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## **"THE PIORKOWSKI LABORATORIES" OF ST. LOUIS.**

### **CONVICTED OF SELLING BIOLOGIC PRODUCTS WITHOUT A LICENSE.**

In January, 1914, information was received that a St. Louis, Mo., concern, operating under the name of "The Piorkowski Laboratories," was selling so-called turtle tuberculin in interstate traffic without having a license, as required by the act of Congress of July 1, 1902, regulating the sale of viruses, serums, etc.

Evidence to this effect was collected, and a criminal information filed under the direction of the Solicitor of the Treasury in the district court at St. Louis, Mo., against Leslie A. Knight, the party using the name "The Piorkowski Laboratories."

On November 27, 1914, the defendant pleaded guilty to having made a shipment of so-called turtle tuberculin in violation of the law, and was fined \$100 and costs.

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## **TRACHOMA IN THE SCHOOLS OF PORTO RICO.**

By W. W. KING, Surgeon, United States Public Health Service, Member Institute of Tropical Medicine and Hygiene of Porto Rico.

The discovery of cases of trachoma among school children in various places in Porto Rico, and the report of its presence in 15½ per cent of 600 persons examined at the clinic of the Institute of Tropical Medicine and Hygiene, at Utuado, brought this disease into considerable local prominence and discussion. Seemingly there existed conditions which demanded attention, but to undertake systematic measures looking to prevention, control, and eradication, it was evident that more knowledge of its prevalence and other facts was necessary.

At the request of the governor and the director of sanitation, I undertook further investigation of the subject, particularly as affecting school children, with the results herein given.

### **Object of the Survey.**

It was desired first to determine whether the disease was limited to certain localities or widely spread; to gain an approximate idea of the percentage of school children who were sufferers from it, and to ascertain the prevailing types and other epidemiological factors influencing its spread, in order to formulate plans to combat it.

A more extensive survey was planned, but circumstances and the lack of time before the close of the school year curtailed the number of places and schools visited.

*Schools visited.*

Name of school.	Town or district.	Number examined.	Positive cases	Per cent.	Suspicious cases.	Per cent.
Central High.....	San Juan.....	274	22	8.0	14	5.1
Central Grammar.....	do.....	415	47	11.0	17	4.0
San Juan No. 1.....	do.....	1,034	135	13.0	104	10.0
Lincoln.....	Aibonito.....	181	8	4.3	5	2.7
Brumbaugh.....	do.....	213	10	4.6	6	2.8
McKinley.....	Ponce.....	968	82	8.4	38	3.9
Columbia.....	Fajardo.....	389	19	4.8	18	4.6
Belaval.....	do.....	351	15	4.2	4	1.1
Martin Gonzales <sup>1</sup> .....	Carolina.....	70	4	5.7	2	2.8
Juan Gonzales <sup>1</sup> .....	Rio Grande.....	29	0	0.0	0	0.0
Tijeras <sup>1</sup> .....	Juana Diaz.....	24	5	20.8	5	20.8
Town schools <sup>2</sup> .....	Utua.....	39	8	20.5	4	10.2
Rural schools <sup>1,2</sup> .....	do.....	72	21	29.1	3	4.6
Beatriz <sup>1</sup> .....	Cidra.....	25	1	4.0	1	4.0
Beatriz <sup>1</sup> .....	Cayey.....	15	1	6.6	0	0.0
Beatriz No. 1 <sup>1</sup> .....	Caguas.....	16	0	0.0	2	1.2
Beatriz No. 2 <sup>1</sup> .....	do.....	25	2	8.0	1	4.0
Coto Laurel <sup>1</sup> .....	Ponce.....	45	19	42.2	5	11.1
Town schools <sup>2</sup> .....	Mayaguez.....	14	2	14.2	2	14.2
		4,202	401	9.5	231	5.4

<sup>1</sup> Rural schools.

<sup>2</sup> Pupils from various schools.

**Diagnosis.**

A diagnosis of trachoma was made in those cases showing a well-defined granulation accompanied by hyperplasia of the conjunctiva.

Cases of acute or subacute conjunctivitis and those presenting indefinite granulation with or without congestion, superficial granulation, and border-line cases were classed as "suspicious." It is probable that a goodly number of these suspicious cases were trachoma of mild character or in the very early stages. This view seems to be strengthened by the fact that in many instances these persons were members of families in which positive cases were found.

**Percentage.**

It will be noted that the percentage of infection in different schools shows wide variation, ranging from nothing to the extremely high figure of 42.2, an inequality probably due to the length of time that the disease has been present in the neighborhood or to local factors very difficult or impossible to determine.

It is believed that the number of pupils and the variety of localities were sufficient to make the general average of 9.5 a fairly accurate index to the amount of infection in the schools throughout the island, although it is possible that further inspections may somewhat modify it. The number examined at Mayaguez was too small to give a reliable index for that city, but at least the presence of trachoma at that point was established. A more extensive inspection might change the local average, but would not materially affect the general result.

Accepted as a tentative working figure, this average means that of an enrollment of 182,766 pupils during the past school year 17,435 had trachoma, without considering 10,000 others who had symptoms that were suspicious and therefore well deserving attention. These figures give an idea of the gravity of the situation and the difficulties which must be confronted in dealing with it.

#### Distribution.

Probably few schools in Porto Rico are free from the disease. It is very unlikely that the localities visited chanced to be the principal ones infected; and if they may be taken as representative of their section, it is reasonable to suppose that the intervening places are also in more or less the same condition. It seems safe, therefore, to say that trachoma is prevalent in all parts of Porto Rico, though varying in intensity.

An attempt to trace any influence to general topographical features results negatively from these examinations, the average for the coast lowlands being 8.6 per cent and that for the mountainous interior but little higher—9.7 per cent. High percentages as well as low ones were found under both conditions.

A comparison between town and rural schools shows quite different findings—8.9 per cent in the former against 16.5 per cent in the latter. These rates must, however, be considered with the knowledge that a disproportionately small number of rural schools were visited, this being one of the principal points in which the survey was not completed. Two heavily infected centers—Utuado and Coto Laurel—were encountered, and it remains to be seen if this heavy ratio of infection will be sustained in future inspections.

#### Type of the Disease.

Except in a comparatively small number of the severely infected, nearly all denied having felt "anything in the eye." Probably many did not, and others were at an age when they could not easily express their feelings. The symptoms of chronic trachoma may give little trouble and are often unnoticed until attention is directed to them by the examining physician. Careful questioning elicited in many instances an admission of having had one or more of the following symptoms: Burning, itching, reddening of the lid margins or eyeball, sensation of grit beneath the lids, lachrymation, photophobia, lashes stuck together in the morning, muco-purulent secretion at the inner canthus, etc. Not many admitted having had acute attacks, but children are prone to forget, and I have found that frequently such history can be had from parents when denied by the child.

These cases presented every gradation of granulation from a few elevations along the tarsal margin to the abundant crowded masses filling every bit of space in the conjunctiva in both lids of both eyes.

A moderate amount of medium-sized granulations along the tarsal margin and in the superior cul-de-sac was the rule. No attempt was made to classify them into papillary or follicular form. Both forms were seen, but the majority were mixed in varying degree.

In somewhat more than half the number, the inferior conjunctiva was involved, sometimes to a greater degree than the superior, but in only one or two cases was it limited to the lower lid. Usually both eyes were about equally affected, but it was not uncommon to see a marked difference in the amount of granulation. In about 1 per cent one eye only appeared trachomatous, the other being normal or so nearly normal that taken alone no suspicion of trachoma would be aroused. Such cases emphasize the liability of error when only one eye is examined.

Very thick, stiff lids, so characteristic of long-standing cases, were seldom seen. Scar tissue, generally as fine lines, was more often noted, but not in the majority of cases, probably because that stage of the disease had not yet been reached.

In the course of these examinations other inflammatory conditions of the conjunctiva were found which may be roughly divided into several groups:

(1) Acute and subacute conjunctivitis, not many in number. Not infrequently there were observed chronic cases presenting marked injection of the conjunctival vessels of lids and eyeball, increased secretion, burning, itching, and slight photophobia. The conjunctiva was moist and clear, without thickening or granulation except rarely a few very fine papillary points. Blepharitis with frequent sties was a very common history. These cases could hardly be mistaken for trachoma, hence have not been included under the term "suspicious."

(2) Cases showing nothing but a few, usually small, elevations along the tarsal margin with little or no congestion about them.

(3) Those with only a small patch of smooth, rounded elevations in the cul-de-sac, or more especially in the outer corner of the lower lid. It is often difficult to determine whether they are true granulation or simply folds of redundant tissue.

(4) Those having large or small semitransparent, soft, flabby-looking discrete granules so superficial that they appear to rest upon the conjunctiva. Fine blood vessels passing under them can be distinctly seen.

(5) Those border-line cases in which only repeated observation under treatment can settle the diagnosis.

#### **Complications and Accompanying Conditions.**

Owing to the scarcity of cases of long standing, complications were comparatively rare. Ptosis was noticed three times; sty, twice;

and the following conditions, once each: Marked astigmatism, small corneal opacity, ptosis and keratitis, keratitis, symblepharon, blepharitis, beginning pterygium, episcleritis, and strabismus. Two of the suspicious cases had blepharitis with sty.

#### Damage to Vision.

This can be said to have occurred in only three cases worthy of mention.

That more cases of damaged vision were not encountered is to be explained by the fact that trachoma progresses slowly, as a rule, and it is hardly to be expected that many school children had had it a sufficient time for serious effects to supervene.

#### Age.

Age in years.	Number examined.	Positive cases.	Per cent.	Suspicious cases.	Per cent.
4.....	1				
5.....	44	2	4.5	2	4.5
6.....	92	10	10.8	9	9.7
7.....	167	16	9.5	9	5.4
8.....	214	18	8.4	14	6.5
9.....	260	32	12.3	15	5.7
10.....	375	29	7.2	20	5.3
11.....	347	38	10.9	22	6.3
12.....	521	76	12.6	34	6.5
13.....	503	45	8.9	24	4.7
14.....	535	55	10.5	36	6.7
15.....	449	42	9.3	20	4.4
16.....	304	17	5.5	10	3.2
17.....	190	16	8.4	7	3.6
18.....	119	3	2.5	7	5.9
19.....	53	3	5.7	2	3.8
20.....	18				
21.....	7	1	14.3		
22.....	1				
23.....	1				
25.....	1				
Total...	4,202	401		231	

Extreme accuracy in obtaining the exact age was not attempted, nor was it necessary. The statements of the pupils were accepted or, in case they did not know, the apparent age was noted.

The percentages show no marked variation from the general average except in one instance where the number examined was very small. Age would therefore seem to have little influence within the limits of school age.

#### Sex.

Sex.	Number examined.	Positive cases.	Per cent.	Suspicious cases.	Per cent.
Males.....	2,159	257	11.9	126	5.8
Females.....	2,043	144	7.0	105	5.1
Total...	4,202	401		231	

The sexes were nearly equally represented, 51.1 per cent and 48.9 per cent, yet males show 4.9 per cent greater prevalence. Girls are less promiscuous in their associates than boys and are instinctively more cleanly and of better personal habits, hence it is reasonable to suppose that these two important factors may explain the difference.

#### Color.

Every gradation, from pure Caucasian to pure African, occurs in Porto Rico, resulting from every degree of mixture of the two races. Traces of aboriginal Indian blood are seen in many faces, especially in the interior, but no pure Indian remains. It has not been taken into account in these statistics.

It was impossible to fix a definite line of demarcation of color, the classification here given being that of the most prominent characteristics. In the school records only the distinction of "white" and "colored" is made.

During the first part of the examination of the San Juan schools the lists of pupils examined were left with the teachers to supply the data as to age, sex, and color, and it was not noticed until too late for correction, that, with the exception of one room, the distinction between "mulatto" and "negro" was not made. In the following table it thus became necessary to make a separate class of "colored" for the other pupils of the San Juan No. 1 and the Central Grammar Schools.

#### Color.

Color.	Number examined.	Positive cases.	Per cent.	Suspicious cases.	Per cent.
White.....	2,525	231	9.1	149	5.9
Mulatto.....	921	90	9.7	33	3.6
Negro.....	271	15	5.5	9	3.3
Colored.....	485	65	13.4	40	8.2
Total ..	4,202	401	.....	231	.....

No reason is apparent for the difference in percentage between colored (13.4) and mulatto and negro combined (8.8).

The percentages between white and mulatto are practically the same. Negroes give a somewhat lower rate but remarkably higher than that found by Oakley, Moore, and Kolb in Kentucky (0.09 per cent), Clark in Virginia and West Virginia (0.08 per cent), and Foster in North Carolina and South Carolina (0.04 per cent). Scherschewsky also has stated that he has rarely found the disease in negroes.

These observers have apparently made no distinction between negro and mulatto but have classed them as "colored," in accord-

ance with custom in the United States. If there is a difference in susceptibility between whites and negroes, it would seem that a study of the effect of the mixture of the two races would prove interesting and profitable.

What is the cause of this very great difference of findings in the United States and Porto Rico? The causative organism of trachoma is still a matter of controversy and can not settle the diagnosis of doubtful cases. Experienced examiners may differ as to diagnosis in certain cases, but it is improbable that officers trained in the same school of experience—the United States Public Health Service—could differ so widely in diagnosis as is shown by the percentages of infection in negroes in the United States and Porto Rico.

A more plausible but only partially sufficient reason may be found in the difference in the relations existing between these races in the two countries. Contrary to the custom in the States above mentioned the color line in Porto Rico is very loosely drawn, the people of every color intermingling freely in the schools, churches, theaters, and other public places, and in certain social classes there is but little distinction made. The sanitary conditions under which the negro race lives do not materially differ in the two countries.

The more intimate association naturally affords greater chance for the interchange of disease, but seems insufficient to explain the figures under discussion, as the difference in percentage of infection is much greater than the difference in degree of intimacy in the two places. In the absence of other epidemiological factors of importance, we must suppose that the negro race is less susceptible to trachoma than the white race, but that this partial immunity is lost by amalgamation of the two. Such conclusions seem to be indicated by the result of these examinations.

#### Social Grade.

The ratio of the incidence of trachoma in the different social strata can not be expressed in figures. In the beginning of this work an endeavor was made to divide the pupils into 3 or 4 grades on this basis, but it had to be abandoned as impracticable. There being no natural definite lines of division, any arbitrary standard was open to serious objection.

However, some observations were made especially demonstrating the falsity of the belief held by many persons that trachoma in Porto Rico is a disease of the poorer or lower classes. It was surprising to see the number of cases encountered in children of wealthy or at least well-to-do families of high social position, and this fact should be emphasized because of the frequently heard expression of the above opinion.

Children are notoriously careless in matters of personal hygiene, and on account of their essentially democratic nature do not draw social distinctions, particularly in play, as strictly as do their elders. In school they meet children of all kinds. They also have more intimate contact with servants. In such ways children living under apparently the best hygienic conditions may have rather extensive opportunities for contracting trachoma.

#### Nationality.

No effort was made to record the nationality of those examined, as all but a small fraction were Porto Ricans. Included in the remainder were children of American, Spanish, French, English, Danish, German, Italian, Venezuelan, Dominican, Syrian, West Indian, and possibly other parentage, most of whom were born in Porto Rico.

At the time of the transfer of Porto Rico from Spanish to American authority many of the people retained their Spanish citizenship, especially those who were born in Spain. The majority of the French are Corsican families, who have resided in Porto Rico for a considerable number of years, hence the children of these Spanish and French parents may be considered in the same category as Porto Rican children in so far as this investigation is concerned.

The same may be said to be true in more or less degree with regard to children of other nationalities, except American and those of people from the English-speaking islands to the eastward of Porto Rico. These elements have been introduced since the American occupation and many of the children are Porto Rican born.

