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VACCINATION OF MONKEYS AGAINST PNEUMOCOCCUS TYPE I PNEUMONIA BY MEANS OF INTRATRACHEAL INJECTION OF PNEUMOCOCCUS TYPE I VACCINE.¹

By RUSSELL L. CECIL, M. D., Special Expert, and GUSTAV I. STEFFEN, Assistant Bacteriologist, Pneumonia Studies, United States Public Health Service.

In a previous study (1) it has been shown that monkeys can be completely immunized against pneumococcus Type I pneumonia by three subcutaneous injections of pneumococcus Type I vaccine. The results with pneumococcus vaccine in monkeys were in harmony with those obtained in man by Cecil and Austen (2), and by Cecil and Vaughan (3), who tested the prophylactic value of pneumococcus vaccine on recruits in the United States Army and found that the incidence rate of pneumonia was markedly lowered in organizations that had received subcutaneous inoculations of pneumococcus vaccine. These investigators, however, commented on the severe reactions sometimes produced by pneumococcus vaccine, and intimated that improvements in methods of preparation and administration would have to be forthcoming before active immunization against pneumonia would be practical in civil life.

During the past three years a number of modified pneumococcus vaccines have been tried by the authors of this report, but none of them has been quite so efficient as the original saline suspension of killed pneumococci. With regard to modifications in the method of administration, it occurred to us that a satisfactory immunity against pneumonia might be obtained by injecting the vaccine directly into the trachea. Such a procedure seemed entirely rational when taking into consideration the fact that in lobar pneumonia infection takes place through the trachea, and in the very early stages is a peritracheal and peribronchial infection. Furthermore, the work of Besredka (4) on the production of local immunity in the respiratory tract by intratracheal injections of vaccine, and the more recent report of Mackenzie and Baldwin (5) on the desensitization of hay-fever patients by the local application of pollen extracts to the nasal mucous membrane, lent support to such a proposition.

¹ From the Hygienic Laboratory of the United States Public Health Service and the second (Cornell) medical division and pathological laboratory of Bellevue Hospital, New York. This work also received financial aid from the Metropolitan Life Insurance Co.'s influenza fund.

The experiments reported in this article all have to do with intratracheal vaccination. In these experiments two species of monkeys have been used, *Macacus syrichtus* and *Cebus capucinus*. The vaccine was prepared in the usual way and was similar in every respect to the pneumococcus saline vaccine employed in preceding experiments. The vaccine was prepared from a highly virulent strain of pneumococcus Type I, which was capable of killing a mouse in doses of 0.00000001 c. c. of a 24-hour broth culture. The technique used for vaccinating monkeys intratracheally was similar to that which had been previously developed for producing experimental pneumonia in monkeys by the intratracheal injection of virulent pneumococci. The neck of the animal was shaved and the skin painted with iodine. The vaccine was then injected directly into the trachea with a sterile hypodermic syringe. Immediately after the injection of vaccine the operating board was elevated in order to facilitate descent of the vaccine into the lungs. The injections were given at intervals of five to seven days, and the immunity of the monkeys was tested two or three weeks after the third administration of vaccine by inoculating the immunized monkeys intratracheally with small doses (0.001 to 0.0001 c. c.) of living virulent pneumococcus culture.

EFFECT OF THREE LARGE DOSES OF PNEUMOCOCCUS VACCINE INJECTED INTRATRACHEALLY.

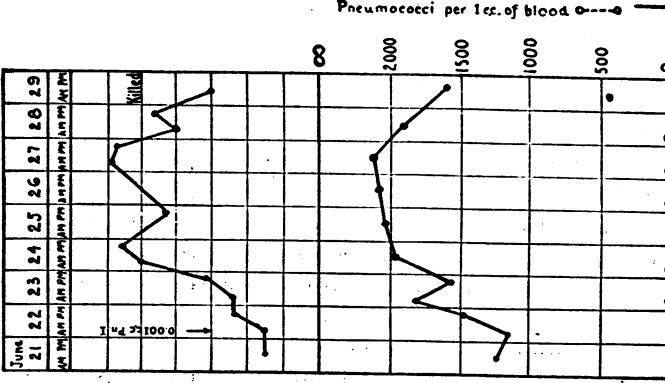
The object of the first experiment was to determine whether three large doses of pneumococcus vaccine injected intratracheally would afford adequate immunity against a subsequent pneumonia. The total dosage of vaccine used was exactly equivalent to that which had been successfully employed in the subcutaneous vaccination experiments, namely, 120,000,000,000 pneumococci.

EXPERIMENT 1.—Three Philippine monkeys were vaccinated intratracheally, as follows:

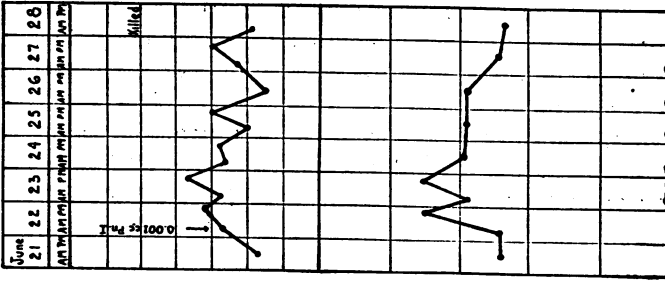
May 18, 1921, No. 122 (2140 gm.), No. 123 (2546 gm.), and No. 124 (2090 gm.) received each 20,000,000,000 (2 c. c.) of pneumococcus Type I vaccine intratracheally. May 25 each monkey received 40,000,000,000 (2 c. c.) of pneumococcus Type I vaccine intratracheally. June 1 each monkey received 60,000,000,000 (2 c. c.) of pneumococcus Type I vaccine intratracheally. There were no noticeable reactions to any of the three inoculations. June 22, three weeks after the last injection of vaccine, each of the three monkeys received 0.001 c. c. of a virulent 18-hour broth culture of pneumococcus Type I intratracheally. At the same time an unvaccinated control monkey, No. 140 (2600 gm.), received the same amount (0.001 c. c.) of culture intratracheally.

The results of this experiment are shown in Figure 1. The three vaccinated monkeys remained perfectly well. They showed no rise in temperature, and only a slight and temporary rise in the leucocyte

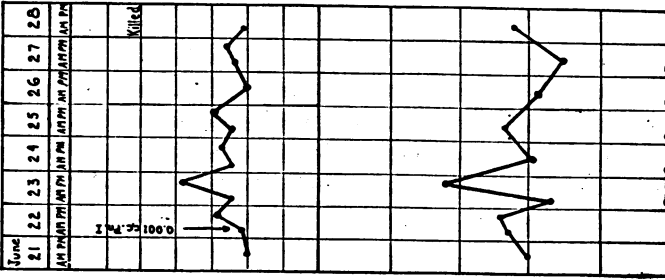
Monkey 140
(Control)



Monkey 124



Monkey 123



Monkey 122

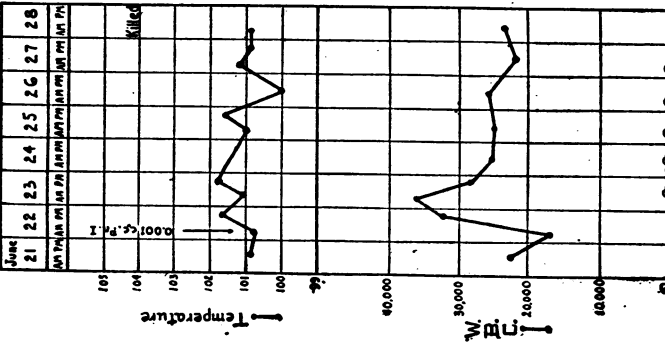


FIG. 1.—Active immunity against pneumococcus Type I pneumonia, following three large intratracheal injections of pneumococcus Type I vaccine. Monkeys 122, 123, and 124 each received 120 billion pneumococcus Type I vaccine intratracheally. Monkey 140 was the control.

count. The blood remained sterile in all three vaccinated monkeys. The control monkey became ill shortly after inoculation with the virulent pneumococcus and ran a typical course of pneumonia with temperature of 103° to 105° F., leucocytes 30,000 to 43,000, and lysis on the eighth day. The three vaccinated monkeys were killed on the seventh day, the control on the eighth day, after inoculation. The lungs were entirely normal and sterile in all three vaccinated monkeys. There was no evidence in the gross or in microscopic sections of a past or present pneumonia. The control monkey showed a perfectly typical lobar consolidation of the right lower lobe in the early stage of resolution. Pneumococcus Type I was recovered in cultures from the consolidated lobe.

Protection tests.—The three vaccinated monkeys were bled just before their active immunity was tested, in order to determine the protective power of their serums in mice. No protective substance against pneumococcus Type I could be demonstrated in any of the serums, even when doses of culture as minute as 0.0000001 c. c. were used.

From this experiment it is evident that three large intratracheal doses of pneumococcus Type I vaccine conferred complete protection against a subsequent pneumococcus Type I pneumonia. The actual dose of vaccine used was the same as that employed in the subcutaneous experiments previously reported.

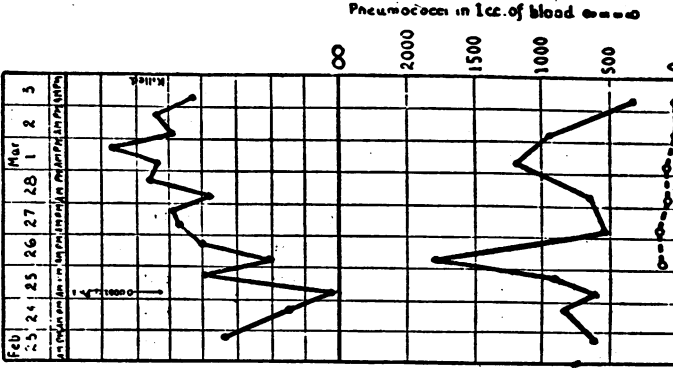
EFFECT OF THREE SMALL DOSES OF PNEUMOCOCCUS VACCINE INJECTED INTRATRACHEALLY.

It was desirable to determine whether an adequate immunity could be established by the intratracheal injection of smaller doses of vaccine. A second experiment was therefore carried out in which the total dosage of vaccine injected was equivalent to approximately one-tenth of the total dosage employed in the first experiment.

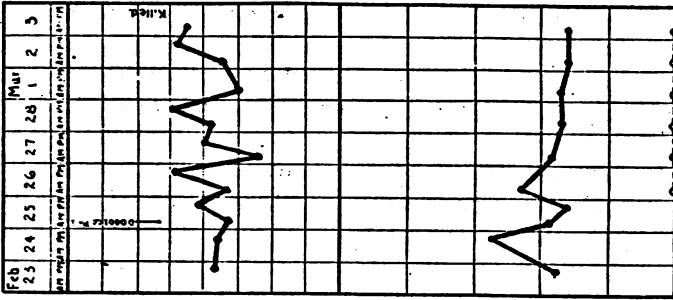
EXPERIMENT 2.—Three Philippine monkeys were vaccinated as follows:

January 30, 1922, No. 177 (2189 gm.), No. 178 (2088 gm.), and No. 181 (1572 gm.), received each 600,000,000 (2 c. c.) of pneumococcus Type I vaccine intratracheally. February 4, each monkey received 5,000,000,000 (2 c. c.) of pneumococcus Type I vaccine intratracheally. No. 177 escaped from cage just after the first vaccination and burnt his feet on a hot radiator. At this time (February 4) there were large blebs on all four feet, some of which had ruptured and were oozing blood. February 9, each monkey received 7,000,000,000 (2 c. c.) of pneumococcus Type I Vaccine intratracheally. Feet of monkey 177 were still sore and oozing bloody fluid. Feet washed with bichloride of mercury (1-1000) solution. In spite of this treatment, however, the feet became infected, and when the tests for immunity were carried out two weeks later, they were still swollen and sore, and the monkey was running a temperature of 103° to 104° F. February 25, 16 days after the last injection of vaccine, each of the three vaccinated monkeys received 0.0001 c. c. of a virulent 18-hour culture of pneumococcus Type I intratracheally. At the same time, an unvaccinated control monkey, No. 183 (2434 gm.), received the same amount (0.0001 c. c.) of culture intratracheally.

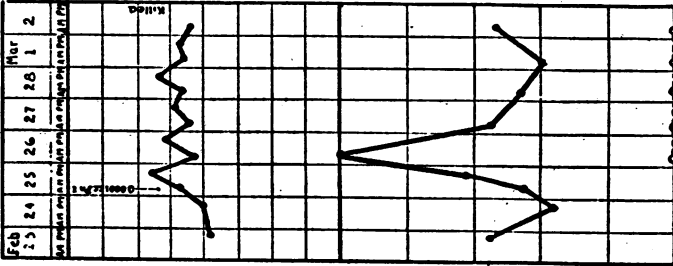
Monkey 183
(Control)



Monkey 181



Monkey 178



Monkey 177

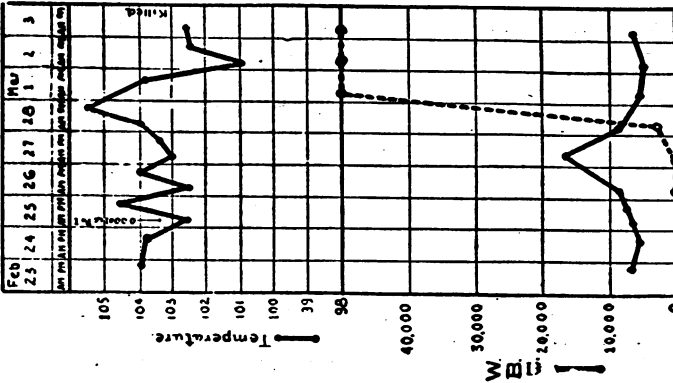


Fig. 2.—Active immunity against pneumococcus Type I pneumonia, following three small intratracheal injections of pneumococcus Type I vaccine. Monkeys 177, 178, and 181 each received 12.6 billion pneumococcus Type I vaccine intratracheally. Monkey 183 was the control.

The results are indicated in Figure 2. Monkey No. 177, the vaccinated monkey, whose feet had been accidentally burned and thereafter had become infected, gradually developed signs of pneumonia. His temperature rose slowly to 105.4°, and blood cultures showed a severe pneumococcus septicemia. On the seventh day following inoculation he was killed by a blow on the head. Autopsy revealed lobar pneumonia of the right upper and right lower lobes, in the early stage of gray hepatization. Pneumococcus Type I was recovered in pure culture from the consolidated areas and also from the heart's blood. The other two vaccinated monkeys, Nos. 178 and 181, remained healthy in spite of the inoculation. There was little or no change in their temperature, nor could pneumococci be demonstrated at any time in their blood. These two monkeys were killed, one on the sixth day and the other on the seventh day following inoculation, and at the autopsies normal sterile lungs were found in both cases.

The control for this experiment, monkey No. 183, developed the symptoms and signs of pneumonia and, when killed on the seventh day after inoculation, showed a small patch of consolidation in each upper lobe. Pneumococcus Type I was recovered from the consolidated areas, and Gram positive diplococci were demonstrated in sections of the lung stained by the Gram method. -

Protection tests.—Blood was withdrawn, as usual, from the vaccinated monkeys, just before they were inoculated with living pneumococci, to test for protective bodies against pneumococcus Type I. No protection could be demonstrated in the serums of No. 177 or No. 178. In the case of No. 181, the mice receiving the two smallest injections of culture (0.0000001 c. c. and 0.0000001 c. c.) both survived.

This experiment indicates that an adequate immunity against pneumococcus Type I pneumonia can be established in monkeys with doses of vaccine only one-tenth as large as those previously used, provided the vaccine is given intratracheally. To be sure, monkey 177 failed to develop sufficient immunity to protect him against a subsequent pneumonia, but this failure was probably referable to the infection of the feet which existed at the time the monkey's immunity was tested.

EFFECT OF PNEUMOCOCCUS VACCINE SPRAY.

If monkeys could be protected against pneumococcus pneumonia by three small intratracheal injections of pneumococcus vaccine, there was some ground for hoping that a satisfactory immunity might be produced by the mere inhalation of a vaporized pneumococcus vaccine. Accordingly, three monkeys were sprayed every day for approximately three weeks with pneumococcus vaccine, in order to determine whether this method of vaccination was practical.

