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THE EFFECT OF GASOLINE FUMES ON DISPENSARY ATTENDANCE AND OUTPUT IN A GROUP OF WORKERS.

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The investigation here reported was made because of the complaint of a worker in a certain establishment that the gasoline used on the stamping machines in the plant was a health hazard and was injuring the worker's eyes and general health.

In all charts in this report the words "section" and "group" are interchangeable. Section Y refers to the section surveyed and the 42 workers employed therein. Twenty-two of these workers were operating or assisting on the stamping machines. Section F refers to the 53 workers in the southern half of the same room as represented in Figure 1. This group, it will be noticed, is in the same general room as the operators of the stamping machine, but the workers composing it are not so intimately associated with the machines or with the fumes from the gasoline, and they are engaged in a different form of work. Section D (or Group D), refers to the 196 workers on the floor below the one occupied by Sections (or Groups) Y and F. In Section D the same general room conditions prevail as in Sections Y and F, except as regards the gasoline fumes and the stamping machines. The work is the same as that in Section F. Section D is not shown in Figure 1, nor elsewhere; but it is located in a room of the same size as that used by Sections Y and F, is similarly situated, and has the same room conditions except as noted above and that it is on the sixth floor of the building, while Sections Y and F are on the seventh or top floor. The number of workers listed here is as of April, 1921, but it fluctuates monthly, as shown in Table I.

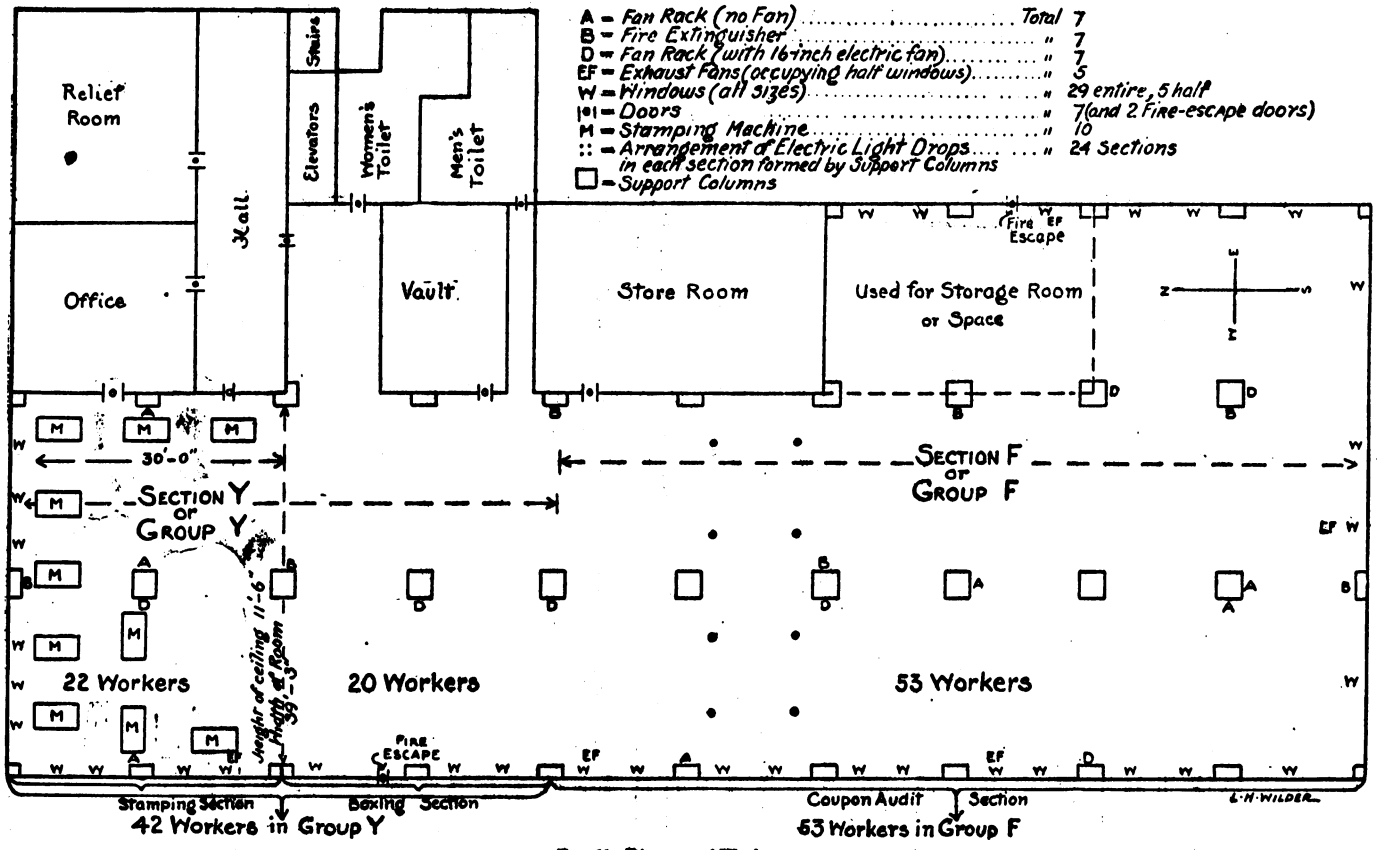

Fig 1.—Diagram of Workroom.

TABLE I.—*Number of workers in each group per month.*

Month.	Group Y[1]	Group F.	Group D.
	Boxing and stamping section.	Audit section.	Arranging section.
1920.			
August		63	
September	39	72	225
October	39	37	223
November	39	37	207
December	39	37	211
1921.			
January	39	43	211
February	41	55	207
March	41	54	200
April	42	53	196
May	42	53	226
June	43	57	245
July	43	62	230
August	43	67	227
September	43	54	216
October	43	46	209
November	43	66	200
December	43	77	185
1922			
January	41		150

[1] Including workers employed on the stamping machines.

WORKROOM CONDITIONS.

With the exception of ventilation and temperature, the sanitary conditions of the workroom were good. There was no dust hazard. Natural illumination was adequate, except with regard to the arrangement of the machines. However, these could be placed in different positions in order better to utilize natural illumination. The arrangements of the drops, the size of the globes, and the position of the desks would indicate that the artificial (electrical) illumination was satisfactory. No dust counts were made, nor were illuminometer readings taken.

TYPE OF WORKERS.

Twenty-two persons working on the stamping machines, including three males, single, three males, married, eight females, single, seven females, married, and one widow, were present and available for examination and study. The ages of the males ranged from 22 to 29 years; those of the females from 18 to 46. These 22 workers, directly exposed to gasoline fumes, received physical examinations [1] and were closely questioned and examined in an effort to find all the factors influencing or contributing to their state of health. The workers seemed to be honest in their statements, and their complaints pertained mostly to the gasoline in use. No unusual or serious

[1] See page 2307 for the findings, symptoms, and complaints noted during the physical examination of these workers.

physical conditions were found in any of the workers during their physical examinations; consequently, all symptoms and complaints could logically be considered as resulting from a cause other than a personal impairment. Several cases of varying degrees of chronic gasoline poisoning were present in this group of 22 workers examined.

When they entered this work, all the employees were subject only to such physical and other examinations as are required for appointment in a general clerical position. Because of the nature of the work in this particular branch of the establishment, and because of several features connected with the occupation which rendered it more or less undesirable, there was occasionally a shortage of workers. For example, some of the employees objected to the noise made by the machines, to the ventilation of the workroom, to the monotony of the process, to the uncleanliness necessarily connected with the process, owing to the ink and the compounds used, and to the disagreeable odor and effects resulting from the evaporation of the gasoline used in the process.

Since the compensation offered for this work is not great in comparison with the nature and the amount of labor performed, those who engage in it as a means of livelihood are, in a number of cases, individuals who do so as a last resort; though this is not true of all the workers. The process is not one that requires education or training, but depends largely on the temperament of the workers and their ability mechanically to adjust themselves to the mechanical process.

DESCRIPTION OF THE WORK PROCESS.

The process consists of the stamping of a certain type of coupon by an electrically driven machine. The stamp shows the date (the month and the year) of the cancellation of the coupons and whence they are received.

The coupons vary in size and are also of different color and design, One group, 2 by 3½ inches, and green in color, is difficult to handle, because the green ink seems to come off and clog the rubber feed belt of the stamping machine. Another group of the same size, but blue in color, requires more ink to be stamped successfully, because the blue ink of the coupon does not take up very easily the black ink used on the stamp.

These stamping machines are constructed on the same general principle. Each machine consists principally of a motor and a machine proper. The speed of the machine and of the motor can be adjusted to suit the speed of the working ability of the operator. Each machine has six revolving metal cylinders or pulleys, one feed belt, one reverse belt, one impression belt, three guides, one feed box, and one stacking-up box. The feed box and the stacking-up box are adjust-

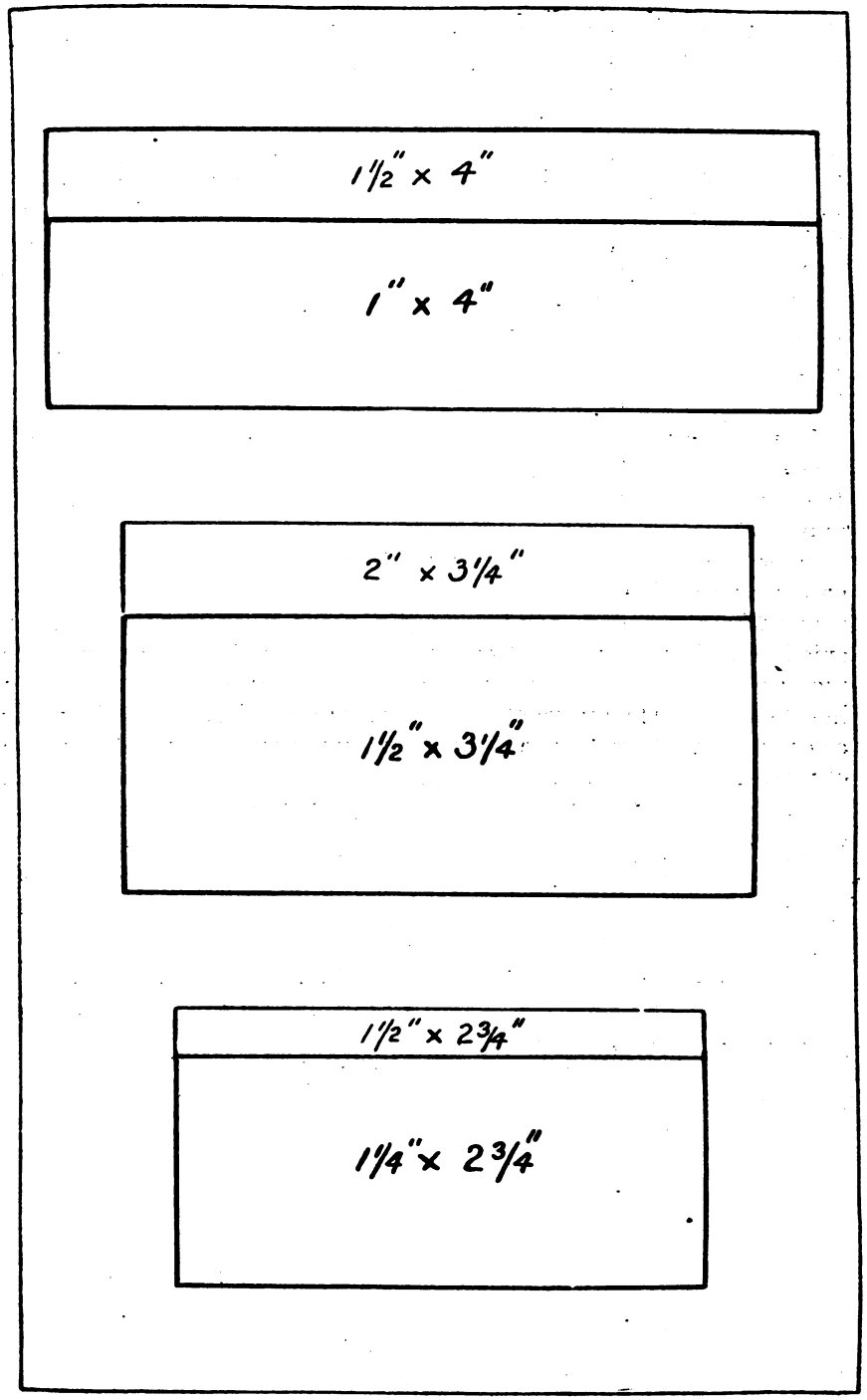

FIG. 2.—Actual sizes of coupons used in the machines.

able to the variously sized coupons. The coupons are fed into the machine at the point of contact between the rubber feed belt and the reverse belt, by the right hand of the operator and pass through the machine, which stamps, collects, and partly stacks them in the "stacking-up" place by the left hand of the operator. The operator governs the speed of the machine by a set screw, and feeds the coupons into the machine as he desires. The assistant operator, whose duty it is to find all unstamped coupons and to look after damaged or torn coupons, inspects and completes the stacking up of the coupons after they have passed through the machine. In some cases the operators and assistant operators alternate in this work, but as a rule they do not.

FACTORS INFLUENCING THE OUTPUT.

The number of coupons stamped in a given time is governed by the size and shape of the coupons, the color or nature of the ink used on them, and by their condition. If the coupons are soft, worn, or torn, more time is required to stamp them than if they are in good condition or are fairly stiff. The frequent changing, in the die of the stamping machine, of the date and the number of the establishment from which the coupons were received, causes a loss of time. Handling small lots of varying sizes of coupons causes loss of time, owing to the making of necessary records and to changing the die. It often happens that one or more of these retarding conditions arise in a day or during a week, with one or more workers or with the entire group of workers and hence, their daily and weekly averages will be lowered. The light weight of the paper coupons will not permit of drafts or air currents from electric fans or raised windows; hence the room conditions in hot or humid weather probably affect the production to a certain extent. The output depends, to a limited extent, on the team work; therefore a slow system and a slow operator retard the output.

Table II shows for one year the average daily output, by weeks, for each stamping machine, and the number of operators and assistants in the boxing and stamping section employed on these machines.

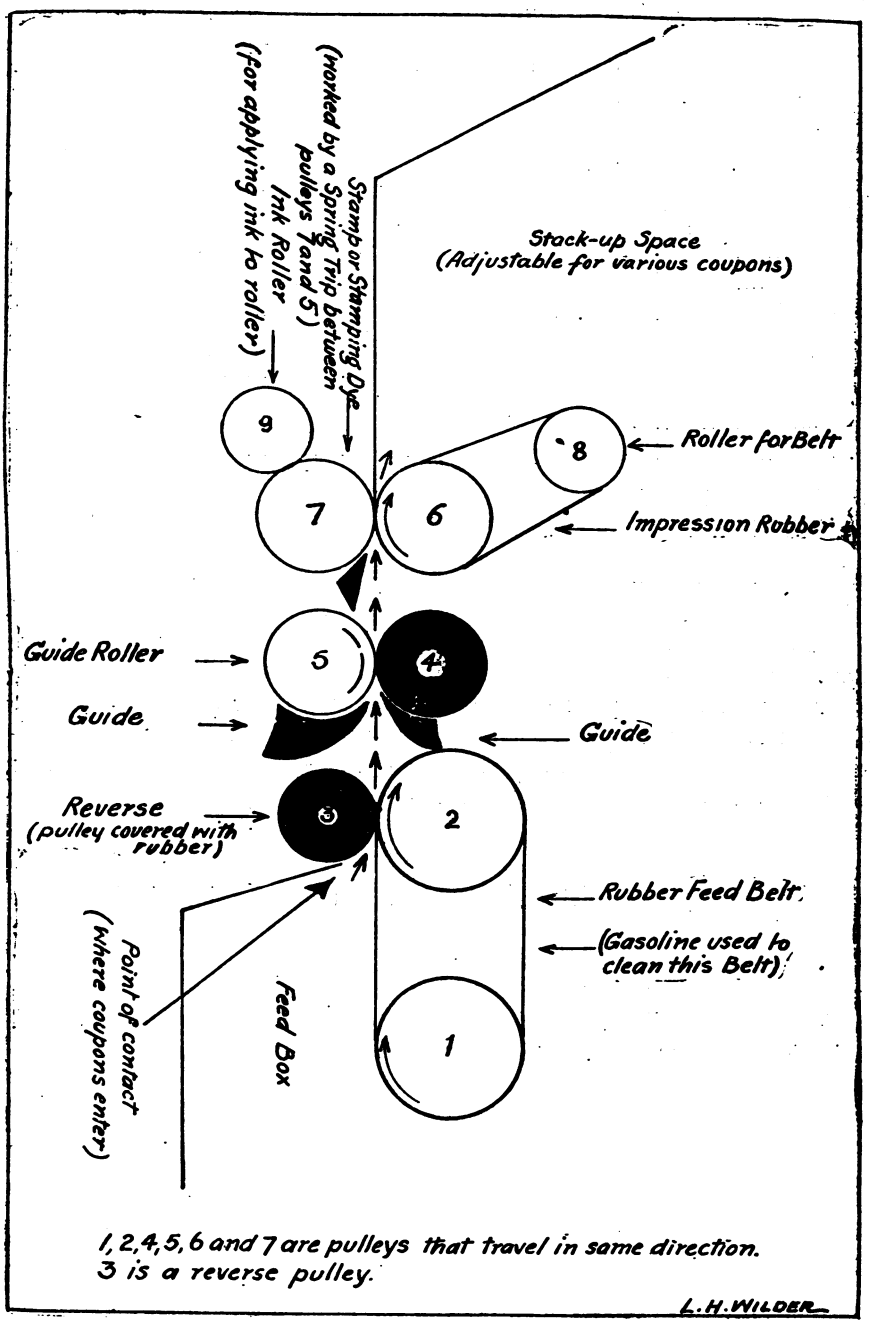

FIG. 3.—Stamping machine.