The West Indian element is largely pure negro, and no case of trachoma was found among them. On the other hand, some cases were found in American children. In this connection it may be stated that of the total number of 632 positive and suspicious cases, apparently none were imported. There were no persons included in this number but those who had lived in the island longer than the apparent duration of their conjunctival disease.

#### Origin of Trachoma in Porto Rico.

Sufficient data is not at hand to throw much light upon this question, nor could an inspection of school children be expected to furnish much information. It is very evident that trachoma has existed in Porto Rico long enough to become widespread even to the remotest parts. Among the patients at the clinic of the Institute of Tropical Medicine and Hygiene at Utuado I found adults from isolated mountain districts with cases of trachoma in which the pathological conditions, as well as the patient's statements, gave evidence of trachoma of many years' duration.



Blame for the introduction of trachoma has been placed upon the Syrians. In the medical inspection of immigrants by the United States Public Health Service at Porto Rican ports since the American occupation many Syrians have been rejected for this cause.

They are usually shopkeepers and peddlers in many West Indian and South American lands, and prior to the American occupation were accustomed to penetrate into all parts of Porto Rico selling their wares. It is not unreasonable to suppose that they unconsciously peddled trachoma at the same time, yet their numbers were comparatively few and it is probable that they may be less blameworthy than has been claimed.

Spanish immigrants and soldiers come in for a larger measure of responsibility. The disease is prevalent to an undetermined degree in Spain, and in the constant stream of Spanish immigration there undoubtedly were many persons afflicted with trachoma. Spanish garrisons were constantly maintained in the island and the result of several thousand soldiers mingling with the populace must have been an important factor in the introduction of this disease.

Although practically no notice was taken of it until recently, it is evident that trachoma was introduced into Porto Rico during the Spanish régime, and probably through several channels.

#### Dissemination.

Following its introduction, various causes have been at work to spread it. Considering that the infecting organism is present in the secretions of the trachomatous eye, one can readily imagine the various ways in which it may be transferred from person to person. The use in common of towels, handkerchiefs, wash basins, clothing, books, pencils, and other objects in the home, school, or workshop may be mentioned. Persons ignorant or negligent about personal hygiene are of course more liable to contract the disease, especially when living under conditions of poverty, uncleanness, crowding, and unhygienic circumstances generally.

The fly and maybe other insects must not be overlooked. Their predilection to alight upon the face and eyelids is well known, particularly if attracted by the presence of a purulent discharge. From the inflamed eye to a sound one is often a short flight.

The topography of a country influences the transmission of trachoma by its effect upon the means of communication, habits, pursuits, etc., of the people. Porto Rico presents two general topographical features—a strip of fairly level coast land of varying width, sometimes extending by valleys some distance from the sea, and a mountainous interior with an elevation 1,000 to 2,500 feet, broken by numerous irregular ridges and valleys. It has been likened to a choppy sea.

The entire island is traversed in all directions by roads and trails, so that while communication may be more difficult in some parts than in others, no localities can be said to be really isolated. Distances are comparatively short, and as a matter of fact all sections are in constant and free intercommunication. The people are practically homogeneous, and, class for class, the differences in habits, occupation, dress, etc., are so slight that they have little or no bearing upon the question under discussion.

While it is evident that trachoma has been existent in Porto Rico for a long time and well scattered throughout its extent, information is totally lacking in regard to the ratio of infection and rate of spread. That the increase in the number of cases has been more rapid of late years seems probable and logical. The large number of new roads opened up in the last 15 years has rendered communication easier and increased prosperity has supplied motive and means for greater movement.

Far more important has been the rapid and enormous expansion of the school system from an enrollment of about 26,000 in 1899 to 182,766 in 1913-14. Thousands of children who would have scarcely seen each other were thus brought into close association with a minimum or absence of medical supervision except in regard to the usual contagious diseases, smallpox, measles, scarlatina, etc. The danger of transmission of trachoma in the school should not be exaggerated, neither should it be minimized, and it is hardly supposable that such multiplication of opportunities for exposure should have occurred without the logical consequence of more rapid dissemination of the disease.

Remembering that the secretions of the trachomatous eye are infective, it is easy to understand why the intimate association between members of a family, particularly children with each other, affords the most favorable opportunities for infection. Therefore it was no surprise to find a number of instances of more than one case in the same family. One wealthy and prominent family gave 3 well-developed cases. Another family, not included in these statistics, consisting of 9 children from 2 to 13 years of age, showed 7 with undoubted trachoma, a suspicious condition in the next to youngest child, and negative in the baby. In such families it is usual to find the further advanced cases in the older children.

Illustrative of infection contracted from parents was a family seen at the clinic at Utuado. The mother had a very old trachoma with much thickening and scar tissue. Two children, aged 11 and 9, had less advanced cases, and the other children, aged 7, 6, and 5, were negative.

### Prevention.

The proverb "an ounce of prevention is worth a pound of cure" is truly applicable to trachoma. Once contracted and developed, it is very difficult to cure. Treatment is painful, tedious, and wearing upon the endurance of both physician and patient; hence is too often abandoned before complete cure is attained.

Protection against it is more a matter of individual personal hygiene than of general measures. A person may live under the best hygienic surroundings and still be very negligent in his personal habits, due to ignorance or carelessness. Children are naturally careless and thoughtless and unless taught personal hygiene will grow up in ignorance of some of its more essential features. The time for beginning this instruction is infancy. It can hardly be said that any age is too early.

The individual towel and individual handkerchief are as essential if not more so than the individual toothbrush, the necessity of which everyone recognizes. This exclusiveness in such things should be cultivated to the point of seeming absurdity. It is safer to be over rather than under scrupulous in these matters. Young children learn first by imitation, later by precept as well, and before the mother or nurse realizes the child will notice that certain articles are reserved for its exclusive use and will want them.

As the careless and indifferent age is reached, constant admonition and example should keep these hygienic observances before the mind of the child until they become habits. Habits formed in childhood endure with remarkable tenacity. Lapses will occur, but in proportion to the attention given personal hygiene the danger of infection will decrease.

By the intelligent cooperation of the teacher the school can give powerful aid, supplementing the home training or supplying it when lacking. Instruction on these points might be incorporated in the studies on hygiene, but would probably be more effective if made a special subject presented to the pupils in different ways and on different occasions as a matter having particular interest and importance to them individually rather than a routine study of general application. It is not possible here to go into details as to what should be included in such instruction.

General sanitary measures are of benefit indirectly, but at the same time may be of considerable importance. Special mention may be made of the eradication of flies. Conveyance by this means can scarcely be questioned and is important according to the number of flies present.

Treatment of existing cases not only gives relief to the sufferers but adds protection to the uninfected by reducing the number of sources of infection.

General isolation is, of course, impossible; still, restrictive measures can and should be taken with those in an acutely infective stage. Proper treatment should be instituted, their association with other persons limited as far as circumstances permit, and they and those necessarily in intimate contact with them instructed in the precautions to be observed.

Early and apparently insignificant attacks of "sore eyes" (ceguera) should not be neglected. By no means are they all a beginning trachoma, but they may be. The cases designated "suspicious" deserve attention for the same reason.

It is sometimes difficult to determine the amount of danger from a trachomatous patient, but as the discharge from the affected eye is the vehicle of the contagion, the amount and character of the secretion may be taken as a rough index to it. Almost anyone regards an acutely inflamed eye as possibly contagious, but while trachoma is prone to acute attacks the eye may be infective without outward signs of disease. Cases with exuberant granulation may be dangerous from time to time, due to the trachomatous "granule" rupturing and extruding its contents, which are carried away by the secretion. This secretion is often seropurulent, but may be so slight as to pass unnoticed in a hasty superficial examination.

Exclusion from the schools or segregation of all trachomatous pupils is the natural impulse and is unquestionably proper and valuable. When dealing with such numbers as are involved in Porto Rico, certain difficulties may be encountered and opposition met with, due to failure to appreciate the gravity of this disease and its results.

The excluded child is still a focus of infection to the family and to the community at large and should be under supervision. While some cases should be kept from school, to exclude all and attempt supervision over them would be a herculean task, especially in the face of opposition, and by possible failure might defeat the end in view. Perhaps better control and better results might be attained by allowing all those not actively contagious to attend school provided that the danger from their presence be minimized by requiring them to undergo treatment and by insisting upon the observance of precautions by all pupils.

#### Conclusions.

1. Trachoma is prevalent in practically all parts of Porto Rico, especially among school children.
2. The degree of prevalence is high, although it varies in different localities.

3. It has been existent in Porto Rico for many years and was probably introduced through various channels at different times.

4. It has spread more rapidly of late years, and the rate of spread will become still more rapid as time goes on unless measures are taken to control it.

5. On account of the serious effects of the disease, it becomes a public-health problem of great gravity and difficulty, demanding urgent measures for control and prevention.

6. This condition of affairs will not improve if let alone, but will steadily become worse unless efficient work is done against it. In the light of our present knowledge of trachoma, there is no quick and easy method of fighting it. A campaign against it may be compared to that against tuberculosis and means organized effort, trained workers, and the expenditure of energy and money for many years.

7. Suspicious cases deserve equal consideration with positive ones because a certain number of them are undoubtedly trachoma and may be sources of infection. Also, because trachoma is more amenable to treatment in the earlier stages.

8. The topographical features of the country have apparently had no influence upon the disease in Porto Rico.

9. Trachoma seems more prevalent in rural districts than in town, but this observation needs confirmation by more extended investigation.

10. Age within school limits has no influence.

11. Males are more frequently affected than females.

12. Negroes apparently enjoy a partial racial immunity, although the percentage of occurrence among them is remarkably higher in Porto Rico than is reported in the United States.

13. This immunity is apparently lost by mixture with white or Indian blood.

14. Trachoma is not limited to the poorer classes of society in Porto Rico, but affects those of higher social grade to a surprising degree.

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## A NEW BACTERIAL DISEASE OF RODENTS

### TRANSMISSIBLE TO MAN.<sup>1</sup>

By WILLIAM B. WHERRY, M. D., Professor of Bacteriology, University of Cincinnati.

Three years ago, while working in the Federal Laboratory at San Francisco on the distribution and epidemiology of plague among the California ground squirrels, McCoy (McCoy, Geo. W.—Public Health Bulletin No. 43, April, 1911) encountered a disease of these rodents which was of particular interest in that the lesions in ground squirrels, guinea pigs, white rats, and gray mice rather closely simulated

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<sup>1</sup> Submitted for publication Dec. 8, 1914.

those due to plague. Infected squirrels were obtained from widely distributed points between Los Angeles and Sacramento. Later, McCoy and Chapin (McCoy, Geo. W. and Chapin, Chas. W.—*Jour. Infectious Diseases* 1912, Vol. 10, p. 61, and *Public Health Bulletin* No. 53, January, 1912) published further observations and described the *Bacterium tularensis* which they isolated and proved to be the cause of this disease. The extensive experiments of these workers will not be reviewed in detail, as the publications cited can be easily obtained. However, as the virus was extremely pathogenic for certain rodents, they were naturally anxious to determine its virulence for various animals and carried out extensive inoculations. They found guinea pigs, rabbits, white rats, gray mice, ground squirrels (*C. beecheyi*), the gopher (*T. bottae*), the Java and Rhesus monkeys quite susceptible; while the adult Norway rat (*M. norvegicus*) was usually immune, the young were only partly resistant; sheep were only slightly susceptible (one out of five). The following animals they found immune: Calf, pig, goat, cat, dog, pigeon.

In a private communication to the writer, McCoy says that owing to the marked virulence of the virus for monkeys they fully expected a human case to turn up sooner or later. Working with Mr. B. H. Lamb, the writer has discovered two cases of human infection with *B. tularensis* in Cincinnati. The first case has been reported in detail. (Wherry and Lamb—*Jour. Infectious Diseases* 1914, vol. 15, p. 331.) This case was in a meat cutter in a cheap restaurant who came under the care of Dr. Derrick T. Vail. He was suffering from an acute ulcerative conjunctivitis, with involvement of the preauricular and cervical glands on the corresponding side, fever, and marked prostration. The details of the clinical history of this case were published by Dr. Vail (D. T. Vail, *The Ophthalmic Record*, Oct. 1914). The second case was a farmer's wife who came under the care of Dr. Robert Sattler, who will report on it later. She also had an ulcerative conjunctivitis of the left eye, with marked edema, involvement of the preauricular and cervical glands, and marked prostration. The temperature in this case once went to 104° F. Her illness lasted over two months.

We were anxious to find the source of infection in this locality and naturally suspected wild rabbits, as these represent the chief variety of wild game sold in the markets. Our attention was further directed to rabbits through the reports of hunters that wild rabbits in Indiana and Kentucky were dying in large numbers. Through the cooperation of Dr. J. H. Landis, health officer of Cincinnati, we were able to examine two rabbits found dead on the M. farm about 6 miles from Vevay, Ind. (Switzerland County). Both of these rabbits showed the gross lesions of the disease and were proven by guinea pig inoculations and bacteriologic examinations to be infected with *B. tular-*

*ense*.<sup>1</sup> It is interesting to note here that Dr. Sattler's case came from a farm in Indiana about 4 miles distant from the M. farm. Through the further interest of Dr. Landis we are now engaged in testing out some rabbits from Kentucky and Ohio, which are in all probability also affected with the same disease. Hence we are inclined to conclude that this rodent disease is widely distributed and that extensive epizootics among wild rabbits occur frequently.

Further investigation will show whether the disease is transmitted to man frequently or not. While the human cases on record were both individuals who had handled and dissected wild rabbits and were both cases of conjunctivitis, it seems possible that infection may occur through less direct channels and that other types of infection in man may occur. On the basis of animal experiments it seems possible that ulcerative rhinitis, ulcerative or membranous sore throat, gastro-intestinal infection, or lymphadenitis secondary to cutaneous infection may occur. Susceptible rodents may be infected by feeding and by the introduction of infectious material into the eye or nose or upon an abrasion of the skin. Experiments on transmission by contact or association have failed in the case of guinea pigs and ground squirrels, but a recent experiment by Mr. Lamb was successful in the case of rabbits. In this experiment a rabbit, inoculated by placing infectious material in its eye, was kept in a run-way with about 15 healthy rabbits which had been under observation for several weeks. In the course of about two weeks five of the rabbits associated with the sick one died of the disease. We believe this is due to gastro-intestinal infection, as rabbits kept together are very affectionate and will lick any sore place upon their companions. However, it should be borne in mind that rodent fleas may possibly transmit the disease to man, for McCoy and Chapin, in searching for a natural mode of transmission among ground squirrels, twice successfully transmitted the disease by means of 100 and 500 squirrel fleas, respectively.

*Bacteriologic diagnosis.*—We have not been able to find *B. tularensis* in smears from the human cases. This is apparently due to the fact that here the organism occurs in the coccoid form and is not easily distinguished from the granular, colloidal débris present. In tissue smears from rabbits or guinea pigs recently dead of the disease the organism can be readily found in very large numbers. It never takes up dyes intensely and is demonstrated most clearly by aniline-water, Hoffman's Violet or Gentian Violet. When so stained it appears as rods varying from 0.5 to 1.0 micron in length and less than 0.5 micron in diameter, surrounded by a distinct capsular halo. A few hours after the death of an animal the organisms in the tissues round up into the coccoid form.

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<sup>1</sup> We have reported these findings in the Jour. Amer. Med. Assoc., 1914, vol. 63, p. 2041.

It can not be cultivated upon any of the ordinary laboratory media, even if this contains the blood of susceptible animals. But it can be isolated on the coagulated egg-yolk recommended by McCoy and Chapin. It is more convenient to resort to animal inoculation for a diagnosis than to attempt to grow the organism in cultures, as this sometimes fails even when the conditions for growth seem favorable. Guinea pigs usually die of the disease in about three days and rabbits in from three to six days.

