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SPECIFIC LEPROUS REACTIONS AND ABNORMAL VACCINIA INDUCED IN LEPERS BY SMALLPOX VACCINATION.¹

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As a prophylactic measure against smallpox, 118 lepers and 105 non-leprous attendants were recently vaccinated in the U. S. Marine Hospital No. 66 (National Leprosarium, Carville, La.). The virus used to vaccinate the lepers and the attendant personnel of the hospital was obtained at the same time from the same commercial laboratory, and the same technique was employed in all instances. The number of cases observed under the same conditions warrants, in the opinion of the writers, the drawing of some conclusions.

Though it may be difficult to state what amount of reaction should accompany a normal, successful vaccination, yet the number of cases observed and the marked departure from the control established by vaccination of the hospital personnel demonstrated quite clearly, it is believed, that vaccinia in the lepers ran an abnormally violent course, evidenced in a majority of cases by excessive local inflammation, necrosis, and ulceration, and accompanied by unusually high fever and even severe prostration.

Appearing coincidentally with the symptoms of severe vaccinia, and even in some cases of unsuccessful vaccination, were other manifestations specifically leprous in character. Previous and subsequent daily observation of each individual case has shown that these leprous reactions were unusual departures from the course of leprosy and must be attributed to the effect of the vaccine.

CONTROL VACCINATIONS.

Of the 105 nonleprous employees, 74, or 70.5 per cent, were successfully vaccinated as follows:

- 52 were successfully vaccinated by the first administration;
- 6 were successfully vaccinated by the second administration;
- 13 were successfully vaccinated by the third administration;
- 3 were successfully vaccinated by the fourth administration;
- 0 were successfully vaccinated by the fifth administration.

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Vaccinations among the nonleprous attendant personnel ran normal courses without exception, the various stages appearing in proper sequence and at proper intervals; secondary reactions, such as local pain and tenderness, axillary adenitis, malaise, and hyperpyrexia, were not more marked than might be expected in average normal individuals. No case was confined to bed or even seriously incapacitated.

LOCAL VACCINIAL REACTIONS IN LEPERS.

Of the 118 lepers, 79, or 67 per cent, were successfully vaccinated as follows:

- 36 were successfully vaccinated by the first administration;
- 24 were successfully vaccinated by the second administration;
- 15 were successfully vaccinated by the third administration;
- 1 was successfully vaccinated by the fourth administration;
- 3 were successfully vaccinated by the fifth administration;
- 0 were successfully vaccinated by the sixth administration.

The local reaction to vaccination in the lepers pursued an atypical course, variable in intensity, but abnormally severe in most cases, and in 11 instances resulted in alarming symptoms. In the more severe cases during the stage of pustulation the areola surrounding the site of inoculation became markedly intensified and grew rapidly in extent. In the course of a few days the inflammation spread over the entire arm. The resulting pain and enormous swelling demanded absolute rest in bed with immobilization of the vaccinated arm for more than one week. The involved areas could not be differentiated clinically from leprous macules undergoing inflammatory changes, such as occur periodically in some cases of maculo-tubercular leprosy, and the "Hansen bacillus" was readily demonstrated in scrapings from the inflamed tissues. The inflammatory crisis was reached in two or three weeks, when gradual return to normal took place. Temperatures ran from 39° C. to 40.4° C., and continued for from one to three weeks.

The vaccination proper progressed from the papular, through the vesicular, to the pustular stage in an apparently normal manner; but frequently the process failed to proceed to normal desiccation and continued as one of necrosis, spreading in a serpentine manner, eventually covering areas from 5 to 15 centimeters in diameter. In from one to two months the resulting ulcers healed by granulation and cicatrization.

Illustrative case.—E. M., No. 53, white male, 59 years of age, mixed type with skin lesions predominating, presenting typical macules generally distributed over trunk and limbs, distinct nodules and deeply infiltrated patches on face, but no gross disfigurement. Some anesthesia but no muscular atrophy or contractures of flexor tendons.

General condition excellent, permitting daily performance of routine duties as a hospital orderly. Since admission to the hospital, about two years previously, he has shown marked improvement with no tendency to attacks of leprous fever or other symptoms of unfavorable progress.

Successfully vaccinated May 15, 1921. After a period of indefinite malaise, there appeared on the twelfth day a violent reaction, accompanied by hyperpyrexia and an outcropping of tubercles around the site of vaccination. These tubercles became involved in the rapidly spreading vaccination areola; similar lesions appeared in light brown macules, previously existing elsewhere on the same arm; coincidentally there was an outcropping of tubercles and erythematous macules on the opposite arm in areas previously quiescent. On the thirteenth and fourteenth days numerous new macules and tubercles appeared on the right wrist in areas previously unaffected by leprosy. The site of vaccination no longer resembled a normal vaccination and appeared as a slough 6 centimeters in diameter (fig. 1), evidently extending deeply into the subcutaneous tissues. There was no evidence of secondary infection, and the lesion was treated without antiseptics and protected from trauma with gauze rings. On the seventeenth day the process appeared to have reached its maximum severity, and desiccation of the lesion began; at the same time, the hyperpyrexia and malaise declined in severity until the twenty-fourth day, when the patient was without discomfort. The newly appeared tubercles and macules disappeared rapidly with coincident desquamation of epithelium (fig. 3). On the thirty-second day of vaccination, the patient had returned to his pre-vaccinated state (figs. 4 and 5), with a surprisingly small amount of scarring resulting from the extensive ulceration and necrosis.

SPECIFIC LEPROUS REACTIONS FOLLOWING SUCCESSFUL VACCINATION.

In some instances the reactions were simple recurrences of old symptoms; in others, the reactions were typically those of leprosy, but entirely new to the individual affected.

For convenience, the systemic reactions among those successfully vaccinated will be described as they appeared in the three main divisions of leprosy—namely, the nodular, the maculo-anesthetic, and the mixed types.

NODULAR TYPE.

Among the lepers of the uncomplicated nodular type there appeared, generally on the fourth day of successful vaccination, marked malaise and an increase in body temperature. On the fifth day the process apparently concentrated on the old leprous lesions, which clearly evidenced an inflammatory reaction, enlarging rapidly, and becoming hard and extremely tender. Subsequently, there occurred an outcropping of similar tubercles and infiltrated patches in areas previously unaffected, while the systemic symptoms attained a severity which was frequently sufficient to render the patient bedfast.

The crisis was usually reached about the twelfth day of successful vaccination, after which a decline of symptoms was noted and the individual rapidly returned to his prevaccinated state.

Illustrative case: C. Y., No. 96, white male, 51 years of age, nodular type. Unsuccessfully vaccinated May 15, 1921; revaccinated May 20. The second vaccination was definitely successful May 24. On the fifth, sixth, seventh, and eighth days, severe malaise and high temperature. On ninth day exhibited considerable inflammatory activity in old tubercles and new tubercles appeared on both arms in areas previously unaffected. On the tenth day the general condition improved, the malaise decreasing, but numerous new tubercles had appeared. On the twelfth day, numerous of the new and old tubercles on his arms underwent resolution and developed into small, cutaneous abscesses. On the thirteenth day about 50 of these abscesses, averaging in size one-half centimeter, were evacuated and swabbed with an antiseptic. The lesions rapidly healed and within two days the patient had returned to his prevaccinated state. Bacteriologic examination of the material from the evacuated pustules showed numerous leucocytes and myriads of acid-resisting organisms having the morphology of "Hansen bacilli".

MACULO-ANESTHETIC TYPE.

In the simple, uncomplicated maculo-anesthetic cases, a definite neuritis appeared, usually in the successfully vaccinated arm, frequently in both arms, and rarely in the unvaccinated arm alone. Coincident hyperpyrexia existed, so that the process apparently differed in no respect from the characteristic ulnar neuritis and so-called "leper fever". In three instances the neuritis appeared coincidentally in the ulnar and sciatic nerves. In point of time the neuritis ran a much shorter course than that of the nodular types, rarely lasting longer than four days.

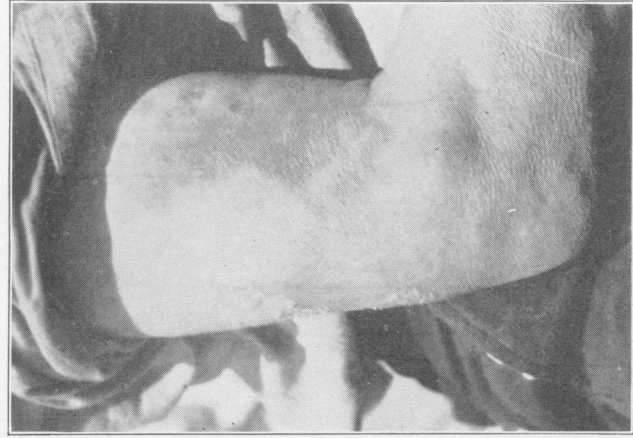
Illustrative case: S. H., No. 31, negro woman, 56 years of age, an apparently inactive though advanced anesthetic case, with typical "claw hand" and deformed feet. For a number of years there has been no apparent progression in the disease. Vaccinated May 15, 1921. On the fifth day the vaccination gave promise of success in the papular stage. On the sixth day she complained of violent pain along the course of both ulnar nerves, somewhat more intense in the unvaccinated arm. On the eighth and ninth days the patient still complained of severe pain; the vaccination, however, desiccated rapidly and appeared to have failed of success. May 29, the vaccination having definitely failed, she was revaccinated; the neuritis on this date had practically disappeared. On the sixth day, the vaccination was again apparently successful in the papulo-vesicular stage and the patient again complained of pain, not only along the course of the ulnar but also of the sciatic nerves; the severity of the neuritis was such that morphine was administered to alleviate the suffering. The vaccination again ran an abortive course, the vesicle being completely desiccated by the tenth day, at which time the neuritis had disappeared and the patient had returned to her prevaccinated state.



A.



B.

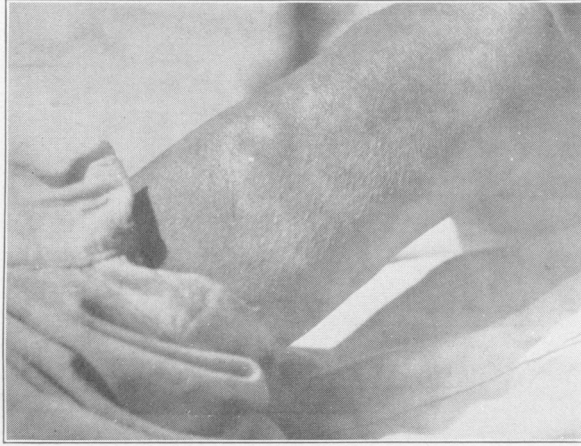


C.

4. Left arm, 12th day after vaccination. Necrotic mass at site of vaccination; numerous new nodules distributed over entire arm. B. Right arm, 12th day after vaccination. New nodules so numerous that they are confluent. C. Right arm, 23d day after vaccination. Almost complete disappearance of nodules and coincident desquamation. (All of Case 53.)



A.



B.

A. Left arm, six months after vaccination. Complete disappearance of nodules, leaving slightly pigmented areas. Note small cicatrix following vaccinia. B. Right arm, six months after vaccination. Small, slightly pigmented macules at sites of former nodules. (Both of Case 53.)

MIXED TYPE.

The mixed cases showed a combination of the reactions described as occurring in the nodular and the maculo-anesthetic types.

Illustrative case: M. S., No. 75, white female, 35 years of age, advanced stage, mixed type of leprosy, with gross disfigurement resulting from both skin and nerve lesions. Vaccinated unsuccessfully May 15, 1921; revaccinated May 20, the papule appeared on the fourth day and proceeded in a normal manner. On the ninth day she began having slight fever, malaise, and arthralgia, which continued with increasing severity, while a painful neuritis developed in the vaccinated arm; coincidentally, an inflammatory reaction appeared, involving the same arm from the shoulder to the finger tips. The prostration was so intense that the patient was bedfast for three weeks. The vaccination lesion proper failed to subside on the twelfth day and resulted in a necrotic area which attained in three weeks a diameter of seven centimeters. All the leprosy spots over the entire body showed signs of intense inflammation. Numerous new tubercles appeared during the period of prostration. In three weeks the crisis was reached and convalescence began. Some of the newly formed nodules developed into abscesses which, when evacuated, yielded readily to antiseptic dressings and proceeded to complete repair. The necrotic mass at the site of vaccination eventually sloughed, and the lesion healed by granulation and cicatrization at the end of two months, when the patient had not only returned to her prevaccinated state but actually appeared to be in better physical condition than at the time of vaccination.

SPECIFIC LEPROUS REACTIONS FOLLOWING UNSUCCESSFUL VACCINATION.

Thirteen of the lepers who were unsuccessfully vaccinated exhibited reactions similar to, but less intense than, those among the successfully vaccinated, the reaction taking place in response to each administration of the virus.

Illustrative case: D. E., No. 102., white male, 25 years of age, mixed type. Prior to vaccination, the patient was in excellent health, having shown progressive improvement since admission to the hospital. Although formerly subject to ulnar neuritis of the left arm, had been free from attacks for nearly a year. About 10 hours after vaccination of the left arm, on May 15, 1921, he began having ulnar neuritis in that arm. The symptoms rapidly became exaggerated, reaching a crisis in 48 hours. The patient evidently suffered excruciating pain, which changed his habitually cheerful disposition to an irritable, cringing one. He complained of pain which morphine alone appeared to relieve; during the following two days the pain decreased in severity and disappeared. Revaccinations of the left arm on May 20, 24, and 29 caused a recurrence of the same cycle of symptoms, always in the vaccinated arms, so that he had barely recovered from the effects of one vaccination when the next was administered. He evaded the fifth round of vaccinations given to other patients on June 4 and was not revaccinated until June 12, during which interval he completely regained his normal

composure and voluntarily reported for duty as an emergency hospital orderly. His fifth vaccination (June 12) was on his right arm and six hours later he began having ulner neuritis in this arm, which had never previously been affected. The administration of chloral was sufficient to furnish relief during the first 24 hours; as the pain increased during the seven succeeding days it was necessary to give morphine hypodermically to furnish relief. The maximum pain was experienced on the eighth day, after which it declined and disappeared in four days.

SUMMARY.

One hundred and five nonlepers were vaccinated with 74 successful results and with no untoward symptoms.

One hundred and eighteen lepers were vaccinated with 77 successful results. Of the 77 successful vaccinations—

- 49 had leprous reactions;
- 2 had leprous reactions and varioloid;
- 3 had variola;¹
- 1 had varioloid;¹
- 1 absconded;
- 4 are cases of presumably arrested leprosy;
- 17 had no reactions.

Thirty-nine lepers were unsuccessfully vaccinated, and of this number—

- 13 had leprous reactions in response to each vaccination;
- 3 had variola;¹
- 3 had varioloid;¹
- 1 absconded;
- 5 are cases of presumably arrested leprosy;
- 14 had no reactions.

COMMENT.

While the exact significance of the phenomena attending vaccinations of lepers is not apparent, the writers feel justified in stating: (A) That the majority of successful vaccinations were abnormally severe in respect to results immediately attributable to vaccine virus; (B) that the normal course of leprosy was profoundly affected by the appearance of definite leprous lesions; and (C) that these lesions were provoked by vaccination and were not merely intercurrent attacks of leprous fever with its usual skin changes.

(A) That the destruction of tissue at the site of vaccination was far in excess of what might be expected in normal individuals under the same conditions was amply evidenced by comparison with the control cases. It is believed that this necrosis was directly due to

¹ The phenomena observed in cases of leprosy affected with smallpox and varioloid will be discussed in a subsequent paper.

vaccine virus and not to secondary infection or to leprous reactions. Secondary infection was eliminated as the causative factor, because no cases of secondary infection with extensive necrosis occurred in the control cases; the leper is well known to be unusually resistant to ordinary staphylococcic and streptococcic infections, even trophic gangrene being less alarming in the leper than in nonleprous individuals; the necrotic areas were dry and the vesicles and pustules before desiccation, though larger than usual, were typically vaccinal; those unsuccessfully vaccinated frequently exhibited considerable local inflammation on the fourth day which seemed to indicate, even in these cases, a susceptibility to some irritant substance in the vaccine. That the necrosis was a leprous manifestation was regarded as improbable for the following reasons: In vaccinating, care was taken to avoid leprous lesions; necrosis and ulceration on the arms are extremely rare in uncomplicated leprosy and occur in terminal cases only; the necrotic areas developed at the site of vaccination only, spread by peripheral extension from the point of inoculation, and, though larger than in normal individuals, in other respects were identical with the more limited necrosis that usually follows vaccination.