EXPERIMENT 3.—Three Philippine monkeys were sprayed with pneumococcus vaccine, as follows:

October 4, 1921, No. 149 (1982 gm.), and No. 150 (1814 gm.) received each 1 c. c. pneumococcus saline vaccine (20,000,000,000 pneumococci per c. c.) in the form of vapor from a De Vilbiss atomizer directly into the pharynx. Artificial respiration was practiced on the monkeys in such a way that deep inspiration occurred synchronously with each squeeze of the atomizer bulb. The monkeys, however, offered considerable opposition to this procedure and, by blocking off the nasopharynx with the tongue and soft palate, made it quite difficult to get the vaccine into the trachea. This treatment was repeated every day for 24 days with dosage of vaccine gradually increasing. November 10, 1921, monkey No. 152 (1467 gm.) was sprayed with pneumococcus Type I vaccine in a similar manner and the treatment repeated every day for 19 days. November 9, 1921, twelve days after the completion of vaccination, each of the three monkeys received 0.001 c. c. of a virulent 18-hour broth culture of pneumococcus Type I intratracheally. At the same time an unvaccinated control monkey, No. 155 (2032 gm.), received the same amount (0.001 c. c.) of culture intratracheally.

The results of this experiment are shown in Figure 3. The three vaccinated monkeys and the control all developed pneumonia. The two monkeys, however, that had been sprayed every day for 24 days (Nos. 149 and 150) remained lively during the entire period of observation and never developed a positive blood culture. No. 152 had been sprayed only nineteen times. He developed a lobar pneumonia with leucocytosis and positive culture, but was recovering when killed on the seventh day. The control ran a typical course of lobar pneumonia, as seen in monkeys, with prostration, high temperature, leucocytosis, and severe pneumococcus septicemia, and recovered by lysis on the seventh day.

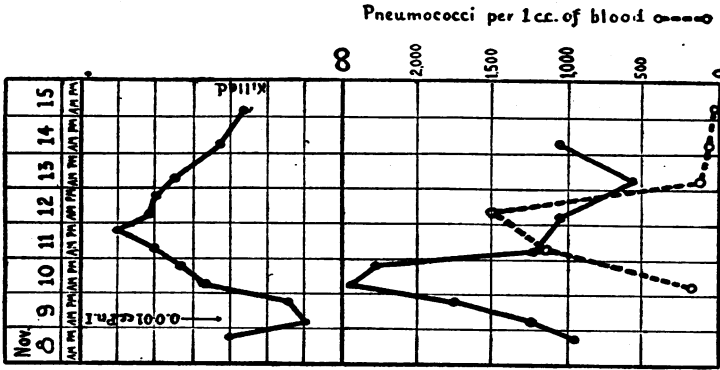
Monkey 149 and monkey 150 were killed on the sixth day; monkey 152 and monkey 155 on the seventh day following the intratracheal injection of culture. Monkey 149 showed a lobar pneumonia of the right lower lobe, from which pneumococcus Type I was recovered. Monkey 150 also presented a lobar pneumonia in the gray stage, which involved the right lower lobe. Pneumococcus Type I was isolated in pure culture from the lobe involved. Monkey 152 showed at autopsy an interstitial pneumonia of both lower lobes. Cultures from the lungs yielded pneumococcus Type I. The control monkey (No. 155) was also found to have interstitial pneumonia of the right and left lower lobes, cultures from which showed a pure growth of pneumococcus Type I.

Protection tests were carried out on mice with the serums of the monkeys that had been sprayed with pneumococcus vaccine. No protective substance could be demonstrated in any of the three.

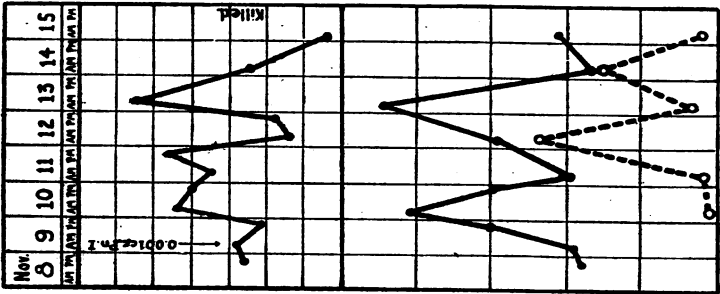
DISCUSSION.

From these experiments the inference seems justified that the intratracheal injection of pneumococcus vaccine affords just as satisfactory an immunity against pneumonia as that induced by sub-

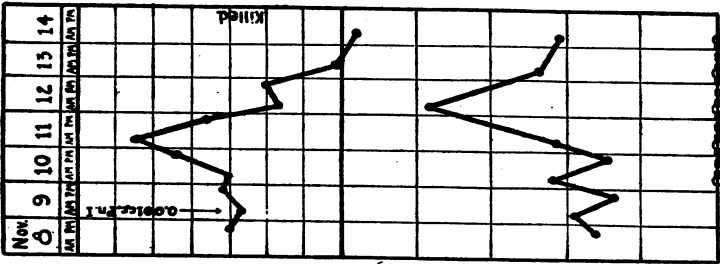
Monkey 155
(Control)



Monkey 152



Monkey 150.



Monkey 149

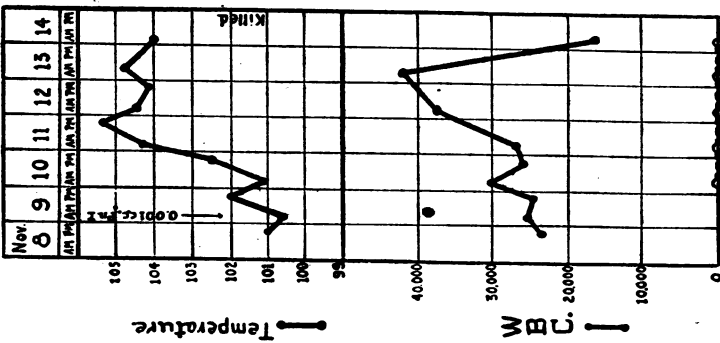


Fig. 3.—Effect of pneumococcus Type I vaccine spray. Monkeys 149, 150, and 152 were sprayed daily with pneumococcus Type I vaccine for from 19 to 24 days. Monkey 155 was the control.

cutaneous or intravenous injections. Indeed, the successful immunization of monkeys with three small intratracheal doses of vaccine indicates that immunity is more readily induced by the intratracheal route than by the subcutaneous route.

It is interesting that such a high degree of immunity could be produced by a formed antigen. The killed pneumococci are probably taken up rapidly by the epithelial cells exactly as foreign bodies are taken up. Theoretically, an antigen in solution would seem to be better adapted for establishing a local immunity such as this appears to be.

The failure of one of the vaccinated monkeys in the second experiment to resist infection serves to bring out an interesting point as to the effect of one infection on immunity against another infection. At the time when this monkey's immunity against pneumonia was being tested, he was suffering from infected feet. This apparently trivial infection was enough to neutralize completely his immunity against pneumonia. Cecil and Vaughan made a similar observation on the troops at Camp Wheeler. They found that pneumococcus vaccine would not always prevent pneumonia in patients suffering with severe attacks of influenza. The development of a high grade of active immunity against pneumonia is probably retarded in like manner by chronic systemic diseases, such as nephritis, cardiac disease, etc.

The failure of the pneumococcus vaccine spray to produce complete immunity against pneumonia was a disappointment; but it was a result not to be wondered at when subsequent experiments with india ink showed that monkeys would allow little or none of the vaporized fluid to enter the trachea. This difficulty, of course, would not be encountered in vaccinating man by the spray method. In spite of the large doses of vaccine which were administered in the first experiment, the monkeys manifested no signs of discomfort following the inoculations. Similar doses when administered subcutaneously in the previous experiments had, on some occasions, excited rather severe local reactions.

The immunity induced by the intratracheal injection of pneumococcus vaccine is probably in great part a cellular immunity. Protection tests were carried out with the serums of all the monkeys vaccinated intratracheally, and in only one case could any protective substance against pneumococcus be demonstrated. It would be interesting to know how much virulent pneumococcus culture could be tolerated intravenously in these monkeys that had been vaccinated intratracheally. It has been shown in a previous study (1) that the intravenous injection of pneumococcus vaccine confers complete immunity against intratracheal infection. The question whether or not the reverse holds true can not be answered at the present time.

CONCLUSIONS.

1. The intratracheal inoculation of monkeys with three doses of pneumococcus Type I vaccine renders them completely immune against experimental pneumococcus Type I pneumonia.

2. The mere spraying of the throat with pneumococcus vaccine will not produce complete immunity against pneumonia in monkeys. Failure under these circumstances may be due to the fact that the monkey, by closing off the nasopharynx, prevents the vaporized vaccine from entering the trachea.

3. The immunity established by intratracheal injection of pneumococcus vaccine is probably cellular in character. Little or no protective substance against pneumococcus can be demonstrated in the serum of monkeys vaccinated by this method.

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SHIP FUMIGATION.**PRELIMINARY REPORT OF THE BOARD APPOINTED BY THE SURGEON GENERAL TO INVESTIGATE THE SUBJECT OF FUMIGATION OF SHIPS.**

Because of the increasing requirements imposed by the quarantine laws of the United States and other countries, especially with reference to rodents, the Public Health Service has felt the need for further study of the whole subject of ship fumigation. For this reason the Surgeon General convened a board on March 1, 1922, consisting of a medical officer, a chemist, and an engineer to inquire into the subject and make recommendations.

In considering this matter the board arranged the work in two main divisions:

First. The investigation of the various gases which seem to offer advantages in ship fumigation, and experimentation regarding the production of these gases.

Second. The investigation of natural ventilation and artificial means of ventilation of ships after fumigation.

INVESTIGATION OF VARIOUS GASES FOR SHIP FUMIGATION.

The two gases which have been largely used for ship fumigation in the United States are hydrocyanic acid gas and sulphur dioxide. Each of these gases has certain advantages and disadvantages not

possessed by the other. Neither is ideal. Carbon monoxide was used for a short time; but, while highly efficient, its use is restricted because of the complicated apparatus needed for its generation.

Sulphur dioxide has the advantages of being a fairly effective fumigant and of giving warning of its presence in time to allow the escape of any person within the quarters where the fumigant is being used. On the other hand, it has the disadvantage of being costly, it diffuses poorly, it is harmful to most tissues, articles of clothing, foodstuffs, seeds, etc., and the length of time for exposure—from 5 to 12 hours—is extremely important, from a financial standpoint, to the ship-owners.

Hydrocyanic acid gas has the advantage of being very toxic in the percentage in which the gas is used, it is less costly than sulphur dioxide, it requires only a short period of exposure, and it does not affect foodstuffs, fabrics, clothing, etc. Its main disadvantages are that it is practically odorless and nonirritating, and that it is so highly toxic that a number of fatalities have occurred during its use.

From a study of the two gases now in use, certain requirements can be laid down which the ideal fumigant should meet. Briefly, these requirements are as follows: High toxicity; easy detection, by the senses, in sublethal concentration; harmlessness to foods; efficient penetrative qualities; nonpersistence; reasonably low cost; furnishes no fire or explosive hazard; and ease of manipulation. It should also be noncorrosive to metals and harmless to fabrics.

In determining where the experimental work should be done it was felt that on account of the wide experience of the Chemical Warfare Service of the Army with the various kinds of poison gases during the war and the familiarity of its officers with the production of such gases, the Edgewood Arsenal of that service would offer ideal facilities if such cooperation could be obtained.

When the matter was suggested to the Chief of the Chemical Warfare Service he immediately gave permission for the Public Health Service to use the facilities of the arsenal to the fullest extent and, in addition, made arrangement for the members of the board to reside at the arsenal during the actual experimental work. Certain personnel of the Chemical Warfare Service were detailed to cooperate in the experiments; others acted in an advisory capacity along special lines. The board desires to express its appreciation of the cooperation of those persons who so generously assisted in the experiments, and whose work contributed in a large measure toward making the final results successful.

Before the board planned its work a brief study had been made by the Public Health Service on the use of chloracetophenone gas with hydrocyanic acid gas. These studies brought out the fact that in such a mixture the tear gas remained long after the hydrocyanic acid

gas had been dispersed. It also brought out the fact that these two gases tended to "layer out"—that is, to form pockets.

CYANOGEN CHLORIDE.

In reviewing the available literature the board gave special consideration to gases containing the cyanogen molecule, as it appeared that a number of these gases not only possessed the toxic effect of HCN, but also were tear gases. Cyanogen chloride was especially investigated, as its chemical and physiological properties seemed to conform so nearly to the requirements set down by the board. Work was therefore begun on a satisfactory method of production and a study of the practicability of its uses as a fumigant.

Methods of production.—Several tests were made with hydrochloric acid or sulphuric acid, sodium cyanide, and an oxidizing agent. The oxidizing agents which were used were manganese dioxide, sodium dichromate, sodium perchlorate, and sodium chlorate. These tests gave little or no lacrimation and were unsatisfactory. Sulphuric acid and salt, with sodium chlorate as an oxidizing agent, gave considerable lacrimation, but was considered undesirable because of delayed time of lacrimation and the predominance of hydrocyanic acid gas.

In the second series of experiments, bleach was used with hydrochloric acid and sodium cyanide. This method of production gave a very satisfactory quantity of cyanogen chloride. The main objections to this method were the danger of fire and the fact that the cyanogen chloride was given off when the bleach and cyanide were mixed, even before they were added to the acid. This method deserves further investigation.

In the third series of experiments, sodium cyanide and sodium chlorate were added to hydrochloric acid with and without the addition of talc. The qualities giving the most satisfactory results per 1,000 cubic feet were:

- 4 ounces powdered sodium cyanide;
- 3 ounces sodium chlorate;
- 2 ounces talc;
- 17 fluid ounces commercial hydrochloric acid, sp. gr. 1.20;
- 34 ounces water.

NOTE.—This formula is tentative and may be changed later.

First, the talc was mixed with the sodium chlorate, then the cyanide was added and mixed, and then the bag containing mixture was dropped into the dilute acid.

The composition of the lethal concentration as expressed in milligrams per liter is as follows:

Cyanogen chloride. 0.9407
Hydrocyanic acid gas.... 0.3269

The purpose of the talc is to reduce the fire and explosive hazard. The friction and impact tests on the cyanide-chlorate talc mixture carried on by the Bureau of Mines for the Public Health Service showed that the fire and explosive hazard of the mixture was very small, except under extreme conditions not met with in actual usage.

The cyanogen chloride and hydrochloric acid gas mixture given above fulfills the following requirements:

- (1) Toxicity: High toxicity with rodents, bats, roaches, bedbugs. (The amount required for lice requires further experimentation.)
- (2) Detection properties: Intense lacrimation when lethal dose used. In 1/8 lethal dose (having no harmful effect on rats after exposure of one hour) lacrimation was still extreme.
- (3) No effect on foods, tobacco, fabrics, leather, and no corrosive action on metals (with the possible exception of nickel).
- (4) Efficient penetration qualities.
- (5) Nonpersistence: Gas is not more persistent with hydrocyanic acid gas, probably less so.
- (6) Reasonably low cost per 1,000 cubic feet. Cyanogen chloride mixture, \$0.088; hydrochloric acid gas, \$0.081.
- (7) Fire and explosive hazards at minimum.

INVESTIGATION OF VENTILATION OF SHIPS.

At the request of the Surgeon General, the United States Shipping Board detailed one of its ships to the Public Health Service for the study of ventilation.

This part of the investigation has not as yet been completed, but the work has been along the following general lines:

- (1) A study of the natural air currents in the holds of the ship under varying conditions of temperature, humidity, and wind velocity.
- (2) A study of the air currents set up by artificial means of ventilation, such as blowers and fans, and the arrangement of the ducts of the blowers and the location of the fans to give the best results.
- (3) A comparative study of natural ventilation and the various means of artificial ventilation in dispersing nontoxic heavy gases and cyanogen chloride.
- (4) Practical application of cyanogen chloride in fumigation of holds and quarters on ship board.

As soon as the ventilation studies are finished, it is expected to present both the chemical and ventilation studies as a service publication.

FUMIGATION OF CARGOES OF CRATED VEGETABLES.