The lesions found postm $\ddot{a}$ rtem in guinea pigs, rabbits, and ground squirrels are very much alike and are characteristic. At the point of inoculation, e. g. in the subcutis, one finds a dry, yellowish exudate. The congested vessels radiate from this area to the regional glands, which are enlarged, firm, and white on section, and lie buried in the very much congested periglandular tissues. The spleen and liver are congested and hypertrophied and appear speckled with numerous yellowish-white foci of necrosis. The vessels of the heart and thorax are deeply injected. The lungs sometimes show a few small tubercle-like foci of necrosis or more commonly patchy red areas of consolidation.

*Prophylaxis.*—In the present state of our knowledge concerning the infection of man with this virus it would seem advisable to at least warn those who dissect rabbits of the danger of infection, and to urge an unusually thorough scrubbing of the hands and of any other objects which may have come in contact with possibly infectious material.

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## PLAGUE AND PLAGUE-LIKE DISEASE.

### A REPORT ON THEIR TRANSMISSION BY STOMOXYLS CALCITRANS AND MUSCA DOMESTICA.<sup>1</sup>

By N. E. WAYSON, Assistant Surgeon, United States Public Health Service.

The possible rôle of the stable and the house fly in the transmission of a plague-like disease affecting rodents (A Plague-like Disease of Rodents, Public Health Bulletin No. 43, April, 1911, by G. W. McCoy) to human beings was suggested by the occurrence of a human case of conjunctivitis with cervical adenitis and considerable systemic disturbance in a meat cutter who worked in a restaurant, the location of which was not far removed from an epizootic among rabbits. The case was caused by an organism simulating, or identical with, that which causes the plague-like disease among the rodents of California, especially the ground squirrels. (*Bacterium tularense*, the Cause of a Plague-like Disease of Rodents, Public Health Bulletin No. 53, G. W. McCoy and Charles W. Chapin; Infection of man

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<sup>1</sup>Submitted for publication Nov. 11, 1914.



with *Bacterium tularensis*, Journal of Infectious Diseases, September, 1914, William B. Wherry and B. H. Lamb.)

This disease, the morbid pathology and causative agent of which have been described by the above-mentioned authors, has been found again this year during the routine examination of ground squirrels for the presence of plague in connection with plague-eradication measures in California.

The causative organism readily lends itself to transmission by the house fly because of the high degree of susceptibility in rodents. There is no difficulty in causing the death of an animal by rubbing a small portion of an infected organ into the hair, without more trauma than would be made by using a pair of anatomical forceps for holding the material, no clipping or shaving of the skin being necessary, as in the vaccination method for production of experimental plague. Likewise, a drop of a dilute suspension of an infected spleen in sterile normal salt solution, applied to the conjunctiva of a guinea pig, prepared by cocainizing and traumatizing by rubbing a grain of sterile sand under the palpebra, will cause the death of the animal within the usual incubation time, to wit, five or six days.

Stable flies, held captive in a glass phial covered with a single layer of surgical gauze, will readily attack the clipped skin of a guinea pig and the unprepared ear of a Belgian hare, especially after a night of fasting. When so applied to an animal (guinea pig) acutely ill of this plaguelike disease, or of plague bacteremia, eight bites by one or more flies (not over two have been used simultaneously) will effectively transmit the disease to a healthy animal, if the application is made within an hour after the flies have bitten the affected pig, and the death of the second animal will occur in from five to nine days after the application. Washings of the flies in normal salt solution and of flies slightly crushed when injected subcutaneously will produce similar results.

House flies allowed to crawl and feed on the infected viscera of an animal dead of the plaguelike disease, and immediately transferred to conjunctivæ prepared as above indicated, cause a severe purulent conjunctivitis after 48 hours; later, hypopyon, with marked pannus, and after five to nine days, the death of the animal, with cervical adenitis and typical findings in the viscera. The feces of house flies similarly fed, suspended in salt solution and instilled into the conjunctiva, will produce like results.

The transmission by bites occurs, apparently, only from those animals having an advanced stage of the bacteremia, as indicated by their death within 24 to 48 hours after the fly feeding. Microscopic preparations of the blood as control indicators of the degree of bacteremia are uncertain.

The minimum number of bites necessary for transmission has not been determined. In two experiments where flies were allowed to bite the infected animal four times and the healthy animal four times death did not occur. In two experiments where flies were allowed to bite an infected animal eight times and to bite a healthy animal eight times, death resulted. It is assumed, of course, that all the animals were equally susceptible.

The determination of the length of time that flies remain infectious is in process of experimentation. Results have been negative after 24 hours from the time of feeding.

#### Transmission of Plague by *Stomoxys calcitrans*.

Strain.	Pig.	Fly bites.	Original pig.	Healthy pig exposed to bites.
(1) 3081.....	Adult male.....	8	Dead 24 hours later....	Dead on seventh day.
(2) 3081.....	Adult female.....	8	do.....	Dead on eighth day.
(3) 3081.....	do.....	19	Dead 96 hours later....	Remained alive.

Two experiments were made using flies which had bitten the infected pig used in No. 3, respectively 24 hours and 5 days after biting the original pig. Both resulted negatively.

#### Transmission of Plaguelike Disease by *Stomoxys calcitrans*.

Strain.	Pig.	Fly bites.	Original pig.	Healthy pig exposed to bites.
(1) 3045.....	Male.....	13	Dead 72 hours later....	Remained alive.
(2) 3045.....	Female.....	14	do.....	Do.
(3) 3106.....	do.....	12	Dead 48 hours later....	Dead on sixth day.
(4) 3106.....	do.....	8	do.....	Dead on ninth day.
(5) 3106.....	Male.....	8	Dead 24 hours later....	Dead on fifth day.
(6) 3045.....	Female.....	8	do.....	Dead on sixth day.

#### Transmission of Plaguelike Disease by *Musca domestica*.

Four flies selected from a number that had fed on the 48-hour old viscera of an animal dead of plaguelike disease were washed and slightly crushed in 2 cubic centimeters of salt solution, and 1 cubic centimeter of the suspension was injected subcutaneously into a pig, with the result that death occurred on the fifth day.

Five flies were washed without crushing, after feeding on similar material, in 2 cubic centimeters of salt solution, and 1 cubic centimeter of the suspension was injected subcutaneously. Result, death on the sixth day.

Five flies were allowed to feed and crawl on similar material and were immediately transferred to and allowed to crawl on a conjunctiva prepared by cocainization and traumatized by rubbing a few grains of sterile sand between the ocular and palpebral conjunctiva. This resulted, in 48 hours, in a purulent conjunctivitis; in 72 hours,

in pus in the anterior chamber and in a pannus; death occurred on the sixth day. Repetition of this experiment three times has resulted similarly.

A number of flies, after feeding in the carcass of an animal dead of the plague-like disease 48 hours previously, were allowed to crawl over an area of the skin of a healthy animal, prepared by shaving sufficiently close to produce an abrasion. Results, negative.

The above-outlined experiments are being extended and repeated for the purpose of learning whether the transmission of the plague-like disease from the carcass of an infected animal to the eye or mucous membranes of another animal, or to an abraded surface, is likely to become a factor of importance. Further information is also desirable regarding the transmission of plague by the stable fly, since this fly will feed on carcasses recently dead. Definite information might explain the occurrence of cases of this disease which do not lend themselves readily to an epidemiological explanation by flea transmission.

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## **THE TUBERCULOSIS PROBLEM IN RURAL COMMUNITIES.**

### **ITS MODERN ASPECT AND THE DUTY OF HEALTH OFFICERS.**

By S. ADOLPHUS KNOFF, M. D., New York, N. Y.

On September 16, 1914, upon the invitation of the commissioner of health of New York State, I delivered an address at Saratoga Springs before the 700 sanitary officers of the State, assembled there for their annual conference. What I have seen, read, and learned from conversations with health officers in rural communities in other States, Territories, and in our Spanish-American possessions has convinced me that the conditions in those localities, while perhaps not exactly the same, still do not differ very materially from conditions in the State of New York. It would seem, therefore, that the publication of the address in the report of the United States Public Health Service, so widely read by the surgeons of the Public Health Service by health officers throughout the country, and by sanitarians and hygienists in general, might be helpful to some in their work of dealing with the tuberculosis problem in smaller communities. I have added some important items which, for want of time, I could not discuss when the address was delivered, but which I have reason to believe will enhance whatever value this communication may possess.

When I was first asked to speak on the subject of the tuberculosis problem in rural communities, I could not for the moment think that there should be any great difference between the tuberculosis problem in the city and in the town or village; but after some reflection I could well see that there is indeed quite a difference in the method by

which tuberculosis must be attacked in the community which, on the one hand, has not the administrative machinery of a large city, and where, on the other, because of the close personal relations, friendly and neighborly in many instances, the health officer seemingly is not always free to say and do what he thinks is best for the interest of the community at large.

Take, for example, the spitting nuisance. Many a worthy inhabitant of a small village or town, should he be forbidden to expectorate freely where he pleases when in winter he and his neighbors congregate around the warm stove in the grocery store or post office and solve the problems of the universe, would consider an antispitting regulation an infringement on his inalienable rights as a free citizen. The same would probably hold good if, when sitting in summer in front of his own home, he should dispose his accumulated pulmonary, bronchial, or salivary secretions or the juices of his chewing tobacco, on the sidewalk.

In countries like Cuba and our own Spanish-American possessions the spitting nuisance will be equally difficult to combat on the plaza, the place where the masses congregate, and it will require a great deal of tact on the part of the health officers of those Spanish-American communities to enforce antispitting regulations. It is difficult for the citizens of those localities to see how they may not only injure themselves and their families but the entire community by uncleanly and insanitary habits.

When, as happens not infrequently, the careless spitter is upheld by some worthy but retrogressive member of our profession, be it because of political or family antagonism to the present incumbent of the health office, then there surely will be discord and continued spitting. Of course there are exceptions, but I know that situations such as I have just described do occur, and they make the carrying out of sanitary regulations exceedingly difficult in rural communities.

Should there be any community progressive enough to have made tuberculosis a reportable disease, I can readily see that there might occasionally arise unpleasant feeling when the health officer insisted upon reporting such cases. The fear that after being reported a stigma will be fastened upon an individual or family is often an inducement to hide the disease. We all know the danger of the tuberculous individual to a community, small or large, when he behaves as if he were not tuberculous. Even if he should be careful at home because of the advice of a conscientious family physician, he will often be careless when away from home, disseminating his 7 billion bacilli per day by the deposit of his sputum where it will have a chance to dry and pulverize and be inhaled as bacilliferous dust by others. He may also propagate his disease through droplet infection. It is very strange how this latter source of infection is

sometimes overlooked by otherwise well-trained physicians. The expression "dry cough" is used even by some medical men, yet we all know that small particles of saliva are expelled during the cough, even if the individual does not expectorate.

Whenever the establishment of a provincial or local hospital for the care of tuberculous patients is contemplated, I know from experience what a prejudice the people have against the erection of such an institution in the vicinity of any community, and there is also a prejudice on the part of many tuberculous individuals against entering such an institution. We may put it this way: The most difficult phase of the tuberculosis problem in rural communities is phthisiophobia—the exaggerated fear of the presence of a tuberculous individual. On this fear is based the disinclination of prospective patients to have their chests examined during the onset of early symptoms, such as cough, loss of weight, rise of temperature, hoarseness, sanguineous expectoration, etc. They and their relatives fear being stigmatized in the event that tuberculosis is diagnosed and reported. In brief, phthisiophobia is responsible for the disinclination to obey antisputting laws, the disinclination of the community at large to have tuberculosis hospitals or sanatoria in the neighborhood, and last, but not least, the disinclination of individuals to enter these institutions for treatment and cure.

To some of the younger and less experienced physicians among my readers it may sound strange when I say that the majority of tuberculous individuals think themselves perfectly harmless and object to entering tuberculosis institutions for fear of becoming infected there; and this fear is not infrequently shared by other members of the family. We all know that the successful treatment in the home of the patient, while feasible in some instances, is impossible in many. Yet upon the early discovery and the prompt treatment of the tuberculous invalid, at the right time and in the right place, depends in no small degree the solution of the tuberculosis problem.

What can the health officer of a rural community do in the face of the tremendous difficulties which confront him in his honest and sincere effort to be helpful in the combat of tuberculosis? Let me answer this question by picturing my ideal of what such an officer should be.

First of all, the ideal health officer of a rural community must be an ideal man; he must be beloved for his personality, for his tact in dealing with patients, with his fellow physicians, and the other authorities in the community. He must be a thoroughly trained sanitarian. While it would be desirable for him to have a degree of doctor of public health besides the degree of doctor of medicine, this to my mind is not absolutely essential; but he must be a thoroughly

trained medical man to whom his fellow practitioners can look up and whom they can call on for counsel.

In one of the issues of the Public Health Reports,<sup>1</sup> the author, in deploring the fact that "there are exceedingly few men with requisite training from among whom the thousands of local health officers can be appointed," recommends a correspondence course in health administration and allied subjects for improving the efficiency of these officers. I most highly approve of this suggestion, but would urge that facilities for clinical instruction should be provided in addition, for the ideal health officer should not only be versed in sanitary science in general and be familiar with all the means of preventing endemic and epidemic diseases, but he should also be an expert diagnostician of communicable and contagious diseases, which knowledge can not be acquired by correspondence.

Besides being all this, he need not necessarily have the gift of oratory, but he should be able to give good practical talks to physicians and laymen on medical topics, sanitation, and the prevention of diseases. Last but not least, and I may say this with all due respect for the authorities, the health officer of any county must and should be paid a salary high enough to make him independent of practice, so as to enable him to devote all his time to his official duties. The position should be for life, as long as he is able to do his duty. It should never depend upon political preferment.

If the community is too small to maintain a well-paid health officer, let us follow the suggestion of Mr. George J. Nelbach, of the tuberculosis committee of the New York State Charities Aid Association, and unite a number of the smaller communities under the administration of one health officer, who because of being well paid can be held responsible for the sanitary conditions of the various communities comprising his sanitary district or unit.

And, now, what are the particular duties of this officer concerning the tuberculosis problem? After having united with his fellow practitioners of the community to form an antituberculosis league, after they have pledged themselves to aid him in a conscientious war, not against the tuberculous but against tuberculosis, he should give regular popular talks to the town or village folks on the prevention of this disease, of course always under the auspices of the local physicians. The conscientious health officer should prepare himself carefully for such tuberculosis conferences, for it is not so very easy to talk the language of science in the language of the people. Nothing is more difficult than to avoid scientific terms when accustomed to them, and at the same time nothing is more detrimental to the good effect of a

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<sup>1</sup> The making of health officers—The possibility of State departments of health improving the efficiency of local health officers by means of correspondence courses in health administration and allied subjects, Public Health Reports, Sept. 4, 1914, p. 2299.

popular medical talk than the use of big words and phrases familiar to the medical ear, but sounding like Greek, Latin, or Hebrew to the lay hearer.

Let the lecturer begin by defining tuberculosis, not as a dangerous contagious disease, but merely as a communicable one, which becomes dangerous only through ignorance and carelessness. I ascribe the wonderful success of the antituberculosis work in New York City, inaugurated by the distinguished commissioner of health of the State of New York and my distinguished teacher, Hermann M. Biggs, to the fact that from the very onset of his propaganda he classified tuberculosis with the communicable and not with the contagious diseases. One must first overcome the fear of the disease to combat it successfully. It is a good thing to tell a lay audience that probably every one of them, or at least nine-tenths of them have or have had tuberculosis at one time or another in their lives, and that we are not at all certain that a slight attack of tuberculosis does not confer upon us a certain immunity to future attacks. The lecturer must explain, furthermore, that when we are in good health, thanks to the bactericidal quality of the Schneiderian membrane of our nose, the upward waving ciliæ in the upper respiratory tract, the phagocytic power of the antibodies in our blood, and the bacteria-killing power of the gastric secretions, we have natural factors of defense against tuberculosis. Otherwise, probably every one of us would be ill with the disease. Then let him emphasize, in as strong language as it can possibly be put in, the fact that the honest, conscientious consumptive, who takes care to avoid infecting others by his sputum or saliva, is not a danger to his fellow men and is as safe to associate with as anybody else.