TABLE II.—*Average daily output, by weeks, and number of workers.*

Week ending—	Average daily output.	Number of operators and assistants.	Week ending—	Average daily output.	Number of operators and assistants.
1921.			1921.		
Jan. 29	50,362	21	July 30	59,520	24
Feb. 5	49,721	23	Aug. 6	54,988	31
Feb. 12	49,483	21	Aug. 13	51,223	34
Feb. 19	54,825	24	Aug. 20	47,585	35
Feb. 26	60,070	24	Aug. 27	48,146	33
Mar. 5	45,950	27	Sept. 3	50,696	32
Mar. 12	58,868	23	Sept. 10	48,281	35
Mar. 19	46,772	28	Sept. 17	53,427	33
Mar. 26	47,260	26	Sept. 24	58,771	30
Apr. 2	44,930	26	Oct. 1	62,593	25
Apr. 9	64,730	28	Oct. 8	54,681	24
Apr. 16	68,137	26	Oct. 15	57,385	27
Apr. 23	53,813	19	Oct. 22	60,060	27
Apr. 30	67,456	25	Oct. 29	65,196	24
May 7	60,508	23	Nov. 5	61,150	27
May 14	57,495	26	Nov. 12	58,361	27
May 21	57,229	30	Nov. 19	55,947	26
May 28	46,724	32	Nov. 26	48,171	26
June 4	48,936	29	Dec. 3	46,680	24
June 11	49,240	30	Dec. 10	62,337	26
June 18	46,716	28	Dec. 17	69,339	26
June 25	42,920	24	Dec. 24	50,832	27
July 2	50,749	30	Dec. 31	25,455	29
July 9	58,972	30	1922.		
July 16	63,564	29	Jan. 7	62,718	21
July 23	54,141	30			

As production records were available for only one year, and as the survey was made during the beginning of the fourth month of the year, a comparison of the periods before and after the survey, in so far as the production is concerned, does not afford evidence as conclusive as might be desired, but detailed study, as described in this paper, makes such comparison valuable.

FATIGUE.

A certain degree of fatigue beyond the normal physiological amount is possibly produced by the monotony of the occupation and by the speeding up induced by the desire to increase output and thereby gain favor and an increase in salary. A certain average must be maintained. This average is established by the best operators, and it is also accepted as the standard for persons of a less active nature, who are thus required to exert themselves. Faulty posture, steady work, eyestrain, monotony, loud noises, prolonged pressure of the body against the desk or the table, are all factors that tend to produce fatigue.

HEALTH HAZARDS, LENGTH OF THE WORK DAY, AND AMOUNT OF EXPOSURE.

In cleaning the rubber feed belt on pulleys 1 and 2 of the stamping machine (see Fig. III) with gasoline or a compound of gasoline and oil of wintergreen, fumes are produced and liberated in the workroom as

a result of evaporation. This cleaning of the feed belt is necessary, as the belt becomes coated with the ink and dirt from the coupons as well as with the grease and ink from the ink pad of the stamping machines. After the feed belt becomes thus coated with grease and ink it will not properly pick up the coupons and feed them into the machine. For many months previous to this investigation, the workers had used gasoline to remove the ink and grease from the feed belt. The gasoline quickly removes the ink and grease which clog the pores of the rubber and, because of rapid evaporation, does not retard the speed of the operator, but increases speed in production by increasing the roughness of the feed belt so that the coupons may be fed into the machine more rapidly. This led to a more frequent use of gasoline than was necessary. The gasoline was kept in open containers within 20 inches of the face of the workers and was applied frequently to the rubber feed belt with a piece of cloth. This resulted in constant emanation of the fumes into the atmosphere. These fumes were found to be responsible for the complaints made by the workers.

It was stated by the workers that for the four months previous to the making of the investigation a much cheaper and lower grade of gasoline than that customarily used had been supplied and that the fumes from this gasoline had been extremely irritating and disagreeable. Ten gallons of gasoline a month was the average consumption for 10 stamping machines. The cubic content of the northern section of the workroom (see Fig. 1) in which these machines were installed was 13,541 cubic feet,[1] including space occupied. Twenty-four workers normally occupied this section, giving approximately 564 cubic feet to a worker. Reducing the 10 gallons of gasoline to minims and considering twenty-four[2] 7-hour days to the working month, with 24[3] workers exposed, it is estimated that each individual working on these machines was exposed to the liberation of 152.4 minims an hour. It has been determined by physiological tests that the average person inhales approximately 19.06 cubic feet of air an hour, or approximately 135 cubic feet in a 7-hour work day.[4]

It was found that 36.5 minims of gasoline was the maximum amount possible to be inhaled by each individual in one hour, or 255.4 minims in a 7-hour workday, 24 days to the month. However, this amount may or may not have been inhaled by each workman, because the amount inhaled was subject to variation according to the air currents and to the

[1] The space in question was not a separate room containing the air space represented by these figures, but was only the northern part of the large workroom as shown by heavy arrows in Fig. 1.

[2] Because of Sundays, legal holidays, and half days on Saturdays during the summer months, 24 working days are considered a fair estimate of the exposure.

[3] The relief workers and machine repairers are included with the 20 workers on the 10 machines, since they are constantly near or working on the machines.

[4] On the basis that the amount of tidal air inhaled at each inspiration is 30.5 cu. in., or 500 c. c., and allowing 18 respirations a minute.

position of the worker in the room. The cloths used for cleaning the belt and the vessels containing gasoline were within 20 inches of the workers, and the air movement and ventilation of the workrooms were seldom satisfactory, because the extreme lightness of the coupons did not permit of the use of electric fans, or of air currents in any form, directly upon or around the machine. The method of computing the amount of gasoline inhaled seems admissible and reasonable. The computation is merely a mathematical one. No laboratory tests were made to ascertain the concentration or the percentage of various gases in the room atmosphere because the actual use of gasoline was discontinued, by order of the officials in charge, at noon of the day previous to the day of investigation. This was a matter of regret, for the investigators were in the workroom while gasoline was in use and the fumes were very noticeable. These fumes were also noticed in the hallways and the elevator shafts.

HOW DISPENSARY ATTENDANCE WAS COMPUTED.

The dispensary attendance as given in this report is the annual admission rate per employee and was computed as follows:

Each visit of an individual from a respective section was listed, and at the end of the month the total number of visits to the dispensary was divided by the total number of workers in that section for the month. This gives the actual number of visits per employee during the month. The number of visits which would occur in a year was then obtained by dividing the number of days in the year by the number of days in the month in question and by multiplying the quotient by the monthly rate. Thus the dispensary attendance rate used in this paper is the number of admissions which would occur per employee per year if the rate for the month in question should be maintained.

Data on only those conditions of the eyes, head, nose, and throat, or respiratory system, etc., most likely to be affected by the gasoline fumes were taken from the dispensary record and used in computing the admission rate. These records were carefully collected by a registered nurse, under supervision, and the same class of cases was considered over the entire period studied. Physical examination was made of all workers exposed, and every complaint and symptom was listed.

It was, of course, recognized that there are many diseases or conditions that would affect the eyes, head, nose, and throat; therefore the same types of complaints were studied in the other departments where gasoline fumes were not present.

Table III shows, by months, the number of workers employed in each section, the number of visits to the dispensary from each section, and the annual admission rate per employee for each section.

TABLE III.—*Annual admission rate per employee, by sections.*

Month.	Number of workers.			Number of dispensary visits.			Annual admission rate per employee.		
	Section Y.	Section F.	Section D.	Section Y.	Section F.	Section D.	Section Y.	Section F.	Section D.
1920.									
August		63			27			4.95	
September	39	72	235	21	29	27	6.45	3.41	1.34
October	39	37	223	17	20	26	4.83	6.36	1.30
November	39	37	207	21	12	25	6.45	3.89	1.46
December	39	37	211	11	12	25	3.30	3.77	1.41
1921.									
January	39	43	211	9	11	31	2.71	2.94	1.65
February	41	55	207	41	20	15	13.04	4.69	.91
March	41	54	200	23	26	11	6.59	5.65	.65
April [1]	42	53	196	21	15	15	6.08	3.41	.97
May	42	53	226	6	11	25	1.65	2.47	1.20
June	43	57	245	13	15	13	3.65	3.16	.51
July	43	62	230	7	9	25	1.88	1.65	1.20
August	43	67	227	10	13	19	2.71	2.24	.94
September	43	54	216	7	12	26	1.95	2.68	1.10
October	43	46	209	16	14	51	4.36	3.53	2.88
November	43	66	200	16	17	24	4.50	3.29	1.46
December	43	77	185	9	13	28	2.47	1.88	1.77

[1] Use of gasoline discontinued. Poor grade had been in use since January. Many experiments to find a suitable substitute for gasoline were made during part of April.

THE DISPENSARY ATTENDANCE BEFORE THE SURVEY.

Figure IV gives the dispensary attendance for Groups Y, F, and D from August, 1920, to December 31, 1921. Records prior to August, 1920, were not available. One of the purposes of this graph is to show the effect, if any, of the poor grade of gasoline said to have been in use since about January 1, 1921, on the rate of dispensary attendance of the exposed group, as compared with a control or nonexposed group of workers, other conditions being identical.

It will be seen that the average annual admission rate per employee of dispensary attendance of the workers for the time here recorded while gasoline was in use, August, 1920, to March, 1921, inclusive, was as follows: Over six visits in Group Y, the exposed group; over four visits in Group F, the adjoining group; and only one visit in Group D, the control or nonexposed group on the floor below.

It is therefore evident that the gasoline fumes, together with the complicating factors of the workroom processes, produced this situation.

SELECTION OF SUBSTITUTE FOR GASOLINE.

The perpendicular lines shown in center of Figure IV represent the date of the survey and the week in which the experiments, as described below, were carried out in an effort to find a suitable substitute for gasoline.

When it had been definitely decided that gasoline was the principal health hazard in Section Y, and when the exact manner of use of the

gasoline had been ascertained, the investigators immediately began to look for substitutes that would render the same service without producing harmful and obnoxious fumes or injuring the health of the workers.[1] The first three or four days were spent in studying the efficiency of the following compounds: (1) 95 per cent alcohol, (2) ethyl acetate, and (3) carbon tetrachloride. Observations were made as to the rapidity with which these compounds removed the ink and the grease from the belts, as to the odors produced, and as to approval or objection on the part of the workers. Of the three substitutes, the operators selected the 95 per cent alcohol as the most efficient and as having the most pleasant odor. There were objec-

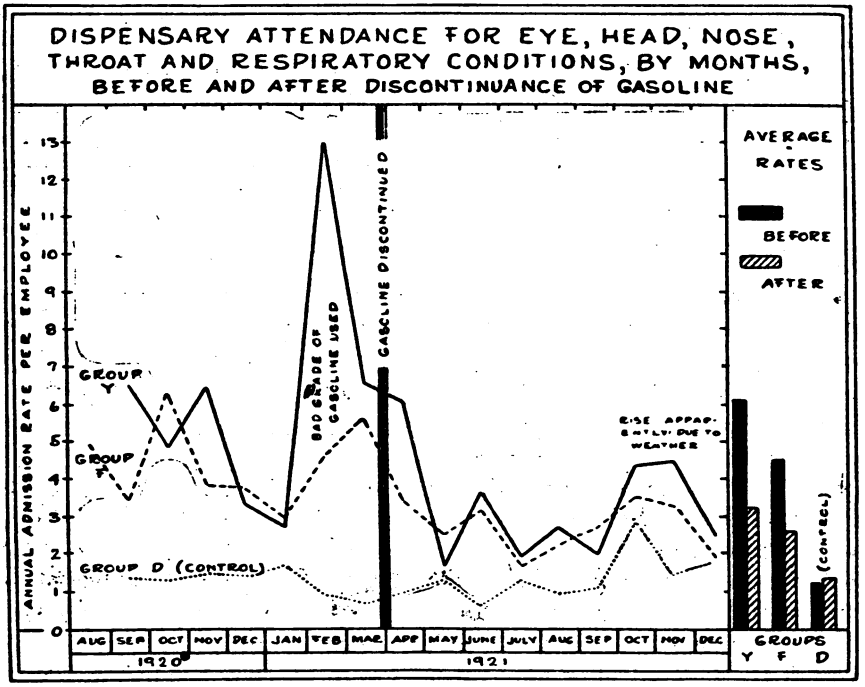

FIG. 4.—Dispensary attendance before and after discontinuance of gasoline.

tions to the use of alcohol, however, in that some of the workmen would be inclined to carry the alcohol home for medicinal or other purposes, and in the matter of expense, alcohol being 80 cents a gallon as compared with 27 cents a gallon for gasoline. Kerosene oil was next tested. As the workers objected to the odor of the kerosene, it was disguised by the addition of an essential oil. After allowing the workers to use the kerosene for three or four days, they were again furnished with the 95 per cent alcohol solution treated with a

[1] Assistant Chemist H. W. Houghton made experiments with various compounds and finally selected the one most suitable for the process.

small amount of phenolphthalein and caustic soda. After the workers had used this alcohol for several days, it was observed that they complained of headache and dizziness. Statements were also made that the alcohol was not as satisfactory as the kerosene, for the gauze used to clean the belts, when moistened with the alcohol, dried out much more quickly than when kerosene was used. In using the kerosene it was not necessary to moisten the gauze before each application. Time was thereby saved by the operator. The use of the alcohol was discontinued.

Efforts were then directed toward disguising the kerosene, in order to overcome the objection of some of the workers to its use. At first the kerosene was colored with Sudan-3 and was perfumed with birch oil. But this combination produced an odor which was unpleasant to the workers. Kerosene colored with alkanet and perfumed with anise oil and vanillin was then tried. This mixture made the room very odorous and could not be used. After this experiment, kerosene colored with alkanet and perfumed with oil of lavender flowers was tried. This mixture was also objectionable because of the odor. Finally, kerosene colored with alkanet and perfumed with a slight amount of anise oil was tried, and proved satisfactory. It was decided that kerosene colored with alkanet and perfumed with 1 ounce of anise oil to 10 gallons would be a good substitute to use in the place of gasoline. The total cost of this preparation should be less than $2 per 10 gallons.

RESULTS OF THE STUDY AND RECOMMENDATIONS.

The use of gasoline was discontinued, and kerosene, colored with alkanet, plus 1 ounce of anise oil as a deodorant to every 10 gallons of kerosene, was substituted. The results following the adoption and use of kerosene in place of gasoline, as previously described, will be discussed in the next paragraph and are shown in Figure IV.

It will be noticed in Figure IV that immediately following the discontinuance of the use of gasoline, and the period of experimentation leading to the selection of a suitable substitute, there was a decided drop in the rate of dispensary attendance in Groups Y and F.

Comparison of the annual admission rate per employee of dispensary attendance for a period of eight months before the survey and the adoption of a substitute for gasoline, with the period of nine months after the substitution of kerosene, shows that the rate of dispensary attendance dropped approximately 48 per cent in Group Y, and approximately 42 per cent in Group F, whereas in the control group, Group D, there was a slight rise, which is accounted for. The rise in the rate of dispensary attendance in Groups Y, F, and D during the month of October, as shown in Figure IV, is attributed to a common cause, the weather conditions which existed in the city at

that time, since this rise in dispensary attendance was similar in all groups. This increase in dispensary attendance was checked with dispensary records in several other dispensaries in the same city, all of which show an increase in conditions attributable to coryza, affection of the tonsils, and inflammation of the throat, or, as commonly called, "bad colds" and light attacks of "la grippe."

The difference between the rate of dispensary attendance in Groups Y and F, as compared with Group D, after gasoline was discontinued, as shown in Figure IV, can be explained, to a certain extent, by the noises from the machines; by a certain amount of odor from the ink, the oil, and the grease used on the machines; by a lack of ventilation in the workroom; and by a habit of visiting the dispensary, acquired previous to this investigation. If certain improvements in the room conditions, and other suggestions embodied in recommendations submitted immediately after the survey, had been carried out, the annual admission rate of Groups Y and F would probably have been near that of Group D.

THE RELATION OF PRODUCTION TO DISPENSARY ATTENDANCE.

The daily average of production by weeks is computed by tabulating from day to day the output of each operator or assistant operator working on a machine, the record being the number of coupons stamped by each machine, and, at the end of the week, totaling the number of coupons stamped by each machine and dividing the total by the number of work days. This is the daily average for the week for each machine. The weekly averages for each of the 10 machines are then added and divided by 10, which gives what is known as the average daily output for that week (see Table II). The 10 machines are in almost constant operation, and when the statement is made that the average production for a certain week represented, let us say, 30,000, we mean that this is the average for each of the 10 machines per day for that week, the total output per day by the 10 machines being considered as 300,000 coupons, which was the lowest weekly day-average for any week.

It is by these records that the management is able to keep check on the production of the operators and their assistants and thereby make promotions and increase compensations.

After having tabulated the data which show such a reduction in the rate of dispensary attendance following the discontinuance of the use of gasoline, it was decided to ascertain the effect of the removal of gasoline fumes on the production of the workers.

It will be noted in Table II that the production promptly made a remarkable gain for the 10 stamping machines, increasing from a weekly average of about 47,200 coupons during the week of March

26, 1921, to a weekly average of about 68,000 coupons during the week ending April 16. This is an increase of about 44 per cent in the production. However, this remarkable increase was not maintained and it may have been largely psychological, or at least partly so. The average increase of 9 per cent for the entire 8-month period, including the great depression in June and the slight depression about the last of August, would probably be nearer the correct figure. The drop in output from about May 21, 1921, until July 2, 1921, can be partly accounted for by the fact that at this time the majority of the skilled workers with a number of their skilled assistants were on annual leave, and in their places were individuals temporarily transferred from their usual work to the stamping machines. Also, about the middle of June and again in August, a cheap grade of kerosene was supplied to the workers. This kerosene caused a great deal of dissatisfaction and complaint among the workers, as it produced fumes which resulted in headaches and other complaints and produced a dermatitis upon the fingers of the workers. A sample of the oil obtained at that time was found to contain about 25 per cent of a heavy paraffin oil and to give a positive test for sulphuric acid. The conditions described above arose whenever the kerosene was not of high grade. If kerosene is not pure and contains any adulterant of sulphuric acid, as it did in this case, it can not be colorized with alkanet, as the sulphuric acid prevents its colorization. It will be noted that during the periods of the two drops or depressions (see Table II), there was a rise in the dispensary attendance (see Figure IV). It is believed that the impure kerosene influenced both the production and dispensary attendance.

The production from week to week in Group Y, of course, varies (see Table II); but this variation can be accounted for in almost every case by the factors previously enumerated in the section headed "Factors Influencing the Output." Variation in production was necessarily investigated, and it was found that the best operators would occasionally vary as much as 50 per cent per day in their output. This produced a marked weekly variation in the production.

It can then reasonably be stated that the substitution of pure kerosene, colored with alkanet and deodorized with anise oil, for gasoline of a more or less impure nature in the work carried on in Group Y resulted in a decrease in the annual admission rate per employee of dispensary attendance from a maximum in February of 13 visits per annum, or from an average rate of over 6 visits per annum over an 8-month period, to a constant average of a little over 3 visits per annum in the 9-month period following the adoption of the use of kerosene. The production increased from an average of 50,834 coupons for the short period before the survey to an average of 55,402 for the 8 months following the survey, an increase during the 8-month period of 9 per cent.

SYMPTOMS PRODUCED BY GASOLINE FUMES.