The question has recently arisen as to whether cargoes of crated onions, garlic, and potatoes landed at San Juan, P. R., provide means for the conveyance of rats, and therefore whether or not such cargoes

should be fumigated. The following extract from a report made by the chief quarantine officer of San Juan is interesting in this connection:

On August 31, 1922, the Spanish steamship *Antonio Lopez* arrived at San Juan from ports in Spain and the Canary Islands. The vessel proceeded to discharge into open lighters the following cargo: 1,672 crates of garlic from Barcelona, 428 crates of garlic from Valencia, and 600 crates of potatoes from the Canary Islands. The foregoing cargo filled 11 lighters, which contained no rats prior to taking on the cargo. All of these loaded lighters were fumigated by means of cyanide gas. As usual, the portable cyanide gas generator was employed. The time of exposure was two hours. After the completion of the fumigation, the cargo was discharged, under the supervision of an employee of the United States Public Health Service, and four dead rats were found in the lighters. All four rats were full grown *Mus norvegicus*. They were sent immediately to the laboratory for examination, which was reported to be negative for plague infection.

DEATHS DURING WEEK ENDED OCTOBER 21, 1922.

Summary of information received by telegraph from industrial insurance companies for week ended October 21, 1922, and corresponding week, 1921. (From the Weekly Health Index, October 24, 1922, issued by the Bureau of the Census, Department of Commerce.)

	Week ended Oct. 21, 1922.	Corresponding week, 1921.
Policies in force.....	50, 908, 562	47, 955, 519
Number of death claims.....	8, 944	8, 359
Death claims per 1,000 policies in force, annual rate.....	9. 2	9. 1

Deaths from all causes in certain large cities of the United States during the week ended October 21, 1922, infant mortality, annual death rate, and comparison with corresponding week of 1921. (From the Weekly Health Index, October 24, 1922, issued by the Bureau of the Census, Department of Commerce.)

City.	Estimated population July 1, 1922.	Week ended Oct. 21, 1922.		Annual death rate per 1,000, corre- sponding week 1921.	Deaths under 1 year.		Infant mor- tality rate, week ended Oct. 21, 1922. ^a
		Total deaths.	Death rate. ^b		Week ended Oct. 21, 1922.	Corre- sponding week 1921.	
Total.....	27, 479, 466	6, 050	11. 5	11. 6	891	809	.....
Albany, N. Y.....	116, 223	32	14. 4	14. 5	5	5	112
Atlanta, Ga.....	220, 047	61	14. 5	15. 3	8	7	.....
Baltimore, Md.....	762, 222	193	13. 2	14. 6	30	35	84
Birmingham, Ala.....	191, 017	44	12. 0	14. 3	4	12	.....
Boston, Mass.....	784, 017	204	13. 9	11. 9	38	21	102
Bridgeport, Conn.....	* 143, 555	29	10. 5	7. 3	8	4	100
Buffalo, N. Y.....	52*, 163	112	11. 1	10. 5	16	17	63
Cambridge, Mass.....	110, 944	17	8. 0	11. 3	3	1	55
Camden, N. J.....	121, 915	22	9. 4	10. 5	4	5	61
Chicago, Ill.....	2, 533, 288	528	9. 7	10. 8	85	86	.....
Cincinnati, Ohio.....	404, 865	119	15. 3	13. 2	9	10	60
Cleveland, Ohio.....	854, 565	161	9. 8	10. 0	25	28	64
Columbus, Ohio.....	253, 455	52	10. 7	15. 5	6	11	63
Dallas, Tex.....	171, 974	45	13. 6	13. 9	4	7	.....
Dayton, Ohio.....	161, 824	40	12. 9	12. 9	4	4	68
Denver, Colo.....	267, 591	77	15. 0	9. 7	7	4	.....
Detroit, Mich.....	* 113, 678	212	11. 1	9. 3	48	32	92

Deaths from all causes in certain large cities of the United States during the week ended October 21, 1922, etc.—Continued.

City.	Estimated population July 1, 1922.	Week ended Oct. 21, 1922.		Annual death rate per 1,000, corresponding week 1921.	Deaths under 1 year.		Infant mortality rate, week ended Oct. 21, 1922. ³
		Total deaths.	Death rate. ¹		Week ended Oct. 21, 1922.	Corresponding week 1921.	
Fall River, Mass.	120,790	25	10.8	16.0	4	13	56
Fort Worth, Tex.	114,717	20	9.1	.....	3	.....	.....
Grand Rapids, Mich.	143,572	30	10.9	12.6	4	3	67
Houston, Tex.	150,067	36	12.5	13.4	5	4	.....
Indianapolis, Ind.	333,257	98	15.3	11.5	5	8	38
Jersey City, N. J.	305,911	62	10.6	11.5	14	5	89
Kansas City, Mo.	343,388	62	9.4	11.8	11	6	.....
Los Angeles, Calif.	634,866	188	15.4	12.8	22	12	91
Louisville, Ky.	256,377	53	10.8	15.5	7	4	76
Lowell, Mass.	114,423	32	14.6	15.1	4	6	67
Memphis, Tenn.	167,862	62	19.3	23.0	7	11	.....
Milwaukee, Wis.	476,603	92	10.1	7.8	14	13	68
Minneapolis, Minn.	400,970	82	10.7	9.4	11	3	60
Nashville, Tenn.	122,832	34	14.4	12.8	5	3	.....
New Bedford, Mass.	127,542	24	9.8	10.0	5	9	74
New Haven, Conn.	169,987	37	11.4	11.6	2	2	24
New Orleans, La.	399,616	115	15.0	16.4	15	18	.....
New York, N. Y.	5,839,746	1,189	10.2	11.0	176	164	68
Newark, N. J.	431,792	68	8.2	10.1	13	12	58
Norfolk, Va.	124,915	18	7.5	7.7	3	3	53
Oakland, Calif.	223,279	39	8.7	11.5	2	3	25
Omaha, Neb.	200,739	46	11.9	10.8	8	4	86
Paterson, N. J.	138,521	30	11.3	13.3	3	4	46
Philadelphia, Pa.	1,894,500	446	12.3	11.3	71	56	84
Pittsburgh, Pa.	607,902	155	13.3	13.9	38	25	121
Portland, Oreg.	269,240	59	11.4	10.8	7	4	69
Providence, R. I.	241,011	52	11.3	13.3	9	14	71
Richmond, Va.	178,365	50	14.6	13.9	9	7	110
Rochester, N. Y.	311,548	58	9.7	10.9	12	14	92
St. Louis, Mo.	795,008	192	12.6	12.6	15	22	.....
St. Paul, Minn.	239,836	51	11.1	9.4	7	7	66
Salt Lake City, Utah	123,918	23	9.7	12.9	1	4	15
San Antonio, Tex.	178,656	56	16.4	.....	14	.....	.....
San Francisco, Calif.	529,792	142	14.0	14.9	12	11	69
Seattle, Wash.	* 315,312	57	9.4	8.0	6	4	51
Spokane, Wash.	104,445	29	14.5	11.5	2	1	43
Springfield, Mass.	140,652	31	11.5	10.0	6	4	89
Syracuse, N. Y.	181,012	44	12.7	12.1	5	10	60
Toledo, Ohio.	260,717	67	13.4	9.5	7	5	68
Trenton, N. J.	125,075	33	13.8	18.7	4	2	61
Washington, D. C.	* 437,571	113	13.5	14.7	12	12	69
Worcester, Mass.	188,449	39	10.8	10.1	5	7	54
Yonkers, N. Y.	105,422	13	6.4	7.1	2	1	42

¹ Annual rate per 1,000 population.

² Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1921. Cities left blank are not in the registration area for births.

³ Enumerated population Jan. 1, 1920.

PREVALENCE OF DISEASE.

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

UNITED STATES.

CURRENT STATE SUMMARIES.

Reports for Week Ended October 28, 1922.

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

ARKANSAS.		Cases.	CONNECTICUT—continued.		Cases.
Chicken pox.....		2	Influenza.....		4
Dengue.....		32	Measles.....		60
Diphtheria.....		23	Mumps.....		27
Hookworm disease.....		1	Pneumonia (lobar).....		21
Influenza.....		10	Poliomyelitis.....		2
Malaria.....		83	Scarlet fever.....		57
Pellagra.....		7	Tetanus.....		1
Poliomyelitis.....		1	Tuberculosis (all forms).....		45
Scarlet fever.....		9	Typhoid fever.....		4
Tuberculosis.....		18	Whooping cough.....		50
Typhoid fever.....		5			
Whooping cough.....		6			
CALIFORNIA.			FLORIDA.		
Cerebrospinal meningitis—San Francisco.....		1	Cerebrospinal meningitis.....		1
Diphtheria.....		196	Dengue.....		176
Influenza.....		13	Diphtheria.....		24
Lethargic encephalitis:			Influenza.....		3
Los Angeles.....		1	Malaria.....		18
Kings County.....		1	Ophthalmia neonatorum.....		1
Measles.....		11	Pneumonia.....		7
Scarlet fever.....		123	Scarlet fever.....		1
Smallpox.....		7	Smallpox.....		1
Typhoid fever.....		28	Typhoid fever.....		2
Typhus fever—Los Angeles.....		2	GEORGIA.		
COLORADO.			Cerebrospinal meningitis.....		2
(Exclusive of Denver.)			Chicken pox.....		3
Chicken pox.....		1	Dengue.....		737
Diphtheria.....		35	Diphtheria.....		87
Impetigo contagiosa.....		1	Dysentery (bacillary).....		1
Pneumonia.....		3	German measles.....		2
Scarlet fever.....		27	Hookworm disease.....		34
Smallpox.....		7	Influenza.....		16
Typhoid fever.....		28	Malaria.....		61
Tuberculosis.....		6	Pellagra.....		1
CONNECTICUT.			Pneumonia.....		3
Cerebrospinal meningitis.....		1	Scarlet fever.....		18
Chicken pox.....		30	Septic sore throat.....		1
Diphtheria.....		78	Smallpox.....		3
			Tetanus.....		1
			Tuberculosis (pulmonary).....		5
			Typhoid fever.....		7
			Whooping cough.....		15

ILLINOIS.		LOUISIANA.	
	Cases.		Cases.
Cerebrospinal meningitis:		Cerebrospinal meningitis..... 2	
Adams County.....	1	Dengue.....	806
Clay County.....	1	Diphtheria.....	23
Cook County (including Chicago).....	2	Influenza.....	3
Chicago.....	1	Scarlet fever.....	5
Diphtheria:		Smallpox.....	2
Christian County.....	24	Typhoid fever.....	7
Coles County.....	8		
Cook County (including Chicago).....	261	MARYLAND.¹	
Chicago.....	241	Cerebrospinal meningitis.....	1
Fulton County.....	12	Chicken pox.....	12
Greene County.....	8	Diphtheria.....	88
Kane County.....	24	Dysentery.....	2
La Salle County.....	11	Influenza.....	6
Lake County.....	10	Malaria.....	4
Livingston County.....	9	Measles.....	23
Macon County.....	9	Mumps.....	10
Scattering.....	138	Pneumonia (all forms).....	30
Influenza.....	15	Scarlet fever.....	44
Pneumonia.....	180	Septic sore throat.....	1
Poliomyelitis:		Tuberculosis.....	35
Chicago.....	5	Typhoid fever.....	39
Madison County.....	1	Whooping cough.....	35
Rock Island County.....	1		
Stephenson County.....	1	MASSACHUSETTS.	
Scarlet fever:		Cerebrospinal meningitis.....	3
Christian County.....	10	Chicken pox.....	60
Cook County (including Chicago).....	106	Conjunctivitis (suppurative).....	3
Chicago.....	85	Diphtheria.....	237
La Salle County.....	8	German measles.....	5
Lake County.....	10	Hookworm disease.....	1
Madison County.....	8	Influenza.....	14
Peoria County.....	16	Lethargic encephalitis.....	2
Scattering.....	122	Malaria.....	1
Smallpox:		Measles.....	218
Place not stated.....	1	Mumps.....	47
Whiteside County.....	22	Ophthalmia neonatorum.....	8
Typhoid fever.....	32	Pneumonia (lobar).....	67
Whooping cough.....	179	Poliomyelitis.....	4
INDIANA.		Scarlet fever.....	129
Cerebrospinal meningitis—Cass County.....	1	Septic sore throat.....	1
Diphtheria.....	212	Trachoma.....	1
Poliomyelitis—Vigo County.....	1	Trichinosis.....	3
Rabies in animals—Hendricks County.....	1	Tuberculosis (all forms).....	131
Scarlet fever.....	104	Typhoid fever.....	14
Smallpox.....	8	Whooping cough.....	143
Typhoid fever.....	29		
IOWA.		MICHIGAN.	
Diphtheria.....	126	Diphtheria.....	268
Scarlet fever.....	96	Measles.....	12
Smallpox.....	3	Pneumonia.....	71
KANSAS.		Scarlet fever.....	262
Chicken pox.....	30	Smallpox.....	10
Diphtheria.....	181	Tuberculosis.....	32
German measles.....	1	Typhoid fever.....	44
Influenza.....	1	Whooping cough.....	102
Measles.....	13		
Mumps.....	7	MINNESOTA.	
Pneumonia.....	15	Chicken pox.....	12
Scarlet fever.....	168	Diphtheria.....	146
Smallpox.....	2	Influenza.....	2
Trachoma.....	1	Measles.....	3
Tuberculosis.....	47	Pneumonia.....	4
Typhoid fever.....	11	Poliomyelitis.....	1
Whooping cough.....	10	Scarlet fever.....	229
		Smallpox.....	23

¹ Week ended Friday.

MINNESOTA—continued.		Cases.	NEW YORK—continued.		Cases.
Tuberculosis		59	Scarlet fever		221
Typhoid fever		25	Smallpox		2
Whooping cough		7	Typhoid fever		42
			Whooping cough		184
MISSISSIPPI.			NORTH CAROLINA.		
Dengue		164	Cerebrospinal meningitis		1
Diphtheria		84	Chicken pox		14
Scarlet fever		16	Diphtheria		360
Smallpox		3	German measles		5
Typhoid fever		20	Measles		50
MONTANA.			Scarlet fever		130
Cerebrospinal meningitis		1	Septic sore throat		5
Diphtheria		12	Smallpox		9
Scarlet fever		17	Typhoid fever		14
Smallpox		7	Whooping cough		90
Typhoid fever		12	NORTH DAKOTA.		
NEBRASKA.			Chicken pox		27
Chicken pox		5	Diphtheria		20
Diphtheria:			Ophthalmia neonatorum		1
Omaha		20	Pneumonia		4
Gage County		12	Poliomyelitis		2
Scattering		26	Scarlet fever		21
Influenza		1	Smallpox		7
Mumps		5	Trachoma		1
Pneumonia		1	Tuberculosis		9
Scarlet fever		54	Typhoid fever		6
Smallpox		5	OREGON.		
Tuberculosis		1	Chicken pox		8
Typhoid fever		4	Diphtheria:		
Whooping cough		3	Portland		9
NEW JERSEY.			Scattering		8
Cerebrospinal meningitis		2	Influenza		4
Chicken pox		26	Measles		3
Diphtheria		250	Mumps		1
Dysentery		1	Pneumonia		3
Influenza		17	Scarlet fever		16
Measles		135	Smallpox:		
Pneumonia		47	Seaside		19
Poliomyelitis		3	Scattering		8
Scarlet fever		65	Tuberculosis		17
Typhoid fever		14	Typhoid fever		6
Whooping cough		134	Whooping cough		4
NEW MEXICO.			SOUTH DAKOTA.		
Chicken pox		1	Chicken pox		1
Conjunctivitis		1	Diphtheria		26
Diphtheria		19	Pneumonia		2
Pneumonia		6	Scarlet fever		28
Scarlet fever		12	Tuberculosis		7
Septic sore throat		2	Typhoid fever		2
Trachoma		1	TEXAS.		
Tuberculosis		24	Dengue		216
Typhoid fever		22	Diphtheria		32
Whooping cough		7	Pellagra		2
NEW YORK.			Pneumonia		2
(Exclusive of New York City.)			Scarlet fever		13
Diphtheria		240	Smallpox		2
Influenza		10	Typhoid fever		8
Lethargic encephalitis		3	VERMONT.		
Measles		93	Chicken pox		18
Pneumonia		112	Diphtheria		12
Poliomyelitis		22	Measles		1

1 Deaths.

VERMONT—continued.	Cases.
Scarlet fever.....	21
Typhoid fever.....	1
Whooping cough.....	43
WASHINGTON.	
Chicken pox.....	39
Diphtheria.....	39
Impetigo contagiosa.....	1
Measles.....	2
Mumps.....	19
Paratyphoid fever.....	2
Scarlet fever.....	35
Septic sore throat.....	12
Smallpox.....	6
Tuberculosis.....	15
Typhoid fever.....	28
Whooping cough.....	28
WEST VIRGINIA.	
Diphtheria:	
Charleston.....	9
Scattering.....	35
Scarlet fever:	
Parkersburg.....	9
Scattering.....	20
Typhoid fever.....	8

WISCONSIN.	Cases.
Milwaukee:	
Chicken pox.....	16
Diphtheria.....	31
German measles.....	1
Measles.....	283
Ophthalmia neonatorum.....	1
Pneumonia.....	5
Scarlet fever.....	51
Smallpox.....	2
Tuberculosis.....	13
Whooping cough.....	11
Scattering:	
Cerebrospinal meningitis.....	4
Chicken pox.....	46
Diphtheria.....	43
Influenza.....	23
Measles.....	100
Pneumonia.....	4
Poliomyelitis.....	6
Scarlet fever.....	134
Smallpox.....	20
Tuberculosis.....	26
Typhoid fever.....	3
Whooping cough.....	55

Reports for Week Ended October 21, 1922.

