had spent several months in a tuberculosis sanitarium a few years previously and probably had a healed lesion at the time of this examination. In no other instance were suitable specimens of sputum obtained for laboratory examination.

Measures of chest expansion gave the following results:

Expansion in inches:	Number.
½	1
1	26
1.5	49
2	22
2.5	2

The individual having only one-half inch expansion was a woman of 52, with well-marked pulmonary emphysema. The lack of normal expansion in others is probably explainable as due to indoor lives,

lack of proper physical exercise, and probably partly to poor development.

Focal infections and the gastrointestinal system.—In 5 persons the teeth were in good condition—that is, they were clean, not more than 1 tooth was missing, and all carious areas were properly filled. In each of the other 95 persons there were present usually several badly decayed teeth, or several teeth missing, and there was other evidence of a lack of dental repair and the use of the toothbrush. A condition that could be definitely designated as pyorrhea alveolaris was present in 42 persons. Daily use of toothbrush was reported by 18 subjects; occasional use by 47; 35 said they never used the brush.

Enlarged tonsils were present in 15 persons, and enlarged tonsils needing surgical treatment were present in 6.

In two individuals the presence of chronic anal fistulæ was noted. One person had been operated upon for appendicitis.

Ciculatory system.—The main disorders discovered in the circulatory system were cardiac lesions and relatively high blood pressure. Results of the blood Wassermann tests are given in Table XXX.

TABLE XXVIII.—*Cardiac disorders and accompanying conditions.*

Disorder.	Number of cases.	Accompanying conditions.
Mitral regurgitation	1	Woman of 20; enlarged tonsils; recent attack of influenza.
Double aortic and mitral lesions	1	Woman of 42 with 4 plus blood Wassermann reaction.
Hypertrophy	1	Pulmonary emphysema in woman of 52 years.
Probable myocardial changes	1	Woman of 34; alcoholic with syphilis; pale; dyspnœic on exertion.
Thickening of radial arteries	2	1. Alcoholic woman who appeared to be 45 or 50 years of age but gave her age as 36. 2. Alcoholic prostitute of 44, who gave a history of syphilitic infection 12 years ago.

Nine women were found to have a systolic blood pressure of 100 mm. or less and a diostolic blood pressure of 72 mm. or less. The factors that seemed to have a relation to this condition of low pressure were poor physique, indoor life, syphilis, alcohol, and tuberculosis. In all these persons the general state of nutrition was poor, a fact for which their diseases and habits of life were probably responsible.

TABLE XXIX.—*Blood pressure and accompanying conditions.*

Pressure.		Accompanying conditions.
Systolic.	Diastolic.	
140	50	Woman of 42. Alcoholic, syphilitic, double aortic lesion and mitral regurgitation.
145	95	Woman of 29; prostitute for 14 years. Alcoholic; 1 plus Wassermann.
180	110	Woman of 52. Pulmonary emphysema and cardiac hypertrophy.

The systolic blood pressure was found to measure from 100 to 120 mm. in practically all other individuals with a diastolic pressure of about 50 mm. or less. In 23 persons one or more groups of superficial lymph nodes were sufficiently enlarged to be felt. One suppurating bubo was found.

There are given in the following table the results of the Wassermann tests performed on subjects during the months of January, February, March, and April, 1919:

TABLE XXX.—*Wassermann tests.*

	Negative.	1 plus.	2 plus.	3 plus.	4 plus.
Number of subjects	57	6	8	8	21

Of the 57 women giving negative Wassermann reactions, 4 gave a definite history of syphilis, 1, 12, 16, and 21 years previously, respectively, with subsequent treatment; 4 had had 4 plus Wassermann reactions during the previous 10 months; and 1 had been a street prostitute for several years, giving a 1 plus Wassermann reaction 4 months previously.

Of the 6 women giving a 1 plus Wassermann reaction, 1 had a 4 plus reaction in July, 1918, 1 had been under treatment for syphilis for about 4 months, and 4 were known to have been alcoholic prostitutes for periods of from 1 to 14 years.

Of the 8 women giving a 2 plus Wassermann reaction, 1 had definite syphilis 4 years ago, 1 had a 4 plus Wassermann reaction in November, 1918, 1 had a primary lesion on the lip, and 1 had well-marked secondary symptoms at time the test was made. One gave a history of a stillbirth about 24 years previously, followed shortly after by 2 miscarriages with no further pregnancies, 1 was a feeble-minded girl taken into custody at a local railroad station, and 2 were alcoholic prostitutes.

There seems to be no doubt that those cases giving either a 3 plus or 4 plus Wassermann reaction had syphilis. Therefore, out of the total of 100 women there were 48 in regard to whom no evidence of syphilis could be found in history, physical examination, or Wassermann reaction. It seems that this relatively high percentage of women presumably not infected is explainable on the grounds that a considerable number of the women examined engaged in prostitution only occasionally, depending mainly on some legitimate occupation for a living, although there were three in this negative group who had engaged solely in prostitution for from 1 to 6 years. The possibility of a temporarily negative reaction should also be considered.

Genito-urinary system.—In determining the presence of gonorrhea,[1] smears made from the cervix and urethra and stained by the Gram method, were depended upon. The results were as follows:

Smears showing presence of gonococci	81
Smears regarded as doubtful	2
Smears not showing gonococci	16
Smear not made	1
Venereal warts	3
Persons presenting evidence of tubal infection	2

During a period of 5 years prior to this examination, 7 women had had pelvic operations, presumably for tubal infections due to the gonococcus in 6 cases and following an abortion in 1 case. Leaving out the doubtful case of operation following an abortion, 10.1 per cent of those presenting definite evidence of gonorrhea had had tubal involvement at some time during the course of the disease.

Among those subjects regarded as presumably not infected with gonorrhea, there were 3 women who had been engaged in prostitution almost continuously for 6, 8, and 14 years, respectively. It hardly seems possible that these women had escaped infection; rather, it is probable that the organisms were not found on one examination—a surmise in accordance with the common experience of finding positive and negative smears alternating, when examining smears for release of persons from detention.

The findings just given indicate that gonorrhea in the female is in many cases a symptomless disease, except in the event of tubal infection or other less common complications.

Nervous system.—Irregular pupils, with considerably diminished reaction to light, were found in a woman 44 years of age, who had engaged in prostitution intermittently for 21 years, had been heavily alcoholic, and gave a history of having contracted syphilis 12 years previously. At the time of the examination her blood and spinal fluid Wassermann reactions were negative, globulin negative, with 10 cells per cm. in spinal fluid.

Irregular pupils, with considerably diminished reaction to light, were found also in a woman 32 years of age who had been heavily alcoholic for at least 2 or 3 years. She had had several children born at term, no miscarriages, no history nor evidence of syphilis, and her blood Wassermann reaction was negative. Spinal puncture not done. This is probably another case in which alcohol was the cause of pupillary changes.

The left pupil was contracted and irregular, and the reaction to light diminished in both pupils in a woman 39 years of age, who stated that she had contracted syphilis 21 years previously, and acknowledged having been "moderately" alcoholic for many years.

[1] For findings in syphilis, see p. 1261.

At the time of examination she had a negative blood Wassermann reaction. Spinal puncture not done. No other neurological signs.

A small left pupil, with diminished light reaction, was found in an alcoholic woman 36 years of age, who had a negative blood Wassermann reaction. Spinal puncture not done.

The left pupil was small and irregular, with diminished reaction to light and accommodation, the right pupil showed poor reaction to light in a woman 26 years of age, who had been a prostitute for 8 years, had contracted syphilis 5 years previously, and at the time of examination had a 4 plus Wassermann reaction in blood serum. She had used morphine for 3 years, and had drunk whisky heavily for the past year. No other neurological signs. Spinal puncture not made.

The cause of pupillary changes (left pupil small and irregular, with diminished reactions to light) was not clear in the case of a woman 43 years of age, who began drinking heavily 10 or 11 years previously, and 3 years later began having pains in extremities, was in bed 2 months, "out of her head" at times, and had difficulty in walking for several months because of numbness in lower extremities. At the time of examination there was a total absence of patellar reflexes; diminished left Achilles reflex; senses of touch and pain seemed normal. Blood Wassermann reaction 4 plus; spinal fluid Wassermann negative; globulin test and cell count not made. Probably a case of old multiple alcoholic neuritis.

General.—Other physical conditions present were exophthalmic goiter, of which sufficient signs were present in 2 persons to make reasonably sure the diagnosis of hyperthyroidism of a mild type. Simple thyroid enlargements, with no evidence of oversecretion, were present in 5 persons. Speech defects were present in 3 persons. Syphilitic periostitis of tibia was found in 1 case. Residuals of old phlebitis of lower extremity were found in 1 instance. One individual had had the right thigh amputated at the middle, at the age of 11 years; 1 had an old ununited fracture of the clavicle.

Alcohol and drug habits.—Thirty-four subjects gave a history of steady drinking over considerable periods, or spree drinking; 27 gave a history of drinking small amounts of liquor "occasionally," but of never being intoxicated; and 30 denied the use of alcohol at any time. Seven had used both alcohol and morphine, at times simultaneously, at times alternately. One gave a history of having used morphine, cocaine, and alcohol; one, alcohol and paregoric. Seventeen were addicted to the use of cigarettes.

It seems certain that at the time of the examination, none of these persons was using narcotics. Their discontinuance of the habit seems in almost every case to have been directly the result of the anti-narcotic laws recently put into effect.

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It was rather surprising how easily those who were addicted to the use of drugs got along without them when they realized that it was practically impossible to obtain a further supply.

4. Mental Examination.

There are set forth below the results of the psychometric examination, carried out in accordance with the Goddard revision of the Binet-Simon scale. These tests were supplemented by questions of wider scope covering the subjects' general knowledge.

In the following table each individual is recorded as making that Binet age to which she came the nearest; for example, one making a Binet age of 10.6 years would be recorded as making 11 years.

TABLE XXXI.—*Record of Binet tests.*

Chronological age.	Tested mental age (years).					
	7	8	9	10	11	12
17 to 20	1	2	7	2	4	5
21 to 25		4	10	4	9	12
26 to 30	1	3	4	2	2	7
31 to 35	1	1			2	2
36 to 40	1	1	1	1	1	3
41 to 45		2	1		2	1
46 to 55						1
Total	4	13	23	9	20	31

Arranged in different form, the results can be shown as follows:

	Number of subjects.
Of Binet age under 10 years	40
Of Binet age of 10 and under 12	29
Of Binet age of 12 years or more	31

For the purpose of grouping these 100 subjects from a psychiatric standpoint, the following classification was adopted:

TABLE XXXII.—*Psychiatric classification.*

	Number of cases.
Feeble-minded	38
Constitutional inferiority	43
Epileptic with intellectual deficiency	1
Allied to epilepsy	2
Dementia præcox	1
Normal (probably)	7
Unclassified	8

Those classified as inherently feeble-minded were so diagnosed only after a consideration of all the available facts in connection with each individual, including early environment, educational opportunities, medical history, physical examination, general and

any special knowledge, with all information obtained from the Binet-Simon examination.

The Binet ages of these 38 feeble-minded persons ranged between 7 and 9.6 years. In this group several persons were the subjects of syphilis, several had been more or less addicted to the use of alcohol, and 1 had been a morphine habitué; but it is not believed that these factors played any important rôle in determining their present intellectual status. The group included 4 pairs of sisters, and 1 individual whose sister was classified as constitutionally inferior.

The relative incidence of gonorrheal infection, and alcohol and drug addiction, was slightly lower in the feeble-minded than in those classified as constitutionally inferior, while the incidence of syphilis was equal in the two groups.

Those individuals classified as constitutionally inferior or of psychopathic constitution came from environments which might be considered to range from fair to good, from which might be expected to come average citizens. However, all these persons apparently were indifferent in school work, more or less inefficient in their occupations, with rather frequent changes for no very good reason, and often idle for varying periods. All showed at one or more times in their lives bad social reactions, such as prostitution, alcoholism, drug addiction, thievery, forgery, neglect or desertion of children, and certain other offenses. They showed a changeability and irresponsibility, with a certain lack of foresight and judgment. On the Binet-Simon scale their mental ages ranged from 10.2 to 12 years.

It is probable that in this group belong many of the so-called "degenerates," but it seems better to consider such persons as having some degree of defect in development, rather than as having degenerated. Two individuals in the above group had recently been given a Binet examination by a psychologist and had been graded as "mentally normal" merely on the basis of making a grade of 12 years or more. Both of these individuals had been prostitutes for several years. They were addicted to the use of morphine and alcohol, and paregoric and alcohol, respectively. Each had been arrested more than once. One had served a term for grand larceny and the other for petit larceny.

It is believed that these cases well illustrate the necessity that those persons who carry out only psychometric tests confine themselves to merely a statement as to their findings in this respect, rather than attempt any general statements as to the subjects' mentality.

5. Types of Personality.

One subject was classified as a case of epilepsy, with defect. Her mother and sister had had convulsions for many years, and the subject herself had had spasms in childhood, and later suffered frequent losses of consciousness. She displayed a marked inability to learn well at school and had a violent temper, having once killed a man by striking him in the head with a hatchet, and at another time having been arrested for trying to cut her husband's throat. She made a Binet age of 8.8 years.

Two subjects were classified as cases allied to epilepsy, on the ground of egoistic make-up so marked as to have interfered with normal adjustment practically all their lives. They probably were both somewhat subnormal intellectually.

One individual was classified as a case of dementia præcox. Her father was alcoholic, sexually immoral, and had been twice admitted to a State hospital with what were apparently manic attacks. A sister had also been in a State hospital with a maniclike attack. The subject herself, 17 years of age, had reached the second year of high school, where she was an average student. About one year previous to our examination she was said to have had a "breakdown," that is she gave up her work, was quiet and self-absorbed, and at times irritable, but the mother could give no more details. About eight months later, immediately after her marriage, she was said to have been very "talkative and argumentative" for a time. These attacks seem to have been a depression and elevation, respectively, but we know too little to be confident about their exact nature. During this period she was caught practicing some sexual perversions on her 15-year-old brother-in-law. She gave a history of having been first sexually immoral about the age of 16. She was married about November, 1918, to a soldier, and when he returned to camp she went part of the way with him. After separation she fell in with some soldiers on the train with whom she drank and was sexually intimate. Then followed a period of about two or three months in which she engaged in prostitution, often practiced perversions, was at times alcoholic, and was arrested three times. It seems quite probable that during this period of excesses she was in a mild manic-like excitement, but this is not definitely known. At the time of this examination she was already in jail and was, no doubt, mildly elated. She was alert, quick, smiling, and spontaneously talkative, but quite clear and accurate in all her statements.

After being in jail a few days she was found to have gonorrhea. When she realized that an indefinite and probably long period of quarantine lay before her, she worried a good deal, and in a few days developed a quite marked maniclike attack. During this

attack she gave vent to much crude sexual material, many infantile ideas, prominent among which was a belief that she was pregnant by a negro, upon whom she had practiced fellatio, and later this colored fetus had changed into a blackbird and gone out from her body. Much of her scattered and symbolic productions were understandable in connection with the clear history she had given prior to the full development of the psychosis. After having been under observation for about a month she was committed to a State hospital as a case of dementia præcox.

In this case we have a person with a bad paternal heredity, herself for many years somnambulistic and the subject of frequent nightmares. Nothing is known in regard to an elation in connection with her immorality at the age of 16, but there occurred two later definite maniclike attacks, during which she engaged in excesses of various kinds, malignant symptoms appearing apparently in connection with the prospect of an indefinite period of detention facing her.

Seven individuals were classified as of probably normal make-up. This classification was made on the basis of the reasonably frank, open personality, with a considerable degree of insight in regard to their situation and position in society, with no evidence of inherent intellectual defect, and this in all cases in the face of unusually bad environment and lack of ordinary opportunities. While these persons presented defective moral reactions in varying degrees, it seems probable that bad environment was the determining factor.

Eight individuals were placed in an unclassified group on account of various interacting factors, which made it impossible to arrive at a fair estimate of personality. Brief comment on certain of these cases may be given here. Two women who were prostitutes were the daughters of prostitutes and had been in intimate contact with their mothers during their early years. They showed no definite intellectual defect. One woman who had been a prostitute had used alcohol for about 12 years, heroin, cocaine, and morphine alternately for about four years, and was the daughter of an alcoholic prostitute. She showed some evidence of intellectual defect, but in the light of her environment and previous alcoholic and drug habits it is believed to be impossible to evaluate properly the various factors influencing her conduct.

Two others of this unclassified group came from environments of ignorance and poverty, with an alcoholic factor in one instance. These two persons did well on intellectual tests. One was made an orphan before she was 4 years of age, after which she lived in an orphanage and with various relatives until about the age of 15 or 16. After that she supported herself in various ways, in later years almost entirely by prostitution. She contracted syphilis five years previous

to this study, had used morphine for three years, and for over a year had drunk heavily. At the time of this study she had a 4 plus blood Wassermann reaction and unequal pupils, which reacted poorly to light. She made a Binet age of 10 years. Here was clearly an end product, concerning whose personality practically nothing could be determined.

Still another individual of the unclassified group, aged 42, gave a poor history of her previous life, made a Binet age of 7.8 years, could barely read and write, had a 2 plus blood Wassermann reaction, negative spinal fluid Wassermann reaction, was slow and dull and slurred test words. Her history included a stillbirth about 24 years previously, followed by two miscarriages, but no other pregnancies. She stated that she had had rather frequent losses of consciousness during most of her life, and during the four years immediately preceding had frequently heard voices speaking of her as "that beggar, that drunkard, thief, and whore." At times she said she cursed people on the streets because of the voices. As a general rule, however, she was not greatly troubled by these hallucinatory experiences. She might be regarded as a feeble-minded epileptic who, late in life, developed auditory hallucinations and whose long-standing syphilitic infection was of uncertain effect, if of any. The alcoholic man with whom she was living was unable to give any information except to confirm her statements in regard to the auditory hallucinations. The case is not clear.

Finally, one woman, unclassified, aged 44, gave a history of early poverty, little educational opportunity, prostitution since about the age of 23, of decidedly alcoholic habits for the past 15 or 16 years, and of syphilis contracted 12 years previously. For this she had had considerable treatment. At the time of the examination she was dull, contradictory, and evidently quite defective or deteriorated. She presented no neurological signs except irregular pupils with sluggish light reaction. She had a negative blood Wassermann reaction, negative spinal fluid Wassermann reaction, globulin negative, and cell count of 10 cells per cm. It was not considered that a Korsakoff's syndrome could be diagnosed, and she seemed most probably an inherently defective person with some deterioration.

Several other types of personality observed may be briefly mentioned at this point. There were 3 individuals who could be regarded as the obtrusive or manic type of personality; that is, they were active, energetic, quick tempered, and were inclined to be quarrelsome and violent while under the influence of alcohol. However, in none of these persons could there be discerned a significant relation between the type of personality and prostitution.

Five individuals examined presented a definitely seclusive make-up, their prominent traits being shyness and backwardness in both

childhood and adult life. They spoke of themselves as always being "nervous," were usually quiet and unsociable except when under the influence of alcohol or drugs, had difficulty in securing and holding positions, had a tendency to have hallucinations, and displayed marked feelings of inferiority.