The symptoms, as given by Kober and Hanson,[1] Oliver,[2] Rambousek,[3] Thompson,[4] and Alice Hamilton,[5] produced by low-boiling distillates of petroleum—gasoline, naphtha, and benzine—that would likely be found in individuals who are at work and suffering from what is called mild chronic cases of gasoline poisoning, are—

1. Dizziness.
2. Irritation of the throat.
3. Cough.
4. Headache.
5. Vertigo.
6. Drowsiness.
7. Loss of appetite.
8. Distaste for food.
9. Constipation.
10. Pain in the stomach.
11. Nausea.
12. Vomiting.
13. Stupidity and listlessness.
14. Loss of strength.
15. Insomnia.
16. Loss of weight.
17. Paleness, or loss of color.
18. Aching eyes.
19. Conjunctivitis.
20. Muscular twitching and impairment.
21. Exhaustion.

Petroleum distillates, however, produce an acute condition, the symptoms of which are usually given as "headache, nausea, stupid feeling, heaviness or sleepiness, roaring in the ears, inclination to cough, feeling of irritation and constriction in the throat, trembling of the hands and arms, sensation of crawling over the skin, excitement or irritability. Girls are said to grow talkative and foolish and laugh a great deal; men are said to be unreasonable and easily provoked to anger. These symptoms may be felt most intensely during the first hours of the day, but in other cases they come on when the person leaves work and goes out into the open air."[6] The workpeople call an acute attack of such poisoning a "jag."

The acute cases, as here described, seldom occur; but at times they do occur, with the patient passing on to a comatose condition, with cold skin, pale and pulseless, and sometimes resulting in death.

The chronic form is a continuation of the conditions listed above, which sometimes go to the extent of extensive impairment of the health of the individual, owing to changes in the nerve or muscular systems and sometimes alteration of the blood.

RESULTS OF PHYSICAL EXAMINATIONS.

In making the physical examinations of the 22 employees working directly on the stamping machines, the following symptoms were found:

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[1] Diseases of Occupation and Vocational Hygiene (1916), p. 137.
[2] Diseases of Occupation, p. 83.
[3] Industrial Poisoning, p. 61.
[4] Diseases of Occupation, p. 333.
[5] Industrial Poisons used in the Rubber Industry. Bulletin No. 179, U. S. Department of Labor, p. 22.
[6] Idem, pp. 22, 23

Symptoms.	Male.	Female.	Symptoms.	Male.	Female.
Headache	4	9	Insomnia	0	2
Daily headache	4	4	Tingling or crawling sensation of the skin of left arm and fingers	0	1
Varying headaches	0	5	Tingling or crawling sensation of skin on right hand and forearm	0	1
Drowsiness	3	8	Complaint of extreme muscular weakness	0	4
Afternoon drowsiness	2	3	Extreme tiredness in the morning	3	0
Dizziness	3	5	Complaint of gradual loss of use of left forearm, wrist, and hand	0	1
Heaviness in head	1	8	Exhaustion or "all-in" condition by mid-afternoon	0	4
Dull aching pain in eyes	2	6	Overtiredness at quitting time	0	8
Irritated eyes (burning, smarting, or gritty feeling)	2	10	Occasional attack of colic	0	2
Excessive lachrymation (watery eyes)	1	10	Nausea (in two cases occurred daily, other cases at various times)	2	3
Blurred vision	0	3	Loss of appetite	1	6
Puffed eyelids	0	1	Constipation	0	4
Slight conjuctivitis, one eye	1	1	Loss of weight	0	1
Slight conjunctivitis, both eyes	1	2	Frequent urination, condition lasting from a few days to four months	2	4
Impaired taste	0	1			
Continued hoarseness	0	1			
Sore and inflamed throat	0	4			
Constant irritation of throat (tickling or itching)	0	2			
Constant dryness of throat	0	4			
Extreme nervousness	0	3			
Feeling of worry	0	3			
Easily angered	0	5			
Often easily excited	0	5			
Complaint of the work being nerve racking	2	2			

[1] Lack of sleep no doubt the cause.

CONCLUSIONS.

1. The gasoline fumes liberated in the workroom studied had produced cases of mild chronic gasoline poisoning.

2. In workrooms where the ventilation is not adequate, the liberation of gasoline fumes from open containers or from processes will, sooner or later, depending upon the amount and the concentration of the fumes, produce cases of acute, mild chronic, or chronic gasoline poisoning.

3. The liberation of gasoline fumes above an undetermined concentration, in an improperly ventilated workroom, will result in increased dispensary attendance and absenteeism among the workers exposed.

4. Increased production and a lower rate of dispensary attendance were obtained by the removal of the gasoline fumes.

VENEREAL DISEASE SOCIAL SERVICE IN PLAINFIELD, N. J.

By A. J. CASSELMAN, Acting Assistant Surgeon, United States Public Health Service, Consultant, Bureau of Venereal Disease Control, New Jersey State Department of Health.

The New Jersey law places upon the local boards of health in the State the duty of investigating cases of venereal disease and of ascertaining all sources of infection and all exposures. It is believed that the steps which led the Board of Health of Plainfield, N. J., to undertake this duty placed upon it by law and to appoint a venereal-disease social worker, and the methods which this worker employs

and the results already achieved, may be of interest to persons engaged in venereal-disease control work and to others.

Plainfield is primarily a home of commuters in a metropolitan district. It has many wealthy residents and, therefore, a large servant population. A group of industries, situated on either side of the city for many miles along the Central Railroad of New Jersey, employ a large number of factory workers. The population of Plainfield is 27,000, and there are perhaps as many more persons living in near-by but smaller communities who are dependent upon the Plainfield venereal disease clinic for free treatment.

The city has an efficient and progressive health board, which receives adequate financial support and employs a full-time health officer and staff of seven assistants. The city has a modern, well-equipped hospital, which houses and partially supports the public venereal-disease clinic. This clinic was one of the first to be established in the State and was supported entirely by the hospital before municipal, State, and Federal aid was given. The physicians conducting the clinic—two men and one woman—are all efficient and progressive and interested in the success of the clinic. The hospital formerly supplied the part-time service of its social worker, and still provides nursing service, medical assistance from its internes, and modern laboratory facilities (there is a paid full-time bacteriologist in charge of the laboratory). It is evident that these conditions were very favorable to the development of an efficient clinic to serve as the foundation for an effective antivenereal-disease campaign. But the physicians in charge of the clinic, and the city and State health authorities were not satisfied with the results achieved; for, of the 550 patients who have attended since the clinic first received State and Federal aid, 266, or 48 per cent of the total attendance, became delinquent before treatment was completed. Only a small proportion of the persons named as the source of infection or as having been exposed to the diseases had ever been induced to submit to examination and treatment, if found infected.

This large percentage of delinquents obviously was not due to the failure of any of the units in the program. Medical attention was the best; the hospital social service worker devoted all of the time which she could spare from her other duties to the follow-up of delinquent cases from the clinic; ample clinic hours were provided to encourage attendance; and the local board of health, with the aid of the State department of health, had carried on a number of educational campaigns, which included talks on the subject of venereal disease given to the employees in the factories, newspaper advertisements calling attention to the campaign and to the clinic, and social hygiene lectures in the schools, in the churches, and before as many general groups as could be reached. Yet there was no evidence that

any effective control of disease was being accomplished, or that those persons who were spreading disease to others had been reached. The percentage of delinquents among the persons who had been induced to begin treatment pointed to the necessity of additional effort.

The Plainfield Board of Health called upon the State department of health to supply a social worker from the bureau of venereal disease control to demonstrate to the city the need for and the value of medical social service as an adjunct to the health department and the venereal-disease clinic staff. The Plainfield Board of Health pointed out to the municipal authorities the fact that the venereal-disease program was not complete, and that little progress could be made if only those persons who know themselves to be infected with gonorrhea or syphilis and who seek medical treatment are treated either by private practitioners or at the public clinic. It was pointed out that a considerable proportion of all venereally diseased persons are not aware of their infection, and that many more, realizing that they may be infected, refuse treatment. Such cases are the ones which continue to spread the disease; and, without an investigator to discover these unknown diseased persons and to persuade them to take adequate treatment, venereal-disease control would be impossible.

The board explained the fact that while the private practitioner may induce some of his patients to bring to him for examination the immediate family of the patient and perhaps others whose actions the patient can control, not every practitioner can or will give the time needed to perform this unpaid public-health work. In a similar manner the physicians in charge of the public clinic may be able to induce some of the clinic patients to do the same thing; but, again, the action of the patient is voluntary; actual experience in the Plainfield clinic demonstrated that this persuasion is not enough.

Finally, the board of health made it evident that the investigation of cases of venereal disease is a public-health activity and is so defined by the law; that the physician has no legal duty to perform other than to report all cases to the State department of health and all delinquent cases to the local board; and that the hospital housing the clinic has no duty or authority other than that placed upon the private physician. All of the authority granted by law and all of the duties imposed by it devolve upon the local health board.

With the understanding that the board of health would continue venereal disease social service in the clinic if a demonstration proved its value, the State department of health conducted a three months' demonstration from November, 1921, through January, 1922. The field agent assigned to this demonstration was made temporarily an officer of the Plainfield Board of Health; she attended all of the clinic hours and kept the records for the clinicians. At the completion of

the demonstration, the board of health presented a report to the common council, and funds were provided sufficient not only to pay the salary of the social worker but to support the clinic and to pay an honorarium to the attending physicians.

The Social Service Program in Plainfield.

The nurse employed by the board of health as its social worker reports to the health officer for a weekly conference, but during the remainder of the week she works in connection with the hospital. Her three principal duties are—

(1) To take and record a brief social history of all the patients under treatment at the public clinic and all those reported as delinquent by private practitioners; in each case to determine, if possible, the source of infection and to find all persons exposed after the case has become infectious.

(2) To persuade all patients to continue treatment until cured, if cure should be possible, or at least until the danger of infection has passed.

(3) To discover foci of infection through sources other than those of cases under treatment at the public clinic.

I. THE HISTORY OF KNOWN CASES.

The term "known cases" includes all persons under treatment at the public clinic, all persons who have stopped treatment at the clinic without permission and who are still within the jurisdiction of the local department of health, and all cases reported as delinquent by private practitioners.[1]

In order to get the history of the clinic patients, the social worker must attend all clinic hours, not only that she may know the patients but that the patients may learn to know who she is and have confidence in her. In the Plainfield clinic, as in others of the smaller clinics, the social worker can keep all of the clinic records, both social and medical. She must have access to these records; and by keeping the files she can assist materially in conducting the clinic, thereby assuming the share in the maintenance of it which should be borne by the local board of health. The social worker finds that, as a member of the staff of the clinic, she can ascertain the facts which she must have without arousing the suspicion or animosity of the patient.

[1] Ch. 253, P. L., 1918, sec. 6, provides: "* * * If a person in the infectious stage of a venereal disease shall fail to report to said physician for treatment by the physician when directed so to do, said physician shall report such failure on the part of said person to the local board of health, and such board or its health officer may thereupon require said person to be examined as provided for in section 1 of this act, and if, upon examination, said person is found to be suffering from a venereal disease in its infectious stage and does not present evidence to show that he is being regularly treated by a reputable physician for such disease, he shall be isolated, as described in section 3 of this act."

Persons exposed by the known cases include, of course, all persons with whom the patient may have had sexual intercourse and the immediate family of the patient as well. The social worker must determine for each case the best method by which the family of the patient shall be induced to seek a medical examination—whether the case can be discussed frankly or whether the relatives must be induced to submit to examination without a definite statement of the reasons for the examination will depend entirely upon the mental, moral, and emotional conditions of the individual. In this work the medical case worker has the greatest opportunity to display her initiative and tact.

Between the visits of the patient to the clinic she can make any investigations necessary to corroborate such points in the information given as she believes need substantiation. The social worker must determine the relative importance of the source of infection and the persons exposed; in cases of chronic syphilis of long standing, the source of infection may be relatively unimportant; more importance should be attached to the persons who may have been exposed during the period in which the patient was infectious and to the immediate family of the patient as well. In cases of acute gonorrhea the source of infection is of great importance, for the presence of the acute case suggests the existence of other persons who likewise may have been exposed to this infection. The social worker must decide in each case how best to obtain the history and the facts which she needs. It is obvious that the method by which an illiterate laborer would be questioned would vary from the method by which information could be obtained from an intelligent but perhaps wayward girl.

II. CONTINUANCE OF TREATMENT.

Experience at the Plainfield clinic demonstrated the fact that in spite of the instructions given by the physicians to the patients, and in spite of printed information prepared by the State department of health, and distributed by the clinicians to the patients, many persons refuse to be impressed with the necessity for adequate treatment for either gonorrhea or syphilis. One of the most obvious duties of the social worker is to insure the return of delinquents for treatment until a probable cure has been effected or until there is no further danger of the patients becoming again infectious.

The Plainfield Board of Health is fortunate in having obtained a social worker with an adequate medical background, so that she can explain to the patients the necessity for continuing treatment for long periods of time, the nature of the treatment to be employed, and the probable course of the disease. She is of great assistance to

the clinicians in this educational work and relieves them of a burden which consumes too much of their limited time in the clinic.

In educating the patient in the nature of his disease and the treatment which he must undergo, the social worker refers him to particular statements in each of several pamphlets,[1] on the assumption that the reference to a particular statement will induce the patient to read the entire pamphlet. Thus, in discussing the nature of venereal disease, particular statements in "Man Power" or "On Guard" are used as a reference. "Information about Gonorrhea and Syphilis" is used when the necessity for adequate treatment is being urged. If the patient is interested in the public health aspect of the work, he is given a copy of Irwin's "Fighting an old enemy." Parents may be assured of the value of proper home influence and sex education for their children by placing a copy of "Sex Education" in their hands. Persons who desire to marry are given a copy of the pamphlet, "The Right to Marry."

The social worker finds it more difficult to deal with illiterate patients and must give more time to each individual. A brief leaflet of information, with only the essential facts written in easily understood language, is given to this class of patients. This leaflet and illustrated wall charts form the only means of abridging the educational work which the social worker must undertake.

After the treatment has been continued sufficiently long to alleviate any distressing or obvious symptoms, many patients become delinquent in spite of all educational efforts; and, since relapses are so common in persons inadequately treated, the return of these delinquent cases is perhaps the most important public health problem. The social worker in Plainfield notifies the delinquent patient by letter that he must return to the clinic for treatment. Of course a personal visit is more effective than a letter; but experience has shown that the letter is sufficient in most cases to bring back the patient for treatment, or it will produce information explaining the reasons for the delinquency. If the first letter is not acknowledged within a week, a second letter is sent before a visit is made to the patient. When a reasonable time has elapsed after the delivery of the second letter and no reply has been received, the social worker visits the patient at his home to learn the reason for his delinquency and to persuade him to return for treatment if he has not made other arrangements.

This work is of the utmost importance, for failure to respond to letters is an indication of the person's mental or moral condition; either he is too ignorant or lazy to care about his own condition, and, if this be the case, he would care nothing about the danger of

[1] Some of these pamphlets are issued by the United States Public Health Service and others by the New Jersey State Department of Health. They are supplied to the clinic without charge by the State department of health.

infecting others. Such persons frequently change their addresses, and, although the follow-up entails a considerable effort, the social worker finds it worth while to give all the time she can to such cases. If a single interview fails to return the patient for treatment, she does not waste more time but turns the case over to the health officer, who is empowered by law to isolate the delinquent patient until he agrees to submit to examination, and to treatment should the examination prove the necessity for it.[1]

III. THE DISCOVERY OF UNKNOWN FOCI OF INFECTION.

Besides the persons reported as the source of infection or as having been exposed to infection by the known clinic patients and delinquents reported by private practitioners, there are many other cases which the social worker may discover if she can devote the time to outside investigation. In Plainfield it has been found that the records of deaths and stillbirths reveal many foci of infection which would otherwise have remained undiscovered. The social worker finds that the advice of the clinic physicians is essential in determining which of the records of deaths and stillbirths may lead to the discovery of syphilitic or gonorrheal infections, and before attempting any investigation she calls upon the physician who made the report, obtains his permission to continue the investigation, and enlists his cooperation.

The social worker in Plainfield keeps in touch with the local judge and police court and has enlisted their support in determining the infectiousness of persons arrested on charges involving sex offenses. It has been found that in practice it is necessary only for the judge to ask the person charged with a sex offense to submit to medical examination. Such a request coming before the case is tried is almost sure to be complied with, and persons found infected can be paroled in custody of the health officer if their offenses do not warrant incarceration. The school truant officer also refers suspected cases to the social worker, and when the presence of the social worker was made known to the physicians practicing in Plainfield they began to refer an increasing number of cases to her for investigation. These are among the more important means by which the social worker is beginning to gather in all of the foci of infection.

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[1] "Any person who refuses to submit to the examination provided for in section 1 of this act, or who refuses to supply or permit to be taken the specimens provided for in said section, or who upon examination is found to be suffering from a venereal disease in its infectious stage, and who by reason of his habits, occupation, or for any other reason, is likely to spread the disease to others, may, in the discretion of said board of health or health officer, be isolated either in a hospital or in his own home and such isolation continued until such person is determined by suitable examination to be no longer infectious. In establishing isolation said board or officer shall define the place and the limits of the area within which said person is to be isolated, and no person other than the attending physician or nurse shall enter or leave the area of isolation without the permission of said board or health officer."—Sec. 3, ch. 253, P. L., 1918.

The Limitations of a Venereal Disease Social Worker.

Plainfield is fortunate in having appointed a social worker who is constantly on the alert to guard herself from assuming unnecessary work. Her duty is solely that of controlling venereal disease, and every activity is measured from that standpoint. The question is always, "Will this effort help to control venereal disease?" There is a charity organization society and a visiting nurse association, both of which work in close cooperation with the department of health in its venereal disease control work. When the investigation of a case reveals the presence of antisocial factors, which have nothing to do with venereal disease control, the case is referred to these agencies for care. The board of health reciprocates by taking from these organizations the burden of disposing of the investigation and treatment of venereal disease cases coming under their care. The social worker has familiarized herself with all of the State agencies available for caring for physical and mental deficients and, as the need for this help arises, the patient is referred without loss of time to the proper agency.

Perhaps a greater danger which the social worker in Plainfield avoids is that of interfering in the medical treatment of the case. The social worker, being a registered nurse, is familiar with medical treatment, but in no case does she interfere in the province of the clinician, even though conditions appear which she may believe to indicate neglect. The cordial relation with the physicians which she has developed is one of the most hopeful signs for the success of the work.

The Results of the Work.

Since the appointment of a social worker by the Plainfield Board of Health, the new admissions to the clinic have risen from a monthly average of 13 to that of 23, and the number of delinquents has been reduced to a minimum. The increase in the attendance has been caused not by any sporadic and voluntary attendance of new cases, for the educational campaigns conducted by the department of health brought in all cases of this character which could be induced to come. The increase has been brought about by the attendance of the relatives of and the persons exposed by the known cases, which would probably not have been reached without a social worker. This is a hopeful sign and an indication that Plainfield has gone a long way toward solving the problem of venereal disease control. It has a modern efficient public clinic for the treatment of indigent cases; it has a body of practicing physicians interested in the treatment of venereal diseases; and it has an efficient, adequately supported health department and a trained social worker.