ALABAMA.	Cases.
Cerebrospinal meningitis.....	1
Dengue.....	76
Diphtheria.....	37
Influenza.....	22
Malaria.....	37
Ophthalmia neonatorum.....	1
Pellagra.....	3
Poliomyelitis.....	1
Scarlet fever.....	19
Trachoma.....	2
Tuberculosis.....	17
Typhoid fever.....	15
DISTRICT OF COLUMBIA.	
Chicken pox.....	2
Diphtheria.....	15
Scarlet fever.....	13
Tuberculosis.....	18
Typhoid fever.....	2
Whooping cough.....	13
KENTUCKY.	
Cerebrospinal meningitis—Ohio County.....	1
Chicken pox.....	7
Diphtheria:	
Christian County.....	10
Davies County.....	8
Jefferson County.....	32
Kenton County.....	11
Scattering.....	71
Influenza.....	5
Measles.....	4
Paratyphoid fever.....	1
Pneumonia.....	10
Scarlet fever.....	15
Tonsillitis.....	3

KENTUCKY—continued.	Cases.
Trachoma.....	13
Tuberculosis:	
Jefferson County.....	21
Scattering.....	3
Typhoid fever.....	10
Whooping cough.....	3

MAINE.	Cases.
Chicken pox.....	7
Diphtheria.....	7
Influenza.....	2
Measles.....	1
Pneumonia.....	3
Poliomyelitis.....	2
Scarlet fever.....	19
Septic sore throat.....	1
Tuberculosis.....	12
Typhoid fever.....	3
Whooping cough.....	3

MISSOURI.	Cases.
Chicken pox.....	8
Diphtheria.....	102
Influenza.....	28
Measles.....	2
Mumps.....	3
Scarlet fever.....	69
Trachoma.....	11
Tuberculosis.....	9
Typhoid fever.....	9
Whooping cough.....	8

WYOMING.	Cases.
Scarlet fever.....	4
Smallpox.....	1
Whooping cough.....	1

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.	Pollomyelitis.	Scarlet fever.	Smallpox.	Typhoid fever.
<i>September, 1922.</i>										
California.....	10	452	39	44	25	4	8	225	33	125
Colorado.....	1	283			8		3	78	30	132
Delaware.....	1	1		19	2			28		28
Idaho.....	1	43					6	13	30	22
Illinois.....	11	873	33	61	145	2	34	518	8	254
Indiana.....	1	363	16		55		3	215	23	139
Iowa.....	3	210			3		4	130	5	8
Kansas.....	3	447	7	3	26		4	296	6	125
Maryland.....		168	30	76	20		7	88		213
Mississippi.....	3	472	330	16,041	47	417	3	63	8	262
New Jersey.....	8	522	23		9	209	12	189		105
North Carolina.....	8	1,989			56		4	476	15	302
Oklahoma.....		35		1		5	1	32	7	48
Oregon.....	1	20			5			27	45	34
Pennsylvania.....	10	1,323		8	823		14	773		411
South Carolina.....		560	6	22	2		1	46	1	36
South Dakota.....	5	49			1		4	135	13	25
Virginia.....	1	1,088	395	664	60	14	3	405	2	226
Washington.....		84			8			64	21	83
Wisconsin.....	4	179	7		142		24	208	39	39

CITY REPORTS FOR WEEK ENDED OCTOBER 14, 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 Oct. 14, 1922.		City.	Median for previous years.	Week ended Oct. 14, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
California:				New York:			
Long Beach.....	0		1	New York.....	2	3	1
San Diego.....	0	1		Niagara Falls.....	0	1	1
San Francisco.....	0	1	1	Ohio:			
Massachusetts:				Akron.....	0	1	
Boston.....	0	1	1	Tennessee:			
Fall River.....	0	1	1	Nashville.....	0		1
Newton.....	0	1		West Virginia:			
Michigan:				Charleston.....	0		1
Highland Park.....	0	1		Wisconsin:			
Port Huron.....	0	1		Milwaukee.....	0	2	

DENGUE.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			Louisiana:		
Anniston.....	3		New Orleans.....	72	
Mobile.....	1		South Carolina:		
Arkansas:			Charleston.....	178	1
North Little Rock.....	7		Columbia.....	54	
Georgia:					
Albany.....	4				
Macon.....	500				

CITY REPORTS FOR WEEK ENDED OCTOBER 14, 1922—Continued.

DIPHTHERIA.

See p. 2760; also Current State summaries, p. 2750, and Monthly summaries by States, p. 2754.

INFLUENZA.

City.	Cases.		Deaths, week ended Oct. 14, 1922.	City.	Cases.		Deaths, week ended Oct. 14, 1922.
	Week ended Oct. 15, 1921.	Week ended Oct. 14, 1922.			Week ended Oct. 15, 1921.	Week ended Oct. 14, 1922.	
California:				Massachusetts—Contd.			
Los Angeles.....	3	6		Saugus.....	2		
Oakland.....		1		Webster.....		1	
San Francisco.....	9	1		Michigan:			
Connecticut:				Detroit.....	1		
Bridgeport.....		1		Missouri:			
Hartford.....		1		Cape Girardeau.....	1		
District of Columbia:				New Jersey:			
Washington.....	1	1		Jersey City.....		1	
Florida:				Newark.....	1	4	
Tampa.....	9			Trenton.....		1	
Georgia:				New York:			
Atlanta.....	8		1	Albany.....		4	
Illinois:				Buffalo.....		1	
Chicago.....	11	6	1	New York.....	21	31	3
Cicero.....	1			Ohio:			
Louisiana:				Cincinnati.....		1	1
New Orleans.....	1			Cleveland.....	1		1
Maine:				Cleveland Heights.....	2		
Lewiston.....		2		Pennsylvania:			
Maryland:				Philadelphia.....	2	4	1
Baltimore.....	4	7	1	Rhode Island:			
Cumberland.....		1		Providence.....			1
Frederick.....		1		Texas:			
Massachusetts:				Dallas.....			1
Boston.....	3	1		Wisconsin:			
Greenfield.....			1	Kenosha.....		1	
Haverhill.....	1	1		La Crosse.....		1	
Lynn.....				Wausau.....		1	
Quincy.....	2						

LETHARGIC ENCEPHALITIS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
California:					
San Francisco.....	1	1			

MALARIA.

Alabama:			Massachusetts:		
Birmingham.....	1		Boston.....	1	
California:			Michigan:		
Los Angeles.....	1		Detroit.....	1	
Connecticut:			New York:		
New Haven.....	1		New York.....	3	
Georgia:			Ohio:		
Albany.....	1		Akron.....	9	
Savannah.....	2		Tennessee:		
Illinois:			Memphis.....	17	3
Decatur.....	1		Texas:		
Louisiana:			Beaumont.....		1
New Orleans.....		1	Virginia:		
Maryland:			Alexandria.....	1	
Baltimore.....	1		Norfolk.....	1	

MEASLES.

See p. 2760; also Current State summaries, p. 2750, and Monthly summaries by States, p. 2754.

CITY REPORTS FOR WEEK ENDED OCTOBER 14, 1922—Continued.

PELLAGRA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			South Carolina:		
Mobile.....		1	Columbia.....	1	
Montgomery.....		1	Tennessee:		
Kentucky:			Memphis.....		1
Louisville.....	1		Texas:		
Maryland:			Dallas.....	1	
Baltimore.....	1				

PNEUMONIA (ALL FORMS).

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			Massachusetts—Continued.		
Anniston.....	2		Chelsea.....	1	
Birmingham.....		4	Chicopee.....		1
Montgomery.....		1	Everett.....	1	
California:			Fall River.....		2
Long Beach.....		3	Frammingham.....		1
Los Angeles.....	21	9	Holyoke.....	2	1
Oakland.....		7	Lawrence.....	4	2
Sacramento.....	1		Leominster.....		1
San Bernardino.....	3	1	Lowell.....		2
San Diego.....	1	1	Lynn.....	2	
San Francisco.....	7	4	Malden.....	1	
Colorado:			Medford.....		1
Colorado Springs.....		1	Melrose.....		2
Denver.....		7	Methuen.....		1
Connecticut:			New Bedford.....		4
Bridgeport.....	4	1	Newton.....		2
Bristol.....	1		Salem.....		1
Fairfield.....		2	Springfield.....	1	
Greenwich.....	1		Webster.....	1	
Hartford.....	1		Worcester.....		2
Manchester.....	1		Michigan:		
Meriden.....	1	1	Ann Arbor.....	1	
New Haven.....		6	Detroit.....	37	22
New London.....		1	Grand Rapids.....	3	
Norwalk.....		1	Hamtramck.....		2
District of Columbia:			Highland Park.....	1	
Washington.....		2	Kalamazoo.....	2	1
Florida:			Muskegon.....	1	
Tampa.....		2	Pontiac.....		1
Georgia:			Port Huron.....	1	
Atlanta.....		8	Minnesota:		
Savannah.....		2	Duluth.....	5	
Illinois:			Minneapolis.....		6
Chicago.....	141	33	St. Paul.....		5
Cicero.....		1	Winona.....		1
Decatur.....		1	Missouri:		
Forest Park.....	2		Independence.....		2
La Salle.....	1		Kansas City.....	13	11
Mattoon.....	1		St. Joseph.....		1
Peoria.....		1	Springfield.....		3
Springfield.....		2	Montana:		
Indiana:			Billings.....		1
Bloomington.....		1	Great Falls.....		1
East Chicago.....		1	Nebraska:		
Gary.....		1	Omaha.....		5
Hammond.....		1	New Jersey:		
Indianapolis.....		7	Belleville.....	1	
Kansas:			East Orange.....	1	
Kansas City.....	2		Hoboken.....		2
Topeka.....		1	Jersey City.....	1	
Wichita.....		1	Montclair.....		
Kentucky:			Newark.....	25	5
Louisville.....	9	7	Orange.....	3	
Louisiana:			Passaic.....	3	1
New Orleans.....		10	Paterson.....	2	
Maine:			Phillipsburg.....		1
Bangor.....	1		Plainfield.....		2
Portland.....		2	Trenton.....		3
Maryland:			New York:		
Baltimore.....	39	14	Albany.....	5	
Cumberland.....		1	Auburn.....	3	
Massachusetts:			Buffalo.....	16	6
Belmont.....	1		Jamestown.....	1	
Boston.....	21	9	Lackawana.....	1	
Brookline.....	1		Little Falls.....		1
Cambridge.....		4	Lockport.....		1

CITY REPORTS FOR WEEK ENDED OCTOBER 14, 1922—Continued.

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
New York—Continued.			Pennsylvania:		
Mount Vernon.....	2		Philadelphia.....	37	24
New York.....	188	92	Rhode Island:		
Newburgh.....		1	Cumberland.....		1
Niagara Falls.....		5	Providence.....		2
Port Chester.....		2	South Carolina:		
Poughkeepsie.....	1		Charleston.....		2
Rochester.....	6	1	Tennessee:		
Schenectady.....	4	3	Memphis.....		3
Syracuse.....	10	5	Nashville.....		2
Troy.....		4	Texas:		
Watertown.....		1	Corpus Christi.....		1
Yonkers.....	1		Dallas.....		1
North Carolina:			El Paso.....		1
Wilmington.....		2	Fort Worth.....		4
Ohio:			Galveston.....		4
Akron.....	2		Houston.....		2
Ashtabula.....		1	Utah:		
Cincinnati.....		6	Salt Lake City.....		2
Cleveland.....	17	12	Virginia:		
Columbus.....		5	Norfolk.....		1
Dayton.....	1		Petersburg.....		2
Findlay.....		1	Richmond.....		3
Lima.....		1	Roanoke.....		1
Springfield.....		1	West Virginia:		
Toledo.....		6	Clarksburg.....		2
Youngstown.....		4	Huntington.....		1
Oklahoma:			Wisconsin:		
Oklahoma.....		1	Janesville.....		1
Oregon:			La Crosse.....	2	
Portland.....		3	Milwaukee.....	1	

POLIOMYELITIS (INFANTILE PARALYSIS).

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

City.	Median for previous years.	Week ended Oct. 14, 1922.		City.	Median for previous years.	Week ended Oct. 14, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Connecticut:				New York—Continued.			
Greenwich.....	0	1		Rochester.....	0	1	1
New Haven.....	0	1		Rome.....	0	1	
Maryland:				Syracuse.....	0	1	
Baltimore.....	1	3		Watertown.....	0	1	
Massachusetts:				White Plains.....	0	1	
Boston.....	1	1		Ohio:			
Everett.....	0	1		Cleveland.....	1	1	
Michigan:				Washington:			
Detroit.....	1	1		Everett.....	0	1	
New Jersey:				Tacoma.....	0	1	
Orange.....	0		1	Wisconsin:			
New York:				Beloit.....	0	1	
Auburn.....	0	1		Wyoming:			
Mount Vernon.....	0	2		Cheyenne.....		1	
New York.....	5	12	1				

RABIES IN ANIMALS.

City.	Cases.
California:	
Los Angeles.....	3
Kentucky:	
Louisville.....	3
Tennessee:	
Memphis.....	1

CITY REPORTS FOR WEEK ENDED OCTOBER 14, 1922—Continued.

RABIES IN MAN.

City.	Cases.	Deaths.
California:		
Los Angeles.....	1	.....

SCARLET FEVER.

See p. 2760; also Current State summaries, p. 2750, and Monthly summaries by States, p. 2754.

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 Oct. 14, 1922.		City.	Median for previous years.	Week ended Oct. 14, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
California:				New York:			
Los Angeles.....	0	1	.....	Jamestown.....	0	1	.....
Oakland.....	1	1	.....	New York.....	0	1	.....
Colorado:				Watertown.....	0	2	.....
Denver.....	2	24	2	Oregon:			
Idaho:				Portland.....	3	7	.....
Boise.....	1	1	.....	Washington:			
Kansas:				Bellingham.....	0	1	.....
Fort Scott.....	0	2	.....	Walla Walla.....	0	1	.....
Salina.....	0	1	.....	Wisconsin:			
Minnesota:				Milwaukee.....	1	2	.....
Duluth.....	0	18	.....	Superior.....	0	7	.....
				Waukesha.....	1	.....	.....

TETANUS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
California:			New York—Continued.		
Stockton.....	.....	1	North Tonawanda.....	1	.....
Georgia:			Rochester.....	1	.....
Savannah.....	.....	2	North Carolina:		
Illinois:			Durham.....	.....	1
Chicago.....	1	1	Ohio:		
Maryland:			Cleveland.....	.....	1
Baltimore.....	.....	1	Pennsylvania:		
Massachusetts:			Philadelphia.....	1	1
Boston.....	1	.....	Texas:		
New Jersey:			Beaumont.....	.....	1
Newark.....	1	.....	Virginia:		
Trenton.....	.....	1	Richmond.....	1	2
New York:					
Hudson.....	1	1			
New York.....	1	1			

TUBERCULOSIS.

See p. 2660; also Current State summaries, p. 2750.

CITY REPORTS FOR WEEK ENDED OCTOBER 14, 1922—Continued.