One individual was observed who might be regarded as a fatuous type of personality. She was not seclusive, and she did well on the Binet examination, yet her conduct had been characterized at all times under observation by a childish lack of judgment and an immature sense of responsibility.

It seems that the feeling of inferiority is found with great frequency in prostitutes, and it probably plays a considerable part in determining the individual to take up prostitution. It may at first seem surprising that a shy and bashful girl would engage in this life; but it is believed that this frequently occurs, and it is probably explainable on the ground that the part of the female in prostitution is so nearly passive and requires the exercise of so little intelligence.

In this study little consideration was given to the statement of any individual as to why she began sexual immorality; practically all such statements probably represent a rationalization rather than the real reason.

(Part III of these studies, dealing with the investigations into the social and environmental factors, which were made by the representative of the Children's Bureau, will appear in the next issue of Public Health Reports.)

WHAT CAN A COMMUNITY AFFORD TO PAY TO RID ITSELF OF MALARIA?

By L. M. Fisher, Associate Sanitary Engineer, U. S. Public Health Service.

Upon the intelligent understanding of the financial problem involved in malaria eradication will largely depend the rate of progress with which the malarious sections of the country will be cleared up. In places where health work has been backward the health authorities probably do not realize that the community will tax itself very heavily to be assured of good health, provided it has confidence in the ability of the health authorities to do what they say is necessary to clean up the community. Good health is the greatest human asset. The extent to which this is appreciated by the average man is indicated by the fact that advertising concerns find it profitable to make health the "appeal" in a large percentage of the advertising matter put out. Hugo Munsterberg, in his "Psychology of Business," says: "Psychological experiments in which advertisements with different feeling-appeals were graded by 20 men and 20 women showed on an average that the idea of health appealed to the personality most strongly. Next comes cleanliness * * * ." This is

an indication of the extent to which health authorities can draw upon public support when confidence is established by the results accomplished.

A man in a desperate situation will pay any sum to escape from it. The only requirement is that it must offer at least a faint chance of success. If his situation is less desperate, he will consider the money cost more in detail; it becomes then a question of relative values.

If a community has much malaria and possesses little money, it can afford to spend little on malaria, for other demands upon its funds can not be ignored. It must provide for its means of livelihood first. It must finance agriculture, industry, commerce, transportation, and keep business as active as possible. The money a community spends on malaria control should be considered as an investment. *Whether it is a good or a bad investment depends upon the money returns realized, just as in the case of any other investment.* The more intelligent and public-spirited a community is, the quicker will it be to sense the value of a good investment in malaria-control work.

The economic significance of malaria has probably not been fully realized by many people. The insidious losses do not attract marked attention, since they are practically an everyday occurrence and comparatively few people die of malaria. The losses occur in little leaks. Personal efficiency is reduced. The business man is not fully alive to his opportunities. The laborer can not render full value for his wages. His employer loses thereby and may attempt to recoup his losses by reducing the pay for labor, thus passing the loss on to the employee. The professional man suffers like the business man—from decreased personal efficiency. In addition, both suffer from the smaller volume of business and from poorer collections because of the reduced prosperity of the community. The manufacturer loses because of the lowered efficiency of the operative, and because of idle machines due to illness of the employees. The railroads lose because the community does not produce the freight it would produce if every worker were fully efficient.

Time is important in the computation of the amount of this loss. If a cotton mill, for instance, produces 5,000 pounds less of manufactured goods a day than it would produce if there were no malaria, it loses daily the profit that it would make on manufacturing 5,000 pounds of goods. The laborers lose each day the compensation they would receive for manufacturering 5,000 pounds of finished product. The railroad loses the revenue it would earn each day by hauling 5,000 pounds of freight from the community. The merchants lose because there is less money to spend that day. The doctor loses because the wage earner must spend his money for the necessities of life, leaving little or nothing for family medical atten tion. The children, who are the first in the community to suffer,

acquire a defective education because of lost days at school as well as inefficient days. This handicap projected over a period of years in the lifetime of the individual may become very formidable in dollars and cents. It is not practicable to name a definite figure indicative of this loss. The community, however, realizes that it is a very real loss.

The farmer loses a portion of his crops because his laborer is in bed or only partly efficient. Some of the family lose time nursing the sick; money is spent for quinine and other medicines, for screens, mosquito lotions, chill tonics, and so forth.

The property owner loses because of depreciated property values and low rents.

If all these losses are figured up for the year and capitalized, the result indicates from an economic and commercial viewpoint the amount to which the community would be justified in making a cash expenditure or in issuing bonds to effect permanent relief. From the result thus obtained, a sum must be deducted, the interest on which would pay for the maintenance charges on the permanent work.

Thus if the losses above mentioned should amount to, let us say, $8,000 a year for the community, figuring interest and sinking fund charges at 8 per cent, they would be capitalized at $100,000. Now if maintenance of ditches, etc., should cost $2,400 a year, this sum capitalized with interest at 8 per cent would amount to $30,000. The community would, therefore, be justified in bonding itself for $70,000, or in raising and spending $70,000 in cash. Whatever additional value the community would place upon the comforts of being free from mosquitoes and enjoying a reputation as a healthful, energetic, enterprising town, could be added to the sum of $70,000.

The enormous drain that malaria puts upon the resources of a community leads to discouragement, and enterprising persons will abandon the locality. What may be called a deterioration in the quality of the population is thus accentuated.

Carter, observing that this deterioration is progressive, said, in effect, that in a country where malaria is prevalent, the control of malaria is more important than the control of all other communicable diseases, including smallpox, cholera, bubonic plague, yellow fever, typhoid fever, dysentery, etc.; that the population would move out of a malarious country and would not return, whereas the people would return after the passing of a yellow fever epidemic or after cholera or plague; in short, that malaria ruined a country, financially.

If, in the above assumption, the community contained a population of 3,000, the per capita first cost would amount to about $23; but if the results sought, namely, the elimination of malaria, were accomplished, the expenditure would undoubtedly be justified, although the per capita cost would be high.

The first cost for malaria-control work varies widely for different communities. In some localities it may amount to possibly some figure like $1.50 per capita; in others it may amount to 20 times as much, or even more. *It may even amount to a figure which would make it cheaper to abandon the property created by the community and let the people move away, rather than pay the cost of eliminating malaria.* In such a case decision must be made between continuous malarial infection or abandonment of the property which the industry of the community has created. The community is thus caught on the two horns of the dilemma. Some communities have, perhaps, been abandoned, where control measures, intelligently applied, would have cost less than the value of the property abandoned; but they were abandoned because of the fact that knowledge of just what was necessary to be done did not exist.

The best course to pursue, from a purely economic standpoint, depends in any case upon three factors: the annual community loss, the first cost of permanent work, and the cost of maintenance. This may be expressed exactly by the following mathematical formulæ:

(1) Let P=population in the community, and
(2) C=per capita first cost of malaria-control work; then
(3) PC=total cost of the work.
(4) Let I=interest and sinking fund charge in per cent; then
(5) PCI=total annual interest and sinking fund charge in dollars.
(6) Let M=maintenance in per cent of first cost; then
(7) PCM=total annual maintenance charge, and
(8) PCI+PCM=total annual cost, interest, and maintenance.
(9) Let R=per cent of population infected; then
(10) PR=number of infected persons in the community.
(11) Let V=annual loss in dollars per person infected; then
(12) PRV=total annual loss to the community before control, and
(13) PRV−(PCI+PCM)=total saving for community=P [RV−C (I+M)];

(14) $\frac{PRV-(PCI+PCM)}{P}$=net average annual gain per capita=RV−C (I+M); and

(15) $\frac{\frac{PRV-(PCI+PCM)}{P}}{C}$=annual dividend to community on first cost=$\frac{RV}{C}-(I+M)$.

Now, if only partial control is effected, and we let

(16) F = the percentage of control, such as 65%, 80%, 90%, etc., then equation (12) becomes
(17) PRVF = average annual saving under partial control; this factor F will appear in each of the remaining equations, and equation (15) will take the form
(18) $\frac{RVF}{C}-(I+M)$ = annual dividend to community on first cost.

From this equation it is evident that the dividend varies directly as the percentage of the population infected, directly as the loss per person infected, directly as the percentage of control, and inversely as the per capita first cost, i. e., the greater the infection, the greater

the dividend; the greater the annual loss per person infected, the greater the dividend; the greater the percentage of control, the greater the dividend; and the less the first cost, the greater the dividend. The percentage of infection alone does not determine the wisdom of undertaking the work, nor does the per capita cost, but both must be considered together.

Now, if we take two communities, A and B, equal in population, and assume interest charges the same in both places, the annual maintenance a fixed percentage of the first cost in each place, the annual loss per person infected the same in each place, and 100 per cent reduction in each place, but with only 10 per cent of the population infected in A and 85 per cent in B, and with a per capita cost of only $1.50 in A whereas it is $10 in B, then, substituting these values in equation 18, we have

$$\text{Dividend for A} = \frac{10 \times 5}{1.50} - (8+7) = 18.3 \text{ per cent, and}$$

$$\text{Dividend for B} = \frac{85 \times 5}{10} - (8+7) = 27.5 \text{ per cent.}$$

These results are only illustrative, but they indicate that the dividends on the first cost in the case of B are greater than they are for A, although the per capita cost for B was very much greater than that for A.

Therefore, in order to arrive at an intelligent decision as to the profit of proposed malaria work in a community, the first requirement is that a malaria census be taken to determine the approximate annual loss suffered because of malaria. The next step should be the preparation of an estimate of first cost and that of annual maintenance. From formula (18) the annual average dividend could be approximated.

The sum that a community could *afford* to pay on the above assumptions may be very materially greater than the sum it is *willing* to pay.

AN INTENSIVE COURSE OF INSTRUCTION ON SYPHILIS.

The Rochester Health Bureau is giving an intensive course of instruction in regard to syphilis, at the State General Hospital and Dispensary. This course will include—

1. The history and municipal control of syphilis.
2. Clinical lectures and demonstrations.

The course of clinical lectures and demonstrations will include—

(*a*) Early diagnosis.

(*b*) Taking of blood and demonstration of the technique for Wassermann examination.

(*c*) Preparation of solutions of arsphenamine and technique of its administration.
(*d*) Methods of administering mercury.
(*e*) Spinal punctures and the cytology and chemistry of spinal fluid.

The lecturers and demonstrators are able and experienced men. The course is free and will be given twice. The first course will be given June 14–19, 1920, and the second course June 24–26. The number of physicians taking the work is limited to fifteen in each course.

Applications must be sent to the Health Bureau, Chestnut and James Streets, Rochester, N. Y., and those applying for the first course must have their applications in by June 12. Those applying for the second course should have their applications in by June 19.

GARBAGE-DISPOSAL ORDINANCE HELD VALID.

An ordinance of the city of Joplin, which provides that the city may "contract with a suitable person, firm or corporation, for the exclusive right to dispose of the garbage in the city," has been declared valid [1] by the Supreme Court of Missouri.

Pursuant to the ordinance the plaintiff was, by contract, given the exclusive right to collect and dispose of garbage. The defendants removed garbage in violation of the ordinance, and the plaintiff sought to enjoin such removal. The defendants contended that the ordinance was void because it authorized the city to make an exclusive contract for the removal and disposal of garbage, and also that the ordinance was destructive of property rights.

The supreme court, however, granted an injunction, holding the ordinance to be the fair exercise of the police power lodged in the city. The court disposed of the contentions of the defendants by holding that in such a case the city is exercising its police power in the interest of the public health and is not establishing a monopoly, and that the value of the owner's rights in garbage "is so inconsequential that they are absorbed and lost in the greater rights of the State to protect such owner and the public at large from the dire effects of improper methods in the handling and disposition of the same."

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[1] Valley Spring Hog Ranch Co. *v.* Plagmann et al., 220 S. W., 1.

DAMAGES FOR DEATH FROM ANTHRAX-INFECTED SHAVING BRUSH DISALLOWED.

The following abstract of a court decision is taken from the advance sheets of the Federal Reporter, issue of May 13, 1920.

"Included in an order for goods from a mail-order house, by a number of neighbors, was that for a shaving brush, which was ordered by a lady at her husband's request. In shaving, after using the brush, he accidentally cut himself slightly with his razor, and became inoculated with anthrax germs, with which the brush was charged, and died from the effects. An action was brought by the widow and minor children, based upon the breach of an alleged warranty contained in the catalogue from which the goods were ordered. The action, which was to recover $30,000, was removed to the federal court, where plaintiff had judgment. The Circuit Court of Appeals, Fifth Circuit, reversed the judgment in S. H. Kress & Co. *v.* Lindsey, 262 Federal Reporter, 331.

"In the opinion, written by District Judge Ervin, it was held that there was no such contractual privity between the seller of the brush and purchaser's widow and children as to give the latter a right of action for breach of alleged warranty, nor any survivorship to them under any breach of warranty directly to the purchaser himself, and to recover under the Mississippi death statute (Laws Miss. 1914, c. 214), it must appear from the complaint that the dealer knew of the infection in the brush, or was guilty of some negligence, and that a complaint which merely alleges breach of warranty can not be treated as sufficient under the statute."

The Public Health Service is unable to supply the demand for bound copies of the Public Health Reports. Librarians and others receiving the Public Health Reports regularly should preserve them, as it will probably not be practicable to furnish bound copies on individual requests in the future.

DEATHS DURING WEEK ENDED MAY 15, 1920.

[From the "Weekly Health Index," May 18, 1920, issued by the Bureau of the Census, Department of Commerce.]

Deaths from all causes in certain large cities of the United States during the week ended May 15, 1920, infant mortality (per cent), annual death rates, and comparison with corresponding week of preceding years.

City.	Population July 1, 1918, estimated.	Week ended May 15, 1920.		Average annual death rate per 1,000.[2]	Per cent of deaths under 1 year.	
		Total deaths.	Death rate.[1]		Week ended May 15, 1920.	Previous year or years.[2]
Arkon, Ohio	[3] 208,435	46	11.5	.....	26.1	.....
Albany, N. Y.	[3] 113,344	56	25.8	C 15.9	7.1	C 11.8
Atlanta, Ga.	201,732	67	17.3	C 17.3	13.4	C 9.0
Baltimore, Md.	[4] 669,981	219	17.0	A 19.2	13.7	A 16.2
Birmingham, Ala.	197,670	68	15.3	A 17.1	22.4	A 11.5
Boston, Mass.	785,245	209	13.9	A 17.5	11.5	A 16.0
Buffalo, N. Y.	473,229	139	15.3	C 17.0	20.1	C 24.0
Cambridge, Mass.	111,432	25	11.7	A 12.8	12.0	A 13.4
Chicago, Ill.	2,596,681	616	12.4	A 14.5	18.7	A 17.3
Cincinnati, Ohio	[3] 401,158	154	20.0	C 16.6	12.3	C 18.3
Cleveland Ohio	810,306	210	13.5	C 11.1	16.7	C 15.1
Columbus, Ohio	225,296	68	15.7	C 16.2	10.3	C 18.6
Dayton, Ohio	[3] 153,830	45	15.3	C 12.7	15.6	C 11.1
Denver, Colo.	.....	69	.....	.....	11.6	.....
Detroit, Mich.	.....	244	.....	.....	21.7	.....
Fall River, Mass.	128,392	31	12.6	C 13.8	22.6	C 20.6
Grand Rapids, Mich.	135,450	39	15.0	C 16.2	23.1	C 2.4
Indianapolis, Ind.	290,389	102	18.3	C 14.4	12.7	C 10.0
Jersey City, N. J.	318,770	97	15.9	C 13.2	15.5	C 8.6
Kansas City, Mo.	313,785	82	13.6	C 26.3	6.1	C 3.2
Los Angeles, Calif.	568,495	141	12.9	A 13.0	9.9	A 11.5
Louisville, Ky.	[3] 234,891	67	14.9	C 16.3	11.9	C 9.6
Lowell, Mass.	109,081	31	14.8	A 16.8	2.8	A 14.9
Memphis, Tenn.	[3] 162,351	64	20.6	C 11.6	4.7	C 5.7
Milwaukee, Wis.	[3] 457,147	83	9.5	A 13.0	20.5	A 19.4
Minneapolis, Minn.	[3] 380,498	101	13.8	C 14.9	20.8	C 16.2
Nashville, Tenn.	[3] 118,342	33	14.5	C 22.3	15.2	C 8.0
Newark, N. J.	[3] 415,609	112	14.1	C 15.1	17.9	C 20.5
New Haven, Conn.	151,865	44	14.8	C 17.2	25.0	C 15.7
New Orleans, La.	[3] 387,408	96	12.9	A 20.6	8.3	A 16.2
New York, N. Y.	5,215,879	1,332	13.3	C 14.3	14.9	C 14.2
Oakland, Calif.	214,206	44	10.7	A 11.9	6.8	A 15.2
Omaha, Nebr.	180,264	42	12.1	C 8.1	19.0	C 7.1
Philadelphia, Pa.	1,761,371	483	14.3	[5] 15.7	17.6	[5] 13.0
Pittsburgh, Pa.	[3] 588,193	185	16.4	C 19.1	17.8	C 18.4
Portland, Oreg.	.....	58	.....	.....	12.1	C 15.0
Providence, R. I.	263,613	67	13.3	C 14.2	13.4	C 13.9
Richmond, Va.	160,719	50	16.2	C 17.8	6.0	C 7.3
Rochester, N. Y.	264,856	74	14.6	C 11.4	14.9	C 8.6
St. Louis, Mo.	[3] 773,000	194	13.1	C 13.7	11.9	C 14.1
St. Paul, Minn.	[3] 234,595	51	11.3	C 12.6	9.8	C 8.9
San Francisco, Calif.	478,530	134	14.6	C 17.9	7.5	C 5.5
Spokane, Wash.	[3] 104,204	24	12.0	C 11.0	12.5	C 18.2
Syracuse, N. Y.	[3] 171,647	53	16.1	C 16.9	22.6	C 14.8
Toledo, Ohio	[3] 213,109	67	14.4	A 16.0	14.9	A 12.5
Washington, D. C.	[3] 437,414	89	10.6	A 15.6	11.2	A 9.3
Worcester, Mass.	173,650	43	12.9	C 12.6	7.0	C 23.8

[1] Annual rates per 1,000 estimated population.
[2] "A" indicates data for the corresponding week of the years 1913 to 1917, inclusive. "C" indicates data for the corresponding week of the year 1917.
[3] 1920 enumeration, subject to revision.
[4] Population estimated as of July 1, 1919.
[5] Data are based on statistics of 1915, 1916, and 1917.

Summary of information received by telegraph from industrial insurance companies for week ended May 15, 1920.

Policies in force	43,799,083
Number of death claims	8,696
Death claims per 1,000 policies in force, annual rate	10.4

PREVALENCE OF DISEASE.

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

UNITED STATES.

CURRENT STATE SUMMARIES.

Telegraphic Reports for Week Ended May 22, 1920.