VACCINATION IN THE PHILIPPINES.

The following extracts from correspondence, printed in a recent issue of The Boston Medical and Surgical Journal,[1] are of interest in connection with the effectiveness of vaccination in the prevention of smallpox and as a refutation of attacks sometimes made upon the procedure.

A LETTER FROM MAJ. GEN. LEONARD WOOD, M. D.

MANILA, *May 9, 1922.*

MR. EDITOR: Your letter of March 21 received on April 26.

I am inclosing copies of two letters which I think will prove interesting to the readers of The Boston Medical and Surgical Journal, and hope that both the letter and its answer may be given wide publicity, as it will, perhaps, tend to check the unthinking and dangerous attacks which are made upon vaccination from time to time.

Wherever vaccination has been carried out carefully in the Philippine Islands, smallpox has practically disappeared. Wherever it has been neglected or inefficiently done, we have had frightful loss of life. The people who are familiar with the situation are keenly appreciative of the benefits of vaccination.

The general health situation is complex and difficult. The Philippines are greatly in need of doctors, nurses, and well-trained sanitary inspectors. Efforts are being made to encourage the study of medicine and surgery and to greatly increase the number of nurses and sanitary inspectors. With approximately 11,000,000 people, we have less than 1,100 trained nurses, about 1,200 physicians and surgeons, and altogether too few well-trained sanitary inspectors. We need at least three times the number of nurses we now have and a very great increase in the number of well-educated medical men. Arrangements are being made for a brief intensive course of training for sanitary inspectors.

A medical survey of the islands is being made under the direction of the Rockefeller Foundation, and steps are being taken to give widespread instruction to the people in food values and to correct the tendency to use too much polished rice, to which is traceable directly 50 per cent of the heavy annual infant death rate from infantile beriberi. The present infantile death rate is very heavy; about one-third of all children born die in the first year.

We are also reorganizing the great leper colony at Culion of over 5,000 lepers, so that better and more extensive treatment of the lepers may be possible and the results made available for the medical profession everywhere.

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[1] Vol. 183, No. 25, June 22, 1922, pp. 865-866.

There is a growing interest among the people in sanitary matters, and no efforts are being spared to build up an appreciation of the value of preventive medicine and sanitation.

There is an excellent field for the medical missionary and the small, well equipped and maintained hospital in the Philippines. The hospitals which have been established by the various churches and missionary organizations are all much appreciated and are doing good work and have been of great value in supplementing the vigorous efforts of the Government. They meet, however, only in part the demand of the situation. Arrangements for the better care and treatment of the insane are also under consideration. The institutions at present in use are largely lacking in the facilities of proper treatment. Much was done while William Cameron Forbes was Governor General to improve the water supply through the provision of many artesian wells, but an adequate supply of pure water is still one of the great problems.

The Filipinos are naturally a healthy people and their houses so built that they have ample ventilation; but there is, nevertheless, a good deal of tuberculosis. We have also a difficult problem to deal with in controlling malaria.

I have but indicated some of the medical and sanitary problems, but I am sure I have said enough to indicate that there is plenty to do for the dietitian, the sanitarian, and the medical profession generally.

Very sincerely yours,

LEONARD WOOD.

THE AMERICAN HUMANE ASSOCIATION.

ALBANY, N. Y., *March 22, 1922.*

Maj. Gen. LEONARD WOOD,
Governor General Philippine Islands, Manila, P. I.

DEAR GENERAL WOOD: * * * A correspondent in Tampa, Fla., has just sent me a clipping which discusses the matter of smallpox vaccination in the Philippines. It states:

> In 1918 the Philippine Health Service shot 3,286,376 slugs of pus into that number of Filipinos and reaped a harvest of 47,369 cases of smallpox with 10,447 deaths.
>
> In 1919 they improved the service and delivered 7,670,252 pus puncheries into their brown brethren and reaped a harvest of 65,180 cases of smallpox with 44,408 deaths.

I have no means of determining the truth of such a statement. If you can put me in the way of getting definite and reliable facts in regard to the conditions referred to, I shall be very glad to have the information.

Hoping that you are well and realizing that you will do everything to make good for our Filipino brethren, I am

Faithfully your friend,

W. O. STILLMAN, *President.*

P. S.—Does the above mean that the vaccination was a failure? I am a physician.

S.

OFFICE OF THE GOVERNOR GENERAL OF THE PHILIPPINE ISLANDS.

MANILA, *April 29, 1922.*

DEAR DR. STILLMAN: Your letter of March 22, quoting statement from a correspondent in Florida, which would seem to throw doubt upon the efficacy of vaccination, has just been received. The real facts are diametrically opposite; instead of there being any doubt as to the value of vaccination against smallpox it has been doubly confirmed.

According to the reports of the Philippine Health Service, 1918, there have been even a larger number of deaths reported than quoted by your correspondent. When the records are analyzed they show that something like 90 per cent of the deaths occurred in children, most of whom were born since 1913. The records show that vaccination has been steadily continued since 1913, but on investigation it was found that, owing to the inefficient inspection, vaccination consisted mostly in destroying the vaccine and submitting reports to the main office that it had been applied. In brief, a huge unvaccinated population had accumulated in the Philippines; it only required a spark to set it into conflagration, and in a short time a smallpox epidemic began among these unvaccinated children which assumed huge proportions and eventually gained such virulence that it affected persons who under ordinary conditions would have been safe. The figures of the city of Manila bear out this statement in a striking manner. Among 989 deaths that were recorded, all but 100 occurred in children under 10 years of age. Again, of 1,826 cases received at the Manila Infectious Disease Hospital, 813 had never been vaccinated; and of these 680 died; 336 had been vaccinated with negative results; of these 249 died. Of the total 1,826 cases received at the hospital only 176 had evidence of vaccination, many of which were undoubtedly performed many years prior to the attack of the disease. Among this number there were 60 deaths. During 1919 more effective vaccination was begun, and there was such a decline in the smallpox epidemic that by 1920 there were only 5 cases in Manila, and none in 1921.

From the accompanying table it will be seen that after effective vaccination had been established in the city of Manila there were no

deaths for seven years. It is also interesting to observe that before the days of systematic vaccination in the Philippine Islands there were approximately 40,000 deaths per year from smallpox. As effectual vaccination was carried out the disease disappeared province by province.

It is apparent, therefore, that the foregoing information makes concrete proof of the value and desirability of vaccination when it is effectually applied. * * *

Yours very sincerely,

LEONARD WOOD.

Dr. WILLIAM O. STILLMAN,
President American Humane Association, Albany, N. Y.

Deaths caused by smallpox in the city of Manila.

[Transients and residents included.]

Year.	Age group.												
	30 days.	30 days to 1 year.	1-2 years.	3-4 years.	5-9 years.	10-14 years.	15-19 years.	20-29 years.	30-39 years.	40-49 years.	50 years and over.	Unknown.	Total.
1904		3	10		1		3	10		1		1	29
1905			1				1						2
1906		2	1				2						5
1907	1												1
1908		16	58		20	3	9	9	5	1	1		122
1909		4	11		1		2	5	2				25
1910													0
1911													0
1912													0
1913													0
1914													0
1915													0
1916										1			1
1917		1	1										2
1918	3	193	193	336	148	23	40	44	5	2	2		989
1919	2	10	6	13	9	1	4	7	3				55
1920		1	3					1					5
1921													0

DEATH RATES IN A GROUP OF INSURED PERSONS.

COMPARISON OF DEATH RATES FOR PRINCIPAL CAUSES, JUNE AND JULY, 1922.

The accompanying table is taken from the Statistical Bulletin of the Metropolitan Life Insurance Co. for August, 1922, and presents the mortality experience of the industrial department of the company for June and July, 1922, and July and year, 1921. The figures are based on a strength of approximately 14,000,000 insured persons.

It is stated that the death rate for July, 1922 (7.6 per 1,000), equals that for August, 1919, the lowest rate ever recorded for this group of persons. This represents a drop of 16.3 per cent from the rate for June, 1922, and of 4 per cent from that for July, 1921. It is stated that despite the influenza flurry in the early part of this year, the cumulative death rate is only 3 per cent in excess of that for the first seven months of 1921.

Death rates (annual basis) for principal causes per 100,000 lives exposed, June and July, 1922, and July and year, 1921.

[Industrial department, Metropolitan Life Insurance Co.]

Cause of death.	Death rate per 100,000 lives exposed.			
	July, 1922.	June, 1922.	July, 1921.	Year 1921.
Total, all causes	756.9	904.7	788.3	870.6
Typhoid fever	6.8	5.2	7.4	6.7
Measles	3.3	7.6	3.0	3.2
Scarlet fever	2.3	2.4	4.7	7.0
Whooping cough	2.1	2.1	3.6	3.9
Diphtheria	10.4	11.1	13.3	23.8
Influenza	3.9	10.1	2.6	8.7
Tuberculosis (all forms)	105.4	133.7	109.0	117.4
Tuberculosis of respiratory system	95.0	119.5	97.4	105.6
Cancer	64.1	72.5	69.8	71.7
Cerebral hemorrhage	49.0	62.8	52.4	62.1
Organic diseases of heart	100.6	126.9	101.3	117.4
Pneumonia (all forms)	29.3	52.1	28.9	67.8
Other respiratory diseases	10.7	11.4	9.0	14.1
Diarrhea and enteritis	14.1	11.9	21.3	14.2
Bright's disease (chronic nephritis)	59.9	73.4	59.9	68.0
Puerperal state	15.2	20.6	16.8	19.8
Suicides	7.0	8.6	7.0	7.6
Homicides	5.6	5.7	6.4	6.7
Other external causes (excluding suicides and homicides)	68.8	63.3	77.2	57.6
Traumatism by automobile	14.2	13.7	10.7	12.2
All other causes	199.1	223.3	194.5	192.9

FIFTY-FIRST ANNUAL MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

To Be Held at Cleveland, Ohio, October 16–19, 1922.

Announcement has been made that the fifty-first annual meeting of the American Public Health Association will be held at Cleveland, Ohio, October 16–19, 1922.

The following sections will conduct programs: Public health administration, laboratory, vital statistics, sanitary engineering, industrial hygiene, food and drugs, and child hygiene. There will also be special programs on public health publicity and education, and public health nursing.

An interesting part of the general sessions of the program will consist of the presentation of a summary and conclusions from a survey of 85 city health departments, conducted by a committee under the chairmanship of Prof. C.-E. A. Winslow. Another important feature will be a symposium on the subject, "How can we safeguard public health from political interference?"

Reduced railroad rates have been granted to members of the association.

Further information may be obtained from the secretary of the association, 370 Seventh Avenue, New York City.

DEATHS DURING WEEK ENDED SEPTEMBER 9, 1922.

Summary of information received by telegraph from industrial insurance companies for week ended September 9, 1922, and corresponding week 1921. (From the Weekly Health Index, September 13, 1922, issued by the Bureau of the Census, Department of Commerce.)

	Week ended Sept. 9, 1922.	Corresponding week 1921.
Policies in force	49,933,345	47,554,690
Number of death claims	6,662	6,710
Death claims per 1,000 policies in force, annual rate	7.0	7.4

Deaths from all causes in certain large cities of the United States during the week ended September 9, 1922, infant mortality, annual death rate, and comparison with corresponding week of 1921. (From the Weekly Health Index, September 13, 1922, issued by the Bureau of the Census, Department of Commerce.)

City.	Estimated population July 1, 1922.	Week ended Sept. 9, 1922.		Annual death rate per 1,000, corresponding week 1921.	Deaths under 1 year.		Infant mortality rate, week ended Sept. 9, 1922.[2]
		Total deaths.	Death rate.[1]		Week ended Sept. 9, 1922.	Corresponding week 1921.	
Total	27,860,666	5,571	10.4	10.7	884	930	.....
Akron, Ohio	[3] 208,435	24	6.0	9.3	11	21	116
Albany, N. Y	116,223	33	14.8	14.5	3	2	67
Atlanta, Ga	220,047	66	15.6	16.1	11	3	.....
Baltimore, Md	762,222	175	12.0	12.6	35	28	99
Birmingham, Ala	191,017	69	18.8	15.7	9	11	.....
Boston, Mass	764,017	166	11.3	11.1	33	26	88
Bridgeport, Conn	[3] 143,555	21	7.6	9.0	6	12	75
Buffalo, N. Y	528,163	138	13.6	15.6	35	36	138
Cambridge, Mass	110,944	18	8.5	11.3	4	6	73
Camden, N. J	121,915	38	16.3	8.7	6	5	92
Chicago, Ill	2,833,288	549	10.1	10.2	92	108	.....
Cincinnati, Ohio	404,855	98	12.6	13.6	15	13	100
Cleveland, Ohio	854,003	150	9.2	8.8	32	24	83
Columbus, Ohio	253,455	64	13.2	11.9	9	8	95
Dallas, Tex	171,974	41	12.4	9.1	4	5	.....
Dayton, Ohio	161,824	33	10.6	6.6	3	2	51
Denver, Colo	267,591	56	10.9	11.9	11	3	.....
Detroit, Mich	[3] 993,678	161	8.4	9.6	31	48	60
Fall River, Mass	120,790	36	15.5	14 7	11	11	154
Fort Worth, Tex	114,717	22	10.0	.....	4	.....	.....
Grand Rapids, Mich	143,572	22	8.0	7.8	3	3	50
Houston, Tex	150,087	29	10.1	12.3	3	3	.....
Indianapolis, Ind	333,257	82	12.8	11.4	10	13	76
Jersey City, N. J	305,911	69	11.8	13.1	13	18	83
Kansas City, Kans	113,801	28	12.8	12 0	2	2	46
Kansas City, Mo	343,988	86	13.0	11.9	12	7	.....
Los Angeles, Calif	634,866	139	11.4	12 4	15	15	62
Louisville, Ky	236,877	64	14.1	15.5	6	3	65
Lowell, Mass	114,423	28	12.8	13.3	5	1	84
Memphis, Tenn	167,862	57	17.7	14.5	5	6	.....
Milwaukee, Wis	476,603	86	9.4	9.8	18	15	88
Minneapolis, Minn	400,970	70	9.1	8.8	10	6	55
Nashville, Tenn	122,832	30	12.7	15.8	9	4	.....
New Bedford, Mass	127,542	19	7.8	11.3	6	12	89
New Haven, Conn	169,987	42	12.9	10.6	4	3	49
New Orleans, La	399,616	123	16.0	15.2	19	12	.....
New York, N. Y	5,839,746	999	8.9	9.6	158	177	61
Newark, N. J	431,792	63	7.6	10.7	12	21	53
Norfolk, Va	124,915	25	10.4	13.8	2	6	35
Oakland, Calif	233,279	41	9.2	8.3	2	3	25
Omaha, Nebr	200,739	35	9.1	11.1	3	4	32
Paterson, N. J	138,521	20	7.5	9.1	3	5	46
Philadelphia, Pa	1,894,500	373	10.3	10.6	57	72	68
Pittsburgh, Pa	607,902	116	10.0	12.1	18	25	58
Portland, Oreg	269,240	52	10.1	8.7	3	6	30
Providence, R. I	241,011	57	12.3	10.2	12	14	95
Richmond, Va	178,365	40	11.7	12.2	10	6	122
Rochester, N. Y	311,548	37	6.2	10.8	5	10	38
St. Louis, Mo	795,008	171	11.2	9.8	14	15	.....
St. Paul, Minn	239,836	49	10.7	7.0	7	5	66
Salt Lake City, Utah	123,918	14	5.9	8.6	0	6	0
San Antonio, Tex	178,056	38	11.1	.....	5	.....	.....
San Francisco, Calif	529,792	139	13.7	11.1	13	6	75
Seattle, Wash	[3] 315,312	48	7.9	5.1	3	3	25
Spokane, Wash	104,445	31	15.5	14.0	3	2	64
Springfield, Mass	140,052	12	4.5	11.5	3	5	45
Toledo, Ohio	260,717	56	11.2	12.7	7	9	68
Trenton, N. J	125,075	28	11.7	13.2	7	4	107
Washington, D. C	[3] 437,571	101	12.0	11.8	14	7	80
Wilmington, Del	115,568	25	11.3	14.7	6	7	117
Worcester, Mass	188,449	40	11.1	12.1	5	8	54
Yonkers, N. Y	105,422	12	5.9	6.6	3	2	63
Youngstown, Ohio	144,970	17	6.1	10.8	4	7	53

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1921. Cities left blank are not in the registration area for births.
[3] Enumerated population Jan. 1, 1920.

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 September 16, 1922.

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

ARKANSAS.

	Cases.
Diphtheria	12
Malaria	129
Measles	4
Pellagra	6
Scarlet fever	6
Tuberculosis	12
Typhoid fever	11
Whooping cough	1

COLORADO.

(Exclusive of Denver.)

Chicken pox	2
Diphtheria	7
Pneumonia	1
Scarlet fever	2
Septic sore throat	1
Smallpox	1
Tuberculosis	29
Typhoid fever	21
Whooping cough	2

DELAWARE.

Cerebrospinal meningitis—Wilmington	1
Diphtheria	1
Malaria	7
Pneumonia	1
Scarlet fever	5
Tuberculosis	7
Typhoid fever	9
Whooping cough	2

FLORIDA.

Dengue	421
Diphtheria	22
Influenza	2
Lethargic encephalitis	1
Malaria	31
Smallpox	1
Typhoid fever	2

GEORGIA

	Cases.
Chicken pox	2
Dengue	248
Diphtheria	57
Dysentery (amebic)	1
Hookworm disease	31
Influenza	18
Malaria	95
Measles	19
Pneumonia	1
Scarlet fever	11
Septic sore throat	1
Tuberculosis (pulmonary)	6
Typhoid fever	23
Whooping cough	12

ILLINOIS.

Diphtheria:	
Cook County (including Chicago)	81
Chicago	71
Scattering	71
Influenza	3
Pneumonia	76
Poliomyelitis:	
Chicago	5
Crawford County	1
McLean County	1
Rock Island County	1
Scarlet fever:	
Cook County (including Chicago)	13
Chicago	37
La Salle County	9
Peoria County	13
Scattering	41
Smallpox	2
Typhoid fever:	
Cook County (including Chicago)	2
Chicago	17
Scattering	41
Whooping cough	184

IOWA.

	Cases.
Diphtheria	46
Scarlet fever	28
Smallpox	3
Typhoid fever	3

KANSAS.

Cerebrospinal meningitis	2
Chicken pox	1
Diphtheria	99
Favus	1
German measles	1
Hookworm disease	1
Measles	3
Mumps	5
Pneumonia	10
Poliomyelitis	1
Scarlet fever	36
Tuberculosis	26
Typhoid fever	39
Whooping cough	20

LOUISIANA.