To explain to a lay audience the difference between a contagious and a communicable disease, take smallpox as an example. It should be made clear to the hearers that no matter how clean and conscientious a smallpox patient may be, they should not go near him nor touch him unless they have been vaccinated and revaccinated, and that they should stay away from the smallpox hospital in general. On the other hand, the audience should be told that they may safely touch and shake hands with the conscientious consumptive and even kiss him on the forehead, if they must kiss, and nothing will happen to them. They can also be assured that the well-equipped and well-conducted tuberculosis hospital or sanatorium is the safest place not to catch consumption in.

In popular tuberculosis talks one should never fail to lay emphasis on the value of early diagnosis and impress upon one's hearers the fact that an annual or semiannual examination of their chests by their family physician is one of the safest, and, from every point of view, most profitable investments for retaining or gaining health

they could possibly make. Since the health officer counsels these people to be examined by their own physicians, they will see the altruism in his giving this valuable advice.

In reference to the tuberculosis institution, hospital, or sanatorium, we can also conscientiously say that because of the careful training of the patients and the splendid hygiene in vogue in such institutions no physician, no nurse, no visitor, nor healthy inmate ever contracted tuberculosis there. This also should be told to those who object, on sentimental or sanitary grounds, to the establishment of tuberculosis institutions in their neighborhood. The mortality from tuberculosis among the inhabitants of villages surrounding sanatoria invariably decreases with the establishment of such institutions. By existing statistics, which are available to all, it can be proven to those who object on account of depreciation of property values that real estate has improved in the vicinity of institutions for the tuberculous, and we will very quickly win over to our side the real-estate owner and the real-estate dealer.

In talks to the townspeople and farmers, and particularly to the women, the value of fresh air should be taught. They have so much in the country, and they make so little use of it; they should be told that the fear of night air is a nightmare, for night air is just as good as day air. In tropical countries the fear of the night air, particularly at the time of the full moon, amounts in many instances to an almost unconquerable superstition. Here again much patience, education of old and young, and tactful persistent agitation on the part of the health officers will be necessary to overcome the pernicious habit of sleeping with tightly closed windows and doors which is so prevalent in tropical countries. Of course, we all know that this fear of night air in these countries originated in the fear of contracting yellow or malarial fever during the night, and prior to the immortal discoveries of Reed and Laveran and the works of Gorgas, even physicians looked upon the night air in tropical countries as a propagator of these diseases.

Children and adults should be taught the art of deep breathing; adult audiences should be told all about the necessity for proper food and regular habits and also the danger of intemperance, since alcohol is a strong predisposing factor to tuberculosis.

The habit of cigarette smoking among the adults, male and female, and, alas, among children, will be even harder to overcome in countries like Mexico and Cuba than in the United States and Canada. Yet that excessive cigarette smoking, particularly because the smoke is inhaled deeply into the lungs, is one of the predisposing factors to diseases of the respiratory tract, particularly of the larynx and the lungs, needs no further argument to be proved. Excessive cigarette smoking lessens the vitality of the individual and makes him more



susceptible to the invasion of the germs of tuberculosis, pneumonia, grippe, etc.

In Mexican and Cuban communities the health officer will, I believe, have to have qualifications more than the ordinary mortal possesses in order to be successful in an anticigarette crusade among the adults, but he may be able to do a great deal for the children. If he and the teachers will unite to show the impressionable children that cigarette smoking is detrimental to their physical and mental development and that it will render them susceptible to an early nervous and mental breakdown, they will listen and obey, and thus a vast amount of good can be accomplished and cigarette smoking among children perhaps become unpopular. But let me say in passing that nothing impresses a child so much, teaches him something so thoroughly, as example, and unless the health officer and the teacher cease smoking cigarettes themselves their anticigarette talks to children will make very little impression.

The health officer should insist upon the enforcement of anti-spitting laws, and should have the people do away with the roller towel at home, in hotels, and in other public or private washrooms. In the United States, Canada, Cuba, and Mexico there are any number of hotels in which the roller towel and the common drinking cup seem still to be permanent fixtures and badly kept spittoons the usual ornament of the lobbies and public assembly rooms.

Outdoor sleeping, which can be carried out so much more easily in smaller communities than in larger ones should be encouraged. The chiming of bells and the striking of the town clock between the hours of 9 p. m. and 7 a. m. should be stopped, as well as other unnecessary and distressing street noises; they are as bad for the nerves of the indoor as the outdoor sleeper, and it is as bad for the nontuberculous as for the tuberculous to be kept awake at night. Except in small villages, I do not see any earthly reason why the rooster nuisance could not also be done away with, as has been done in New York City, where we recently passed a regulation which will go into effect on November 1, 1914. This regulation will not permit residents of the city of Greater New York to keep roosters; it will also prohibit persons from raising chickens in their back yards where there is another residence or public institution within 75 feet of the poultry inclosure.

The hygiene of rural schools must be improved. In the larger cities we erect the most beautiful buildings for our school children; in some villages and small towns, anything from an old barn to the old-fashioned red brick building with low ceiling, with little or no ventilation and bad lighting, has to serve. These schools should be remodeled into open-air schools or new ones built, in which there should be plenty of open-air classrooms. I have said before, and I am willing to say it again, that in my humble opinion open-air

schools, at least for primary grades, must become the rule, and indoor classes the exception, if we wish to prevent and combat tuberculosis in childhood.

In warm or semitropical countries, particularly in the villages, open-air schools should predominate and a good part of the time the smaller children could be taught entirely in the open air. I believe, moreover, that there are many branches in the curriculum of even the higher classes of our public schools that could be taught with advantage in the open air, particularly such studies as can be combined with excursions, such as botany, topography, geography, geology, etc. Weather permitting, calisthenics, singing, and recitation should always be done in the open air. Nothing seems to tend to develop children's chests so much as just such exercises when taken in the open air. The health officer should be the counselor to the school superintendent and teachers, not only in all that appertains to the prevention and spread of diseases, but also in all that tends to strengthen the physique of the children.

Health officers should concern themselves even with the hygiene of the churches. Places of worship should be properly ventilated and frequently cleaned. In Protestant churches the use of individual communion cups should be advocated, and in Catholic churches careful attention should be paid to the frequent disinfection of crosses and other articles of adoration, often kissed by the devout.

Antituberculosis talks should be given to priests, ministers, and teachers, or directly to the children, and popular medical literature distributed in schools for the children to take home will make fresh-air apostles of these little ones and reach the old folks at home, thus combating the tendency to tuberculosis in the adults and in the young.

The laws against bovine tuberculosis should be enforced, for we must bear in mind that 10 per cent of the tuberculosis in childhood is due to the bovine type of the disease. All milk, except such as comes from cows periodically tested with tuberculin, should be sterilized. No individual with an open pulmonary tuberculosis (when the disease is active and bacilli are found in the sputum) should be employed in a dairy or in the handling of milk in stores.

All suspected sputum sent to the health officer must be carefully examined, but the physicians sending these specimens should be told that often several specimens are necessary in order to find the tuberculosis germ; and it can not be repeated too often that while the presence of tubercle bacilli in the pulmonary secretion of the individual is absolute proof of the existence of the disease, the absence of the germ does by no means prove that there is no tuberculosis. In the earlier stages of the pulmonary type of tuberculosis, because of slight disintegration of pulmonary tissue, the germs of the disease are found but rarely, and yet it is in this early stage that we can most

hope for complete recovery. It is therefore of vast importance that every community should have physicians who are experts in the physical diagnosis of the disease in its earliest stages, and the health officer of a community should be particularly qualified to aid his fellow physicians in the early discovery of tuberculosis.

Health officers should see to it that every patient with open tuberculosis receives hospital and sanatorium care, or at least gets his sanatorium treatment under intelligent guidance at home. There should be no uncared for tuberculous individual in any community which has an efficient health officer and an intelligent municipal or county government. The sanatorium should be made a center of education for physicians and laymen, and hospitals for advanced cases should be made attractive, so that those who ought to enter will enter willingly and gladly because they will receive better treatment there than they could at home. If the institution has cheerful and attractive features they will miss the home less.

The consumptive is the ideal victim of the quack, charlatan, and vendor of patent medicines, and this is particularly true of the consumptive who lives in rural communities, where often the local papers derive their greatest income from advertising nostrums and sure cures for consumption and other diseases. There should be a health publicity column in the local paper to enlighten the public. If necessary, the provincial or local department of health should pay for this, to compensate the poor editor for his loss of quack advertisements. The laity should be told that there is no sure cure for consumption; that good air, rest, and good food under careful medical supervision, and the scientific administration of medicine to relieve distressing symptoms are, up to this date, our only means of curing tuberculosis, and that every advertisement of a sure consumption cure cloaks a swindle.

In all talks to laymen the health officer should try to imbue his hearers with his own enthusiasm and devotion to the tuberculosis cause. He should tell them that tuberculosis is not merely a medical disease, but that it has a very large social aspect. Bad housing, overcrowding, dangerous congestion, and even underfeeding exist, alas, not only in our large cities, but also in smaller communities. Wealthy and influential citizens should be shown what great good they can accomplish by becoming interested in the amelioration of such conditions as are conducive to the spread of tuberculosis. They will themselves benefit in the end from a clean and healthy community. Personal service to the consumptive poor, and kind, generous, and considerate actions toward those afflicted with tuberculosis, rich and poor alike, will create a better and more helpful feeling throughout the community.

It is essential, in order to prevent and cure the disease, that the laymen and physicians of the community, whether the community is large or small, should forget their little social, political, or religious differences, and work hand in hand for the common good.

From what has been said it will be seen what a great task the health officer of a small community has before him if he wishes successfully to combat tuberculosis. It would certainly seem easier in the larger cities, but there is one advantage the health officer of a small community has over his colleague in the city, and that is the knowledge of existing conditions by personal observation. If he will but have it for his maxim to make earnest and conscientious war against tuberculosis, but no war against the tuberculous invalid; if he has the greatest consideration for the welfare of the latter and thus for the welfare of the community at large, the health officer is bound to succeed; he will ingratiate himself with his fellow practitioners and with the community which he serves.

**PLAGUE-ERADICATIVE WORK.**

**CALIFORNIA.**

The following reports of plague-eradication work in California have been received from Passed Asst. Surg. Hurley, of the United States Public Health Service, in temporary charge of the work:

WEEK ENDED NOVEMBER 21, 1914.

SAN FRANCISCO, CAL.		RATS IDENTIFIED.	
Premises inspected.....	1,659	Mus norvegicus.....	15
Premises destroyed.....	11	Mus rattus.....	84
Nuisances abated.....	241	Mus alexandrinus.....	100
Poisons placed.....	5,400	Mus musculus.....	77
Average number of traps set daily.....	875		
<b>RATS COLLECTED AND EXAMINED FOR PLAGUE.</b>			
Collected.....	276		
Examined.....	164		
Found infected.....	0		

*Squirrels collected and examined for plague.*

County.	Collected.	Examined.	Found infected.
Contra Costa.....	67	67	None.
San Benito.....	29	29	Do.
<b>Total.....</b>	<b>96</b>	<b>96</b>	<b>Do.</b>

*Ranches inspected and hunted over.*

Contra Costa County.....	26
San Benito County.....	6
<b>Total.....</b>	<b>32</b>

*Operations on water front.*

Vessels inspected for rat guards .....	22
Reinspections made on vessels .....	17
New rat guards procured.....	14
Defective rat guards repaired.....	36
Vessels on which cargo was inspected .....	1

	Condition.	Rat evidence.
Steamer Admiral Farragut from Seattle:		
200 barrels, empty.....	O. K.....	None.
250 cases condensed milk.....	O. K.....	None.
20 rolls paper.....	O. K.....	None.
500 sacks shorts.....	O. K.....	None.

Rats trapped on wharves and water front.....	9
Rats trapped on vessels.....	24
Traps set on wharves and water front.....	107
Traps set on vessels.....	75
Vessels trapped on.....	11
Poisons placed on water front (pieces).....	7,230
Bait used on water front and vessels, bacon (pounds).....	5
Amount of bread used in poisoning water front (loaves).....	21
Pounds of poison used on water front.....	12

The work is being carried on in the following named counties: Alameda, Contra Costa, San Francisco, San Joaquin, Santa Cruz, Merced, Stanislaus, San Benito, and Santa Clara.

WEEK ENDED NOV. 28, 1914.

SAN FRANCISCO, CAL.

RAT PROOFING.

Inspections of new buildings under construction.....	265
Basements concreted, new buildings (sq. ft., 49,735).....	63
Floors concreted, new buildings (sq. ft., 33,997).....	26
Yards, passageways, etc., new buildings (sq. ft., 77,980).....	69
Total area of concrete laid, new premises (sq. ft., 161,712).....	
Inspections class A, B, and C (fireproof) buildings.....	195
Roof and basement ventilators, etc., class A, B, and C buildings screened.....	400
Openings around pipes, etc., closed with cement.....	614
Sidewalk lens lights replaced.....	1,900
Inspections, old buildings.....	154
Wooden floors removed, old buildings.....	17
Yards and passageways planking removed.....	12
Cubic feet new foundation walls installed, old buildings.....	8,591
Concrete floors installed, old buildings (sq. ft., 14,898).....	26
Number of basements concreted, old buildings (sq. ft., 22,650).....	31

SAN FRANCISCO, CAL.—Continued.

RAT PROOFING—continued.

Yards, passageways, etc., concreted (sq. ft., 10,928).....	40
Total area of concrete laid in old premises (sq. ft., 48,476).....	
Floors, old buildings, rat proofed with wire cloth (sq. ft., 7,760).....	8
Buildings razed.....	2)
New garbage cans stamped approved.....	725
Nuisances abated.....	217

RATS COLLECTED AND EXAMINED FOR PLAGUE.

Collected.....	200
Examined.....	133
Found infected.....	0

RATS IDENTIFIED.

Mus norvegicus.....	25
Mus rattus.....	58
Mus alexandrinus.....	66
Mus musculus.....	51

SQUIRRELS COLLECTED AND EXAMINED FOR PLAGUE.

Contra Costa County.....	29
San Benito County.....	19
Total.....	48
Found infected.....	0

Record of plague infection.

Places in California.	Date of last case of human plague.	Date of last case of rat plague.	Date of last case of squirrel plague.	Total number rodents found infected since May, 1907.
<b>Cities:</b>				
San Francisco.....	Jan. 30, 1908	Oct. 23, 1908	None.....	398 rats.
Oakland.....	Aug. 9, 1911	Dec. 1, 1908	.....do.....	126 rats.
Berkeley.....	Aug. 28, 1907	None.....	.....do.....	None.
Los Angeles.....	Aug. 11, 1908	.....do.....	Aug. 21, 1908	1 squirrel.
<b>Counties:</b>				
Alameda (exclusive of Oakland and Berkeley).	Sept. 24, 1909	Oct. 17, 1909 <sup>1</sup>	Aug. 7, 1914	286 squirrels, 1 wood rat.
Contra Costa.....	May 17, 1914	None.....	Oct. 23, 1914	1,565 squirrels.
Fresno.....	None.....	.....do.....	Oct. 27, 1911	1 squirrel.
Merced.....	.....do.....	.....do.....	July 12, 1911	5 squirrels.
Monterey.....	.....do.....	.....do.....	Apr. 10, 1914	6 squirrels.
San Benito.....	June 4, 1913	.....do.....	Sept. 26, 1914	36 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. 31, 1910	.....do.....	July 23, 1913	25 squirrels.
Santa Cruz.....	None.....	.....do.....	May 17, 1910	3 squirrels.
Stanislaus.....	.....do.....	.....do.....	June 2, 1911	13 squirrels.