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

ALABAMA.	Cases.
Chicken pox	41
Malaria	9
Measles	27
Scarlet fever	13
Smallpox:	
Jefferson County	12
Mobile	14
Scattering	11
Tuberculosis (pulmonary)	19
Typhoid fever	9
Whooping cough	17

ARKANSAS.	
Cerebrospinal meningitis	1
Chicken pox	15
Diphtheria	2
Hookworm	3
Influenza	20
Leprosy	1
Malaria	27
Measles	73
Pellagra	22
Scarlet fever	6
Smallpox	24
Trachoma	4
Tuberculosis	28
Typhoid fever	7
Whooping cough	30

CALIFORNIA.	
Cerebrospinal meningitis:	
Eureka	1
Los Angeles	1
Oakland	1
Santa Cruz	2
Influenza	19
Lethargic encephalitis:	
Los Angeles	2
San Francisco	1

CALIFORNIA—continued.	Cases.
Leprosy—Los Angeles	1
Pellagra	2
Poliomyelitis—Los Angeles	1
Smallpox:	
Azusa	9
Los Angeles	14
Scattering	37
Typhoid fever	13

CONNECTICUT.	
Cerebrospinal meningitis:	
Bridgeport	1
Chicken pox	21
Diphtheria:	
Fairfield County—Bridgeport	8
Hartford County—Hartford	10
Litchfield County—Litchfield	6
New Haven County—Wallingford	7
Scattering	37
German measles	5
Lethargic encephalitis	2
Measles:	
Hartford County—	
Farmington	11
Hartford	46
New Britain	18
West Hartford	8
Litchfield County—Watertown	11
New Haven County—	
Derby	9
New Haven	17
North Haven	27
Waterbury	12
New London County—	
Groton	17
New London	28
Windham County—Brooklyn	10
Scattering	61

CURRENT STATE SUMMARIES—Continued.

Telegraphic Reports for Week Ended May 22, 1920—Continued.

CONNECTICUT—continued.	Cases.
Mumps	58
Paratyphoid fever	1
Pneumonia	13
Scarlet fever:	
Hartford County—New Britain	20
New Haven County—	
New Haven	7
Waterbury	16
Scattering	41
Trachoma	2
Tuberculosis (all forms)	41
Typhoid fever	6
Whooping cough	24

DELAWARE.	
Cerebrospinal meningiti.—Laurel	1
Chicken pox	4
Diphtheria	4
Influenza	1
Measles	62
Mumps	2
Pneumonia	2
Scarlet fever—Wilmington	9
Smallpox	1
Tuberculosis	2
Typhoid fever	3

FLORIDA.	
Cerebrospinal meningitis	1
Diphtheria	7
Influenza	48
Malaria	14
Pneumonia	42
Scarlet fever	2
Smallpox	1
Typhoid fever	6

GEORGIA.	
Cerebrospinal meningitis	1
Chicken pox	40
Conjunctivitis (acute infectious)	9
Diphtheria	11
Dysentery (amebic)	15
Dysentery (bacillary)	26
German measles	4
Hookworm	10
Influenza	[1] 124
Malaria	66
Measles	107
Mumps	32
Paratyphoid fever	2
Pneumonia	22
Scarlet fever	10
Septic sore throat	14
Smallpox	63
Trachoma	2
Tuberculosis (all forms)	31
Typhoid fever	12
Whooping cough	85

ILLINOIS.	
Cerebrospinal meningitis:	Cases.
Chicago	1
Joliet	1
Diphtheria:	
Chicago	145
Scattering	28
Influenza—Chicago	16
Lethargic encephalitis:	
Chicago	2
Toulon	1
Poliomyelitis:	
Chicago	1
Vermilion County—Butler Township	1
Pneumonia:	
Chicago	194
Scattering	18
Scarlet fever:	
Chicago	168
Scattering	68
Smallpox:	
Chicago	10
Galesburg	15
Rock Island	7
Varna	10
Scattering	72
Typhoid fever	18

INDIANA.	
Cerebrospinal meningitis:	
Bartholomew County	1
Diphtheria	34
Measles:	
Clark County	96
Scattering	341
Poliomyelitis:	
Shelby County	1
Rabies in animals	3
Scarlet fever:	
Elkhart County	32
Scattering	108
Smallpox	131

IOWA.	
Chicken pox	7
Diphtheria	6
Measles:	
Aurora	8
Burlington	10
Council Bluffs	17
Davenport	13
Dubuque	46
Everly	18
Scattering	49
Mumps	5
Pneumonia	1
Scarlet fever	46
Smallpox:	
Davenport	9
Des Moines	15
Dubuque	17
Scattering	87
Whooping cough	4

[1] Includes delayed reports.

CURRENT STATE SUMMARIES—Continued.

Telegraphic Reports for Week Ended May 22, 1920—Continued.

KANSAS.	Cases.
Diphtheria	18
Scarlet fever	39
Smallpox	116
LOUISIANA.	
Cerebrospinal meningitis	4
Malaria	22
Measles	17
Scarlet fever	5
Smallpox	29
Tuberculosis	42
Typhoid fever	14
MAINE.	
Chicken pox	13
Conjunctivitis	1
Diphtheria	3
Measles:	
Bangor	28
Lewiston	29
Scattering	14
Mumps	15
Scarlet fever:	
Auburn	9
Portland	10
Scattering	19
Smallpox	2
Tuberculosis	26
Typhoid fever	12
Whooping cough	14
MARYLAND.[1]	
Cerebrospinal meningitis	3
Chicken pox	32
Diphtheria	31
Influenza	46
Lethargic encephalitis	1
Malaria	1
Measles	456
Mumps	27
Ophthalmia neonatorum	2
Pneumonia (all forms)	96
Scarlet fever	46
Septic sore throat	1
Smallpox	5
Tuberculosis	44
Typhoid fever	7
Whooping cough	32
MASSACHUSETTS.	
Anthrax	3
Cerebrospinal meningitis	3
Chicken pox	118
Conjunctivitis (suppurative)	6
Diphtheria	126
German measles	15
Influenza	18
Measles	1,482
Mumps	180
Ophthalmia neonatorum	31

MASSACHUSETTS—continued.	Cases.
Pneumonia (lobar)	106
Scarlet fever	332
Septic sore throat	1
Smallpox	3
Tuberculosis (all forms)	216
Typhoid fever	11
Whooping cough	322
MINNESOTA.	
Cerebrospinal meningitis	1
Smallpox:	
Red Lake County—Garnes Township	8
St. Louis County—Winton	8
Scattering	11
MISSISSIPPI.	
Cerebrospinal meningitis	2
Diphtheria	1
Influenza	23
Scarlet fever	4
Smallpox	25
Typhoid fever	14
MONTANA.	
Cerebrospinal meningitis:	
Laurel	1
Diphtheria	80
Influenza	1
Rocky Mountain spotted or tick fever:	
Jordan City	1
Scarlet fever	20
Smallpox	53
Typhoid fever	4
NEBRASKA.	
Cerebrospinal meningitis:	
Omaha	1
Chicken pox	14
Diphtheria	4
Influenza	1
Measles:	
Lincoln	55
Omaha	57
Plattsmouth	11
York	17
Scattering	35
Mumps	29
Scarlet fever:	
Omaha	10
Scattering	6
Septic sore throat	2
Smallpox:	
Lincoln	13
Omaha	12
York	10
Scattering	59
Tuberculosis	1
Whooping cough	6

[1] Week ended Friday.

CURRENT STATE SUMMARIES—Continued.

Telegraphic Reports for Week Ended May 22, 1920—Continued.

NEW JERSEY.

	Cases.
Influenza	27
Measles, unusually prevalent.	
Pneumonia	117
Smallpox:	
Cases reported from—	
North Arlington.	
Point Pleasant.	
Union.	

NEW MEXICO.

Chicken pox	3
Diphtheria:	
Tecolote	15
Scattering	20
German measles	1
Hookworm	1
Lethargic encephalitis	1
Malaria	2
Measles	24
Mumps	8
Pneumonia	9
Smallpox	2
Trachoma	1
Tuberculosis	24
Typhoid fever	8
Whooping cough	15

NEW YORK.

(Exclusive of New York City.)

Cerebrospinal meningitis:	
Greenwood	1
Diphtheria	156
Influenza	41
Measles	1,827
Pneumonia	266
Scarlet fever	204
Smallpox	6
Tetanus	1
Typhoid fever	14
Whooping cough	259

NORTH CAROLINA.

Cerebrospinal meningitis	1
Chicken pox	50
Cholera infantum	2
Diphtheria	15
German measles	2
Measles	95
Ophthalmia neonatorum	2
Pneumonia (all forms)	20
Scarlet fever	20
Septic sore throat	1
Smallpox	41
Typhoid fever	13
Whooping cough	263

OHIO.

Diphtheria—Cincinnati	13
Scarlet fever:	
Akron	33
Cincinnati	72
Guernsey County—Valley Township	10

OHIO—continued.

	Cases.
Scarlet fever—Continued.	
Springfield	12
Trumbull County—Driscoll Township	11
Youngstown	14
Smallpox:	
Bucyrus	5
Lima	9
Youngstown	24

SOUTH DAKOTA.

Chicken pox	3
Diphtheria	6
Measles	202
Pneumonia	3
Scarlet fever	40
Smallpox	45
Tuberculosis	1

TEXAS.

Chicken pox	37
Diphtheria	3
Influenza	3
Malaria	10
Measles:	
Austin	7
Dallas	32
Mumps—Dallas	2
Pellagra	3
Pneumonia	6
Scarlet fever	1
Smallpox:	
Dallas	15
Fort Worth	35
Trachoma	1
Tuberculosis	29
Typhoid fever:	
Galveston	8
Scattering	8
Whooping cough	23

VERMONT.

Chicken pox	20
Diphtheria	5
Measles	85
Mumps	39
Pneumonia	3
Scarlet fever	5
Typhoid fever	2
Whooping cough	11

VIRGINIA.

Smallpox:	
Alleghany County	5
Nelson County	1
Prince Edward County	1
Wise County	5

WASHINGTON.

Chicken pox	38
Diphtheria	25
Measles	382
Mumps	11
Pneumonia	1
Scarlet fever	39

CURRENT STATE SUMMARIES—Continued.

Telegraphic Reports for Week Ended May 22, 1920—Continued.

WASHINGTON—continued.	Cases.
Smallpox	79
Tuberculosis	5
Typhoid fever	4
Whooping cough	40
WEST VIRGINIA.	
Cerebrospinal meningitis:	
Fairmont	1
Diphtheria	7
Measles:	
Clarksburg	9
Moundsville	7
Parkersburg	11
Sistersville	12
Wellsburg	18
Wheeling	54
Scattering	19
Scarlet fever	13
Smallpox:	
Bluefield	13
Scattering	10
Typhoid fever	3

WISCONSIN.	Cases.
Milwaukee:	
Cerebrospinal meningitis	2
Chicken pox	49
Diphtheria	18
Measles	712
Poliomyelitis	1
Rubella	3
Scarlet fever	20
Smallpox	11
Tuberculosis	25
Typhoid fever	2
Whooping cough	67
Scattering:	
Cerebrospinal meningitis	1
Chicken pox	37
Diphtheria	25
Influenza	1
Measles	648
Scarlet fever	111
Smallpox	133
Tuberculosis	14
Typhoid fever	4
Whooping cough	37

Kentucky Report for Week Ended May 15, 1920.

Cerebrospinal meningitis:	Cases.
Oldham County	1
Chicken pox	9
Diphtheria	7
Dysentery	6
German measles	1
Influenza	10
Malaria	1
Measles:	
Jefferson County	54
Kenton County	17
Lawrence County	11
Muhlenburg County	10

Measles—Continued:	Cases.
Pike County	36
Scattering	47
Mumps	5
Pneumonia	15
Scarlet fever	36
Smallpox:	
Daviess County	27
Scattering	6
Trachoma	3
Tuberculosis	15
Typhoid fever	8
Whooping cough	21

SUMMARY OF CASES REPORTED MONTHLY, BY STATES.

Tables showing, by counties, the reported cases of cerebrospinal meningitis, influenza, malaria, pellagra, poliomyelitis, smallpox, and typhoid fever are published under the names of these diseases. (See names of these and other diseases in the table of contents.)

The following monthly State reports include only those which were received during the current week. These reports appear each week as received.

State.	Cerebrospinal meningitis.	Diphtheria.	Influenza.	Malaria.	Measles.	Pellagra.	Poliomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
APRIL, 1920.										
Arizona	.....	5	31	.....	55	.....	.....	12	29	.....
Louisiana	10	25	83	18	114	13	1	24	209	26
Maryland	4	173	589	6	1,802	.....	.....	243	21	27
Michigan	.....	607	.....	.....	4,145	.....	.....	1,000	417	160
Nebraska	4	56	258	.....	1,342	.....	1	275	607	16
West Virginia	7	96	296	.....	995	.....	1	138	312	50

ANTHRAX.

Chicago, Ill., and New York, N. Y.

During the week ended May 8, 1920, anthrax was reported as follows: Chicago, Ill., 2 cases and 1 death; New York, N. Y., 1 case.

CEREBROSPINAL MENINGITIS.

State Reports for April, 1920.

Place.	New cases reported.	Place.	New cases reported.
Louisiana:		Nebraska—Continued.	
Allen Parish	2	Thayer County	1
Bossier Parish	3	Saline County	1
Lafourche Parish	3		
Orleans Parish	2	Total	4
Total	10	West Virginia:	
		Cabell County	1
Maryland:		Greenbrier County	2
Baltimore	4	Kanawha County	1
		Ohio County	1
Nebraska:		Randolph County	1
Custer County	1	Roane County	1
Lancaster County	1	Total	7

City Reports for Week Ended May 8, 1920.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio	1		Philadelphia, Pa	2	
Boston, Mass	1		Plainfield, N. J	1	1
Chicago, Ill	1	1	Rochester, N. Y		1
Cincinnati, Ohio	1		Rock Island, Ill	1	1
Cleveland, Ohio	1		Rutland, Vt	1	1
Detroit, Mich	4	1	St. Louis, Mo	2	
Duluth, Minn	1		San Bernardino, Calif	1	
Fall River, Mass	1	1	Sandusky, Ohio	1	
Freeport, Ill	1	1	San Francisco, Calif	4	
Grand Rapids, Mich	1		Santa Barbara, Calif		1
Milwaukee, Wis	2		Savannah, Ga	1	
Mount Vernon, N. Y	2	2	Trenton, N. J		1
New Bedford, Mass		1	Waterbury, Conn	1	1
New Orleans, La	1		Wausau, Wis	1	
Oakland, Calif		1	Winston-Salem, N. C	1	
Passaic, N. J	2	1	Worcester, Mass		1

DIPHTHERIA.

See Telegraphic weekly reports from States, p. 1277; Monthly summaries by States, p. 1281; and Weekly reports from cities, p. 1294.

INFLUENZA.

Maryland Report for April, 1920.

Place.	New cases reported.	Place.	New cases reported.
Maryland:		Maryland—Continued.	
Baltimore	113	Howard County—	
Allegany County—		Rural districts	3
Cumberland	16	Kent County—	
Westernport	3	Rural districts	3
Frostburg	1	Montgomery County—	
Rural districts	8	Rural districts	26
Anne Arundel County—		Prince Georges County—	
Annapolis	35	Laurel	2
Rural districts	32	Rural districts	8
Baltimore County—		Somerset County—	
Rural districts	5	Crisfield	2
Calvert County—		Rural districts	4
Rural districts	2	Talbot County—	
Carroll County—		Easton	1
Rural districts	10	Rural districts	4
Cecil County—		Washington County—	
Rural districts	2	Rural districts	5
Charles County—		Wicomico County—	
Rural districts	22	Salisbury	1
Dorchester County—		Rural districts	193
Cambridge	13		
Rural districts	72	Total	589
Frederick County—			
Frederick	1		
Brunswick	2		

City Reports for Week Ended May 8, 1920.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Alton, Ill	1		Los Angeles, Calif	10	
Ansonia, Conn	1		Louisville, Ky	2	
Atlanta, Ga	3		Minneapolis, Minn		3
Atlantic City, N. J	1		Nashville, Tenn		2
Baltimore, Md	11	2	New York, N. Y	22	13
Beaumont, Tex		1	Niagara Falls, N. Y	1	1
Biddeford, Me	3		Oakland, Calif	2	1
Billings, Mont		1	Orange, Conn		1
Birmingham, Ala		2	Petersburg, Va	2	
Binghamton, N. Y	2		Philadelphia, Pa	3	5
Boston, Mass	9	1	Portland, Me		1
Cambridge, Mass	2	2	Providence, R. I		1
Charleston, N. C		2	Richmond, Va		1
Chattanooga, Tenn		1	Riverside, Calif	1	
Chicago, Ill	7	7	Rocky Mount, N. C		1
Cincinnati, Ohio	1	1	Sacramento, Calif	5	1
Cleveland, Ohio	3	5	St. Louis, Mo	2	
Columbus, Ohio		2	San Bernardino, Calif	1	
Cumberland, Md	2		San Francisco, Calif	2	1
Dallas, Tex	9		Savannah, Ga		1
Detroit, Mich		1	Somerville, Mass	2	
Everett, Mass	2		Springfield, Ill	1	
Haverhill, Mass	3		Springfield, Mass		1
Houston, Tex	1	1	Springfield, Ohio	1	
Huntington, Ind	1	1	Stockton, Calif		1
Jamestown, N. Y	3		Trenton, N. J	2	
Jersey City, N. J	1		Washington, D. C	1	1
Kansas City, Mo	3	3	Watertown, Mass	1	
Keene, N. H	2		Worcester, Mass	1	
Lexington, Ky		1			

LEPROSY.

Los Angeles, Calif.—Week Ended May 8, 1920.

During the week ended May 8, 1920, 1 case of leprosy was reported at Los Angeles, Calif.

LETHARGIC ENCEPHALITIS.

State Reports for April, 1920.

During April, 1920, 2 cases of lethargic encephalitis were reported in Louisiana, 16 in Maryland, and 3 in Nebraska.

City Reports for Week Ended May 8, 1920.

During the week ended May 8, 1920, 1 death from lethargic encephalitis was reported at Omaha, Nebr., 1 death at Orange, N. J., 1 case at San Francisco, Calif., and 1 case and 1 death at Rock Island, Ill.

MALARIA.

Louisiana and Maryland Reports for April, 1920.

Place.	New cases reported.	Place.	New cases reported.
Louisiana:		Maryland:	
Concordia Parish	1	Allegany County—	
East Carroll Parish	3	Cumberland	1
Grant Parish	2	Dorchester County—	
Iberville Parish	3	Hudson	1
Jeff Davis Parish	1	Frederick County—	
Natchitoches Parish	1	Mount Pleasant	1
Pointe Coupee Parish	1	Prince Georges County—	
St. Charles Parish	1	Farmington	3
St. Landry Parish	1		
Tangipahoa Parish	1	Total	6
Washington Parish	2		
Orleans Parish	1		
Total	18		

City Reports for Week Ended May 8, 1920.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio	1	.....	Dallas, Tex	9	1
Alexandria, La	18	.....	Mobile, Ala	1	.....
Atlanta, Ga	4	.....	Morristown, N. J	1	.....
Baltimore, Md	1	.....	Savannah, Ga	2	1
Baton Rouge, La	1	1	Trenton, N. J	1	.....
Brunswick, Ga	1	.....	Tuscaloosa, Ala	8	.....
Chicago, Ill	1	1			

MEASLES.