Dengue	673
Diphtheria	13
Influenza	11
Poliomyelitis	2
Scarlet fever	1
Smallpox	1
Typhoid fever	22

MARYLAND.[1]

Cerebrospinal meningitis	1
Chicken pox	4
Diphtheria	26
Dysentery	9
Influenza	8
Lethargic encephalitis	1
Malaria	29
Measles	8
Mumps	3
Paratyphoid fever	1
Pneumonia (all forms)	15
Poliomyelitis	4
Scarlet fever	18
Septic sore throat	5
Tuberculosis	47
Typhoid fever	60
Whooping cough	58

MASSACHUSETTS.

Chicken pox	14
Conjunctivitis (suppurative)	6
Diphtheria	99
Influenza	1
Lethargic encephalitis	3
Malaria	1
Measles	46
Mumps	9
Ophthalmia neonatorum	14
Pneumonia (lobar)	18
Poliomyelitis	14
Scarlet fever	58
Septic sore throat	1
Tetanus	1

MASSACHUSETTS—continued.

	Cases.
Trachoma	1
Trichinosis	1
Tuberculosis (all forms)	131
Typhoid fever	23
Whooping cough	158

MONTANA.

Diphtheria	4
Poliomyelitis	4
Smallpox	2
Typhoid fever	5

NEBRASKA.

Diphtheria—Omaha	21
Measles	2
Mumps	1
Poliomyelitis:	
McCook	1
Smithfield	1
Scarlet fever	18
Tuberculosis	1
Typhoid fever	9
Whooping cough	6

NEW JERSEY.

Cerebrospinal meningitis	3
Chicken pox	7
Diphtheria	84
Influenza	5
Malaria	5
Measles	38
Pneumonia	30
Poliomyelitis	3
Scarlet fever	35
Typhoid fever	28
Whooping cough	91

NEW MEXICO.

Chicken pox	1
Diphtheria	18
Malaria	1
Pneumonia	3
Scarlet fever	6
Tuberculosis	15
Typhoid fever	16
Whooping cough	1

NEW YORK.

(Exclusive of New York City.)

Diphtheria	130
Influenza	2
Lethargic encephalitis	1
Measles	52
Pneumonia	51
Poliomyelitis	23
Scarlet fever	91
Smallpox	3
Typhoid fever	46
Whooping cough	123

OREGON.

Cerebrospinal meningitis	1
Chicken pox	1
Diphtheria	3

[1] Week ended Friday.

OREGON—continued.

	Cases.
Measles	1
Mumps	1
Pneumonia	[1] 1
Poliomyelitis—Ontario	1
Scarlet fever	6
Smallpox:	
Portland	9
Scattering	1
Tuberculosis	19
Typhoid fever	6
Whooping cough	6

TEXAS.

Cerebrospinal meningitis	1
Dengue	761
Diphtheria	10
Dysentery	19
Malaria	61
Measles	1
Mumps	1
Paratyphoid fever	1
Pellagra	4
Pneumonia	5
Scarlet fever	6
Trachoma	13
Tuberculosis	11
Typhoid fever	10
Whooping cough	3

VERMONT.

Chicken pox	1
Diphtheria	9
Influenza	1
Poliomyelitis	1
Scarlet fever	7
Typhoid fever	3
Whooping cough	17

WASHINGTON.

	Cases.
Chicken pox	6
Diphtheria:	
Spokane	9
Scattering	9
Measles	1
Mumps	8
Scarlet fever	13
Smallpox	4
Tuberculosis	19
Typhoid fever	9
Whooping cough	14

WEST VIRGINIA.

Diphtheria	16
Scarlet fever	13
Typhoid fever	8

WISCONSIN.

Milwaukee:	
Chicken pox	2
Diphtheria	7
German measles	1
Measles	13
Ophthalmia neonatorum	1
Scarlet fever	13
Tuberculosis	24
Whooping cough	38
Scattering:	
Cerebrospinal meningitis	1
Chicken pox	6
Diphtheria	41
German measles	1
Influenza	2
Lethargic encephalitis	1
Measles	24
Pneumonia	[1] 1
Poliomyelitis	8
Scarlet fever	33
Smallpox	13
Tuberculosis	11
Typhoid fever	5
Whooping cough	80

Delayed Reports for Week Ended September 9, 1922.

DISTRICT OF COLUMBIA.

	Cases.
Diphtheria	12
Pellagra	1
Scarlet fever	3
Tuberculosis	19
Typhoid fever	3
Whooping cough	1

KENTUCKY.

Chicken pox	1
Diphtheria:	
Jefferson County	11
Scattering	38

KENTUCKY—continued.

	Cases.
Dysentery	3
Malaria	1
Measles	5
Pneumonia	3
Scarlet fever	12
Tuberculosis:	
Jefferson County	21
Scattering	5
Typhoid fever	25
Whooping cough	6

[1] Death.

SUMMARY OF CASES REPORTED MONTHLY BY STATES.

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

State.	Cerebrospinal meningitis.	Diphtheria.	Influenza.	Malaria.	Measles.	Pellagra.	Poliomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
July, 1922.										
Colorado	1	106	5	.....	8	.....	.....	54	14	73
Rhode Island	1	41	.....	5	39	.....	33	21	.....	4
August, 1922.										
Arkansas	.....	37	7	1,042	7	36	3	23	11	117
Florida	1	69	235	184	2	16	1	10	15	43
Nebraska	1	26	5	.....	9	.....	1	36	5	13
New Jersey	8	347	21	18	214	.....	29	165	.....	124
New Mexico	.....	100	.....	8	1	2	4	13	1	41
New York	22	906	63	35	606	.....	99	453	5	397

DENGUE.

Charleston, S. C., and Dallas, Tex.

On September 16, 1922, dengue was reported present in Charleston, S. C. The disease was stated to be of a mild type.

According to the August bulletin issued by the city department of health of Dallas, Tex., several cases of dengue were reported at that place on August 9, 1922, and since that time the infection has spread gradually throughout the entire city.

CITY REPORTS FOR WEEK ENDED SEPTEMBER 2, 1922.

CEREBROSPINAL MENINGITIS.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Sept. 2, 1922.		City.	Median for previous years.	Week ended Sept. 2, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Colorado:				Missouri:			
Denver	0	.....	1	St. Louis	0	.....	1
Connecticut:				Nebraska:			
New Haven	0	1	2	Omaha	0	.....	1
Florida:				New York:			
Tampa	.....	1	1	Lackawanna	0	1	.....
Illinois:				New York	4	3	3
Aurora	0	1	.....	Syracuse	0	1	.....
Indiana:				Ohio:			
Hammond	0	.....	1	Cleveland	0	1	.....
Muncie	0	.....	1	Pennsylvania:			
Kansas:				Monessen	0	1	.....
Parsons	0	1	.....	Pittsburgh	0	2	.....
Kentucky:				Texas:			
Louisville	0	3	2	Beaumont	0	.....	1
Maryland:				Dallas	0	1	1
Baltimore	1	.....	1	West Virginia:			
Massachusetts:				Charleston	0	.....	1
Lowell	0	.....	1	Clarksburg	.....	1	.....
Peabody	0	1	1	Huntington	0	.....	1
Michigan:				Wisconsin:			
Highland Park	0	.....	1	Fond du Lac	0	1	.....
				West Allis	.....	1	.....

CITY REPORTS FOR WEEK ENDED SEPTEMBER 2, 1922—Continued.

DENGUE.

City.	Cases.	Deaths.
Florida:		
Tampa	50	

DIPHTHERIA.

See p. 2330; also Telegraphic reports from States, p. 2321, and Monthly summaries by States, p. 2324.

INFLUENZA.

City.	Cases.		Deaths, week ended Sept. 2, 1922.	City.	Cases.		Deaths, week endod Sept. 2, 1922.
	Week ended Sept. 3, 1921.	Week ended Sept. 2, 1922.			Week ended Sept. 3, 1921.	Week ended Sept. 2, 1922.	
California:				Massachusetts:			
Los Angeles	2	63		Boston	1		
Oakland	1			Haverhill	2		
San Francisco	1			New Jersey:			
Santa Barbara			1	Newark	1	11	
Connecticut:				Orange		2	
Fairfield			1	New York:			
Florida:				Auburn	1		
Tampa		1	1	Binghamton	1		
Georgia:				Middletown		1	1
Valdosta	1			New York	5	4	2
Illinois:				Ohio:			
Chicago	8			Akron		1	
Louisiana:				Cleveland	1	1	
Baton Rouge	2			Pennsylvania:			
Maryland:				Philadelphia		6	4
Cumberland		1		Wisconsin:			
				Kenosha	1		

LEPROSY.

City.	Cases.	Deaths.
Alabama:		
Birmingham		1

LETHARGIC ENCEPHALITIS.

Connecticut:		
New Haven		1

MALARIA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			New Jersey:		
Anniston	1		Jersey City	1	
Birmingham	1	1	Newark	1	
Mobile		1	New York:		
Montgomery	2		New York	3	
Arkansas:			Ohio:		
Little Rock	6		Findlay	1	
California:			Oklahoma:		
Oakland	1		Oklahoma		1
Sacramento	1		Tennessee:		
Georgia:			Memphis	17	2
Augusta	3	1	Texas:		
Louisiana:			Dallas	2	
New Orleans	1		Houston		1
Maryland:			Virginia:		
Baltimore	1		Portsmouth		1
			Richmond	1	

CITY REPORTS FOR WEEK ENDED SEPTEMBER 2, 1922—Continued.

MALTA FEVER.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Connecticut:					
Derby		1			

MEASLES.

See p. 2330; also Telegraphic weekly reports from States, p. 2321, and Monthly summaries by States, p. 2324.

PELLAGRA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Georgia:			Texas:		
Atlanta		2	Corpus Christi		1
North Carolina:			Fort Worth		2
Winston-Salem	1		Virginia:		
			Richmond		1

PNEUMONIA (ALL FORMS).

Alabama:			Massachusetts:		
Birmingham		3	Boston		10
California:			Cambridge		1
Bakersfield		1	Chelsea		1
Long Beach	1		Chicopee		1
Los Angeles	15	7	Everett	2	1
Oakland		3	Fall River		3
Pasadena	1		Framingham	1	
Sacramento		2	Malden	2	
San Francisco	8	4	New Bedford	1	
Colorado:			Newton		1
Denver		3	Springfield	3	2
Connecticut:			Woburn		1
Fairfield		1	Worcester		3
Hartford	2		Michigan:		
New Haven		2	Ann Arbor		1
Waterbury		2	Detroit	20	8
District of Columbia:			Kalamazoo		3
Washington		4	Muskegon	1	
Florida:			Minnesota:		
Tampa		1	Duluth	1	
Georgia:			Minneapolis		3
Atlanta		4	St. Paul		4
Augusta		3	Missouri:		
Illinois:			Kansas City		3
Aurora		1	Nebraska:		
Chicago	55	17	Lincoln		1
Decatur	2		Omaha		4
Elgin		1	New Jersey:		
Freeport	1		Atlantic City	2	
Kewanee	1		East Orange	1	
Oak Park	2		Hackensack		1
Peoria		3	Newark	14	2
Rockford		1	Orange	2	
Indiana:			Passaic	2	
Fort Wayne		1	Paterson	1	
Hammond		1	Trenton	3	1
Indianapolis		4	West Orange	1	
Kansas:			New York:		
Kansas City	4		Albany	1	
Wichita		1	Buffalo	3	2
Kentucky:			Cohoes	2	
Lexington		1	Elmira	3	1
Louisville	2		Ithaca	1	
Louisiana:			Lackawanna	1	
New Orleans	12	8	Middletown		1
Maine:			New York	114	66
Bangor	1		Niagara Falls		1
Portland		1	Port Chester	1	
Maryland:			Rochester	5	4
Baltimore	11	5	Schenectady	2	

CITY REPORTS FOR WEEK ENDED SEPTEMBER 2, 1922—Continued.

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.
New York—Continued.		
Syracuse		6
Troy		1
Watertown		1
White Plains		1
Ohio:		
Akron	1	
Alliance		1
Cincinnati		3
Cleveland		11
Columbus		2
Dayton	1	
East Cleveland	3	
Mansfield	1	
Norwood	1	
Springfield		1
Oklahoma:		
Oklahoma		2
Oregon:		
Portland		2
Pennsylvania:		
Philadelphia	37	12
Rhode Island:		
Providence		1
South Carolina:		
Charleston		1
Tennessee:		
Memphis		4
Nashville		2
Texas:		
Beaumont		1
Dallas	1	
El Paso		1
Fort Worth		1
Galveston		1
Houston		1
Utah:		
Provo	2	1
Salt Lake City		5
Vermont:		
Burlington		1
Virginia:		
Norfolk		1
Petersburg		1
Portsmouth		1
Richmond		1
West Virginia:		
Huntington		1
Wisconsin:		
Kenosha		1

POLIOMYELITIS (INFANTILE PARALYSIS).

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Sept. 2, 1922.	
		Cases.	Deaths.
Alabama:			
Birmingham	0	1	
Connecticut:			
Bridgeport	0	3	
Illinois:			
Aurora	0	1	1
Indiana:			
Muncie	0	1	
Massachusetts:			
Boston	1	2	1
New Bedford	0	1	
Michigan:			
Detroit	1	1	
Missouri:			
St. Louis	1	1	1
New Jersey:			
Paterson	0	1	
Union	0	1	
New York:			
Auburn	0	7	
New York	4	8	2
Syracuse	0	4	1
Troy	0	1	
Ohio:			
Cleveland	1	1	
Pennsylvania:			
Philadelphia	0	2	
West Virginia:			
Bluefield	0		1
Wisconsin:			
Madison	0	2	
Stevens Point		1	

RABIES IN ANIMALS.

City.	Cases.
California:	
Los Angeles	10
Missouri:	
Kansas City	2
Tennessee:	
Memphis	1

SCARLET FEVER.

See p. 2330; also Telegraphic weekly reports from States, p. 2321, and Monthly summaries by States, p. 2324.

CITY REPORTS FOR WEEK ENDED SEPTEMBER 2, 1922—Continued.

SMALLPOX.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Sept. 2, 1922.		City.	Median for previous years.	Week ended Sept. 2, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Alabama:				Montana:			
Montgomery	0	1	.....	Great Falls	1	1	.....
California:				Ohio:			
Los Angeles	1	1	1	Chillicothe	0	1	.....
San Francisco	1	1	.....	Fremont	0	1	.....
Colorado:				Hamilton	0	1	.....
Denver	2	10	.....	Texas:			
Connecticut:				El Paso	0	1	.....
Bridgeport	0	2	.....	West Virginia:			
Indiana:				Clarksburg	.....	1	.....
Indianapolis	0	4	.....	Fairmont	0	1	.....
Michigan:				Wisconsin:			
Detroit	0	1	.....	Superior	0	3	.....
Minnesota:							
Duluth	0	1	.....				
Minneapolis	3	1	.....				

TETANUS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
California:			Missouri:		
Los Angeles	1	1	St. Louis	1	.....
San Francisco	1	1	New York:		
Illinois:			Elmira	1	.....
Chicago	4	3	Pennsylvania:		
Louisiana:			Philadelphia	1	.....
New Orleans	.....	1	Tennessee:		
			Nashville	.....	1

TUBERCULOSIS.

See p. 2330; also Telegraphic weekly reports from States, p. 2321.

TYPHOID FEVER.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding weeks of the years 1915 to 1921, inclusive. In instances in which data for the full seven years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended Sept. 2, 1922.		City.	Median for previous years.	Week ended Sept. 2, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Alabama:				Connecticut:			
Birmingham	7	11	.....	Bridgeport	2	1	.....
Mobile	1	.....	1	New Haven	4	3	.....
Montgomery	1	1	.....	Waterbury	3	1	.....
Arkansas:				District of Columbia:			
Fort Smith	0	4	2	Washington	8	2	.....
Little Rock	2	1	.....	Florida:			
North Little Rock	1	2	.....	Tampa	.....	2	.....
California:				Georgia:			
Los Angeles	3	5	1	Atlanta	4	4	1
Richmond	0	1	1	Augusta	.....	2	1
Sacramento	1	.....	1	Illinois:			
San Francisco	3	2	.....	Alton	0	2	.....
Colorado:				Aurora	1	2	.....
Denver	4	3	.....	Chicago	9	12	1
Trinidad	0	2	.....	Rockford	0	3	.....

CITY REPORTS FOR WEEK ENDED SEPTEMBER 2, 1922—Continued.

TYPHOID FEVER—Continued.

