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INVESTIGATION OF TYPHOID FEVER AT TEXARKANA, ARK.-TEX. (MILK OUTBREAK.)

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This investigation was undertaken upon the request of the representative to Congress from the first district of Texas, to the Surgeon General, Public Health and Marine-Hospital Service, and with the approval of the State boards of health of Arkansas and Texas.

Occasion is taken to express appreciation for the help and courtesies extended by the mayors, health officers, and other city officials, and by the physicians and citizens of the two cities.

SCOPE OF INVESTIGATION.

This has included a careful study of 36 cases, a sanitary survey of the cities, inspection of dairies, inspection of the public water system, bacteriological examination of water and milk; the making of Widal blood tests as an aid in diagnosis; and the examination of blood and stools from the attendants of one dairy. A blank form was used for each patient and filled out with any information having a bearing upon the possible source of infection.

POSSIBLE CAUSES.

The prevalence of typhoid fever in any community depends directly upon the chances which are offered for the contamination of food and drink with the typhoid bacillus.

The typhoid bacilli are discharged in the excreta of patients with typhoid fever during a part of the incubation period, during the period of fever and convalescence, and occasionally for years after the attack. In a small percentage of cases typhoid bacilli are found in the excreta of people who have had no apparent symptoms of the disease.

Infection may be brought into a community by means of water, milk, milk products, ice, green vegetables, raw shellfish, and other food products.

Its further spread in the community may be by direct contact to persons in intimate association with the patient, and by insects, especially flies having access to the dejecta of patients and to the food of those living in the same or neighboring houses.

Milk is a favorable culture medium for the typhoid bacillus, and when once introduced it multiplies rapidly under ordinary conditions.

There are numerous ways in which it may gain entrance in milk. At the dairy farm a person in the early stages of typhoid fever or convalescing, or suffering from an unrecognized case of the disease, may convey infection directly to the milk in handling it. Or a person nursing a patient may convey the infection to the milk. Again, infection may be carried by flies from excreta not disinfected, directly to the milk or the milk utensils. If the milk utensils are washed in water taken from a well or stream, which is contaminated by infected dejecta, the disease is thus further spread.

Milk bottles left at the home of a patient with typhoid fever may easily become infected, and if carried back to the dairy and filled before being thoroughly sterilized, may carry the infection to a different home.

The essential aim in all preventive measures against typhoid is the keeping of the dejecta of typhoid patients from the food and drink of other people. This can be accomplished in recognized cases, but a few mild cases and either temporary or chronic bacillus carriers are more than apt to escape detection.

PREVALENCE OF DISEASE.

From September 1 to November 15, 1911, there occurred in Texarkana 36 cases of typhoid fever. These cases were reported by the attending physicians at the special request of the health officers, as typhoid at present is not among the list of infectious diseases required to be reported.

Two of these cases are regarded as being imported, the disease developing within 9 days after their arrival in the city.

The remaining 34 were distributed as follows, according to the date of definite onset:

From Sept. 1–15, inclusive	2
From Sept. 16–30, inclusive	1
From Oct. 1–15, inclusive	3
From Oct. 16–31, inclusive	9
From Nov. 1–15, inclusive	19
	34

Estimating the population at 15,000 people, this gives an incidence of disease of 1 case to every 441 people.

There is no data for an accurate comparison of the number of cases occurring this year with previous years. But it would seem that there has been an unusual prevalence of the disease, at least during the period from October 15 to November 15.

The cases occurred for the most part in the better residential part of the city. Twenty-eight of the cases occurred in 28 separate homes. The remaining 6 occurred in 3 separate homes, 2 in each. In 2 of these homes both patients were taken sick within a week of each other, which suggests some common outside source of infection. In the third home the second case developed 15 days after the first case, which suggests contact with the previous case as the cause.

In general they were of mild or moderate severity, and only 1 death was reported. This gives a case fatality of 2.9 per 100, which is very low. For the most part the cases were characterized by a sudden onset.

DIAGNOSIS.

As an aid in diagnosis, 8 Widal blood tests were made, of which 5 were positive for typhoid and 3 negative. Of the 3 negative ones, 2 were not clinically typhoid, and the third was made during the first week of sickness.

Of the 5 positive ones, 2 were of a mild type, and a third had not been confined to bed at all.

In the 34 cases it is extremely improbable that any mistake in diagnosis was made; but on the other hand it is very probable that there really were more cases of typhoid or paratyphoid which were not classed as such on account of their mildness.

ANALYSIS OF CASES.

The 34 cases were distributed according to age as follows:

0–4 years, inclusive	3
5–9 years, inclusive	10
10–14 years, inclusive	9
15–19 years, inclusive	5
20–24 years, inclusive	2
25–29 years, inclusive	2
30–34 years, inclusive	1
35–39 years, inclusive	2
	34

Twenty-two, or 61 per cent, of the 34 cases were under 15 years of age. This is a high percentage and very suggestive of milk infection.

SEX.

The cases were evenly divided as to sex, 17 occurring in males and 17 in females.

CONTACT.

One case occurred in the same house as a previous case, the onset being 15 days later. This case may have been due to infection by contact.

SANITARY CONDITIONS.

In 29 of the 34 cases the house was connected with the city sewerage system and in 5 an open privy was in use. In only 2 cases could the sanitary conditions be classed as extremely bad.

DISPOSAL OF EXCRETA.

The disinfection of excreta was as follows: Efficient in 21 cases, fairly efficient in 10 cases, not efficient in 3 cases.

MILK.

Of the 34 cases, 33 gave a history of using milk as a beverage, or on cereals, or in both ways, within 30 days before the onset of sickness. One patient claimed to have used no milk at all.

Of the 33 cases using milk, 25, or 75 per cent, obtained the whole or a part of the milk from one dairy farm. Of the remaining 8 cases, 7 used milk from a second dairy and 1 from his own cows. Of these 7 cases, 3 took part of their meals at various restaurants, and while known to have used milk from the second dairy, may possibly have had some from the first also.

In 1 other of the 7 cases infection was most probably acquired by contact.

When divided into 15-day periods, we have the following:

	Number cases using milk.	Number cases using milk from dairy No. 1.
Sept. 1-15, inclusive	2	1
Sept. 16-30, inclusive	1	1
Oct. 1-15, inclusive	3	0
Oct. 16-31, inclusive	8	6
Nov. 1-15, inclusive	19	17
	33	25

Comparisons between different dairies, to be of value, must of necessity take into account the amount of milk sold in proportion to the number of cases of sickness.

From information furnished by the dairymen, it is reckoned that the daily output of milk furnished by the 10 dairies is 1,800 quarts, and for the period of 76 days from September 1, to November 15, would be 136,800 quarts.

Taking this figure as a basis, and computing the amount of milk sold by each dairy, and the number of cases of typhoid for each 100,000 quarts of milk sold, a very good idea is gained of the distribution of cases among the different dairies.

No. of dairy.	Number of cases.	Number quarts milk sold in 76 days.	Ratio of cases per 100,000 quarts of milk.
1	25	18,240	137
2	7	53,200	13
3	0	21,280	0
4	0	4,560	0
5	0	4,560	0
6	0	7,600	0
7	0	9,220	0
8	0	7,600	0
9	0	4,560	0
10	0	6,080	0

Of these 7 cases attributed to dairy No. 2 for the purpose of illustration, as already mentioned, one was probably due to infection by contact, and from the evidence obtained it would not be fair to attribute any of them to infection caused by using this milk.

On the other hand, the 25 cases credited to dairy No. 1 had no other common source of supply for either food or drink, and their infection may be justly attributed to this milk.

It is evident that the number of cases occurring among the customers of dairy No. 1 is out of all proportion to the amount of milk sold. This dairy sold 60 gallons of milk daily, or 13 per cent of the total, and had among its customers 75 per cent of all those patients giving a history of using milk. It would be impossible to explain this upon the ground of mere coincidence.

Further evidence in regard to the milk from dairy No. 1 as being the source of infection is brought out by a comparison between the number of cases occurring among users of this milk and the number of cases occurring among the remainder of the population during the period from October 16 to November 15.

During this period, 27 cases occurred; 23 of these cases were among customers of dairy No. 1, and 4 were not.

Allowing the liberal estimate that each quart of milk of the daily 240 quarts supplied by this dairy was divided among 8 people, we have 23 cases among 1,920 people, or 1 case to every 83, as against 4 cases among 13,000 people (the remainder of the population), or 1 to every 3,250.

Some of the general features of milk-borne typhoid epidemics, as observed in various places by different investigators, are described as follows: There is a special incidence of disease upon the track of the suspected milk supply; better class houses suffer most; milk drinkers are chiefly affected; women and children suffer most; there is a sudden onset, with short incubation period; several cases may occur in the same house about the same time; the attacks are often mild; contact cases are lessened, and the mortality rate is lower than usual.

It would seem that these general features have been quite closely followed out in the series of cases here.

A careful inspection of the suspected dairy was made and measures were recommended for the proper handling of the milk. There was no history of any case of typhoid fever occurring on the place, and no history of any person on the place being associated with a typhoid patient.

To detect a possible bacillus carrier, a Widal test was made of 4 persons on the farm who were employed in handling the milk or utensils. These were all negative for typhoid or paratyphoid. An examination of the stools of 3 people engaged in handling the milk was made, which were also negative for the *Bacillus typhosus*.

Water used for washing the milk bottles and utensils was taken from an open well near the milk house. The water from this well was found to be badly contaminated, the colon bacillus being found in 0.1 of a cubic centimeter at two examinations. Within 4 or 5 feet of this well there ran an underground pipe carrying the discharge from a bathtub in the house, and waste water used in washing the milk utensils.

Again, the method of washing and sterilizing dirty milk bottles was not sufficient to kill the typhoid bacillus, had any been present. It is very possible that dirty bottles returned from the home of a typhoid patient may have been contaminated, and these being washed in the same water with other bottles, and all being filled again without thorough sterilizing, may have served to spread the infection.

Also this contaminated waste water may have found its way into the well from the drain pipe, and the infection further spread from this source.

Whatever the exact source of the infection, it apparently ceased to be operative before or about November 1, for the date of definite onset of the last case of typhoid fever reported was November 12.

No typhoid bacilli were found in the well water or milk, but this is very natural, as the first examination was made about 20 days after the date of onset of the last case of typhoid reported, and about a month from the time we may judge the source of infection to have disappeared.

ICE CREAM.

The occasional use of ice cream was quite general among the 34 cases, the cream being obtained from various sources. No case could be definitely attributed to its use, but there is possibility that this was the source of infection in a few cases not otherwise accounted for.

ICE.

The use of ice can be quite definitely eliminated as a cause of infection, since this product is satisfactorily made from distilled water.

WATER.

The public water supply is obtained from two groups of wells numbering about 46, and from about 30 to 70 feet deep. That portion coming from the Arkansas station is subjected to mechanical filtration, and at this station a reserve supply is kept in a storage reservoir for fire purposes. The daily consumption is about 850,000 to 1,000,000 gallons. This supply is used quite generally in the city as the sole or occasional supply. Besides this, many families have shallow wells, either dug or driven to a depth between 20 to 40 feet.

Among the 34 cases investigated the water supply was as follows:

City water:	
Solely	18
Principally	3
Occasionally	11
Shallow-well water:	
Solely	1
Principally	11
Occasionally	1
Spring water:	
Solely	1
Principally	0
Occasionally	2

In order to judge what part, if any, water has played as a cause of typhoid, 22 bacteriological examinations have been made of samples of the city water and 7 from private sources. Five of these 22 samples were taken at the pumping stations and 17 from centrally located taps.

Fermentation tests were made in lactose bouillon incubated at room temperature for 48 hours. Plates of standard agar, kept at room temperature for 48 hours, were used in making the counts. Endo's plating medium was used for the detection of the colon bacillus from fermentation tubes showing the presence of gas. From these plates typical red colonies of *Bacillus coli* were fished and later fully identified at the Hygienic Laboratory.

Numerous fermentation tubes showed the presence of a small amount of gas, but when plated on Endo's medium no colon-like colonies were found. Many of these colonies which were formed on Endo's medium were later replanted in fermentation tubes but in no instance was gas formed.

This leads to the conclusion that the formation of gas in the original tubes was due to anaerobic bacteria which failed to grow on the plates. On the other hand in 3 instances the colon bacillus was found on plates made from fermentation tubes showing the presence of only a small amount of gas, estimated at less than 10 per cent. This emphasizes the necessity of careful plating out from fermentation tubes showing the presence of only a small amount of gas, to detect the colon bacillus, and shows the error that may arise when relying only upon the presumptive test.

Results of examination of water supply.