See Telegraphic weekly reports from States, p. 1277; Monthly summaries by States, p. 1281; and Weekly reports from cities, p. 1294.

PELLAGRA.

Louisiana Report for April, 1920.

Place.	New cases reported.	Place.	New cases reported.
Louisiana:		Louisiana—Continued.	
Beauregard Parish	2	Pointe Coupee Parish	1
De Soto Parish	1	Tangipahoa Parish	5
East Carroll Parish	1		
East Feliciana Parish	2	Total	13
Orleans Parish	1		

PELLAGRA—Continued.

City Reports for Week Ended May 8, 1920.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Atlanta, Ga.	.....	1	Memphis, Tenn.	1	.....
Dallas, Tex.	3	.....	New Orleans, La.	1	1
Danville, Va.	1	1	Waco, Tex.	.....	1
Houston, Tex.	1	1	Washington, D. C.	1	.....
Kalamazoo, Mich.	1	1	Wichita, Kans.	.....	1

PLAGUE (HUMAN).

Hawaii.

On March 22, 1920, one case of human plague was reported at Kalopa, Hawaii.

PLAGUE (RODENT).

California.

During the week ended May 1, 1920, 2,495 ground squirrels (*Citellus beechyi*) were collected and examined. Of these, 11 were found to be plague-infected.

County.	Squirrels collected and examined.	Number found infected.
Alameda	533	7
Contra Costa	832	3
San Benito	191	1
San Joaquin	307	None.
Monterey	292	None.
Stanislaus	340	None.
Total	2,495	11

Other animals were collected and examined for plague as follows: San Francisco, 87 rats; Alameda County, 2 rats, 2 mice, 1 rabbit; and Monterey County, 1 rabbit and 1 gopher. None of these was found to be plague-infected.

Honolulu, Hawaii.

During the week ended May 1, 1920, 377 rodents were captured and examined. None showed plague-infection. The classification of rodents by species is as follows: *Mus alexandrinus*, 81; *Mus rattus*, 47; *Mus norvegicus*, 44; *Mus musculus*, 201; and mongoose, 4.

New Orleans, La.

For the week ended May 8, 1920, two plague-infected rats were confirmed. One was *Mus norvegicus* and the other *Mus rattus*. During the week 11,427 rodents were captured and examined for plague-infection. The classification of the rodents is as follows: *Mus alexandrinus*, 467; *Mus musculus*, 4,819; *Mus norvegicus*, 5,647; *Mus rattus*, 221; wood rats, 26; putrid, 234; and miscellaneous, 13.

PNEUMONIA (ALL FORMS).

City Reports for Week Ended May 8, 1920.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio	10		Hartford, Conn		3
Albany, N. Y	9		Haverhill, Mass	3	1
Alliance, Ohio		1	Hoboken, N. J		3
Alton, Ill	1		Holyoke, Mass		4
Amesbury, Mass		1	Hot Springs, Ark	1	
Ansonia, Conn	1	2	Houston, Tex		3
Arlington, Mass	1		Huntington, Ind		1
Ashtabula, Ohio	2		Hutchinson, Kans	1	
Astoria, Oreg	3		Independence, Mo	2	2
Atlanta, Ga	1	6	Indianapolis, Ind		20
Atlantic City, N. J	4	1	Irvington, N. J	1	
Aurora, Ill	1		Ishpeming, Mich	1	
Austin, Tex		1	Jamestown, N. Y	3	1
Baltimore, Md	57	26	Jefferson City, Mo		1
Barberton, Ohio	6	2	Jersey City, N. J	5	
Battle Creek, Mich		1	Kalamazoo, Mich	6	2
Beatrice, Nebr		2	Kankakee, Ill		1
Belleville, N. J	1		Kansas City, Kans	3	
Berlin, N. H		2	Kansas City, Mo	10	7
Biddeford, Me	3	3	Kearny, N. J	4	1
Billings, Mont		1	Keene, N. H	1	
Binghamton, N. Y	7		Lackawanna, N. Y	1	
Birmingham, Ala		3	La Fayette, Ind		1
Bloomfield, N. J	3		Lawrence, Mass	1	
Bloomington, Ill		2	Leominster, Mass	3	
Boston, Mass	20	20	Lexington, Ky		1
Bridgeport, Conn		2	Lockport, N. Y	1	1
Bristol, Conn	2	1	Logansport, Ind		1
Brockton, Mass	6	1	Long Beach, Calif	1	1
Brookline, Mass	1		Lorain, Ohio	1	
Buffalo, N. Y		16	Los Angeles, Calif	30	8
Burlington, Vt		1	Louisville, Ky	1	2
Butte, Mont	1	3	Lowell, Mass		1
Cairo, Ill		1	Lynn, Mass	2	
Cambridge, Mass	3	2	Macon, Ga		1
Charlotte, N. C		2	Malden, Mass	1	
Chelsea, Mass	3	1	Marquette, Mich	1	1
Chicago, Ill	282	68	Martins Ferry, Ohio		2
Chicopee, Mass		4	Medford, Mass	1	1
Cincinnati, Ohio	12	9	Memphis, Tenn		6
Cleveland, Ohio	43	21	Middletown, N. Y	1	
Cohoes, N. Y	1	1	Middletown, Ohio		1
Columbus, Ohio		7	Minneapolis, Minn		10
Concord, N. H		2	Mishawaka, Ind		1
Cortland, N. Y	1		Missoula, Mont	1	
Covington, Ky	2	2	Montgomery, Ala		1
Cranston, R. I		1	Morgantown, W. Va	1	
Cumberland, Md	3	1	Moundsville, W. Va	2	2
Dallas, Tex	7	1	Mount Vernon, N. Y	2	1
Danville, Ill		1	Muncie, Ind		3
Dayton, Ohio	4		Nashua, N. H		1
Denver, Colo		13	New Bedford, Mass		3
Detroit, Mich	49	42	New Britian, Conn	1	1
Duluth, Minn	12		Newburgh, N. Y		1
Durham, N. C		1	Newcastle, Ind	1	1
East Chicago, Ind		4	New Haven, Conn		3
East Orange, N. J	4	2	New London, Conn		1
East St. Louis, Ill		1	New York, N. Y	253	155
Elgin, Ill		1	North Adams, Mass		1
Elizabeth, N. J		4	Norwalk, Conn		2
El Paso, Tex		9	Norwich, Conn	1	1
Everett, Mass	1		Oakland, Calif		2
Fall River, Mass	3	1	Oak Park, Ill	2	2
Fargo, N. Dak		1	Oklahoma City, Okla		2
Findlay, Ohio	1		Omaha, Nebr		11
Flint, Mich		1	Orange, Conn		3
Fort Wayne, Ind		1	Orange, N. J	4	2
Framingham, Mass	1		Pasadena, Calif		1
Freeport, Ill	1		Passaic, N. J	1	
Gardner, Mass	2	1	Paterson, N. J	6	
Gary, Ind		4	Peoria, Ill		2
Geneva, N. Y	3	3	Perth Amboy, N. J		1
Gloucester City, N. J	1		Philadelphia, Pa	102	68
Grand Rapids, Mich	15	2	Phillipsburg, N. J	1	1
Great Falls, Mont	2	4	Piqua, Ohio	1	
Greenfield, Mass		1	Pittsfield, Mass	2	1
Greensboro, N. C		2	Plainfield, N. J	2	
Greenwich, Conn		1	Plymouth, Mass		2
Hackensack, N. J	1	1	Pontiac, Mich	2	3
Harrison, N. J	1		Port Chester, N. Y	1	1

PNEUMONIA (ALL FORMS)—Continued.

City Reports for Week Ended May 8, 1920—Continued.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Port Huron, Mich	3		Somerville, Mass	1	
Portland, Me	3	4	South Bend, Ind		2
Portland, Oreg		7	Southbridge, Mass		1
Portsmouth, Ohio	2	1	Springfield, Ill	2	3
Poughkeepsie, N. Y	1	1	Springfield, Mass	11	
Providence, R. I		4	Springfield, Ohio		2
Pueblo, Colo		3	Staunton, Va		2
Quincy, Ill		1	Stockton, Calif		1
Raleigh, N. C		1	Syracuse, N. Y	4	4
Richmond, Ind		2	Taunton, Mass	1	1
Richmond, Va	1	2	Terre Haute, Ind		1
Riverside, Calif		2	Toledo, Ohio	1	3
Rochester, N. Y	17	8	Topeka, Kans	1	4
Rock Island, Ill	2	2	Trenton, N. J	7	1
Rocky Mount, N. C		1	Troy, N. Y	4	1
Rome, N. Y	2		Tuscaloosa, Ala	1	
Rutland, Vt		1	Washington, D. C		9
Sacramento, Calif	5	4	Waterbury, Conn	1	
St. Joseph, Mo		6	Watertown, Mass	1	1
St. Paul, Minn		9	West Orange, N. J	1	1
Salt Lake City, Utah		3	Wheeling, W. Va	1	4
San Bernardino, Calif		3	White Plains, N. Y	1	1
San Diego, Calif	3	3	Wichita, Kans		2
Sandusky, Ohio	4		Wilmington, Del		5
Sanford, Me		2	Winston-Salem, N. C	4	2
San Francisco, Calif	13	5	Winthrop, Mass	1	
Sault Ste. Marie, Mich	3		Worcester, Mass	4	2
Savannah, Ga		2	Yonkers, N. Y	3	2
Schenectady, N. Y	3	2	Zanesville, Ohio		2

POLIOMYELITIS (INFANTILE PARALYSIS).

Nebraska, West Virginia, and Denver, Colo.

During the month of April, 1 case of poliomyelitis (infantile paralysis) was reported in Allen Parish, La., 1 case in Johnson County Nebr., and 1 case in Doddridge County, W. Va. For the week ended May 8, 1920, 1 case was reported in Denver, Colo.

RABIES IN ANIMALS.

City Reports for Week Ended May 8, 1920.

Place.	Cases.	Place.	Cases.
Cranston, R. I	1	Detroit, Mich	1
Dallas, Tex	1	Kansas City, Mo	1
Danville, Va	1	Wilmington, N. C	2

SCARLET FEVER.

See Telegraphic weekly reports from States, p. 1277; Monthly summaries by States, p. 1281; and Weekly reports from cities, p. 1294.

SMALLPOX.

State Reports for April, 1920—Vaccination Histories.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Vaccinated within 7 years preceding attack.	Last vaccinated more than 7 years preceding attack.	Never successfully vaccinated.	History not obtained or uncertain.
Maryland:						
Baltimore	10				10	
Anne Arundel County—						
Glen Burnie, R. D	1				1	
Baltimore County—						
Towson	5				5	
Montgomery County—						
Takoma	4				4	
Queen Annes County—						
Centerville, R. D	1				1	
Total	21				21	
Michigan:						
Baraga County—						
L'Anse	2				1	1
Barry County—						
Maple Grove Township	4		2		2	
Benzie County—						
Platte Township	8		4		4	
Berrien County—						
Bainbridge Township	10				6	4
Benton Township	3				3	
Lincoln Township	1				1	
Benton Harbor	1					1
Niles City	35		3	1	30	1
St. Joseph	1		1			
Branch County—						
Mattison Township	1				1	
Union Township	1				1	
Coldwater	2				1	1
Calhoun County—						
Athens Township	1				1	
Battle Creek Township	1				1	
Battle Creek	7			1	6	
Cass County—						
Calvin Township	7					7
La Grange Township	1				1	
Howard Township	2				2	
Milton Township	1				1	
Edwardsburg	1				1	
Vandalia	1				1	
Dowagiac	1				1	
Charlevoix County—						
Boyne City	4				4	
Cheboygan County—						
Cheboygan	1				1	
Mackinaw	2					2
Clinton County—						
DeWitt Township	1				1	
Crawford County—						
Grayling	1				1	
Eaton County—						
Sunfield Township	2					2
Charlotte	1				1	
Emmet County—						
Bear Creek Township	1				1	
Mackinaw	2					2
Genesee County—						
Flint	5					5
Gogebic County—						
Ironwood	2			1		1
Grand Traverse County—						
Grant Township	1				1	
Paradise Township	7				7	
Gratiot County—						
Alma	1				1	
Houghton County—						
Franklin Township	1				1	
Torch Lake Township	1				1	
Quincy Township	6			2	4	
Lake Linden	1				1	

SMALLPOX—Continued.

State Reports for April, 1920—Vaccination Histories—Continued.

Place.	New cases reported.	Deaths.	Vaccination history of cases.			
			Vaccinated within 7 years preceding attack.	Last vaccinated more than 7 years preceding attack.	Never successfully vaccinated.	History not obtained or uncertain.
Michigan—Continued.						
Ingham County—						
Williamston Township	1				1	
Wheatfield Township	2		1		1	
Webberville	1				1	
Williamston	7				7	
Lansing	15				15	
Ionia County—						
Easton Township	1					1
Ionia Township	3					3
Portland Township	1				1	
Isabella County—						
Coe	3				3	
Shepherd	1				1	
Jackson County—						
Hanover Township	4					4
Jackson	7		1		6	
Kalamazoo County—						
Kalamazoo Township	1				1	
Kalamazoo	3					3
Kent County—						
Grand Rapids	6					6
Livingston County—						
Howell	1				1	
Marquette County—						
West Branch Township	5			1	3	1
Marquette	5			1	1	3
Mecosta County—						
Big Rapids	2				2	
Muskegon County—						
Muskegon	7					7
Muskegon Heights	8				8	
Oakland County—						
Birmingham	3			1	2	
Pontiac	9				9	
Ontonagon County—						
Bergland Township	2				1	1
Ontonagon	1					1
Otsego County—						
Livingston Township	1				1	1
Gaylord	1					1
Ottawa County—						
Holland Township	1					1
Presque Isle County—						
Onaway	1				1	
Schoolcraft County—						
Manistique	3				2	1
St. Clair County—						
Ira Township	2				2	
Port Huron	1					1
St. Joseph County—						
Fawn River	1					1
Nottawa Township	1					1
Van Buren County—						
Decatur	1				1	
Hartford	1				1	
Washtenaw County—						
Ann Arbor	5				5	
Ypsilanti	2					2
Wayne County—						
Greenwood Township	1				1	
Hamtramck	49				49	
Northville	1				1	
Highland Park	11				4	7
Detroit	101					101
Wexford County—						
Mesick	1		1			
Total	417		13	8	222	174

SMALLPOX—Continued.

State Reports for April, 1920.

Place.	Cases.	Deaths.
Arizona:		
Greenlee County	1	
Maricopa County	14	
Pinal County	2	
Santa Cruz County	2	
Yavapai County	9	
Yuma County	1	
Total	29	
Louisiana:		
Ascension Parish	2	
Avoyelles Parish	2	
Beauregard Parish	7	
Caddo Parish	21	
East Baton Rouge Parish	3	
East Carroll Parish	2	
East Feliciana Parish	5	
Franklin Parish	1	
Iberville Parish	1	
Jefferson Parish	2	
Lafourche Parish	1	
Lincoln Parish	1	
Madison Parish	2	
Natchitoches Parish	1	
Orleans Parish	141	
Plaquemines Parish	5	
Rapides Parish	1	
Richland Parish	2	
St. Martin Parish	3	
Tangipahoa Parish	1	
Tensas Parish	1	
Terrebonne Parish	1	
Vermilion Parish	2	
Washington Parish	1	
Total	209	
Nebraska:		
Adams County	7	
Antelope County	5	
Banner County	2	
Box Butte County	1	
Boyd County	7	
Brown County	1	
Buffalo County	4	
Burt County	2	
Cass County	6	
Cedar County	3	
Cherry County	11	
Cheyenne County	16	
Clay County	35	
Colfax County	3	
Cuming County	3	
Custer County	22	
Dawes County	8	
Dawson County	1	
Dexel County	7	
Dixon County	3	
Dodge County	9	
Douglas County	69	
Dundy County	8	
Fillmore County	2	
Franklin County	4	
Furnas County	5	

Place.	Cases.	Deaths.
Nebraska—Continued.		
Gage County	8	
Grant County	3	
Hamilton County	7	
Holt County	8	
Howard County	36	
Johnson County	3	
Kearney County	4	
Keith County	1	
Knox County	26	
Lancaster County	58	
Lincoln County	6	
Logan County	3	
Madison County	16	
Merrick County	26	
Nemaha County	15	
Pierce County	2	
Polk County	15	
Redwillow County	3	
Richardson County	44	
Scotts Bluff County	11	
Seward County	12	
Sheridan County	5	
Sioux County	1	
Stanton County	7	
Thayer County	6	
Thurston County	1	
Valley County	9	
Wayne County	1	
Webster County	7	
York County	19	
Total	607	
West Virginia:		
Barbour County	5	
Berkeley County	1	
Boone County	12	
Braxton County	1	
Brooke County	1	
Cabell County	3	
Clay County	18	
Fayette County	20	
Hampshire County	12	
Hancock County	7	
Harrison County	4	
Jackson County	2	
Kanawha County	52	
Lewis County	1	
Logan County	2	
McDowell County	7	
Marion County	1	
Mercer County	83	
Mingo County	28	
Monongalia County	7	
Raleigh County	3	
Randolph County	1	
Roane County	1	
Taylor County	26	
Wayne County	11	
Wood County	1	
Wyoming County	2	
Total	312	

SMALLPOX—Continued.