City.	Median for previous years.	Week ended Sept. 2, 1922.	
		Cases.	Deaths.
Indiana:			
Huntington	0	1	
Indianapolis	6	6	
Terre Haute	0		1
Kansas:			
Kansas City	1	3	
Lawrence	0	2	
Parsons	0	1	
Salina	0	1	
Wichita	2	2	
Kentucky:			
Louisville	7	6	
Louisiana:			
New Orleans	4	2	
Maine:			
Portland	3	1	1
Maryland:			
Baltimore	17	17	1
Cumberland	1	3	
Massachusetts:			
Boston	7	3	
Fall River	6	4	
Haverhill	0	1	
Leominster	0	1	
Lynn	1	2	1
Newburyport	0	1	
Northampton	0	1	
Springfield	2	1	
Michigan:			
Alpena	1	1	
Detroit	11	7	2
Hamtramck	0	1	1
Holland	0	1	
Kalamazoo	2	1	
Sault Ste. Marie	0	2	
Minnesota:			
Duluth	1	1	
Minneaplis	3	3	
St. Paul	1	1	
Missouri:			
Kansas City	5	2	1
St. Louis	8	12	2
Springfield	0		1
Montana:			
Great Falls	2	1	
Nebraska:			
Lincoln	0	1	
Nevada:			
Reno	1	1	
New Hampshire:			
Berlin	0		1
Dover	0		1
New Jersey:			
Atlantic City	1	4	
Hoboken	0	1	
Newark	3	6	
Perth Amboy	0	2	
Trenton	2	2	
New York:			
Albany	1	3	
Buffalo	7	3	1
New York	70	46	3
Rochester	1	1	
Troy	1	1	
Watertown	0	1	
North Carolina:			
Durham	4	1	
Raleigh	0	4	1
Winston-Salem	2	2	
Ohio:			
Akron	2	1	
Alliance	0	1	
Ashtabula	0	1	
Canton	0	15	
Cincinnati	3	1	
Cleveland	9	5	1
Dayton	1	1	
Fremont	0	1	
Springfield	0	1	
Toledo	3	11	
Zanesville	1		1
Oklahoma:			
Oklahoma	1	3	1
Tulsa	4	1	
Oregon:			
Portland	1	5	
Pennsylvania:			
Allentown	2	1	
Canonsburg	0	1	
Carlisle	0	1	
Chester	0	1	
Coatesville	0	1	
Dubois	0	1	
Easton	0	2	
Erie	1	1	
Johnstown	1	2	
Lancaster	0	1	
New Castle	1	2	
Norristown	1	1	
Philadelphia	25	18	1
Pittsburgh	7	5	
Reading	1	1	
Washington	1	3	
South Carolina:			
Charleston	4	2	
Columbia	2	4	
Greenville	0	1	
Tennessee:			
Knoxville	2	11	1
Memphis	5	3	
Texas:			
Dallas	2	5	
El Paso	0	2	
Fort Worth	1	2	1
Utah:			
Salt Lake City	0	2	
Virginia:			
Danville	1	1	
Petersburg	2	4	
Portsmouth	1	1	1
Richmond	3	3	1
Roanoke	3	7	
Washington:			
Everett	0	3	
Seattle	3	3	
West Virginia:			
Charleston	3	1	
Huntington	0	1	
Martinsburg	1	1	
Wisconsin:			
La Crosse	0	2	
Milwaukee	1	1	
West Allis		1	

CITY REPORTS FOR WEEK ENDED SEPTEMBER 2, 1922—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Alabama:										
Anniston	17,734	.....	17	.....	.....	.....	.....	.....	.....	.....
Birmingham	178,806	51	5	1	1	.....	6	.....	10	5
Mobile	60,777	21	4	1	.....	.....	1	.....	.....	1
Montgomery	43,464	7	2	.....	.....	.....	1	.....	.....	2
Tuscaloosa	11,996	.....	1	.....	.....	.....	.....	.....	.....	.....
Arkansas:										
Fort Smith	28,870	7	1	.....	.....	.....	.....	.....	.....	1
Hot Springs	11,695	5	.....	.....	.....	.....	.....	.....	.....	1
Little Rock	65,142	.....	.....	.....	.....	.....	1	.....	1	.....
North Little Rock	14,048	.....	1	.....	.....	.....	.....	.....	2	2
California:										
Alameda	28,806	4	1	.....	.....	.....	.....	.....	.....	.....
Bakersfield	18,638	5	.....	.....	.....	.....	.....	.....	.....	.....
Long Beach	55,593	16	.....	.....	.....	.....	.....	.....	.....	.....
Los Angeles	576,673	177	60	.....	1	.....	10	1	56	20
Oakland	216,261	46	8	.....	.....	.....	3	.....	2	3
Pasadena	45,354	14	.....	.....	1	.....	.....	.....	1	.....
Richmond	16,843	6	4	.....	.....	.....	.....	.....	1	1
Riverside	19,341	9	.....	.....	.....	.....	1	.....	3	1
Sacramento	65,908	15	2	.....	.....	.....	3	.....	2	1
San Bernardino	18,721	12	.....	.....	1	.....	.....	.....	.....	1
San Diego	74,683	22	1	.....	.....	.....	2	.....	3	1
San Francisco	506,676	120	18	1	3	.....	5	.....	28	10
Santa Ana	15,485	3	1	.....	.....	.....	.....	.....	.....	.....
Santa Barbara	19,441	4	.....	.....	.....	.....	.....	.....	.....	.....
Santa Cruz	10,917	2	.....	.....	.....	.....	.....	.....	.....	.....
Vallejo	21,107	1	.....	.....	.....	.....	.....	.....	.....	.....
Colorado:										
Denver	256,491	56	25	3	.....	.....	5	.....	.....	9
Greeley	10,958	6	.....	.....	.....	.....	.....	.....	.....	1
Pueblo	43,050	11	1	1	.....	.....	.....	.....	.....	.....
Trinidad	10,906	.....	1	.....	1	.....	.....	.....	.....	.....
Connecticut:										
Bridgeport	143,555	20	4	.....	1	.....	2	.....	3	4
Bristol	20,620	0	.....	.....	.....	.....	.....	.....	2	.....
Derby	11,238	4	.....	.....	.....	.....	.....	.....	.....	.....
Fairfield (town)	11,475	6	.....	.....	1	.....	1	.....	.....	.....
Greenwich (town)	22,123	.....	.....	.....	.....	.....	.....	.....	1	.....
Hartford	138,036	21	5	.....	4	.....	.....	.....	3	.....
Manchester (town)	18,370	3	.....	.....	.....	.....	.....	.....	.....	.....
Milford (town)	10,193	4	.....	.....	.....	.....	.....	.....	.....	.....
New Haven	162,537	19	2	.....	1	.....	.....	.....	5	.....
New London	25,688	2	.....	.....	.....	.....	.....	.....	2	.....
Norwich (city)	22,304	6	1	.....	.....	.....	.....	.....	1	.....
Waterbury	91,715	11	.....	.....	.....	.....	2	.....	4	.....
District of Columbia:										
Washington	437,571	105	3	.....	.....	.....	2	.....	19	15
Florida:										
Tampa	51,608	14	3	.....	.....	.....	.....	.....	1	2
Georgia:										
Atlanta	200,616	65	15	1	.....	.....	8	.....	5	8
Augusta	52,548	20	.....	.....	.....	.....	.....	.....	.....	2
Brunswick	14,413	4	1	1	.....	.....	.....	.....	.....	1
Rome	13,252	.....	1	.....	.....	.....	2	.....	.....	.....
Valdosta	10,783	4	.....	.....	.....	.....	.....	.....	.....	.....
Idaho:										
Boise	21,393	5	.....	.....	.....	.....	.....	.....	.....	.....
Illinois:										
Alton	24,682	7	3	.....	.....	.....	3	.....	.....	.....
Aurora	36,397	8	1	.....	.....	.....	.....	.....	1	.....
Bloomington	28,725	4	1	.....	.....	.....	.....	.....	.....	.....
Centralia	12,491	5	.....	.....	.....	.....	.....	.....	.....	.....
Chicago	2,701,705	506	62	3	25	2	21	4	146	40
Chicago Heights	19,653	3	.....	.....	.....	.....	.....	.....	.....	.....
Cicero	44,995	8	4	.....	.....	.....	.....	.....	.....	1
Decatur	43,818	2	1	.....	.....	.....	.....	.....	3	.....
Elgin	27,454	10	.....	.....	.....	.....	.....	.....	.....	.....
Evanston	37,234	8	.....	.....	.....	.....	.....	.....	.....	.....
Freeport	19,669	7	1	.....	.....	.....	.....	.....	.....	2
Galesburg	23,834	4	.....	.....	.....	.....	.....	.....	.....	.....
Kewanee	16,026	4	.....	.....	.....	.....	.....	.....	.....	.....
Mattoon	13,552	2	.....	.....	.....	.....	.....	.....	2	.....
Oak Park	39,858	9	1	.....	.....	.....	2	.....	.....	.....

CITY REPORTS FOR WEEK ENDED SEPTEMBER 2, 1922—Continued.

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

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Illinois—Continued.										
Peoria	76,121	20	1				1			
Quincy	35,978	10								
Rockford	65,651	11	2		1					1
Springfield	59,183	17							5	1
Indiana:										
Anderson	29,767	6	1				4			
Bloomington	11,595	3								
Crawfordsville	10,139	1								
East Chicago	35,967	7	1	1						
Fort Wayne	86,549	22	3			1				
Frankfort	11,585	1								
Hammond	36,004	7	1							
Huntington	14,000	4								
Indianapolis	314,194	69	10		3		4		2	
Kokomo	30,067	3					1		1	
La Fayette	22,486	1								
Logansport	21,626	3								
Mishawaka	15,195	2								
Muncie	36,524	10			1					
Newcastle	14,458	3								
South Bend	70,983	9	2		1		5			
Terre Haute	66,083	14	2				1			1
Iowa:										
Burlington	24,057		1							
Council Bluffs	36,162	3					2			
Davenport	56,727		4							
Des Moines	126,468		12		1		4			
Dubuque	39,141		1				1			
Marshalltown	15,731						1			
Mason City	20,065	3	2							
Muscatine	16,068	4								
Sioux City	71,227		3				1			
Waterloo	36,230		1		2		5			
Kansas:										
Coffeyville	13,452	3								
Fort Scott	10,693	0	2							
Kansas City	101,177		2				5		13	
Lawrence	12,453	4								
Leavenworth	16,912		1							
Parsons	16,028	5								
Salina	15,085	4								
Topeka	50,022	10	8	1			1		4	2
Wichita	72,217	32	2	1			2		2	3
Kentucky:										
Covington	57,121	14								2
Lexington	41,534	13								1
Louisville	234,891	53	6				1		20	3
Owensboro	17,424		1		1					
Paducah	24,735		6		3					
Louisiana:										
New Orleans	387,219	108	7	1			1		25	16
Maine:										
Auburn	16,985	3								
Bangor	25,978						1			
Biddeford	18,008	2								
Lewiston	31,791	8					1			
Portland	69,272	14	6				1			1
Sanford (town)	10,691	3								
Maryland:										
Baltimore	733,826	165	25	4	4		9		22	12
Cumberland	29,837	7	1				1		3	1
Massachusetts:										
Amesbury (town)	10,036	4								
Arlington (town)	18,665	1	1		1					
Attleboro	19,731	6								2
Belmont (town)	10,749	3	2				2			
Beverly	22,561	2			1		1			
Boston	748,060	185	47	1	14		14	1	38	17
Braintree (town)	10,880	1								
Brookline	37,748		2							1
Cambridge	109,694	25	5				2			
Chelsea	43,184	14	3				1		5	2
Chicopee	36,214	7								

CITY REPORTS FOR WEEK ENDED SEPTEMBER 2, 1922—Continued.

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

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Massachusetts—Continued.										
Clinton	12,979	2								
Danvers	11,108								1	
Dedham	10,792	0								
Everett	40,120	6	4	1			3		2	
Fall River	120,485	32			8	1	1		6	1
Framingham	17,033	5	1							
Greenfield	15,462	2								
Haverhill	53,884	7					1		1	
Holyoke	60,203	13	2						3	1
Lawrence	94,270	17	1						3	1
Leominster	19,744	3					1			
Lowell	112,759	24	1		1		1		2	3
Lynn	99,148	20	3		1		1		4	2
Malden	49,103	6			1		4		2	
Medford	39,038	4					1		2	
Melrose	18,204	7					1			
Methuen	15,189	3								
New Bedford	121,217	30	4		2				9	3
Newburyport	15,618	3			1					
Newton	46,054	6							1	
North Adams	22,282	5								
Northampton	21,951	4							1	
Peabody	19,552	5	2						1	
Pittsfield	41,763	6	1				1		2	
Plymouth	13,045	1								
Quincy	47,876	9	1						1	1
Salem	42,529	11	1				1			1
Somerville	93,091	17	2		2				2	
Southbridge	14,245	0	3							
Springfield	129,614	26	2		1				3	1
Taunton	37,137	9							3	1
Wakefield	13,025	3								
Waltham	30,915	5			1					
Watertown	21,457	6	4	1						1
West Springfield	13,443	1								
Westfield	18,604	4	2							
Winchester	10,485	0								
Winthrop	15,455	4	1		1					
Woburn	16,574	4								
Worcester	179,754	43	3				2		8	2
Michigan:										
Ann Arbor	19,516	8					1			1
Benton Harbor	12,233	2								
Detroit	993,678	175	30	3	2		35		47	24
Grand Rapids	137,634	27	1	1			6		3	2
Hamtramck	48,615	2	10	1					1	
Highland Park	46,499	12					1			
Holland	12,183	0					1			
Kalamazoo	48,487	16	7						1	1
Marquette	12,718	3	2							1
Muskegon	36,570	5								
Pontiac	34,273	10	1						2	1
Port Huron	25,944	6	2		1		2		2	1
Sault Ste. Marie	12,096	0								
Minnesota:										
Duluth	98,917	10	1	1			2		2	1
Hibbing	15,089	2					8			
Minneapolis	380,582	64	10	3	4		15		15	5
Rochester	13,722	20	1							
St. Paul	234,698	54	5	1	4		15		9	2
Virginia	14,022						1			
Winona	19,143								1	
Missouri:										
Independence	11,686	5								
Kansas City	324,410	86	5	1	1		2		4	3
St. Joseph	77,939	20	1	1			1			
St. Louis	772,897	141	15	1			4		31	16
Springfield	39,631	14								4
Montana:										
Anaconda	11,668	4								
Great Falls	24,121	6		1						
Missoula	12,668	4							2	

CITY REPORTS FOR WEEK ENDED SEPTEMBER 2, 1922—Continued.

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

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Nebraska:										
Lincoln	54,948	13								2
Omaha	191,601	35	7		1		1			2
Nevada:										
Reno	12,016	2								
New Hampshire:										
Berlin	16,104	4								
Dover	13,029	5								
Keene	11,210	4								
Nashua	28,379	4								
New Jersey:										
Asbury Park	12,400	4								
Atlantic City	500,707	29			2		1			
Bayonne	76,754		1						2	
Bloomfield	22,019	4	1							
Clifton	26,470	1	1							
East Orange	50,710	7							5	
Englewood	11,627	1							2	
Garfield	19,381	4	2		1					
Hackensack	17,667	12								
Hoboken	68,166	12							2	1
Jersey City	298,103		10				5		6	
Kearny	26,724	2								
Morristown	12,548	5			1				1	
Newark	414,524	66	4	1	19		7		15	4
Orange	33,268	2			1		1			
Passaic	63,841	8			3		1		6	
Paterson	135,875		2		1				5	
Perth Amboy	41,707	2	2						1	
Phillipsburg	16,923	4								
Plainfield	27,700	3								
Rahway	11,042	0					1			
Summit	10,174	2					1		1	
Trenton	119,289	39	9	1	3	1	3		3	2
West Hoboken	40,074	2								1
West New York	29,926	0	1							
West Orange	15,573	3	1							1
New Mexico:										
Albuquerque	15,157	9	1				1		2	4
New York:										
Albany	113,344		3				3		3	
Auburn	36,192	9	4							
Buffalo	506,775	101	9	1	1		8		9	7
Cohoes	22,987	9								
Elmira	45,393		1							
Geneva	14,648	5								
Glens Falls	16,638	2								
Hornell	15,025	2								
Hudson	11,745	3								
Ithaca	17,004	6								
Jamestown	38,917	6			1		1		2	
Lackawanna	17,918	3					1			
Little Falls	13,029	3								
Lockport	21,308	7							1	
Middletown	18,420								1	1
New York	5,620,048	987	60	1	18	1	26	1	285	104
Newburgh	30,366	11			1		1		3	
Niagara Falls	50,760	5	1		4				1	
North Tonawanda	15,482	4					1			1
Ogdensburg	14,609	6								1
Olean	20,506	4								
Peekskill	15,868	2			2		1		1	
Plattsburg	10,909	6								
Port Chester	16,573	3			1					
Poughkeepsie	35,000	12							2	2
Rochester	295,750	51	1		3	1	2		9	
Saratoga Springs	13,181	1	1						2	
Schenectady	88,723	16					1		2	
Syracuse	171,717	43	17	1	3		2		4	1
Troy	72,013	18							2	
Watertown	31,285	14								
White Plains	21,031	4			1		1			2
Yonkers	100,176	10	3	1						1

CITY REPORTS FOR WEEK ENDED SEPTEMBER 2, 1922—Continued.

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

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
North Carolina:										
Durham	21,719	2	4				1		1	1
Greensboro	15,861	8								1
Raleigh	24,418	13	1				3			2
Rocky Mount	12,742	11								2
Salisbury	13,884	5								
Wilmington	33,372	11								
Winston-Salem	48,395	13	4				1		2	
North Dakota:										
Fargo	21,961	0								
Ohio:										
Akron	208,435	20	2				11		1	
Alliance	21,603	6					1			
Ashtabula	22,082	5							1	
Barberton	18,811	2	1							
Bucyrus	10,425	1								
Canton	87,091	13	2				2			
Chillicothe	15,831	1								
Cincinnati	401,247	115	3				4		12	4
Cleveland	796,841	124	15	2	5	2	14	1	40	13
Cleveland Heights	15,236								1	
Columbus	237,031	57	4		1		4		6	4
Dayton	152,559	31			1				7	
East Cleveland	27,292	3							3	1
Findlay	17,021	4	1							
Fremont	12,468	3							1	
Hamilton	39,675	7	1				2			
Kenmore	12,683						2			
Lancaster	14,706	7	1						1	2
Mansfield	27,824	7	1		1				1	
Marion	27,891						1			
Martins Ferry	11,634	4					3			
Middletown	23,594	5								2
New Philadelphia	10,718		1		1					
Newark	26,718	6	1							
Niles	13,080	2								
Norwood	24,966	15	1				4		1	2
Piqua	15,044	4								
Salem	10,305	4								
Sandusky	22,897	6	1							
Springfield	60,840	14	1							
Toledo	243,164	44	10		5		8		3	3
Zanesville	29,569	14	2				1			2
Oklahoma:										
Oklahoma	91,295	11	2	1			1		2	1
Tulsa	72,075						1			
Oregon:										
Portland	258,288	39	2		6				31	4
Pennsylvania:										
Allentown	73,502								1	
Altoona	60,331		2							
Ambridge	12,730		2		1					
Beaver Falls	12,802		1							
Bethlehem	50,358		2		2		1			
Braddock	20,879		2		1					
Bradford	15,525								1	
Bristol	10,273		1							
Butler	23,778		5				1			
Canonsburg	10,632		1		1				5	
Carrick	10,504		1				1			
Charleroi	11,516						2			
Chester	58,030				1				1	
Coatesville	14,515				1					
Connellsville	13,804		2							
Donora	14,131		4							
Dubois	13,681		2							
Duquesne	19,011		1						1	
Easton	33,813		2							
Erie	93,372		1						5	
Harrisburg	75,917		3		2		1			
Homestead	20,452								1	
Jeannette	10,627		1							
Johnstown	67,327		1							

CITY REPORTS FOR WEEK ENDED SEPTEMBER 2, 1922—Continued.