(B) It was evident that following vaccination there was a profound systemic disturbance accompanied by unusual skin and nerve lesions identical with the symptoms of leprous fever. That these multiple and generally distributed skin lesions were specifically leprous was shown not only by the clinical characteristics of the lesions but also by repeated bacterioscopic examinations which invariably disclosed great numbers of acid-fast organisms conforming morphologically with the "Hansen bacillus." It is of interest as an indication of symbiosis that in the extensive areola surrounding the site of vaccination there were often found numerous tubercles clinically and bacterioscopically leprous. So intermixed, indeed, were the newly formed leprous lesions and the extensive vaccinal areola that it was often impossible to determine to what extent the resulting enormous swelling of the vaccinated arm was caused by leprosy and to what extent by vaccinia.

(C) It has been noted in a preceding paragraph that the leprous reactions observed following vaccination were identical clinically and bacterioscopically with the spontaneous exacerbations that occur from time to time in uncomplicated leprosy. But the assumption that 51 out of 71 lepers should at a given time spontaneously develop fever and severe acute leprous symptoms is not warranted by the frequency with which these symptoms occur in the usual course of the disease. A proportion as great as five out of seven inmates at the same time suffering from this form of fever is unprecedented in the last 20 years' history of the hospital and can not be explained as

a mere coincidence. That the acute specific leprous lesions described did not occur spontaneously but were induced by vaccination is further evidenced by the uniform time of their appearance after vaccination, by their preponderance near the site of inoculation, and by their occurrence in cases which had not previously and have not subsequently suffered attacks of leprous fever.

In explanation of the phenomena observed, the most satisfactory hypothesis that occurs to the writers is that leprosy and vaccinia are so related that the symptoms of both diseases are exaggerated when lepers are vaccinated. In view of the enormous number of "Hansen bacilli" found, the generally distributed acute leprous lesions must be regarded as the result of unusually rapid proliferation of organisms and can not be explained as a simple foreign protein reaction or shock such as occurs in forms of toxic dermatitis. There seems to exist in chronic leprosy a well-balanced control by which the growth of bacilli is held in check for long periods of years. In spontaneous acute attacks of leprous fever this control seems to be lost, and the probability is that in a similar way vaccinia abolishes inhibiting influences on bacterial growth.

Certain reagents, notably the iodides, ethyl esters of chaulmoogra oil, and various vaccines, including erysipelas and anthrax, may provoke reactions in lepers; the end results of these reactions have been improvement in some lepers and retrogression in others. It is not without interest that in no instance did a case present more pronounced symptoms of chronic leprosy at the subsidence of the acute symptoms provoked by smallpox vaccination, but, on the contrary, some showed actual improvement. It is not improbable that during the acute leprous exacerbation, long acquiescence of the host to bacterial invasion was disturbed, and immunizing substances were produced which were not elaborated during the quiescent periods. The production of such substances in the acute leprous lesions would readily explain the completeness with which such lesions disappeared and also such improvement as has been noted in chronic symptoms. It is with considerable interest, therefore, that observations, to be reported elsewhere, are being made on patients who are now being revaccinated one year subsequent to the observations here recorded.

CONCLUSIONS.

(1) Vaccinia in lepers was accompanied by more severe local symptoms than in normal individuals. This abnormal susceptibility to vaccine virus occurred in all types and stages of leprosy.

(2) Following vaccination, acute specific leprous lesions occurred in a proportion of cases sufficiently large to establish a relationship of cause and effect. These acute leprous reactions developed not

only near the site of vaccination but were generally distributed over the entire body, manifesting themselves as nerve disturbances in the nerve type, as highly inflammatory macules and nodules in the skin type, and as nerve and skin lesions in the mixed type.

(3) The acute leprous reaction to vaccination was of short duration. No case was permanently aggravated, and some showed actual amelioration.

(4) A symbiotic relation existing between vaccine virus and the bacillus of leprosy offers the best explanation of the phenomena observed.

SMALLPOX AND VACCINATION IN DENVER, COLO.

The Department of Health and Charity of Denver, Colo., has issued a leaflet giving information regarding the outbreak of smallpox in that city.

During the 13-month period from November 1, 1921, to November 30, 1922, 854 cases of smallpox, with 263 deaths were recorded. The leaflet contains the names of all patients who died during the months of September, October, and November, 1922.

The accompanying tables have been compiled from the data given in the leaflet.

TABLE 1.—*Vaccination status of smallpox patients, Denver, Colo., November, 1921, to November, 1922, inclusive.*

Month.	Cases.			Fatal cases. ¹		
	Vaccinated.	Not vaccinated.	Total.	Vaccinated.	Not vaccinated.	Total.
November..... 1921.	3	43	46	1	10	11
December.....	18	66	84	3	23	26
..... 1922.						
January.....	10	62	72	0	24	24
February.....	9	38	47	5	11	16
March.....	14	39	53	3	12	15
April.....	11	34	45	1	18	19
May.....	10	19	29	0	7	7
June.....	2	7	9	0	0	0
July.....	2	9	11	0	3	3
August.....	2	12	14	0	2	2
September.....	10	22	32	2	5	7
October.....	31	129	160	2	39	41
November.....	60	192	252	6	86	92
Total.....	182	672	854	23	240	263

¹Include 1 in "Cases" columns.

TABLE 2.—Vaccination history of patients.

	Number of patients.				Number of patients.		
	Recov- ered.	Died.	Total.		Recov- ered.	Died.	Total.
Years since vaccinated:				Years since vaccinated:			
5.....	1		1	42.....	2	1	3
7.....	2	1	3	43.....	5		5
8.....	1		1	44.....	3	1	4
9.....	1		1	45.....	6		6
11.....	1		1	46.....	2		2
12.....	3		3	47.....	1		1
13.....		1	1	48.....	2	1	3
14.....	1		1	50.....	8	2	10
15.....	1	1	2	52.....	1		1
16.....	1		1	54.....			1
17.....	2		2	55.....	1		1
18.....	2		2	56.....	1	1	2
19.....	1		1	57.....	1		1
20.....	7	1	8	58.....	2	1	3
22.....	2		2	59.....	1	1	2
23.....	3		3	60.....	5	3	8
24.....	2		2	63.....	1	1	2
25.....	2		2	65.....	2	1	3
26.....	1		1	70.....	1		1
27.....	1		1	71.....	1		1
29.....	3		3	72.....		1	1
30.....	8	1	9	73.....	1		1
31.....	1		1	81.....	1		1
32.....	3		3	No authentic history.....	18		18
34.....	3		3	Vaccinated after expo- sure.....	13	1	14
35.....	9	1	10	Vaccinated "when a child".....	1		1
36.....	1		1	Previously had smallpox.....	1		1
37.....	3		3				
38.....	3		3				
40.....	5	2	7				
41.....	3		3	Total.....	159	23	182

An analysis of Table 2 shows that the vaccination histories of 148 patients who had been vaccinated before exposure were available. Of these 126 recovered and 22 died. The average time elapsed between vaccination and the contracting of the disease was 38 years. Over one-half were vaccinated more than 35 years before the disease was contracted; 75 per cent were vaccinated more than 25 years before; 90 per cent more than 15 years before. In three cases seven years had elapsed since vaccination, and one was vaccinated five years before the disease was contracted.

These data again emphasize the fact that vaccination and revaccination are the most effective means for the control of smallpox, but remind us that one vaccination does not protect the individual throughout his entire lifetime.

INFLUENZA IN THE UNITED STATES.

Dr. James A. Hayne, State health officer of South Carolina, reports that influenza is prevalent in a number of counties in South Carolina. Arrangements have been made by Doctor Hayne for securing telegraphic reports of cases of influenza and deaths from influenza and

from pneumonia (all forms) in the State. Summaries of these reports will be published in the Public Health Reports.

The following table shows the number of cases of influenza reported by State health officers weekly during the months of October, November, and December, 1922:

Cases of influenza reported by State health officers.

State.	Cases of influenza reported during week ended—										
	October—				November—				December—		
	7	14	21	28	4	11	18	25	2	9	16
Alabama.....	126		22	12	69		25	143	70	141	125
Arkansas.....	8	4	12	10	2	15	19	12	28	35	10
California.....	27	17	16	13	28	12	19	18	15	29	13
Colorado (except Denver).....						1			1	2	3
Connecticut.....	6	3	5	4	7	6	5	5	3	18	10
Delaware.....			(¹)	(¹)			4		6	(¹)	3
District of Columbia.....		1		(¹)				1	2		(¹)
Florida.....	7	13	2	3	13	8	28	6	48	28	49
Georgia.....	19	22	20	16	47	48	72	72	246	400	894
Illinois.....	12	8	9	15	22	17	22	20	14	35	37
Kansas.....	3	3	1	1	2		5	2	4	1	4
Kentucky.....	3	4	5	6	6	17	8	20	9	9	(¹)
Louisiana.....	16	3	7	3	8		6		3		
Maine.....		2	2			1	1		5	11	4
Maryland.....	11	14	16	6	22	20	22	52	30	20	65
Massachusetts.....	3	2	3	14	15	14	10	18	7	10	20
Minnesota.....			2	2	4				1		
Missouri.....			28	(¹)			6	2	8	3	9
Nebraska.....		2	2	1				1	3		3
New Jersey.....	5	20	10	17	17	15	10	26	11	31	29
New Mexico.....					1	7		9	2		1
New York (except New York City).....	5	9	17	10	12	16	16	14	12	26	17
New York City.....	18	31	21	35	41	67	45	41	43	35	43
Oregon.....		4		4			3	4	1		
South Dakota.....						2					6
Texas.....	5				4	14	8	10			6
Wisconsin.....	6	4	8	23	30	46	36	6	37	38	35
Wyoming.....						(¹)	1				

¹ No weekly report received.

REGULATIONS GOVERNING THE CARE OF LEPERS.

The regulations printed below were approved December 4, 1922, by the Secretary of the Treasury, and are published for the information of health officers and others concerned.

The following is the letter of transmittal:

TREASURY DEPARTMENT,
BUREAU OF THE PUBLIC HEALTH SERVICE,

November 27, 1922.

THE SECRETARY OF THE TREASURY.

SIR: I have the honor to transmit herewith for your approval regulations for the government of leprosaria and for the apprehension, detention, treatment, and release of lepers, prepared by a board of officers in accordance with the provisions of Public Act No. 299, Sixty-fourth Congress.

Respectfully,

H. S. CUMMING, *Surgeon General.*

Regulations for the Apprehension, Detention, Treatment, and Release of Lepers.

In accordance with sections 2 and 3 of Public Act No. 299, Sixty-fourth Congress, approved February 3, 1917, the following rules and regulations are promulgated:

(1) *Transportation of persons afflicted with leprosy to the National Home for Lepers, officially known as United States Marine Hospital No. 66.*—The Surgeon General of the Public Health Service is authorized upon request of the proper health authority of any State, Territory, or the District of Columbia, or upon notification, under the quarantine laws or regulations, to send for any person afflicted with leprosy, except an alien subject to deportation, and to convey said person to United States Marine Hospital No. 66, Carville, La., provided that said request is accompanied by satisfactory proof of diagnosis.

(2) *Admission to the Hospital.*—There shall be received into said hospital, under these regulations, any person afflicted with leprosy, who presents himself or herself, for care, detention, and treatment, or who may be apprehended under authority of the United States quarantine acts, or any person afflicted with leprosy, duly consigned to said home by the proper health authorities of any State, Territory, or the District of Columbia.

(3) *Examination upon admission to the hospital.*—At the earliest practicable date, after the arrival of a patient, the medical officer in charge of the hospital shall convene a board of not less than three officers of the Public Health Service, who shall confirm or disapprove the diagnosis of leprosy.

(4) *Release if not a leper.*—Should the diagnosis of leprosy not be confirmed, the patient shall be placed in a building upon the reservation set aside for observation purposes. At the earliest practicable date thereafter the medical officer in charge shall convene a board of not less than three medical officers experienced in leprosy, who shall carefully consider the case and recommend the discharge of the patient upon their unanimous opinion that the patient is not a leper. Should the opinion of the board not be unanimous that the patient is not a leper he shall be held for such further period of observation as may be necessary to make a definite diagnosis.

If the diagnosis of leprosy is confirmed, the patient shall be detained in the hospital as provided in these regulations.

(5) *Treatment.*—Patients are expected to submit to the usual routine clinical examinations which may be required for the diagnosis of primary or secondary conditions, and to such treatment as may be prescribed.

(6) *Detention and discipline of patients afflicted with leprosy.*—(a) No patient shall, under any circumstances, proceed beyond the limits

of the reservation set aside for the detention of patients suffering from leprosy.

(b) Patients shall, on no account, visit the quarters allotted to, or hold communication with, patients of the opposite sex, unless authorized to do so by special permission of the medical officer in charge. Visiting between patients of the opposite sex shall be permitted in the appointed visiting place only and at such hours as may be set aside for that purpose.

(c) No patient shall willfully destroy, damage, deface, or make away with any building, fixture, implement, article of equipment, clothing, or any other article, the property of the Government, and no patient who received at the public expense issues of clothing, equipment, or foodstuffs, for personal use shall willfully destroy, damage, deface, or make away with such articles by gift, sale, barter, or otherwise.

(7) *Provisions for the enforcement of discipline.*—(a) There shall be provided the necessary accommodations within that part of the reservation set aside for persons afflicted with active leprosy, for isolation or restraint of patients when in the judgment of the medical officer in charge such action is necessary for the protection of themselves or others.

(b) The medical officer in charge shall keep a separate register, recording cases that have been placed in isolation or restraint, in which shall be recorded all circumstances attendant upon such isolation or restraint.

(8) *Discharge of patients.*—Each patient confined in the United States Marine Hospital No. 66 shall be examined bacterioscopically not less than once in 12 months. If at such examination the patient has not been found bacterioscopically a leper the medical officer in charge shall convene a board of three medical officers to make a thorough physical and bacterioscopic examination of the patient. If in the opinion of this board the said patient is considered to be a latent or arrested case he shall be kept under observation for six months, during which time bacterioscopic and physical examinations shall be made not less frequently than once each month. If during this six months' period the patient shows no signs of leptotic retrogression he shall be removed from that portion of the reservation used by patients with active leprosy and placed under observation in that portion of the reservation set aside for special observation purposes. Said patient so isolated shall be examined physically and bacterioscopically not less than once each month for a period of one year. If during this one year of special observation and isolation the patient has not shown signs of leptotic retrogression the medical officer in charge shall convene a board of not less than three medical officers experienced in leprosy, who shall review the findings of the

case and in the absence of contra-indicating findings may recommend the discharge of the patient on probation as either "cured," "arrested," or "latent," and "no longer a menace to the public health."

If at any of the examinations above indicated the patient shows signs of leprotic retrogression he shall be considered as ineligible for consideration for discharge within one year from the date of such examination.

(9) *Examinations of patients probationally discharged.*—After the discharge of a patient the medical officer in charge shall notify the proper health officer of the State in which the patient resides and request that he arrange to make a clinical and bacterioscopic examination of the patient at intervals of not less than once in six months for a period of three years and report the findings to the medical officer in charge.

(10) *Disposal of patients deceased.*—Lepers dying at the hospital shall be buried at the expense of the Government in the station cemetery and the graves shall be marked by a proper headstone of standard design, upon which shall be inscribed the patient's name, date of birth, and date of death. Upon proper application by a member of the deceased's immediate family or an accredited representative the patient's body may be removed, in conformity with interstate quarantine regulations and State regulations governing the transportation of human bodies dead from contagious diseases. No expenses incident to the preparation or transportation shall be borne by the United States Public Health Service.

(11) *Visitors.*—Visitors may be admitted under such restrictions as the medical officer in charge may prescribe.

(12) *General administration of hospital.*—The hospital shall be administered, except as above provided, in accordance with the regulations governing the hospitals and relief stations of the United States Public Health Service and regulations for the government of the United States Public Health Service.

DEATH RATES OF MOTHERS FROM CHILDBIRTH, 1921.

The Department of Commerce announces that the compilations made by the Bureau of the Census show lower death rates of mothers from childbirth or puerperal causes in 1921 than in any year since 1917.