Source and date.	Number of bacteria per cc.	Fermentation in lactose bouillon.			B. coli in—		
		10 cc.	1 cc.	0.1 cc.	10 cc.	1 cc.	0.1 cc.
Texas station, before passing pump:							
Dec. 4, 1911	200	.....	.....	.....	.....	.....	.....
Dec. 16, 1911	350	.....	.....	[1]×	.....	.....	.....
Average	275	.....	.....	.....	.....	.....	.....
Texas station, after passing pump, Dec. 4, 1911	225	.....	.....	.....	.....	.....	.....
Arkansas station, after passing pump:							
Dec. 4, 1911	1,500	.....	.....	.....	.....	.....	.....
Dec. 16, 1911	800	[1]×	[1]×	.....	.....	.....	.....
Average	1,150	.....	.....	.....	.....	.....	.....
Central tap on State Line Avenue:							
Dec. 4, 1911	500	.....	.....	.....	.....	.....	.....
Dec. 9, 1911	585	[2]×	[1]×	.....	.....	.....	.....
Dec. 11, 1911	295	×	×	.....	×	×	.....
Dec. 12, 1911	2,100	×	×	.....	×	×	.....
Dec. 16, 1911	545	[1]×	[1]×	[2]×	.....	.....	.....
Average	805	.....	.....	.....	.....	.....	.....
Central tap on Pine Street:							
Dec. 9, 1911	215	×	[1]×	[1]×	×	.....	.....
Dec. 11, 1911	600	×	×	×	×	×	×
Dec. 12, 1911	2,385	[2]×	[1]×	.....	.....	.....	.....
Dec. 13, 1911	1,300	[1]×	[2]×	.....	.....	.....	.....
Dec. 15, 1911	130	×	[2]×	.....	×	.....	.....
Dec. 16, 1911	230	×	[2]×	[2]×	×	.....	.....
Average	810	.....	.....	.....	.....	.....	.....
Tap corner Broad and Pine Streets:							
Dec. 9, 1911	2,185	[2]×	[2]×	[1]×	.....	.....	.....
Dec. 11, 1911	280	[1]×	[2]×	[2]×	.....	.....	.....
Dec. 12, 1911	1,450	×	[2]×	.....	×	.....	.....
Dec. 13, 1911	3,300	×	[2]×	[1]×	×	.....	.....
Dec. 15, 1911	660	[1]×	[2]×	.....	.....	.....	.....
Dec. 16, 1911	765	[1]×	[2]×	[2]×	.....	.....	.....
Average	1,440	.....	.....	.....	.....	.....	.....
Water samples, miscellaneous:							
Well open B—							
Dec. 2	1,933	×	×	×	×	×	×
Dec. 5	1,066	×	×	×	×	×	×
Well closed B, Dec. 5	366	[2]×	[1]×	.....	.....	.....	.....
Well closed C, Dec. 6	300	[1]×	.....	.....	.....	.....	.....
Well open W, Dec. 9	416	×	[1]×	.....	.....	.....	.....
Spring B, Dec. 8	1,110	×	×	.....	×	×	.....
Spring G, Dec. 18	833	×	×	.....	×	×	.....

[1]×—Small amount of gas. Plated on Endo's medium. No colonlike colonies formed.
[2]×—Gas bubble. Not plated.
×—Present.

From the above tables it is seen that the colon bacillus was found in 8 of these samples of city water, or 36 per cent, but for the most part in such large amounts of water (10 c. c.) as not to indicate a very dangerous pollution. Water showing only this degree of pollution could not be considered as the probable cause of a typhoid epidemic.

During the time covered by these examinations the filter was under repair, and the quality of the water may be fairly assumed not to have been up to the usual standard, or equal to that supplied during the month of October and before the unusual prevalence of this disease.

To fairly estimate the quality of the water, it is necessary to take into account the source of the water in connection with the bacteriological examination. Water coming from closed wells at a depth of 30 feet or more should be practically free from contamination with intestinal bacteria unless under very unfavorable surroundings.

Before a water supply can be considered as the prime factor in the causation of a typhoid epidemic it is first necessary to eliminate other possible factors as causes, which can not be done in this case with the milk supply. Thus the assertion is warranted that evidence is lacking that the public water supply has played any appreciable part in the causation of typhoid.

No case could be definitely attributed to the use of water from shallow wells, but this remains the possible source of infection in a few cases not otherwise accounted for. From the few examinations made it would seem that the water obtained from the shallow wells, especially of the open type, was of an inferior quality to that of the public supply.

SUMMARY AND CONCLUSIONS.

To sum up the foregoing, 25 of the 34 cases arising in the city or 73.5 per cent, are attributed to the use of milk from one dairy; one case may be attributed to contact, leaving 8 cases, or 23.5 per cent unaccounted for. The most probable source in these cases is milk, ice cream, or well water.

RECOMMENDATIONS.

Milk and food supplies.—The sale of milk and ice cream should be under the supervision of the city authorities. Those desiring to sell milk and ice cream should be required to take out a license and be subject to inspection. All infectious diseases at the dairy farm should be reported, and the sale of milk should be prohibited when coming from insanitary premises or from places where there are patients suffering from typhoid or other infectious disease if there is the least possibility of contamination.

This requires the attention of a milk inspector whose duty it should be to make inspections of the dairies and instruct the dairymen as to the proper way to secure clean milk.

Pasteurization of milk is urged as the most efficient means of preventing the spread of typhoid from this source. If done in an efficient manner it will kill the germs which may get into the milk from undetected sources.

The practice of keeping foodstuffs exposed for sale, where subject to contamination by flies and street dust, should be prohibited.

Sewerage.—The city sewerage system should be extended as soon as possible, to include those portions of the city not already supplied, and, when available, connections to the sewer should be enforced.

Where sewerage connection is not possible, soil pollution should be limited by replacing the common open privy with one of a sanitary type, so constructed that flies can have no access to it, and its contents can be properly disinfected and disposed of.

Disposal of stable and household refuse.—To limit the prevalence of flies and the spread of disease by this means, careful attention should be given to the removal of their breeding places, which are chiefly in stable and household refuse. The disposal of this refuse should be under the control of city authorities, and frequent removal, at least once a week, is suggested as the most practicable method.

The health department in its relation to typhoid.—Probably the most important factor in the prevention of typhoid fever and other infectious diseases is the vigilance of the health department. The importance of the health department in the welfare of the city should be fully appreciated and adequate provision made for it in the way of equipment.

Typhoid fever should be reported to the health officers as other infectious diseases are, so that they can make investigation as to the cause of the disease and the measures necessary for its control. Instructions should be given as to the proper disinfection of excreta, and where necessary the disinfectant should be distributed free of charge.

Included in the health organization there should be a bacteriologist, with the equipment necessary to make examinations of milk, water, and blood. Blood examinations are most important in the early diagnosis of typhoid fever, especially so in a country where malaria occurs. By this means, also, more accurate information is secured as to the prevalence of the disease and its control made more efficient.

UNITED STATES.

MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HYGIENE.

[Adopted since July 1, 1911.]

BROOKLINE, MASS.

MILK—PRODUCTION, CARE, AND SALE.

ARTICLE V. *Milk.*—SEC. 1. All animals kept in the town of Brookline for the production of milk shall, at all times, be kept in a clean condition; the udders shall be washed or wiped with a clean, damp cloth before milking; the milker's hands shall be clean, and the animals shall not be fed upon swill or fermented brewery grains.

SEC. 2. Any person having any infectious disease (the board considers tuberculosis to come within the meaning of the statutes in regard to infectious diseases), or having recently been in contact with any such person, shall not be allowed to milk cows or handle cans, measures, or other vessels used for milk intended for sale, or in any way take part or assist in the sale of the same, until the board of health is satisfied that all danger of communicating such disease is passed.

SEC. 3. Milk cans or jars of milk dealers shall not be left at any house in which there is a case of diphtheria, scarlet fever, typhoid fever, or smallpox, but the milk shall be poured into receptacles furnished by the customer.

SEC. 4. No person, by himself or by his servant or agent, or as the servant or agent of any other person, firm, or corporation, shall in the town of Brookline sell, exchange, or deliver, or have in his custody or possession with intent to sell, exchange, or deliver, any milk, skimmed milk, or cream which contains more than 300,000 bacteria per cubic centimeter, or which has a temperature higher than 50° F.

SEC. 5. All milk sold in the town of Brookline other than from wagons shall be delivered to the purchaser in original sealed jars, or from a milk cooler which has been approved by the board of health.

SEC. 6. All premises, vehicles, compartments, or rooms used for the storage and sale of milk in the town of Brookline shall be kept cleansed in a manner satisfactory to the board of health.

SEC. 7. No person by himself or by his servant or agent, or as the servant or agent of any other person, firm, or corporation, shall in the town of Brookline sell, exchange, or deliver milk, skimmed milk, or cream produced upon premises where there is a case of contagious disease without the written consent of the board of health.

SEC. 8. All utensils used in the handling and selling of milk shall be washed and sterilized with steam or boiling water each day before being used, and all milk vessels (bottles and cans) which are to be returned, shall be cleansed as soon as emptied by the person who pours out the milk.

SEC. 9. Premises, compartments, rooms, receptacles, or ice chests used for the storage or sale of milk shall be kept cleansed in a manner satisfactory to the board of health. [Ordinance, board of health, adopted Nov. 6, 1911.]

PIQUA, OHIO.

MILK—PRODUCTION, CARE, AND SALE.

Permits.—No one shall engage in the sale of milk or cream in the city of Piqua, Ohio, ship the same into the city for sale, or supply to others for use in the city, unless he shall first obtain a permit from the board of health so to do.

A fee of 50 cents will be charged for each permit, and the same shall be credited to the sanitary fund. Permits shall be renewed every six months.

On or before the 1st day of January and the 1st day of July of each year hereafter, permits will be issued by the board of health for the ensuing half year, to all applicants who comply with the provisions of these rules and regulations, regulating the sale of milk or cream in the city of Piqua, but before the issuance of any permit every vendor or shipper of milk or cream shall make application therefor upon a printed form provided by the board for the purpose, on which shall be stated:

1. The name, residence, postoffice address, and location of the business place or places of the applicant.

2. The number of cows from which milk is obtained for sale, and the kind of food which the cows are given.

3. If the applicant buys part or all his milk supply, the names and addresses of all persons from whom he obtains milk or cream.

4. If the applicant be a shipper of milk or cream into the city he shall, in addition to the above, state the route of his shipments.

If any person engage in the sale of milk or cream after the said 1st day of January or July in any year, he shall forthwith make application for a permit for the remainder of the half year, complying with the above regulations.

The board will not issue any permit unless it is satisfied, after inspection, with the cleanly and sanitary condition of the stables, cows, wagons, store, or place of business of the applicant therefor, and with all the utensils used by him from which his milk or cream is obtained; and that the food given the cows is pure and wholesome, and that all persons engaged in the care and handling of the milk are free from any contagious diseases, and that said persons use due cleanliness in their work.

All applications for permits shall be signed by the applicant, and when received by the milk and dairy inspector shall be placed on file and the name of such applicant shall be entered in a book of registration kept for such purpose. The filing of such application shall authorize such applicant to continue the prosecution of his business until the board of health takes official action thereon, and either issues a permit to such applicant for the sale of milk or cream or refuses to do so. The permit fee shall accompany the application.

As soon as possible after an application is received at the health office for a permit to sell milk, the milk and dairy inspector shall visit the dairy or place of business of such applicant and make such observation and gather such information as will enable the board to properly consider such application.

If, after issuing a permit to sell milk or cream, the board of health shall become satisfied that the provisions of this subdivision of the sanitary code are being violated, it will at once revoke the permit issued to such person or persons, and no new permit will be issued until all insanitary conditions have been rectified, and all other provisions of this subdivision of the sanitary code are complied with.

Quality of milk.—No person shall bring into the city for sale, or shall sell or offer for sale any milk—

a. Containing more than 88 per cent of water or fluids.

b. Containing less than 12 per cent of milk solids.

c. Containing less than 3 per cent of milk fats.

d. From which any part of the cream has been removed.

e. Having a specific gravity of less than 1.029.

f. Containing any dirt, foreign matter, or sediment.

g. Containing any boracic or salicylic acid, formaldehyde, or other foreign chemicals.

h. Containing any pathogenic bacteria.

i. Containing bacteria of any kind, more than 500,000 per cubic centimeter.

j. Drawn from any cow having a communicable disease or showing clinical symptoms of tuberculosis, or from a herd which contains any diseased cattle or are afflicted with or exposed to any communicable disease.

k. Drawn from any cow which has been fed on garbage, refuse, swill, moist distillery waste, or other improper food.

l. Which has existed or has been kept under conditions contrary to the provisions of this code.

m. No milk shall be kept, sold, offered for sale, or drawn from cows suffering with sore and inflamed udders and teats, or from cows diseased.

n. Drawn from any cow within fifteen days before or twelve days after parturition.

o. No milk in partially filled bottles shall be sold or offered for sale, and no bottles shall be filled, capped, or recapped outside of the dairy building regularly used for this purpose.

Provided that the subdivisions a, b, c, and d shall not apply to milk sold under the title of "skimmed milk."

Retailers.—All grocers, bakers, or other persons having or offering for sale milk or cream shall at all times keep the names and addresses of the dairymen from whom

the milk on sale was obtained posted up in a conspicuous place wherever such milk may be sold or offered for sale. If skimmed milk is kept or offered for sale, each and every container of such milk shall be plainly marked with the words "skimmed milk."

No person shall bring into the city for sale or sell or offer for sale milk from which the cream has been removed, either in part or in whole, unless plainly marked on the container "skimmed milk."

Milk tickets.—If dairymen or other persons offering milk for sale use tickets as representatives of value, these tickets must be in coupon form and must be destroyed after once using.