<sup>1</sup> Wood rat.

RANCHES INSPECTED AND HUNTED OVER.		OPERATIONS ON THE WATER FRONT.	
Contra Costa Co.....	13	Vessels inspected for rat guards.....	27
San Benito Co.....	9	Reinspections made on vessels.....	14
Total.....	22	New rat guards procured.....	5
		Defective rat guards repaired.....	2
		Vessels on which cargo was inspected.....	1

	Condition	Rat evidence.
Steamer Congress from Seattle:		
500 cases condensed milk.....	O. K.....	None.
1,000 sacks flour.....	O. K.....	Do.

Rats trapped on wharves and water front.....	1)
Rats trapped on vessels.....	16
Traps set on wharves and water front.....	105
Vessels trapped on.....	10
Traps set on vessels.....	76
Poisons placed on water front.....	1,800
Poisons placed within P. P. I. E. grounds.....	7,200
Bait used on water front and vessels, bacon (pounds).....	6
Amount of bread used in poisoning water front (loaves).....	6
Pounds of poison used on water front.....	3
Total number of poisons placed.....	11,100
Average number of traps set daily.....	864

The work is being carried on in the following-named counties: Alameda, Contra Costa, San Francisco, San Joaquin, Santa Cruz, Merced, Stanislaus, San Benito, and Santa Clara.

LOUISIANA—NEW ORLEANS.

Chronic Plague among Rats in New Orleans.

Surg. Corput, of the United States Public Health Service, made the following report November 28, 1914, on the finding of chronic plague among rats in New Orleans:

Rodent case 203 and rodent case 204 are the first cases of resolving (chronic) rodent plague discovered in New Orleans, and inject into the problem of plague eradication a very serious factor.

Rodent case 203 was from 826 North Claiborne Street. No acute rodent plague has ever been discovered on the premises, and the last case of rodent plague taken in this locality was rodent case 182, on October 11, at 926 North Liberty Street, which address is more than five blocks distant from 826 North Claiborne Street.

Rodent case 204 was taken from Westwego Dumps, in Jefferson Parish, across the river from Audubon Park and in the vicinity of large grain elevators. Realizing the possibility of rodent extension across the river and to these elevators, which furnish considerable attraction for a large rodent population, a trapping force has been constantly at work since the early part of the campaign. No acute rodent plague has been discovered there, despite the fact that this case of resolving rodent plague would indicate that there had been previous rodent infection.

How long the *B. pestis* may remain viable in the tissues of a "resolving plague" rodent has never been determined, but it would seem probable that some such condition of prolonged viability of the organism must be the source of the "bridging" between rodent epizootics having a lengthy interval of time.

The chronicity and tenacity of rodent and human plague in India is, I believe, largely attributed by the Indian authorities to resolving plague in rats. The prevention of a similar condition in New Orleans now becomes an added feature to the eradication campaign. It will probably cause a longer campaign than has been estimated, as well as prolong the post-eradication work.

#### On November 30, 1914, Surg. Corput further reported:

One additional case of resolving (chronic) rodent plague has been discovered in a rat captured at the corner of Tchoupitoulas and Eleanore Streets. As in the other cases reported, at no other time during the progress of eradication work has an acute rodent plague case been taken in this neighborhood, the nearest one being 27 squares away. Intensive trapping will be started in the vicinity immediately.

#### Report for Week Ended December 5, 1914.

The following report of plague-eradication work at New Orleans for the week ended December 5, 1914, has been received from Surg. Corput, of the United States Public Health Service, in temporary charge of the work:

OUTGOING QUARANTINE.		DESTINATION AND NUMBER OF RAILROAD CARS INSPECTED WEEK ENDED DEC. 5.	
Vessels fumigated with sulphur.....	21	Alabama.....	115
Vessels fumigated with carbon monoxide....	21	Arizona.....	1
Vessels fumigated with hydrocyanic gas....	2	Arkansas.....	11
Pounds of sulphur used.....	4,757	California.....	15
Coke consumed in carbon monoxide fumi- gation.....	31,600	Carolina, North.....	2
Pounds of potassium cyanide used in hydro- cyanic gas fumigation.....	170	Carolina, South.....	5
Pounds of sodium carbonate used in hydro- cyanic gas fumigation.....	170	Colorado.....	42
Pounds of sulphuric acid used in hydro- cyanic gas fumigation.....	280	Dakota, South.....	16
Clean bills of health issued.....	33	Delaware.....	1
Foul bills of health issued.....	13	Florida.....	47
		Georgia.....	34
		Illinois.....	241
		Indiana.....	38
		Iowa.....	11
		Kansas.....	4
		Kentucky.....	30
		Louisiana.....	971
		Maryland.....	1
		Massachusetts.....	2
		Michigan.....	29
		Minnesota.....	1
OVERLAND FREIGHT INSPECTION.			
Cars inspected, found in good order, per- mitted to load.....	1,027		
Cars ordered repaired before loading.....	1,067		
Cars condemned.....	0		
Total cars inspected.....	2,694		
Rodents killed in cars.....	0		

DESTINATION AND NUMBER OF RAILROAD CARS INSPECTED WEEK ENDED DEC. 5—continued.

Mississippi.....	404
Missouri.....	78
Nebraska.....	13
New Jersey.....	2
New York.....	22
Ohio.....	108
Oklahoma.....	12
Oregon.....	6
Pennsylvania.....	16
Tennessee.....	89
Texas.....	214
Utah.....	6
Virginia.....	2
West Virginia.....	1
Washington.....	1
Wisconsin.....	5
Canada.....	1

FIELD OPERATIONS.

Number of rats trapped.....	7,941
Number of premises fumigated.....	0
Number of premises disinfected.....	66

FIELD OPERATIONS—continued.

Number of premises inspected.....	9,139
Poisons placed.....	0
Notices served.....	2,275

BUILDINGS RAT-PROOFED.

By elevation.....	41
By marginal concrete wall.....	134
By concrete floor and walls.....	294
By minor repairs.....	149
Square yards of concrete laid.....	20,043
Total buildings rat-proofed.....	618
Buildings rat-proofed to date.....	5,204
Number of abatements.....	377
Number of abatements to date.....	15,340

LABORATORY OPERATIONS.

Rodents examined.....	7,462
Mus norvegicus.....	3,553
Mus rattus.....	70
Mus alexandrinus.....	275
Mus musculus.....	3,524
Putrid.....	284
Total rodents received at laboratory.....	7,734
Number of suspicious rats.....	77
Plague rats confirmed.....	3

Rodent cases.

Case No.	Address.	Captured.	Diagnosis confirmed.	Treatment of premises.
206	Eleanore and Tchoupitoulas.	Nov. 21...	Nov. 30(chronic plague).	Intensive trapping. Rat proofing initiated.
207	917 Touro Street.....	Nov. 30...	Dec. 1.....	Rat proofing initiated. Intensive trapping.
208	Cortez and Toulouse Streets.	Nov. 26...	Dec. 2.....	Summary destruction of rat harborage. Intensive trapping. Rat proofing initiated.

Total number of rodents captured to Dec. 5.....	175,235
Total number of rodents examined to Dec. 5.....	151,369

Rodent cases to Dec. 5, by species:

Mus rattus.....	10
Mus alexandrinus.....	3
Mus musculus.....	1
Mus norvegicus.....	194

Total rodent cases to Dec. 5.....	208
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WASHINGTON—SEATTLE.

The following report of plague-eradication work at Seattle for the week ended November 21, 1914, has been received from Surg. Lloyd, of the United States Public Health Service, in charge of the work.



**RAT PROOFING.**

New buildings inspected .....	62
Basements concreted, new buildings (24), sq. ft. ....	18,651
Floors concreted, new buildings (9), sq. ft. ....	61,356
Yards, etc., concreted, new buildings (4) sq. ft. ....	485
Sidewalks concreted, sq. ft. ....	6,480
<b>Total concrete laid, new structures, sq. ft. ....</b>	<b>86,972</b>
New buildings elevated .....	6
New premises rat proofed, concrete .....	53
Old buildings inspected .....	7
Buildings razed .....	4

**WATER FRONT.**

Vessels inspected and histories recorded. . . .	9
Vessels fumigated .....	9
Sulphur used, pounds .....	3,200
New rat guards installed .....	20
Defective rat guards repaired .....	26
Vessels searched for dead rats .....	6

**WATER FRONT--continued.**

Dead rats recovered after fumigation .....	52
Fumigation certificates issued .....	9
Canal Zone certificates issued .....	3
Port sanitary statements issued .....	40

**LABORATORY AND RODENT OPERATIONS.**

Dead rodents received .....	34
Rodents trapped and killed .....	362
<b>Total .....</b>	<b>396</b>
Rodents examined for plague infection .....	270
Rodents proven plague infected .....	2
Blocks poisoned .....	49
Poison distributed, pounds .....	123
Human bodies examined for plague infection .....	4
Bodies showing infection .....	None.

**CLASSIFICATION OF RODENTS.**

Mus rattus .....	11
Mus alexandrinus .....	79
Mus norvegicus .....	225
Mus musculus .....	55
Not classified .....	26

The usual day and night patrol was maintained to enforce rat guarding and fending.

*Rodents examined in Tacoma.*

Mus norvegicus trapped .....	2
Mus norvegicus found dead .....	20
Mus rattus found dead .....	3
Mus alexandrinus found dead .....	1
<b>Total .....</b>	<b>26</b>
Rodents examined for plague infection .....	26
Rodents proven plague infected .....	0

**HAWAII.**

The following reports of plague-eradication work in Hawaii have been received from Surg. Trotter, of the United States Public Health Service:

**Honolulu.**

WEEK ENDED NOV. 21, 1914.

Total rats and mongoose taken .....	421
Rats trapped .....	410
Mongoose trapped .....	7
Rats found dead .....	0
Rats killed by sulphur dioxide .....	4
Examined microscopically .....	340
Showing plague infection .....	0
Classification of rats trapped:	
Mus alexandrinus .....	168

**Classification of rats trapped--Continued.**

Mus musculus .....	172
Mus norvegicus .....	38
Mus rattus .....	32
Classification of rats killed by sulphur dioxide:	
Mus alexandrinus .....	4
Average number of traps set daily .....	1,085
Cost per rat destroyed .....	20½ cents

WEEK ENDED NOV. 28, 1914.

Total rats and mongoose taken.....	401	Average number of traps set daily.....	1,085
Rats trapped.....	398	Cost per rat destroyed.....	21½ cents
Mongoose trapped.....	3	Last case rat plague, Aiea, 9 miles from Honolulu,	
Rats found dead.....	0	Apr. 12, 1910.	
Examined microscopically.....	313	Last case human plague, Honolulu, July 12, 1910.	
Showing plague infection.....	0	Last case rat plague, Kalopa stable, Paauhau, Ha-	
Classification of rats trapped:		wahi, Aug. 29, 1914.	
Mus alexandrinus.....	160	Last case human plague, Paauhau Landing, Hawaii,	
Mus musculus.....	175	Aug. 17, 1914.	
Mus norvegicus.....	51		
Mus rattus.....	12		

Hilo.

WEEK ENDED NOV. 14, 1914.

Rats and mongoose taken.....	2,201	Rats and mongoose plague infected.....	0
Rats trapped.....	2,159	Classification of rats trapped and found dead:	
Rats found dead.....	3	Mus norvegicus.....	500
Mongoose taken.....	39	Mus alexandrinus.....	258
Rats and mongoose examined macroscopi-		Mus rattus.....	525
cally.....	2,201	Mus musculus.....	879

# PREVALENCE OF DISEASE.

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

## IN CERTAIN STATES AND CITIES.

### CEREBROSPINAL MENINGITIS.

**Kansas Report for November, 1914.**

The State Board of Health of Kansas reported that during the month of November, 1914, one case of cerebrospinal meningitis had been notified in Leavenworth County, Kans.

#### City Reports for Week Ended Nov. 28, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Chicago, Ill.....	1	1	Newton, Mass.....	1	
Cleveland, Ohio.....	1	1	New York, N. Y.....	5	3
Milwaukee, Wis.....	2	2	Providence, R. I.....	1	1
Newark, N. J.....	1	1	San Francisco, Cal.....	1	

### DIPHTHERIA.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 3414.

### ERYSIPELAS.

#### City Reports for Week Ended Nov. 28, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Baltimore, Md.....	1		Los Angeles, Cal.....	3	
Binghamton, N. Y.....	1		Milwaukee, Wis.....	1	1
Buffalo, N. Y.....	3	1	New Britain, Conn.....		1
Camden, N. J.....	1		New Castle, Pa.....	1	
Chicago, Ill.....	18	1	New York, N. Y.....		4
Cincinnati, Ohio.....	6	1	Philadelphia, Pa.....	8	1
Cleveland, Ohio.....	5		Pittsburgh, Pa.....	8	1
Dayton, Ohio.....	1		Reading, Pa.....	1	
Detroit, Mich.....		1	St. Louis, Mo.....	7	
Duluth, Minn.....	1		San Francisco, Cal.....	2	
Harrisburg, Pa.....	1		Springfield, Ill.....	1	

### MEASLES.

See Diphtheria, measles, scarlet fever, and tuberculosis, page 3414.

**PELLAGRA.**

**City Reports for Week Ended Nov. 28, 1914.**

During the week ended November 28, 1914, pellagra was notified by cities as follows: Austin, Tex., 1 death; Charleston, S. C., 2 cases; Galveston, Tex., 1 death; Los Angeles, Cal., 1 case; Lynchburg, Va., 3 deaths; Mobile, Ala., 1 death.

**PNEUMONIA.**

**City Reports for Week Ended Nov. 28, 1914.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Auburn, N. Y.	2	1	Los Angeles, Cal.	10	11
Binghamton, N. Y.	4	1	McKeesport, Pa.	2	.....
Braddock, Pa.	1	.....	Manchester, N. H.	3	3
Chicago, Ill.	126	97	New Castle, Pa.	1	.....
Cleveland, Ohio.	28	12	Philadelphia, Pa.	31	62
Duluth, Minn.	3	3	Pittsburgh, Pa.	10	24
Grand Rapids, Mich.	3	1	Sacramento, Cal.	3	3
Johnstown, Pa.	1	1	San Francisco, Cal.	2	4
Kalamazoo, Mich.	3	2	Schenectady, N. Y.	4	.....
La Crosse, Wis.	1	.....	Springfield, Ill.	4	4
Lancaster, Pa.	1	.....	York, Pa.	1	.....

**POLIOMYELITIS (INFANTILE PARALYSIS).**

**State Reports for October, 1914.**

Places.	New cases reported.	Places.	New cases reported.
<b>Montana:</b>		<b>Vermont—Continued.</b>	
Fergus County	1	Orange County	6
<b>Vermont:</b>		Orleans County	4
Addison County	7	Rutland County	10
Chittenden County	3	Washington County	4
Franklin County	15	Windsor County	2
Grand Isle County	2	<b>Total</b>	<b>55</b>
Lamoille County	2		

**State Reports for November, 1914.**

<b>Kansas:</b>		<b>Vermont—Continued.</b>	
Decatur County	2	Franklin County	1
Franklin County	1	Rutland County	1
<b>Total</b>	<b>3</b>	Washington County	2
<b>Vermont:</b>		Windham County	1
Addison County	1	Windsor County	2
Chittenden County	1	<b>Total</b>	<b>9</b>

**City Reports for Week Ended Nov. 28, 1914.**

During the week ended November 28, 1914, poliomyelitis was notified by cities as follows: Ann Arbor, Mich., 1 case; Haverhill, Mass., 1 case; Philadelphia, Pa., 1 death; Superior, Wis., 2 deaths.