For the nine States and the District of Columbia (constituting the "birth registration area" of 1915, exclusive of Rhode Island), the death rate from puerperal causes in 1921 was 6.5 per 1,000 live births as compared with 7.6 in 1920, 6.8 in 1919, 8.9 in 1918, 6.3 in 1917, 6.2

in 1916, and 6.1 in 1915. The relatively high rates for the years 1920, 1919, and 1918 were doubtless due, for the most part at least, to the epidemics of influenza which prevailed in those years and which took heavy toll of pregnant women. The ratio of deaths from childbirth to the number of women bearing children in the year 1921 was about 1 to 150.

Of the 27 States for which figures are available, South Carolina has the highest 1921 death rate from puerperal causes (9.8 per 1,000 live births) and Connecticut the lowest (5.3).

Rates for the white and colored are shown for only the six States of Kentucky, Maryland, Mississippi, North Carolina, South Carolina, and Virginia. For 1921 the highest rate for the white (7.8) appears for South Carolina and the lowest (5.7 each) for Kentucky and Virginia, while for the colored the highest rate (14.8) appears for Kentucky and the lowest (9.6) for Maryland.

Utah.....	7.3	7.9	8.4	8.0	5.9	(2)	2.9	2.0	2.1	2.1	2.0	0.6	(2)	4.3	3.9	6.2	6.5	3.7	(2)
Vermont.....	7.3	7.0	8.0	8.0	6.3	(2)	1.9	1.7	1.7	1.6	2.0	0.6	(2)	4.8	5.1	6.3	6.7	4.4	(2)
Virginia (total).....	7.0	8.9	8.2	10.7	8.2	(2)	2.3	2.1	2.1	2.6	3.1	(2)	(2)	4.7	6.4	6.2	8.1	5.0	(2)
White.....	3.7	7.5	6.6	9.6	6.4	(2)	1.8	1.9	1.5	2.1	2.3	(2)	(2)	3.9	5.6	5.1	7.5	4.2	(2)
Colored.....	9.9	11.1	11.9	13.2	12.1	(2)	3.5	3.1	3.3	3.8	5.0	(2)	(2)	6.4	8.0	8.6	9.4	7.0	(2)
Washington.....	7.8	9.2	8.6	9.9	7.4	(2)	3.6	2.3	2.8	3.3	3.4	(2)	(2)	4.2	6.9	3.8	6.6	4.0	(2)
Wisconsin.....	3.8	6.7	4.8	6.0	3.7	(2)	2.2	2.1	1.6	1.9	2.1	(2)	(2)	3.6	4.6	3.2	4.1	3.6	(2)

¹ Includes Connecticut, Maine, Massachusetts, Michigan, Minnesota, New Hampshire, New York, Pennsylvania, Rhode Island, Vermont, and District of Columbia.

² Not added to registration area until a later date.

³ Dropped from the registration area.

DEATHS DURING WEEK ENDED DECEMBER 9, 1922.

Summary of information received by telegraph from industrial insurance companies for week ended December 9, 1922, and corresponding week 1921. (From the Weekly Health Index, December 12, 1922, issued by the Bureau of the Census, Department of Commerce.)

	Week ended Dec. 9, 1922.	Corresponding week, 1921.
Policies in force.....	50, 140, 837	47, 857, 387
Number of death claims.....	9, 500	8, 609
Death claims per 1,000 policies in force, annual rate.....	9.9	9.4

Deaths from all causes in certain large cities of the United States during the week ended December 9, 1922, infant mortality, annual death rate, and comparison with corresponding week of 1921. (From the Weekly Health Index, December 12, 1922, issued by the Bureau of the Census, Department of Commerce.)

City.	Estimated population July 1, 1922.	Week ended Dec. 9, 1922.		Annual death rate per 1,000 corresponding week 1921.	Deaths under 1 year.		Infant mortality rate, week ended Dec. 9, 1922. ³
		Total deaths.	Death rate. ¹		Week ended Dec. 9, 1922.	Corresponding week 1921.	
Total.....	28,356,508	6,975	12.8	11.8	895	829	.....
Akron, Ohio.....	³ 208,435	30	7.5	6.0	4	1	44
Albany, N. Y.....	116,223	30	13.5	17.0	2	3	46
Atlanta, Ga.....	220,047	68	16.1	15.8	12	7	.....
Baltimore, Md.....	762,222	221	15.1	13.3	34	27	96
Birmingham, Ala.....	191,017	47	12.8	12.0	9	7	.....
Boston, Mass.....	764,017	223	15.2	12.9	29	29	78
Bridgeport, Conn.....	³ 143,555	27	9.8	9.1	0	4	0
Buffalo, N. Y.....	528,163	136	13.4	8.2	16	13	62
Cambridge, Mass.....	110,944	35	16.5	10.9	7	3	120
Camden, N. J.....	121,915	28	12.0	11.3	6	7	94
Chicago, Ill.....	2,833,288	599	11.0	10.4	84	67	.....
Cincinnati, Ohio.....	404,865	126	16.2	15.6	13	12	83
Cleveland, Ohio.....	854,565	173	10.6	10.5	19	25	50
Columbus, Ohio.....	253,455	60	12.3	12.0	6	6	63
Dallas, Tex.....	171,974	36	10.9	11.0	5	5	.....
Dayton, Ohio.....	161,824	35	11.3	13.2	4	1	65
Denver, Colo.....	267,591	87	17.0	15.7	7	6	.....
Detroit, Mich.....	³ 983,678	192	10.1	8.8	43	36	81
Duluth, Minn.....	104,183	13	6.5	.....	2	.....	45
Erie, Pa.....	109,528	22	10.5	14.2	2	4	39
Fall River, Mass.....	120,790	47	20.3	12.5	8	6	112
Flint, Mich.....	111,794	14	6.5	.....	1	.....	19
Fort Worth, Tex.....	114,717	31	14.1	12.2	6	3	.....
Grand Rapids, Mich.....	143,572	35	12.7	15.1	1	5	15
Houston, Tex.....	150,087	37	12.9	14.8	10	8	.....
Indianapolis, Ind.....	333,257	94	14.7	11.7	8	5	59
Jersey City, N. J.....	305,911	69	11.8	11.0	9	6	57
Kansas City, Kans.....	113,801	25	11.5	19.1	4	7	.....
Kansas City, Mo.....	243,988	91	13.8	14.3	11	7	82
Los Angeles, Calif.....	634,866	176	14.5	15.9	20	13	43
Louisville, Ky.....	256,877	66	13.4	15.7	4	5	90
Lowell, Mass.....	114,423	30	13.7	15.1	3	4	76
Lynn, Mass.....	101,673	28	14.4	.....	.....	.....	.....
Memphis, Tenn.....	167,892	49	15.2	17.0	5	12	.....
Milwaukee, Wis.....	476,693	90	9.8	10.9	15	10	75
Minneapolis, Minn.....	400,970	90	11.7	11.7	9	12	50
Nashville, Tenn.....	122,832	29	12.3	15.8	4	4	.....
New Bedford, Mass.....	127,542	23	9.4	12.9	4	7	57
New Haven, Conn.....	169,987	43	13.2	13.4	4	6	49
New Orleans, La.....	399,616	154	20.1	16.9	31	17	.....
New York, N. Y.....	5,839,716	1,259	11.2	10.9	157	161	61
Bronx Borough.....	809,535	136	8.8	8.6	13	14	44
Brooklyn Borough.....	2,117,164	425	10.5	9.2	64	46	67
Manhattan Borough.....	2,271,888	576	13.2	13.1	67	89	62
Queens Borough.....	516,757	91	9.2	9.7	10	9	54
Richmond Borough.....	124,401	31	13.0	16.3	3	3	55
Newark, N. J.....	431,792	116	14.0	10.9	15	19	67
Norfolk, Va.....	124,915	29	12.1	6.9	7	2	131

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 births for 1921. Cities left blank are not in the registration area for births.

³ Enumerated population Jan. 1, 1920.

Deaths from all causes in certain large cities of the United States during the week ended December 9, 1922, infant mortality, annual death rate, and comparison with corresponding week of 1921.—Continued.

City.	Estimated population July 1, 1922.	Week ended Dec. 9, 1922.		Annual death rate per 1,000 corresponding week 1921.	Deaths under 1 year.		Infant mortality rate, week ended Dec. 9, 1922.
		Total deaths.	Death rate.		Week ended Dec. 9, 1922.	Corresponding week 1921.	
Omaha, Nebr.....	200, 739	62	16.1	6.3	6	7	65
Paterson, N. J.....	138, 521	40	15.1	9.9	4	4	62
Philadelphia, Pa.....	1, 894, 500	611	16.8	12.9	75	59	90
Pittsburgh, Pa.....	607, 902	200	17.2	12.4	30	29	99
Portland, Oreg.....	269, 240	62	12.0	9.8	4	5	29
Providence, R. I.....	241, 011	64	13.8	15.7	8	16	63
Richmond, Va.....	178, 365	67	19.6	14.2	10	11	120
Rochester, N. Y.....	311, 548	52	8.7	10.6	4	9	31
St. Louis, Mo.....	795, 008	190	12.5	13.5	13	16	.....
St. Paul, Minn.....	239, 836	60	13.0	12.1	7	10	65
Salt Lake City, Utah.....	123, 918	28	11.8	13.3	10	1	153
San Antonio, Tex.....	178, 056	51	14.9	.....	11	.....	.....
San Francisco, Calif.....	529, 792	168	16.5	13.1	7	12	40
Seattle, Wash.....	315, 312	55	9.1	8.9	5	5	46
Spokane, Wash.....	104, 445	33	16.5	10.5	3	1	60
Springfield, Mass.....	140, 052	38	14.1	10.4	4	4	61
Syracuse, N. Y.....	181, 012	42	12.1	13.8	10	7	120
Tacoma, Wash.....	100, 369	20	10.4	.....	2	.....	.....
Toledo, Ohio.....	260, 717	51	10.2	15.6	8	16	48
Trenton, N. J.....	125, 075	40	16.7	13.6	1	6	77
Washington, D. C.....	437, 571	112	13.3	12.6	11	9	15
Wilmington, Del.....	115, 568	21	9.5	7.8	4	1	64
Worcester, Mass.....	188, 449	51	14.1	10.4	7	5	75
Yonkers, N. Y.....	105, 422	26	12.9	12.1	3	6	62
Youngstown, Ohio.....	144, 970	18	6.5	7.1	2	2	26

* 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.

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

Reports for Week Ended December 16, 1922.

ALABAMA.	Cases.	COLORADO.	Cases.
		(Exclusive of Denver.)	
Cerebrospinal meningitis.....	1	Chicken pox.....	39
Chicken pox.....	10	Diphtheria.....	25
Dengue.....	12	Influenza.....	3
Diphtheria.....	22	Measles.....	2
Hookworm disease.....	92	Mumps.....	3
Influenza.....	125	Pellagra.....	1
Malaria.....	4	Pneumonia.....	4
Polio-myelitis.....	1	Polio-myelitis.....	1
Scarlet fever.....	8	Scarlet fever.....	65
Tuberculosis.....	7	Smallpox.....	6
Typhoid fever.....	11	Tuberculosis.....	29
		Typhoid fever.....	4
		Whooping cough.....	8
ARKANSAS.		CONNECTICUT.	
Chicken pox.....	35	Chicken pox.....	65
Dengue.....	4	Conjunctivitis.....	1
Diphtheria.....	15	Diphtheria.....	77
Influenza.....	10	Influenza.....	10
Malaria.....	25	Measles.....	339
Measles.....	4	Mumps.....	24
Mumps.....	1	Pneumonia (lobar).....	40
Paratyphoid fever.....	8	Polio-myelitis.....	1
Pellagra.....	1	Scarlet fever.....	112
Scarlet fever.....	4	Smallpox.....	1
Trachoma.....	16	Tuberculosis (all forms).....	21
Tuberculosis.....	15	Typhoid fever.....	3
Typhoid fever.....	25	Whooping cough.....	80
Whooping cough.....	17		
		DELAWARE.	
CALIFORNIA.		Anthrax:	
Cerebrospinal meningitis:		Wilmington.....	1
Alameda.....	2	Chicken pox.....	30
Fresno County.....	1	Diphtheria.....	4
Pasadena.....	1	Influenza.....	3
San Francisco.....	1	Malaria.....	1
San Luis Obispo County.....	1	Measles.....	38
Diphtheria.....	119	Pneumonia.....	5
Influenza.....	13	Scarlet fever:	
Lethargic encephalitis:		Wilmington.....	19
Alameda.....	1	Seating.....	5
San Francisco.....	1	Tuberculosis.....	5
Measles.....	14		
Scarlet fever.....	103		
Smallpox.....	2		
Typhoid fever.....	5		

FLORIDA.		INDIANA.	
	Cases.		Cases.
Dengue	8	Diphtheria	140
Diphtheria	35	Scarlet fever	70
Influenza	49	Smallpox	11
Malaria	35	Typhoid fever	2
Pneumonia	33		
Scarlet fever	1	IOWA.	
Smallpox	9	Diphtheria	64
Trichinosis	1	Scarlet fever	73
Typhoid fever	8	Smallpox	2
GEORGIA.		KANSAS.	
Cerebrospinal meningitis	1	Chicken pox	82
Chicken pox	13	Diphtheria	153
Dengue	44	Influenza	4
Diphtheria	23	Malaria	1
Dysentery (bacillary)	2	Measles	9
Hookworm disease	15	Mumps	14
Influenza	894	Pneumonia	28
Malaria	10	Poliomyelitis	1
Measles	2	Scarlet fever	121
Mumps	10	Smallpox	4
Paratyphoid fever	3	Tetanus	1
Pneumonia	31	Trachoma	1
Rabies	1	Tuberculosis	42
Scarlet fever	12	Typhoid fever	4
Septic sore throat	2	Whooping cough	13
Smallpox	4		
Tuberculosis (all forms)	99	LOUISIANA.	
Typhoid fever	5	Dengue	125
Whooping cough	1	Diphtheria	53
		Scarlet fever	10
ILLINOIS.		Smallpox	5
Cerebrospinal meningitis:		Typhoid fever	22
Cook County	1		
Henry County	2	MAINE.	
Knox County	1	Chicken pox	23
Pulaski County	1	Diphtheria	9
Diphtheria:		Influenza	4
Cook County (including Chicago)	254	Measles	2
Chicago	217	Mumps	9
Du Page County	12	Pneumonia	11
Fulton County	11	Poliomyelitis	1
Kane County	9	Scarlet fever	35
Lake County	14	Tuberculosis	14
St. Clair County	10	Typhoid fever	9
Will County	11	Whooping cough	27
Scattering	161		
Influenza	37	MARYLAND. ²	
Pneumonia	340	Chicken pox	130
Poliomyelitis:		Diphtheria	99
Chicago	1	Dysentery	4
Johnson County	2	German measles	16
St. Clair County	1	Influenza	65
Scarlet fever:		Measles	110
Cook County (including Chicago)	93	Mumps	28
Chicago	84	Ophthalmia neonatorum	3
Fulton County	8	Paratyphoid fever	1
La Salle County	8	Pneumonia (all forms)	87
Madison County	8	Scarlet fever	68
Peoria County	16	Septic sore throat	2
Whiteside County	8	Trachoma	1
Scattering	139	Tuberculosis	37
Smallpox	24	Typhoid fever	15
Typhoid fever	29	Whooping cough	71
Whooping cough	193		

¹ 33 of these cases occurred prior to week ended Dec. 16.

² Week ended Friday.