The stable and surroundings.—The stable shall be so constructed that the cows have plenty of air space and light, and should be painted in some light color or whitewashed twice a year.

The stables must be kept free from dirt, dust, cobwebs, and odor.

The urine and manure shall be twice daily removed from the stable, and must be moved at least 30 feet from the stable and placed where cows can not get into it. Manure must not be thrown out of stable windows. The bedding shall be kept sweet and clean; the food and water ample and well chosen. No dairyman shall feed his cows on swill, garbage, or other like substances. If malt is used, it must not be fed when sour. The surroundings to the stable must be kept in a sanitary condition. Cows must not be allowed to stand in manure and filth. Cows must be kept clean. Manure, litter, etc., must not be allowed to become caked or dried on them.

The milkers.—The milkers must thoroughly wash and wipe their hands and the cows' udders before they begin milking. Their outer garments must be clean. They must not use pails, cans, strainers, etc., unless they have been thoroughly washed in hot water and soap, or hot water and soda, and afterwards sterilized with boiling water or steam. Care must be taken that the seams of the vessels are thoroughly cleaned with a brush. They must refrain from milking or handling milk in any way when in themselves or their families there is even a suspicion of any contagious or infectious disease, such as smallpox, scarlet fever, diphtheria, typhoid fever, tuberculosis, or the like.

Handling the milk.—Immediately after milking the milk shall be removed from the stable into a milk room screened from flies and other insects, aerated and cooled to at least 60° temperature, and put into perfectly clean bottles or cans. The milk house or milk room must be located at least 20 feet from any other building. Dairymen who use both bottles and cans in delivering milk shall not fill bottles while on their delivery route. All milk and cream sold in the city shall be delivered with a temperature not to exceed 65° F.

Care of cans or bottles.—All cans or bottles used in the distribution of milk must be thoroughly cleaned, either by hot water and soap or hot water and soda, or other alkalies, rinsed and sterilized by boiling water or steam before they are again used as receptacles for milk. Extreme care must be exercised in cleaning the faucets to cans by use of a brush. No person shall use a milk bottle for other than milk purposes.

Contagious diseases.—Should scarlet fever, smallpox, diphtheria, typhoid fever, tuberculosis, or other dangerous or infectious diseases occur in the family of any dairyman or among any of his employees, or in any house in which milk is kept for sale, or in the family or among the employees of any person who ships milk into the city for sale, such dairyman, venders, or shippers of milk shall immediately notify the health officer of the facts of the case, and the health officer shall at once investigate and order the sale of such milk stopped, or sold under such regulations as he thinks proper.

Should dairymen, venders, or shippers of milk fail to notify the health officer when contagious diseases exist in their families or in the families of their employees, or who, after such information is given the health officer, fail to obey his directions, the milk and dairy inspector shall sieze and destroy all milk sent into the city by such persons, and he shall, when acting in good faith, be held harmless in damages therefor in any suit or demands made.

In delivering milk to families in which there exists any of the above-named contagious or infectious diseases, the dairyman shall not enter, neither shall he permit any of his milk bottles or vessels to be taken into such houses, but shall pour such milk as each family wishes into vessels furnished by such family.

Adulterations.—No person shall offer for sale any milk that is impure, adulterated, or unwholesome.

Milk delivery wagons.—No one shall use any vehicle for the delivery of milk in the city of Piqua which has not painted thereon in legible roman letters not less than 3 inches in height, and on both sides of the vehicle in a conspicuous place, the name and location of his dairy and the number of his permit, and if such vender sells

skimmed milk, each and every container of skimmed milk shall have the words "Skimmed milk" thereon in plain letters not less than 1 inch in height.

The milk delivery wagons shall be kept at all times in a cleanly condition and free from any substance liable to contaminate or injure the purity of the milk.

Certificate of veterinarian.—The board may require a certificate from a licensed veterinarian, showing the cows furnishing milk brought for sale within its jurisdiction are free from tuberculosis or other dangerous disease.

Milk inspectors.—The milk or dairy inspector, the health officer, or any other person authorized by the board of health may examine all dairy herds, utensils for handling milk of all dairymen or other persons engaged in selling or shipping for sale milk or cream to the city of Piqua. These inspectors shall have power to open any can, vessel, or package containing milk or cream, whether sealed (locked) or otherwise, or whether in transit or otherwise, and take samples of the milk or cream for testing or analysis; and if, upon inspection, the milk or cream is found to be filthy, or the cans or other containers are in an unclean condition, the said inspector may then and there condemn the milk or cream as deemed by him to be filthy and pour the contents of such bottles, vessels, or packages upon the ground forthwith, and he shall, if done in good faith, be held harmless in damages thereior in any suit or demand made.

Penalty for violation.—Whoever violates any provision of this subdivision of the sanitary code of the city of Piqua shall be fined in any sum not exceeding $100, or imprisoned for any time not exceeding 90 days, or both; but no person shall be imprisoned under this section for the first offense, and the prosecution shall always be and for such first offense, unless the affidavit upon which the prosecution is instituted contains the allegation that the offense is a second or repeated offense. (Sec. 2119, O. L., V. 85, p. 424.)

[Regulations, board of health, adopted July 31, 1911.]

PLAINFIELD, N. J.

NUISANCES—GARBAGE, REFUSE, MANURE, STAGNANT WATER, CESSPOOLS, PRIVIES, BODIES OF DEAD ANIMALS, RAGS, BONES, SCRAPS, KEEPING OF ANIMALS, OFFENSIVE TRADES, CARE OF PREMISES, OVERCROWDING OF BUILDINGS, CLEANING AND FUMIGATION OF RAILWAY CARS.

SECTION. 1. Whatever is dangerous to human life or to health and whatever renders the ground, air, food, or water unwholesome and an injury to human health is hereby declared to be a nuisance and is prohibited.

SEC. 2. The casting, draining, throwing or discharging, or causing to be cast, drained, thrown, or discharged into any public street or highway, gutter, alley, or other public or private grounds within said city, any slops, kitchen water, laundry water, sewage, waste water, swill, or filth, shall be deemed and hereby is declared to be a nuisance; and all ponds, pools, or collections of still and stagnant water, all heaps and quantities of manure (stable manure used as a fertilizer or kept in manure pit built as hereinafter directed excepted) or filth of any kind, all cow yards and hog pens, any accumulation or deposit of offal or of decaying animal or vegetable matter, in or upon any lot of land near any inhabited dwelling house or any public street or highway, alley, or other public or private place within said city is declared to be a nuisance.

SEC. 3. Other nuisances within the city are hereby defined and declared to be, and they shall include and embrace: Placing or depositing in or upon any street or alley, or in or upon any public or private property, any dead animal not killed for consumption as food, or any part of same, or filth from privies or cesspools or catch basins, or garbage; also any foul or offensive or noxious matter or substance whatever; also throwing or allowing to drop into any sewer, receiving basin, or in or upon the bed of Green Brook or of Cedar Brook, any dead animal or decomposing animal or vegetable matter whatever; also any full or overflowing privy vault, cesspool, or other receptacle for filth; also permitting any liquid or solid matter taken from cesspools or privy vaults to be deposited in or upon any lawn, lot, or place within the city; also allowing any night soil, garbage, swill, or other offensive or decomposing solid or fluid matter or substance to leak or ooze from cart or wagon or vessel in which the same may be conveyed or carried; also the conveying or carrying through any street of any substance which has been removed from any privy vault or cesspool, unless the same shall be inclosed in air-tight barrels or tanks.

SEC. 4. No rags, bones, scraps, or refuse matter shall be brought into or be stored or kept within the limits of the city of Plainfield, except on permit of this board, said board to reserve the right of revocation at any and all times.

SEC. 5. No dwelling or any part thereof, within the city of Plainfield, shall be used for the sale, storage, sorting, or handling of rags, without a written permit of the board of health.

SEC. 6. The construction, maintenance, use, or continuance of any privy vault or other receptacle for human excrement in or upon the ground in such manner that the filthy contents thereof shall be accessible to flies shall constitute and is hereby declared a nuisance, and the construction, maintenance, use, or continuance thereof is hereby prohibited.

SEC. 7. No person shall have or keep upon any premises or in any building, lot, or place within the city any swine without the permission of the board of health, and the pens and places in which any swine may be permitted by the board of health to be kept shall at all times be kept clean and in such condition as to be free from any noxious or unhealthful odors.

SEC. 8. No person shall keep or allow to be kept in any dwelling house or any part thereof any horse, cattle, swine, goats, or fowls, nor shall any such animals or fowls be allowed to run at large in the city.

SEC. 9. No animal or vegetable substance, or swill or garbage, street sweepings or muck, or dirt gathered in cleaning yards, buildings, sewers, waste of mills and factories, or any offensive material, either separately or mixed with ashes or rubbish, shall be deposited on or used to fill in or raise the surface or level of any ground, lot, or street nor shall any person maintain any sunken land from which there shall arise offensive gases deleterious to health.

SEC. 10. No person or persons shall carry on any trade or business within the city in such a manner as to be obnoxious and offensive to the inhabitants of the city of Plainfield or any part thereof or which may be attended by noisome or unhealthful odors, or which may be attended by such noise or noises as may be detrimental to life of health.

SEC. 11. No person owning, occupying, or having charge of any house, stable, or other buildings or premises, shall keep or allow therein or thereon any dog or other animal which shall by noise disturb the quiet and repose of any person therein or in the vicinity to the detriment of life or health.

SEC. 12. Any imperfect trap, sink, or water-closet within any house, or any other drainage appliance or fixture within any house, from which there shall arise any foul or noxious gas or odor detrimental to human health, is hereby declared to be a nuisance.

SEC. 13. The keeping of any house or building or part thereof in such a state of uncleanliness, or the crowding of persons in any house or building in such a manner as to endanger the health of the persons dwelling therein, is hereby declared to be a nuisance and is prohibited.

SEC. 14. No owner, agent, or lessee of any building or any part thereof shall occupy nor let, lease, or hire out the same or any portion thereof, to be occupied either for domestic or business purposes by any person, or allow the same to be occupied as a place for anyone to dwell or lodge or conduct business, where such building or parts thereof are not provided with adequate means of ingress and egress, or not sufficiently supported, lighted, ventilated, drained, cleaned, or provided with proper water-closets.

SEC. 15. No building or premises shall be rented, let, leased, or occupied, either for domestic or business purposes, which shall not have a plentiful supply of pure water suitable for domestic purposes furnished at one or more places in such building or yard thereof, so that the same may be adequate and reasonably convenient for the use of the occupants of said building or premises.

SEC. 16. Whenever it shall be decided by this board that any building or part thereof is unfit for human habitation by reason of the number of occupants, want of cleanliness or by reason of its being in a condition dangerous to health or life or likely to be the cause of sickness among the occupants, and notice of such decision shall have been affixed conspicuously on the building or any part thereof, and personally served upon the owner, agent, or lessee, if the same can be found in the State, requiring all persons therein to vacate such building or part thereof for the reasons stated therein, such buildings or part thereof shall within ten days thereafter be vacated, or in case of special emergency, within such shorter time as may be specified in said notice.

SEC. 17. It shall be the duty of all owners, lessees, tenants, or occupants of any and all buildings in the city of Plainfield to keep the gutters and sidewalks and alleys surrounding said buildings free from any offensive substance, liquid or solid, or any dirt, rubbish, water, bottles, broken glass, crockery ware, iron, tin, wire, or stones, or any other thing dangerous to health, life or limb of man or beast.

SEC. 18. Each and every railway car running through or upon the streets of, or elsewhere in the city of Plainfield, and engaged in carrying passengers in said city, or to other places, shall be kept carefully and thoroughly washed and cleaned, and when so directed by this board, fumigated so that all dirt and filth, or causes of disease, are removed from the inside, steps, and platform of said cars.

SEC. 19. No person shall burn within the city of Plainfield any matter or substance (other than coal, charcoal, wood, gas, or oils) which shall emit into the air or cause or produce or cast off any foul or obnoxious or offensive or hurtful or annoying or repulsive gas, smoke, or odors of any kind whatever.

Sec. 20. It shall be the duty of any owner, tenant, lessee, or occupant of any lot, ground, building, house, or stable in the city, on notice from this board, to forthwith remove therefrom any rubbish, waste paper, garbage, offal, or any offensive matter or thing; and it shall be the duty of any person, on notice from this board to abate any nuisance existing on any premises of which he may be the owner, tenant, lessee, or occupant. If any person shall refuse or neglect to remove any foul or noxious or hurtful matter or thing, or if any person shall refuse or neglect to abate any nuisance, then this board may proceed under the provisions of "An act to establish in this State boards of health and a bureau of vital statistics and to define their respective powers and duties," approved March 31, 1887, and acts amendatory thereof and supplemental thereto, and remove said nuisance, source of foulness, or cause of sickness, and shall recover by action of debt the expense incurred by said board by such removal.

SEC. 21. *Penalty.*—Every nuisance herein defined is prohibited and forbidden within the city, and any person or association of persons making, causing, permitting, or maintaining any of the said nuisances shall forfeit and pay a penalty of not less than $2, nor greater than $50, for every such offense, and in the case of a continuing offense shall be liable to a further penalty of $10 for each and every day after written notice of the offense from his board. [An amendment adopted July 7, 1911, to Article I of an ordinance adopted Dec. 18, 1902.]