**RABIES.****Massachusetts—Newton.**

During the week ended November 28, 1914, a case of rabies was notified at Newton, Mass.

**California—Oakland—Rabies in Animals.**

During the week ended November 28, 1914, a case of rabies in a dog was notified at Oakland, Cal.

**Washington—Seattle—Rabies in Animals.**

Surgeon Lloyd reported that during the four weeks ended November 28, 1914, rabies in animals had been reported in Seattle, Wash., as follows: Fifteen cases in dogs, 2 cases in cattle, making the totals of rabies in animals reported since the beginning of the outbreak; 421 cases in dogs, 6 in cattle, 2 in cats, 1 in a hog, and 1 in a horse.

**SCARLET FEVER.**

See Diphtheria, measles, scarlet fever, and tuberculosis, page 3414.

**SMALLPOX.****Maryland—Crisfield.**

Collaborating Epidemiologist John S. Fulton reported by telegraph December 15, 1914, that a new focus of smallpox infection had been reported in Maryland, one case of the disease having been notified at Crisfield, Somerset County.

**Miscellaneous State Reports.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
<b>Kansas (Nov. 1-30):</b>			<b>Montana (Oct. 1-31):</b>		
<b>Counties—</b>			<b>Counties—</b>		
Barton.....	2	.....	Fergus.....	1	.....
Cowley.....	1	.....	Jefferson.....	3	.....
Finney.....	16	.....	Lewis and Clark.....	10	.....
Ford.....	1	.....	Meagher.....	1	.....
Geary.....	1	.....	Missoula.....	2	.....
Greenwood.....	3	.....	Sheridan.....	1	.....
Harper.....	10	.....	Silver Bow.....	2	.....
Haskell.....	1	.....	Butte.....	7	.....
Kingman.....	19	.....	Sweet Grass.....	4	.....
Kiowa.....	2	.....	<b>Total.....</b>	<b>31</b>	.....
Lane.....	10	.....			
Lyon.....	1	.....	<b>Oregon (Oct. 1-31):</b>		
Nemaha.....	24	.....	<b>County—</b>		
Pawnee.....	5	.....	Multnomah.....	1	.....
Rice.....	2	.....	<b>Vermont (Oct. 1-31).<sup>1</sup></b>		
Scott.....	9	.....	<b>County—</b>		
Sedgwick.....	17	.....	Franklin.....	13	.....
Sumner.....	4	.....			
Wallace.....	1	.....			
<b>Total.....</b>	<b>129</b>	.....			

<sup>1</sup> No case.

**SMALLPOX—Continued.**

**City Reports for Week Ended Nov. 28, 1914.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Butte, Mont.....	2	.....	Milwaukee, Wis.....	23	.....
Detroit, Mich.....	6	.....	Muncie, Ind.....	5	.....
Knoxville, Tenn.....	10	.....	Niagara Falls, N. Y.....	1	.....
Little Rock, Ark.....	1	.....	San Diego, Cal.....	2	.....

**TETANUS.**

**City Reports for Week Ended Nov. 28, 1914.**

During the week ended November 28, 1914, tetanus was notified by cities as follows: Baltimore, Md., 1 death; Philadelphia, Pa., 1 case; Ponce, P. R., 1 case<sup>1</sup> with 1 death; San Francisco, Cal., 1 case.

**TRACHOMA.**

**Arizona—Douglas.**

Acting Asst. Surg. J. W. Tappan reported December 3 that out of 2,417 pupils examined in the public schools of Douglas, Ariz., 73 were found affected with trachoma. This gives a trachoma case rate among the public-school pupils of 30 per 1,000.

**TUBERCULOSIS.**

See Diphtheria, measles, scarlet fever, and tuberculosis, page 3414.

**TYPHOID FEVER.**

**State Reports for October, 1914.**

Places.	New cases reported.	Places.	New cases reported.
<b>Montana:</b>		<b>Oregon:</b>	
Beaverhead County.....	1	Clackamas County.....	1
Blaine County.....	8	Clatsop County.....	1
Cascade County.....	10	Josephine County.....	5
Great Falls.....	5	Lane County.....	3
Dawson County.....	3	Linn County.....	2
Wibaux.....	3	Marion County.....	10
Fallon County.....	2	Multnomah County.....	1
Fergus County.....	1	Portland.....	6
Flathead County—		Polk County.....	1
Kalispell.....	1	<b>Total.....</b>	<b>30</b>
Gallatin County.....	7	<b>Vermont:</b>	
Bozeman.....	1	Addison County.....	1
Hill County.....	4	Chittenden County.....	3
Lewis and Clark County—		Franklin County.....	7
Helena.....	1	Lamoille County.....	2
Lincoln County.....	1	Orange County.....	2
Sanders County.....	1	Orleans County.....	1
Sheridan County.....	2	Rutland County.....	4
Silver Bow County.....	3	Washington County.....	2
Butte.....	9	Windsor County.....	1
Stillwater County.....	1	<b>Total.....</b>	<b>23</b>
Sweet Grass County.....	3		
Teton County.....	1		
Valley County.....	5		
Richland.....	3		
Yellowstone County.....	4		
Billings.....	9		
<b>Total.....</b>	<b>89</b>		

<sup>1</sup> Infantile.

**TYPHOID FEVER—Continued.**

**State Reports for November, 1914.**

Places.	New cases reported.	Places.	New cases reported.
<b>Kansas:</b>		<b>Kansas—Continued.</b>	
Allen County.....	1	Nemaha County.....	1
Anderson County.....	1	Neosho County.....	11
Atchison County.....	1	Ness County.....	2
Barber County.....	3	Norton County.....	1
Barton County.....	2	Osborne County.....	2
Bourboa County.....	1	Pratt County.....	3
Fort Scott.....	1	Rawlins County.....	2
Brown County.....	2	Reno County.....	1
Butler County.....	2	Hutchinson.....	12
Chautauqua County.....	2	Republic County.....	1
Cherokee County.....	4	Rice County.....	1
Cloud County.....	3	Riley County.....	12
Comanche County.....	1	Rush County.....	3
Cowley County.....	4	Sedgwick County.....	1
Crawford County.....	5	Wichita.....	3
Pittsburg.....	2	Seward County.....	1
Decatur County.....	3	Shawnee County.....	1
Doniphan County.....	5	Topeka.....	3
Douglas County.....	3	Smith County.....	3
Ellis County.....	5	Stafford County.....	3
Ford County.....	5	Sumner County.....	3
Franklin County.....	17	Thomas County.....	3
Greewood County.....	3	Wabunsee County.....	1
Harvey County.....	3	Wallace County.....	1
Hodgeman County.....	2	Washington County.....	4
Jackson County.....	1	Wilson County.....	3
Jefferson County.....	1	Woods County.....	1
Jewell County.....	2	Wyandotte County.....	1
Johnson County.....	1	Kansas City.....	7
Kearny County.....	5		
Kingman County.....	4	<b>Total.....</b>	<b>243</b>
Kiowa County.....	1		
Labette County.....	13	<b>Vermont:</b>	
Parsons.....	5	Chittenden County.....	3
Leavenworth County.....	3	Lamoille County.....	1
Leavenworth.....	3	Orleans County.....	3
Lyon County.....	3	Rutland County.....	4
Marion County.....	2	Windham County.....	1
Marshall County.....	2	Windsor County.....	2
McPherson County.....	6		
Meade County.....	1	<b>Total.....</b>	<b>14</b>
Miami County.....	3		
Montgomery County.....	13		
Coffeyville.....	2		

**City Reports for Week Ended Nov. 28, 1914.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Alameda, Cal.....	1	.....	Elmira, N. Y.....	2	.....
Ann Arbor, Mich.....	2	.....	Erie, Pa.....	2	.....
Atlantic City, N. J.....	1	.....	Evansville, Ind.....	1	.....
Aurora, Ill.....	1	.....	Everett, Mass.....	1	.....
Baltimore, Md.....	16	5	Fall River, Mass.....	6	.....
Beaver Falls, Pa.....	1	.....	Galveston, Tex.....	4	.....
Binghamton, N. Y.....	.....	1	Grand Rapids, Mich.....	10	1
Boston, Mass.....	5	4	Harrisburg, Pa.....	.....	1
Brockton, Mass.....	1	.....	Hartford, Conn.....	3	1
Brookline, Mass.....	1	.....	Haverhill, Mass.....	.....	1
Buffalo, N. Y.....	2	1	Johnstown, Pa.....	.....	1
Cambridge, Mass.....	2	.....	Jersey City, N. J.....	1	2
Camden, N. J.....	2	.....	Kalamazoo, Mich.....	2	.....
Charleston, S. C.....	2	.....	Kansas City, Kans.....	1	.....
Chelsea, Mass.....	1	.....	La Crosse, Wis.....	1	.....
Chicago, Ill.....	24	7	Los Angeles, Cal.....	6	.....
Chicopee, Mass.....	1	.....	Lowell, Mass.....	2	.....
Cincinnati, Ohio.....	5	.....	Lynchburg, Va.....	2	.....
Cleveland, Ohio.....	1	1	Lynn, Mass.....	1	.....
Coffeyville, Kans.....	2	.....	Marinette, Wis.....	2	1
Dayton, Ohio.....	3	.....	Milwaukee, Wis.....	2	.....
Detroit, Mich.....	4	1	Mobile, Ala.....	1	.....
Duluth, Minn.....	3	1	Newark, N. J.....	2	1

**TYPHOID FEVER—Continued.**

**City Reports for Week Ended Nov. 28, 1914—Continued.**

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
New Bedford, Mass.....	5	1	Rockland, Me.....	1	.....
New Britain, Conn.....	1	.....	Sacramento, Cal.....	2	.....
New Castle, Pa.....	1	.....	St. Louis, Mo.....	8	3
New Orleans, La.....	23	5	San Francisco, Cal.....	6	4
Newton, Mass.....	1	.....	San Juan, P. R.....	2	1
New York, N. Y.....	31	5	Schenectady, N. Y.....	1	2
Niagara Falls, N. Y.....	.....	1	Seattle, Wash.....	2	.....
Norfolk, Va.....	8	.....	Springfield, Ill.....	1	1
North Adams, Mass.....	1	1	Springfield, Ohio.....	3	.....
Philadelphia, Pa.....	11	.....	Steelton, Pa.....	1	.....
Pittsburgh, Pa.....	1	2	Sumas, Wash.....	4	.....
Portsmouth, Va.....	.....	1	Toledo, Ohio.....	3	2
Providence, R. I.....	5	1	Wilkes-Barre, Pa.....	2	.....
Reading, Pa.....	4	1	Wilmington, N. C.....	.....	1
Roanoke, Va.....	2	.....	Worcester, Mass.....	3	.....

**TYPHUS FEVER.**

**Texas—Galveston.**

During the week ended November 28, 1914, a case of typhus fever was notified at Galveston, Tex.

**DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.**

**State Reports for October, 1914.**

States.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.
Montana.....	39	8	52
Oregon.....	33	28	34
Vermont.....	118	2	9

**State Reports for November, 1914.**

States.	Cases reported.		
	Diphtheria.	Measles.	Scarlet fever.
Kansas.....	463	129	129
Vermont.....	88	8	20



## DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Contd.

## City Reports for Week Ended Nov. 28 1914.

Cities.	Population as of July 1, 1914 (estimated by United States Census Bureau).	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500 inhabitants:										
Baltimore, Md.	579,590	169	39	2	1	.....	19	1	18	12
Boston, Mass.	733,802	222	106	5	113	3	40	.....	42	20
Chicago, Ill.	2,393,325	658	173	25	28	.....	12	1	108	60
Cleveland, Ohio.	639,431	157	97	5	7	.....	73	.....	20	11
Detroit, Mich.	537,650	128	55	3	.....	.....	22	4	7	7
New York, N. Y.	5,333,537	1,389	323	21	216	2	162	4	336	150
Philadelphia, Pa.	1,657,810	462	65	9	31	1	20	2	76	42
Pittsburgh, Pa.	564,878	148	42	6	78	1	73	3	13	15
St. Louis, Mo.	734,667	230	157	9	6	.....	32	2	30	24
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y.	454,112	147	18	1	5	.....	22	.....	31	18
Cincinnati, Ohio.	402,175	107	47	2	1	.....	7	.....	19	15
Los Angeles, Cal.	438,914	118	23	2	8	.....	28	.....	41	12
Milwaukee, Wis.	417,054	117	37	4	5	.....	15	8	6	11
Newark, N. J.	389,106	101	28	1	5	.....	11	.....	31	16
New Orleans, La.	361,221	135	40	2	.....	.....	1	.....	37	22
San Francisco, Cal.	448,502	159	36	5	123	.....	8	.....	4	13
From 200,000 to 300,000 inhabitants:										
Jersey City, N. J.	293,921	90	41	6	2	.....	9	1	12	9
Portland, Oreg.	260,601	39	6	3	2	.....	.....	.....	1	3
Providence, R. I.	245,090	84	17	3	7	.....	18	.....	9	7
Seattle, Wash.	313,029	54	2	.....	1	.....	4	.....	16	2
From 100,000 to 200,000 inhabitants:										
Cambridge, Mass.	110,357	24	10	.....	7	.....	1	.....	10	3
Camden, N. J.	102,465	.....	4	.....	11	.....	.....	.....	6	.....
Dayton, Ohio	123,794	54	8	1	1	.....	3	.....	5	2
Fall River, Mass.	125,443	40	6	.....	7	.....	8	.....	4	4
Grand Rapids, Mich.	123,227	29	6	.....	1	.....	11	2	3	4
Hartford, Conn.	107,038	29	9	1	2	.....	1	.....	.....	4
Lowell, Mass.	111,004	26	2	.....	1	.....	3	.....	8	1
New Bedford, Mass.	111,230	39	8	.....	5	.....	7	.....	3	4
Oakland, Cal.	183,002	38	2	1	2	.....	6	.....	3	3
Reading, Pa.	103,361	24	6	1	.....	.....	5	.....	4	2
Richmond, Va.	134,917	42	5	.....	1	.....	2	.....	6	5
Tacoma, Wash.	103,418	.....	1	.....	.....	.....	1	1	.....	4
Toledo, Ohio.	184,126	55	11	2	8	.....	4	.....	2	5
Trenton, N. J.	106,831	48	12	1	.....	.....	2	.....	2	5
Worcester, Mass.	157,732	46	5	.....	1	.....	7	.....	3	5
From 50,000 to 100,000 inhabitants:										
Altoona, Pa.	56,553	11	3	1	.....	.....	1	.....	.....	.....
Atlantic City, N. J.	53,952	6	.....	.....	.....	.....	3	.....	.....	.....
Bayonne, N. J.	65,271	16	12	.....	.....	.....	2	.....	2	.....
Berkeley, Cal.	52,105	2	.....	8	.....	.....	.....	.....	1	1
Binghamton, N. Y.	52,191	.....	15	3	.....	.....	3	.....	1	1
Brockton, Mass.	64,043	12	8	.....	2	.....	.....	.....	2	1
Charleston, S. C.	60,121	39	3	.....	.....	.....	.....	.....	2	2
Duluth, Minn.	89,331	.....	3	.....	.....	.....	4	.....	3	7
Erle, Pa.	72,401	16	3	.....	.....	.....	4	.....	3	.....
Evansville, Ind.	71,284	14	6	.....	14	.....	3	.....	1	3
Harrisburg, Pa.	69,493	16	5	.....	1	.....	.....	.....	2	1
Johnstown, Pa.	64,642	15	5	.....	.....	.....	2	.....	.....	.....
Kansas City, Kans.	94,271	.....	15	1	1	.....	1	.....	.....	1
Little Rock, Ark.	53,811	25	11	.....	.....	.....	1	.....	2	.....
Lynn, Mass.	98,207	26	1	.....	.....	.....	3	.....	4	4
Manchester, N. H.	75,635	25	.....	.....	.....	.....	.....	.....	.....	.....
Mobile, Ala.	55,513	23	2	1	.....	.....	.....	.....	.....	2
New Britain, Conn.	50,612	.....	1	.....	2	.....	.....	.....	1	.....
Norfolk, Va.	46,540	.....	7	.....	.....	.....	2	.....	.....	3
Passaic, N. J.	66,270	15	9	.....	.....	.....	1	.....	1	2
Pawtucket, R. I.	56,901	10	3	.....	.....	.....	1	.....	.....	.....
Schenectady, N. Y.	90,503	21	5	.....	24	.....	3	.....	3	.....
South Bend, Ind.	65,114	8	1	.....	.....	.....	.....	.....	.....	.....
Springfield, Ill.	57,972	24	3	1	.....	.....	9	.....	.....	.....
Springfield, Ohio.	80,058	19	3	1	.....	.....	1	.....	.....	2
Wilkes-Barre, Pa.	73,660	19	2	.....	3	.....	2	.....	5	1





## FOREIGN REPORTS.

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### CHINA.