MASSACHUSETTS.	
	Cases.
Actinomycosis.....	1
Cerebrospinal meningitis.....	3
Chicken pox.....	225
Conjunctivitis (suppurative).....	5
Diphtheria.....	266
German measles.....	5
Influenza.....	20
Lethargic encephalitis.....	1
Measles.....	528
Mumps.....	120
Ophthalmia neonatorum.....	16
Pneumonia (lobar).....	148
Scarlet fever.....	242
Septic sore throat.....	1
Tetanus.....	2
Trachoma.....	3
Trichinosis.....	2
Tuberculosis.....	148
Typhoid fever.....	8
Whooping cough.....	294

MICHIGAN.	
Diphtheria.....	240
Measles.....	131
Pneumonia.....	150
Scarlet fever.....	303
Smallpox.....	67
Tuberculosis.....	46
Typhoid fever.....	13
Whooping cough.....	138

MINNESOTA.	
Cerebrospinal meningitis.....	1
Chicken pox.....	31
Diphtheria.....	131
Measles.....	70
Pneumonia.....	7
Scarlet fever.....	243
Smallpox.....	60
Tuberculosis.....	55
Typhoid fever.....	6
Whooping cough.....	12

MISSISSIPPI.	
Dengue.....	4
Diphtheria.....	30
Scarlet fever.....	10
Small pox.....	5
Typhoid fever.....	7

MISSOURI.	
Chicken pox.....	17
Diphtheria.....	85
Epidemic sore throat.....	3
Influenza.....	9
Measles.....	1
Pneumonia.....	4
Scarlet fever.....	84
Smallpox.....	10
Trachoma.....	1
Typhoid fever.....	3
Whooping cough.....	17

MONTANA.	
	Cases.
Diphtheria.....	6
Scarlet fever.....	9
Smallpox.....	1
Typhoid fever.....	2

NEBRASKA.	
Chicken pox.....	26
Diphtheria:	
Omaha.....	9
Wymore.....	17
Scattering.....	17
German measles.....	1
Influenza.....	3
Lethargic encephalitis:	
Collegeview.....	1
Measles.....	3
Mumps.....	2
Pneumonia.....	2
Scarlet fever.....	60
Smallpox.....	10
Tuberculosis.....	1
Typhoid fever.....	6
Whooping cough.....	1

NEW JERSEY.	
Cerebrospinal meningitis.....	2
Chicken pox.....	238
Diphtheria.....	230
Influenza.....	29
Measles.....	712
Pneumonia.....	153
Poliomyelitis.....	1
Scarlet fever.....	147
Trachoma.....	1
Typhoid fever.....	16
Whooping cough.....	138

NEW MEXICO.	
Chicken pox.....	15
Diphtheria.....	21
German measles.....	1
Influenza.....	1
Lethargic encephalitis.....	1
Measles.....	2
Pneumonia.....	10
Scarlet fever.....	12
Smallpox.....	1
Tuberculosis.....	11
Typhoid fever.....	2

NEW YORK.	
(Exclusive of New York City.)	
Cerebrospinal meningitis.....	1
Diphtheria.....	248
Influenza.....	17
Lethargic encephalitis.....	1
Measles.....	349
Pneumonia.....	229
Poliomyelitis.....	5
Scarlet fever.....	320
Smallpox.....	57
Typhoid fever.....	25
Whooping cough.....	314

NORTH CAROLINA.

	Cases.
Cerebrospinal meningitis.....	1
Chicken pox.....	102
Diphtheria.....	110
German measles.....	4
Measles.....	80
Scarlet fever.....	70
Septic sore throat.....	3
Smallpox.....	30
Trachoma.....	1
Typhoid fever.....	11
Whooping cough.....	88

OREGON.

Chicken pox.....	33
Diphtheria:	
Portland.....	13
Scattering.....	19
Measles.....	5
Pneumonia.....	15
Scarlet fever.....	16
Septic sore throat.....	11
Smallpox.....	9
Tuberculosis.....	20

SOUTH DAKOTA.

Actinomycosis.....	1
Diphtheria.....	7
Pneumonia.....	4
Scarlet fever.....	61
Smallpox.....	12
Tuberculosis.....	6

TEXAS.

Cerebrospinal meningitis.....	3
Dengue.....	30
Diphtheria.....	61
Influenza.....	6
Measles.....	23
Pellagra.....	11
Pneumonia.....	10
Scarlet fever.....	24
Typhoid fever.....	6

VERMONT.

Chicken pox.....	50
Measles.....	4
Mumps.....	2
Pneumonia.....	2
Scarlet fever.....	28
Smallpox.....	2
Typhoid fever.....	3
Whooping cough.....	72

¹ Deaths.

WASHINGTON.

	Cases.
Chicken pox.....	93
Diphtheria.....	12
Dysentery (amebic).....	1
Measles.....	2
Mumps.....	28
Pneumonia.....	3
Scarlet fever.....	19
Smallpox.....	6
Tuberculosis.....	4
Typhoid fever.....	8
Whooping cough.....	14

WEST VIRGINIA.

Diphtheria:	
Charleston.....	8
Huntington.....	13
Scattering.....	34
Scarlet fever.....	11
Typhoid fever.....	3

WISCONSIN.

Milwaukee:	
Cerebrospinal meningitis.....	1
Chicken pox.....	51
Diphtheria.....	28
Measles.....	708
Pneumonia.....	4
Scarlet fever.....	85
Tuberculosis.....	9
Whooping cough.....	5

Scattering:

Cerebrospinal meningitis.....	2
Chicken pox.....	191
Diphtheria.....	123
German measles.....	3
Influenza.....	35
Measles.....	198
Ophthalmia neonatorum.....	1
Pneumonia.....	20
Scarlet fever.....	135
Smallpox.....	46
Trachoma.....	1
Tuberculosis.....	16
Typhoid fever.....	4
Whooping cough.....	109

WYOMING.

Chicken pox.....	5
Scarlet fever.....	1
Smallpox.....	1

Reports for Week Ended December 9, 1922.

DISTRICT OF COLUMBIA.

Chicken pox.....	22	Scarlet fever.....	25
Diphtheria.....	18	Tuberculosis.....	23
Lethargic encephalitis.....	1	Typhoid fever.....	1
Measles.....	7	Whooping cough.....	27

KENTUCKY.

Cerebrospinal meningitis:		Pneumonia.....	24
Montgomery County.....	1	Scabies.....	1
Chicken pox.....	19	Scarlet fever.....	23
Diphtheria:		Septic sore throat.....	1
Jefferson County.....	22	Smallpox.....	1
Scattering.....	15	Trachoma.....	10
Influenza.....	9	Tuberculosis:	
Measles:		Jefferson County.....	21
McCracken County.....	97	Scattering.....	5
Scattering.....	16	Typhoid fever.....	10
Mumps.....	1	Whooping cough.....	15

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.	Poliomycellitis.	Scarlet fever.	Smallpox.	Typhoid fever.
NOVEMBER, 1922.										
District of Columbia.....		114	5	22	8			50		9
Illinois.....	6	2,297	81		606		17	1,419	179	173
Nebraska.....	3	219	4	1	11		1	322	5	13
North Dakota.....	1	38			16		3	144	39	28
Vermont.....		44			14		3	113		5

CITY REPORTS FOR WEEK ENDED DECEMBER 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 Dec. 2, 1922.		City.	Median for previous years.	Week ended Dec. 2, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Alabama:				New Jersey:			
Birmingham.....	0	1		Newark.....	0		1
Connecticut:				Plainfield.....	0	1	
Meriden.....	0	1	1	New York:			
Illinois:				New York.....	5	3	1
Galesburg.....	0	1	1	Rome.....	0		1
Kentucky:				Ohio:			
Louisville.....	0	1		Akron.....	0	1	
Massachusetts:				Tennessee:			
Adams.....	0	1		Nashville.....	0		1
Boston.....	1	1		Texas:			
Gardner.....	0	1		Dallas.....	0	1	
Michigan:				Wisconsin:			
Detroit.....	1	1	1	Milwaukee.....	1	1	
Nebraska:							
Omaha.....	0	1	1				

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

DENGUE.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Georgia: Albany.....	2	.....	Louisiana: New Orleans.....	36	.....

DIPHTHERIA.

See p. 3170; also Current State summaries, p. 3160; and Monthly summaries, by States, p. 3164.

INFLUENZA.

City.	Cases.		Deaths, week ended Dec. 2, 1922.	City.	Cases.		Deaths, week ended Dec. 2, 1922.
	Week ended Dec. 3, 1921.	Week ended Dec. 2, 1922.			Week ended Dec. 3, 1921.	Week ended Dec. 2, 1922.	
Alabama: Mobile.....			1	Missouri: Kansas City.....	1	1	.....
Arkansas: Little Rock.....	1			St. Louis.....		1	.....
California: Los Angeles.....	5	5	.....	Montana: Missoula.....		1	1
Oakland.....		1	1	New Jersey: Bayonne.....		1	.....
San Francisco.....	4	2	2	Hackensack.....	1		.....
Connecticut: Bridgeport.....			1	Kearny.....	1		.....
New Britain.....	1			Montclair.....			1
District of Columbia: Washington.....	3	2	1	Newark.....	5	16	.....
Florida: Tampa.....	6	1	.....	Orange.....	1		.....
Georgia: Albany.....	5			Trenton.....	1		.....
Atlanta.....	2	3	1	New York: Albany.....	2		.....
Macon.....		6	.....	Cohoes.....	2		.....
Illinois: Chicago.....	20	7	2	New York.....	13	43	11
East St. Louis.....		1	.....	Niagara Falls.....	1		.....
Kansas: Kansas City.....		1	.....	Syracuse.....		1	.....
Topeka.....	1		.....	North Carolina: Durham.....			1
Kentucky: Louisville.....		1	.....	Raleigh.....			1
Louisiana: New Orleans.....	2	1	1	Ohio: Cincinnati.....			1
Maryland: Baltimore.....	5	14	2	Cleveland.....	1	1	.....
Massachusetts: Arlington.....		1	.....	Steubenville.....		1	.....
Beverly.....		1	.....	Oregon: Portland.....			1
Boston.....	4	2	1	Pennsylvania: Philadelphia.....	1	2	2
Cambridge.....		1	1	Rhode Island: Providence.....			2
Fall River.....	1			Virginia: Roanoke.....		3	.....
Fitchburg.....		1	.....	West Virginia: Clarksburg.....			1
Lynn.....		1	.....	Huntington.....			1
Michigan: Detroit.....	1	2	2	Wisconsin: Wausau.....	3		.....
Highland Park.....		1	.....			
Saginaw.....		1	.....			

LETHARGIC ENCEPHALITIS.

City.	Cases.	Deaths.
California: Oakland.....	1	.....

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

MALARIA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Arkansas:			Georgia—Continued.		
Little Rock.....	1		Macon.....	4	
California:			Savannah.....	1	1
Los Angeles.....	1		Ohio:		
Florida:			Cleveland.....		1
Tampa.....	1	1	Texas:		
Georgia:			Houston.....		1
Atlanta.....	2				

MEASLES.

See p. 3170; also Current State summaries, p. 3160; and Monthly summaries by States, p. 3164.

PELLAGRA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			Texas:		
Birmingham.....	1	1	Houston.....		1

PNEUMONIA (ALL FORMS).

Alabama:			Indiana—Continued.		
Birmingham.....		6	Hammond.....		1
California:			Indianapolis.....		15
Alameda.....		2	La Fayette.....		1
Glendale.....		1	South Bend.....		3
Long Beach.....		2	Terre Haute.....		5
Los Angeles.....	46	10	Iowa:		
Oakland.....		5	Burlington.....		2
Riverside.....	2	1	Council Bluffs.....		2
Sacramento.....	3	1	Kansas:		
San Bernardino.....		1	Fort Scott.....		1
San Diego.....	3	2	Kansas City.....	3	
San Francisco.....	11	3	Lawrence.....		1
Stockton.....		3	Salina.....		1
Colorado:			Topeka.....	5	2
Denver.....		6	Wichita.....		4
Pueblo.....		1	Kentucky:		
Connecticut:			Covington.....		8
Bridgeport.....	4	1	Louisville.....		11
Bristol.....		1	Louisiana:		
Hartford.....		2	New Orleans.....		11
New Haven.....		5	Maine:		
New London.....		1	Auburn.....		1
Waterbury.....		3	Bangor.....	5	
District of Columbia:			Portland.....		4
Washington.....	24		Maryland:		
Florida:			Baltimore.....	44	29
Tampa.....	3	3	Cumberland.....	1	
Georgia:			Massachusetts:		
Atlanta.....	14	14	Amesbury.....		1
Brunswick.....	1	1	Arlington.....	3	1
Savannah.....	6	6	Attleboro.....		1
Illinois:			Belmont.....	1	
Aurora.....		1	Boston.....		30
Chicago.....	124	61	Braintree.....	1	1
Decatur.....	6	3	Cambridge.....	7	1
East St. Louis.....		1	Chelsea.....		5
Elgin.....		1	Chicopee.....		1
Forest Park.....	1		Clinton.....	3	1
Jacksonville.....	4	2	Everett.....	3	1
Kewanee.....		1	Fall River.....	6	4
Mattoon.....	1		Frammingham.....		1
Oak Park.....		1	Haverhill.....	4	
Peoria.....		2	Holyoke.....		6
Quincy.....		1	Lawrence.....		1
Rockford.....	3		Leominster.....	1	
Springfield.....		2	Lowell.....		5
Indiana:			Malden.....	5	
Anderson.....		1	Medford.....		1
East Chicago.....		3	Melrose.....		1
Gary.....		3			

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

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Massachusetts—Continued.			New York—Continued.		
New Bedford	4	3	Olean		1
Newton	1		Peekskill	1	3
Peabody		1	Port Chester		
Pittsfield		2	Poughkeepsie	2	4
Quincy	3	1	Rochester	15	2
Salem	3	1	Rome	2	1
Somerville	3		Schenectady	6	5
Springfield	9	4	Syracuse	14	6
Winthrop	1		Troy		1
Worcester		9	Watertown		1
Michigan:			Yonkers	1	
Detroit	44	27	North Carolina:		
Flint		2	Charlotte		2
Grand Rapids	6	2	Greensboro		1
Hamtramck		4	Salisbury		1
Highland Park		2	Wilmington		1
Jackson	1		Ohio:		
Kalamazoo		5	Akron	1	
Marquette	1		Barberton	1	
Muskegon		2	Canton		3
Port Huron		1	Cincinnati		12
Minnesota:			Cleveland	24	13
Duluth	3		Columbus		3
Minneapolis		10	Dayton	1	
Rochester	1		Fremont	1	
Winona		1	Kenmore	2	
Missouri:			Lorain	1	
Kansas City	19	17	Mansfield		1
St. Joseph		3	Newark		1
Springfield		1	Salem	1	
Montana:			Sandusky	1	
Great Falls		2	Springfield		4
Missoula	2	1	Toledo		2
Nebraska:			Youngstown		3
Lincoln		1	Oklahoma:		
Omaha		5	Oklahoma		3
New Hampshire:			Oregon:		
Concord	1		Portland		8
New Jersey:			Pennsylvania:		
Bayonne	1		Philadelphia	96	62
Bloomfield		1	Rhode Island:		
Clifton		2	Cranston		3
East Orange	4		Pawtucket		7
Garfield	2		Providence		6
Harrison	1		South Carolina:		
Hoboken		4	Charleston		3
Jersey City	3		South Dakota:		
Kearny		1	Sioux Falls	2	1
Montclair	1		Tennessee:		
Morristown		1	Memphis		9
Newark	69	12	Nashville		2
Orange	6	4	Texas:		
Passaic	4	3	Dallas		5
Paterson	3		El Paso		5
Port Amboy		1	Fort Worth		2
Phillipsburg		2	Houston		3
Plainfield	4		Waco		1
Trenton	22	4	Utah:		
West Hoboken		2	Salt Lake City		9
West New York		1	Virginia:		
New Mexico:			Norfolk	2	1
Albuquerque		2	Petersburg		1
New York:			Portsmouth		3
Albany	18		Richmond		7
Auburn	1	1	Roanoke		1
Buffalo	37	8	West Virginia:		
Elmira	3	1	Clarksburg		2
Hornell		1	Huntington		1
Ithaca		2	Parkersburg		1
Jamestown	2		Wheeling		2
Lackawanna	2		Wisconsin:		
Lockport		1	Fond du Lac	5	1
Middletown	1		Milwaukee	3	
Newburgh	1		Superior		1
New York	258	150	Wyoming:		
Niagara Falls	6	4	Cheyenne		2
North Tonawanda	1				
Ogdensburg		1			

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

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 Dec. 2, 1922.		City.	Median for previous years.	Week ended Dec. 2, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Illinois:				New Jersey:			
Chicago.....	0	3		Paterson.....	0	1	
Kentucky:				West New York.....	0	1	
Lexington.....	0		1	New York:			
Maryland:				New York.....	3	1	2
Baltimore.....	0	1		Syracuse.....	0	1	
Massachusetts:				Texas:			
Boston.....	1	2		Fort Worth.....	0	1	
Lynn.....	0	1		Virginia:			
				Norfolk.....	0	1	

RABIES IN ANIMALS.

City.	Cases.	City.	Cases.
California:		New York:	
Los Angeles.....	9	Hudson.....	1
Oakland.....	1	West Virginia:	
Missouri:		Morgantown.....	3
Kansas City.....	1		
New Jersey:			
East Orange.....	1		

SCARLET FEVER.

See p. 3170; also Current State summaries, p. 3160; and Monthly summaries by States, p. 3164.