CEREBROSPINAL MENINGITIS IN TEXAS.

According to the last information received, cerebrospinal meningitis is still present in Dallas, Fort Worth, Galveston, Waco, and many small towns in Texas. At Dallas the average number of new cases was at the time of the last report about 7 daily, at Fort Worth about 3, and at Waco 1 or 2 daily. The sanitary campaign includes the house quarantine of direct contacts until they are shown not to be carriers.

Surg. Guiteras at Galveston reports the occurrence of 3 new cases of cerebrospinal meningitis at Galveston on February 3, 1 new case February 5, 1 new case February 6, and 1 new case each February 8 and 9.

CEREBROSPINAL MENINGITIS IN OKLAHOMA.

With cerebrospinal meningitis present in Texas, it was to be expected that the disease would be found occurring in the neighboring States. Information for the State of Oklahoma is available, showing that from December 1, 1911, to January 25, 1912, a total of 72 positive and 2 suspected cases had been reported from 14 counties, as follows:

County.	Cases.	Deaths.
Garvin	3	[1] 3
Carter	5	4
Bryan	14	9
Love	17	7
Marshall	4	.....
McClain	[2] 3	2
Pittsburg	[2] 1	.....
Comanche	[3] 7	2
Johnson	1	[1] 1
McCurtain	1	[1] 1
Murray	1	[1] 1
Osage	10	4
Choctaw	2	.....
Pontotoc	2	[1] 2
Pawnee	3	.....
Total	74	36

[1] Free of disease Jan. 25. [2] One suspect. [3] Three in one family.

Considering that the disease is perhaps always present to some extent, this is not a large number of cases. The State department of health seems to have taken every possible means of keeping itself informed of the situation by the cooperation of the local authorities and the prompt reporting of cases and to have materially controlled the spread of the disease by the distribution of bulletins and circulars relative to its prevention and treatment, by the detail of trained men to the infected localities, and by the prompt examination by the State bacteriologist of specimens forwarded for diagnosis.

PLAGUE-PREVENTION WORK.

DISTRIBUTION OF POISON.

In connection with the making and maintenance of a squirrel-free zone around the cities of California on San Francisco Bay, 1,050 acres of land in Alameda County were covered with poison during the week ended January 27, 1912.

During the same period 6,100 acres of land in San Joaquin County and 7,040 acres in Stanislaus County were covered with poison for the purpose of eradicating plague foci.

RECORD OF PLAGUE INFECTION.

Places.	Date of last case of human plague.	Date of last case of rat plague.	Date of last case of squirrel plague.	Total number of rodents found infected since May, 1907.
California:				
Cities—				
San Francisco	Jan. 30, 1908	Oct. 23, 1908	None	398 rats.
Oakland	Aug. 9, 1911	Dec. 1, 1908	do	126 rats.
Berkeley	Aug. 27, 1907	None	do	None.
Los Angeles	Aug. 11, 1908	do	Aug. 21, 1908	1 squirrel.
Counties—				
Alameda (exclusive of Oakland and Berkeley).	Sept. 26, 1909	Wood rat, Oct. 17, 1909.	Oct. 9, 1911	114 squirrels and 1 wood rat.
Contra Costa	July 21, 1911	None	Sept. 23, 1911	364 squirrels.
Fresno	None	do	Oct. 27, 1911	1 squirrel.
Merced	do	do	July 13, 1911	5 squirrels.
Monterey	do	do	Aug. 6, 1911	Do.
San Benito	June 5, 1910	do	June 8, 1911	22 squirrels.
San Joaquin	Sept. 18, 1911	do	Aug. 26, 1911	18 squirrels.
San Luis Obispo	None	do	Jan. 29, 1910	1 squirrel.
Santa Clara	Aug. 23, 1910	do	Oct. 5, 1910	23 squirrels.
Santa Cruz	None	do	May 17, 1910	3 squirrels.
Stanislaus	do	do	June 2, 1911	13 squirrels.
Washington:				
City—				
Seattle	Oct. 30, 1907	Sept. 21, 1911	None	25 rats.

RATS COLLECTED AND EXAMINED FOR PLAGUE INFECTION.

Places.	Week ended—	Found dead.	Total collected.	Examined.	Found infected.
California:					
Cities—					
Berkeley	Jan. 27, 1912	3	[1] 129	65	.....
Fresno	do	.....	[2] 64	64	.....
Oakland	do	6	[3] 553	460	.....
San Francisco	do	3	[4] 1,469	1,167	.....
Counties—					
San Joaquin	do	.....	[5] 125	125	.....
Santa Clara	do	.....	[6] 31	31	.....
Washington:					
City—					
Seattle	do	.....	938	901	.....

[1] Identified: Mus norvegicus, 71; Mus musculus, 58.
[2] Identified: Mus alexandrinus, 54; Mus musculus, 10.
[3] Identified: Mus norvegicus, 472; Mus musculus, 81.
[4] Identified: Mus norvegicus, 765; Mus rattus, 198; Mus alexandrinus, 205; Mus musculus, 301.
[5] Identified: Mus norvegicus, 121; Mus alexandrinus, 2. Mus musculus, 2.
[6] Identified: Mus norvegicus, 31.

SMALLPOX IN THE UNITED STATES.

In the following table the States indicated by an asterisk are those from which reports of smallpox are received only from certain city, and in some cases county, boards of health. In these States, therefore, the recorded cases and deaths should not be taken as showing the general prevalence of the disease. In the States not marked by an asterisk the reports are received monthly from the State boards of health, and include all cases reported to the State authorities.

REPORTS RECEIVED DURING WEEK ENDED FEB. 16, 1912.

Places.	Date.	Cases.	Deaths.	Remarks.
Connecticut	Jan. 1-31			No case.
Iowa:				
Counties—				
Butler	Jan. 1-31	3		
Carroll	do	1		
Cerro Gordo	do	4		
Fayette	do	1		
Guthrie	do	1		
Linn	do	3		
Marshall	do	5		
Page	do	1		
Pottawattamie	do	3		
Sac	do	7		
Van Buren	do	2		
Webster	do	2		
Woodbury	do	3		
Worth	do	2		
Total for State		38		
*Kentucky:				
Newport	Jan. 28-Feb. 3	1		
Maryland	Jan. 1-31			No case.
Michigan:				
Counties—				
Allegan	Jan. 1-31	1		
Bay	do	1		
Butler	do	2		
Calhoun	do	13		
Eaton	do	7		
Genesee	do	4		
Hillsdale	do	3		
Ingham	do	1		
Ionia	do	17		
Jackson	do	101		
Kent	do	7		
Lenawee	do	58		
Macomb	do	1		
Monroe	do	11		
Montcalm	do	14		
St. Clair	do	1		
Washtenaw	do	2		
Wayne	do	18		
Wexford	do	4		
Total for State		266		
*Missouri:				
St. Louis	Jan. 28-Feb. 3	5		
New Jersey	Jan. 1-31			No case.
Pennsylvania	Dec. 1-31	20		
Tennessee:				
Counties—				
Knox—				
Knoxville	Jan. 28-Feb. 3	15		
Shelby	Jan. 1-31	4		
		19		

SMALLPOX IN THE UNITED STATES—Continued.

Reports Received during Week ended Feb. 16, 1912.

Places.	Date.	Cases.	Deaths.	Remarks.
Wisconsin:				
Counties—				
Adams	Jan. 1-31	2		
Dane	do	6		
Dodge	do	1		
Douglas	do	11		
Fond du Lac	do	1		
Iowa	do	6		
La Crosse	do	1		
Marathon	do	11	1	
Outagamie	do	2		
Polk	do	1		
Portage	do	4		
Trempealeau	do	1		
Waushara	do	4		
Wood	do	13		
Total for State		64	1	
Wyoming:				
Counties—				
Albany	Jan. 1-Dec. 31,1911	1		
Converse	do	4		
Fremont	do	17		
Laramie	do	63		
Natrona	do	1		
Sweetwater	do	18		
Total for State		104		
Grand total for the United States		517	1	

For reports received from July 1 to December 29, see Public Health Reports for December 29, 1911. The cumulative table of reported cases of smallpox, heretofore published each week, has been discontinued, and in its place summaries will be published periodically.

MORBIDITY AND MORTALITY.

MORBIDITY AND MORTALITY TABLE, CITIES OF THE UNITED STATES, FOR WEEK ENDED JAN. 27, 1912.

Cities.	Population, United States census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Smallpox.		Tuberculosis.		Typhoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cities having over 500,000 inhabitants.														
Baltimore, Md	558,485	232	22	1	4	....	19	1	....	....	44	27	11	3
Boston, Mass	670,585	233	36	8	102	1	32	....	1	....	43	21	7	1
Chicago, Ill	2,185,283	758	139	16	54	4	153	8	....	....	163	70	15	4
Cleveland, Ohio	560,663	182	23	3	24	1	41	2	....	....	34	12	4	....
New York, N. Y	4,766,883	1,564	264	26	608	10	267	8	4	1	506	195	38	10
Philadelphia, Pa	1,549,008	580	56	16	13	1	25	3	....	....	97	64	30	4
Pittsburgh, Pa	533,905	173	28	5	3	....	22	1	....	....	34	15	8	....
St. Louis, Mo	687,029	235	41	4	7	....	20	....	20	....	53	18	4	1
Cities having from 500,000 to 600,000 inhabitants.														
Buffalo, N. Y	423,715	152	29	....	11	....	18	....	1	....	15	9	7	1
Cincinnati, Ohio	364,463	141	12	1	7	....	21	2	1	....	30	17	1	1
Detroit, Mich	465,766	172	13	4	....	....	29	2	2	....	....	....	....	....

MORBIDITY AND MORTALITY—Continued.

Morbidity and mortality table, cities of the United States, for week ended Jan. 27, 1912—Continued.

Cities.	Population, United States census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Smallpox.		Tuberculosis.		Typhoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cities having from 300,000 to 500,000 inhabitants—Continued.														
Los Angeles, Cal.	319,198	127	3	....	1	....	15	....	7	1	16	23	1	....
Milwaukee, Wis.	373,857	139	15	4	99	2	41	2	....	....	24	13	27	6
Newark, N. J.	347,469	121	13	....	....	1	14	....	....	....	24	16	3	1
New Orleans, La.	339,075	143	7	....	1	....	18	....	4	....	29	21	2	....
San Francisco, Cal.	416,912	124	1	1	230	1	8	....	....	....	24	13	1	....
Washington, D. C.	331,069	140	8	1	2	....	11	1	....	....	29	21	9	....
Cities having from 200,000 to 300,000 inhabitants.														
Denver, Colo.	213,381	69	3	....	4	....	5	1	....	....	....	9	....	....
Jersey City, N. J.	267,779	86	....	....	....	....	....	....	....	....	....	10	....	....
Kansas City, Mo.	248,381	22	11	1	2	....	3	....	....	....	3	7	1	1
Providence, R. I.	224,326	82	17	....	6	....	13	1	....	....	11	7	....	1
Cities having from 100,000 to 200,000 inhabitants.														
Bridgeport, Conn.	102,054	25	1	1	4	....	3	1	....	....	3	....	1	....
Cambridge, Mass.	104,839	33	12	4	....	....	11	1	....	....	10	2	1	....
Columbus, Ohio.	181,548	61	9	1	13	1	12	....	1	....	5	10	....	2
Dayton, Ohio.	116,577	36	....	....	....	....	....	....	....	....	1	4	1	....
Fall River, Mass.	119,295	39	5	3	....	....	2	....	....	....	6	3	....	....
Grand Rapids, Mich.	112,571	40	2	....	....	....	5	....	....	....	4	1	5	3
Lowell, Mass.	106,294	50	2	....	8	....	7	....	....	....	2	4	1	....
Nashville, Tenn.	110,364	42	1	....	2	....	3	....	....	....	7	5	3	....
Oakland, Cal.	150,174	45	....	....	3	....	1	....	....	....	1	2	....	1
Omaha, Nebr.	124,096	40	1	....	1	....	1	....	....	....	....	1	1	1
Spokane, Wash.	104,402	....	....	....	43	....	4	....	14	....	....	3	1	1
Toledo, Ohio.	168,497	64	7	2	14	....	9	2	....	....	....	6	10	2
Worcester, Mass.	145,986	48	8	1	....	....	19	....	....	....	2	4	....	....
Cities having from 50,000 to 100,000 inhabitants.														
Altoona, Pa.	52,127	8	1	1	....	....	1	....	....	....	....	2	1	....
Bayonne, N. J.	55,545	17	1	....	....	....	2	....	....	....	2	1	....	....
Brockton, Mass.	56,878	15	....	....	39	....	3	....	....	....	5	1	....	....
Camden, N. J.	94,538	....	8	1	....	....	1	....	....	....	....	....	1	....
Duluth, Minn.	78,466	19	....	....	....	....	2	....	4	....	3	3	1	....
Elizabeth, N. J.	73,409	32	3	1	6	....	8	....	....	....	....	2	....	....
Evansville, Ind.	69,647	26	3	....	....	....	2	....	7	....	4	4	7	....
Harrisburg, Pa.	64,186	13	4	....	....	....	....	....	....	....	6	2	....	....
Hartford, Conn.	98,915	8	4	....	....	....	4	2	....	....	4	4	1	....
Hoboken, N. J.	70,324	3	....	....	....	....	....	....	....	....	1	....	1	....
Johnstown, Pa.	55,482	30	1	....	2	....	1	....	....	....	....	2	....	....
Lawrence, Mass.	85,892	26	2	....	1	1	1	....	....	....	2	4	1	....
Lynn, Mass.	89,336	20	4	....	7	....	8	....	....	....	4	2	....	....
Manchester, N. H.	70,063	21	6	1	2	....	2	....	....	....	1	1	....	....
New Bedford, Mass.	96,652	28	1	....	3	....	4	....	....	....	3	2	5	1
Oklahoma City, Okla.	64,205	18	....	....	....	....	....	....	....	....	1	2	....	....
Passaic, N. J.	54,773	23	3	....	3	....	....	....	....	....	4	1	....	....
Pawtucket, R. I.	51,622	....	....	....	....	....	....	1	....	....	....	1	....	....
Peoria, Ill.	66,950	36	2	1	1	....	2	....	....	....	....	5	....	....
Reading, Pa.	96,071	27	5	....	1	....	2	....	....	....	1	2	2	1
San Antonio, Tex.	96,614	14	....	....	18	....	5	....	1	....	....	11	3	....
Schenectady, N. Y.	72,826	22	2	....	....	....	3	....	....	....	3	3	....	....
South Bend, Ind.	53,684	16	....	....	....	....	1	....	....	....	....	1	4	....
Springfield, Ill.	51,678	20	4	....	....	....	....	....	1	....	....	3	2	....
Springfield, Mass.	88,926	28	2	....	35	....	9	....	....	....	2	1	2	....
Terre Haute, Ind.	58,157	....	3	....	....	....	....	....	....	....	....	4	3	1
Trenton, N. J.	96,815	37	3	....	....	....	6	....	....	....	10	3	....	1
Wilkes-Barre, Pa.	67,105	26	3	....	148	1	1	....	....	....	....	....	....	1
Wilmington, Del.	87,411	26	....	....	....	....	....	....	....	....	....	4	....	....
Yonkers, N. Y.	79,803	....	1	....	10	....	5	....	....	....	2	1	....	1