City Reports for Week Ended May 8, 1920.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Aberdeen, Wash	3		La Fayette, Ind	4	
Akron, Ohio	9		Laurel, Miss	1	1
Alliance, Ohio	4		Lincoln, Nebr	5	
Ann Arbor, Mich	2		Logansport, Ind	2	
Appleton, Wis	10		Long Beach, Calif	5	
Ashtabula, Ohio	3		Los Angeles, Calif	2	
Astoria, Oreg	4		Louisville, Ky	1	
Atlanta, Ga	5		Manitowoc, Wis	1	
Auburn, Me	2		Mankato, Minn	2	
Baltimore, Md	2		Marion, Ind	2	
Bedford, Ind	2		Marion, Ohio	10	
Belleville, N. J	2		Marquette, Mich	2	
Birmingham, Ala	10		Marshalltown, Iowa	7	
Bloomfield, N. J	1		Memphis, Tenn	7	
Bluefield, W. Va	4		Milwaukee, Wis	8	
Boise, Idaho	16		Minneapolis, Minn	30	
Boston, Mass	1		Mishawaka, Ind	5	
Cairo, Ill	3		Mobile, Ala	15	
Cedar Rapids, Iowa	12		Montgomery, Ala	1	
Charleston, S. C	19		Nashville, Tenn	1	
Charleston, W. Va	3		New Orleans, La	23	2
Chattanooga, Tenn	4		Niagara Falls, N. Y	1	
Chicago, Ill	1		Norwood, Ohio	1	
Cincinnati, Ohio	2		Oakland, Calif	2	
Cleveland, Ohio	2		Oklahoma City, Okla	5	
Columbus, Ohio	2		Omaha, Nebr	14	
Coshocton, Ohio	2		Paducah, Ky	2	
Council Bluffs, Iowa	2		Parkersburg, W. Va	1	
Covington, Ky	1		Parsons, Kans	5	
Dallas, Tex	26		Philadelphia, Pa	2	
Danville, Ill	2		Pontiac, Mich	6	
Davenport, Iowa	5		Portland, Oreg	19	
Dayton, Ohio	2		Pueblo, Colo	1	
Decatur, Ill	1		Quincy, Ill	2	
Denver, Colo	18		Racine, Wis	1	
Detroit, Mich	45		Redlands, Calif	1	
Dubuque, Iowa	8		Reno, Nev	4	
Duluth, Minn	5		Richmond, Ind	1	
East St. Louis, Ill	5		Roanoke, Va	1	
Eau Claire, Wis	2		Rock Island, Ill	13	
El Paso, Tex	3		Rome, Ga	1	
Everett, Wash	9		St. Cloud, Minn	5	
Fargo, N. Dak	4		St. Joseph, Mo	9	
Flint, Mich	2		St. Louis, Mo	10	
Fond du Lac, Wis	2		St. Paul, Minn	11	
Fort Scott, Kans	2		Salem, Oreg	1	
Fort Wayne, Ind	2		Salt Lake City, Utah	37	
Fort Worth, Tex	15		San Diego, Calif	1	
Galesburg, Ill	7		Sandusky, Ohio	14	
Gary, Ind	5		San Francisco, Calif	5	
Granite City, Ill	1		Santa Cruz, Calif	1	
Great Falls, Mont	2		Savannah, Ga	1	
Greeley, Colo	1		Seattle, Wash	16	
Green Bay, Wis	8		Sioux Falls, S. Dak	1	
Hammond, Ind	2		South Bend, Ind	2	
Hoquiam, Wash	1		Spokane, Wash	11	
Hot Springs, Ark	1		Steubenville, Ohio	1	
Houston, Tex	2		Stillwater, Minn	1	
Huntington, Ind	6		Superior, Wis	5	
Indianapolis, Ind	11		Tacoma, Wash	5	
Ironwood, Mich	2		Terre Haute, Ind	2	
Ithaca, N. Y	5		Toledo, Ohio	1	
Jacksonville, Ill	5		Topeka, Kans	9	
Joplin, Mo	2		Walla Walla, Wash	5	
Kansas City, Kans	3		Washington, D. C	3	
Kansas City, Mo	18		Wausau, Wis	4	
Kewanee, Ill	6		Wichita, Kans	11	1
Knoxville, Tenn	5		Winston-Salem, N. C	4	
Kokomo, Ind	8		Yakima, Wash	1	
La Crosse, Wis	3				

TETANUS.

City Reports for Week Ended May 8, 1920.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Chattanooga, Tenn		1	Newport, R. I		1
Danville, Ill		1	Oklahoma City, Okla	1	
Houston, Tex	1	1	Philadelphia, Pa	1	1
Los Angeles, Calif	1	1	Rochester, N. Y	2	
Mobile, Ala		2	Savannah, Ga		1

TUBERCULOSIS.

See Telegraphic weekly reports from States, p. 1277; and Weekly reports from cities, p. 1294.

TYPHOID FEVER.

State Reports for April, 1920.

Place.	New cases reported.	Place.	New cases reported.
Louisiana:		Michigan—Continued.	
Assumption Parish	1	Cass County—	
Avoyelles Parish	2	Vandalia	1
Bienville Parish	1	Delta County—	
Caddo Parish	1	Escanaba	2
DeSoto Parish	1	Eaton County—	
Iberia Parish	1	Sunfield Township	1
Iberville Parish	1	Genesee County—	
Jackson Parish	1	Flushing	1
Jefferson Parish	3	Gratiot County—	
Lafayette Parish	1	Alma	3
Morehouse Parish	1	Hillsdale County—	
Orleans Parish	7	Hillsdale	2
Rapides Parish	1	Houghton County—	
Richland Parish	1	Adams Township	1
St. Landry Parish	1	Ingham County—	
Vermilion Parish	1	Williamston	1
Washington Parish	1	Kalamazoo County—	
Total	26	Kalamazoo	1
		Kent County—	
Maryland:		Grand Rapids	1
Baltimore	8	Macomb County—	
Allegany County—		Mount Clemens	1
Cumberland	1	Mecosta County—	
Baltimore County—		Big Rapids	1
Woodlawn	3	Midland County—	
Charles County—		Midland	2
Dentsville, R. D	1	Montmorency County—	
Pomfret	1	Briley Township	1
Frederick County—		Muskegon County—	
Jefferson, R. D	1	Muskegon	1
Ladiesburg	1	Oakland County—	
Jefferson	1	Pontiac	2
Ijamsville	1	Oceana County—	
Mountville, R. D	1	Greenwood Township	1
Howard County—		Saginaw County—	
Highland	1	Saginaw	3
Montgomery County—		St. Clair County—	
Brookville	3	Clay Township	1
Damascus, R. D	1	Riley Township	1
Somerset County—		Algonac	1
Marion	1	Port Huron	1
Washington County—		Tuscola County—	
Hagerstown	2	Vassar	1
Total	27	Van Buren County—	
		South Haven	3
Michigan:		Washtenaw County—	
Alpena County—		Ann Arbor	1
Alpena	89	Wayne County—	
Bay County—		River Rouge	2
Bay City	24	Trenton	1
Calhoun County—		Detroit	6
Battle Creek	1	Wexford County—	
Burlington Township	1	Wexford Township	1
		Total	160

TYPHOID FEVER—Continued.

State Reports for April, 1920.

Place.	New cases reported.	Place.	New cases reported.
Nebraska:		West Virginia—Continued.	
Cass County	3	Kanawha County	4
Chase County	1	McDowell County	4
Cherry County	1	Marion County	1
Douglas County	11	Marshall County	2
		Mason County	2
Total	16	Mineral County	1
		Monongalia County	5
West Virginia:		Monroe County	1
Cabell County	1	Ohio County	1
Clay County	1	Preston County	1
Fayette County	7	Summers County	1
Gilmer County	1	Taylor County	7
Grant County	1	Upshur County	1
Greenbrier County	3	Wayne County	2
Hancock County	1		
Jefferson County	2	Total	50

City Reports for Week Ended May 8, 1920.

Place.	Cases.	Deaths.	Place.	Cases.	Deaths.
Akron, Ohio	1		Manitowoc, Wis	2	
Baltimore, Md	2	1	Mattoon, Ill	1	
Bangor, Me	2	1	Memphis, Tenn	1	
Birmingham, Ala	4		Milwaukee, Wis	2	
Boston, Mass	2		Minneapolis, Minn	1	
Brunswick, Ga	2		Montgomery, Ala	1	
Buffalo, N. Y		1	Moundsville, W. Va	1	
Cambridge, Mass	1	1	Mount Vernon, N. Y	2	
Chattanooga, Tenn	1		Nashville, Tenn	1	
Chicago, Ill	4	1	Newburgh, N. Y	1	
Cincinnati, Ohio		1	New Philadelphia, Ohio	1	
Cleveland, Ohio	3	1	New York, N. Y	6	2
Coffeyville, Kans	2		Niagara Falls, N. Y		1
Council Bluffs, Iowa		1	North Tonawanda, N. Y	3	
Covington, Ky	1		Norwich, Conn	1	
Detroit, Mich	4		Omaha, Nebr	2	
East Chicago, Ind		1	Philadelphia, Pa	9	2
East St. Louis, Ill	1	1	Portland, Me	1	1
Fall River, Mass	1		Portland, Oreg	2	
Flint, Mich	1		Poughkeepsie, N. Y	1	
Fort Wayne, Ind	2		Racine, Wis	1	
Fort Worth, Tex	5		Rahway, N. J	1	
Galveston, Tex	1		Red Wing, Minn	1	
Gary, Ind	1		San Francisco, Calif	1	
Haverhill, Mass	1		Santa Cruz, Calif	2	
Houston, Tex	2		Savannah, Ga	1	1
Huntington, W. Va		1	Schenectady, N. Y	2	
Indianapolis, Ind	1		Sheboygan, Wis	1	
Kansas City, Mo	1	1	Steubenville, Ohio	1	
Lawrence, Mass	1		Syracuse, N. Y	3	
Long Beach, Calif	1		Toledo, Ohio	1	
Long Branch, N. J	1		Washington, D. C	1	
Lorain, Ohio	6		Winona, Minn	1	
Los Angeles, Calif	2				

TYPHUS FEVER.

Paterson, N. J.—Week Ended May 8, 1920.

During the week ended May 8, 1920, one case of typhus fever was reported at Paterson, N. J.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City Reports for Week Ended May 8, 1920.

City.	Population as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Aberdeen, S. Dak	[1]15,926	7			21		10			
Aberdeen, Wash	21,392				31					
Adams, Mass	14,406	2								
Akron, Ohio	93,604	66			17		42		9	
Alameda, Calif	28,433	7	5		4					
Albany, N. Y	106,632		1		6		8		7	
Alexandria, La	16,232	5							1	2
Alliance, Ohio	19,581	4			4					
Alton, Ill	23,783	5	1		20		6		1	
Amesbury, Mass	10,200	3			30					
Anaconda, Mont	10,631	2	4		3					1
Anderson, Ind	24,230	7								
Ann Arbor, Mich	15,041	10			18		2			
Anniston, Ala	14,326						1		1	
Ansonia, Conn	16,954	6	1							
Appleton, Wis	18,005		3		45		5			
Arlington, Mass	13,073	6			9				4	
Asbury Park, N. J	14,629	1			4		1		2	
Ashland, Wis	11,594		1		1		1			
Ashtabula, Ohio	22,008	5							1	
Astoria, Oreg	10,487	20			10					1
Atchison, Kans	16,785						1			
Atlanta, Ga	196,144	43	1		30		4		17	3
Atlantic City, N. J	55,515	18	5		6		1		2	3
Attleboro, Mass	19,776	4	1		9		3		1	1
Auburn, Me	16,607	12			1					
Aurora, Ill	34,795	6							3	
Austin, Tex	35,612	17	1							
Baltimore, Md	594,637	203	19	1	256	3	10		29	26
Bangor, Me	26,958						3		8	
Barberton, Ohio	14,187	9			3		1			
Barre, Vt	12,401				18					
Baton Rouge, La	17,544	4							2	2
Battle Creek, Mich	30,159				50		21			
Bayonne, N. J	72,204				12		1		2	
Beatrice, Nebr	10,437	7								
Beaumont, Tex	28,851	10								1
Bedford, Ind	10,613	1								
Belleville, N. J	12,797				2		1		1	
Beloit, Wis	18,547				97		2			
Benton Harbor, Mich	11,099				5		1			
Berlin, N. H	13,892	6								
Beverly, Mass	22,128	5					2			1
Billings, Mont	13,123	6			40					
Binghamton, N. Y	54,864	15			2		1		2	2
Birmingham, Ala	189,716	52	2				5	1	15	6
Bloomfield, N. J	19,013		2		3					
Bloomington, Ill	27,462	12			5		4			1
Bloomington, Ind	11,661	1								
Bluefield, W. Va	16,123				6		1			
Boise, Idaho	35,951	8					1			
Boston, Mass	767,813	221	26	3	245	4	59	2	60	19
Brazil, Ind	10,472	4			1					2
Bridgeport, Conn	124,724	40	3	1	3	1	6	1	5	4
Bristol, Conn	16,318	7			2		2			2
Brockton, Mass	69,152	15	4		8		1		7	3
Brookline, Mass	33,526	6			46		3		1	
Brunswick, Ga	10,984	2							1	
Buffalo, N. Y	475,781	150		5		4		1		14
Burlington, Iowa	25,144	10			8		11	1		1
Burlington, Vt	21,802	7	2		1					
Butte, Mont	44,057	14			2		1		15	4
Cadillac, Mich	10,158	2								1
Cairo, Ill	15,995	13								4
Cambridge, Mass	114,293	43	3		48		15		6	3
Canton, Ill	13,674	5								
Canton, Ohio	62,566	22	1		35	2	9	1	1	
Cedar Rapids, Iowa	38,033		2							
Centralia, Ill	11,838				32				1	
Chanute, Kans	12,968	2								
Charleston, S. C	61,041	22								3
Charlotte, N. C	40,759	11	1						4	

[1] Population Apr. 15, 1910.

DIPTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended May 8, 1920—Continued.

City.	Population as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Chattanooga, Tenn.	61,575	22	1		5					
Chelsea, Mass.	46,405	11	1		11				2	1
Cheyenne, Wyo.	[1]11,320	5			1					
Chicago Heights, Ill.	22,863	7								
Chicago, Ill.	2,547,201	[6]51	108	16	269	1	193	6	191	63
Chicopee, Mass.	29,950	6	2		7					
Chillicothe, Ohio.	15,625	3	1		8				2	
Cincinnati, Ohio.	414,248	113	[1]		184	5	50	1	23	19
Cleveland, Ohio.	692,259	199	9	3	75	2	37	2	43	12
Clinton, Mass.	[1]13,075	3			1		2			
Coffeyville, Kans.	18,331	1			2		1			
Cohoes, N. Y.	25,292	10			1					1
Columbia, S. C.	35,165				1				1	
Columbus, Ohio.	220,135	63			159	2	9		4	4
Concord, N. H.	22,858	9	2		25		8		1	
Corpus Christi, Tex.	10,789	4			5				1	
Cortland, N. Y.	13,321	6					4			1
Council Bluffs, Iowa.	31,838	11			15		2			
Covington, Ky.	59,623	18	2		9		14		1	2
Cranston, R. I.	26,773	6	1						1	1
Cumberland, Md.	26,686	6							5	1
Dallas, Tex.	129,738	40	3	1	31	1	2		9	2
Danvers, Mass.	10,037		2				3			
Danville, Ill.	32,969	10			3		1			
Danville, Va.	20,183		1							
Davenport, Iowa.	49,618				17		3			
Dayton, Ohio.	128,939	22	1		23		1		2	
Decatur, Ill.	41,483	4			11					
Dedham, Mass.	10,618	1	1				1		1	
Denver, Colo.	268,439	80	16	2	137	1	8			14
Detroit, Mich.	619,648	204	81	5	111	1	83	1	44	18
Dover, N. H.	13,276	6			9					
Dubuque, Iowa.	40,096		2		31		4			
Duluth, Minn.	97,077		5		2		2		3	
Durham, N. C.	26,160	8								1
East Chicago, Ind.	30,286	13		1				1		
East Cleveland, Ohio.	13,864				3		1			
Easthampton, Mass.	10,656	2	1		46	1		1		
East Orange, N. J.	43,761	8	1		44		2		4	1
East Providence, R. I.	18,485		2							
East St. Louis, Ill.	77,312	11			7		3		4	
Eau Claire, Wis.	18,887		4		11		3			
Elgin, Ill.	28,562	6			17		3		1	2
Elizabeth, N. J.	88,830		1		50		4		2	2
Elkhart, Ind.	22,273	3			3		6			
El Paso, Tex.	69,149	39	4							8
Elwood, Ind.	[1]11,028	4								
Englewood, N. J.	12,603	3			14		1			
Eugene, Oreg.	14,257	5								
Eureka, Calif.	15,142	5								
Evanston, Ill.	29,304	8			2		7			
Everett, Mass.	40,160	7	2		19		4		6	
Everett, Wash.	37,205				19					
Fairmont, W. Va.	16,111		2		10		3			
Fall River, Mass.	129,828	31	4		8		5		7	3
Fargo, N. Dak.	17,872	3			8					
Findlay, Ohio.	[1]14,858	5			2		2			
Flint, Mich.	57,386	18	5		1		10			3
Fond du Lac, Wis.	21,486		1		18		2			
Fort Scott, Kans.	10,564	2			5					
Fort Smith, Ark.	29,390		1		4		1			
Fort Wayne, Ind.	78,014	15	5		143		20	1		3
Fort Worth, Tex.	109,597		2				1		5	
Fostoria, Ohio.	10,959	4								
Framingham, Mass.	14,149	9			25		6		1	1
Freeport, Ill.	19,844	7					5			
Fremont, Nebr.	10,080	2								
Fremont, Ohio.	11,034	[2]			15		12			
Galesburg, Ill.	24,629	8	1		7					
Galveston, Tex.	42,650	19								3

[1]Population Apr. 15, 1910.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended May 8, 1920—Continued.

City.	Population as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Gardner, Mass.	17,534	4								
Gary, Ind.	56,000	18	2			1	8			
Geneva, N. Y.	13,915	6			24					
Glens Falls, N. Y.	17,160	1								
Gloucester City, N. J.	11,375				6					
Grand Rapids, Mich.	132,861	55	2		353	1	4		6	6
Granite City, Ill.	15,890	4			21		1			
Great Falls, Mont.	[1]13,948	13			1		1			
Greeley, Colo.	11,942	3			4		1			1
Green Bay, Wis.	30,017		1		3		4			
Greenfield, Mass.	12,251	7	1	1	11		1			
Greensboro, N. C.	20,171	7								1
Greenwich, Conn.	19,594	3	2		3					
Hackensack, N. J.	17,412	5	2		15		2		2	
Hammond, Ind.	27,016	6	2		9		2			
Harrison, N. J.	17,345		1		7				2	
Hartford, Conn.	112,831	36	7		40		3		3	1
Haverhill, Mass.	49,180	15	7		76				1	1
Hibbing, Minn.	17,550		4							
Hoboken, N. J.	78,324	9	1						2	
Holland, Mich.	13,459	7			9					
Holyoke, Mass.	66,503	17			11		6			2
Hoquiam, Wash.	12,230		1		1					
Hot Springs, Ark.	17,690	6	1		2					1
Houston, Tex.	116,878	40	16		1		1			3
Huntington, Ind.	10,982	1	3		2		2			
Huntington, W. Va.	47,686	11					5			1
Hutchinson, Kans.	21,461				7		2			
Independence, Mo.	11,964	4							1	1
Indianapolis, Ind.	283,622	111	3		609	2	22	2	6	11
Iowa City, Iowa.	11,626				3					
Ironton, Ohio.	14,079	3			1					
Ironwood, Mich.	15,095	8			1					1
Irvington, N. J.	16,710		2		1					
Ishpeming, Mich.	[1]12,448	2					1			
Ithaca, N. Y.	16,017	7			4		2			2
Jacksonville, Ill.	15,506	8			2					1
Jamestown, N. Y.	37,431	14			13					3
Janesville, Wis.	14,411				14		5			
Jefferson City, Mo.	13,712	2								1
Jersey City, N. J.	312,557		19		48		3		15	
Joplin, Mo.	33,400				26		2			
Kalamazoo, Mich.	50,408	23	1		151		7		1	
Kankakee, Ill.	14,270	7	1		2		2			
Kansas City, Kans.	102,096		1		31		2		6	
Kansas City, Mo.	305,816	90	7		34	1	9		6	4
Kearny, N. J.	24,325	8			41		5		1	1
Keene, N. H.	10,725	1			2					
Kewanee, Ill.	13,607						3			
Knoxville, Tenn.	59,112	5		2	10		1		3	3
Kokomo, Ind.	21,929	4			12		3		1	
Lackawanna, N. Y.	16,219	6			1					1
La Crosse, Wis.	31,833				43		1		5	
La Fayette, Ind.	21,481	8	3		15		2			
Lake Charles, La.	14,930	3								
Lancaster, Ohio.	16,086	3			1					
Laurel, Miss.	12,313	2		1						
Lawrence, Kans.	13,477	3			15					1
Lawrence, Mass.	102,923	22	3		19		4		4	2
Leominster, Mass.	21,365	4			2				2	
Lexington, Ky.	41,997	12			3					2
Lima, Ohio.	37,145	11	1		32		1		1	
Lincoln, Nebr.	46,957	12	5		93		1	1		
Lincoln, R. I.	10,473				2					
Little Rock, Ark.	58,716				4				11	
Lockport, N. Y.	20,028	6							11	1
Logansport, Ind.	21,338	4					1			
Long Beach, Calif.	29,163	12	3	1	22		2	1	1	
Long Branch, N. J.	15,733	2					2			
Los Angeles, Calif.	535,485	151	54	1	85		11	24	66	
Louisville, Ky.	240,808	45	2		23		6		5	3

[1] Population Apr. 15, 1910.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended May 8, 1920—Continued.