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 Dec. 2, 1922.		City.	Median for previous years.	Week ended Dec. 2, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Alabama:				New York:			
Birmingham.....	0	1		New York.....	0	1	
California:				Niagara Falls.....	0	1	
Los Angeles.....	0	2		North Carolina:			
Oakland.....	2	1		Winston-Salem.....	0	5	
San Francisco.....	1	1		Ohio:			
Stockton.....	0	2		Akron.....	0	1	
Colorado:				Dayton.....	0	1	
Denver.....	12	24	15	Sandusky.....	0	2	
Pueblo.....	0	1		Oregon:			
Illinois:				Portland.....	2	5	
Alton.....	0	1		Pennsylvania:			
Chicago.....	1	1		Philadelphia.....	0	1	
Indiana:				Tennessee:			
Indianapolis.....	2	5		Knoxville.....	0	10	
Iowa:				Utah:			
Council Bluffs.....	2	2	1	Salt Lake City.....	3	3	
Michigan:				Virginia:			
Flint.....	0	1		Alexandria.....	0	1	
Minnesota:				Washington:			
Duluth.....	0	5		Bellingham.....	1	1	
Minneapolis.....	9	4		Spokane.....	32	5	
Montana:				Wisconsin:			
Great Falls.....	0	2		Ashland.....	0	4	
				Superior.....	0	15	

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

TETANUS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
California:			New York:		
Los Angeles.....	1	1	Middletown.....	1	1
Illinois:			Ohio:		
Jacksonville.....	1		Cleveland.....	2	1
Minnesota:			Texas:		
Minneapolis.....	2	2	Beaumont.....		1

TUBERCULOSIS.

See p. 3170, also Current State summaries, p. 3160.

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 Dec. 2, 1922.		City.	Median for previous years.	Week ended Dec. 2, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Alabama:				Michigan—Continued.			
Birmingham.....	3	3		Muskegon.....	0	1	
Arkansas:				Saginaw.....	0	1	1
Little Rock.....	1	1		Minnesota:			
California:				Duluth.....	1		1
Los Angeles.....	2	4	1	Minneapolis.....	2	2	
Oakland.....	0	2		Missouri:			
Sacramento.....	1	1		Kansas City.....	1	2	
Stockton.....	0	1		St. Joseph.....	0	1	
Colorado:				St. Louis.....	5	2	
Pueblo.....	0	1		Montana:			
Trinidad.....	0	1		Missoula.....	0	1	
Connecticut:				New York:			
Bridgeport.....	0	1		Albany.....	1	1	
New Haven.....	0	1		Middletown.....	0	1	
Florida:				New York.....	18	16	1
Tampa.....	0		1	Syracuse.....	1	1	
Georgia:				Troy.....	0	2	1
Atlanta.....	0	1		Yonkers.....	0	1	
Brunswick.....	0	1	1	Ohio:			
Savannah.....	0	1		Cleveland.....	1	1	1
Illinois:				Piqua.....	0	5	
Chicago.....	7	3		Steubenville.....	0	1	
Jacksonville.....	0	9		Toledo.....	2	1	
Indiana:				Oregon:			
Indianapolis.....	1	1		Portland.....	1	1	
Kansas:				Pennsylvania:			
Topeka.....	0	1	1	Lancaster.....	0	1	
Wichita.....	0	3		Philadelphia.....	7	4	
Kentucky:				Shenandoah.....	0	1	
Louisville.....	2	2	1	Rhode Island:			
Louisiana:				Providence.....	1	2	
New Orleans.....	1	3		Tennessee:			
Maine:				Memphis.....	1	1	
Bangor.....	0	1		Virginia:			
Maryland:				Roanoke.....	0	1	1
Baltimore.....	4	3		Washington:			
Massachusetts:				Seattle.....	0	3	
Boston.....	2	3		Tacoma.....	0	1	
Leominster.....	0	1		West Virginia:			
Lowell.....	0	2	1	Bluefield.....	1	1	
Lynn.....	0	1		Charleston.....	1	1	
New Bedford.....	1	1		Clarksburg.....		2	
Quincy.....	0	1		Huntington.....	0	1	
Taunton.....	0	1		Wisconsin:			
Worcester.....	0		1	Madison.....	0	1	
Michigan:				Racine.....	0	1	
Detroit.....	4	4		Superior.....	0		1
Ironwood.....	0	1	1	Wausau.....	0	1	

CITY REPORTS FOR WEEK ENDED DECEMBER 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:										
Birmingham	178,806	55	8	1			2			
Mobile	60,777	25	4				1		5	5
Montgomery	43,464	11	1							1
Tuscaloosa	11,986		2							1
Arkansas:										
Hot Springs	11,695	4								
Little Rock	65,142		4				3		3	2
North Little Rock	14,048						1	1		
California:										
Alameda	28,806	10	7	1			1		1	
Eureka	12,923	10			1					
Glendale	13,536	6								1
Long Beach	55,583	17	6		1		3		4	
Los Angeles	576,673	166	32		1		44		30	21
Oakland	216,261	44	16		1		15		1	2
Pasadena	45,354	11		1					1	1
Richmond	16,843	2	1						1	
Riverside	19,341	3	2						2	1
Sacramento	65,908	20	4				7		3	4
San Bernardino	18,721	6	2	1						4
San Diego	74,683	16	5	1	1		10		3	1
San Francisco	506,676	139	32	3	2		8		13	15
Santa Ana	15,485	5	3							
Santa Barbara	19,441	4								1
Santa Cruz	10,917	9	2	1						
Stockton	40,296	8	5				1			2
Colorado:										
Denver	256,491	72	38	1	2		18			6
Greeley	10,958	4								1
Pueblo	43,050	8	8				1			
Trinidad	10,906	2			1					
Connecticut:										
Bridgeport	143,555	26	18		4		8	1	6	1
Bristol	20,620	4	4		25	1	1			
Fairfield (town)	11,475	0					1			
Greenwich (town)	22,123						2			
Hartford	138,036	42	27	4	8		4		3	1
Manchester (town)	18,370	6								
Meriden (city)	29,867	1					3			
Milford (town)	10,193	1								
New Haven	162,537	32	5		35	1	2		9	1
New London	25,688	6								
Waterbury	91,715	21	5				13		1	2
District of Columbia:										
Washington	437,571	132	19		6		13		21	11
Florida:										
St. Petersburg	14,237	4	1							1
Tampa	51,608	26	3							1
Georgia:										
Albany	11,555						1			
Atlanta	200,616	59	6	1			2		1	1
Brunswick	14,413	3	1							
Macon	52,995		4						2	
Rome	13,252		2							
Savannah	83,252	39	3	1	1		1			1
Idaho:										
Boise	21,393	1					1			
Pocatello	15,001	8								
Illinois:										
Alton	24,682	4	9				6		1	
Aurora	36,397	12	20		1		2		2	2
Bloomington	28,725	5	1				4		2	
Centralia	12,491	4	1							
Chicago	2,701,705	579	231	11	85	3	67	2	167	33
Chicago Heights	19,653	1								
Cicero	44,995	9	5				2			
Decatur	43,818	15	3				1			
East St. Louis	66,767	15	3						1	
Elgin	27,454	7					1		1	
Evanston	37,234	12	1		2		2		5	
Galesburg	23,834	8	1							
Jacksonville	15,713	8					6			
Kewanee	16,026	5			1		2			

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

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

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Illinois—Continued.										
La Salle.....	13,050	3			2					
Mattoon.....	13,552	7	3							
Oak Park.....	39,858	10	3				4			
Pekin.....	12,086	2								
Peoria.....	76,121	15					6			1
Quincy.....	35,978	12								
Rockford.....	65,651	15	5				1			
Springfield.....	59,183	25	11	1						
Indiana:										
Anderson.....	29,767	7					1		1	
Bloomington.....	11,595	0	1							
Clinton.....	10,962	3	1							
Crawfordsville.....	10,139	7	1	1						
East Chicago.....	35,967	12	1				1			
Frankfort.....	11,585	4	9	1						
Gary.....	55,378	13	4				1			
Hammond.....	36,004	6	4				3		1	
Huntington.....	14,000	4								
Indianapolis.....	314,194	115	87	3	2		10		1	9
Kokomo.....	30,067	3	3							
La Fayette.....	22,486	7	1							1
Logansport.....	21,626	3								
Mishawaka.....	15,195	0	3		12		6			
Muncie.....	36,524	9	5							
South Bend.....	70,983	14			31		4	1		1
Terre Haute.....	66,083	27	4		1		2			
Iowa:										
Burlington.....	24,057	10		5			2			
Cedar Rapids.....	45,566						2			
Clinton.....	24,151		6							
Council Bluffs.....	36,162	11	4							
Davenport.....	56,727		21				2			
Des Moines.....	126,468		16				19			
Dubuque.....	39,141				14					
Iowa City.....	11,267						1			
Marshalltown.....	15,731						1			
Mason City.....	20,065	4	9				1			
Muscatine.....	16,068	6	4				1			
Sioux City.....	71,227		9				5			
Waterloo.....	36,230		3				4			
Kansas:										
Atchison.....	12,639		2				2			
Coffeyville.....	13,452	6	2				1			
Fort Scott.....	10,693	6	3				3			
Kansas City.....	101,177		7		3				3	
Lawrence.....	12,456	2	2				1			
Parsons.....	16,028	5								
Salina.....	15,085	7	1				1			
Topeka.....	50,022	21	12	1			5		2	2
Wichita.....	72,217	40	15	4			4			1
Kentucky:										
Covington.....	57,121	19	8				1			3
Lexington.....	41,534	14	3				1		2	
Louisville.....	234,891	83	27	1			2		8	7
Owensboro.....	17,121						1			
Paducah.....	24,735				53					
Louisiana:										
New Orleans.....	387,219	122	36	3	1		10		17	13
Maine:										
Auburn.....	16,985	5					1			
Bangor.....	25,978		2				1			
Bath.....	14,731	3								
Lewiston.....	31,791	11		1	1		2		3	
Portland.....	69,272	35	3		4					3
Sanford (town).....	10,691	3								
Maryland:										
Baltimore.....	733,826	203	59	2	79		30		26	16
Cumberland.....	29,837	7					1			
Frederick.....	11,066	5					1			
Massachusetts:										
Adams (town).....	12,967	3								
Amesbury (town).....	10,036	2					2			
Arlington (town).....	18,665	5	1						1	

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

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

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Minnesota:										
Duluth.....	98,917	10	4		5		11		1	1
Faribault.....	11,089	6				4				
Hibbing.....	15,089		2			5				
Minneapolis.....	380,582	85	57	2		49	2	13	5	
Rochester.....	13,722	15	1							
St. Cloud.....	15,873		2			3		1		
Virginia.....	14,022							1		
Winona.....	19,143	11	1			2				
Missouri:										
Joplin.....	29,902		1							
Kansas City.....	324,410	84	19	1	2	8		4	2	
Saint Joseph.....	77,939	36	7			5				
Saint Louis.....	772,897	184	50	2	1	31		23	7	
Springfield.....	39,631	10								
Montana:										
Anaconda.....	11,668	0								
Billings.....	15,100	4	1			5		2		
Great Falls.....	24,121	6	1			1			1	
Missoula.....	12,668	8								
Nebraska:										
Lincoln.....	54,948	11	1				1	3		
Omaha.....	191,601	42	19		1	5			1	
Nevada:										
Reno.....	12,016	4								
New Hampshire:										
Concord.....	22,167	7								
Dover.....	13,029	5								
Keene.....	11,210	4	1					1		
New Jersey:										
Asbury Park.....	12,400	1	1							
Bayonne.....	76,754		4			2		1		
Bloomfield.....	22,019	3			2					
Clifton.....	26,470	4	4		4	2				
East Orange.....	50,710	10			19	1			1	
Englewood.....	11,627	3								
Garfield.....	19,381	6	3						2	
Hackensack.....	17,667	7	4			2				
Harrison.....	15,721		1							
Hoboken.....	68,166	19	4			1		4	1	
Jersey City.....	298,103		17			6		6		
Kearny.....	26,724	4	4			2				
Montclair.....	28,810	7				4				
Morristown.....	12,548	8			14	2				
Newark.....	414,524	97	19	2	52	1	13	13	6	
Orange.....	33,268	14			8		2	1	2	
Passaic.....	63,841	5	2		33	1	5			
Paterson.....	135,875		7		1			1		
Perth Amboy.....	41,707	13	5	2		3				
Phillipsburg.....	16,923	5								
Plainfield.....	27,700	5								
Summit.....	10,174	3								
Trenton.....	119,289	36	48	2		9		2		
Union (town).....	20,651				1	1				
West Hoboken.....	40,074	6								
West New York.....	29,926	7	2			2		1	2	
West Orange.....	15,573	1			24	2				
New Mexico:										
Albuquerque.....	15,157	9	6	1	1			3	6	
New York:										
Albany.....	113,344		2			1		4		
Auburn.....	36,192	12								
Buffalo.....	506,775	133	13	1	26	1	24	1	24	
Cohoes.....	22,987	5								
Elmira.....	45,393		1			3				
Geneva.....	14,648	4								
Glens Falls.....	16,638	4				1				
Hornell.....	15,025	5							1	
Hudson.....	11,745	4	4			1				
Ithaca.....	17,004	12								
Jamestown.....	38,917	19	1		1	2		3	1	
Lackawanna.....	17,918	3	2		1	3		1		
Little Falls.....	13,029	7								

CITY REPORTS FOR WEEK ENDED DECEMBER 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.
New York—Continued.										
Lockport	21,308	5					1			
Middletown	18,420						2			
New York	5,620,048	1,242	208	16	40	1	120	2	243	190
Newburgh	30,366	7					2			
Niagara Falls	50,790	21	1	1			5		8	1
North Tonawanda	15,482	4					12			2
Ogdensburg	14,609	5								
Olean	20,506	6	2							
Peekskill	15,868	4					3			
Plattsburg	10,909	0								
Port Chester	16,573	5	2						4	1
Poughkeepsie	35,000	13	2				2		3	1
Rochester	295,750	66	13	3	74		5		18	3
Rome	26,341	10					13			
Saratoga Springs	13,181	4								1
Schenectady	88,723	18	5	2	1		23		3	
Syracuse	171,717	41	25	4	2		4			2
Troy	72,013	30	4	1					3	2
Watertown	31,285	7			1		3			
Watervliet	16,073	1								
White Plains	21,031	5								
Yonkers	100,176	18	4		2		3			1
North Carolina:										
Charlotte	46,338	6	1						1	2
Durham	21,719	4			1		1		1	1
Greensboro	15,861	5								
Raleigh	24,418	5	6				4			
Rocky Mount	12,742	5								1
Salisbury	13,884	5								
Wilmington	33,372	16	3	1			1			2
Winston-Salem	48,395	23	8	2			3		5	1
North Dakota:										
Fargo	21,961	0			1					
Grand Forks	14,010				1					
Ohio:										
Akron	208,435	37	8				10			
Alliance	21,603	3	3				5			
Ashtabula	22,082	2								
Barberton	18,811	2	2				2			
Cambridge	13,104	3								
Canton	87,091	16	7		7		7		1	1
Cincinnati	401,247	119	25	4	1		12		9	6
Cleveland	796,841	144	79	9	18		124		21	8
Columbus	237,031	57	14		7		9		8	1
Dayton	152,559	38	13				13			
East Cleveland	27,292	2	1				2			
East Youngstown	11,237	1								1
Findlay	17,021	1								
Fremont	12,468	2								
Hamilton	39,675	6	2		3					
Kenmore	12,683								2	
Lima	41,326	7	4	1			4			
Lorain	37,295		9				6			
Mansfield	27,824	8	7						2	1
Martins Ferry	11,634	1			1		3			
Middletown	23,594	6					1		1	
New Philadelphia	10,718		1				3			
Newark	26,718	9	3	1						
Niles	13,080	0	2							
Norwood	24,966	1	1							
Piqua	15,044	3								
Salem	10,306	4	3				5			
Sandusky	22,897	7	2				5			
Springfield	60,840	17	2		1		2			4
Staubenville	28,508	9					1			
Tiffin	14,375	6	1							
Toledo	243,184	55	31	2	161	1	14	1	1	4
Youngstown	132,358	28	38	4	6	1	1	1	1	2
Zanesville	29,569	11	2		70				1	1
Oklahoma:										
Oklahoma	91,295	22	2				9			1
Tulsa	72,075		12		5		8			

¹ Pulmonary tuberculosis only.

FOREIGN AND INSULAR.

AUSTRALIA.