MORBIDITY AND MORTALITY—Continued.

Morbidity and mortality table, cities of the United States, for week ended Jan. 27, 1912—Continued.

Cities.	Population, United States census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Smallpox.		Tuberculosis.		Typhoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cities having from 25,000 to 50,000 inhabitants.														
Atlantic City, N. J.	46,150	12	5	....	....	....	....	....	....	....	....	....	....	....
Auburn, N. Y.	34,668	15	....	....	....	....	....	....	....	....	1	3	....	1
Aurora, Ill.	29,807	13	1	....	....	....	1	....	....	....	....	1	....	....
Berkeley, Cal.	40,434	8	....	....	5	....	....	....	....	....	....	....	....	....
Binghamton, N. Y.	48,443	26	1	....	1	....	....	....	....	....	5	3	1	....
Brookline, Mass.	27,792	6	1	....	3	....	....	....	....	....	....	....	....	....
Chelsea, Mass.	32,452	10	2	....	16	....	2	....	1	....	....	1	....	....
Chicopee, Mass.	25,401	3	1	1	1	....	1	....	....	....	....	....	2	....
Danville, Ill.	27,871	18	5	....	....	....	3	....	....	....	....	4	....	....
Dubuque, Iowa.	38,494	10	....	....	....	....	....	....	....	....	....	1	....	....
East Orange, N. J.	34,371	9	2	....	1	....	4	1	....	....	2	....	1	....
Elmira, N. Y.	37,176	11	1	....	1	....	....	....	....	....	....	1	....	....
El Paso, Tex.	39,279	22	....	....	....	....	4	....	1	....	....	5	....	....
Everett, Mass.	33,484	8	2	....	2	....	1	....	....	....	1	1	1	....
Fitchburg, Mass.	37,826	16	2	....	....	....	....	....	....	....	2	1	....	....
Haverhill, Mass.	44,115	....	2	....	17	....	2	....	....	....	4	3	....	....
Kalamazoo, Mich.	39,437	13	1	....	1	....	1	....	....	....	3	1	1	....
Knoxville, Tenn.	36,346	17	1	....	1	....	....	....	3	....	....	5	....	....
La Crosse, Wis.	30,417	19	7	....	....	....	1	....	....	....	....	2	....	....
Lancaster, Pa.	47,227	....	....	....	....	....	1	....	....	....	1	....	1	....
Lexington, Ky.	35,099	16	3	....	4	....	1	....	....	....	2	2	....	....
Lynchburg, Va.	29,494	8	2	....	13	....	3	....	....	....	1	....	1	....
Malden, Mass.	44,404	11	1	....	1	....	5	....	....	....	1	1	....	....
Montgomery, Ala.	38,136	12	....	....	3	....	....	....	1	....	2	3	....	....
Newcastle, Pa.	36,280	....	3	....	....	....	1	....	....	....	....	....	12	....
Newport, Ky.	30,309	13	1	....	....	....	....	....	....	....	1	1	....	....
Newton, Mass.	39,806	8	....	....	2	....	....	....	....	....	....	1	....	....
Niagara Falls, N. Y.	30,445	15	3	....	1	....	....	....	....	....	....	....	4	1
Norristown, Pa.	27,875	14	....	....	29	1	2	....	....	....	....	1	1	....
Orange, N. J.	29,630	....	1	....	10	....	1	....	....	....	....	....	2	....
Pasadena, Cal.	30,291	....	....	....	....	....	3	....	....	....	....	....	1	....
Pittsfield, Mass.	32,121	11	2	....	....	....	....	....	....	....	....	....	....	....
Portsmouth, Va.	33,190	14	3	....	....	....	2	....	2	....	....	1	....	....
Racine, Wis.	38,002	7	6	....	....	....	....	....	....	....	....	....	....	....
Roanoke, Va.	34,874	13	3	....	13	....	2	....	....	....	3	1	....	1
Rockford, Ill.	45,401	27	2	....	....	....	....	....	....	....	....	1	....	1
Salem, Mass.	43,697	12	....	....	2	....	3	....	....	....	....	1	....	....
San Diego, Cal.	39,578	....	1	....	....	....	1	....	....	....	6	6	....	....
South Omaha, Nebr.	26,259	6	....	....	....	....	....	....	....	....	2	2	....	....
Superior, Wis.	40,384	14	1	....	....	....	1	....	....	....	....	3	....	....
Taunton, Mass.	34,259	15	1	....	3	....	2	....	....	....	....	....	....	....
Waltham, Mass.	27,834	8	....	....	16	....	2	....	....	....	1	1	....	....
West Hoboken, N. J.	35,403	17	6	....	....	....	....	....	....	....	3	....	....	....
Wheeling, W. Va.	41,641	15	2	....	2	....	....	....	....	....	3	....	6	1
Williamsport, Pa.	31,860	7	....	....	1	....	1	....	....	....	2	....	....	....
Wilmington, N. C.	25,748	14	....	....	1	....	2	....	7	....	1	3	....	....
York, Pa.	44,750	....	2	....	1	....	....	....	....	....	2	....	....	....
Zanesville, Ohio.	28,026	8	4	....	....	....	....	....	....	....	....	....	6	....
Cities having less than 25,000 inhabitants.														
Ann Arbor, Mich.	14,817	9	....	....	....	....	....	....	....	....	....	1	....	....
Beaver Falls, Pa.	12,191	....	....	....	1	....	2	....	....	....	....	....	3	....
Bennington, Vt.	....	3	....	....	....	....	3	....	....	....	....	....	....	....
Braddock, Pa.	19,957	8	2	....	....	....	1	....	....	....	....	....	....	....
Butler, Pa.	20,782	10	2	....	....	....	....	....	....	....	....	....	....	....
Cambridge, Ohio.	11,327	4	....	....	....	....	....	....	....	....	....	....	....	....
Carbondale, Pa.	17,040	3	....	....	....	....	4	....	....	....	....	....	....	....
Clinton, Mass.	13,075	6	....	....	....	....	....	....	....	....	1	....	....	....
Coffeyville, Kans.	12,687	....	1	....	....	....	....	....	....	....	....	....	2	....
Columbus, Ga.	20,554	5	....	....	....	....	....	....	....	....	....	....	....	....
Concord, N. H.	21,497	11	1	....	1	....	....	....	....	....	....	....	....	....
Cumberland, Md.	21,839	10	1	....	....	....	....	....	....	....	1	1	4	1
Dunkirk, N. Y.	....	2	4	....	....	....	....	....	....	....	1	....	1	....
Galesburg, Ill.	22,089	4	1	....	....	....	....	....	....	....	....	....	....	....
Harrison, N. J.	14,498	3	1	....	....	....	....	....	....	....	....	....	....	....
Homestead, Pa.	....	5	....	....	....	....	1	....	....	....	....	....	....	....

MORBIDITY AND MORTALITY—Continued.

Morbidity and mortality table, cities of the United States, for week ended Jan. 27, 1912—Continued.

Cities.	Population, United States census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Smallpox.		Tuberculosis.		Typhoid fever.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Cities having less than 25,000 inhabitants—Con.														
Kearny, N. J.	18,659	.....	2	....	1	....	.....	....	.....	....	3	.....	....	....
Kokomo, Ind.	17,010	7	.....	.....	.....	....	4	....	4	....	1	1	....	....
La Fayette, Ind.	20,081	6	.....	.....	.....	....	1	....	.....	....	.....	.....	....	....
Lebanon, Pa.	19,240	.....	4	.....	.....	....	.....	....	.....	....	9	.....	1	....
Logansport, Ind.	19,050	7	3	1	.....	....	.....	....	.....	....	2	2	....	....
Manistee, Mich.	12,381	.....	.....	.....	.....	....	8	....	.....	....	.....	.....	....	....
Marinette, Wis.	14,610	4	1	....	6	....	.....	....	.....	....	.....	.....	....	....
Marlboro, Mass.	14,579	7	1	....	.....	....	.....	....	.....	....	1	2	....	....
Massillon, Ohio	.....	5	.....	.....	.....	....	.....	....	.....	....	1	.....	....	....
Medford, Mass.	23,150	8	.....	....	3	....	1	....	.....	....	1	.....	....	....
Melrose, Mass.	15,715	5	.....	....	7	....	.....	....	.....	....	.....	.....	....	....
Moline, Ill.	24,199	7	1	....	.....	....	.....	....	.....	....	1	1	2	....
Montclair, N. J.	21,150	8	.....	.....	.....	....	.....	....	.....	....	4	1	....	....
Morristown, N. J.	12,507	4	.....	.....	.....	....	.....	....	.....	....	1	.....	....	....
Nanticoke, Pa.	18,857	6	1	....	14	....	.....	....	.....	....	.....	.....	....	....
Newburyport, Mass.	19,240	4	1	....	.....	....	.....	....	.....	....	1	.....	....	....
North Adams, Mass.	22,012	6	2	1	3	....	1	....	.....	....	1	.....	....	....
Northampton, Mass.	19,431	8	.....	....	5	....	3	....	.....	....	.....	1	....	....
Ottumwa, Iowa.	22,012	12	1	....	.....	....	1	....	.....	....	1	2	....	....
Peekskill, N. Y.	.....	6	3	....	.....	....	.....	....	.....	....	1	1	....	....
Plainfield, N. J.	22,250	2	1	....	3	....	.....	....	.....	....	.....	.....	1	....
Portsmouth, N. H.	.....	.....	.....	....	1	....	.....	....	.....	....	.....	.....	....	....
Pottstown, Pa.	.....	7	.....	.....	.....	....	.....	....	.....	....	.....	1	....	....
Rutland, Vt.	18,713	3	.....	.....	.....	....	.....	....	.....	....	.....	.....	....	....
Saratoga Springs, N. Y.	.....	6	.....	.....	.....	....	.....	....	.....	....	.....	.....	....	....
South Bethlehem, Pa.	19,973	13	1	....	8	....	.....	....	.....	....	4	3	1	....
Steelton, Pa.	14,246	5	2	....	.....	....	.....	....	1	1	3	1	....	....
Warren, Pa.	11,081	4	.....	.....	.....	....	.....	....	.....	....	.....	.....	....	....
Wilkinsburg, Pa.	18,924	4	2	....	.....	....	2	....	.....	....	.....	1	1	....
Woburn, Mass.	15,308	5	.....	....	2	....	.....	....	.....	....	.....	.....	....	....

STATISTICAL REPORTS OF MORBIDITY AND MORTALITY, STATES OF THE UNITED STATES (untabulated).

FLORIDA.—Week ended February 3, 1912. Reports from the State show diphtheria present in 5 localities with 13 cases, malaria in 1 locality with 2 cases, smallpox in 8 counties with 68 cases, tuberculosis in 9 localities with 20 cases, typhoid fever in 5 localities with 16 cases.

NEW JERSEY.—Month ended January 10, 1912. Population, 2,537,167. Total number of deaths from all causes 2,694, including diphtheria 46, measles 8, scarlet fever 11, tuberculosis 243, typhoid fever 30.