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 Oct. 14, 1922.		City.	Median for previous years.	Week ended Oct. 14, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Alabama:				Michigan—Continued.			
Birmingham.....	4	1		Marquette.....	0	1	
Arkansas:				Muskegon.....	0	3	1
Hot Springs.....	0	1		Port Huron.....	2	1	
Little Rock.....	1	1		Minnesota:			
California:				St. Paul.....	0	1	
Long Beach.....	0		1	Missouri:			
Los Angeles.....	4	5	1	Joplin.....	0	1	
San Francisco.....	3	2		Kansas City.....	3	3	1
Stockton.....	0	1		St. Louis.....	9	10	
Colorado:				Springfield.....	0		1
Denver.....	3	3	2	Montana:			
Pueblo.....	0	5		Billings.....	1	1	1
Connecticut:				Missoula.....	0	1	
Hartford.....	2	1	1	Nebraska:			
Manchester.....	0	2		Omaha.....	2	1	
New Haven.....	3	6	1	New Jersey:			
District of Columbia:				Asbury Park.....	0	1	
Washington.....	7	7		East Orange.....	0	1	
Georgia:				Englewood.....	0	1	
Atlanta.....	1	1	1	Newark.....	2	16	2
Macon.....	1	3		Orange.....	0	2	
Rome.....	1	1		Paterson.....	0	1	
Savannah.....	1	2		New Mexico:			
Idaho:				Albuquerque.....	2	4	
Boise.....	0	1		New York:			
Illinois:				Buffalo.....	8	1	
Alton.....	0		1	Lockport.....	0	1	
Aurora.....	0	1		Middletown.....	0	1	
Champaign.....	0			New York.....	40	25	10
Chicago.....	9	3	2	Newburgh.....	0	1	
Decatur.....	0	1		Peekskill.....	0		1
Springfield.....	1	1		Poughkeepsie.....	0	1	
Indiana:				Rochester.....	0	1	1
Frankfort.....	0	2		Syracuse.....	0	1	
Hammond.....	0	1		Watertown.....	0	1	
La Fayette.....	0	1		North Carolina:			
Muncie.....	0	2	2	Durham.....	2	2	
Iowa:				Winston-Salem.....	2	2	1
Ottumwa.....	1	1		Ohio:			
Kansas:				Ashtabula.....	0	1	
Coffeyville.....	0	1		Canton.....	0	1	1
Kentucky:				Cincinnati.....	1	1	
Louisville.....	2	5		Cleveland.....	4	4	
Owensboro.....		1		Columbus.....	4	1	
Louisiana:				Coshocton.....	0	2	
New Orleans.....	2	4		Dayton.....	3	1	
Maine:				Fremont.....	0	1	
Bangor.....	1	1		Hamilton.....	0	1	
Portland.....	1		1	Lima.....	1	1	
Maryland:				Lorain.....	0	1	
Baltimore.....	11	10		Zanesville.....	0	3	
Frederick.....	0		1	Oklahoma:			
Massachusetts:				Oklahoma.....	0		1
Belmont.....	0	1		Tulsa.....	0	3	
Boston.....	3	4	1	Oregon:			
Brookline.....	0	1		Portland.....	1	8	
Chelsea.....	0	1		Pennsylvania:			
Chicopee.....	0	1		Allentown.....	1	1	
Fall River.....	3	3		Butler.....	0	2	
Haverhill.....	0	1		Easton.....	0	1	
Lawrence.....	1	1		Erie.....	1	1	
Pittsfield.....	0	1		Farrell.....	0	1	
Somerville.....	0	1	1	Johnstown.....	0	1	
Springfield.....	0	1	1	Lancaster.....	1	1	
Michigan:				New Castle.....	0	3	
Benton Harbor.....	0	2		Philadelphia.....	15	17	3
Detroit.....	10	11	1	Pittsburgh.....	5	4	
Highland Park.....	0	1		Punxsutawney.....	0	2	
Holland.....	0	1		Uniontown.....	0	1	
Kalamazoo.....	1	2					

CITY REPORTS FOR WEEK ENDED OCTOBER 14, 1922—Continued.

TYPHOID FEVER—Continued.

City.	Median for previous years.	Week ended Oct. 14, 1922.		City.	Median for previous years.	Week ended Oct. 14, 1922.	
		Cases.	Deaths.			Cases.	Deaths.
Pennsylvania—Contd.				Virginia:			
Washington.....	0	4	.....	Richmond.....	3	4	.....
Wilkes-Barre.....	0	1	.....	Roanoke.....	1	2	..... 1
York.....	1	1	.....	Washington:			
South Carolina:				Spokane.....	0	1	.....
Columbia.....	0	2	.....	Walla Walla.....	2	3	.....
Tennessee:				West Virginia:			
Knoxville.....	0	19	1	Bluefield.....	0	2	.....
Memphis.....	0	1	.....	Charleston.....	1	2	.....
Nashville.....	7	3	.....	Fairmont.....	1	1	.....
Texas:				Martinsburg.....	0	4	.....
Dallas.....	3	1	.....	Wisconsin:			
El Paso.....	0	1	.....	Milwaukee.....	1	1	.....
Utah:				Sheboygan.....	0	2	.....
Salt Lake City.....	2	3	.....			

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Alabama:										
Anniston.....	17,734	.....	5	.....					1	..... 7
Birmingham.....	178,806	43	10	.....	1		6		9	..... 1
Mobile.....	60,777	22	1	.....			2			..... 2
Montgomery.....	43,464	15	3	.....			2		6	..... 1
Tuscaloosa.....	11,996	.....	1	.....						..... 2
Arkansas:										
Hot Springs.....	11,695	6	1	.....						..... 1
Little Rock.....	65,142	.....	8	.....			3			.....
North Little Rock.....	14,048	.....	1	.....						.....
California:										
Alameda.....	28,806	6	3	.....	1					.....
Bakersfield.....	18,638	3	2	.....						.....
Eureka.....	12,923	6	3	.....			3		2	..... 2
Glendale.....	13,536	12		.....						.....
Long Beach.....	55,593	23		.....			1			..... 1
Los Angeles.....	576,673	162	46	1			9		60	23
Oakland.....	216,261	44	15	2			7		2	4
Pasadena.....	45,354	9		.....						.....
Richmond.....	16,843	2		.....			1	1	1	.....
Riverside.....	19,341	5	2	.....						.....
Sacramento.....	65,906	11	3	.....	3		9	1	1	..... 2
San Bernardino.....	18,721	8	4	.....	1					..... 3
San Diego.....	74,683	24	9	.....			1		4	..... 2
San Francisco.....	506,676	125	26	2	2		3		23	9
Santa Ana.....	15,485	4	5	.....						.....
Santa Barbara.....	19,441	3		.....						.....
Santa Cruz.....	10,917	2		.....						.....
Stockton.....	40,286	12	3	.....			2			..... 1
Colorado:										
Colorado Springs.....	30,105	10		.....			3			..... 1
Denver.....	256,491	84	64	3	1	1	13			12
Pueblo.....	43,050	4		.....			6		3	.....
Trinidad.....	10,906	.....	1	1	.....					.....
Connecticut:										
Bridgeport.....	143,555	20	17	1			2		6	3
Bristol.....	20,620	2		.....	1		1			.....
Derby.....	11,238	4		.....						.....
Fairfield (town).....	11,475	4		.....	1					.....
Greenwich (town).....	22,123	.....	1	.....						.....
Hartford.....	138,036	34	8	2			7		4	1
Manchester (town).....	18,370	1		.....			1			.....
Meriden (city).....	29,867	.....	3	.....						.....
Milford (town).....	10,193	3		.....						.....
New Haven.....	162,537	26	3	.....		18			4	1
New London.....	25,688	9		1	.....					.....

CITY REPORTS FOR WEEK ENDED OCTOBER 14, 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.
Connecticut—Continued.										
Norwalk	27,743	7								
Stonington (town)	10,236	1	1							
Waterbury	91,715	14	5			10		2	2	
District of Columbia:										
Washington	437,571	89	11	1		16		23	6	
Florida:										
Tampa	51,608	8	4			1				
Georgia:										
Albany	11,555		1							
Atlanta	200,616	79	19	2		8		2	4	
Brunswick	14,413	1						3		
Macon	52,995		2							
Rome	18,252		2			3				
Savannah	55,252	33	2			1		3	4	
Valdosta	10,753	0	1							
Idaho:										
Boise	21,393	8								
Illinois:										
Alton	24,682	2	5	1	2			2		
Aurora	36,397	15	8						2	
Bloomington	28,725	6	2			1		1	2	
Centralia	12,491	2	2							
Champaign	15,873				1					
Chicago	2,701,705	505	169	15	14	75		135	36	
Cicero	44,995	11	10	1		1		2	1	
Decatur	43,818	10	3			4				
East St. Louis	66,767	9	1			1				
Elgin	27,454	4	1			3				
Evanston	37,234	8								
Forest Park	10,768				1					
Freeport	19,669	8	3					1		
Galesburg	23,834	7								
Kewanee	16,026	2				2		2		
La Salle	13,050	2	1							
Mattoon	12,552	4	2			1			1	
Oak Park	39,858	8	3			2			1	
Peoria	76,121	11	6			15		2		
Rock Island	35,177	6	2			1		1		
Springfield	59,183	23	5			1		2	1	
Indiana:										
Anderson	29,767	3	5				2			
Bloomington	11,595	2								
Crawfordsville	10,139	3								
East Chicago	35,967	8	3	1		1				
Frankfort	11,585	5	3			1		1		
Gary	55,378	7	2		1	1				
Hammond	36,004	10	2			6				
Huntington	14,000	1				1				
Indianapolis	314,194	61	54	2		9		3	5	
Kokomo	30,067	6	2							
La Fayette	22,486	2	2					1		
Logansport	21,626	5								
Mishawaka	15,195	4	1			9		2		
Muncie	36,524	8	4		2	1				
South Bend	70,983	8	2	1	2	6		2		
Terre Haute	66,063	18	15	2		4			3	
Iowa:										
Burlington	24,057	4	4		1	2		1		
Cedar Rapids	45,566		1			3				
Clinton	24,151		12							
Davenport	56,727		14			1				
Des Moines	126,468		32	1		20				
Dubuque	39,141				1	1				
Iowa City	11,267		1			1				
Mason City	20,065	7	12	1		1				
Muscatine	16,068	5	5			2				
Ottumwa	22,063	5	6			1				
Sioux City	71,227	6	6			7				
Waterloo	36,230		1			4				
Kansas:										
Atchison	12,630		3							
Colleyville	13,452		1					1		
Fort Scott	10,603		2							
Hutchinson	23,298		1			2				

CITY REPORTS FOR WEEK ENDED OCTOBER 14, 1922—Continued.

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

City.	Popula- tion Jan. 1, 1920.	Total deaths from all caus ^{es} .	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Kansas—Continued.										
Kansas City.....	101,177		10		3		8		6	
Lawrence.....	12,456	4								
Leavenworth.....	16,912		2							
Salina.....	15,085	3	1					1		
Topeka.....	50,022	12	20			7		4	2	
Wichita.....	72,217	27	6		1	3				
Kentucky:										
Covington.....	57,121	15	6	1			1	1		
Lexington.....	41,534	13	1			1			1	
Louisville.....	234,891	68	18	2		4		18	9	
Owensboro.....	17,424		1					1		
Paducah.....	24,735		2		2					
Louisiana:										
New Orleans.....	387,219	121	17			4		12	11	
Maine:										
Auburn.....	16,985	1				5				
Bangor.....	25,973					2				
Bath.....	14,731	2								
Biddeford.....	18,008	3	2			1				
Lewiston.....	31,791	5	6							
Portland.....	69,272	23	3	1	1	2			1	
Sanford (town).....	10,691	0								
Maryland:										
Baltimore.....	733,826	172	48		3	7		10	11	
Cumberland.....	29,837	8						1	1	
Frederick.....	11,066	3								
Massachusetts:										
Adams (town).....	12,967	1				1				
Amesbury (town).....	10,036	4	3	1		2				
Arlington (town).....	18,665	3	2							
Attleboro.....	19,731	2			5				1	
Belmont (town).....	10,749	2				1		1		
Beverly.....	22,561	2				1				
Boston.....	748,060	192	83	2	37	24	1	33	15	
Braintree (town).....	10,580	2				1		1	1	
Brockton.....	66,254	6	3			1		1		
Brookline.....	37,748	6	3			1		2		
Cambridge.....	109,694	30	11	1	3	4		1	4	
Chelsea.....	43,184	5	2		8	3		2		
Chicopee.....	36,214	6	2	1				1		
Clinton.....	12,979	2								
Danvers.....	11,108		7							
Dedham.....	10,792	3				1				
Easthampton.....	11,261	1	1					1	1	
Everett.....	40,120	5	2			2				
Fall River.....	120,485	31	9		69	4		5	1	
Framingham.....	17,033	8	4		2			1	1	
Gardner.....	16,971	3	2			1				
Greenfield.....	15,462	5								
Haverhill.....	53,884	15	2			2		2		
Holyoke.....	60,203	14	6			1		3	2	
Lawrence.....	94,270	12				2		1	1	
Leominster.....	19,744	4	3							
Lowell.....	112,759	35	4			5		4	3	
Lynn.....	99,148	27	3		4			1	1	
Malden.....	49,403	5	3			1		1	2	
Medford.....	39,033	7	6			3		1		
Melrose.....	18,204	9	2			2		1		
Methuen.....	15,189	3	2					1		
New Bedford.....	121,217	40	3	1	6	2		7	3	
Newburyport.....	15,618	1								
Newton.....	46,054	6	1		1	3		3	2	
North Adams.....	22,282	11							3	
Northampton.....	21,951	7	1			1				
Peabody.....	19,552	6								
Pittsfield.....	41,763	7				4		1		
Plymouth.....	13,045	5								
Quincy.....	47,876	6	4			2			1	
Salem.....	42,529	10	1		1	1		1		
Somerville.....	93,091	20	6	2		2		2		
Southbridge.....	14,245	1	1			1		1		
Springfield.....	129,614	28	6	1		3		1		
Taunton.....	37,137	20							2	
Wakefield.....	13,025	4	2		1			1		
Waltham.....	30,915	8	2			5			2	
Watertown.....	21,457	0	9							

CITY REPORTS FOR WEEK ENDED OCTOBER 14, 1922—Continued.

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

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Massachusetts—Continued.										
Webster.....	13,258	0								
West Springfield.....	13,443	3								
Westfield.....	18,604	2	2	1	1					
Winthrop.....	15,455	2							1	
Woburn.....	16,574	3								1
Worcester.....	179,754	31	2	1			8		3	
Michigan:										
Alpena.....	11,101						1			
Ann Arbor.....	19,516	10	2							1
Battle Creek.....	36,164		4				2			
Benton Harbor.....	12,233	2	5				2			
Detroit.....	993,678	206	64	5	4	59	1	41		13
Flint.....	91,599	15	17			8				2
Grand Rapids.....	137,634	36	9			6		1		4
Hamtramck.....	48,615	9		1						2
Highland Park.....	46,499	13	2			5		1		2
Holland.....	12,183		3			2				
Kalamazoo.....	48,487	10	31							
Marquette.....	12,718	3				2				
Muskegon.....	36,570	7	3							
Pontiac.....	34,273	7	8						2	
Port Huron.....	25,944	11	5			1			2	
Sault Ste. Marie.....	12,095	2	1	1		1				
Minnesota:										
Duluth.....	98,917	26	16		1	3		3		1
Hibbing.....	15,089	1				7				
Minneapolis.....	380,382	70	40	1	4	32		48		9
St. Cloud.....	15,873		2			2				
St. Paul.....	234,698	49	22	1		39	1	18		3
Virginia.....	14,022					1				
Winona.....	19,143	3	2			1				
Missouri:										
Independence.....	11,686	6								
Kansas City.....	324,410	82	16	3		6		7		6
St. Joseph.....	77,939	25	9			5				
St. Louis.....	772,897	156	35		1	32	1	37		10
Springfield.....	39,631	9								
Montana:										
Anaconda.....	11,638	0								
Billings.....	15,100	5				7		1		1
Great Falls.....	24,121	4								1
Missoula.....	12,668	3								
Nebraska:										
Lincoln.....	54,948	18	3							1
Omaha.....	191,601	52	17	3		3				4
Nevada:										
Reno.....	12,016	3								1
New Hampshire:										
Berlin.....	16,104	5		1						
Dover.....	13,029	3								
Keene.....	11,210	5								
Nashua.....	28,379	2								
New Jersey:										
Asbury Park.....	12,400	1								
Atlantic City.....	50,707	5			7					
Bayonne.....	76,754		2			1		1		
Bloomfield.....	22,019	0						1		
Clifton.....	26,470	2	1							
East Orange.....	50,710								1	
Elizabeth.....	95,783		14	1	1	6		2		1
Englewood.....	11,627	2						1		1
Garfield.....	19,381	4	1		7	1				
Hackensack.....	17,687	6				2				
Harrison.....	15,721								2	
Hoboken.....	68,166	19	1			1		1		1
Jersey City.....	298,103	5	15		2	3		1	9	
Kearny.....	26,724									
Montclair.....	28,810	4	1			1				
Morristown.....	12,548	5				1				1
Newark.....	414,524	79	10		12	1	7		27	6
Orange.....	33,268	7	2		2	2				1
Passaic.....	63,841	13	5			1			1	2
Paterson.....	135,875		5				3		6	
Perth Amboy.....	41,707	4	13	1	1		4			
Phillipsburg.....	16,923	3	1						2	