#### Plague-Infected Rat--Hongkong.

During the week ended October 31, 1914, 1,753 rats were examined at Hongkong. One plague-infected rat was found.

#### Plague--Plague-Infected Rats--Shanghai.

During the week ended November 7, 1914, a death from plague was notified at Shanghai. During the same period, 388 rats were examined. Nine plague-infected rats were found.

### GERMANY.

#### Cholera--Silesia.

During the period from November 15 to 28, 1914, 33 cases of cholera with 9 deaths were notified in the district of Oppeln, Silesia. The cases occurred in the Austrian Army.

### GREAT BRITAIN.

#### Examination of Rats--Liverpool.

During the two weeks ended November 21, 1914, 332 rats were examined at Liverpool. No plague-infected rat was found. The total number of rats examined from July 25, 1914, was 3,587. No plague infection was found.

### GREECE.

#### Smallpox--Mitylene.

Smallpox developed during the last week in August, 1914, at Mitylene, among refugees from Asia Minor. On November 11, 100 cases were reported present in the isolation hospital and about 26 cases isolated in the city. The disease has been confined almost entirely to refugees, of whom there are about 60,000 in the island, the greater number of these being in the port of Mitylene.

#### Smallpox--Typhoid Fever--Patras.

On November 11, 1914, smallpox was reported epidemic at Patras. On November 26, 1914, typhoid fever was reported present.

**JAVA.**

**Cholera—Batavia.**

Cholera has been reported epidemic at Batavia since September 22, 1914, with a total to October 10, of 310 cases with 258 deaths.

**Status of Plague.**

Plague was notified in east Java during the month of September, 1914, as follows:

Districts.	Cases.	Deaths.	Districts.	Cases.	Deaths.
Kediri.....	753	676	Pasoeroean.....	917	741
Madioen.....	164	148	Surabaya.....	205	188

**TURKEY IN ASIA.**

**Plague.**

Plague has been notified in Turkey in Asia as follows: Bagdad, October 28, 1914, 1 case with 1 death; November 3, 1 case; Beirut, November 4, 1914, 1 case.

**ZANZIBAR.**

**Plague—Plague-Infected Rats—Zanzibar.**

During the three weeks ended October 14, 1914, 7 cases of plague with 4 deaths were notified at Zanzibar. During the same period 2,969 rats were examined for plague infection. Thirty plague-infected rats were found.

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

**Reports Received During Week Ended Dec. 18, 1914.**

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

**CHOLERA.**

Places.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Crownlands.....				Total, Sept. 16-Oct. 17: Cases, 469; deaths, 160.
Silesia.....	Nov. 27-Oct. 2.....	16		
Stiermark.....	Sept. 27-Oct. 3.....	2	1	And vicinity.
Tyrol and Vorarlberg.....	Oct. 16.....	1		
Hungary.....				Total, Sept. 19-Oct. 17: Cases, 805.
Dutch East Indies:				
Celebes—				
Menadno.....	Oct. 11-17.....	83	80	
Java—				
Batavia.....	.....do.....	196	150	3 deaths among Europeans.
Sumatra:				
Palembang.....	.....do.....	5	5	
Germany:				
Silesia.....	Nov. 15-23.....	33	9	Mainly in the Austrian army.
India:				
Calcutta.....	Oct. 11-24.....		13	
Madras.....	Oct. 18-24.....	393	306	
Siam:				
Bangkok.....	Sept. 6-26.....		2	

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX (Continued.)****Reports Received During Week Ended Dec. 18, 1914 (Continued.)****YELLOW FEVER.**

Places.	Date.	Cases.	Deaths.	Remarks.
Venezuela:				
Caracas	Dec. 10	1		
West Indies:				
Curacao	Dec. 11		1	

**PLAGUE.**

Places.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Bahia	Nov. 1-7	5		
Do.	Nov. 8-15	4	1	
Ceylon:				
Colombo	Oct. 11-24	11	11	
China:				
Shanghai	Nov. 2-8		1	
Dutch East Indies:				
Kediri	Sept. 1-30	753	676	Sept. 1-30: Cases, 2,039; deaths 1,753.
Madison	do.	164	148	
Paseroean	do.	917	741	
Surabaya	do.	205	188	
Egypt:				
Alexandria	Nov. 4	1		
India:				
Bassein	Sept. 20-Oct. 19	6	7	
Bombay	Nov. 19-24	1	1	
Indo-China:				
Saigon				And vicinity, Oct. 20-26: Cases, 5
Turkey in Asia:				
Beirut	Nov. 4	1		
Zanzibar:				
Zanzibar	Sept. 22-Oct. 14	7	4	

**SMALLPOX.**

Places.	Date.	Cases.	Deaths.	Remarks.
Arabia:				
Aden	Oct. 13-26	1		
Australia:				
New South Wales— Sydney				Oct. 23-Nov. 12: Cases, 45 in the metropolitan area, and 20 in the country districts.
Brazil:				
Rio de Janeiro	Oct. 18-31	273	83	
Canada:				
Hamilton	Oct. 27-Nov. 3	5		
Montreal	Nov. 30-Dec. 5	8		
Toronto	do.	1		
Canary Islands:				
Santa Cruz	Nov. 1-7		2	
Ceylon:				
Colombo	Oct. 11-24	21	14	
China:				
Nanking	Oct. 31			Still present.
Shanghai	Nov. 2-8	1	6	Deaths among natives.
Cuba:				
Habana	Dec. 10	1		
Egypt:				
Alexandria	Oct. 22-28	2	1	
Cairo	Oct. 8-14	4	1	
France:				
Paris	Nov. 1-14	2	1	
Greece:				
Mitylene				Nov. 11: 100 cases in hospitals and 26 cases in the city. Isolated. Epidemic.
Patras	Nov. 16-22		8	
India:				
Calcutta	Oct. 11-17		7	
Mexico:				
Chihuahua	Nov. 14-20	3		
Juarez	Dec. 14			Present.
Mazatlan	Nov. 18-24	1	2	
Monterey	Nov. 16-Dec. 6	1	1	
Norway:				
Christiansand	Nov. 1-21	3	2	
Stavanger	Nov. 15-21	2		

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.****Reports Received During Week Ended Dec. 18, 1914—Continued.****SMALLPOX—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
Portugal:				
Lisbon.....	Nov. 1-21.....	5		
Russia:				
Moscow.....	Oct. 11-24.....	5	1	
Petrograd.....	Oct. 1-24.....	51	22	
Siam:				
Bangkok.....	Sept. 6-26.....		2	
Spain:				
Barcelona.....	Nov. 14-20.....		2	
Valencia.....	Nov. 8-14.....	14	1	
Switzerland:				
Basel.....	Oct. 18-24.....	1		
Turkey in Asia:				
Beirut.....	Oct. 25-31.....	6	2	
Haifa.....	Oct. 19-25.....	5	2	
Jerusalem.....	Sept. 1-30.....	12		
At sea.....				
				Nov. 19 and 24, respectively, on s. s. Balmes, from Barcelona to New Orleans, via the Canary Islands, one case from Las Palmas, Grand Canary, and one case from Santa Cruz, de la Palma. Reported from San Juan, Porto Rico.

**Reports Received from June 27 to Dec. 11, 1914.****CHOLERA.**

Places.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Bohemia—				
Prague.....				Sept. 26, 1 case in Zizkov, suburb.
Hungary.....				Sept. 26, present in 5 localities. Oct. 1-3; Cases, 378. Oct. 24: Present in Carinthia, Carniola, and Moravia Provinces.
Budapest.....	Sept. 26-Oct. 17...	6	11	
Lower Austria—				
Vienna.....	Sept. 13-Oct. 3....	12		Oct. 8, still present.
Ceylon:				
Colombo.....	June 14-20.....	1	1	
Uda Pusselawa, district.....	June 7-13.....			Present in Kumbalagamuwa and the neighboring tea estates.
China:				
Amoy.....	Aug. 23-Sept. 12..	1	1	
Kulangsu.....	Aug. 1.....	1		
Hankow.....	July 12-18.....	1		From up-country districts.
Chaochowfu.....	July 4.....			Present.
Canton.....	Jan. 1-Apr. 30....	4		
Hongkong.....	May 17-23.....	1	1	
Do.....	Sept 27-Oct. 3....	1	1	
Dutch East Indies:				
Celebes.....				June 6-13: In Bali and Lombok. Cases, 44; deaths, 23. July 19-Aug. 1: Cases, 85; deaths, 85.
Gorontalo.....	Sept. 16.....			Present.
Macassar.....	July 12-Sept. 12..	138	122	
Menado.....	June 21-Oct. 5....	193	165	
Java—				
Batavia.....	June 28-Oct. 5....	152	139	
Samarang.....	Aug. 30-Sept. 12..	1	1	
Sumatra—				
Palembang.....	Aug. 2-Oct. 5....	172	104	
Germany.....				Nov. 20, 1 fatal case in Alteberun and Tischau, and 1 case in Myslowitz, in Silesian Prussia.
Greece:				
Piræus.....				Oct. 15: Cases, 1, from Gallipoli. Village.
Surgun, Tschadalza.....	July 22.....	1		
Viza.....	do.....	1		

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

Reports Received from June 27 to Dec. 11, 1914—Continued.

## CHOLERA—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
<b>India:</b>				
Bassein .....	Apr. 26-June 29...	84	65	
Bombay .....	May 17-Oct. 17.....	281	177	
Calcutta .....	May 10-Oct. 10.....	.....	326	
Cocanada .....	July 18-Aug. 12.....	.....	44	
Kashmir Province.....	.....	.....	.....	Endemic. Aug. 18, increasing.
Madras .....	May 31-Oct. 17.....	1,454	1,060	Epidemic from Aug. 15.
Moulmein .....	June 7-13.....	1	1	
Negapatam .....	May 14-Aug. 27.....	31	31	
Rangoon.....	Apr. 1-Aug. 31.....	29	28	Aug. 2-Sept. 5, present.
Indo-China.....	.....	.....	.....	Jan. 1-July 31: Cases, 241; deaths, 136.
Barla .....	July 1-31.....	18	15	
Battambang.....	June 11-July 31.....	5	5	
Cholon .....	July 1-31.....	6	3	
Hanoi.....	May 1-July 31.....	2	0	
Saigon .....	Jan. 1-July 31.....	8	5	Saigon and vicinity, June 2-Sept. 14: Cases, 49; deaths, 23.
Soctrang.....	May 10-20.....	3	3	
Scarleng.....	July 1-31.....	1	1	
Travinh.....	Jan. 1-July 31.....	43	27	
Japan:				
Karatsu.....	Oct. 2.....	2	.....	Coaling station 50 miles from Nagasaki.
Saga.....	Sept. 1-30.....	4	3	
Persia:				
Anzali.....	June 15.....	1	.....	
Philippine Islands:				
Manila.....	July 4-Oct. 24.....	482	220	First quarter, 1914: Cases, 49; deaths, 27.
Provinces.....	.....	.....	.....	First quarter, 1914: Cases, 519; deaths, 392. July 2-Oct. 5: Cases, 1,131; deaths, 796.
Rizal.....	.....	.....	.....	Total: Cases, 126; deaths, 74.
Malabon.....	July 2-Oct. 1.....	30	14	
Pateros.....	July 7-Aug. 3.....	2	0	
S. P. Macati.....	July 12-20.....	8	2	
Pasay.....	July 16-Oct. 3.....	15	1	
Pasig.....	July 17-19.....	4	3	
Laspinas.....	July 21.....	1	0	
Paranaque.....	July 21-Sept. 24.....	2	2	
Navotas.....	July 25-Oct. 5.....	38	34	
Caloocan.....	Aug. 3-Sept. 11.....	10	5	
Jalajala.....	Aug. 16-25.....	16	13	
Bulacan.....	.....	.....	.....	Total: Cases, 310; deaths, 218.
Paombong.....	July 21-Oct. 5.....	25	24	
Calumpit.....	July 21-Aug. 24.....	12	6	
Baliwag.....	July 20-Oct. 2.....	5	4	
Hagonoy.....	July 23-Oct. 5.....	158	97	
Meycauyan.....	July 25.....	5	3	
Polo.....	Aug. 3-31.....	10	9	
Pulilan.....	Sept. 21.....	1	1	
Obando.....	Aug. 7-Oct. 3.....	15	13	
Malolos.....	Aug. 11-Sept. 27.....	52	41	
Bulacan.....	Aug. 17-Sept. 27.....	22	17	
Bocaue.....	Aug. 23.....	2	1	
Quigue.....	Aug. 31-Sept. 4.....	3	2	
Cavite.....	.....	.....	.....	Total: Cases, 38; deaths, 32.
Cavite.....	July 9-Sept. 9.....	8	7	
Imus.....	Aug. 28.....	1	1	
Rosario.....	Sept. 11-27.....	12	12	
Kawit.....	Sept. 22-Oct. 4.....	5	3	
Bacoor.....	Oct. 5.....	1	0	
Carmona.....	Sept. 22-Oct. 4.....	7	7	
Noveleta.....	Oct. 2-5.....	4	2	
Iloilo:				
Iloilo.....	July 20.....	2	.....	
Tayabas:				
Lucban.....	Aug. 3.....	2	.....	
Pampanga:				
Minalin.....	Aug. 6.....	1	1	
Masantol.....	Aug. 7-Oct. 4.....	36	17	
Macabebe.....	Aug. 8-Oct. 2.....	10	4	
Apalit.....	Aug. 10.....	1	1	
Bataan:				
Dinalupihan.....	Oct. 4.....	1	1	
Orani.....	Aug. 7.....	1	1	Total: Cases, 2; deaths, 2.