City.	Population as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Lowell, Mass.	114,366	28	2	.....	5	.....	4	.....	11	4
Ludington, Mich.	10,566	11	.....	.....	1	.....	.....	.....	.....	1
Lynchburg, Va.	33,497	8	.....	.....	11	.....	.....	.....	.....	1
Lynn, Mass.	104,534	22	9	.....	.....	.....	17	.....	5	3
Macon, Ga.	46,099	16	.....	.....	36	.....	.....	.....	.....	3
Madison, Wis.	31,315	.....	1	.....	9	.....	3	.....	.....	.....
Malden, Mass.	52,243	8	3	.....	33	.....	1	.....	.....	1
Manchester, Conn.	15,859	2	1	.....	2	.....	.....	.....	1	.....
Manchester, N. H.	79,607	19	4	1	16	.....	1	.....	1	1
Manitowoc, Wis.	13,931	.....	.....	.....	.....	.....	4	.....	.....	.....
Mankato, Minn.	10,365	.....	.....	.....	3	.....	.....	.....	.....	.....
Marion, Ind.	19,923	4	1	.....	6	.....	.....	.....	.....	1
Marion, Ohio.	24,129	.....	1	.....	13	.....	.....	.....	1	.....
Marlboro, Mass.	15,285	4	.....	.....	.....	.....	2	.....	1	.....
Marquette, Mich.	12,555	7	.....	.....	2	.....	.....	.....	.....	.....
Martinsburg, W. Va.	12,984	.....	.....	.....	1	.....	4	.....	.....	.....
Martins Ferry, Ohio.	10,135	9	.....	.....	4	.....	.....	.....	.....	.....
Mattoon, Ill.	12,764	.....	.....	.....	1	.....	.....	.....	.....	.....
Medford, Mass.	23,681	9	.....	.....	6	.....	6	.....	1	.....
Memphis, Tenn.	151,877	53	2	.....	.....	.....	2	.....	12	10
Meriden, Conn.	29,431	.....	4	.....	2	.....	.....	.....	2	.....
Methuen, Mass.	14,320	2	2	.....	8	.....	.....	.....	2	.....
Middletown, N. Y.	15,890	.....	.....	.....	2	.....	4	.....	4	.....
Middletown, Ohio.	16,384	5	1	.....	.....	.....	3	.....	1	1
Milwaukee, Wis.	445,008	.....	17	.....	460	.....	24	.....	14	.....
Minneapolis, Minn.	373,448	106	17	2	149	2	24	1	23	16
Mishawaka, Ind.	17,033	3	.....	.....	2	.....	1	1	.....	.....
Missoula, Mont.	19,075	6	.....	.....	.....	.....	.....	.....	.....	.....
Mobile, Ala.	59,201	22	.....	.....	.....	.....	.....	.....	.....	3
Monmouth, Ill.	10,346	3	1	.....	.....	.....	2	.....	.....	.....
Montgomery, Ala.	44,039	21	.....	.....	.....	.....	.....	.....	.....	1
Morgantown, W. Va.	14,444	3	.....	.....	4	.....	.....	.....	.....	.....
Morristown, N. J.	13,410	5	.....	.....	2	.....	.....	.....	.....	.....
Moundsville, W. Va.	11,513	4	1	.....	4	.....	.....	.....	1	1
Mount Vernon, N. Y.	37,991	19	1	.....	41	.....	.....	.....	3	.....
Muncie, Ind.	25,653	12	.....	.....	6	.....	6	.....	2	.....
Muscatine, Iowa	17,713	3	.....	.....	2	.....	.....	.....	.....	.....
Nashua, N. H.	27,541	5	.....	.....	65	.....	.....	.....	10	.....
Nashville, Tenn.	118,136	39	1	.....	8	.....	5	.....	2	7
New Bedford, Mass.	121,622	44	3	.....	2	.....	15	.....	15	12
New Britain, Conn.	55,385	10	2	.....	2	.....	6	.....	3	2
Newburgh, N. Y.	29,893	8	2	.....	.....	.....	5	.....	.....	2
Newburyport, Mass.	15,291	3	3	.....	.....	.....	.....	.....	1	.....
Newcastle, Ind.	14,144	7	.....	.....	.....	.....	.....	.....	2	2
New Haven, Conn.	152,275	49	11	1	30	.....	8	.....	13	3
New London, Conn.	21,199	.....	1	.....	57	.....	.....	.....	1	.....
New Orleans, La.	377,010	101	6	2	7	.....	5	1	27	15
New Philadelphia, Ohio.	10,133	.....	.....	.....	2	.....	.....	.....	.....	.....
Newport, R. I.	30,585	7	.....	.....	24	.....	1	.....	.....	1
Newton, Mass.	44,343	10	1	.....	119	.....	8	.....	2	.....
New York, N. Y.	5,757,492	1,385	318	23	1,032	22	162	10	299	138
Niagara Falls, N. Y.	38,466	5	1	.....	40	.....	7	.....	.....	1
North Adams, Mass.	[1] 22,019	4	.....	.....	4	.....	.....	.....	2	.....
Northampton, Mass.	20,096	11	.....	.....	3	.....	1	.....	.....	.....
North Attleboro, Mass.	11,248	3	.....	.....	.....	.....	1	.....	.....	1
North Little Rock, Ark.	15,515	.....	.....	.....	2	.....	.....	.....	.....	.....
North Tonawanda, N. Y.	14,060	5	.....	.....	.....	.....	.....	.....	.....	.....
Norwalk, Conn.	27,332	11	.....	.....	5	.....	.....	.....	1	.....
Norwich, Conn.	21,923	5	.....	.....	24	.....	6	.....	1	.....
Norwood, Ohio.	23,269	5	1	.....	2	.....	5	.....	.....	.....
Oakland, Calif.	203,405	37	2	.....	.....	.....	5	.....	5	2
Oak Park, Ill.	27,816	10	1	.....	7	.....	3	.....	.....	.....
Ogdensburg, N. Y.	16,845	1	.....	.....	.....	.....	.....	.....	.....	.....
Oklahoma City, Okla.	97,588	26	.....	.....	12	.....	.....	.....	1	3
Olean, N. Y.	16,927	6	.....	.....	.....	.....	.....	.....	.....	1
Omaha, Nebr.	177,777	48	4	.....	91	1	12	.....	.....	6
Orange, Conn.	14,393	9	.....	.....	.....	.....	.....	.....	1	3
Orange, N. J.	33,636	10	4	.....	7	.....	.....	.....	.....	2
Oshkosh, Wis.	36,549	.....	.....	.....	15	.....	3	.....	1	.....
Paducah, Ky.	25,178	.....	1	.....	1	.....	2	.....	.....	.....
Parkersburg, W. Va.	21,059	6	.....	.....	10	.....	2	.....	.....	.....

[1] Population Apr. 15, 1910.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended May 8, 1920—Continued.

City.	Population as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Parsons, Kans.	15,952		2		2		1			
Pasadena, Calif.	49,620	14	1		46		2			
Passaic, N. J.	74,478	15	2		39	1				1
Paterson, N. J.	140,512		6		116		2		6	
Pawtucket, R. I.	60,666	10								2
Peekskill, N. Y.	19,034	2								
Pekin, Ill.	10,973				1					
Peoria, Ill.	72,184	20			21		14			
Perth Amboy, N. J.	42,646	6	2		19		3			1
Petersburg, Va.	25,817	10			8		2		3	
Philadelphia, Pa.	1,735,514	520	63	14	485	7	81	1	82	63
Phillipsburg, N. J.	15,879	5								
Piqua, Ohio.	14,275	6			1				1	1
Pittsfield, Mass.	39,678	13			1		1		2	
Plainfield, N. J.	24,330	4			3		3			
Plattsburg, N. Y.	13,111	2			77					
Plymouth, Mass.	14,001	3								
Pontiac, Mich.	18,006	12	7		2		3		1	1
Port Chester, N. Y.	16,727	4			2				1	
Port Huron, Mich.	[1] 18,863	4	1		1		2			
Portland, Me.	64,720	16		1	9		3			1
Portland, Oreg.	308,399	51	7		80		14		6	4
Portsmouth, N. H.	11,730		1		7		1			
Portsmouth, Ohio.	29,356	7			19		5		1	
Poughkeepsie, N. Y.	30,786	5	2		9		4		1	1
Providence, R. I.	259,895	58	26	3	41		5			6
Pueblo, Colo.	56,084	15			17					
Quincy, Ill.	36,832	7	1				1			
Quincy, Mass.	39,022	7	4		2		3		2	
Racine, Wis.	47,465				27		5			
Rahway, N. J.	10,361				20		2			
Raleigh, N. C.	20,274	6			6				1	
Redlands, Calif.	14,573	2								
Reno, Nev.	15,514	5			6					
Richmond, Ind.	25,080	14	3		1		1		1	
Richmond, Va.	158,702	46	2		109		5		8	6
Riverside, Calif.	20,496	6	3							
Roanoke, Va.	46,282	11			1				1	1
Rochester, N. Y.	264,714	88	11		50	1	9		26	4
Rockford, Ill.	56,739	9	1		4		3			
Rock Island, Ill.	29,452	12			45		1		1	1
Rocky Mount, N. C.	12,673	5								
Rome, Ga.	15,607		1				1			
Rome, N. Y.	24,259				1		4			
Rutland, Vt.	15,038	6			11					
Sacramento, Calif.	68,984	20	3	1	7			1	2	
St. Cloud, Minn.	12,013		2		10					
St. Joseph, Mo.	86,498	33	1	1	13		2			2
St. Louis, Mo.	768,650	206	50	3	283	5	30		51	12
St. Paul, Minn.	252,465	77	27	1	86		5	1	13	8
Salem, Mass.	49,346	14	2		14		1			
Salem, Oreg.	21,274	4			1					
Salt Lake City, Utah.	121,623	31	4		11				1	2
San Bernardino, Calif.	17,616	6							1	1
San Diego, Calif.	56,412	28	1		3		1		2	2
Sandusky, Ohio.	20,226	9	1		11		2		1	
Sanford, Me.	11,217	5								
San Francisco, Calif.	471,023	130	14	1	13		11		32	14
Santa Barbara, Calif.	15,360	6			1				1	
Santa Cruz, Calif.	15,150	4	1		2					
Sault Ste. Marie, Mich.	14,130	3					4			
Savannah, Ga.	69,250	33			14		1			7
Schenectady, N. Y.	103,774	21	2		58		1		3	2
Seattle, Wash.	366,445		8		66		13			
Sheboygan, Wis.	28,907				40		1			
Sioux City, Iowa.	58,568						5			
Sioux Falls, S. Dak.	16,887	5			25					1
Somerville, Mass.	88,618	21	1		48		7		4	1
South Bend, Ind.	70,967	8	1		7		4		7	1
Southbridge, Mass.	14,465	1							1	

[1] Population Apr. 15, 1910.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City Reports for Week Ended May 8, 1920—Continued.

City.	Population as of July 1, 1917 (estimated by U. S. Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Spokane, Wash	157,656				104		1			
Springfield, Ill	62,623	16			3		1			2
Springfield, Mass	108,668	25	2		67		4		8	1
Springfield, Mo	41,169	12								5
Springfield, Ohio	52,296	16	1		52		8		7	
Stamford, Conn	31,810		2		4				1	
Staunton, Va	11,823	8					1			1
Steubenville, Ohio	28,259	9			3		1			
Stockton, Calif	36,209	13	1		1		1			
Superior, Wis	47,167		1		9		4			
Syracuse, N. Y	158,559	50	11	1	44	2	8		4	4
Tacoma, Wash	117,446		3		67		2			
Taunton, Mass	36,610	19			3				2	2
Terre Haute, Ind	67,361	15			31		3			
Toledo, Ohio	202,010	70	1		37		20	2	10	10
Topeka, Kans	49,538	9			38				1	2
Traverse City, Mich	14,090	3								
Trenton, N. J	113,974	30	3		1		3		6	
Trinidad, Colo	14,413				2		1			
Troy, N. Y	78,094	24	1		1		1		2	1
Tucson, Ariz	17,324	18								
Tuscaloosa, Ala	10,824								1	
Vallejo, Calif	13,803	5	1		1					
Vancouver, Wash	13,805		2		1					
Virginia, Minn	15,954		1							
Waco, Tex	34,015	16								1
Walla Walla, Wash	26,067				14					
Waltham, Mass	31,011	9	4		7	1	1		1	
Washington, D. C	369,282	106	10	1	26		23		22	16
Waterbury, Conn	89,201	3	8	1	5		15		4	1
Watertown, Mass	15,188	5			5		3			1
Watertown, N. Y	30,404		1	1			1	1		1
Wausau, Wis	19,666				17		7			
Webster, Mass	13,484	3								1
Westfield, Mass	18,769	5			1					1
West New York, N. J	19,613	1	2		8		1		1	
West Orange, N. J	13,964	2	1		2					
West Springfield, Mass	10,770	3								
Wheeling, W. Va	43,657	20	4		160		1		1	3
White Plains, N. Y	23,331	4			19		4			
Wichita, Kans	73,597	27			20		2		1	
Wilmington, Del	95,369	25	3		16	1	3			1
Wilmington, N. C	30,400	8					4		2	1
Winchester, Mass	10,812	4			1					
Winona, Minn	[1] 18,583						1		1	
Winston-Salem, N. C	33,136	16	2		5		3	1	4	2
Winthrop, Mass	13,105	3			15		1			
Woburn, Mass	16,076	3								
Worcester, Mass	166,106	39	2		2		41		15	2
Yakima, Wash	22,058		1		98		10			
Yonkers, N. Y	103,066	22	3		75		2			4
Zanesville, Ohio	31,320	7	1		17					

[1] Population Apr. 15, 1910.

FOREIGN AND INSULAR.

CUBA.

Communicable Diseases—Habana.

Communicable diseases have been notified at Habana as follows:

Disease.	May 1-10, 1920.		Remaining under treatment May 10, 1920.
	New cases.	Deaths.	
Cerebrospinal meningitis			[1] 1
Chicken pox	8		15
Diphtheria	1		3
Leprosy			10
Malaria	11	1	[2] 20
Measles	28	1	71
Paratyphoid fever			1
Scarlet fever	4	3	15
Typhoid fever	18	1	[3] 52

[1] From abroad. [2] From the interior 11; from abroad 1. [3] From the interior 24; from abroad 1.

ROUMANIA.

Precautions against Importation of Plague—Constanza.

According to information dated April 22, 1920, vessels arriving at the port of Constanza, Roumania, from ports infected with plague, are required to remain at a distance from the wharves. Discharge of cargo is required to be performed under precautions against passage of rats from the vessel to the land.

INFLUENZA.

The following information was taken from reports received during the week ended May 28, 1920:

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria:				
Departments—				
Algiers	Apr. 11-20	3		
Constantine	do	1		
Oran	do	2		
Australia:				
Sydney	Feb. 29-Mar. 27			Present. Not pneumonic.
Bolivia:				
La Paz	Mar. 21-Apr. 3	7	1	
Brazil:				
Rio de Janeiro	Jan. 18-Apr. 10		113	Dec. 28, 1919-Apr. 10, 1920; deaths, 143.

INFLUENZA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Canada:				
Manitoba—				
Winnipeg	Apr. 18–May 1	2	1	
Ontario—				
Fort William and Port Arthur	May 2–8	2	1	
Toronto	do		2	Pneumonia, acute primary, deaths, 22.
Ceylon:				
Colombo	Mar. 14–27		4	
China:				
Antung	Apr. 12–18	5		
Egypt:				
Alexandria	Apr. 9–22	13		
France:				
Bordeaux	Apr. 5–18		3	
St. Etienne	Apr. 17–30		2	
Great Britain:				
England and Wales	Apr. 11–17		306	In 96 great towns. Population, 16,577,344.
Do	Apr. 18–24		259	Do.
Do	Apr. 25–May 1		202	Do.
London	Apr. 11–17		101	Greater London and Outer Ring, 187 deaths.
Do	Apr. 18–24		59	Greater London and Outer Ring, 145 deaths.
Do	Apr. 25–May 1		45	Greater London and Outer Ring, 99 deaths.
Scotland	Apr. 11–17		27	With pneumonia complications, 178 deaths.
Greece:				
Athens	Feb. 28–Mar. 27		163	
Kalamata	Feb. 11–Mar. 13		9	
Piræus	Mar. 1–15		36	With pneumonia complications, 36 deaths; broncho-pneumonia, 63 deaths.
Saloniki	Mar. 15–28		20	
India:				
Madras	Mar. 22–28		3	
Rangoon	Mar. 14–27		57	
Italy:				
Turin	Mar. 22–28	1	1	
Mexico:				
Acapulco	Apr. 4–24			Present.
Panama:				
Colon	Apr. 26–May 2	2		
Spain:				
Madrid	Mar. 1–31		27	
Santander				Jan.–Mar., 1920: Present.
Sweden:				
Gottenborg	Mar. 28–Apr. 3	141		
Stockholm	Apr. 4–10	54	14	
Switzerland:				
Basel	Feb. 29–Apr. 10	1,193	32	Report for week ended Mar. 20 not received.
Zurich	Apr. 4–11	5	1	

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

Reports Received During Week Ended May 28, 1920.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
India				Feb. 15–Mar. 6, 1920: Deaths, 4,422.
Calcutta	Mar. 28–Apr. 3	50	48	
Madras	Mar. 22–28	4	1	
Rangoon	Mar. 21–27	2	1	
Java:				
West Java				Mar. 12–18, 1920: Cases, 4; deaths, 1.