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

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Pennsylvania—Continued.										
Lancaster	53,150		4				2		1	
Lebanon	24,643						1			
McKee's Rocks	16,713		2							
Mount Carmel	17,469						1			
Nanticoke	22,614		1				1			
New Castle	44,938		2							
New Kensington	11,987		1		1					
Norristown	32,319				1					
North Braddock	14,928				1					
Oil City	21,274						1			
Olyphant	10,236		2							
Philadelphia	1,823,779	366	30	2	46		16	1	77	33
Pittsburgh	588,343		23		15		14		6	
Pottstown	17,431		1							
Pottsville	21,876		2							
Punxsutawney	10,311						1			
Reading	107,784		6		2				1	
Scranton	137,783		4						2	
Shenandoah	24,726		1				1			
Steelton	13,428		2				1			
Sunbury	15,721		1							
Warren	14,272		1		1				2	
Washington	21,480						2		1	
West Chester	11,717		3				1			
Wilkes-Barre	73,833				1				1	
Wilkinsburg	24,403		1		1		1			
Williamsport	36,198						1			
Woodlawn	12,495		1		4		2			
York	47,512		3				6			
Rhode Island:										
Cranston	29,407	3								
Cumberland (town)	10,077	2								
Newport	30,255	4							1	1
Pawtucket	64,248	13								1
Providence	237,595	58	1		1		1			1
South Carolina:										
Charleston	67,957	26	1				1		1	1
Columbia	37,524		4						1	
Greenville	23,127	8	1				5			2
South Dakota:										
Sioux Falls	25,202	6								
Tennessee:										
Chattanooga	57,895		4				1			
Knoxville	77,818		5		1		3		4	4
Memphis	162,351	56	16	2			1		10	3
Nashville	118,342	33	8	1			1			1
Texas:										
Beaumont	40,422	12							1	
Corpus Christi	10,522	6							2	2
Dallas	158,976	37	4				1		1	3
El Paso	77,560	22								8
Fort Worth	106,482	28	2	1			1		1	1
Galveston	44,255	12								2
Houston	138,276	48								
San Angelo	10,050	5								3
Waco	38,500	10	5							
Utah:										
Provo	10,303	6					1			
Salt Lake City	118,110	21	2				1			1
Vermont:										
Burlington	22,779	7								
Rutland	14,954	3								
Virginia:										
Alexandria	18,060	5	2							1
Danville	21,539	6	4				1			
Lynchburg	30,070	10	2						1	2
Norfolk	115,777		2						11	1
Petersburg	31,012	13	2				5		1	3
Portsmouth	54,387	14	4				3			
Richmond	171,667	49	11				12		33	5
Roanoke	50,842	14	11	1			1		1	

CITY REPORTS FOR WEEK ENDED SEPTEMBER 2, 1922—Continued.

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

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Washington:										
Aberdeen	15,337						1			
Seattle	315,312		5		1		1		14	
Spokane	104,437		3				1			
Tacoma	96,965		1							
West Virginia:										
Bluefield	15,282	4					2			1
Charleston	39,608	12	1						2	
Clarksburg	27,869	2	1		4		2			
Fairmont	17,851		1							
Huntington	50,177	17	1							
Morgantown	12,127		1							
Moundsville	10,669	2					2			
Wheeling	56,208	5	1		1		6			
Wisconsin:										
Beloit	21,284	4					1			
Eau Claire	20,906						1			
Fond du Lac	23,427	4	1							
Janesville	18,293	5	2						1	
Kenosha	40,472	9			1				1	1
La Crosse	30,421				1				1	
Madison	38,378		2		1		1			
Milwaukee	457,147		11		20		12		6	
Oshkosh	33,162	6							1	1
Racine	58,593	13			1		2		3	2
Sheboygan	30,955		4							
Superior	39,671	10								
Waukesha	12,558				5					
West Allis	13,745		1							
Wyoming:										
Cheyenne	13,829	0								

FOREIGN AND INSULAR.

PLAGUE RATS ON VESSEL.

Steamship "Legie"—At Hamburg—From Buenos Aires.

The finding of plague-infected rats on the steamship *Legie* from Buenos Aires, Argentina, was reported at Hamburg, Germany, July 29, 1922.

AUSTRALIA.

Plague-Infected Rat—Brisbane.

The finding of a plague-infected rat was reported at Brisbane, Australia, during the week ended July 29, 1922.

BRAZIL.

Leprosy—State of Sao Paulo.

According to information dated August 4, 1922, taken from the annual message of the President of the State of Sao Paulo, Brazil, data were being collected regarding the lepers in the State, preparatory to instituting measures for their care and for the prevention of further spread of the disease. The number of lepers in the State was estimated at about 1,000.

HAWAII.

Plague.

Under date of August 29, 1922, the occurrence of two fatal cases of plague was reported in Hawaii. The first case, which was bubonic in type, occurred at Honakaa in a Japanese, a stableman, and terminated fatally August 19. The second case was a Japanese school girl, a resident of Honakaa Mill, Hawaii. The case was pneumonic in type and terminated fatally August 24.

JAMAICA.

Alastrim.

During the four-week period ended August 26, 1922, 110 new cases of alastrim were reported in the Island of Jamaica. The two weeks ended August 19 and 26 showed the greatest number of cases, viz, 36 and 55, respectively.

Typhoid Fever—Kingston and Vicinity.

During the same period, seven cases of typhoid fever were reported in Kingston and 55 cases in the surrounding country.

POLAND.

Communicable Diseases.

Communicable diseases were reported in Poland, exclusive of the districts of Brest-Litovsk and Minsk, but including the district of Wilno, as follows:

June 4–24, 1922.[1]

Disease.	Cases.	Deaths.	Districts of highest mortality.
Cerebrospinal meningitis	26	9	Bialystok, Lemberg, Posen, and Wilno.
Cholera	8	3	Repatriation camp, Rovno.
Diphtheria	173	12	Posen and Tarnopol.
Measles	1,690	46	Posen and Stanislawow.
Scarlet fever	715	76	Krakow, Lwow, and Stanislawow.
Smallpox	188	23	Nowogrodek and Stanislawow.
Tuberculosis	402	554	Lwow and Warsaw City.
Typhoid fever	810	49	Krakow, Lodz, Lwow, and Wolyn.
Typhus fever	2,224	132	Lublin and Polesia.
Typhus, recurrent	1,973	39	Do.

June 25–July 1, 1922.

Cerebrospinal meningitis	9	2	Warsaw City.
Cholera	.....	2	Volhynia.
Diphtheria	56	4	Kielce.
Measles	328	6	Stanislawow and Volhynia.
Scarlet fever	200	19	Stanislawow.
Smallpox	30	9	Do.
Tuberculosis	123	154	Warsaw City.
Typhoid fever	221	19	Lodz.
Typhus fever	625	50	Stanislawow.
Typhus, recurrent	538	17	Lublin.

[1] Public Health Reports, Aug. 18, 1922, p. 2032.

Botulism.

During the period June 4 to 24, 1922, 52 cases of botulism, with 4 deaths, were reported in Poland. Of these, three cases with two deaths occurred in the district of Posen. The remaining 49 cases were not reported according to locality. During the week ended July 1, 1922, five cases of botulism were reported; the locality of occurrence was not stated.

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

Reports Received During Week Ended September 22, 1922.[1]

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

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Newchwang	July 27			Present. Stated to have been imported from Shanghai.
Pootung	Aug. 3			Present.
Woosung	do			About 75 deaths reported for previous week.
India:				
Bombay	July 2–8	1	1	
Calcutta	July 30–Aug. 5	5	5	
Madras	do	1		
Rangoon	July 23–Aug. 5	7	2	
Philippine Islands:				
Manila	July 30–Aug. 5	1	1	
Poland:				
Rovno	June 11–24	8	3	Repatriation camp.
Do	June 25–July 1		2	Do.
Straits Settlements:				
Singapore	July 16–22	1	1	
Syria:				
Aleppo	Aug. 13–26			Present in interior.

PLAGUE.

Algeria:				
Oran	Aug. 11–20		2	
Australia:				
Brisbane	July 23–29			One plague rat.
British East Africa:				
Kenya Colony				July 9–15, 1922: Deaths, 14.
Ceylon:				
Colombo	July 23–Aug. 5	4	5	
China:				
Foochow	July 9–22			Present.
Egypt				Jan. 1–Aug. 10, 1922: Cases, 427; deaths, 195.
City—				
Alexandria	Aug. 22	1		
Port Said	Aug. 18–19	3	3	
Province—				
Minieh	Aug. 19	1	1	
Hawaii:				
Honakaa	Aug. 19	1	1	Japanese; bubonic.
Honakaa Mill	Aug. 24	1	1	Japanese; pneumonic.
India:				
Bombay	July 2–8	5	3	Surrounding country: Cases, 21; deaths, 16.
Madras Presidency	July 30–Aug. 5	280	191	
Rangoon	July 23–Aug. 5	86	75	
Italy:				
Naples	July 18–25	4		Occurring in suburbs, viz, at Torre Annunziata, July 18–20, 3 cases; San Giovanni a Teduccio, July 25, 1 case.
Peru				July 1–31, 1922: Cases, 63; deaths, 35.
Senegal:				
Dakar	July 1–31	2	2	
On vessel:				
S. S. Legie	July 29			At Hamburg, Germany. Plague rats found. Vessel from Buenos Aires, Argentina.

[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 September 22, 1922—Continued.

SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Arabia:				
Aden	Aug. 6–12		1	
Brazil:				
Rio de Janeiro	July 30–Aug. 12	9	3	
British East Africa:				
Kenya Colony				July 9–15, 1922: Deaths, 5.
Dar es Salaam	July 16–22	1		
Canada:				
Ontario—				
London	Aug. 26–Sept. 2	1		
Toronto	do	1		
Egypt:				
Alexandria	Aug. 6–12	1	1	
Great Britain:				
London	Aug. 13–19	1		
India:				
Bombay	July 2–8	3		
Calcutta	July 30–Aug. 5	1	1	
Madras	do	54	17	
Rangoon	July 23–Aug. 5	4	3	
Java:				
West Java—				
Batavia	July 22–28	11		Province.
Malta				June 1–30, 1922: Cases, 2.
Mexico:				
Mexico City	July 23–Aug. 5	30		Including municipalities in Federal District.
Poland				June 4–24, 1922: Cases, 188; deaths, 23.
Do				June 25–July 1, 1922: Cases, 30; deaths, 9.
Portugal:				
Lisbon	Aug. 6–19	25	8	
Portuguese East Africa:				
Lourenco Marques	July 23–29	1		
Spain:				
Seville	Aug. 15–27		13	
Syria:				
Damascus	Aug. 1–7	5		
Yugoslavia:				
Croatia-Slavonia—				
Zagreb	Aug. 6–12	1		
On vessel:				
S. S. Montoro	July 8	1		At Darwin, Australia. Vessel left Singapore June 28 for Darwin via Java ports. Case, Chinese, developed July 4. Case landed at quarantine; vessel proceeded in quarantine to Sydney, via northern ports.

TYPHUS FEVER.

Australia:				
Brisbane	July 9–15	1		
Egypt:				
Alexandria	Aug. 2–8	1	2	
Port Said	Aug. 13–19		2	
Mexico:				
Mexico City	July 23–Aug. 5	32		Including municipalities in Federal District.
Norway:				
Christiania	Aug. 15	1	1	
Palestine:				
Jerusalem	Aug. 15–21	1		
Poland				June 4–24, 1922: Cases, 2,224; deaths, 132. Recurrent typhus: Cases, 1,973; deaths, 39.
Do				June 25–July 1, 1922: Cases, 625; deaths, 50. Recurrent typhus: Cases, 538; deaths, 17.
Portugal:				
Oporto	Aug. 13–19	1	1	

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

Reports Received from July 1 to September 15, 1922.[1]

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Amoy	May 14–June 24	1	4	
Shanghai	June 25–July 31	198	.....	Aug. 1–6: Cases, 1, foreign; deaths, 11, Chinese. July 29: Stated to be 250 cases in Chinese isolation hospital.
Tientsin	July 25	2	2	Foreign concession.
Greece:				
Athens	June 29	1	1	
Saloniki	June 7–17	30	11	At quarantine station, among passengers from vessel carrying Russian refugees.
India	.....	.....	.....	Feb. 26–June 17, 1922: Deaths, 32,649. (Report for week ended Feb. 25, 1922, not received.)
Bombay	Apr. 23–June 17	12	5	
Calcutta	Apr. 23–June 24	536	378	
Do	June 25–July 29	39	38	
Madras	May 21–June 17	3	1	
Do	July 16–29	3	2	
Rangoon	May 7–June 24	116	65	
Do	June 25–July 22	79	49	
Philippine Islands:				
Manila	May 21–June 24	8	.....	
Do	June 25–July 29	8	.....	
Province—				
Bataan	June 4–10	1	.....	
Batangas	May 26–June 24	15	11	
Do	June 25–July 8	5	3	
Bulacan	Apr. 30–May 6	1	1	
Camarines Sur	Mar. 25–Apr. 1	1	1	
Laguna	Apr. 16–22	1	.....	
Marinduque	June 25–July 1	3	3	
Mindoro	Apr. 23–29	1	.....	
Nueva Ecija	June 11–17	1	1	
Pampanga	Apr. 16–June 24	6	5	
Do	June 25–July 8	1	1	
Pangasinan	June 18–24	3	1	
Rizal	Apr. 2–June 24	3	1	
Tarlac	May 21–June 10	4	4	
Poland:				
Rovno	June 10–16	5	2	Repatriation station: Cases occurring among persons repatriated from Russia.
Do	July 11–Aug. 5	33	8	
Zamosc	Aug. 21	.....	1	
Rumania:				
Crangasi	.....	.....	.....	To July 31, 1922: Cases, 11; deaths, 6. First case in soldier from frontier on Dniester River. Crangasi, a suburb of Bucharest.
Province—				
Bessarabia—				
Cobusea	July 24	1	.....	
Codaeshti	.....	3	.....	Reported Aug. 11.
Orhei	.....	.....	.....	Prefecture. Cholera reported Aug. 11 among troops in garrison.
Rascautzi	.....	11	1	Reported July 29.
Siam:				
Bankok	Apr. 30–June 17	15	9	
Do	July 2–15	5	2	
Syria:				
Aleppo	May 27–June 3	.....	.....	A few cases in interior.
Do	June 25–Aug. 12	.....	.....	Present in interior.
On vessel:				
S. S. Chios	July 16	1	.....	At Kavak quarantine station: Bosporus, from Novorossysk, a Russian Black Sea port. Case occurred in a recognized carrier. Vessel carried refugees for Saloniki, Greece. Six bodies buried at sea, 12 landed at Kavak during stay.

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

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

Reports Received from July 1 to September 15, 1922—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria:				
Oran	Aug. 1–10		1	
Asia Minor:				
Smyrna	May 28–June 17	3	1	
Do	June 30–Aug. 12	6	1	District.
Australia:				
New South Wales—				
Sydney	June 1–15	2		Apr. 2–June 10, 1922: 19 plague-infected rats found.
Azores:				
St. Michaels Island	June 25–July 22	18	3	At Arrifes and Ribeira, about 9 miles from port of Ponta Delgada.
Brazil:				
Bahia	June 11–17	1		May 7–June 4: Rodent; occurring in one section of the city.
Pernambuco	May 7–13	1		Many dead rats found.
Porto Alegre	July 30–Aug. 5	1		
British East Africa:				
Kenya Colony				Mar. 1–May 31, 1922: Cases, 187; deaths, 172.
Nairobi	Feb. 1–28	15	15	
Ceylon:				
Colombo	May 6–June 24	13	10	Plague rats, 5.
Do	June 25–July 22	9	8	Plague rats, 9.
China:				
Amoy	May 7–June 24		87	May 20: From 10 to 20 deaths reported daily. July 16–22: Present.
Do	June 25–July 15		76	
Canton	May 1–June 30	28	23	
Foochow	May 7–June 10	5	4	June 17–24: Present. June 21: Mildly epidemic; 2 fatal cases in foreign physicians.
Do	July 2–8	2		June 25–July 1, 1922: Prevalent.
Hongkong	June 4–24	176	104	
Do	June 25–July 29	109	79	
Ecuador:				
Guayaquil	June 1–15			Rats found infected, 16; examined, 3,400.
Do	July 1–31			Rats examined, 9,200; found infected, 6.
Egypt				Jan. 1–June 29, 1922: Cases, 280; deaths, 120. Jan. 1–Aug. 10, 1922: Cases, 414; deaths, 185.
City—				
Alexandria	June 1–28	21	6	
Do	July 2–Aug. 10	13	5	
Port Said	June 12–25	2	5	Septicemic, 1.
Do	July 2–Aug. 10	24	18	Foreign cases, 2; deaths, 2.
Suez	May 24–June 25	7	6	
Do	July 10–Aug. 8	3	2	Aug. 5: One case imported from Mauritius on S. S. Dumbea.
Province—				
Assiout	May 30–June 23	14	8	Septicemic, 1.
Do	July 11–Aug. 5	6	3	
Beniseuef	May 26–June 30	19	7	
Do	July 2–Aug. 7	28	13	
Fayoum	June 3–29	8	4	
Do	July 2–20	13	3	
Gharbieh	May 26–June 30	37	13	
Do	July 2	3		
Menoufieh	July 20	1	1	
Minieh	June 2–29	24	7	
Do	July 14–Aug. 9	15	6	
Greece:				
Patras	Apr. 24–June 25	5	3	
Hawaii:				
Hamakua	June 30–July 4	1	1	At Kalopa Homesteads. Case, Hawaiian.
Do	July 8			Hamakua Mill Co. One plague rat trapped; found positive, July 14, 1922.
Honakaa	Aug. 12			Two plague rats.
Kalopa	July 13	1	1	Contact with case at Kalopa Homesteads, July 4.
Paauhau	June 30			One plague rat trapped at Paauhau Gulch, June 29; found positive, June 30, 1922.
Paauilo	July 7		1	At Pohakea, Japanese.
Pohakea	Aug. 1–16	2	2	Aug. 1, Japanese child; case reported positive for plague Aug. 6, 1922. Form, pneumonic. Aug. 16, 1 fatal case; Japanese.

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

Reports Received from July 1 to September 15, 1922—Continued

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Hawaii—Continued.				
Pohakuhaku	July 12	1	1	Hawaiian. Reported positive, July 19.
India				Apr. 23–June 17, 1922: Cases, 6,075; deaths, 4,642. June 25–July 8, 1922: Cases, 501; deaths, 375.
Bombay	Apr. 23–June 24	168	123	
Do	June 25–July 1	5	3	
Calcutta	Apr. 23–June 24	56	54	
Do	June 25–July 22	11	11	
Karachi	May 23–June 24	59	55	
Do	June 25–July 8	3	3	
Madras Presidency	May 21–June 24	74	36	
Do	June 25–July 29	225	126	
Rangoon	May 6–June 24	175	161	
Do	June 25–July 29	125	116	
Indo-China:				
Saigon	Apr. 23–June 24	30	21	
Italy:				
Catania	June 17	1		
Japan:				
Osaka	July 11–20	7	6	Reported as having occurred during past month, cases, 9; deaths, 8.
Java				Month of April, 1922: Report of the 7 Provinces of Java: Cases, 413; deaths, 495. May 1–31, 1922: Cases, 293; deaths, 310, occurring in 6 Provinces. June 1–30, 1922: Cases, 222; deaths 250; occurring in 5 Provinces.
East Java—				
Soerabaya	May 7–June 24	3	3	
Soerakarta—				
Keporen	May 20			Epidemic.
Madagascar:				
Tananarive Province—				
Anketrina	May 4		1	Native village; disease stated to have been present since about Apr. 27, 1922. (Name of locality corrected.)
Tamatave	Aug. 21			Present.
Tananarive	May 29–June 18	2	1	
Mesopotamia:				
Bagdad	Apr. 1–June 30	268	188	
Mexico:				
Vera Cruz	June 30			One plague-infected rat.
Palestine:				
Jerusalem	July 4–Aug. 14	32	2	In native quarter of Jaffa.
Peru				May 1–15, 1922: Cases, 36; deaths, 19. June 1–30, 1922: Cases, 87; deaths, 15.
Philippine Islands:				
Manila	June 3	1	1	From S. S. Taisang from Amoy, China.
Portugal:				
Lisbon	July 31–Aug. 6		1	
Portuguese West Africa:				
Guinea				Reported present, Aug. 24, 1922.
Senegal:				
Dakar	June 1–30	1	1	
Siam:				
Bangkok	Apr. 30–June 3	4	3	
Do	July 2–15	2	2	
Straits Settlements:				
Singapore	Apr. 30–June 24	8	9	
Do	July 9–15	1	1	
Syria:				
Beirut	July 30	2		
Tunis:				
Tunis	June 30–July 27	3	1	
Union of South Africa:				
Orange Free State—				
Grootkom Farm	May 7–13			One dead plague-infected rodent found. Locality adjoins Trucart's Berg Farm, on which plague-infected mouse was found preceding week.
Rendezvous Ry. Station.	May 14–20			Plague-infected wild rodent found near.