Plague-Infected Rodents—Brisbane.

During the week ended November 4, 1922, two plague-infected rodents were reported found at Brisbane, Australia.

AZORES.

Plague—Horta.

A fatal case of plague was reported at Horta, Island of Fayal, Azores, November 9, 1922. The case was stated to be an isolated one.

CUBA.

Communicable Diseases.

Communicable diseases have been notified in Cuba as follows:

Habana.

Disease.	Nov. 21-30, 1922.		Remain- ing under treat- ment Nov. 30, 1922.
	New cases.	Deaths.	
Plague.....	4	1	11
Chicken pox.....	3	.....	3
Diphtheria.....	.....	.....	3
Leprosy.....	.....	.....	10
Malaria.....	74	3	289
Paratyphoid fever.....	1	.....	11
Scarlet fever.....	.....	.....	3
Typhoid fever.....	21	7	120

¹ From abroad, 1.

² From the interior, 32; from abroad, 2.

³ From the interior, 30.

Provinces.

Province.	New cases reported Oct. 21-31, 1922.					
	Chicken pox.	Diph- theria.	Malaria.	Para- typhoid fever.	Scarlet fever.	Typhoid fever.
Carnaguey.....	.....	.....	20	2	.....	8
Habana.....	1	9	39	10	4	85
Matanzas.....	3	1	4	.....	.....	8
Oriente.....	2	3	116	.....	.....	38
Pinar del Rio.....	.....	3	1	.....	.....	3
Santa Clara.....	3	2	2	11	1	24
Total.....	9	18	182	23	5	166

ECUADOR.

Plague-Infected Rats—Guayaquil.

During the period November 1–15, 1922, out of 4,450 rats examined 39 rats were found plague-infected.

GREECE.

Typhus Fever—Athens.

Two fatal cases of typhus fever were reported at Athens, Greece, during the period October 25–November 3, 1922.

JAMAICA.

“Alastrim.”

During the two weeks ended November 25, 1922, 104 new cases of “alastrim” were reported in the island of Jamaica.

Typhoid Fever—Kingston and Vicinity.

During the same period nine cases of typhoid fever were reported in Kingston and 38 cases in the surrounding country.

MEXICO.

Further Relative to Yellow Fever—Ciudad Victoria.¹

The fatal case of yellow fever reported from Ciudad Victoria, Mexico, November 30, 1922, is stated to have occurred in an officer of the Mexican Army who left Victoria November 18, 1922, for Mexico City and was taken ill two days out from Mexico City on his way to Monterey, or five days from Victoria. The patient was taken ill on the train and died at Monterey, November 25, 1922.

Measures Against Mosquitoes—Frontera.

According to information dated November 15, 1922, measures for the destruction of mosquitoes have been instituted at Frontera, State of Tabasco, Mexico, under authority of the special commission for yellow fever control of the Mexican Federal Department of Public Health. The 1,380 houses in the town were inspected. The first inspection, October 11 to 23, 1922, disclosed 3,202 breeding places of mosquitoes. These breeding places were treated by means of oil, fish, and covers for containers. The latest inspection, November 11, 1922, showed 1,670 breeding places.

POLAND.

Scarlet Fever—Warsaw City.

During the period July 30–October 21, 1922, 356 cases of scarlet fever with 60 deaths were notified in the city of Warsaw, Poland.

RUSSIA.

Communicable Diseases—Lettonia—September, 1922.

During the month of September, 1922, communicable diseases were reported in the province of Lettonia, Russia, as follows:

September, 1922.

Disease.	New cases.	Remarks.
Diphtheria.....	60	
Measles.....	10	
Scarlet fever.....	60	
Smallpox.....	4	
Typhoid fever.....	105	
Typhus fever.....	19	
Typhus fever, recurrent.....	4	
Whooping cough.....	15	Paratyphus fever; cases 5.

Anthrax—Dysentery—Leprosy—Malaria.

During the same period, one case of anthrax, 246 cases of dysentery, one case of leprosy, and five cases of malaria were reported in Lettonia.

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

Reports Received During Week Ended December 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.
India.....				Sept. 10-23, 1922: Cases, 2,436; deaths, 1,496.
Bombay.....	Oct. 15-21.....	1	1	
Calcutta.....	Oct. 29-Nov. 4.....	9	4	
Madras.....	do.....		1	

PLAGUE.

Australia: Queensland— Brisbane.....	Oct. 29-Nov. 4.....			2-plague infected rats.
Ceylon: Colombo.....	Oct. 22-28.....	6	5	1 plague rodent.
China: Hongkong.....	Oct. 15-Nov. 4.....	5	5	
Ecuador: Guayaquil.....	Nov. 1-15.....			Rats examined, 4,450; found plague-infected, 39.
Egypt.....				Jan. 1-Nov. 16, 1922: Cases, 473; deaths, 220.
City— Suez.....	Nov. 10-15.....	3	1	
Province— Minieh.....	Nov. 10-14.....	3		
India: Bombay.....	Oct. 29-Nov. 4.....	12	9	
Karachi.....	do.....	1	1	
Madras Presidency.....	do.....	158	104	
Bangoon.....	Oct. 15-21.....	6	7	
Madagascar: Tananarive.....				Oct. 9-22, 1922: Cases, 4; deaths, 4.
Amboninampamari- nana.....	Oct. 9-15.....	1	1	
Fenoarivo.....	Oct. 16-22.....	4	3	
Turkey: Constantinople.....	Oct. 22-28.....	2		

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 December 22, 1922—Continued.

SMALLPOX.

Place.	Date.	Cases.	Deaths.	Remarks.
Arabia:				
Aden.....	Nov. 5-11.....	1		
Canada:				
Manitoba—				
Winnipeg.....	Nov. 26-Dec. 2....	7		
Ontario—				
Niagara Falls.....	Nov. 2-Dec. 2.....	6		
Toronto.....	Nov. 26-Dec. 2....	1		
China:				
Amoy.....	Oct. 22-28.....			Present.
Chungking.....	.....do.....			Do.
Foochow.....	.....do.....			Do.
Nanking.....	Oct. 22-Nov. 4....			Do.
Shanghai.....	Nov. 6-12.....	1		Foreign.
Tsingtau.....	Oct. 23-29.....	1	1	Including leased territory of Kia-chow.
Cuba:				
Santiago de Cuba.....	Nov. 1-30.....	1		
Ecuador:				
Guayaquil.....	Nov. 1-15.....	7		
Germany:				
Dresden.....	Nov. 12-18.....		2	
India:				
Bombay.....	Oct. 8-21.....	7	4	Sept. 10-23, 1922: Cases, 1,579; deaths, 375.
Calcutta.....	Oct. 29-Nov. 4....	2		
Karachi.....	.....do.....	1		
Madras.....	.....do.....	22	7	
Rangoon.....	Oct. 15-21.....	5	1	
Java:				
East Java—				
Soerabaya.....	Oct. 8-14.....	2		
West Java—				
Batavia.....	Oct. 28-Nov. 3....	2		Province.
Mexico:				
Chihuahua.....	Nov. 6-Dec. 2.....		5	
Nogales.....	Nov. 27-Dec. 2....		2	
San Luis Potosi.....	Nov. 5-11.....		1	
Russia:				
Lettonia (Province).....	Sept. 1-30.....	4		
Spain:				
Corunna.....	Nov. 5-11.....		2	
Seville.....	Nov. 6-19.....		27	
Valencia.....	Nov. 12-18.....	3		
Switzerland:				
Berne.....	Nov. 5-11.....	9		
Turkey:				
Constantinople.....	Oct. 22-28.....	15	5	

TYPHUS FEVER.

China:				
Antung.....	Oct. 30-Nov. 12...	2		
Egypt:				
Alexandria.....	Nov. 5-11.....	1	1	
Cairo.....	Sept. 10-30.....	11	9	
Greece:				
Athens.....	Oct. 25-Nov. 3....	2	2	
Russia:				
Lettonia (Province).....	Sept. 1-30.....	19		Recurrent typhus: Cases, 4.
Spain:				
Barcelona.....	Nov. 9-22.....		2	

YELLOW FEVER.

Mexico:				
Monterey.....	Nov. 25.....		1	In person arrived ill from Ciudad Victoria, via Mexico City.

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

Reports Received from July 1 to December 15, 1922.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Amoy.....	May 14-June 24	1	4	
Antung.....	Sept. 21-Oct 1			
Manchuria—				
Dairen.....	Sept. 18-24	3	2	
Newchwang.....	July 27.....			Prevalent in Chinese city and in settlements along Yalu River. Oct. 9-15, 1922: Present in Chinese city.
Pootung.....	Aug. 3.....			Present. Stated to have been imported from Shanghai.
Shanghai.....	June 25-July 31.....	198		Present.
Tientsin.....	July 25-Aug. 19.....	4	2	Aug. 1-Oct. 8, 1922: Cases, 6, foreign; deaths, 56, Chinese. July 29, 1922: Stated to be 250 cases in Chinese isolation hospital.
Woosung.....	Aug. 3.....			About 75 deaths reported for previous week.
Greece:				
Athens.....	June 29.....	1	1	
Saloniki.....	June 7-17.....	30	11	At quarantine station: Among passengers from vessel carrying Russian refugees.
India:				
Bombay.....	Apr. 23-June 17.....	12	5	
Do.....	July 2-Oct. 9.....	6	5	Feb. 26-June 23, 1922: Deaths, 33,779. June 2-Aug. 5, 1922: Deaths, 9,346. Aug. 6-Sept. 6, 1922: Cases, 9,453; deaths, 5,934. (Report for week ended Feb. 25, 1922, not received.)
Calcutta.....	Apr. 23-June 24.....	536	378	
Do.....	June 25-Oct. 28.....	106	92	
Madras.....	May 21-June 17.....	3	1	
Do.....	July 16-Oct. 28.....	8	3	
Rangoon.....	May 7-June 24.....	116	65	
Do.....	June 25-Sept. 30.....	99	64	
Indo-China:				
Saigon.....	June 25-Aug. 19.....	30	28	Including area of 100 square km.
Japan:				
Tokyo.....	Oct. 4.....			Epidemic.
Yokohama.....	Oct. 5.....			Present.
Philippine Islands:				
Manila.....	May 21-June 24.....	8		
Do.....	June 25-Sept. 2.....	14	3	1 case, 1 death in nonresident, Aug. 27-Sept. 2, 1922.
Province—				
Bataan.....	June 4-10.....	1		
Batangas.....	May 26-June 24.....	15	11	
Do.....	June 25-July 22.....	7	4	
Bulacan.....	Apr. 30-May 6.....	1	1	
Cagayan.....	Aug. 13-19.....	2	2	
Camarines Sur.....	Mar. 25-Apr. 1.....	1	1	
Laguna.....	Apr. 16-22.....	1		
Marinduque.....	June 25-July 15.....	6	6	
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		
Pangasinan.....	June 25-July 8.....	3	1	
Do.....	Aug. 27-Sept. 2.....	2		
Rizal.....	Apr. 2-June 24.....	3	1	
Tarlac.....	May 21-June 10.....	4	4	
Union.....	Aug. 6-Sept. 9.....	3	2	
Poland.....				July 9-Sept. 7, 1922: Cases, 101; deaths, 28.
Rovno.....	June 11-24.....	8	3	
Do.....	June 25-Aug. 5.....	33	10	Repatriation station: Cases occurring among persons repatriated from Russia.
Volhynia.....	July 2-8.....	1	1	
Zamosec.....	Aug. 21.....	1		
Rumania:				
Bucharest.....	.....do.....	1		
Crangasi.....	.....do.....			To July 31, 1922: Cases, 11; deaths, 6. First case in soldier from frontier on Dniester River. Crangasi, a suburb of Bucharest.
Province—				
Bessarabia—				Reported Aug. 11.
Cobusea.....	July 24.....	1		Prefecture. Cholera reported Aug. 11 among troops in garrison.
Codaeshti.....	.....do.....	3		Reported July 29.
Orhei.....	.....do.....			
Rascautzi.....	.....do.....	11	1	

¹From 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 December 15, 1922—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Siam:				
Bangkok.....	Apr. 30-June 17....	15	9	
Do.....	July 2-Oct. 7.....	14	6	
Straits Settlements:				
Singapore.....	July 16-22.....	1	1	
Syria:				
Aleppo.....	May 27-June 3.....			A few cases in interior.
Do.....	June 25-Sept. 2.....			Present in interior.
On vessels:				
S. S. Chios.....	July 16.....	1		At Kavak Quarantine Station, Bosphorus, 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 cases landed at Kavak during stay.
—.....	Sept. 18-24.....	2	1	At Dairen, Manchuria, China. Name and origin of vessel not stated.

PLAGUE.

Algeria:				
Algiers.....	Aug. 27.....	1		
Oran.....	Aug. 1-31.....	10	3	
Asia Minor:				
Smyrna.....	May 28-June 17....	3	1	
Do.....	June 30-Aug. 26....	8	1	District.
Australia:				
New South Wales—				
Sydney.....	June 1-15.....	2		Apr. 2-June 10, 1922: 19 plague-infected rats found.
Queensland—				
Brisbane.....	July 23-29.....			One plague rat.
Azores:				
Fayal Islands.....				Jan. 16-Feb. 8, 1922: Cases, 6; deaths, 4. Nov. 9, 1922: 1 case, 1 death.
Horta.....	Feb. 2-8.....	4	2	
Do.....	Nov. 9.....	1	1	
St. Michaels Island.....	Sept. 9-Oct. 14....	202	26	Jan. 1-May 13, 1922: Cases, 93; deaths, 55. June 25-Nov. 11, 1922: Cases, 353; deaths, 64. In localities 3-9 miles from Ponta Delgada.
Ponta Delgada.....	Oct. 1-Nov. 11....	7	1	In vicinity, 180 cases.
Brazil:				
Bahia.....	June 11-17.....	1		May 7-June 4, 1922: Rodent: occurring in one section of the city. Many dead rats found.
Do.....	Aug. 20-Oct. 28....	7	3	
Pernambuco.....	May 7-13.....	1		
Porto Alegre.....	July 30-Sept. 30....	1	5	
British East Africa:				
Kenya Colony.....				Mar. 1-June 30, 1922: Cases, 371; deaths, 344. July 9-15, 1922: Deaths, 14.
Kisumu.....	Sept. 8-14.....	1	1	
Nairobi.....	Feb. 1-28.....	15	15	
Tanganyika Territory.....	Sept. 17-30.....	2	1	
Uganda.....				July-August, 1922: Cases, 185; deaths, 186.
Cape Verde Islands:				
St. Vincent.....	Sept. 4.....			Present.
Ceylon:				
Colombo.....	May 6-June 24....	13	10	Plague rats, 5.
Do.....	June 25-Oct. 14....	33	30	Plague rats, 12.
China:				
Amoy.....	May 7-June 24....		87	May 20, 1922: From 10 to 20 deaths reported daily. July
Do.....	June 25-July 15....		76	16-Aug. 12, 1922: Present; stated to be decreasing.
Canton.....	May 1-June 30....	28	23	Present.
Do.....	Sept. 1-30.....			Do,
Chungking.....	Sept. 24-30.....			June 17-24, 1922: Present. June
Foochow.....	May 7-June 10....	5	4	21: Mildly epidemic; 2 fatal cases in foreign physicians.
Do.....	July 2-Aug. 12....	3	1	Aug. 13-Sept. 30, 1922: Present.
Hongkong.....	June 4-24.....	176	104	Sept. 31-Oct. 7, 1922: Plague in rodents.
Do.....	June 25-Oct. 14....	151	103	Present.
Nanking.....	Sept. 24-Oct. 7....			
Cuba:				
Habana.....	Nov. 11-20.....	1		