CITY REPORTS FOR WEEK ENDED OCTOBER 14, 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.
New Jersey—Continued.										
Plainfield	27,700	5								
Summit	10,174	2								
Trenton	119,289	34	37	2	1				5	2
Union (town)	20,651					1			1	
West Hoboken	40,074	5	1							
West New York	29,925	2				2				
West Orange	15,573	1	1		8	3			1	
New Mexico:										
Albuquerque	15,157	8	6	2		3			11	3
New York:										
Albany	113,344		3				2		9	
Auburn	36,192	7	3						3	
Buffalo	506,775	123	16	1	5	13	1	22		2
Cohoes	22,987	8								
Geneva	14,648	3								
Hornell	15,025	1								
Hudson	11,745	1	2							
Jamestown	38,917	7	1		1		4			
Lackawanna	17,918	5	3				5		2	
Little Falls	13,029	8								
Lockport	21,308	5							1	
Middletown	18,420					1			1	
Mount Vernon	42,728	6			8			1	1	
New York	5,620,048	1,085	106	5	37	64	3	1265	176	
Newburgh	30,366	11							1	1
Niagara Falls	50,760	19	5	1		6				1
North Tonawanda	15,482	2	4			2				
Olean	20,506	8	1						1	1
Peekskill	15,868	3	1				2		1	
Port Chester	16,573	3			1					1
Poughkeepsie	35,000	1							2	
Rochester	295,750	70	14	1	17				14	4
Rome	26,341	10	2				9			
Saratoga Springs	13,181	4				1			2	
Schenectady	88,723	21	3		1	9			2	
Syracuse	171,717	48	19			7			4	
Troy	72,013	17	1						4	2
Watertown	31,285	10	2						2	1
White Plains	21,031	5				1				
Yonkers	100,176	13	2		1	4				2
North Carolina:										
Durham	21,719	3	5						1	1
Rocky Mount	12,742	7								
Salisbury	18,884	3								
Wilmington	38,372	11	2			1				3
Winston-Salem	48,395	10	9			4			1	
North Dakota:										
Fargo	21,961	0	3			1				
Grand Forks	14,010					1				
Ohio:										
Akron	208,435	29	15				13		1	
Ashtabula	22,082	4			2	1				
Berberton	18,811	5	3			2				1
Bucyrus	10,425	5								
Cambridge	13,104	5	1							
Canton	87,091	16	4			1			1	
Chillicothe	15,831	3	3			3				
Cincinnati	401,247	91	15	2		10			16	9
Cleveland	796,841	154	71	4	4	36	1	39	11	
Cleveland Heights	15,236					1				
Columbus	237,031	70	49	1		6			2	4
Coshocton	10,847					3			1	
Dayton	152,559	24	15			7			2	
East Cleveland	27,292	4			2	2			2	1
East Youngstown	11,237	1								
Findlay	17,021	6								
Fremont	12,468	3								
Hamilton	39,675	8					1			
Kenmore	12,683				1				1	
Lancaster	14,706									2
Lima	41,328	15	1							
Lorain	37,295		2				4			
Mansfield	27,824	3	4						1	1

1 Pulmonary tuberculosis only.

CITY REPORTS FOR WEEK ENDED OCTOBER 14, 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.
Ohio—Continued.										
Martins Ferry.....	11,634	4					1			
Middletown.....	23,594	7	1	1						
New Philadelphia.....	10,718					1				
Newark.....	26,718	7							1	
Norwood.....	21,966	1								
Piqua.....	15,044	3	1							
Salem.....	10,305	0	3		1					
Springfield.....	60,840	12	5	1			2			
Steubenville.....	28,508	7								
Tiffin.....	14,375	2								
Toledo.....	243,164	47	34	2	26		6		6	5
Youngstown.....	132,358	38	77	2	1		8			2
Zanesville.....	29,569	9	3		1		1			1
Oklahoma:										
Oklahoma.....	91,295	31	5	1	2		12			1
Tulsa.....	72,075		3				5			
Oregon:										
Portland.....	258,288	50	2		1		2		9	1
Pennsylvania:										
Allentown.....	73,502		14		3		2		1	
Altoona.....	60,331		3		1		3			
Ambridge.....	12,730		11		2		2			
Beaver Falls.....	12,802		2		2					
Berwick.....	12,181		1							
Bethlehem.....	50,358		6				1			
Braddock.....	20,879		1		11					
Bradford.....	15,525		1				1			
Bristol.....	10,273		3				1			
Butler.....	22,778		2				2			
Canonsburg.....	10,632		1							
Carbondale.....	18,640		1							
Carnegie.....	11,516						3			
Carrick.....	10,504				13		1			
Chambersburg.....	13,171						3			
Charleroi.....	11,516		1				3			
Chester.....	58,030		4		2					
Coatesville.....	14,515				10					
Columbia.....	10,836		4							
Dickson.....	11,049				2					
Donora.....	14,131		1							
Duquesne.....	19,011		2							
Easton.....	33,813				1					
Erie.....	93,372		3				3		15	
Farrell.....	15,586						1			
Greensburg.....	15,083		1							
Harrisburg.....	75,917		2				3			
Hazleton.....	32,277		1							
Johnstown.....	67,327		1		1		3			
Lancaster.....	53,150		3				14			
McKee's Rocks.....	16,713		15		1		3			
McKeesport.....	46,781		1				6		2	
Monessen.....	18,179		4				1			
Mount Carmel.....	17,469		3							
Nanticoke.....	22,614		1							
New Castle.....	44,938		3							
Norristown.....	32,319		4							
North Braddock.....	14,528				3					
Oil City.....	21,274				1		1			
Philadelphia.....	1,822,779	378	66	6	218	1	29	1	53	34
Pittsburgh.....	588,343		52		26		39		18	
Plymouth.....	16,500		2						1	
Pottstown.....	17,431						1			
Pottsville.....	21,876								1	
Reading.....	107,784		7		12				1	
Scranton.....	137,783		5				1			
Shenandoah.....	24,726		3							
Steelton.....	13,428		4							
Sunbury.....	15,721		1							
Uniontown.....	15,692		2				1			
Warren.....	14,272		2							
Washington.....	21,480				1		3			
Wilkes-Barre.....	73,833		8				2		1	
Williamsburg.....	24,403						1			
Williamsport.....	36,198		8				1			
Woodlawn.....	12,495				10		1			
York.....	47,512						4			

CITY REPORTS FOR WEEK ENDED OCTOBER 14, 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.
Rhode Island:										
Cranston.....	29,407	4								1
Cumberland (town).....	10,077	3								
Newport.....	30,255	6	1							1
Pawtucket.....	64,248	11	2			1				
Providence.....	237,595	57	6			3				3
South Carolina:										
Charleston.....	67,957	20								2
Columbia.....	37,524		1			1			1	
Greenville.....	23,127	2	4			2				
South Dakota:										
Sioux Falls.....	25,202	5	11							
Tennessee:										
Chattanooga.....	57,885		2			2				
Knoxville.....	77,818		6			2	1			
Memphis.....	162,351	45	13			3			3	4
Nashville.....	118,342	24	9			3			2	3
Texas:										
Beaumont.....	40,422	13	3							1
Corpus Christi.....	10,522	4								
Dallas.....	158,976	54	8							3
El Paso.....	77,560	22	1		1					6
Fort Worth.....	106,482	24	3			2			3	2
Galveston.....	44,255	7								
Houston.....	138,276	42	5							4
Waco.....	38,500	6	1							
Utah:										
Salt Lake City.....	118,110	31	2	1	1		1		1	3
Vermont:										
Rutland.....	14,954	5								
Virginia:										
Alexandria.....	18,060	5								
Danville.....	21,539	4	2		2					
Lynchburg.....	30,070	7	12							1
Norfolk.....	115,777		5		1					2
Petersburg.....	31,012	15	2	1			5			2
Portsmouth.....	54,387	8	5							1
Richmond.....	171,667	48	19	1	1		22		4	4
Roanoke.....	50,842	16	23				2			1
Washington:										
Bellingham.....	25,585		1			3				
Seattle.....	315,312		4		2	8			15	
Spokane.....	104,437		8		1	9				
Tacoma.....	96,965		4			4				
West Virginia:										
Bluefield.....	15,282	4	6			2				1
Charleston.....	39,608	13	8	1		7			3	1
Clarksburg.....	27,839	4				1				
Fairmont.....	17,851		2			1				
Huntington.....	50,177	23	4			1				
Martinsburg.....	12,515	2	3	2						
Moundsville.....	10,669	3	2							
Parkersburg.....	20,050	4				1				
Wheeling.....	56,208	17	2		11	4				1
Wisconsin:										
Ashland.....	11,334		1							
Beloit.....	21,284	1				8				
Fond du Lac.....	23,427	5								
Green Bay.....	31,017		3			1				
Janesville.....	18,593	3								
Kenosha.....	40,472	5	1							
La Crosse.....	30,421				2					
Madison.....	38,373		2			1			1	
Marinette.....	13,610		1							
Milwaukee.....	457,147		30		125	31			9	1
Oshkosh.....	33,162	10								1
Racine.....	58,593	4	4		6	3			2	1
Sheboygan.....	30,955		4							
Superior.....	39,671	9							5	2
Waukesha.....	12,558				1	2				
Wausau.....	18,961		3							
West Allis.....	13,745		1		4	2			2	
Wyoming:										
Cheyenne.....	13,829		1				1			

FOREIGN AND INSULAR.

CUBA.

Communicable Diseases—Habana.

Communicable diseases have been notified in Habana as follows:

Disease.	Oct. 1-10, 1922.		
	New cases.	Deaths.	Remain- ing under treat- ment Oct. 10, 1922.
Chicken pox.....	3	.....	5
Diphtheria.....	1	1	4
Leprosy.....	.....	.....	10
Malaria.....	17	1	52
Measles.....	.....	.....	1
Paratyphoid fever.....	1	.....	3
Scarlet fever.....	.....	1	1
Typhoid fever.....	11	5	47

¹ From the interior, 24; from abroad, 2.

² From the interior, 17.

HAWAII.

Plague-Infected Rat—Paauilo.

The finding of a plague-infected rat was reported, September 25, 1922, at Paauilo, Island of Hawaii. The rat was found dead on the floor of the evaporator room, Hamakua Mill.

INDIA.

Anthrax—Madras Presidency.

Statistics furnished by the Civil Veterinary Department, Madras, India, show 391 deaths from anthrax in animals reported in the Presidency of Madras during the month of July, 1922. The greatest number of deaths reported in any one district, viz, 90, occurred in the district of Nellore.

(2767)

PANAMA CANAL.

Communicable Diseases—September, 1922.

Communicable diseases were notified for the Panama Canal during the month of September, 1922, as follows:

Disease.	Canal Zone.	Colon.	Panama.	Nonresident.	Total.
Chicken pox.....	2		6		8
Diphtheria.....	1	1	15		17
Dysentery.....	2		5	1	8
Hookworm.....	90		34	25	149
Leprosy.....	1	1	1		3
Malaria.....	103	10	8	26	147
Measles.....			1		1
Meningitis (influenzal).....	1				1
Pneumonia.....		4	14		18
Scarlet fever.....	1		1		2
Smallpox.....				1	1
Tuberculosis.....	4	1	8	1	14
Typhoid fever.....			3	1	4

PORTUGUESE WEST AFRICA.

Plague—Loanda, Angola.

Plague was reported present, October 25, 1922, at Loanda, Angola, Portuguese West Africa.

RUSSIA.

Communicable Diseases—Lettonia—August, 1922.

Communicable diseases were reported in Lettonia, Russia, during the month of August, 1922, as follows:

Disease.	New cases.	Disease.	New cases.
Cerebrospinal meningitis.....	3	Scarlet fever.....	46
Diphtheria.....	43	Smallpox.....	15
Dysentery.....	397	Typhoid fever.....	130
Malaria.....	4	Typhus fever.....	26
Measles.....	8	Typhus fever, recurrent.....	7

SPAIN.

Plague—Barcelona.¹

The occurrence at Barcelona, Spain, of six new cases of plague with three deaths was reported October 19, 1922. The occurrence of cases was stated to be confined to the factory in which the disease broke out.

¹ Public Health Reports, Oct. 13, 1922, p. 2586; Oct. 27, 1922, p. 2720.

UNION OF SOUTH AFRICA.

Plague—Orange Free State—Preventive Measures.

The secretary for public health of the Union of South Africa has recently drawn attention to the persistence of plague in the Orange Free State and to the need for effective measures to prevent spread. Efforts made to eradicate plague infection among wild rodents in the enormous areas of country involved were stated to have been unsuccessful. In addition to a general campaign against rats, the need for preventive and precautionary measures of a permanent nature was strongly emphasized. These measures included the adoption of building regulations designed to prevent rat infestation. Local authorities, owners of property, and the general public were urged to cooperative action in carrying out these measures.

VIRGIN ISLANDS.

Contagious Diseases—September, 1922.

The occurrence of contagious diseases in the Virgin Islands during the month of September, 1922, has been reported as follows:

Island and disease.	Cases.	Remarks.
In St. Thomas and St. John:		
Chancroid.....	1	Imported.
Dengue.....	2	
Gonococcus infection.....	4	
Tuberculosis.....	1	Chronic pulmonary.
Syphilis.....	3	Primary; 1 imported.
In St. Croix:		
Chancroid.....	2	
Dengue.....	2	
Dysentery.....	2	Entamebic.
Filariasis.....	10	Bancrofti.
Gonococcus infection.....	3	
Syphilis.....	3	Secondary.
Trachoma.....	3	
Tuberculosis.....	1	Chronic pulmonary.

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

Reports Received During Week Ended November 3, 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.....				Aug. 13-19, 1922; Cases, 1,791; deaths, 1,129.
Madras.....	Sept. 17-23.....	1	1	
Siam:				
Bangkok.....	Aug. 27-Sept. 2....	1	1	

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

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

Reports Received During Week Ended November 3, 1922—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Foochow.....	Aug. 27-Sept. 9.....			Present.
Hongkong.....	Aug. 27-Sept. 2.....	4		
Egypt:				Jan. 1-Aug. 10, 1922: Cases, 430; deaths, 204. (Corrected report.)
City—				
Port Said.....	Sept. 22-24.....	1	1	
Province—				
Minieh.....	Sept. 27.....	1	1	
Hawaii:				
Pasullo.....				Sept. 25, 1922: One plague rat found in Hamakua Mill.
India:				Aug. 13-19, 1922: Cases, 960; deaths, 652.
Bombay.....	Aug. 20-26.....	8	6	
Karachi.....	Sept. 17-23.....	1	1	
Madras presidency.....	do.....	210	139	
Madagascar:				
Tamatave.....	Aug. 21-27.....		1	
Palestine:				
Jerusalem.....	Sept. 26-Oct. 2.....	4		
Portuguese West Africa:				
Angola—				
Loanda.....	Oct. 25.....			Present.
Siam:				
Bangkok.....	Aug. 27-Sept. 2.....	3	3	
Spain:				
Barcelona.....	Oct. 19.....	6	3	Stated to be confined to factory in which disease first appeared.
Turkey:				
Constantinople.....	Sept. 24-30.....	6	4	

SMALLPOX.