PENNSYLVANIA.—Reports received from the State department of health show as follows:

Mortality.—Month of November, 1911. Total number of deaths 8,591, including typhoid fever 173, scarlet fever 35, diphtheria 287, measles 19, whooping cough 44, influenza 68, malaria 1, tuberculosis of the lungs 669, tuberculosis of other organs 119, cancer 415,

diabetes 74, meningitis 46, acute anterior poliomyelitis 4, pneumonia 858, diarrhea and enteritis, under 2 years 289, diarrhea and enteritis, over 2 years 57, Bright's disease 551, early infancy 535, suicide 85, accidents in mines 93, railway injuries 117, other forms of violence 448, all other diseases 3,624.

Morbidity.—Month of December, 1911. Total number of cases of communicable diseases reported 10,311, including anterior poliomyelitis 14, anthrax 1, cerebrospinal meningitis 7, chickenpox 1,697, diphtheria 2,012, erysipelas 133, German measles 29, rabies 1, malarial fever 4, measles 1,651, mumps 341, pneumonia 649, puerperal fever 7, scarlet fever 947, smallpox 20, tetanus 9, trachoma 3, trichiniasis 2, tuberculosis 1,055, typhoid fever 1,000, whooping cough 729.

FOREIGN AND INSULAR.

HAWAII.

Death from Plague at Honokaa.

Chief Quarantine Officer Ramus at Honolulu reports, February 10, that a death from plague occurred at Honokaa February 9.

Record of Plague Infection.

The last case of human plague at Honolulu occurred July 12, 1910.

The last plague-infected rat was found at Aïea, 9 miles from Honolulu, April 12, 1910.

A case of human plague was reported at Kapulena, Hawaii, October 28, 1911.

At Hilo the last case of human plague occurred March 23, 1910. At Honokaa, 60 miles from Hilo, a fatal case occurred April 20, 1911, and a fatal case February 9, 1912.

The last plague-infected rat was found at Honokaa December 18, 1911. A plague-infected rat was found at Hilo during the week ended June 10, 1911.

Honolulu—Plague-Prevention Work.

Chief Quarantine Officer Ramus reports:

	Week ended Jan. 13.	Week ended Jan. 20.
Total number of rats and mongoose taken	511	440
Rats trapped	487	421
Mongoose trapped	10	13
Rats shot from trees	14	6
Examined bacteriologically	451	381
Classification of rats trapped:		
Mus alexandrinus	66	34
Mus musculus	97	89
Mus norvegicus	20	30
Mus rattus	304	268
Classification of rats shot from trees:		
Mus alexandrinus	7	.....
Mus rattus	7	6

Mosquito-eradication Measures at Honolulu.

The following statement of the work of mosquito destruction at Honolulu was received from Passed Asst. Surg. McCoy:

Mosquito-eradication measures conducted at Honolulu from Jan. 8 to 13, 1912, both inclusive.

Inspections of—	Total inspections.	Larvæ found in—	Cleaned.	Oiled.	Drained.	Emptied.	Collected.	Filled.	Ordered repaired.	Screened.	Stocked with fish that destroy mosquito larvæ.
Gutters, house	2,282	54	350	1,820	....	....	....	....	....	....	....
Gutters, street	340	11	....	291	....	....	....	....	....	....	....
Standing water	701	129	....	590	62	....	....	9	....	....	2
Cesspools	806	12	3	761	....	....	....	....	5	....	....
Privy vaults	889	....	....	805	....	....	....	....	....	....	....
Holes and low places	563	168	....	315	45	....	....	155	....	....	....
Catch basins	235	6	....	161	....	38	....	....	....	....	....
Leaky fixtures	61	....	....	4	....	....	....	....	57	....	....
Swamps	21	5	....	8	2	....	....	....	....	....	3
Ponds	40	3	....	9	....	....	....	....	....	....	3
Troughs and tanks	119	28	....	16	....	78	....	....	....	....	....
Tubs and other receptacles	356	38	....	16	....	284	....	....	....	....	....
Tin cans, bottles, etc	1,467	95	....	....	....	....	1,467	....	....	....	....
Water barrels	245	86	....	15	....	55	....	....	....	129	....
Vacant houses	....	1	....	....	....	....	....	....	....	....	....
Holes in trees	1,121	51	....	....	....	....	....	1,121	....	....	....
Tiger lilies	27	25	....	....	....	27	....	....	....	....	....

Mosquito-eradication measures conducted at Honolulu from Jan. 15 to 20, 1912, both inclusive.

Inspections of—	Total inspections.	Larvæ found in—	Cleaned.	Oiled.	Drained.	Emptied.	Collected.	Filled.	Ordered repaired.	Screened.	Stocked with fish that destroy mosquito larvæ.
Gutters, house	2,844	86	541	2,050	....	....	....	....	3	....	....
Gutters, street	108	18	....	88	15	....	....	....	....	....	....
Standing water	1,234	202	....	751	41	....	....	5	....	....	....
Cesspools	684	3	4	583	....	....	....	1	....	....	....
Privy vaults	864	....	....	792	....	....	....	....	....	....	....
Holes and low places	719	93	....	145	3	....	....	425	....	....	....
Catch basins	222	16	....	28	....	38	....	....	7	....	....
Leaky fixtures	....	73	....	4	....	....	....	....	48	....	....
Plants, etc	1,310	224	....	....	....	....	....	....	....	....	....
Swamps	10	2	....	1	1	....	....	....	....	....	3
Ponds	24	6	....	5	1	....	....	....	....	....	3
Troughs and tanks	155	50	....	11	....	62	....	....	3	41	1
Tubs and other receptacles	412	72	....	3	....	221	....	....	....	....	....
Tin cans, bottles, etc	1,134	77	....	....	....	....	1,134	....	....	....	....
Water barrels	215	182	....	40	....	55	....	....	....	5	....
Vacant houses	....	4	....	2	....	....	....	....	....	....	....
Holes in trees	421	19	....	....	....	....	....	421	....	....	....

INDIA.

Calcutta—Cholera and Plague.

Acting Asst. Surg. Allan reports cholera and plague as follows:

Week ended December 16, 1911. At Calcutta, 28 deaths from cholera and 1 death from plague; in all Bengal, 530 cases of plague with 415 deaths; in all India, 9,951 cases of plague with 8,191 deaths.

Week ended December 23, 1911. At Calcutta, 24 deaths from cholera and 8 from plague; in all Bengal, 407 cases of plague with 329 deaths; in all India, 8,643 cases of plague with 7,189 deaths. Week ended December 30, 1911. At Calcutta, 21 deaths from cholera and 6 from plague; in all Bengal, 1,149 cases of plague with 947 deaths; in all India, 9,932 cases of plague with 7,903 deaths.

Karachi—Plague in 1911.

The following statement of plague in Karachi during the year 1911 was received from Consul Lupton:

The year ended December 31, 1911, was marked by a great increase in the number of cases of bubonic plague and deaths from the disease, there having been 3,273 cases and 3,046 deaths reported as against 1,727 cases and 1,661 deaths in 1910. With a total population of 149,000 this gives the following percentages:

	Cases per 1,000.	Deaths per 1,000.
1910	11.5+	11.1+
1911	21.9+	20.4+

PLAGUE—KARACHI, 1911.

Week ended—	Cases.	Deaths.	Week ended—	Cases.	Deaths.	Week ended—	Cases.	Deaths.
Jan. 7	15	15	May 6	285	272	Sept. 2	6	8
14	26	25	13	281	258	9	4	4
21	29	29	20	196	189	16	.....	.....
28	15	15	27	172	165	23	1	1
Feb. 4	41	40	June 3	80	81	30	2	1
11	49	50	10	40	40	Oct. 7	.....	.....
18	50	50	17	24	22	14	.....	.....
25	65	63	24	10	13	21	2	2
Mar. 4	95	79	July 1	6	4	28	2	2
11	101	94	8	5	4	Nov. 4	1	1
18	83	79	15	13	13	11	8	7
25	115	111	22	3	3	18	6	5
Apr. 1	168	154	29	6	6	25	2	1
8	299	265	Aug. 5	6	6	Dec. 2	3	3
15	281	261	12	4	4	9	2	1
22	351	309	19	3	2	16	3	3
29	328	309	26	5	2	23	1	1
						30	6	6

IRELAND.

Belfast—Typhus Fever.

Consul Hay reports that during the week ended December 16, 1911 3 cases of typhus fever were reported in Belfast and during the two weeks ended January 13, 1912, 2 cases, with 1 death.

ITALY.

No Cholera Reported.

According to information received from the ministry of foreign affairs no cases of cholera were reported in the Kingdom of Italy during the week ended January 6, 1912.

Florence—Typhus fever.

Consul Keena reports the occurrence of 7 deaths from typhus fever at Florence during the month of December, 1911.

Naples—Examination of Emigrants.

Surg. Geddings reports:

Vessels inspected at Naples and Palermo week ended January 20, 1912:

NAPLES.

Date.	Name of ship.	Destination.	Steerage passengers inspected and passed.	Pieces of baggage inspected and passed.	Pieces of baggage disinfected.
Jan. 17	Canopic	Boston	740	165	830
18	Calabria	New York	145	24	290
20	Pannonia	do			
	Total		885	189	1,120

PALERMO.

Jan. 18	Canopic	Boston	53	80	125
19	Calabria	New York	157	80	150
19	Pannonia	do			
	Total		210	160	275

JAMAICA.

Kingston—Typhus Fever.

Consul Snyder reports the occurrence of a death from typhus fever at Kingston during the week ended January 13.

JAPAN.

Kobe—Examination of Rats.

Consul West reports: From January 1 to December 17, 1911, 354,291 rats were destroyed in Kobe. These were all examined for plague infection. No plague-infected rat was found.

JAVA.

Batavia—Typhus Fever.

Consul Rairden reports that during the three weeks ended December 30, 1911, 4 cases of typhus fever with 2 deaths were reported at Batavia.

MEXICO.

Restrictions on Account of Cerebrospinal Meningitis.

The superior board of health of Mexico has issued instructions, effective January 30, 1912, prohibiting the entry into Mexico, except at the frontier towns of Laredo, Ciudad Porfirio Diaz, Ciudad Juarez, and Nogales, and the ports of Tampico and Vera Cruz, of persons arriving from certain localities in Texas in which cerebrospinal meningitis is prevalent. The localities specifically mentioned are Taylor, Waco, Austin, Dallas, Houston, Italy, Teague, Fort Worth, Smithville, Clarksville, Rockwall, and Emory.

Smallpox.

The official report of smallpox at Magdalena, State of Sonora, dated January 24, shows as follows: Cases present in the isolation hospital 85; new cases, January 21 to 24, 5; deaths from smallpox during the same period 5.

At Mazatlan Consul Alger reports: Smallpox continues present, with 18 cases in the lazaretto. About 20 per cent of the population, including troops, school children, and employees in factories, have been vaccinated.

Merida—Yellow Fever.

During the week ended January 27, 1 case of yellow fever with 1 death was reported at Merida. The total number of cases reported since August 1, 1911, is 56, with 28 deaths.

RUSSIA.

Commission for the Suppression of Plague.

According to information received January 22 a commission appointed by the Imperial Government is at work in the Government of Astrakhan in carrying out measures for the suppression of plague.

TUNIS.

Status of Cholera.

According to information received from the ministry of foreign affairs at Paris 33 cases of cholera with 25 deaths were reported in the Regency of Tunis from December 22, 1911, to January 4, 1912.

TURKEY.

Cholera in Albania.

Information has been received of a cholera outbreak in the Province of Albania, European Turkey. To January 22, 17 cases with 8 deaths were reported at Janina and at Loros 12 cases.

VENEZUELA.

Caracas—Yellow Fever.

The sanitary commission at Caracas reports the occurrence of 6 cases of yellow fever during the period from December 15 to 31, 1911.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.

REPORTS RECEIVED DURING WEEK ENDED FEB. 16, 1912.

[These tables include cases and deaths recorded in reports received by the Surgeon General, Public Health and Marine-Hospital Service, from American consuls through the Department of State and from other sources.]

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Arabia:				
Ras-el-Ketib	Dec. 27-Jan. 1			Total cases 22, deaths 12, mainly in the military hospital.
India:				
Calcutta	Dec. 10-30		73	
Madras	Jan. 1-13	53	53	Report for Dec. 23 not received.
Indo-China:				
Saigon	Dec. 18-24	311	212	
Tunis Regency	Dec. 22-Jan. 24	33	25	

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

Reports Received during Week ended Feb. 16, 1912.

YELLOW FEVER.

Places.	Date.	Cases.	Deaths.	Remarks.
Mexico:				
Merida	Jan. 21–27	1	1	
Portuguese Guinea:				
Bolama	Dec. 19–25	[1] 1	1	In an engineer on a vessel.
Venezuela:				
Caracas	Dec. 25–31	6		

PLAGUE.

Brazil:				
Para	Jan. 7–20	7	3	
China:				
Hongkong	Dec. 24–30	1	1	
Egypt				Total, year 1911: Cases, 1,656; deaths, 1,041.
Provinces—				
Assiout	Jan. 1–25	12	8	
Behera	do	3	2	
Garbieh	do	1		
Kena	do	1	1	
Minieh	do	2	1	
Hawaii:				
Honakaa	Feb. 9	1	1	
India:				
Bombay	Dec. 29–Jan. 13	17	13	
Calcutta	Dec. 14–30		10	
Karachi	Jan. 1–13	23	22	
Madras	Jan. 1–6	1	1	
Indo-China:				
Saigon	Dec. 18–24	3		
Singapore:				
Straits Settlements	Dec. 24–30	3	3	

SMALLPOX.