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

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

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Ecuador:				
Guayaquil.....	June 1-15.....			Rats found infected, 16; examined, 3,400.
Do.....	July 1-Oct. 15.....	1	1	Rats examined, 25,725; found infected, 61.
Egypt.....				Jan. 1-June 29, 1922: Cases, 280; deaths, 120. Jan. 1-Nov. 9, 1922: Cases, 467; deaths, 219.
City—				Nov. 2-8, 1922: One case, one death; septicemic.
Alexandria.....	June 1-28.....	21	6	Septicemic, 1.
Do.....	July 2-Nov. 8.....	19	8	Foreign cases, 2; deaths, 2.
Port Said.....	June 12-25.....	2	5	Aug. 5, 1922: One case imported from Mauritius on S. S. Dumbea.
Do.....	July 2-Nov. 8.....	32	22	Septicemic, 1.
Suez.....	May 24-June 25.....	7	6	
Do.....	July 10-Oct. 27.....	7	4	
Province—				
Assiout.....	May 30-June 23.....	14	8	
Do.....	July 11-Nov. 8.....	11	6	Septicemic, 1.
Benisouef.....	May 26-June 30.....	19	7	
Do.....	July 2-Sept. 2.....	29	13	
Fayoum.....	June 3-29.....	8	4	
Do.....	July 2-20.....	13	3	
Garbieh.....	May 26-June 30.....	37	13	
Do.....	July 2.....	3		
Menoufieh.....	July 20.....	1	1	
Minieh.....	June 2-29.....	24	7	
Do.....	July 14-Nov. 8.....	24	12	
Sinnuris (district).....	Sept. 3-9.....	1		
France:				
Paris.....	Aug. 11-18.....	4		
Greece:				
Patras.....	Apr. 24-June 25.....	5	3	
Piræus.....	Aug. 1-31.....	3	1	
Hawaii:				
Hamakua.....	June 30-July 4.....	1	1	At Kalopa Homesteads. Case, Hawaiian.
Do.....	July 8-Nov. 10.....		1	Hamakua Mill Co. One plague rat trapped; found positive, July 14, 1922. Oct. 9-Nov. 10, 1922: 3 plague rats.
Honokaa.....	Aug. 19-Sept. 10.....		4	Japanese and Filipinos: bubonic and septicemic. Oct. 5, 1922: One case, one death. Reported positive Oct. 12. At Honokaa Mill, occurring in family of fatal case reported Aug. 24, 1922. Aug. 12-Sept. 13, 1922: 3 plague rats found.
Honokaa Mill.....	Aug. 24.....	1	1	Japanese. Pneumonic.
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. Sept. 25, 1922: One plague rat found at Hamakua Mill.
Pohakea.....	Aug. 1-16.....	2	2	Aug. 1, 1922, Japanese child; case reported positive for plague Aug. 6, 1922. Form, pneumonic. Aug. 16, 1 fatal case in Japanese.
Pohakuhaku.....	July 12.....	1	1	Hawaiian. Reported positive, July 19.
India.....				Apr. 23-June 24, 1922: Cases, 6,310; deaths, 4,812. June 25-Sept. 16, 1922: Cases, 9,329; deaths, 6,561. Surrounding country, July 2-8, 1922: Cases, 21; deaths, 16.
Bombay.....	Apr. 23-June 24.....	168	123	
Do.....	June 25-Oct. 7.....	84	64	
Calcutta.....	Apr. 23-June 24.....	56	54	
Do.....	June 25-Sept. 23.....	17	16	
Karachi.....	May 23-June 24.....	59	55	
Do.....	June 25-Sept. 30.....	6	5	
Madras Presidency.....	May 21-June 24.....	74	36	
Do.....	June 25-Oct. 28.....	2,506	1,669	
Rangoon.....	May 6-June 24.....	175	161	
Do.....	June 25-Oct. 14.....	471	420	
Indo-China:				
Saigon.....	Apr. 23-June 24.....	30	21	
Do.....	June 25-Aug. 19.....	10	7	Including area of 100 square kilometers.

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

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

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Italy:				
Catania.....	June 17.....	1		
Naples.....	July 18-Sept. 28..	19		Occurring in suburbs, viz., at Torre Annunziata, July 18-Sept. 28, 1922, 18 cases; San Giovanni a Teduccio, July 25, 1922, 1 case.
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, 259; occurring in 5 Provinces. July 1-Aug. 31, 1922: Cases, 416; deaths, 447; occurring in 5 Provinces. Sept. 1-30, 1922: Cases, 199; deaths, 248. In 7 Provinces.
East Java—				
Soerabaya.....	May 7-June 24.....	3	3	
Do.....	Sept. 17-23.....	1		
Samarang.....	Sept. 1-30.....	49	61	
Soerakarta—				
Keporen.....	May 20.....			Epidemic.
Klaten.....	Sept. 26.....			Epidemic. Locality in district of Prambanan.
Madagascar.....				Nov. 4, 1922: Present.
Tananarive Province—				
Anketrina.....	May 4.....		1	Native village: Disease stated to have been present since about Apr. 27, 1922.
Tamatave.....	June 26-July 2.....	2	1	Present. Aug. 17, 1922: 1 case. Aug. 18, 1922: 1 death. Aug. 21-Sept. 17, 1922: Deaths, 5; Sept. 11-17: Cases, 3.
Do.....	Aug. 21-Sept. 13.....			
Tananarive.....	May 29-June 18.....	2	1	
Do.....	July 10-23.....	2	2	
Mauritius Island.....				Aug. 7-19, 1922: Cases, 2. Oct. 19, 1922: 65 fatal cases reported.
Mesopotamia:				
Bagdad.....	Apr. 1-June 30.....	268	188	
Do.....	July 1-Sept. 30.....	32		
Mexico:				
Tampico.....				Sept. 24-Nov. 25: 2 plague rats.
Vera Cruz.....				June 30, 1922: 1 plague rat.
Palestine:				
Jaffa.....	July 4-Nov. 13.....	55	2	In native quarter. (Entered in previous issues under Jerusalem.)
Peru.....				May 1-15, 1922: Cases, 36; deaths, 19. June 1-30, 1922: Cases, 67; deaths, 15. July 1-Oct. 31, 1922: Cases, 182; deaths, 80. Jan.-June, 1922: Cases, 394; deaths, 173.
Localities—				
Aucun.....	Oct. 11-31.....	1	1	Jan.-June, 1922: Cases, 24; deaths, 10; country district, cases 2 (corrected report).
Bambamarca (Hualgayoc).....	Sept. 1-30.....	2		
Callao.....	Sept. 1-Oct. 31.....	8	3	
Catacaos.....	do.....	1		
Chancaay.....	do.....	3		
Chiclayo.....	do.....	7		
Chosica Vieja.....	do.....	3		
Coaillo y Asia (Cafete).....	do.....	6		
Colan.....	do.....	1		
Guadaloupe.....	do.....	6	1	
Huacho.....	do.....	8	4	
Huaral.....	do.....	5	1	
Huarney.....	do.....	1		
Lima (city).....	do.....	8	7	Jan. 1-June 30, 1922: Cases, 30; deaths, 16; country district, cases, 23; deaths, 16 (corrected report).
Lima (country).....	do.....	16	9	
Paita.....	do.....	1		
Santa.....	do.....	4	2	
St. Luis (Cafete).....	do.....	1		
Trujillo.....	do.....	5	1	

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

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

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands:				
Manila.....	June 3.....	1	1	From S. S. Taisang from Amoy, China.
Do.....	Aug. 20-26.....	2		
Portugal:				
Lisbon.....	July 23-Nov. 10..	6	6	Aug. 1-Oct. 23, 1922: Deaths, 10.
Portuguese West Africa:				
Angola—				
Loanda.....	Oct. 25-28.....			Present.
Guinea.....				Reported present Aug. 24, 1922.
Senegal:				
Dakar.....	June 1-30.....	1	1	
Do.....	July 1-Oct. 31.....	8	8	
Siam:				
Bangkok.....	Apr. 30-June 3.....	4	3	
Do.....	July 2-Oct. 7.....	14	11	
Spain:				
Barcelona.....	Sept. 24-Nov. 14..	23	9	Stated to be confined to factory in which disease first appeared. Oct. 18, 1922; 18 cases present.
Cartagena.....	Oct. 18.....	2		
Valencia.....	do.....	2		
Straits Settlements:				
Singapore.....	Apr. 30-June 24..	8	9	
Do.....	July 9-Aug. 23.....	3	3	
Syria:				
Aleppo.....	Sept. 9-16.....		1	Oct. 8-14, 1922: 1 plague rat.
Alexandretta.....				
Beirut.....	July 30-Aug. 13..	7	1	
Tunis:				
Tunis.....	June 30-Sept. 9...	4	1	
Turkey:				
Constantinople.....	Aug. 20-Oct. 7....	12	8	
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.
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. Barcelona.....	Nov. 11.....	1		At Habana, Cuba, from Barcelona, Spain, via Canary Islands. Patient from Canary Islands.
S. S. Dumbca.....	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. Legie.....	July 29.....			At Hamburg, Germany. Plague rats found. Vessel from Buenos Aires, Argentina.
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.

Algeria:			
Algiers.....	Nov. 1-10.....	1	
Arabia:			
Aden.....	May 7-June 24....	60	21
Do.....	July 2-Nov. 4.....	57	27

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

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

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Argentina:				
Rosario.....	June 1-30.....		3	
Asia Minor:				
Smyrna.....	May 14-June 24.....	4		In district.
Do.....	June 25-Aug. 26.....	13		Do.
Austria:				
Vienna.....	Oct. 22-28.....	3		
Bermuda:				
Hamilton.....	Sept. 3-30.....	3		
Bolivia:				
La Paz.....	Mar. 1-Apr. 30.....	97	16	
Brazil:				
Bahia.....	June 25-Oct. 28.....	3	1	
Para.....	May 29-June 25.....	8		
Do.....	July 3-Sept. 17.....	141	2	Aug. 22-28, 1922: Cases, 16.
Pernambuco.....	Sept. 24-Oct. 14.....	5		
Rio de Janeiro.....	May 14-June 24.....	48	12	
Do.....	June 25-Nov. 4.....	188	44	
Sao Paulo.....	Apr. 10-June 11.....	3	10	
British East Africa:				
Kenya Colony.....				Apr. 1-June 30, 1922: Cases, 15.
Dar-es-Salaam.....	Apr. 16-June 10.....	26		July 9-15, 1922: Deaths, 5.
Do.....	July 16-Aug. 12.....	18	2	
Nairobi.....	Mar. 1-31.....	22	2	
Tanganyika Territory.....	Aug. 20-Oct. 7.....	63	16	
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		
Do.....	Sept. 3-Nov. 25.....	39		
New Brunswick—				
Kent County.....	June 25-July 1.....	2		
Madawaska County.....	June 4-17.....	6		
Do.....	Sept. 10-Nov. 11.....	4	1	Sept. 1-30, 1922: Cases, 19; deaths, 1.
Ontario.....				
Fort William and Port Arthur.....	Aug. 6-Sept. 23.....	3		
Hamilton.....	July 30-Dec. 2.....	4		
London.....	Aug. 26-Sept. 2.....	1		
North Bay.....	June 3-17.....	2		
Do.....	July 16-Aug. 12.....	3		
Ottawa.....	June 11-July 1.....	17		
Do.....	July 2-Nov. 18.....	21		
Toronto.....	June 18-Nov. 18.....	13		
Saskatchewan—				
Regina.....	Sept. 17-23.....	1		Imported.
Saskatoon.....	Aug. 20-26.....	1		
Ceylon:				
Colombo.....	May 14-20.....	1		
Do.....	July 16-Oct. 14.....	19	1	Prevalent July 3, 1922, throughout southern Provinces.
Chile.....				
Concepcion.....	Mar. 14-June 20.....		71	
Do.....	June 27-Sept. 4.....		30	In Concepcion Province: Epidemic in May, 1922, with 60 reported cases. To June 5, epidemic.
Quillon.....				Epidemic.
Do.....	June 27-July 3.....			
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	Province of Cautin; epidemic in May, 1922.
Temuco.....				Incomplete; several districts not reporting.
Valparaiso.....	Mar. 26-June 19.....		115	
Do.....	June 25-July 30.....		46	
China:				
Amoy.....	May 7-20.....			Present. June 18-24, 1922: 1 death. Sept. 24-30, 1922: 1 death.
Do.....	July 16-Oct. 21.....			Present. Oct. 15-21, 1922: 1 death.
Antung.....	May 29-June 18.....	4		
Do.....	July 3-16.....	5		
Chungking.....	May 28-June 24.....			Present.
Do.....	June 25-Oct. 21.....			Do.

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

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

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
China—Continued.				
Foochow	May 14-20.	1		Aug. 13-19, 1922: Present.
Do.	Aug. 27-Oct. 21.			Present.
Hankow	June 25-July 1.	1		
Hongkong	May 14-June 24.	41	32	
Do.	July 16-Sept. 16.	5	2	Aug. 13-26, 1922: Present.
Manchuria—				
Dairen	May 15-June 18.	4	1	
Do.	June 26-Sept. 17.	7	1	
Harbin	May 22-28.	1		
Do.	July 30-Aug. 5.	1		
Mukden	June 18-24.			Present.
Do.	July 16-Sept. 29.			Do.
Nanking	May 7-June 24.			Do.
Do.	June 25-Oct. 21.			Do.
Shanghai	May 22-28.	1		Native.
Tientsin	May 14-20.			Present.
Tsingtau	May 9-June 18.	4	3	Including leased territory of Kia-ochow, Japanese population along Shantung Railway, and Japanese residents, Tsinan.
Do.	June 26-Oct. 22.	8	4	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.				July 1-Aug. 31, 1922: Cases, 77.
City—				
Antilla	June 18-24.	1		Reported for Preston.
Do.	Sept. 17-21.	2		
Cienfuegos	June 24-July 1.	1		
Habana	July 1-Aug. 31.	10		
Sagua la Grande	Oct. 15-21.	1		In vicinity, at Rancho Veloz.
Santiago	June 1-30.	3		
Do.	Sept. 1-30.	1		
Province—				
Habana	Aug. 20-31.	1		
Matanzas	do.	1		
Oriente	do.	3		
Santa Clara	do.	4		
Domenica	Aug. 5-Sept. 9.			Present. Aug. 23: Epidemic. Island in Leeward Islands.
Dominican Republic:				
Puerto Plata	Sept. 12-Oct. 14.	8		
San Pedro de Macoris	May 21-June 24.	167	2	City and Country. (Corrected report).
Do.	June 25-Nov. 11.	426	2	City and district. (Corrected report.)
Santo Domingo	June 4-24.	3	9	Including vicinity.
Do.	June 25-Nov. 18.	7	7	July 30-Aug. 5, 1922: A few cases city and vicinity.
Ecuador:				
Guayaquil	July 16-Oct. 15.	12		
Milagro	Sept. 1-15.	1		
Nobol	do.	1		
Egypt:				
Alexandria	July 23-Aug. 12.	2	2	
Cairo.	Apr. 30-June 24.	13	5	
Do.	July 23-Aug. 19.	7	2	
Port Said	May 7-June 24.	3	1	
Do.	July 23-29.	1		
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	
Do.	Oct. 22-31.	1		
Great Britain:				
Halifax				Outbreak reported under date of June 17, 1922.
Huddersfield				Do.
Hull	Nov. 12-18.	1		
Liverpool	Aug. 13-19.	1		In port hospital.
London	July 30-Nov. 11.	53	15	Oct. 22-28, 1922: Outbreak. To Nov. 3, 1922: Cases, 23; deaths, 2.
Sheffield	May 28-June 17.	5		
Southampton	June 18-24.	2		

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

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

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
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).
Bombay.....	Apr. 23-June 24.....	38	17	Mar. 26-May 20, 1922: Deaths, 6,015. June 4-24: Cases, 2,313; deaths, 919. June 25-Sept. 9, 1922: Cases, 9,090; deaths, 2,371.
Do.....	July 2-Oct. 7.....	9	4	
Calcutta.....	Apr. 23-June 24.....	84	67	
Do.....	June 25-Oct. 21.....	35	28	
Karachi.....	May 23-June 24.....	35	9	
Do.....	July 16-Sept. 30.....	18	5	
Madras.....	May 14-June 24.....	207	94	June 19-25, 1922: Cases, 30; deaths, 15.
Do.....	July 2-Oct. 28.....	548	249	
Rangoon.....	May 7-June 24.....	37	16	
Do.....	July 2-Oct. 7.....	69	34	
Indo-China:				
Saigon.....	June 30-Aug. 19.....	36	26	Including area of 100 square km.
Italy:				
Trieste.....	Sept. 1-Nov. 11.....	13	4	
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 28-July 20.....	48	8	
Java:				
East Java—				
Soerabaya.....	Aug. 13-Sept. 23.....	3		
West Java—				
Batavia.....	Apr. 28-June 30.....	20	3	City and Province.
Do.....	July 9-Oct. 13.....	70	9	Province.
Luxemburg.....	June 15-30.....	1	1	
Malta.....	May 1-June 15.....	4		June 1-30, 1922: Cases, 2.
Mesopotamia:				
Bagdad.....	Apr. 1-June 30.....	36	40	
Do.....	July 1-Sept. 30.....	104	30	
Mexico:				
Chihuahua.....	June 22-Sept. 17.....		2	
Guadalajara.....	May 1-June 30.....	13		
Do.....	July 1-Oct. 31.....	9	2	
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, 1922, not received.
Do.....	June 25-Nov. 4.....	231		Including municipalities in Federal District.
Nogales.....	July 22-Nov. 25.....	26	4	State of Sonora.
San Luis Potosi.....	July 23-Oct. 7.....		12	
Torreón.....	July 1-31.....		1	
Panama Canal:				
Colon.....	July 1-Oct. 15.....	3		July 1-31, 1922: Cases, 4, of which 1 nonresident and not locally reported. July 23-Sept. 28, 1922: Cases, 3; of these, nonresident, 2.
Panama.....	July 1-Aug. 15.....	2		
Persia:				
Teheran.....	Apr. 23-May 22.....	2		
Peru.....				
Callao.....	Jan.-June.....	2		May 1-15, 1922: Cases, 5; deaths, 4. June 1-30, 1922: Cases, 16 deaths, 7. Aug. 1-31, 1922: Cases, 23; deaths, 5.
Do.....	July 1-Sept. 30.....	26	7	Country, 1 case.
Lima.....	Jan.-June.....	65	21	Country, cases, 8; deaths, 2.
Do.....	July 1-Sept. 30.....	17	7	Country, cases, 25, deaths, 7. (Corrected report.)
Poland.....				Mar. 26-June 24, 1922: Cases, 1,210; deaths, 241.
Do.....				June 25-Sept. 7, 1922: Cases, 253; deaths, 64. Sept. 3-30, 1922: Cases, 53; deaths 9.