Arabia:				
Aden.....	Sept. 24-30.....	3	1	
Brazil:				
Para.....				Aug. 22-28, 1922: Cases, 16.
Canada:				
Ontario—				
Ottawa.....	Oct. 15-21.....	2		
China:				
Amoy.....	Aug. 27-Sept. 2.....			Present.
Foochow.....	Aug. 27-Sept. 9.....			Do.
Hongkong.....	Aug. 27-Sept. 2.....	1		
Dominican Republic:				
San Pedro de Macoris.....	Sept. 24-30.....	12		In vicinity.
Santo Domingo.....	Oct. 1-7.....	1	1	Present in vicinity.
Egypt:				
Cairo.....	July 30-Aug. 5.....	1	1	
India:				
Madras.....	Sept. 17-23.....	31	8	Aug. 13-19, 1922: Cases, 723; deaths, 182.
Java:				
West Java—				
Batavia.....	Sept. 2-15.....	4	1	Province.
Portugal:				
Lisbon.....	Sept. 24-30.....	23		
Russia:				
Lettonia.....				Aug. 1-31, 1922: Cases, 15.
Spain:				
Bilbao.....	Sept. 1-30.....			
Huelva.....	Aug. 1-31.....		1	
Seville.....	Sept. 25-Oct. 8.....		18	
Switzerland:				
Berne.....	Sept. 17-23.....	2		
Syria:				
Damascus.....	Sept. 10-16.....	1		
Turkey:				
Constantinople.....	Sept. 17-30.....	11	3	
Union of South Africa:				
Cape Province.....	Sept. 3-9.....			Outbreaks.
Orange Free State.....	Do.....			Do.

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

Reports Received During Week Ended November 3, 1922—Continued.

TYPHUS FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Bulgaria:				
Sofia.....	Sept. 24-30.....	1	1	
Chile:				
Valparaiso.....	Aug. 13-Sept. 30.....		25	
China:				
Tsingtau.....	Sept. 11-18.....		1	
Egypt:				
Alexandria.....	Sept. 17-23.....	1		
Cairo.....	July 30-Aug. 5.....	4	1	
Port Said.....	do.....	3	3	
Germany:				
Coblentz.....	Oct. 1-7.....	4		
Russia:				
Lettonia.....	Aug. 1-31.....	26		Recurrent typhus, Cases, 7.
Turkey:				
Constantinople.....	Sept. 17-30.....	2	1	
Union of South Africa:				
Orange Free State.....	Sept. 3-9.....			Outbreaks.

Reports Received from July 1 to October 27, 1922.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.	
China:					
Amoy.....	May 14-June 24.....	1	4	Present. Stated to have been imported from Shanghai.	
Newchwang.....	July 27.....				
Pootung.....	Aug. 3.....			Present.	
Shanghai.....	June 25-July 31.....	198		Aug. 1-Sept. 17, 1922: Cases, 4, foreign; deaths, 53, Chinese.	
Tientsin.....	July 25-Aug. 19.....	4	2	July 28: 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	At quarantine station; among passengers from vessel carrying Russian refugees.	
Saloniki.....	June 7-17.....	30	11		
India:					
Bombay.....	Apr. 23-June 17.....	12	5	Feb. 26-June 24, 1922: Deaths; 33,979. June 25-Aug. 5, 1922: Deaths, 9,345. Aug. 6-12, 1922: Cases, 2,224; deaths, 1,377. (Report for week ended Feb. 25, 1922, not received.)	
Do.....	July 2-Aug. 12.....	5	4		
Calcutta.....	Apr. 23-June 24.....	536	378		
Do.....	June 25-Sept. 9.....	66	60		
Madras.....	May 21-June 17.....	3	1		
Do.....	July 16-Aug. 5.....	4	2		
Rangoon.....	May 7-June 24.....	116	65		
Do.....	June 25-Sept. 2.....	97	62		
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		One case, 1 death in nonresident, Aug. 27-Sept. 2, 1922.	
Do.....	June 25-Sept. 2.....	14	3		
Province—					
Bataan.....	June 4-10.....	1			
Batangas.....	May 25-June 24.....	15	11		
Do.....	June 25-July 22.....	7	4		
Bulacan.....	Apr. 30-May 6.....	1	1		
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		

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

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

Reports Received from July 1 to October 27, 1922—Continued.

CHOLERA—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands—Contd.				
Province—Continued.				
Fampanga.....	Apr. 16-June 24...	6	5	
Do.....	June 25-July 8....	1	1	
Pangasinan.....	June 18-24.....	3	1	
Rizal.....	Apr. 2-June 24....	3	1	
Tarlac.....	May 21-June 10....	4	4	
Union.....	Aug. 6-Sept. 9....	2	2	
Poland.....				
Rovno.....	June 11-24.....	8	3	July 9-Aug. 5, 1922 Cases, 61; deaths, 19. Repatriation station: Cases occurring among persons repatriated from Russia.
Do.....	June 25-Aug. 5....	33	10	
Volhynia.....	July 2-8.....	1	1	
Zamosc.....	Aug. 21.....	1	1	
Rumania:				
Bucharest.....	do.....	1		To July 31, 1922: Cases 11; deaths, 6. First case in soldier from frontier on Dniester River. Crangasi, a suburb of Bucharest.
Crangasi.....				
Province—				
Bessarabia—				
Cobusea.....	July 24.....	1		Reported Aug. 11. Prefecture. Cholera reported Aug. 11 among troops in garrison. Reported July 29.
Codaeshti.....		3		
Orhel.....				
Rascautzl.....		11	1	
Siam:				
Bangkok.....	Apr. 30-June 17....	15	9	
Do.....	July 2-Aug. 12....	8	4	
Straits Settlements:				
Singapore.....	July 16-22.....	1	1	
Syria:				
Aleppo.....	May 27-June 3....			A few cases in interior. Present in interior.
Do.....	June 25-Sept. 2....			
On vessel:				
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.

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:				
Island of Fayal.....				
Horta.....	Feb. 2-8.....	4	2	Jan. 16-Feb. 8, 1922: Cases, 6; deaths, 4.
St. Michaels Island.....				Jan. 1-May 13, 1922: Cases, 93; deaths, 55. June 25-Oct. 19, 1922: Cases, 265; deaths, 23. In localities 3-9 miles from Ponta Delgada.
Ponta Delgada.....	Oct. 19.....	3		In vicinity, 180 cases.

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

Reports Received from July 1 to October 27, 1922—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Bahia.....	June 11-17.....	1		May 7-June 4: Rodent; occurring in one section of the city. Many dead rats found.
Do.....	Aug. 20-26.....	1		
Pernambuco.....	May 7-13.....	1		
Porto Alegre.....	July 30-Aug. 26.....	1	3	
British East Africa:				
Kenya Colony.....				
Nairobi.....	Feb. 1-28.....	15	15	Mar. 1-June 30, 1922: Cases, 371; deaths, 344. July 9-15, 1922: Deaths, 14.
Cape Verde Islands:				
St. Vincent.....	Sept. 4.....			Present.
Ceylon:				
Colombo.....	May 6-June 24.....	13	10	Plague rats, 5.
Do.....	June 25-Sept. 9.....	20	21	Plague rats, 10.
China:				
Amoy.....	May 7-June 24.....		87	May 20, 1922: From 10 to 20 deaths reported daily. July 16-Aug. 12, 1922: Present; stated to be decreasing.
Do.....	June 25-July 15.....		76	
Canton.....	May 1-June 30.....	28	23	
Foochow.....	May 7-June 10.....	5	4	June 17-24, 1922: Present. June 21: Mildly epidemic; 2 fatal cases in foreign physicians. Aug. 13-26, 1922: Present.
Do.....	July 2-Aug. 12.....	3	1	
Hongkong.....	June 4-24.....	176	104	
Do.....	June 25-Sept. 9.....	137	101	
Ecuador:				
Guayaquil.....	June 1-15.....			Rats found infected, 16; examined, 3,400.
Do.....	July 1-Sept. 15.....			Rats examined, 21,609; found infected, 56.
Egypt:				
City—				Jan. 1-June 29, 1922: Cases, 280; deaths, 120. Jan. 1-Aug. 10, 1922: Cases, 437; deaths, 201. (Corrected report.)
Alexandria.....	June 1-28.....	21	6	
Do.....	July 2-Sept. 9.....	18	7	
Port Said.....	June 12-25.....	2	5	Septicemic, 1.
Do.....	July 2-Sept. 20.....	29	21	Foreign cases, 2; deaths, 2.
Suez.....	May 24-June 25.....	7	6	
Do.....	July 10-Aug. 8.....	3	2	Aug 5, 1922: One case imported from Mauritius on S. S. Dum bea.
Province—				
Assiout.....	May 30-June 23.....	14	8	Septicemic, 1.
Do.....	July 11-Aug. 5.....	6	3	
Benisuef.....	May 26-June 30.....	19	7	
Do.....	July 2-Sept. 2.....	29	13	
Faycum.....	June 3-29.....	8	4	
Do.....	July 2-20.....	13	3	
Gharbich.....	May 26-June 30.....	37	13	
Do.....	July 2.....	3		
Menoufieh.....	July 20.....	1	1	
Minieh.....	June 2-29.....	24	7	
Do.....	July 14-Sept. 16.....	17	8	
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.....			Hamakua Mill Co. One plague rat trapped; found positive, July 14, 1922.
Honokaa.....	Aug. 19-Sept. 10.....		4	Japanese and Filipinos; bubonic and septicemic. 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.
Pauhau.....	June 30.....			One plague rat trapped at Pauhau Gulch, June 29; found positive June 30, 1922.
Pauilo.....	July 7.....		1	At Pohakea; Japanese.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.**Reports Received from July 1 to October 27, 1922—Continued.****PLAGUE—Continued.**

Place.	Date.	Cases.	Deaths.	Remarks.
Hawaii—Continued.				
Pohakaa.....	Aug. 1-16.....	2	2	Aug. 1, Japanese child; case reported positive for plague Aug. 6, 1922. Form, pneumonic.
Pohakuhaku.....	July 12.....	1	1	Aug. 16, 1 fatal case in Japanese. Hawaiian. Reported positive, July 19.
India.....				Apr. 23-June 24, 1922: Cases, 6,310; deaths, 4,812. June 25-Aug. 12, 1922: Cases, 3,064; deaths, 2,212.
Bombay.....	Apr. 23-June 24.....	168	123	Surrounding country, July 2-8, 1922; Cases, 21; deaths, 16.
Do.....	June 25-Aug. 19.....	33	25	
Calcutta.....	Apr. 23-June 24.....	56	54	
Do.....	June 25-Aug. 19.....	16	16	
Karachi.....	May 25-June 24.....	59	55	
Do.....	June 25-July 8.....	3	3	
Madras Presidency.....	May 21-June 24.....	74	36	
Do.....	June 25-Sept. 16.....	1,185	770	
Rangoon.....	May 6-June 24.....	175	161	
Do.....	June 25-Sept. 2.....	370	335	
Indo-China:				
Saigon.....	Apr. 23-June 24.....	30	21	
Do.....	June 25-Aug. 19.....	10	7	Including area of 100 square kilometers.
Italy:				
Catania.....	June 17.....	1		
Naples.....	July 18-Aug. 23.....	15		Occurring in suburbs, viz, at Torre Annunziata, July 18-Aug. 23, 14 cases; San Giovanni a Teduccio, July 25, 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, 233; deaths, 310; occurring in 6 Provinces. June 1-30, 1922: Cases, 222; deaths, 259; occurring in 5 Provinces. July 1-31, 1922: Cases, 208; deaths, 223; occurring in 5 Provinces.
East Java—				
Soerabaya.....	May 7-June 24.....	3	3	
Soerakarta—				
Keporen.....	May 20.....			Epidemic.
Madagascar:				
Tananarivo Province—				
Anketrina.....	May 4.....		1	Native village; disease stated to have been present since about Apr. 27, 1922. (Name of locality corrected.)
Tamatave.....	June 26-July 2.....	2	1	
Do.....	Aug. 21-Sept. 13.....			Present. Aug. 17, 1922: One case.
Tananarivo.....	May 29-June 18.....	2	1	
Do.....	July 10-23.....	2	2	
Mauritius, Island.....				Oct. 19, 1922: 65 fatal cases reported.
Mesopotamia:				
Bagdad.....	Apr. 1-June 30.....	268	188	
Do.....	July 1-31.....	23		
Mexico:				
Tampico.....				Sept. 24-30, 1922: One plague rat. June 30, 1922: One plague rat.
Vera Cruz.....				
Palestine:				
Jerusalem.....	July 4-Sept. 11.....	40	2	In native quarter of Jaffa.
Peru.....				May 1-15, 1922: Cases, 36; deaths, 19. June 1-30, 1922: Cases, 87; deaths, 15. July 1-Aug. 31, 1922: Cases, 95; deaths, 51.
Callao.....				Jan. 1-June 30, 1922: Deaths, 13.

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

Reports Received from July 1 to October 27, 1922—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Philippine Islands:				
Manila ¹	June 3.....	1	1	From S. S. Taisang from Amoy, China.
Do.....	Aug. 20-26.....	2		
Portugal:				
Lisbon.....	July 23-Sept. 2....	4	5	
Portuguese West Africa:				
Guinea.....				Reported present Aug. 24, 1922.
Senegal:				
Dakar.....	June 1-30.....	1	1	
Do.....	July 1-31.....	2	2	
Siam:				
Bangkok.....	Apr. 30-June 3....	4	3	
Do.....	July 2-Aug. 12....	5	4	
Spain:				
Barcelona.....	Sept. 24-Oct. 18..	5	6	
Cartagena.....	Oct. 18.....	2		
Valencia.....	Oct. 18.....	2		
Straits Settlements:				
Singapore.....	Apr. 30-June 24..	8	9	
Do.....	July 9-Aug. 26....	3	3	
Syria:				
Aleppo.....	Sept. 9-16.....		1	
Beirut.....	July 30.....	2		
Tunis:				
Tunis.....	June 30-Sept. 9...	4	1	
Turkey:				
Constantinople.....	Aug. 20-Sept. 16..	6	3	
Union of South Africa:				
Orange Free State— Grootkom Farm.....	May 7-13.....			One dead plague-infected rodent found. Locality adjoins Tru- cart's Berg Farm, on which plague-infected mouse was found preceding week.
Rendezvous Ry. Sta- tion.....	May 14-20.....			Plague-infected wild rodent found near.
On vessels:				
S. S. Ardeola.....	June 25-July 8....			At Liverpool. Four plague-in- fected rats found dead. Vessel from Las Palmas, Canary Is- lands, June 26, 1922.
S. S. Dumbea.....	Aug. 5.....	1		At Suez, Egypt, from Island of Mauritius. Patient ill two days before arrival. Declared positive Aug. 6.
Greek vessel.....	July 19.....			At Messina, Italy. Cases on board. Vessel not allowed to enter.
S. S. Legio.....	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. Ves- sel badly rat-infested.
S. S. Taisang.....	June 1-3.....	1	1	At Manila, P. I., from Amoy, China. Patient landed at Ma- nila June 1, 1922. The Taisang was 2½ days en route direct from Amoy.

SMALLPOX.

Arabia:				
Aden.....	May 7-June 24....	60	21	
Do.....	July 2-Sept. 23....	45	23	
Argentina:				
Rosario.....	June 1-30.....		3	
Asia Minor:				
Smyrna.....	May 14-June 24....	4		In district.
Do.....	June 25-Aug. 26....	13		Do.

¹ The reported occurrence of 32 cases of plague with 16 deaths at Manila during August, 1922, appearing in Public Health Reports, Oct. 13, p. 2687, and Oct. 20, p. 2674, was erroneous.