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

Reports Received from July 1 to September 15, 1922—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
On vessels:				
S. S. Ardeola	June 25–July 8			At Liverpool. Four plague-infected rats found dead. Vessel from Las Palmas, Canary Islands, June 26, 1922.
S. S. Dumbea	Aug. 5	1		At Suez, Egypt, from Island of Mauritius. Patient ill two days before arrival. Declared positive Aug. 6.
Greek vessel ———	July 19			At Messina, Italy. Cases on board. Vessel not allowed to enter.
S. S. Southgate	May 30	1		At Thursday Island quarantine, Australia. Vessel left Calcutta May 2; Rangoon, May 9. Vessel badly rat infested.
S. S. Taisang	June 1-3	1	1	At Manila, P. I., from Amoy, China. Patient landed at Manila June 1, 1922. The Taisang was 2½ days en route direct from Amoy.

SMALLPOX.

Arabia:				
Aden	May 7–June 24	69	21	
Do	July 2–Aug. 5	38	20	
Argentina:				
Rosario	June 1–30		3	
Asia Minor:				
Smyrna	May 14–June 24	4		In district.
Do	June 25–July 15	12		Do.
Bolivia:				
La Paz	Mar. 1–Apr. 30	97	16	
Brazil:				
Bahia	June 25–July 1	1	1	
Para	May 29–June 25	8		
Do	July 3–Aug. 20	100	1	
Rio de Janeiro	May 14–June 24	48	12	
Do	June 25–July 29	48	8	
Sao Paulo	Apr. 10–June 11	3	10	
British East Africa:				
Kenya Colony				Apr. 1–May 31, 1922: Cases, 10.
Dar es Salaam	Apr. 16–June 10	26		
Nairobi	Mar. 1–31	22	2	
Zanzibar	May 1–June 10	36	6	
Do	June 24–July 1	2		
Canada:				
Alberta—				
Calgary	June 18–24	1		
Manitoba—				
Winnipeg	May 6–June 17	3		
New Brunswick—				
Kent County	June 25–July 1	2		
Madawaska County	June 4–17	6		
Ontario—				
Fort William and Port Arthur.	Aug. 6–19	2		
Hamilton	July 30–Aug. 12	2		
North Bay	June 3–17	2		
Do	July 16–Aug. 12	3		
Ottawa	June 11–July 1	17		
Do	July 2–Aug. 26	14		
Toronto	June 18–Aug. 19	8		
Saskatchewan—				
Saskatoon	Aug. 20–26	1		
Ceylon:				
Colombo	May 14–20	1		
Do	July 16–22	1		
Chile				Prevalent, July 3, 1922, throughout southern Provinces.
Concepcion	Mar. 14–June 20		71	
Do	June 27–July 31		17	

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

Reports Received from July 1 to September 15, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Chile—Continued.				
Quillon				In Concepcion Province; epidemic in May, 1922, with 60 reported cases. To June 3, epidemic.
Do	June 27–July 3			Epidemic.
San Patricio	May 16–22	13		
Talcahuano	May 22–June 24	33	19	May 16–22, 1922: Present.
Do	June 25–July 30	5	7	
Temuco				Province of Cautin; epidemic in May, 1922.
Valparaiso	Mar. 26–June 19		115	Incomplete; several districts not reporting.
Do	June 25–July 30		46	
China:				
Amoy	May 7–20			Present June 18–24; 1 death.
Do	July 16–22			Present.
Antung	May 29–June 18	4		
Do	July 3–16	5		
Chungking	May 28–June 24			Present.
Do	June 25–July 29			Do.
Foochow	May 14–20	1		
Hankow	June 25–July 1	1		
Hongkong	May 14–June 24	41	32	
Do	July 16–22	2	2	
Manchuria—				
Dairen	May 15–June 18	4	1	
Do	June 26–July 17	4	1	
Harbin	May 22–28	1		
Mukden	June 18–24			Present.
Do	July 16–22			Do.
Nanking	May 7–June 24			Do.
Do	June 25–July 29			Do.
Shanghai	May 22–28	1		Native.
Tientsin	May 14–20			Present.
Tsingtau	May 9–June 18	4	3	Including leased territory of Kiaochow, Japanese population along Shantung Railway and Japanese residents, Tsinan.
Do	June 26–July 30	5	3	Do.
Chosen (Korea):				
Chemulpo	May 1–31	1		
Fusan	May 1–June 30	147	60	
Do	July 1–31	13	9	
Seoul	May 1–June 30	26	5	
Do	July 1–31	23	8	
Cuba:				
Antilla	June 18–24	1		Reported for Preston.
Cienfuegos	June 24–July 1	1		
Santiago	June 1–30	3		
Domenica	Aug. 5			Present. Aug. 23: Epidemic. Island in Leeward Islands.
Dominican Republic:				
San Pedro de Macoris	May 21–June 24	167	2	City and country. Corrected report.
Do	June 25–Aug. 11	216	2	City and district. Corrected report.
Santo Domingo	June 4–24	3	9	Including vicinity.
Do	June 25–July 29	2	4	July 30–Aug. 5, 1922: A few cases, city and vicinity.
Ecuador:				
Guayaquil	July 16–31	2		
Egypt:				
Alexandria	July 23–29	1	1	
Cairo	Apr. 30–May 20	9	3	
Port Said	May 7–June 17	2		
Finland	June 1–30	2		
Do	July 1–15	1		
Fiume	June 13–19	1		
Do	July 10–16	1		
France:				
Paris	June 1–10	1	1	
Great Britain:				
Halifax				Outbreak reported under date of June 17, 1922.
Huddersfield				Do.
Liverpool	Aug. 13–19	1		In port hospital.
London	July 30–Aug. 12	4	1	

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

Reports Received from July 1 to September 15, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Great Britain—Continued.				
Sheffield	May 28–June 17	5		
Southampton	June 18–24	2		
Greece:				
Saloniki	May 1–June 25	3	1	
Do	July 17–23		1	
Syra Island	May 26	12	5	
Haiti:				
Cape Haitien	June 11–17	1		
Plaine du Nord	do			Vicinity of Cape Haitien. Present.
India				Feb. 26–Mar. 25, 1922: Deaths, 1,162 (date of report corrected). Mar. 26–May 20, 1922: Deaths, 6,015. June 4–17: Cases, 1,941; deaths, 651.
Bombay	Apr. 23–June 24	38	17	
Calcutta	do	84	67	
Do	June 25–July 29	14	11	
Karachi	May 23–June 24	35	9	
Do	July 16–Aug. 1	14	4	
Madras	May 14–June 24	207	94	June 19–25: Cases, 30; deaths, 15.
Do	July 2–29	180	91	
Rangoon	May 7–June 24	37	16	
Do	July 2–22	21	6	July 9–15: Cases, 3; deaths, 1.
Japan:				
Kobe	June 19–25	2		
Taiwan Island	June 11–30	26	3	
Do	July 22–Aug. 10	27	4	
Yokohama	May 29–June 25	4	2	
Do	June 26–July 20	48	8	
Java:				
West Java—				
Batavia	Apr. 28–June 30	20	3	City and Province.
Do	July 9–21	7	6	
Luxemburg	June 15–30	1	1	
Malta	May 1–June 15	4		
Mesopotamia:				
Bagdad	Apr. 1–June 30	36	40	
Mexico:				
Chihuahua	June 22–July 2		1	
Guadalajara	May 1–31	7		
Do	July 1–31	4	1	
Manzanillo	June 6–25		4	Estimated cases, 4 to 10.
Do	June 27–July 3	6	1	Estimated.
Mexico City	May 21–June 24	129		Including municipalities in Federal District. Report, June 11–17, not received.
Do	June 25–July 22	91		Including municipalities in Federal District.
Nogales	July 22–Aug. 5	26	3	State of Sonora.
San Luis Potosi	July 23–Aug. 19		7	
Torreon	July 1–31		1	
Panama				July 1–31, 1922: Cases, 4, of which 1 in nonresident and not locally reported.
Colon	July 1–31	2		
Panama	do	1		
Peru				May 1–15, 1922: Cases, 5; deaths, 4. June 1–30, 1922: Cases, 16; deaths, 7.
Poland				Mar. 26–June 3, 1922: Cases, 1,022; deaths, 218.
Portugal:				
Lisbon	May 29–June 25	6	8	Corrected report.
Do	June 26–Aug. 6	44	31	July 22–Aug. 5: Cases, 19; deaths, 4.
Portuguese West Africa:				
Angola—				
Loanda	June 25–July 1		1	
Russia:				
Esthonia	May 1–June 30	6		
Lettonia	do	51		
Senegal:				
Dakar	June 1–30	4	4	
Spain:				
Barcelona	June 22–28		1	
Do	June 29–July 5		1	
Corunna	June 11–17		1	
Huelva	Apr. 1–June 30		4	
Seville	June 11–17	36		Week ended June 11: Many cases.
Do	June 18–July 30		87	
Valencia	May 21–27	1		

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

Reports Received from July 1 to September 15, 1922—Continued.

SMALLPOX—Continued.

Place.	Dat .	Cases	Deaths.	Remarks.
Straits Settlements:				
Singapore	Apr. 30-June 5	11	2	
Switzerland:				
Basel	May 28-June 3	1		
Berne	May 14-20	1		
Do	July 9-Aug. 5	4		
Lucerne	July 1-31	1		
Zurich	Apr. 23-June 24	9		
Do	June 25-Aug. 12	23		
Syria:				
Aleppo	June 4-24			Present.
Damascus	June 18-24		2	
Do	June 25-July 23	7	2	
Tunis:				
Tunis	July 17-23	1		
Turkey:				
Constantinople	May 21-June 24	21	6	
Do	June 25-July 29	12	2	
Union of South Africa				Apr. 1-June 30, 1922: Cases, 173; deaths, 12 (colored); white, cases, 36.
Cape Province				Apr. 1-June 30, 1922: Cases, 87; deaths, 3 (colored); white, 6 cases.
Do	June 4-17			Outbreaks.
Do	June 25-July 15			Do.
Natal	July 9-15			Apr. 1-May 31, 1922: Cases, 20; deaths, 8 (colored); white, 20 cases.
Orange Free State				May 1-31, 1922: Cases, 12; deaths, 1 (colored).
Do	June 4-27			Outbreaks.
Southern Rhodesia	May 11-June 28	67	4	
Do	June 29-July 12	29		
Transvaal				Apr. 1-June 30, 1922: Cases, 54 (colored); white, 10 cases.
Do	June 4-17			Outbreaks.
Do	July 9-15			Do.
Johannesburg	May 1-31	1		
Virgin Islands:				
St. Thomas	June 5-18	1	1	At quarantine. From vessel from Dominican Republic.
Yugoslavia				Sept. 4-24, 1921: Cases, 11; deaths, 4.
Croatia-Slavonia—				
Zagreb	June 4-10	1		Oct. 23-29, 1921: Cases, 5.
Serbia				
Belgrade	June 11-17	1		
On vessels:				
S. S. Changsha	May 11	1		At Hongkong, China. Case landed from vessel; patient, intending passenger. Vessel proceeded to Australian ports.
S. S. Comeric	do	1		At sea, en route to Durban, S. A., from Sydney, Australia. (Public Health Reports, June 23, 1922, p. 1555.)
Schr. Fancy Me	May 28			At St. Thomas, Virgin Islands. From San Pedro de Macoris, Dominican Republic. One case removed to quarantine June 5, died June 18.
S. S. Shelley	Apr. 19	1		At sea, en route from Hongkong. Vessel left Hongkong Apr. 17. Arrived Thursday Island quarantine, Australia, Apr. 28, 1922. Case, member of crew; type, confluent hemorrhagic.
S. S. St. Albans	May 18	1		At Thursday Island quarantine, Australia. Case in person of Chinese steerage passenger. Vessel left Shimonoseki, Japan, for Melbourne via Hongkong and Manila. Left Thursday Island for Australian ports.

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

Reports Received from July 1 to September 15, 1922—Continued.

TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Algeria:				
Algiers	May 1–31	16	4	
Oran	June 1–30	3	1	
Do	July 1–Aug. 10		3	
Asia Minor:				
Smyrna	May 14–June 24	8		City and district. Corrected report.
Do	June 25–Aug. 5	7		District.
Austria:				
Vienna	May 7–June 10	3	1	
Do	July 2–15	2	1	
Bolivia:				
La Paz	Mar. 1–Apr. 30	15	8	
Bulgaria:				
Sofia	May 28–June 17	4		
Chile:				
Concepcion	Apr. 11–May 29		10	
Do	June 27–July 31		3	
Valparaiso	Apr. 2–22		6	
Do	July 18–24		1	
China:				
Antung	May 15–21	1		
Do	July 10–Aug. 6	6		
Foochow	May 14–20	1		
Hankow	July 9–15	1	1	
Manchuria—				
Harbin	May 8–June 11	4		
Do	June 26–July 2	3		
Czechoslovakia:				
Prague	June 11–17	1		
Danzig (Free City)	June 4–10	1		
Egypt:				
Alexandria	June 4–24	9	6	
Do	June 25–July 29	12	3	July 22–29: 1 imported paratyphoid.
Cairo	Mar. 19–May 20	61	40	Relapsing fever, Mar. 26–Apr. 8: 1 case.
Port Said	May 28–June 3	1		
Do	July 2–Aug. 12	1	1	
Germany				May 1–6, 1922: Five cases typhus fever at quarantine station of Osternothafen, in persons returning from Russia.
Berlin	Apr. 30–June 24		7	
Do	June 25–July 22		6	
Coblenz	July 2–Aug. 5	5		
Königsberg	May 28–June 3	1		
Stuttgart	July 22–Aug. 5	1	1	
Greece:				
Saloniki	May 1–June 18	25	1	2 in Russian refugees.
Mesopotamia:				
Bagdad	Apr. 1–June 30	7	2	
Mexico:				
Mexico City	Apr. 23–June 24	111		Including municipalities in Federal District.
Do	June 25–July 22	36		Do.
Netherlands:				
Amsterdam	July 30–Aug. 5	1		
Norway:				
Province—				
Finmarken	July 26–Aug. 5	12	2	Occurring in 3 localities.
Palestine:				
Jerusalem	June 27–July 3	1		
Persia:				
Teheran	Mar. 22–Apr. 22		1	
Poland				Mar. 26–Apr. 22, 1922: Cases, 5,695; deaths, 349. Apr. 23–June 3, 1922: Cases, 7,178; deaths, 499. Recurrent typhus—Mar. 26–Apr. 22, 1922: Cases, 4,515; deaths, 155. Apr. 23–May 6, 1922: Cases, 1,508; deaths, 34. (Corrected report.) May 7–June 3, 1922: Cases, 2,817; deaths, 72.
Warsaw	Apr. 23–June 24	156		Among transient and permanent residents.
Portugal:				
Oporto	May 4–June 24	9	4	
Do	June 29–July 5	1		
Seixal	Aug. 4	1		Village opposite Lisbon.

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

Reports Received from July 1 to September 15, 1922—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Rumania				Apr. 1-May 31, 1922: Cases, 62.
Cities—				
Bucharest	May 1-31	14		
Cerenauti	do	5		
Chisinau	Apr. 1-30	21		
Cluj	May 1-31	18		
Constanza	do	1		
Galata	do	1		
Sulina	do	2		
Provinces—				
Bucovina	Jan. 1-31	35	13	
Chisinau	Apr. 1-30	14		Recurrent typhus: Cases, 7.
Transylvania	Jan. 1-31	16	3	
Russia:				
Esthonia	Apr. 1-June 30	44		
Lettonia	do	635		Recurrent typhus: Cases, 40.
Spain:				
Barcelona	July 13-19		1	
Madrid	May 1-June 30		16	
Seville	May 21-June 3		1	
Tunis:				
Tunis	June 4-10	2		
Turkey:				
Constantinople	May 21-June 24	16		
Do	July 9-29	11	2	
Union of South Africa				Apr. 1-June 30, 1922: Cases, 1,220; deaths, 214 (colored); white, 17 cases.
Cape Province				Apr. 1-June 30, 1922: Cases, 1,087; deaths, 194 (colored); white, 16 cases.
Natal				Apr. 1-June 30, 1922: Cases, 57; deaths, 7 (colored).
Do	June 25-July 1			Outbreaks.
Orange Free State				Apr. 1-June 30, 1922: Cases, 97; deaths, 10 (colored); white, 1 case.
Transvaal				Apr. 1-June 30, 1922: Cases, 29; deaths, 2 (colored).
Do	June 18-July 1			Outbreaks.
Johannesburg	May 1-June 30	7	1	
Yugoslavia				Aug. 7-13, 1921: 2 new cases; (1921).
Bosnia-Herzegovina	Aug. 7-13	1		
Croatia-Slavonia	Sept. 4-10	1		Do.
Serbia—				
Belgrade	May 6-June 3	2		
Vovvodina	Aug. 7-13	1		(1921.)
From vessels:				
S. S. Chios	July 18	1		At Kavak quarantine station, Bosporus, from Novorossysk, a Russian Black Sea port. Vessel carried refugees for Saloniki, Greece. Six bodies buried at sea, 12 landed at Kavak.
S. S. Smolensk	June 14	1	1	From Danzig, May 30, 1922. At embarkation detention camp, Southampton, England. Public Health Reports, June 30, 1922, p. 1610.

YELLOW FEVER.

Mexico:				
Tampico	July 27-29	1	1	From Panuco. Patient brought to Tampico on eighth day of illness.
Do	Aug. 30		6	Of these, 5 with origin at Panuco, State of Vera Cruz; 1 with origin at Tampico.

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