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

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

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Portugal:				
Lisbon.....	May 29-June 25.....	6	8	Corrected report. Do.
Do.....	June 25-Nov. 11.....	407	10	
Oporto.....	Aug. 27-Oct. 7.....	4		
Portuguese East Africa:				
Lourenco Marques.....	July 23-29.....	1		
Portuguese West Africa:				
Angola—				
Loanda.....	June 25-Oct. 3.....		16	
Russia:				
Esthonia.....	May 1-June 30.....	6		
Do.....	July 1-Sept. 30.....	2		
Lettonia.....	May 1-June 30.....	51		
Do.....	July 1-Aug. 31.....	20		
Senegal:				
Dakar.....	June 1-30.....	4	4	
Spain:				
Barcelona.....	June 22-28.....		1	
Do.....	June 29-Sept. 13.....		3	
Bilbao.....	Aug. 1-Sept. 30.....		5	
Cadiz.....	Aug. 1-30.....		1	
Corunna.....	June 11-17.....		1	
Do.....	Oct. 15-21.....		1	
Huelva.....	Apr. 1-June 30.....		4	
Do.....	July 1-Aug. 31.....		2	
Seville.....	June 11-17.....		36	Week ended June 11, 1922: Many cases.
Do.....	June 18-Nov. 5.....		200	
Valencia.....	May 21-27.....	1		
Do.....	Nov. 5-11.....	1		
Straits Settlements:				
Singapore.....	Apr. 30-June 5.....	11	2	
Do.....	July 30-Aug. 19.....	3	1	
Switzerland:				
Basel.....	May 28-June 3.....	1		
Do.....	Sept. 17-23.....	1		
Berne.....	May 14-20.....	1		
Do.....	July 9-Oct. 28.....	25		
Lucerne.....	July 1-31.....	1		
Zurich Canton				
Zurich.....	Apr. 23-June 12.....	9		Aug. 1-31, 1922: Cases, 73.
Do.....	June 25-Nov. 10.....	95		
Syria:				
Aleppo.....	June 4-24.....			Present.
Damascus.....	June 18-24.....		2	
Do.....	June 25-Oct. 14.....	26	3	
Tunis:				
Tunis.....	July 17-23.....	1		
Turkey:				
Constantinople.....	May 21-June 24.....	21	6	
Do.....	June 25-Oct. 21.....	67	19	
Union of South Africa				
Cape Province.....				Apr. 1-June 30, 1922: Cases, 173; deaths, 12 (colored); white, cases, 36. July 1-Aug. 31, 1922: Colored, cases, 232; deaths, 3; white, 9 cases.
Do.....				Apr. 1-June 30, 1922: Cases, 87; deaths, 3 (colored); white, 6 cases. July 1-Aug. 31, 1922: Cases, 89; deaths, 2 (colored).
Natal.....	Aug. 2-Oct. 21.....			Outbreaks. Apr. 1-May 31, 1922: Cases, 20; deaths, 8 (colored); white, 23 cases. July 1-31, 1922: Cases, 5 (colored).
Orange Free State.....				May 1-31, 1922: Cases, 12; deaths, 1 (colored). July 1-Aug. 31, 1922: 5 cases (colored).
Do.....				Outbreaks.
Southern Rhodesia.....	Sept. 3-9.....			In native cases, 3.
Do.....	May 11-June 28.....	67	4	
Do.....	June 29-Aug. 23.....	35		
Transvaal.....				Apr. 1-June 30, 1922: Cases, 54 (colored); white, 10 cases. July 1-Aug. 31, 1922: Colored, cases, 133; deaths, 1; white, 9 cases.
Do.....				Outbreaks.
Johannesburg.....	July 9-Oct. 21.....			
Do.....	May 1-31.....	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.
Reports Received from July 1 to December 15, 1922—Continued.
SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
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		
Do.....	Aug. 6-12.....	1		
Serbia.....				Oct. 23-29, 1921: Cases, 5.
Belgrade.....	June 11-17.....	1		
Do.....	Aug. 14-Nov. 5....	37	14	
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. Clan MacWilliams.....	Aug. 13.....	1		En route from Durban and Delagoa Bay, Union of South Africa, via Newcastle, Australia, via Mauritius. Arrived Newcastle Aug. 25, 1922; proceeded to Sydney in quarantine. Patient, colored fireman.
S. S. Comerio.....	do.....	1		At sea, en route to Durban, S. A.; from Sydney, Australia. (Public Health Reports, June 23, 1922, p. 1555.)
Sch. Fancy Me.....	May 28.....			At St. Thomas, Virgin Islands. From San Pedro de Macoris, Dominican Republic. 1 case removed to quarantine June 5; died June 18.
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.
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.

TYPHUS FEVER.

Algeria:				
Algiers.....	May 1-31.....	16	4	
Do.....	Aug. 1-Oct. 31.....	6	4	
Oran.....	June 1-30.....	3	1	
Do.....	July 1-Oct. 10.....	1	4	
Asia Minor:				
Smyrna.....	May 14-June 24....	8		City and district. (Corrected report.)
Do.....	June 25-Aug. 19....	11		District.
Australia:				
Brisbane.....	July 9-Aug. 12....	2		
Austria:				
Vienna.....	May 7-June 10....	3	1	
Do.....	July 2-Aug. 19....	3	1	
Bolivia:				
La Paz.....	Mar. 1-Apr. 30....	15	8	

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

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

TYPHUS FEVER—Continued.

Place.	Rate.	Cases.	Deaths.	Remarks.
Bulgaria:				
Sofia.....	May 28-June 17.....	4		
Do.....	Sept. 24-30.....	1	1	
Chile:				
Antofagasta.....	Nov. 5-11.....	1	1	
Concepcion.....	Apr. 11-May 29.....		10	
Do.....	June 27-Oct. 16.....		13	
Talcahuano.....	Oct. 8-28.....	7	1	
Valparaiso.....	Apr. 2-22.....		6	
Do.....	July 18-Sept. 30.....		26	
China:				
Antung.....	May 15-21.....	1		
Do.....	July 10-Oct. 29.....	24		
Foochow.....	May 14-20.....	1		
Do.....	Aug. 6-12.....	4		
Hankow.....	July 9-15.....	1	1	
Manchuria—				
Harbin.....	May 8-June 11.....	4		
Do.....	June 26-Oct. 29.....	9		
Tsingtau.....	Sept. 11-18.....		1	
Czechoslovakia:				
Prague.....	June 11-17.....	1		
Do.....	July 1-Aug. 26.....	2	1	
Danzig (free city)	June 4-10.....	1		
Egypt:				
Alexandria.....	June 4-24.....	9	6	
Do.....	June 25-Nov. 4.....	33	15	July 22-23, 1922: 1 imported paratyphoid.
Cairo.....	Mar. 19-June 24.....	19	62	Relapsing fever, Mar. 26-Apr. 8, 1922; 1 case.
Do.....	June 25-Sept. 9.....	42	30	
Port Said.....	May 28-June 3.....	1		
Do.....	July 2-Sept. 2.....	11	29	
Germany				May 1-6, 1922: 5 cases typhus fever at quarantine station of Osternothafen, in persons returning from Russia.
Berlin.....	Apr. 30-June 24.....		7	
Do.....	June 25-Oct. 21.....		19	
Coblenz.....	July 2-Nov. 18.....	26	3	
Königsberg.....	May 28-June 3.....	1		
Do.....	Sept. 3-9.....	1		
Stuttgart.....	July 22-Aug. 26.....	2	1	
Great Britain:				
Glasgow.....	Sept. 17-23.....	1	1	
Greece:				
Piræus.....	Aug. 1-31.....	1		
Saloniki.....	May 1-June 18.....	25	1	2 in Russian refugees.
Indo-China:				
Saigon.....	Aug. 6-19.....	1		
Java:				
East Java—				
Soerabaya.....	July 23-Aug. 5.....	4	2	
Mesopotamia:				
Bagdad.....	Apr. 1-June 30.....	7	2	
Do.....	Aug. 1-Sept. 30.....	6		
Mexico:				
Mexico City.....	Apr. 23-June 24.....	111		Including municipalities in Federal District.
Do.....	June 25-Nov. 4.....	303		Do.
San Luis Potosi.....	Sept. 16-Oct. 7.....			Present. Oct. 1-7, 1922; Deaths, 2.
Netherlands:				
Amsterdam.....	July 30-Aug. 5.....	1		
Norway:				
Christiania.....	Aug. 15.....	1	1	
Province—				
Finmarken.....	July 26-Aug. 5.....	12	2	Occurring in 3 localities.
Palestine: ¹				
Jaffa.....	June 27-Nov. 6.....	5		Relapsing fever, 1 case.
Persia:				
Teheran.....	Mar. 22-June 22.....		8	

¹ In previous reports given as for Jerusalem.

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

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

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Poland.....				Mar. 26-Apr. 22, 1922: Cases, 5,695; deaths, 349. Apr. 23-June 24, 1922: Cases, 9,402; deaths, 631. Recurrent typhus, Mar. 26-Apr. 22, 1922: Cases, 4,515; deaths, 155. Apr. 23-May 6, 1922: Cases, 1,598; deaths, 34. (Corrected report.) May 7-June 24, 1922: Cases, 4,790; deaths, 111. June 25-Sept. 30, 1922: Cases, 3,060; deaths, 234. Recurrent typhus, June 25-Sept. 30, 1922: Cases, 4,617; deaths, 139.
Warsaw.....	Apr. 23-June 24	156		Among transient and permanent residents.
Portugal:				
Oporto.....	May 4-June 24	9	4	
Do.....	June 29-Sept. 30	3	1	
Seixal.....	Aug. 4	1		Village opposite Lisbon.
Rumania:				Apr. 1-May 31, 1922: Cases, 62.
City—				
Bucharest.....	May 1-June 20	17		
Cerenauti.....	May 1-31	5		
Do.....	Oct. 22-28	7		
Chisinau.....	Apr. 1-June 20	36		
Cluj.....	May 1-June 20	22		
Constanza.....	do	3		
Galatz.....	May 1-June 30	2		
Jassey.....	June 1-30	1		
Sulina.....	May 1-31	2		
District—				
Chisinau.....	July 1-31	4		Apr. 1-30, 1922: Cases, 14; recurrent typhus, cases, 7.
Do.....	Sept. 1-30	5		Recurrent typhus: Cases, 9.
Province—				
Bucovina.....	Jan. 1-31	35	13	
Transylvania.....	do	16	3	
Russia:				
Esthonia.....	Apr. 1-June 30	44		Sept. 1-30, 1922: Recurrent typhus, cases, 6; paratyphus, 11.
Do.....	July 1-Sept. 30	16		Recurrent typhus: Cases, 40.
Lettonia.....	Apr. 1-June 30	635		Recurrent typhus: Cases, 21; paratyphus cases, 3.
Do.....	July 1-Aug. 31	74		
Siberia:				
Vladivostok.....	July 1-31	3		
Spain:				
Barcelona.....	July 13-19		1	
Madrid.....	May 1-June 30		16	
Do.....	July 1-Aug. 31		7	
Seville.....	May 21-June 3		1	
Switzerland:				
Lucerne.....	Aug. 1-31	2		
Syria:				
Aleppo.....	Oct. 15-21	1	1	Aug. 27-Nov. 11, 1922: Present and in interior.
Damascus.....	Oct. 1-7	1		
Tunis:				
Tunis.....	June 4-10	2		
Turkey:				
Constantinople.....	May 21-June 24	16		
Do.....	July 9-Oct. 21	41	4	
Union of South Africa:				
Cape Province.....				Apr. 1-June 30, 1922: Cases, 1,220; deaths, 214 (colored); white, 17 cases. July 1-Aug. 31, 1922: Cases, 1,108; deaths, 179 (colored); white, 4 cases.
Do.....	Aug. 20-Oct. 14			Apr. 1-June 30, 1922: Cases, 1,037; deaths, 194 (colored); white, 16 cases. July 1-Aug. 31, 1922: Cases, 1,041; deaths, 165 (colored); white, 4 cases.
Diamond fields.....				Outbreaks. Sept. 28, 1922. Outbreaks at native locations near Kimberley.
Delport.....	Sept. 28			Outbreak.
Gong-Gong.....	do		20	
Winter's Rush.....	do		12	Including Longlands.
East London.....	do	1		

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

Reports Received from July 1 to December 15, 1922—(Continued.)

TYPHUS FEVER—(Continued.)

Place.	Date.	Cases.	Deaths.	Remarks.
Union of South Africa—Contd.				
Natal.....				Apr. 1-June 30, 1922: Cases, 57; deaths, 7 (colored). July 1-Aug. 31, 1922: Cases, 25; deaths, 4 (colored).
Do.....	Sept. 1-Oct. 21.....			Outbreaks.
Orange Free State.....				Apr. 1-June 30, 1922: Cases, 97; deaths, 10 (colored); white, 1 case. July 1-Aug. 31, 1922: Cases, 36; deaths, 10 (colored).
Do.....	Aug. 27-Oct. 21.....			Outbreaks.
Transvaal.....				Apr. 1-June 30, 1922: Cases, 29; deaths, 2 (colored). July 1-Aug. 31, 1922: Cases, 6 (colored).
Do.....	Aug. 27-Sept. 30.....			Outbreaks.
Johannesburg.....	May 1-June 30.....	7	1	
Do.....	July 1-31.....	1		
Yugoslavia.....				
Bosnia-Herzegovina.....	Aug. 7-13.....	1		Aug. 7-13 1921: 2 new cases. (1921).
Croatia-Slavonia.....	Sept. 4-10.....	1		Do.
Serbia.....				
Belgrade.....	May 6-June 3.....	2		
Voivodina.....	Aug. 7-13.....	1		Do.
On vessels:				
S. S. Chios.....	July 18.....	1		At Kavak quarantine station, Bosphorus, from Novorossysk, a Russian Black Sea port. Vessel carried refugees for Saloniki, Greece.
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.

Brazil:				
Bahia.....	July 30-Aug. 26.....	3	2	
Mexico:				
Ciudad Victoria.....	Sept. 27-Dec. 2.....	2	1	Origin of one fatal case, Tampico. From Panuco: Patient brought to Tampico on eighth day of illness.
Tampico.....	July 27-29.....	1		
Do.....	Aug. 30.....		6	Of these, 5 with origin at Panuco, State of Vera Cruz; 1 with origin at Tampico. Nov. 5, 1922: 1 case.
Tuxpam.....	Oct. 14-Dec. 1.....	3		
On vessel:				
S. S. H. H. Rogers.....	Nov. 28.....	1		Probable case. At Tampico, Mexico.
Schr. William E. Burnham.....	Sept. 13.....		1	At sea between Paramaribo and Mobile Quarantine, Ala., where the vessel arrived Sept. 14, 1922. The vessel left Freetown, Sierra Leone, June 25 and touched at Mungo and Paramaribo.