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

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

Reports Received During Week Ended May 28, 1920—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Argentina:				
Rosario	Mar. 1-31		2	
British East Africa:				
Nairobi	Mar. 21-27	2	2	
Ceylon:				
Colombo	Mar. 28-Apr. 3	2	2	
Ecuador:				
Guayaquil	Apr. 1-15		1	
Egypt				Jan. 1-Apr. 21, 1920: Cases, 168; deaths, 106.
Cities—				
Suez	Apr. 21	1		
Provinces—				
Assiout	Apr. 17-21	5	2	Pneumonic, 2 cases.
India				Mar. 14-20, 1920: Cases, 11,897; deaths, 9,540.
Bombay	Mar. 14-20	12	7	
Karachi	Mar. 21-Apr. 3	35	21	
Madras Presidency	Mar. 22-28	43	34	
Rangoon	Mar. 21-27	50	51	
Java:				
East Java				Mar. 7-13, 1920: Cases, 4; deaths, 6.
Surabaya	Mar. 7-13	4	6	
Peru:				
Trujillo	Apr. 5-18	11	2	

SMALLPOX.

Algeria:				
Departments—				
Algiers	Apr. 11-20	6		
Constantine	do	9		
Oran	do	6		
Bolivia:				
La Paz	Mar. 21-Apr. 3	5	7	
Brazil:				
Pernambuco	Mar. 15-28	41	2	
Rio de Janeiro	Jan. 18-Apr. 10	42	21	Report for week ended Mar. 20 not received.
Canada:				
Alberta—				
Calgary	Apr. 4-May 10	8		
New Brunswick—				
Gloucester County	May 15			Outbreak reported Shippigan Island.
Ontario—				
Fernie	Apr. 25-May 1	1		
Kingston	do	6		
Saskatchewan—				
Moosejaw	May 2-8	2		
Saskatoon	do	1		
Ceylon:				
Colombo	Mar. 28-Apr. 3		1	
China:				
Chungking	Mar. 21-27			Present.
Egypt:				
Alexandria	Apr. 2-27	51	22	
Cairo	Feb. 27-Mar. 3	1		
Port Said	do	1		
Great Britain:				
Birmingham	Apr. 18-24	9		
Glasgow	Apr. 18-May 1	22	6	
Liverpool	Apr. 18-24	1	1	
Greece:				
Patras	Dec. 29-Mar. 14		5	
Saloniki	Mar. 15-21	1		
Haiti:				
Port au Prince	Apr. 28-May 8			Present.
India				Feb. 21-Mar. 6, 1920: Deaths, 4,633.
Bombay	Mar. 14-20	51	25	
Calcutta	Mar. 28-Apr. 3	130	114	
Karachi	Mar. 21-Apr. 3	39	7	
Madras	Mar. 22-28	10	3	
Rangoon	Mar. 14-27	74	14	

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

Reports Received During Week Ended May 28, 1920—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Italy:				
Trieste	Apr. 4-10	1		
Java:				
West Java				Mar. 12-18, 1920: Cases, 60; deaths, 12.
Batavia	Mar. 12-18	2	1	
Luxemburg	Mar. 28-Apr. 11	3		
Manchuria:				
Dairen	Apr. 5-19	2	1	
Newfoundland:				
St. Johns	May 1-7	1		
Portugal:				
Lisbon	Apr. 11-17		9	
Spain:				
Cadiz	Mar. 1-31		1	
Gijon				Jan.-Mar., 1920: Cases, 67; deaths, 10.
Valencia	Apr. 11-17	5	1	
Tunis:				
Tunis	Apr. 19-25		1	
Union of South Africa:				
Johannesburg	Feb. 1-28	2		

TYPHUS FEVER.

Algeria:				
Departments—				
Algiers	Apr. 11-20	4		
Constantine	do	10		
Oran	do	59		
Bolivia:				
La Paz	Mar. 21-27	3	5	
Bulgaria:				
Sofia	Mar. 21-Apr. 3	10		5 in a jail and 5 among Russian refugees.
Egypt:				
Alexandria	Apr. 9-22	131	26	
Cairo	Feb. 27-Mar. 4	27	16	
Great Britain:				
Dublin	Apr. 25-May 1	5		
Greece:				
Saloniki	Mar. 15-28	15	1	Among Russian refugees.
Italy:				
Trieste	Mar. 28-Apr. 17	4		
Mexico:				
Chihuahua	May 3-9	1		
Spain:				
Madrid	Mar. 1-31		1	
Tunis:				
Tunis	Apr. 19-25	1		
Turkey:				
Samsoun	Feb.-Mar	15		
Union of South Africa:				
Johannesburg	Feb. 1-28	1		

Reports Received from Dec. 27, 1919, to May 21, 1920.

CHOLERA.

China:				
Amoy	Nov. 4-17		2	
Chosen (Korea)				Aug. 15-Nov. 16, 1919: Cases, 15,192; deaths, 9,823.
Chemulpo	Oct. 1-31	6	4	
Fusan	do	34	30	
Provinces—				
Keiki	Aug. 15-Nov. 16	224	135	
Kogen	do	64	38	
Kokai	do	4,015	2,770	
North Chusei	do	1	1	
North Heian	do	3,196	2,434	
North Kankyo	do	497	275	
North Keisho	do	63	35	
North Zenra	do	1,326	692	
South Chusei	do	930	590	

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

Reports Received from Dec. 27, 1919, to May 21, 1920—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Chosen (Korea)—Continued.				
Provinces—Continued.				
South Heian	Aug. 15–Nov. 16	3,031	1,858	
South Kankyo	do	870	551	
South Keisho	do	318	156	
South Zenra	do	657	288	
Greece:				
Saloniki	Oct. 10	1		
India				Oct. 19–Dec. 27, 1919: Deaths, 23,388. Jan. 4–Feb. 14, 1920: deaths, 12,701.
Bombay	Nov. 2–8	1	1	
Do	Jan. 11–Feb. 21	3	2	
Calcutta	Oct. 26–Dec. 27	181	166	
Do	Dec. 28–Mar. 20	481	370	
Madras	Nov. 23–Dec. 27	14	5	
Do	Dec. 28–Mar. 21	31	14	
Rangoon	Nov. 30–Dec. 27	12	9	
Do	Dec. 28–Mar. 20	10	9	
Indo-China:				
Saigon	Oct. 27–Nov. 23	5	4	
Japan:				
Kobe	Nov. 24–30	2		
Taiwan				For entire island: Oct. 22–Nov. 30, 1919: Cases, 651; deaths, 385.
Tokyo	Nov. 10–20	1	1	
Java:				
East Java				Oct. 5–11, 1919: One case, 1 death.
Surabaya	Feb. 8–14	1	1	At Pasoeroean.
West Java				Nov. 5–Dec. 25, 1919: Cases, 17.
Batavia	Nov. 5–Dec. 25	17		Jan. 24–Feb. 27, 1920: Cases, 3; deaths, 1.
Do	Jan. 21–Feb. 12	2	1	
Philippine Islands:				
Manila	Nov. 2–Dec. 27	20	10	
Provinces				Nov. 2–Dec. 27, 1919: Cases, 1,574; deaths. 1.151.
Albany	Nov. 2–Dec. 27	339	240	
Ambos Camarines	Nov. 2–Dec. 20	66	34	
Antique	Nov. 2–Dec. 27	160	113	
Batangas	do	39	28	
Bohol	do	34	27	
Cagayan	Nov. 3–15	35	20	
Capiz	Nov. 2–8	6	5	
Cavite	Nov. 2–Dec. 6	25	16	
Cebu	Nov. 2–Dec. 20	23	14	
Davao	Nov. 9–15	6	4	
Ilocos Norte	Nov. 2–29	42	40	
Ilocos Sur	Nov. 2–22	18	15	
Iloilo	Nov. 2–Dec. 20	55	33	
Isabela	Nov. 2–Dec. 13	167	77	
Laguna	Nov. 2–Dec. 20	23	17	
Mindoro	Nov. 2–Dec. 6	81	30	
Mountain	Nov. 2–Dec. 13	6	4	
Occidental Negros	Nov. 2–Dec. 27	100	53	
Pangasinan	Nov. 30–Dec. 20	60	46	
Rizal	do	41	15	
Sorsogon	Nov. 2–Dec. 13	208	139	
Tarlac	Nov. 2–22	11	11	
Tayabas	Nov. 2–Dec. 27	60	35	
Union	Nov. 9–15	5	5	
Manila	Feb. 3–28	2		
Provinces				Dec. 28, 1919–Apr. 10, 1920: Cases, 912; deaths, 506.
Albay	Dec. 28–Apr. 10	78	53	
Ambos Camarines	Dec. 28–Apr. 3	298	593	
Antique	do	219	60	
Batangas	Dec. 28–Feb. 14	19	12	
Cavite	Jan. 11–17	1	1	
Iloilo	Dec. 28–Jan. 3	9	2	
Ilocos Norte	Mar. 7–13		1	
Isabela	Jan. 11–17	6	3	
Laguna	Dec. 22–Jan. 3	2	2	
Mindoro	Jan. 4–24	24	11	
Mountain	Dec. 28–Jan. 10	11	6	
Occidental Negros	Jan. 4–Mar. 20	22	19	
Palawan	Jan. 11–Feb. 28	59	37	
Pangasinan	Dec. 28–Jan. 3	1		
Rizal	Feb. 1–7	3		
Samar	Jan. 4–Apr. 10	66	37	
Sorsogon	Jan. 1–24	51	40	
Tayabas	Jan. 4–Feb. 28	33	19	

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

Reports Received from Dec. 27, 1919, to May 21, 1920—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Poland:				
Garwolin				Present in November, 1919.
Kowal				Do.
Stryi				Do.
Russia:				
Novorossisk	Nov. 8–11	3		
Odessa	Oct. 25–Nov. 7	93		
Siam:				
Bangkok	Dec. 7–27	163	57	Oct. 5–Dec. 15, 1919: Deaths, 1,080.
Do	Dec. 28–Mar. 20	270	131	
Straits Settlements:				
Singapore	Oct. 5–Dec. 27	15	14	
Do	Dec. 28–Mar. 13	8	5	
Sumatra:				
Deli	Oct. 1–31	1	1	
Medan	Nov. 1–30	1	1	

PLAGUE.

Argentina:				
Rosario	Dec. 1–31		7	
Brazil:				
Bahia	Nov. 9–15	1	1	
Do	Jan. 25–Mar. 6	5	3	
Porto Alegre	Nov. 1–30		3	
Rio de Janeiro	Nov. 2–Dec. 27	9	4	
Do	Jan. 11–17	1		
British East Africa				Sept. 1–Dec. 31, 1919: Deaths, 33 reported by native inspectors, 601 reported by native chiefs.
Kisumu	Sept. 28–Nov. 1	6	6	Dec. 14–20, 1919: Present in vicinity. Feb. 15–21, 1920: Present in vicinity.
Do	Feb. 1–7	1	1	
Mombasa	Feb. 1–21	14	14	
Ceylon:				
Colombo	Oct. 26–Dec. 27	36	35	
Do	Dec. 28–Mar. 13	46	22	
Chile:				
Antofagasta	Dec. 8–14	1		
Do	Feb. 8–14	1		
China:				
Hongkong	Dec. 7–13	1		
Do	Feb. 1–7	1	1	
Ecuador:				
Guayaquil	Nov. 1–31	2		
Do	Jan. 1–Mar. 31	45	7	
Egypt				Jan. 1–Dec. 25, 1919: Cases, 867; deaths, 469. Jan. 1–Apr. 8, 1920: Cases, 136; deaths, 86.
Cities—				
Alexandria	Dec. 3	1	1	From vessel Rachid Pacha from Constantinople, Saloniki, and Smyrna.
Do	Feb. 18	1	1	
Port Said	Feb. 13	1		
Suez	Feb. 1–Apr. 2	14	11	
Provinces—				
Assiout	Nov. 15–21	30	17	
Do	Jan. 13–Apr. 7	69	37	
Assouan	Mar. 31	1	1	
Fayoum	Mar. 2–Apr. 2	2	1	
Girgeh	Mar. 4–5	3	3	
Keneh	Mar. 26	1	1	
Minieh	Mar. 1–29	16	8	
Greece				Present, Apr. 28.
Saloniki	Oct. 6–Dec. 21	19	7	
Piræus	Apr. 25–27	5		
Hawaii:				
Kaloha	Feb. 23–Mar. 23	1	2	
India				Oct. 19–Dec. 27, 1919: Cases, 31,542; deaths, 23,443. Dec. 28, 1919–Mar. 13, 1920: Cases, 64,575; deaths, 60,780.
Bombay	Oct. 19–Dec. 27	6	6	
Do	Jan. 4–Mar. 13	40	25	
Calcutta	Jan. 25–Mar. 20	9	5	
Karachi	Nov. 9–29	3	2	
Do	Jan. 11–Mar. 20	5	3	

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

Reports Received from Dec. 27, 1919, to May 21, 1920—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India—Continued.				
Madras Presidency	Nov. 9-Dec. 27	1,068	704	
Do	Dec. 28-Mar. 27	4,583	3,350	
Madras	Jan. 25-Feb. 14	4	2	
Rangoon	Nov. 2-Dec. 27	29	27	Oct. 19-Nov. 1, 1919: Cases, 10; deaths, 7.
Do	Dec. 28-Mar. 20	492	461	
Indo-China:				
Saigon	Oct. 27-Dec. 7	11	9	
Do	Jan. 26-Feb. 7	1	1	
Java:				
East Java				Sept. 28-Dec. 31, 1919: Cases, 1,500; deaths, 1,499. Surabaya Residency, Jan. 1-Mar. 6, 1920: Cases, 64; deaths, 61.
Surabaya	Jan. 1-Mar. 6	50	47	
Mesopotamia:				
Bagdad	Jan. 3-9	1	1	
Peru:				
Callao	Nov. 1-30		3	
Paita	Dec. 29-Jan. 17	23	17	
Salaverry (Trujillo)	Nov. 23-Dec. 21	9	1	Present in surrounding country and in vicinity.
Do	Dec. 29-Apr. 4	44	22	
Senegal:				
Dakar	Nov. 1-30		146	Including Dakar and vicinity.
Siam:				
Bangkok	Dec. 14-20	4	2	
Do	Feb. 1-Mar. 20	34	30	
Straits Settlements:				
Singapore	Oct. 26-Dec. 27	7	6	
Do	Jan. 4-Mar. 6	16	8	
Syria:				
Beirut	Dec. 22	29		
Turkey:				
Constantinople	Nov. 14-Dec. 20	11		Present Dec. 11, 1919. Nov. 14-20, 1919: Present in vicinity.
On vessel:				
S. S. Alps Maru	Feb. 28-Mar. 5	2	2	At port of London, England. Vessel left Yokohama, Japan, Dec. 3, 1919: arrived Suez Jan. 21, 1920. Destination, Hamburg.
S. S. Espana	Mar. 22			Reported at Las Palmas, Canary Islands; quarantined for plague which occurred on board en route. Vessel left Buenos Aires Feb. 16. Arrived at Malaga, Spain, Mar. 16. Destination, Mahon, Island of Minorca.
S. S. Kaisar-i-Hind	Nov. 28	3		At Port Said, Egypt. From Bombay, Nov. 15, for London.

SMALLPOX.

Algeria:				
Department—				
Algiers	Nov. 11-Dec. 31	65		City of Algiers: Cases, 2.
Do	Jan. 1-Apr. 10	109		
Constantine	Nov. 11-Dec. 31	15		
Do	Jan. 1-Apr. 10	42		
Oran	Nov. 11-Dec. 31	90		
Do	Jan. 1-Apr. 10	205		
South Territories	do	12		
Arabia:				
Aden	Dec. 24-30	1	1	
Do	Jan. 6-20		3	
Argentina:				
Rosario	Jan. 1-31		1	
Austria				Nov. 23, 1919-Jan. 3, 1920: Cases, 13.
Vienna	Nov. 23-Jan. 3	10		
Belgium:				
Brussels	Dec. 28-Mar. 6		5	
Bolivia:				
La Paz	June 29-Dec. 27		216	Dec. 29, 1918-June 28, 1919: Cases, 86; deaths, 44. Dec. 14-20, 1919: Cases, 7; deaths, 5.
Do	Dec. 28-Apr. 10	34	43	

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

Reports Received from Dec. 27, 1919, to May 21, 1920—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Bahia	Oct. 26-Nov. 22	1,704	1,022	
Do	Dec. 28-Mar. 6	546	392	
Ceara	Mar. 21-27		1	
Para	Feb. 8-Apr. 17	8	9	
Pernambuco	Nov. 10-Dec. 28	123	9	
Do	Dec. 29-Jan. 11	82	4	
Rio de Janeiro	Sept. 28-Dec. 27	429	119	
Do	Dec. 28-Jan. 17		13	
Santos	Nov. 24-30		1	
Do	Jan. 5-18		2	
British East Africa				Sept. 1-Dec. 31, 1919: Cases, 851; deaths, 327.
Zanzibar	Feb. 1-29	3	1	From s. s. Karapara from Bombay and s. s. Roma from Suez.
Bulgaria:				
Sofia	Feb. 22-Mar. 20	5		
Canada:				
British Columbia—				
Vancouver	Nov. 30-Dec. 6	1		
Do	Jan. 4-17	1		
Manitoba—				
Winnipeg	Jan. 11-Apr. 17	13		
New Brunswick—				
Gloucester County				Jan.-Mar., 1920: Cases, 14.
St. John	Jan. 29-May 1	10		
Nova Scotia—				
Halifax	Dec. 21-27	2		
Do	Jan. 4-Feb. 14	4		
Sydney	Dec. 7-13	1		
Do	Dec. 28-May 1	26		
Counties—				
Cumberland	Dec. 14-20			Present.
Gloucester				Oct.-Nov., 1919: Cases, 3.
Inverness	Dec. 14-20			Present.
Pictou	do			Do.
Ontario				Nov. 1-29, 1919: Cases, 1,673. Nov. 30-Dec. 6, 1919: Cases, 125, in 45 localities, exclusive of Dysart and Toronto. Dec. 1-31, 1919: Cases, 1,414; deaths, 2. Dec. 28, 1919-Mar. 27, 1920: Cases, 2,330; deaths, 35.
Fernie	Apr. 11-17	3		
Fort William and Port Arthur.	Jan. 25-Apr. 24	8		
Hamilton	Dec. 14-20	3		
Do	Jan. 4-May 8	36		
Kingston	Dec. 21-27	1		
Do	Dec. 28-Apr. 12	15		
Moncton	Apr. 25-May 1	1		
North Bay	Jan. 11-May 1	10		
Ottawa	Dec. 14-20	1		
Do	Dec. 28-May 8	41	1	
Peterborough	Dec. 21-27	3		
Do	Dec. 28-Apr. 10	57	2	
Prescott	Jan. 4-10	1		
Sault Ste. Marie	Dec. 7-27	1		
Do	Dec. 28-Jan. 3	1		
Toronto	Dec. 7-27	727		
Do	Dec. 28-May 1	883	7	
Windsor	Dec. 14-27	2		
Do	Mar. 21-May 1	3		
Prince Edward Island—				
Summerside	Feb. 14-May 7	4		
Quebec—				
Bonaventure and Gaspe	Jan. 1-Apr. 30	46		Counties.
Montreal	Dec. 7-27	3		
Do	Jan. 18-May 1	30		
Quebec	Dec. 7-27	4		
Do	Jan. 4-Apr. 24	20		
Saskatchewan—				
Moosejaw	Dec. 28-Apr. 24	6		
Saskatoon	Dec. 14-20	1		
Do	Mar. 28-Apr. 3	1		From Toronto.
Regina	Mar. 27-Apr. 24	2		
Ceylon:				
Colombo	Nov. 16-Dec. 13	10	9	
Do	Dec. 28-Mar. 6	11	2	