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

Reports Received from July 1 to October 27, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Bermuda:				
Hamilton	Sept. 3-30	3		
Bolivia:				
La Paz	Mar. 1-Apr. 30	97	16	
Brazil:				
Bahia	June 25-July 1	1	1	
Para	May 29-June 25	8		
Do	July 3-Sept. 17	141	2	
Rio de Janeiro	May 14-June 24	48	12	
Do	June 25-Sept. 23	136	28	
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	
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. 3-9	1		
New Brunswick—				
Kent County	June 25-July 1	2		
Madawaska County	June 4-17	6		
Do	Sept. 10-Oct. 7	2	1	
Ontario				Sept. 1-30, 1922: Cases, 19; deaths
Fort William and Port Arthur	Aug. 6-Sept. 23	3		1.
Hamilton	July 30-Aug. 12	2		
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-Aug. 26	14		
Toronto	June 18-Sept. 9	10		
Saskatchewan—				
Regina	Sept. 17-23	1		Imported.
Saskatoon	Aug. 20-26	1		
Ceylon:				
Colombo	May 14-20	1		
Do	July 16-Sept. 9	3		
Chile				Prevalent, July 3, 1922, throughout southern Provinces.
Concepcion	Mar. 14-June 20		71	
Do	June 27-Sept. 4		30	
Quillon				In Concepcion Province: epidemic in May, 1922, with 60 reported cases. To June 5, epidemic.
Do	June 27-July 3			Epidemic.
San Patricio	May 16-22	13		
Talcahuano	May 22-June 24	33	19	May 16-22, 1922: Present.
Do	June 25-July 30	5	7	
Temuco				Province of Cautin; epidemic in May, 1922.
Valparaiso	Mar. 26-June 19		115	Incomplete; several districts not reporting.
Do	June 25-July 30		46	
China:				
Amoy	May 7-20			Present. June 18-24, 1922: 1 death.
Do	July 16-Sept. 16			Present.
Antung	May 29-June 18	4		
Do	July 3-16	5		
Chungking	May 28-June 24			Do.
Do	June 25-Sept. 2			Do.
Foochow	May 14-20	1		Aug. 13-19, 1922: Present.
Hankow	June 25-July 1	1		
Hongkong	May 14-June 24	41	32	
Do	July 16-Aug. 12	3	2	Aug. 13-26, 1922: Present.
Manchuria—				
Dairen	May 15-June 18	4	1	
Do	June 26-July 17	4	1	
Harbin	May 22-28	1		
Do	July 30-Aug. 5	1		

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

Reports Received from July 1 to October 27, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
China—Continued.				
Manchuria—Continued.				
Mukden.....	June 18-24.....			Present.
Do.....	July 16-Sept. 23.....			Do.
Nanking.....	May 7-June 24.....			Do.
Do.....	June 25-Sept. 9.....			Do.
Shanghai.....	May 22-26.....	1		Native.
Tientsin.....	May 14-20.....			Present.
Tsingtau.....	May 9-June 18.....	4	3	Including leased territory of Kiaochow. Japanese population along Shantung Railway, and Japanese residents, Tsinan.
Do.....	June 26-July 30.....	5	3	Do.
Chosen (Korea):				
Chemulpo.....	May 1-31.....	1		
Fusan.....	May 1-June 30.....	147	60	
Do.....	July 1-31.....	13	9	
Seoul.....	May 1-June 30.....	26	5	
Do.....	July 1-31.....	23	8	
Cuba.....				
City—				
Antilla.....	June 18-24.....	1		Reported for Proston.
Do.....	Sept. 17-23.....	1		
Cienfuegos.....	June 24-July 1.....	1		
Habana.....	July 1-Aug. 31.....	10		
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.....	4		Present. Aug. 23: Epidemic. Island in Leeward Islands.
Dominican Republic:				
Fuero Plata.....	Sept. 12-25.....	6		
San Pedro de Macoris.....	May 21-June 24.....	167	2	City and country. (Corrected report.)
Do.....	June 25-Sept. 23.....	292	2	City and district. (Corrected report.)
Santo Domingo.....	June 4-24.....	3	9	Including vicinity.
Do.....	June 25-July 29.....	2	4	July 30-Aug. 5, 1922: A few cases, city and vicinity.
Ecuador:				
Guayaquil.....	July 16-Sept. 15.....	8		
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 23-29.....	1		
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	
Great Britain:				
Halifax.....				Outbreak reported under date of June 17, 1922.
Huddersfield.....				Do.
Liverpool.....	Aug. 13-19.....	1		In port hospital.
London.....	July 30-Sept. 23.....	5	2	
Sheffield.....	May 23-June 17.....	5		
Southampton.....	June 18-24.....	2		
Greece:				
Saloniki.....	May 1-June 25.....	3	1	
Do.....	July 17-23.....	1	1	
Syra Island.....	May 26.....	12	5	
Haiti:				
Cape Haitien.....	June 11-17.....	1		Vicinity of Cape Haitien. Present.
Plaine du Nord.....	do.....			

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

Reports Received from July 1 to October 27, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
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, 2,813; deaths, 919. June 25-Aug. 12, 1922: Cases, 6,098; deaths, 1,673.
Do.....	July 2-15.....	4	2	
Calcutta.....	Apr. 23-June 24.....	84	67	
Do.....	June 25-Sept. 9.....	28	21	
Karachi.....	May 23-June 24.....	35	9	
Do.....	July 16-Sept. 9.....	16	4	
Madras.....	May 14-June 24.....	297	94	June 19-25, 1922: Cases, 30; deaths, 15.
Do.....	July 2-Sept. 16.....	437	205	
Rangoon.....	May 7-June 24.....	37	16	
Do.....	July 2-Sept. 2.....	40	19	
Indo-China:				
Saigon.....	June 30-Aug. 19.....	36	26	Including area of 100 square km.
Japan:				
Kobe.....	June 19-25.....	2		
Taiwan Island.....	June 11-30.....	26	3	
Do.....	July 22-Aug. 10.....	27	4	
Yokohama.....	May 29-June 25.....	4	2	
Do.....	June 26-July 20.....	48	8	
Java:				
East Java—				
Soerabaya.....	Aug. 13-19.....	2		
West Java—				
Batavia.....	Apr. 28-June 30.....	20	3	City and Province.
Do.....	July 9-Sept. 1.....	38	7	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 1-31.....	38		
Mexico:				
Chihuahua.....	June 22-Sept. 17.....		2	
Guadalajara.....	May 1-June 30.....	13		
Do.....	July 1-31.....	4	1	
Manzanillo.....	June 6-25.....			Estimated cases, 4 to 10.
Do.....	June 27-July 3.....	6	1	Estimated.
Mexico City.....	May 21-June 24.....	129		Including municipalities in Federal District. Report June 11-17, not received.
Do.....	June 25-Sept. 8.....	204		Including municipalities in Federal District.
Nogales.....	July 22-Aug. 5.....	26	3	State of Sonora.
San Luis Potosi.....	July 23-Oct. 7.....		12	
Torreón.....	July 1-31.....		1	
Panama Canal:				
Colon.....	July 1-31.....	2		July 1-31, 1922: Cases, 4, of which 1 nonresident and not locally reported. July 28-Sept. 28, 1922: Cases, 3; of these, nonresident, 2.
Panama.....	July 1-Aug. 15.....	2		
Persia:				
Teheran.....	Apr. 23-May 22.....	2		
Peru:				
Callao.....				May 1-15, 1922: Cases, 5; deaths, 4. June 1-30, 1922: Cases, 16; deaths, 7. Aug. 1-31, 1922: Cases, 23; deaths, 5.
Lima.....				Jan. 1-June 30, 1922: Deaths, 1.
Poland:				Jan. 1-June 30, 1922: Deaths, 23.
Do.....				Mar. 26-June 24, 1922: Cases, 1,210; deaths, 241.
Do.....				June 25-Aug. 5, 1922: Cases, 191; deaths, 40.
Portugal:				
Lisbon.....	May 29-June 25.....	6	8	Corrected report.
Do.....	June 26-Sept. 23.....	153	62	July 22-Aug. 5: Cases, 19; deaths, 4.
Oporto.....	Aug. 27-Sept. 2.....	1		
Portuguese East Africa:				
Lourenco Marques.....	July 23-29.....	1		
Portuguese West Africa:				
Angola—				
Loanda.....	June 25-July 1.....		1	
Russia:				
Esthonia.....	May 1-June 30.....	6		
Do.....	July 1-31.....	1		
Lettonia.....	May 1-June 30.....	51		
Do.....	July 1-31.....	5		

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

Reports Received from July 1 to October 27, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Senegal:				
Dakar.....	June 1-30.....	4	4	
Spain:				
Barcelona.....	June 22-28.....		1	
Do.....	June 29-Sept. 13.....		3	
Bilbao.....	Aug. 1-31.....		4	
Cadiz.....	Aug. 1-30.....		1	
Corunna.....	June 11-17.....		1	
Huelva.....	Apr. 1-June 30.....		4	
Do.....	July 1-31.....		1	
Seville.....	June 11-17.....		36	Week ended June 11: Many cases.
Do.....	June 18-Sept. 24.....		133	
Valencia.....	May 21-27.....	1		
Straits Settlements:				
Singapore.....	Apr. 30-June 5.....	11	2	
Do.....	July 30-Aug. 19.....	3	1	
Switzerland:				
Basel.....	May 23-June 3.....	1		
Do.....	Sept. 17-23.....	1		
Berne.....	May 14-20.....	1		
Do.....	July 9-Sept. 9.....	18		
Lucerne.....	July 1-31.....	1		
Zurich Canton:				
Zurich.....	Apr. 23-June 12.....	9		Aug. 1-31, 1922: Cases, 74.
Do.....	June 25-Sept. 22.....	67		Aug. 1-31, 1922: Cases, 61.
Syria:				
Aleppo.....	June 4-24.....			Present.
Damascus.....	June 18-24.....		2	
Do.....	June 25-Aug. 26.....	14	2	
Tunis:				
Tunis.....	July 17-23.....	1		
Turkey:				
Constantinople.....	May 21-June 24.....	21	6	
Do.....	June 25-Sept. 16.....	30	8	
Union of South Africa:				
Cape Province.....				Apr. 1-June 30, 1922: Cases, 173; deaths, 12 (colored); white, cases, 36. July 1-31, 1922: Colored—cases, 171; deaths, 3. White—6 cases.
Do.....				Apr. 1-June 30, 1922: Cases, 87; deaths, 3 (colored); white, 6 cases. July 1-31, 1922: Cases, 59; deaths, 2 (colored).
Natal.....	Aug. 20-Sept. 2.....			Outbreaks.
Do.....				Apr. 1-May 31, 1922: Cases, 20; deaths, 8 (colored); white, 20 cases. July 1-31, 1922: Cases, 5 (colored).
Orange Free State.....				May 1-31, 1922: Cases, 12; deaths, 1 (colored). July 1-31, 1922: 1 case (colored).
Southern Rhodesia.....	May 11-June 28.....	67	4	In natives, 3 cases.
Do.....	June 29-Aug. 23.....	35		
Transvaal.....				Apr. 1-June 30, 1922: Cases, 54 (colored); white, 10 cases. July 1-31, 1922: Colored—cases, 106; deaths, 1. White, 6 cases.
Do.....	Aug. 20-Sept. 2.....			Outbreaks.
Johannesburg.....	May 1-31.....	1		
Virgin Islands:				
St. Thomas.....	June 5-18.....	1	1	At quarantine. From vessel from Dominican Republic.
Yugoslavia:				
Croatia-Slavonia—				
Zagreb.....	June 4-10.....	1		
Do.....	Aug. 6-12.....	1		
Serbia.....				
Belgrade.....	June 11-17.....	1		Oct. 23-29, 1921: Cases, 5.
Do.....	Aug. 14-Sept. 21.....	34	12	
On vessels:				
S. S. Changsha.....	May 11.....	1		At Hongkong, China. Case landed from vessel; patient, intending passenger. Vessel proceeded to Australian ports.
S. S. Comeric.....	do.....	1		At sea, en route to Durban, S. A., from Sydney, Australia. (Public Health Reports, June 23, 1922, p. 1555.)

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

Reports Received from July 1 to October 27, 1922—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
On vessels,—Continued.				
Schr. Fancy Me.....	May 28.....			At St. Thomas, Virgin Islands. From San Pedro de Macoris, Dominican Republic. One case removed to quarantine June 5; died June 18.
S. S. 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 Shimonsaki, Japan, for Melbourne via Hongkong and Manila. Left Thursday Island for Australian ports.

TYPHUS FEVER.

Algeria:				
Algiers.....	May 1-31.....	16	4	
Do.....	Aug. 1-31.....	2	1	
Oran.....	June 1-30.....	3	1	
Do.....	July 1-Aug. 10.....		3	
Asia Minor:				
Smyrna.....	May 14-June 24.....	8		City and district. (Corrected report.)
Do.....	June 25-Aug. 19.....	11		District.
Austria:				
Vienna.....	May 7-June 10.....	3	1	
Do.....	July 2-15.....	2	1	
Australia:				
Brisbane.....	July 9-Aug. 12.....	2		
Bolivia:				
La Paz.....	Mar. 1-Apr. 30.....	15	8	
Bulgaria:				
Sofia.....	May 28-June 17.....	4		
Chile:				
Concepcion.....	Apr. 11-May 29.....		10	
Do.....	June 27-Sept. 4.....		7	
Valparaiso.....	Apr. 2-22.....		6	
Do.....	July 18-24.....		1	
China:				
Antung.....	May 15-21.....	1		
Do.....	July 10-Sept. 17.....	11		
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-Sept. 10.....	7		
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-Sept. 16.....	25	14	July 22-29, 1922: 1 imported paratyphoid.
Cairo.....	Mar. 19-June 24.....	91	62	Relapsing fever, Mar. 26-Apr. 8.
Do.....	June 25-July 15.....	20	15	1 case.

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

Reports Received from July 1 to October 27, 1922—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Egypt—Continued.				
Port Said.....	May 28-June 3.....	1		
Do.....	July 2-Sept. 2.....	4	4	
Germany.....				
Berlin.....	Apr. 30-June 24.....		7	May 1-6, 1922: Five cases typhus fever at quarantine station of Osternothafen, in persons returning from Russia.
Do.....	June 25-Sept. 2.....		17	
Coblenz.....	July 2-Sept. 23.....	18		
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	
Mexico:				
Mexico City.....	Apr. 23-June 24.....	111		Including municipalities in Federal district.
Do.....	June 25-Sept. 8.....	183		Do.
San Luis Potosi.....	Sept. 10-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:				
Jerusalem.....	June 27-Sept. 4.....	3		
Persia:				
Tcheran.....	Mar. 22-June 22.....		8	
Poland:				
Do.....				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.
Warsaw.....	Apr. 23-June 24.....	156		June 25-Aug. 5, 1922: Cases, 2,040; deaths, 149. Recurrent typhus, June 25-Aug. 5, 1922: Cases, 2,585; deaths, 84. Among transient and permanent residents.
Portugal:				
Oporto.....	May 4-June 24.....	9	4	
Do.....	June 29-Aug. 19.....	2	1	
Setxal.....	Aug. 4.....	1		Village opposite Lisbon.
Rumania:				
City.....				Apr. 1-May 31, 1922: Cases, 62.
Bucharest.....	May 1-31.....	14		
Cerenauti.....	do.....	5		
Chisinau.....	Apr. 1-30.....	21		
Cluj.....	May 1-31.....	18		
Constanza.....	do.....	1		
Galata.....	do.....	1		
Sulina.....	do.....	2		
Province—				
Bucovina.....	Jan. 1-31.....	35	13	
Chisinau.....	Apr. 1-30.....	14		Recurrent typhus: Cases, 7.
Transylvania.....	Jan. 1-31.....	16	3	
Russia:				
Esthonia.....	Apr. 1-June 30.....	44		
Do.....	July 1-Aug. 31.....	15		
Lettonia.....	Apr. 1-June 30.....	635		Recurrent typhus: Cases, 40.
Do.....	July 1-31.....	43		Recurrent typhus: Cases, 14; paratyphus cases, 3.
Siberia:				
Vladivostok.....	July 1-31.....	3		

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

Reports Received from July 1 to October 27, 1922—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
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.....	Aug. 27-Sept. 2.....			Present in interior.
Tunis:				
Tunis.....	June 4-10.....	2		
Turkey:				
Constantinople.....	May 21-June 24.....	16		
Do.....	July 9-Sept. 16.....	27	3	
Union of South Africa				
Cape Province.....				Apr. 1-June 30, 1922: Cases, 1,220; deaths, 214 (colored); white, 17 cases. July 1-31, 1922: Cases, 629; deaths, 95 (colored); white, 2 cases.
Natal.....				Apr. 1-June 30, 1922: Cases, 57; deaths, 7 (colored). July 1-31, 1922: Cases, 9; deaths, 4 (colored).
Orange Free State.....				Apr. 1-June 30, 1922: Cases, 97; deaths, 10 (colored); white, 1 case. July 1-31, 1922: Cases, 25; deaths, 8 (colored).
Do.....	Aug. 27-Sept. 2.....			Outbreaks.
Transvaal.....				Apr. 1-June 30, 1922: Cases, 29; deaths, 2 (colored). July 1-31, 1922: Cases, 4 (colored).
Do.....	Aug. 27-Sept. 2.....			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		
Volvodina.....	Aug. 7-13.....	1		(1921.)
On vessels:				
S. S. Chios.....	July 18.....	1		At Kavak quarantine station, Bosphorus, from Novorossiysk, 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.....	1	1	Origin, Tampico.
Tampico.....	July 27-29.....	1	1	From Panuco. Patient brought to Tampico on eighth day of illness.
Do.....	Aug. 30.....		6	Of these, 5 with origin at Panuco, State of Vera Cruz; 1 with origin at Tampico.
Tuxpam.....	Oct. 14.....	1		
On vessel:				
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.