Arabia:				
Aden	Jan. 2–15	1	1	And vicinity.
Brazil:				
Rio de Janeiro	Dec. 24–Jan. 6	2		
Canada:				
Ottawa	Jan. 21–27	10		
Quebec	Jan. 28–Feb. 3	35		
China:				
Canton	Dec. 16–30	15	2	
Hongkong	Dec. 24–30	18	15	
Germany	Jan. 14–27	7		
India:				
Bombay	Dec. 31–Jan. 13	27	15	
Madras	Jan. 1–13	18	10	
Indo-China:				
Saigon	Dec. 18–24	2		
Italy:				
Leghorn	Jan. 14–27	28		
Naples	Jan. 14–20	6		
Palermo	Jan. 15–20	151	49	
Turin	Jan. 15–21	2		
Java:				
Batavia	Dec. 24–30	2		
Mexico:				
Aguascalientes	Jan. 21–28		1	
Chihuahua	Jan. 15–21	2		
Juarez	Jan. 21–Feb. 3	2	2	
Magdalena	Jan. 21–27		6	Cases in the lazaretto, 81.
Mazatlan	Jan. 24–30		4	Cases in the lazaretto, 18.
Sario	Jan. 21–27		6	
Russia:				
Moscow	Dec. 24–Jan. 13	9	3	
Odessa	do	3		
St. Petersburg	Dec. 31–Jan. 6	4	3	
Spain:				
Valencia	Jan. 14–27	35	1	

[1] From the Veröffentlichungen des Kaiserlichen Gesundheitsamtes, Jan. 31, 1912.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued

Reports Received during Week ended Feb. 16, 1912.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Straits Settlements:				
Singapore	Dec. 18-30	3	2	
Turkey in Europe:				
Constantinople	Jan. 15-21		9	
Janina	Jan. 22	17	8	
Loros	do	12	7	
Uruguay:				
Montivideo	Nov. 1-30	4	1	
Venezuela:				
Caracas	Dec. 15-31	6		

REPORTS RECEIVED FROM DEC. 30, 1911, TO FEB. 9, 1912.

[For reports received from July 1, 1911, to Dec. 29, 1911, see PUBLIC HEALTH REPORTS for Dec. 29, 1911. In accordance with custom, the tables of epidemic diseases are terminated semiannually and new tables begun.]

CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Arabia:				
Ras-el-Ketib	Dec. 27		2	In the military hospital.
Austria-Hungary:				
Coastland—				
Capodistria	Dec. 14-24	2	2	
Croatia and Slavonia				Total Oct. 22-Dec. 16: Cases, 36.
Sriem	Oct. 22-Dec. 16	36		
Hungary				Total Nov. 19-Dec. 23: Cases, 37.
Backs-Bodog	Dec. 10-16	9		
Jasz-Nagykun-Szolnok	Dec. 3-23	11		
Torontal	Nov. 19-Dec. 16	17	2	
Bulgaria:				
Burgas	Nov. 22-23	2	2	
Varna	Nov. 6	1		
Dutch East Indies				Total Sept. 24-Oct. 9: Cases, 322; deaths, 256.
Batavia	Nov. 12-Dec. 23	21	8	
India:				
Calcutta	Nov. 5-Dec. 9		204	
Madras	Nov. 26-Dec. 30	347	277	Madras Presidency, Dec. 1-31: Cases, 3,879; deaths, 2,412.
Rangoon	Oct. 1-Nov. 30	6	3	
Indo-China:				
Saigon	Nov. 20-Dec. 17	203	169	
Italy				Total June 8-Dec. 31: Cases, 15,985; deaths, 6,022.
Provinces—				
Caltanisetta	Nov. 26-Dec. 31	9	7	
Girgenti	do	105	57	
Messina	Nov. 26-Dec. 2	3	2	
Syracuse	Nov. 26-Dec. 23	15	9	
Malta	Nov. 19-Dec. 10	6	6	Dec. 23 declared free from cholera.
Montenegro	Nov. 4-11	9	5	
Persia:				
Adaban	Nov. 4	1	1	
Philippine Islands:				
Province—				
Union	Oct. 29-Dec. 4	5	5	
Roumania				Total Sept. 9-Dec. 13: Cases, 192; deaths, 42, including cases previously reported.
Districts—				
Braila	Sept. 11-Dec. 13	84	11	Nov. 6-23: 1 death; including cases previously reported.
Convoluri	Oct. 31-Nov. 28	21	1	
Doliju	Nov. 6-Dec. 13	19	4	
Jalonitza	Oct. 31-Nov. 28	4		
Konstanza	Oct. 30-Nov. 28	8		
Prahova	Nov. 6-23	1	1	
Talomita	do	2		
Tulcea	Nov. 24-Dec. 13	15	1	
Servia:				
Belgrade, district	Nov. 26-Dec. 16		1	Declared free Dec. 31.

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

Reports Received from Dec. 30, 1911, to Feb. 9, 1912.

CHOLERA—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Siam:				
Bangkok	Nov. 5–Dec. 2	.....	149	
Straits Settlements:				
Singapore	Nov. 5–18	3	3	
Tripoli:				
Tripoli	Oct. 25–Nov. 10	.....	.....	150 to 200 among the civil population and 25 to 30 among the military, Dec. 21, 1911.
Tunis Regency		.....	.....	Total Nov. 25–Dec. 21: Cases, 325; deaths, 371.
Beja district	Nov. 25–Dec. 7	30	35	
Bizerta district	Nov. 25–Dec. 5	9	15	
Turkey in Asia:				
Adana	Dec. 2–6	16	5	
Aleppo	Jan. 26	.....	.....	Present.
Amara	Oct. 15	1	1	
Basra	Oct. 22–28	14	10	
Erzeroum, vilayet	Sept. 11–16	50	28	
Erzeroum	do	11	8	
Kaifa	Dec. 8	.....	.....	Present.
Kerbelah	Oct. 20–28	10	10	
Kharput	Nov. 19–Dec. 30	47	47	
Jiddah	Dec. 2–24	323	210	
Mekka	Dec. 4–24	905	879	Sept. 1–Dec. 24: Cases, 1,648; deaths, 1,565.
Mersina	Dec. 1–7	2	1	
Osmania	Dec. 1–6	2	4	
Sinope	Dec 7	2	1	
Trebizond and vicinity	Sept. 18–23	64	34	
Tripoli	Jan. 4	.....	.....	Present.
Turkey in Europe:				
Constantinople	Oct. 24–Jan. 2	6	1	
Durazzo	Dec. 7–13	2	.....	
Saloniki, vilayet	Nov. 6–19	4	3	In Serres.

YELLOW FEVER.

Brazil:				
Manaos	Nov. 19–Jan. 6	.....	8	
Para	Dec. 9–16	1	1	
Ecuador:				
Bucay	Nov. 16–30	2	.....	
Duran	Dec. 1–15	3	2	
Guayaquil	Nov. 16–Dec. 15	20	11	
Milagro	do	8	1	
Mexico:				
Espita	Dec. 31–Jan. 6	1	.....	
Maxcanu	do	1	.....	
Merida	Nov. 12–Jan. 20	10	7	Total Aug. 1–Jan. 20: Cases, 55; deaths, 27.
Temax	Dec. 31–Jan. 6	1	.....	
Venezuela:				
Caracas	Nov. 16–Dec. 7	11	.....	
Sabana Grande	Dec. 12	.....	.....	Epidemic.
At sea	Dec. 17–23	1	1	On a vessel en route from Manaos to Para.

PLAGUE.

Algeria:				
Philippeville	Oct. 19–Nov. 11	8	2	Including 5 cases, p. 2096. Vol. XXVI.
Brazil:				
Bahia	Sept. 1–30	.....	2	
Para	Dec. 24–30	5	1	
Pernambuco	Oct. 16–Jan. 16	.....	4	
Rio de Janeiro	Nov. 12–Dec. 23	6	3	
British East Africa:				
Kismayu	Oct. 15–25	2	.....	1 case pneumonic.
Chile:				
Iquique	Nov. 12–Jan. 6	10	4	
Pisagua	Nov. 1–30	8	.....	

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

Reports Received from Dec. 30, 1911, to Feb. 9, 1912.

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
China:				
Amoy	Jan. 15			Present.
Hongkong	Dec. 9-23	3	2	
Dutch East Indies:				
Java				Total Mar. 1-Dec. 9: Cases, 1,777; deaths, 1,262.
Pasoeroean Residency, Malang District.	Nov. 12-Dec. 30	56	25	
Soerobaya	Oct. 17-27	2		
German East Africa:				
Dar-es-Salaam	Nov. 13-15	1	1	From the interior via Bergamogo.
Ecuador:				
Guayaquil	Nov. 16-Dec. 15	102	42	
Egypt				Total Jan. 1-Dec. 31, 1911: Cases, 1,656; deaths, 1,041, including cases previously reported.
Provinces—				
Assiout	Oct. 14-Dec. 27	38	36	
Behera	Oct. 15-Dec. 26	3	1	
Galioubeh	Oct. 5-Dec. 26	1		
Kena	Nov. 20-Dec. 13	3	3	
Minieh	Dec. 13	1		
India:				
Bombay	Nov. 19-Dec. 30	57	53	
Calcutta	Nov. 11-Dec. 9		30	
Karachi	Nov. 26-Dec. 30	15	14	Total, year 1911: Cases, 3,273; deaths, 3,046.
Rangoon	Oct. 1-Nov. 30	38	39	
Bombay Presidency and Sind.	Oct. 29-Dec. 9	27,376	19,684	
Madras Presidency	do	3,589	2,886	
Bengal	do	1,537	1,136	
United Provinces	do	6,139	4,975	
Punjab	do	820	579	
Burma	do	90	84	
Central Provinces	do	3,803	2,838	
Coorg	do	45	22	
Mysore State	do	3,600	2,787	
Hyderabad State	do	6,012	5,651	
Central India	do	3,403	2,825	
Rajputana and Ajmere Merwara.	do	302	246	
North West Province	do	1	1	Total for India, Oct. 29-Dec. 9: Cases, 56,717; deaths, 43,714.
Indo-China:				
Saigon	Nov. 13-Dec. 17	12	5	
Mauritius	Nov. 3-23	13	8	
Natal:				
Durban	Jan. 17		1	
Peru:				
Salaverry	Dec. 25-Jan. 9			Present in vicinity.
Philippine Islands:				
Cebu quarantine station	Dec. 4	1		On s. s. Montrose from Shanghai.
Russian Empire:				
Astrakhan, government	Nov. 28-Dec. 20	87	84	
Siam:				
Bangkok	Nov. 4-Dec. 2		2	
Straits Settlements:				
Singapore	Nov. 5-Dec. 16	12	11	

SMALLPOX.

Algeria:				
Algiers	Nov. 1-30		1	
Arabia:				
Aden	Nov. 28-Jan. 1	4	2	
Argentina:				
Buenos Aires	Oct. 1-31		6	
Rosario	Oct. 1-Nov. 30		31	
Austria-Hungary:				
Galicia	Dec. 24-30	1		
Trieste	Dec. 3-9	1		From s. s. Baron Call from Beirut.
Brazil:				
Bahia	July 1-31		1	
Pernambuco	Oct. 16-Nov. 30		246	Report for Oct. 1-15 not received.
Rio de Janeiro	Nov. 26-Dec. 2	1	1	