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

Reports Received from Dec. 27, 1919, to May 21, 1920—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Amoy	Nov. 4–Dec. 22			Present. Dec. 22: Four deaths.
Do	Dec. 30–Apr. 20	12	7	
Canton	Nov. 2–Dec. 27			Present.
Do	Dec. 28–Feb. 28			Do.
Chungsha	Jan. 4–10	55		
Chungking	do			Do.
Do	Dec. 28–Mar. 6			Do.
Foochow	Nov. 16–Dec. 27			Do.
Do	Dec. 28–Mar. 20			Do.
Hankow	Feb. 29–Mar. 6	1	1	
Hongkong	Jan. 25–Mar. 20	12		
Nankin	Dec. 6–27			Do.
Do	Dec. 28–Apr. 13			Do.
Shanghai	Dec. 22–28	2		
Do	Mar. 29–Apr. 4	1		
Tientsin	Feb. 1–7	1		
Chosen (Korea):				
Chemulpo	Dec. 1–31	1	1	
Do	Jan. 1–Feb. 29	10	3	
Fusan	Oct. 1–Dec. 31	12	1	
Do	Feb. 1–29	1		
Seoul	Oct. 1–Dec. 31	19	4	
Do	Jan. 1–Feb. 29	162	44	
Colombia:				
Barranquilla	Nov. 16–Dec. 20	50	2	
Do	Jan. 11–Mar. 6	500	4	Stated to be epidemic, Jan. 18–24, and Apr. 11–17, 1920. About 200 cases, Feb. 1–14.
Costa Rica:				
Limon	Mar. 28–Apr. 3		1	
Cuba:				
Habana	Jan. 31	4		Children living in same house.
Czecho Slovakia:				
Prague	Feb. 8–Mar. 20	4	2	
Egypt:				
Alexandria	Nov. 12–Dec. 16	32	22	
Do	Jan. 1–Apr. 1	153	74	
Cairo	Oct. 1–Dec. 23	64	31	
Do	Jan. 1–Feb. 25	58	15	
Port Said	Oct. 1–Dec. 23	13	6	
Do	Jan. 1–Feb. 25	34	11	
Finland:				
Provinces				July 16–Dec. 31, 1919: Cases, 83; Jan. 15–31, 1920: Cases, 14.
Abo Och Borneborg	Nov. 1–15	1		
Nyland	July 16–Dec. 15	29		
St. Michael	Dec. 1–15	7		
Tavastehus	July 16–Dec. 31	15		
Do	Jan. 15–31	6		
Vasa	Dec. 1–31	4		
Do	Jan. 25–31	8		
Viborg	July 16–Dec. 31	37		
France:				
Paris	Jan. 1–31	3	2	
Germany				Oct. 5–15, 1919: Cases, 32. In addition to previously reported cases; Sept. 28–Dec. 6, 1919. Cases, 175 (exclusive of Prussia). Dec. 7, 1919–Jan. 17, 1920: Cases, 217.
Prussia	Oct. 20–Nov. 20	1,100	323	
Great Britain:				
Birmingham	Mar. 28–Apr. 13	6		
Glasgow	Feb. 29–Apr. 16	20		
Liverpool	Mar. 14–Apr. 3	3		
London	Feb. 22–28	4		
Greece:				
Saloniki	Nov. 10–Dec. 28	26	26	
Do	Dec. 9–Mar. 14	51	43	In vicinity: Drama, cases, 2; Zagoritzani, 9 cases, 1 death; Serres, 1 case.
Haiti:				
Port-au-Prince	Apr. 10–17			Present.
Hungary				Nov. 3–Dec. 7, 1919: Cases, 15.
India				Oct. 19–Dec. 27, 1919: Deaths, 3,421. Jan. 4–Feb. 21, 1920: Deaths, 2,498.
Bombay	Oct. 12–Dec. 20	46	11	
Do	Dec. 28–Mar. 13	233	89	

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

Reports Received from Dec. 27, 1919, to May 21, 1920—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India—Continued.				
Calcutta	Oct. 26–Dec. 27	186	260	
Do	Dec. 28–Mar. 20	2,025	1,733	
Karachi	Dec. 21–27	6	2	
Do	Jan. 18–Mar. 20	83	32	
Madras	Nov. 2–Dec. 27	31	13	
Do	Dec. 28–Mar. 27	93	19	
Rangoon	Oct 19–Dec. 27	51	18	
Do	Dec. 28–Mar. 13	173	47	
Indo-China:				
Saigon	Oct. 27–Nov. 23	2	.....	
Do	Jan. 19–25	2	.....	
Italy:				
Genoa	Jan. 5–Mar. 7	26	.....	Province: Nov. 17–Dec. 28, 1919: Cases, 15; deaths, 3. Jan. 12–Apr. 4, 1920: Cases, 24.
Leghorn	Jan. 4–Mar. 15	8	.....	
Messina	Nov. 10–Dec. 28	55	8	Province of Messina: Dec. 14–28, 1919: Cases, 68. Jan. 5–Apr. 4, 1920: Cases, 179; 2 deaths.
Do	Dec. 29–Apr. 4	41	7	
Milan	Oct. 1–Dec. 31	15	2	
Do	Jan. 1–Feb. 29	28	8	
Naples	Dec. 28–Feb. 15	13	17	
Palermo	Dec. 27–Mar. 30	6	5	
San Fratello	Dec. 1–28	49	5	
Do	Dec. 29–Mar. 7	29	1	
Trieste	Jan. 3–Mar. 27	3	1	
Turin	Dec. 28–Feb. 15	5	.....	
Japan:				
Kobe	Dec. 15–21	1	.....	
Do	Feb. 23–Apr. 4	6	.....	
Nagasaki	Feb. 2–8	1	1	
Nagoya	Apr. 11–17	1	.....	
Taiwan	Nov. 1–31	36	7	Entire Island.
Do	Jan. 1–Mar. 31	559	177	Do.
Tokyo	Mar. 15–20	15	.....	
Yokohama	Feb. 1–Mar. 26	32	8	
Java:				
East Java	.....	.....	.....	Sept. 28–Dec. 18, 1919: Cases, 34. Jan. 1–Feb. 14, 1920; Cases, 2.
Residency—				
Surabaya	Oct. 25–Dec. 18	26	.....	
Do	Jan. 1–7	1	.....	
West Java	.....	.....	.....	Oct. 17–Dec. 25, 1919; Cases, 659; deaths, 151. Jan. 2–Mar. 11, 1920: Cases, 456; deaths, 90.
Batavia	Oct. 17–Dec. 12	49	22	
Do	Jan. 2–Mar. 11	19	11	
Luxemburg	Feb. 15–Mar. 28	6	.....	
Malta	Feb. 1–Mar. 31	8	2	
Manchuria:				
Dairen	Feb. 3–Apr. 5	5	.....	
Mukden	Jan. 18–Mar. 13	.....	.....	Present.
Mesopotamia:				
Bagdad	Jan. 10–30	5	.....	
Mexico:				
Acapulco	Nov. 9–15	2	.....	
Chihuahua	Dec. 21–27	3	3	
Do	Jan. 11–Mar. 20	.....	3	
Ciudad Juarez	Jan. 11–Feb. 7	.....	2	
Guadalajara	Dec. 1–31	1	.....	
Do	Jan. 1–31	1	.....	
Mexico City	Nov. 16–Dec. 20	11	.....	
Do	Feb. 15–28	2	.....	
Salina Cruz	Feb. 1–29	18	.....	
San Luis Potosi	Dec. 14–20	.....	1	
Do	Jan. 18–Apr. 4	4	7	
Tehuantepec	Dec. 25–31	6	.....	
Do	Jan. 1–Feb. 27	73	.....	
Vera Cruz	Apr. 12–18	1	.....	
Newfoundland:				
St. Johns	Dec. 20–26	3	.....	Dec. 13–26, at outports, 6 cases. Present at 8 other localities.
Do	Dec. 27–Apr. 9	14	.....	Outports, Dec. 27, 1919–Mar. 12, 1920: Cases, 25. Present at other localities. Mar. 25–Apr. 30; Present at outports.
Panama:				
Colon	Dec. 15–21	1	.....	
Peru:				
Callao-Lima	Feb. 1–29	4	.....	

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

Reports Received from Dec. 27, 1919, to May 21, 1920—Continued.

SMALLPOX—Continued.

Place	Date.	Cases.	Deaths.	Remarks.
Philippine Islands:				
Manila	Feb. 15–Mar. 13	3	3	
Portugal:				
Lisbon	Nov. 30–Dec. 27	.....	55	
Do	Dec. 28–Apr. 10	.....	124	
Oporto	Dec. 7–20	5	5	
Do	Dec. 28–Mar. 1	4	3	
Portuguese East Africa	.....	.....	.....	Present in interior, in 5 districts, Nov. 9–Dec. 20, 1919, with 56 reported cases. In interior, Dec. 28, 1919–Mar. 27, 1920: Present.
Towns—				
Chai-Chai	Feb. 1–7	1	.....	
Chinde	Dec. 28–Jan. 25	21	.....	
Inhambane	Dec. 7–27	7	.....	
Do	Jan. 4–Feb. 28	11	.....	
Lourenco Marquez	Nov. 23–Dec. 20	9	.....	
Do	Feb. 15–Mar. 6	8	.....	
Mazambique	Dec. 7–27	2	.....	
Quelimane	....do	4	.....	
Do	Jan. 4–Feb. 28	12	.....	
Tete	Dec. 7–27	1	.....	
Roumania:				
Bucharest	Jan. 1–31	1	.....	
Russia:				
Riga	Feb. 16–Mar. 15	20	.....	
Siberia:				
Vladivostok	Dec. 19–31	17	3	Aug. 1–Dec. 15, 1919: Cases, 10 deaths, 3.
Do	Jan. 1–31	8	8	
Spain:				
Barcelona	Nov. 6–Dec. 27	26	.....	
Do	Dec. 8–Apr. 8	47	.....	
Bilbao	Nov. 1–Dec. 20	.....	4	
Do	Feb. 10–20	1	.....	
Cadiz	Oct. 1–Nov. 30	.....	6	
Madrid	Feb. 1–29	.....	9	
Valencia	Nov. 10–Dec. 27	39	9	
Do	Dec. 28–Apr. 10	151	26	
Vigo	Nov. 18–Dec. 27	14	.....	
Do	Dec. 28–Apr. 10	2	5	Jan. 11–17, 1920: Present in vicinity.
Straits Settlements:				
Singapore	Mar. 7–13	1	1	
Sumatra:				
Medan	Oct. 1–31	8	.....	
Tunis:				
Tunis	Dec. 23–29	1	.....	
Do	Jan. 19–Apr. 18	9	8	
Turkey:				
Constantinople	Nov. 9–Dec. 14	27	.....	
Do	Feb. 18–Mar. 27	6	3	
Union of South Africa:				
Johannesburg	Oct. 1–Dec. 31	21	.....	
Do	Jan. 1–31	5	.....	
On vessel:				
S. S. Roggeveen	.....	1	.....	Vessel from Java: At Noumea, New Caledonia. Case left at Noumea. Vessel arrived at Sydney, Jan. 2, 1920.
S. S. Sarcoxie	Dec. 23	1	.....	At Ponta Delgada, Azores, from Rotterdam for New York.
S. S. Vestnorge	Jan. 15	1	.....	Mild. At Kingston, Jamaica, from Philadelphia, via Norfolk.
S. S. Karapara	Feb. 1–29	1	.....	At Zanzibar, from Bombay.
S. S. Roma	.....do	2	.....	At Zanzibar, from Suez.

TYPHUS FEVER.

Algeria:				
Departments—				
Algiers	Dec. 11–31	2	.....	Algiers (city), Jan. 1–31, 1920: Cases, 1; deaths, 1.
Do	Jan. 11–Apr. 10	15	.....	
Constantine	Nov. 11–Dec. 31	2	.....	
Do	Jan. 1–Apr. 10	25	.....	
Oran	Nov. 21–Dec. 11	5	.....	
Do	Jan. 21–Apr. 10	197	.....	
South Territories	Mar. 21–31	43	.....	

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

Reports Received from Dec. 27, 1919, to May 21, 1920—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria				Sept. 7, 1919–Jan. 3, 1920: Cases, 59.
Vienna	Sept. 7–Jan. 3	38		
Belgium:				
Ghent	Jan. 25–31		2	
Bolivia:				
La Paz	June 29–Dec. 20	30	31	Dec. 29, 1918–June 28, 1919: Deaths, 52.
Do	Jan. 4–Apr. 10	24	17	
Brazil:				
Ceara	Jan. 4–10	1		
Porto Alegre	Feb. 1–7		1	
Bulgaria:				
Sofia	Dec. 21–31	2	1	
Do	Jan. 1–Mar. 20	17	1	
Varna	Feb. 2–8	110		To Feb. 21: Present.
Vratza	Jan. 25–31			Present. Also in vicinity.
Canada:				
Ontario Province				Dec. 1–31, 1919: One case.
Chile:				
Antofagasta	Nov. 17–Dec. 14	14		
Santiago				Jan. 12–Sept. 30, 1919: Cases, 5,153; deaths, 1,023. Outbreak in October, 1918.
Valparaiso	Nov. 9–Dec. 27	955	114	Dec. 1–13, 1919: Cases, 700; deaths, 18.
Do	Dec. 28–Apr. 10	235	108	
China:				
Antung	Nov. 3–Dec. 14	2		
Tientsin	Feb. 1–7	1		
Czechoslovakia:				
Prague	Dec. 21–27	1		
Do	Jan. 25–Feb. 7	2	1	
Egypt:				
Alexandria	Nov. 12–Dec. 16	6	1	
Do	Jan. 1–Mar. 25	143	41	
Cairo	Oct. 1–Dec. 23	113	46	
Do	Jan. 1–Feb. 25	62	24	
Port Said	Oct. 1–Dec. 16	3	1	
Do	Jan. 15–28	1	1	
Finland:				
Province—				
Viborg	July 16–31	2		
Germany				Oct. 5–Dec. 6, 1919: Cases, 10—civil population, 3; military, 4; repatriated soldiers, 3. Dec. 7, 1919–Jan. 17, 1920: Cases, 73, of which 28 in civil population, including 10 Polish workmen; 45 among German troops.
Great Britain:				
Belfast	Dec. 28–Jan. 3	1	1	
Glasgow	Nov. 30–Dec. 6	2		
Greece:				
Cavalea	Nov. 17–Dec. 28	4		
Drama	Nov. 24–Dec. 28	6		
Saloniki	Oct. 6–Dec. 31		43	
Do	Dec. 28–Mar. 7	101	9	In vicinity, at Cavalla, 1 case; Prani, 1; Vertekep, 6 cases; Zagoritzani, 3.
Thassos Island	Dec. 22–28	1		
Zihna	do	1		
Hungary				Aug. 25–Dec. 7, 1919: Cases, 36.
Budapest	Nov. 3–Dec. 7	18		
Italy:				
Brindisi	Dec. 22–28	1		
Naples	Jan. 19–25	2	1	
Trieste	Dec. 14–27	3		
Do	Dec. 28–Feb. 3	5	2	
Venice	Nov. 17–Dec. 21	6	1	
Japan:				
Nagasaki	Dec. 1–28	4	2	
Do	Jan. 12–Mar. 28	6	1	
Mexico:				
Chihuahua	Dec. 21–27	2		
Do	Jan. 11–17		1	
Mexico City	Nov. 16–Dec. 27	129		
Do	Dec. 28–Feb. 28	188		
Saltillo	Nov. 1–30	2	1	
Do	Mar. 28–Apr. 3	1		
San Luis Potosi	Dec. 14–27			Present.
Do	Dec. 28–Apr. 18			Present. Mar. 29–Apr. 4, 1920: 1 death.

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

Reports Received from Dec. 27, 1919, to May 21, 1920—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Paraguay:				
Asuncion	Nov. 30-Dec. 6	1		
Peru:				
Callao	Nov. 1-30		1	Callao-Lima: Jan. 1-Feb. 29, 1920: Cases, 2.
Cerro de Pasco	Dec. 7-13	1		
Poland				Nov. 1-30, 1919: Cases, 11,264; deaths, 942. Including Province of Posen.
Galicia (Province)	Nov. 1-30	5,716	616	
Warsaw	do	107	19	Oct. 1-31, 1919: Cases, 129; deaths, 12.
Portugal:				
Lisbon	Dec. 6-12		2	
Oporto	Dec. 21-27	1		
Roumania:				
Braila	Jan. 1-31	18	3	
Bucharest	do	59	7	
Constantza	do	59	7	
Galatz	do	10	3	
Russia				Mar. 4, 1920: Reported present in nearly all Black Sea ports.
Esthonia				Feb. 16, 1920: Cases, 7,500 to 8,000. Estimated mortality, 40 per cent.
Narva	Feb. 16	2,500		
Reval	do	2,500		
Siberia:				
Vladivostok	Dec. 25-31	23	13	Aug. 1-Dec. 15, 1919: Cases, 402; deaths, 42.
Do	Jan. 1-31	279	22	
Spain:				
Barcelona	Nov. 20-26	7		
Bilbao	Dec. 22-31		1	
Corunna	Nov. 24-Dec. 7	2		
Madrid	Jan. 1-31		1	
Tunis:				
Tunis	Dec. 14-20	1		
Do	Dec. 29-Mar. 27	12	2	
Turkey:				
Constantinople	Nov. 14-Dec. 27	49		
Do	Feb. 8-Mar. 27	122	7	Increase reported due to influx of Russian refugees.
Princes Islands	do	50		About 15 miles distant from Constantinople. In Sea of Marmora.
Union of South Africa:				
Cape Province				Mar. 9, 1920: Present in 20 districts.
Districts—				
Mount Frere	Feb. 22-28			Present.
Transkei	do			Do.
Natal				Mar. 9, 1920: Present in 5 districts.
Districts—				
Camperdown	Feb. 22-28			Present.
Ixopo	do			Do.
Newcastle	do			Do.
Vryheid	do			Do.
Transvaal—				
Johannesburg	do			Present. Mining districts.
On vessels:				
S. S. Panama	Jan. 1-31	37		At Malta. Troops from Russia landed for treatment and segregated.

YELLOW FEVER.

Brazil:				
Bahia	Oct. 26-Nov. 8	1	2	
Do	Feb. 29-Mar. 6	1	1	
Mexico:				
Campeche	Dec. 20	1		
Merida	Dec. 7-27	4	2	The cases were sent from Opichen, vicinity of Muna. One death in case from Muna. Total to Dec. 27: Cases, 47; deaths, 21.
Do	Dec. 28-Mar. 20	2		

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