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

Reports Received from Dec. 30, 1911, to Feb. 9, 1912.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Canada:				
British Columbia—				
Nelson	Dec. 24-30	1		
Manitoba—				
Winnipeg	Jan. 14-20	1		
Ontario—				
Kingston	Dec. 19-23	1		
Ottawa	Dec. 10-Jan. 20	35		
Sarnia	Oct. 17-Dec. 31	42		
Toronto	Jan. 6-13		1	
Quebec—				
Montreal	Dec. 17-Jan. 27	8		
Quebec	Dec. 10-Jan 27	160	1	
Ceylon:				
Colombo	Nov. 12-18	1		
Chile:				
Iquique	Dec. 10-16	2		
La Serena	Nov. 21-30	14		
Talcahuano	Nov. 26-Dec. 23	14	3	
Valparaiso	Dec. 3-9	43		
China:				
Canton	Nov. 11-Dec. 16	25	4	
Chungking	Nov. 18-25			Present.
Hongkong	Nov. 12-Dec. 23	54	41	
Nanking	Dec. 10-16			Do.
Shanghai	Dec. 11-17		1	
Cuba:				
Habana	Dec. 19-Jan. 19	2		Case Dec. 19 from German s. s. Frankenwald from Spain and Canary Islands, case Jan. 19 from s. s. Mexico.
Egypt:				
Cairo	Dec. 10-16	1		
France:				
Marseille	Nov. 1-30		1	
Paris	Dec. 3-Jan. 13	43	2	
Germany				Total, Dec. 31-Jan. 13: cases, 2.
India:				
Bombay	Nov. 19-Dec. 30	44	24	
Calcutta	Nov. 19-Dec. 23		16	
Madras	Nov. 26-Dec. 30	22	13	
Rangoon	Oct. 1-Nov. 30	29	9	
Indo-China:				
Saigon	Nov. 13-Dec. 10	18		
Italy:				
Genoa	Dec. 1-Jan. 15	20	1	
Leghorn	Dec. 16-Jan. 13	56	1	
Messina	Nov. 19-Dec. 31		5	
Naples	Dec. 3-Jan. 6	36		
Palermo	Nov. 26-Jan. 13	1,652	546	
Japan:				
Arima-Mura	Nov. 12-18	6	1	11 miles east from Kobe.
Kanagawa, ken	Dec. 17-23	1		
Java:				
Batavia	Nov. 12-Dec. 23	15	4	
Malta	Dec. 24-Jan. 6	2	1	
Mexico:				
Aguascalientes	Dec. 18-Jan. 7		2	
Chihuahua	Nov. 20-Jan. 14	62	19	
Coahuila, State	Oct. 1-30		16	
Guadalajara	Jan. 14-20		1	
Juarez	Dec. 19-Jan. 20	5	2	
Magdalena	Dec. 23-Jan. 31		37	Jan. 31, 81 cases present.
Mazatlan	Dec. 11-Jan. 23		5	
Mexico	Nov. 26-Dec. 30	34	18	
Monterey	Dec. 11-24		2	
Porfirio Diaz	Dec. 3-Jan. 22		26	
San Antonio	Jan. 1-21	12	9	
San Carlos	Jan. 1-21			Present.
Sandoval	Dec. 16			Do.
San Ignacio	Jan. 8	3		
Santa Ana	....do	4		
San Luis Potosi	Nov. 12-Dec. 2	3		
Tampico	Dec. 1-31	4	4	
Tapachula	Nov. 1-Dec. 31		14	
Portugal:				
Lisbon	Dec. 9-Jan. 6	19		

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

Reports Received from Dec. 30, 1911, to Feb. 9, 1912.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Russia:				
Libau	Dec. 17–23	1		
Moscow	Nov. 19–Dec. 23	12	4	
Odessa	Nov. 26–Dec. 23	7	1	
Reval	Nov. 1–30	1		
St. Petersburg	Nov. 19–Dec. 30	84	9	
Warsaw	Nov. 5–Dec. 2		185	
Spain:				
Cadiz	Nov. 1–Dec. 31		14	
Madrid	Dec. 1–31		1	
Malaga	Nov. 1–30		45	
Seville	Dec. 1–31		5	
Valencia	Dec. 3–Jan. 12	72	9	
Straits Settlements:				
Singapore	Nov. 19–Dec. 16	9	2	
Switzerland:				
Zurich, Canton	Dec. 3–23	6		
Teneriffe:				
Santa Cruz	Dec. 3–Jan. 13		29	
Turkey in Asia:				
Beirut	do	115	25	
Turkey in Europe:				
Constantinople	Dec. 4–Jan. 14		30	
Uruguay:				
Montevideo	Sept. 1–Oct. 31	19	3	
Venezuela:				
Caracas	Nov. 1–Dec. 31	11		
Zanzibar:				
Zanzibar	Oct. 28–Dec. 15	3	2	

MORTALITY.

WEEKLY MORTALITY TABLE, FOREIGN AND INSULAR CITIES.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—									
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Typhoid fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Aberdeen	Jan. 20	163,084	66	....	....	....	....	....	....	....	2	1	....	....
Aden	Jan. 8	45,859	22	7	....	....	....	1	....	....	....	....	....	....
Do	Jan. 15	.....	20	7	....	....	....	....	....	....	....	....	....	....
Aguascalientes	Jan. 28	40,000	37	1	....	....	....	1	2	....	....	....	1	....
Athens	Jan. 15	250,010	109	22	....	....	....	....	....	....	1	2	....	....
Amsterdam	Jan. 20	580,962	134	25	....	....	....	....	....	....	....	1	1	9
Antwerp	Jan. 13	327,668	78	9	....	....	....	....	....	....	1	....	....	....
Asuncion	Dec. 23	75,000	25	2	....	....	....	....	....	1	....	....	....	....
Barcelona	Jan. 24	591,272	215	27	....	....	....	1	....	2	....	8	....	....
Batavia	Dec. 30	217,630	....	....	....	....	....	....	1	....	....	....	....	....
Belfast	Jan. 20	385,492	136	15	....	....	....	....	....	....	....	....	....	12
Belgrade	do	90,050	28	....	....	....	....	....	....	....	2	1	....	....
Berlin	Jan. 13	2,083,824	618	97	....	....	....	....	....	1	5	14	5	2
Bombay	Jan. 6	977,822	780	29	6	....	....	4	....	....	....	....	2	....
Do	Jan. 13	.....	805	44	7	....	....	11	....	....	....	....	8	....
Bordeaux	Jan. 27	253,000	104	17	....	....	....	....	....	....	1	....	2	....
Brussels	Jan. 20	739,684	189	23	....	....	....	....	....	....	....	2	3	....
Canton	Dec. 16–30	1,000,000	230	35	....	....	....	2	....	5	....	3	....	....
Calcutta	Dec. 16	890,493	583	30	1	28	....	....	....	....	....	....	....	....
Do	Dec. 23	.....	528	40	3	24	....	....	....	....	....	....	....	....
Do	Dec. 30	.....	592	39	6	21	....	....	....	....	....	....	1	....
Charlottetown	Jan. 30	110,000	....	....	....	....	....	....	....	....	....	1	....	....
Christiania	do	245,000	77	19	....	....	....	....	....	....	....	1	3	....
Colombo	Dec. 23	213,974	180	14	....	....	....	....	....	5	....	....	....	....
Do	Dec. 30	.....	159	13	....	....	....	....	....	3	....	....	....	....
Constantinople	Jan. 21	1,000,000	342	20	....	1	....	9	....	7	1	2	6	....

MORTALITY—Continued.

Weekly mortality table, foreign and insular cities—Continued.

Cities.	Week ended—	Estimated population.	Total deaths from all causes.	Deaths from—									
				Tuberculosis.	Plague.	Cholera.	Yellow fever.	Smallpox.	Typhus fever.	Typhoid fever.	Scarlet fever.	Diphtheria.	Measles.	Whooping cough.
Copenhagen	Jan. 6	465,000	148	17	....	....	....	....	....	....	....	1	3	1
Dublin	...do....	406,536	191	33	....	....	....	....	....	2	3	4	6	1
Do	Jan. 13	.....	179	25	....	....	....	....	....	1	2	3	3	3
Do	Jan. 20	.....	212	35	....	....	....	....	....	4	3	3	1	6
Dundee	...do....	171,006	57	3	....	....	....	....	....	....	....	4	....	1
Edinburgh	Jan. 20	321,200	118	13	....	....	....	....	....	....	1	....	1	1
Georgetown	Jan. 6	56,000	53	4	....	....	....	....	....	1	....	1	....	....
Gibraltar	Jan. 21	25,367	13	....	....	....	....	....	....	1	....	....	....	....
Glasgow	Jan. 26	785,600	286	....	....	....	....	....	....	3	....	3	43	4
Gothenburg	Jan. 13	170,100	43	10	....	....	....	....	....	....	....	1	....	1
Do	Jan. 20	.....	50	4	....	....	....	....	....	....	....	1	....	1
Halifax	Feb. 3	41,000	15	2	....	....	....	....	....	....	....	1	....	....
Hamburg	Jan. 20	953,079	258	31	....	....	....	....	....	1	3	8	3	2
Havre	Jan. 20	136,159	72	12	....	....	....	....	....	....	1	2	1	....
Hongkong	Dec. 30	336,488	.....	....	1	....	....	15	....	....	....	2	....	....
Juarez	Jan. 27	6,500	14	....	....	....	....	2	....	....	....	....	....	....
Do	Feb. 2	.....	6	....	....	....	....	....	....	....	....	....	....	....
Karachi	Jan. 6	148,000	93	....	15	....	....	....	....	....	....	....	....	....
Do	Jan. 13	149,000	91	....	7	....	....	....	....	....	....	....	....	....
Kobe	Jan. 7	404,851	166	....	....	....	....	....	....	....	....	3	....	....
Leeds	Jan. 20	445,568	134	22	....	....	....	....	....	....	1	6	....	4
Leghorn	...do....	104,000	49	....	....	....	....	....	....	....	....	....	....	....
Leith	...do....	81,000	28	3	....	....	....	....	....	....	2	1	....	....
Libau	Feb. 7	90,000	.....	....	....	....	....	....	....	1	....	1	....	....
Do	Feb. 14	.....	.....	....	....	....	....	....	....	....	1	1	....	....
Do	Feb. 21	.....	.....	....	....	....	....	....	....	1	1	2	....	....
Liege	Jan. 13	167,521	48	5	....	....	....	....	....	....	....	....	....	1
Liverpool	Jan. 20	752,055	253	24	....	....	....	....	....	....	2	7	2	1
Lubec	Jan. 13	100,000	36	4	....	....	....	....	....	....	....	....	1	....
Madras	Jan. 6	518,660	618	....	1	34	....	4	....	....	....	....	....	....
Do	Jan. 13	.....	530	....	....	19	....	6	....	....	....	....	2	....
Manchester	Jan. 20	631,533	226	32	....	....	....	....	....	1	1	6	14	4
Montreal	Feb. 3	466,197	160	35	....	....	....	....	....	1	3	2	....	....
Moscow	Dec. 30	1,500,000	785	99	....	....	....	....	....	3	15	17	40	7
Do	Jan. 6	.....	692	77	....	....	....	1	....	3	16	22	27	4
Do	Jan. 13	.....	806	99	....	....	....	2	1	3	16	19	37	6
Valencia	Jan. 20	240,000	95	5	....	....	....	....	....	1	....	2	....	....
Do	Jan. 27	.....	122	3	....	....	....	1	....	....	1	2	....	....
Winnipeg	...do....	151,958	42	1	....	....	....	....	....	....	2	1	1	....

MORTALITY—FOREIGN AND INSULAR—COUNTRIES AND CITIES (untabulated).

ALGERIA—*Algiers.*—Month of December, 1911. Population, 172,397. Total number of deaths from all causes 317, including tuberculosis 59, typhoid fever 13.

ARGENTINA—*Buenos Aires.*—Month of November, 1911. Population, 1,351,663. Total number of deaths from all causes 2,025, including diphtheria 18, measles 16, scarlet fever 5, tuberculosis 211, typhoid fever 12.

BRAZIL—*Santos.*—Two weeks ended December 9, 1911. Population, 85,000. Total number of deaths from all causes 64, including diphtheria 2, measles 3.

GERMANY—*Kehl.*—Month of December, 1911. Population, 180,193. Total number of deaths from all causes 227, including diphtheria 1, scarlet fever 3, tuberculosis 28, typhoid fever 1.

GREAT BRITAIN.—Week ended January 13, 1912.

England and Wales.—The deaths registered in 77 great towns correspond to an annual rate of 15.4 per 1,000 of the population, which is estimated at 17,559,219.

Ireland.—The deaths registered in 21 principal town districts correspond to an annual rate of 20.3 per 1,000 of the population, which is estimated at 1,157,014. The lowest rate was recorded at Newry, viz., 8.7 per 1,000, and the highest at Kilkenny, viz., 54.6 per 1,000.

Scotland.—The deaths registered in 18 towns correspond to an annual rate of 2 per 1,000 of the population, which is estimated at 2,182,400. The highest rate was recorded at Aberdeen, viz., 21.9, and the lowest at Partick, viz., 11.4 per 1,000. The total number of deaths from all causes was 781, including diphtheria 10, measles 41, scarlet fever 6, typhoid fever 3.

ITALY—*Florence.*—Month of December, 1911. Population, 232,860. Total number of deaths from all causes 380, including diphtheria 1, measles 1, tuberculosis 50, typhus fever 7.

Genoa.—Two weeks ended January 15, 1912. Population 272,077. Total number of deaths from all causes 150, including diphtheria 1, tuberculosis 44.

MALTA.—Two weeks ended January 6, 1912. Population 213,395. Total number of deaths from all causes 111, including diphtheria 2, measles 1, smallpox 1, tuberculosis 9.

SOUTH AFRICA—*Johannesburg.*—Month of December, 1911. Population 237,220. Total number of deaths from all causes 420, including diphtheria 2, measles 1, tuberculosis 61, typhoid fever 17.

SPAIN—*Huelva.*—Month of December, 1911. Population 28,982. Total number of deaths from all causes 59, including tuberculosis 6.

TAHITI.—Four weeks ended January 19, 1912. Population, 4,000. Total number of deaths from all causes 14. No contagious diseases.

TURKS ISLANDS.—Two weeks ended January 27, 1912. Population, 1,681. Total number of deaths from all causes 3. No contagious diseases.

URUGUAY—*Montevideo.*—Month of November, 1911. Population, 321,224. Total number of deaths from all causes 421, including diphtheria 1, smallpox 1, tuberculosis 78, typhoid fever 1.

By authority of the Secretary of the Treasury:

RUPERT BLUE,
Surgeon General,
United States Public Health and Marine-Hospital Service.