**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.****Reports Received from June 27 to Dec. 11, 1914—Continued.****CHOLERA—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
<b>Philippine Islands—Continued.</b>				
<b>Provinces—Continued.</b>				
Laguna:				Total: Cases, 35; deaths, 26.
Binang.....	Sept. 23-Oct. 2.....	25	19	
Santa Rosa.....	Sept. 24-Oct. 2.....	8	5	
Calamba.....	Oct. 1.....	1	1	
S. P. Tinasan.....	Oct. 2.....	1	1	
Fangastinan:				Total: Cases, 46; deaths, 30.
Binalonan.....	Aug. 23.....	4	3	
Dagupan.....	Sept. 11-Oct. 3.....	26	17	
Mangaldan.....	Sept. 25-Oct. 4.....	3	3	
San Fabian.....	Sept. 25-Oct. 5.....	10	6	
San Jacinto.....	Sept. 25-Sept. 25.....	1	1	
Manaoag.....	Oct. 1.....	2	1	
Union:				Total: Cases, 497; deaths, 370.
S. Fernando.....	Aug. 29-Oct. 3.....	77	60	
Bawang.....	Sept. 10-Oct. 5.....	50	34	
Nangilian.....	Sept. 10-Oct. 4.....	14	22	
San Juan.....	Sept. 2-Oct. 4.....	41	27	
Bacnotan.....	Sept. 30-Oct. 4.....	27	25	
Aguo.....	Sept. 14-Oct. 5.....	53	33	
Santo Tomas.....	do.....	74	60	
Tubao.....	Sept. 16-Oct. 5.....	13	11	
Aringay.....	Sept. 20-Oct. 5.....	70	45	
Bangar.....	Sept. 22-Oct. 5.....	33	18	
Caba.....	Sept. 18-Oct. 5.....	22	17	
Luna.....	Sept. 19-Oct. 5.....	11	12	
Rosario.....	Sept. 18-Oct. 4.....	9	5	
Palacan.....	Oct. 1-Oct. 5.....	3	1	
Capiz.....				Total: Cases, 6; deaths, 6.
Capiz.....	Sept. 11-Sept. 27.....	5	5	
Tabuc.....	Sept. 20.....	1	1	
Amburayan:				
San Gabriel.....	Sept. 16.....	5	3	
Cagayan:				
Aparri.....	Sept. 27-Oct. 4.....	3	2	
Ilocos Sur:				Total: Cases, 8; deaths, 6.
Caoayan.....	Oct. 2.....	1	1	
Santa.....	Oct. 1.....	7	5	
Mountain:				
Tagudin.....	Sept. 23.....	3	4	
Russia:				
Kief.....	Oct. 3.....			Present.
Podolia.....				July 19-Aug. 2: Cases, 254; deaths, 85.
Bratzlaw.....	July 26-Aug. 2.....	1		
Jampol.....	July 19-Aug. 2.....	25	8	
Letichev.....	July 10.....	2	2	
Litine.....	July 26-Aug. 8.....	8	3	
Vinnitza.....	July 19-Aug. 2.....	220	74	
Warsaw.....				Aug. 30, present.
Siam:				
Bangkok.....	Apr. 19-Sept. 5.....		287	
Straits Settlements:				
Singapore.....	May 10-Sept. 19.....	152	122	
Turkey in Asia:				
Egrel, Konieh.....	July 19.....		1	
Eski-Cheri.....	July 23-24.....	2	1	
Kamaran.....	Sept. 29.....	1		From a vessel.
Tagadima.....	July 29.....	2		
Turkey in Europe:				
Adrianople.....	May 14-19.....		2	
Constantinople.....	July 15.....	1		

**YELLOW FEVER.**

Brazil:				
Bahia.....	May 10-Oct. 10.....	21	18	
Pernambuco.....	May 1-15.....		1	
Ecuador:				
Guayaquil.....	May 1-Sept. 30.....	6	2	
Do.....	Aug. 1-31.....	4	2	
Mexico:				
Yucatan.....	Nov. 7-13.....	2		In the interior.
Merida.....	Sept. 14-Nov. 27.....	4	2	
Progreso.....	Oct. 8.....	1		
Venezuela:				
Caracas.....	June 1-30.....	1	1	
La Guayra.....	Aug. 16-31.....	1	1	
Maracaibo.....	June 15.....			Present in light form. No cases since.

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

## Reports Received from June 27 to Dec. 11, 1914—Continued.

## PLAGUE.

Places.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Bahia.....	May 17-Oct. 31....	54	35	
Pernambuco.....	May 1-Sept. 30....		11	
Rio de Janeiro.....				Oct. 3, 1 fatal case.
British East Africa:				
Mombasa.....	June 1-July 31....		2	
Ceylon:				
Colombo.....	May 19-Oct. 10....	158	148	
China.....				Jan. 1-Apr. 30, present in Hokschan, Shuntak, Tangsching, and Tungkun. Apr. 3-17, present in Kan-lai and San-hu, 20 miles distant from Pakhol. June 6, still present in vicinity of Swatow. June 20, improving in the Chaotow and Puning districts.
Amoy.....	June 20-July 18....			Present: July 13, present in inland villages. Aug. 10, diminishing.
Kulangsu.....	May 20.....	1		
Canton.....	Jan. 1-June 11....	1,150		
Chinchew.....	May 30-June 6....			Present 30 miles north from Amoy.
Fatshan.....	May 13.....			Present.
Hongkong.....	May 10-Sept. 20....	932	770	Total, Jan. 4-Sept. 26: Cases, 2,156; deaths, 1,708.
Pakhol.....	June 18.....	2		From a vessel from Hongkong. Apr. 3-June 18: Cases, 100. In Kan-lai and San-hu, 20 miles distant.
Shanghai.....	Oct. 5-11.....		4	
Cuba:				
El Aceite (near El Caney).....	July 27-Aug. 2....	4		Total, Mar. 5-Sept. 17: Cases, 43; deaths, 10. Including 2 cases previously reported from vicinity of El Caney; all removed to and previously reported as from Santiago.
Santiago.....				June 30-Sept. 23: Cases, 12 (case Sept. 17 from El Caney); deaths, 4. One of these deaths was a case from El Aceite.
Dutch East Indies:				
Provinces.....				Total, Apr. 1-Aug. 31: Cases, 6,355; deaths, 5,975.
Kediri.....	Apr. 1-Aug. 31....	1,813	1,677	
Madloen.....	do.....	614	524	
Paseroean.....	do.....	3,984	3,465	
Surabaya.....	do.....	344	312	
Ecuador:				
Guayaquil.....	May 1-Sept. 30....	30	10	
Egypt.....				Total Jan. 1-Sept. 30: Cases, 206; deaths, 104.
Alexandria.....	June 2-Oct. 7....	39	20	
Damietta.....	July 17.....	1		
Ismailia.....	June 3-9.....	1	1	
Port Said.....	June 9-Oct. 21....	35	12	
Provinces—				
Assiout.....	May 25-June 20....	5	1	
Charkieh.....	July 13.....	1	1	
Fayoum.....	May 27-Aug. 13....	8	2	
Garbieh.....	Apr. 28-July 24....	4	1	
Gizeh.....	May 27-June 24....	6	3	
Kenah.....	Oct. 14.....	2	2	
Menouf.....	June 17.....	1		
Minieh.....	May 23-July 12....	11	5	
German East Africa:				
Dar-es-Salaam.....	May 2-June 10....	7	3	
Muanza.....	Feb. 21-Mar. 18....	7	5	
Great Britain:				
Liverpool.....	Aug. 8-12.....	9	3	
Greece:				
Chios.....	Aug. 2.....			Epidemic.
Kara-Burum.....	Sept. 19.....	2		Among the military.
Piræus.....	Aug. 7-Sept. 9....	16	2	Sept. 30, ended.
Saloniki.....	Sept. 15.....	3		
Syra, island.....	Sept. 3-4.....	1	1	

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.****Reports Received from June 27 to Dec. 11, 1914—Continued.****PLAGUE—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
Hawaii:				
Fauohau.....	Aug. 17.....	1	1	
India.....				Total Apr. 27-Oct. 17: Cases, 61,870; deaths, 61,928.
Bassein.....	Apr. 26-Sept. 19.....	42	40	
Bombay.....	May 17-Oct. 17.....	630	530	
Calcutta.....	May 10-Oct. 10.....		163	
Karachi.....	May 24-Sept. 19.....	29	28	
Moulmein.....	Apr. 26-Sept. 19.....	116	114	
Rangoon.....	Apr. 1-Aug. 31.....	904	783	
Indo-China.....				Total Jan. 1-July 31: Cases, 1,630; deaths, 1,202.
Cholon.....	Jan. 1-July 31.....	93	19	
Phanitet.....	.....do.....	394	330	
Phanrang.....	.....do.....	853	489	
Pnum Peneh.....	.....do.....	171	152	
Saigon.....	.....do.....	73	41	Saigon and vicinity May 10-Sept. 28: Cases, 203; deaths, 74.
Soctrang.....	May 1-July 31.....	22	15	
Italy:				
Catania.....				Since Sept. 1, 1914, there have been 17 officially reported cases and unauthenticated rumors of others.
Japan.....				Total Jan. 1-Sept. 30: Cases, 82; deaths, 69, exclusive of Taiwan.
Hodogaya.....	June 9-July 3.....	3		
O-No district.....	June 9-15.....	1		Noar Yokohama.
Taiwan (Formosa)—				
Kagi.....	May 3-Aug. 8.....	303	273	
Taihoku.....	Aug. 16-22.....		2	
Tokyo.....	June 22-Aug. 8.....	14	4	Total Apr. 18-July 25: Cases, 45.
Yokohama.....	July 5-Aug. 15.....	4	4	And vicinity. Total May 23-Aug. 15: Cases, 23; deaths, 19.
Mauritius.....	Apr. 17-23.....	2		
Do.....	Sept. 17.....	3		
Peru.....				Total, Jan. 1-May 31: Cases, 479; deaths, 235.
Ancachs.....				Total Jan. 1-Mar. 31: Cases, 34; deaths, 20.
Casma.....	Feb. 9-Mar. 22.....	4		
Chimbote.....	Mar. 23-May 2.....			Present.
Quarhuay (Huaylas).....	.....do.....			Do.
Samanca.....	.....do.....			Do.
Arequipa.....				Jan. 1-May 31: Cases, 24; deaths, 12.
Mollendo.....	Mar. 23-Sept. 27.....	17		Jan. 31-Apr. 30: Cases, 18; deaths, 7.
Cajamarca.....				Jan. 1-Feb. 28: Cases, 4; deaths, 2.
Contumaza.....	Mar. 23-May 2.....	3		
Callao.....	Aug. 3-Oct. 15.....	4		
Lambayeque.....				Jan. 1-Mar. 31: Cases, 74; deaths, 35.
Chiclayo.....	Mar. 23-May 2.....	3		
Guadalupe.....	.....do.....	1		
Libertad.....				Jan. 1-May 31: Cases, 234; deaths, 111.
Huacamarca (Otzuco).....	Mar. 23-May 30.....			
Moche.....	July 9-Aug. 2.....	2		Present.
Pichipampa (Otzuco).....	Mar. 24-30.....	4		
Salavarry.....	Mar. 23-May 2.....	1		
San Pedro.....	.....do.....	8		From Pacasmayo.
Trujillo.....	Mar. 23-Sept. 27.....	26		Nov. 2, 7 cases in the lazaretto.
Lima.....				Jan. 1-May 31: Cases, 56; deaths, 27.
Callao.....	Oct. 8.....			Present.
Unigambal (Santiago de Chuco).....	Mar. 23-June 7.....	16		
Lima.....	Mar. 23-Sept. 27.....	23		
Surco (Matucana).....	.....do.....	11		
Monsefu.....	Aug. 3-Sept. 27.....	1		
Piura.....				Jan. 1-May 31: Cases, 87; deaths, 21.
Catacaos.....	Mar. 23-Aug. 2.....	4		
La Husca.....	June 8-July 5.....	1		
Piura.....	Mar. 23-July 5.....	12		Aug. 3-Sept. 27, present.

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.****Reports Received from June 27 to Dec. 11, 1914—Continued.****PLAGUE—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
<b>Philippine Islands:</b>				
Manila.....	May 17-Sept. 19...	8	8	May 17, 1 case from s. s. Taisang from Amoy; May 23, 1 case from s. s. Liman from Amoy; June 12-20, a fatal case from s. s. Liman from Amoy; June 17, a fatal case in the Philippine General Hospital. First quarter, 1914: Cases, 14; deaths, 10.
Cebu.....				May 20, 1 case on s. s. Rubi from Hongkong.
<b>Portugal:</b>				
Lisbon.....	Oct. 8-9.....	8	8	Pneumonic form.
<b>Russia:</b>				
Astrakhan Government.....				Total, May 25-July 15: Cases, 49; deaths, 46.
Kirghis steppe—				
Betas-Tschagal.....	May 25-July 15.....	2		
Bulanal.....	May 25-June 14.....	10	10	7 of these cases pneumonic.
Manysch-Tschagal.....	do.....	5		
Kalmuck steppe—				
Archanskoge-Tebe.....	do.....	4		
Gubla.....	do.....	4		
Schitkur.....	do.....	1		
<b>Senegal:</b>				
Dakar.....	May 15.....	12		May 17-23, 5 deaths daily among natives.
<b>Siam:</b>				
Bangkok.....	Apr. 19-Sept. 5.....		17	
<b>Straits Settlements:</b>				
Singapore.....	May 10-Sept. 10.....	3	3	
Tripoli.....				July 15, present in Azizia, Tarhuna, and Zanzur, vicinity of Tunis. Dec. 3, 1 case on s. s. Misurata, in the harbor.
<b>Turkey in Asia:</b>				
Adalia.....	July 19-Aug. 1.....	2		
Bagdad.....	Sept. 30-Oct. 24.....	5	2	
Basra.....	June 24-July 19.....	16	8	
Beirut.....	June 16-Aug. 23.....	5		
Hafia.....	Aug. 29.....	1	1	
Jaffa.....	June 5-27.....	4	3	
Kut.....	July 6.....		1	From a steamboat from Bagdad to Basra.
Mitylene.....	Aug. 2.....			Present.
Samos.....	do.....			Epidemic.
Smyrna.....	July 2-Oct. 4.....	9	4	
<b>Union of South Africa:</b>				
Cape Town—				
Queenstown and Tarka.....				Total, Sept. 24-Oct. 5: Cases, 29; deaths, 24. 1 fatal case, a European. All pneumonic.
<b>Zanzibar:</b>				
Zanzibar.....	July 1-Sept. 14.....	21	14	

**SMALLPOX.**

<b>Algeria:</b>				
Departments—				
Algiers.....	Mar. 31-May 31.....	7		
Constantine.....	do.....	7		
Oran.....	do.....	57		
<b>Arabia:</b>				
Aden.....	June 10-Aug. 16.....		2	
<b>Argentina:</b>				
Buenos Aires.....	June 1-30.....		1	
<b>Australia:</b>				
New South Wales—				
Sydney.....				Total, May 8-Oct. 22: Cases, 325 in the metropolitan area and 120 cases in the country districts.
<b>Western Australia—</b>				
Bunbury quarantine station.....	May 5-June 12.....	3	1	From s. s. Kilchattan, from Bombay, including previous report.

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

Reports Received from June 27 to Dec. 11, 1914—Continued.

## SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Galicia.....	Mar. 17-July 25....	12		
Lower Austria.....	May 31-June 20....	2		
Styria.....	July 5-11.....	2		
Upper Austria.....	May 17-July 11....	4		
Belgium:				
Liege.....	June 1-6.....		3	
Brazil:				
Bahia.....	June 1-Oct. 21....	15		
Para.....	May 24-30.....		1	
Pernambuco.....	May 1-Sept. 30....		61	
Río de Janeiro.....	May 10-Oct. 17....	3,547	734	
Canada:				
British Columbia—				
Vancouver.....	Aug. 18-Sept. 5....	4		
Manitoba—				
Winnipeg.....	June 14-Nov. 7....	20		
Ontario—				
Hamilton.....	Aug. 1-Sept. 30....	6		
Niagara Falls.....	July 15-21.....	1		
Ottawa.....	July 26-Aug. 1....	1		
Prince Edward Island—				
Charlottetown.....	July 16-22.....	1		
Quebec—				
Montreal.....	Nov. 8-26.....	15	2	
Quebec.....	July 11-Nov. 26....	6		
Canary Islands:				
Teneriffe—				
Santa Cruz.....	June 28-Oct. 24....		26	
Ceylon:				
Colombo.....	May 19-Oct. 10....	120	27	
Uva district—				
Passara.....	June 7-13.....	39	11	Among coolies from India. May 16-23, present in Kaying and increasing in Choa Chow.
China.....				Present.
Amoy.....	May 17-June 13....			
Canton.....	Jan. 1-Apr. 30....	21		
Chungking.....	May 22.....			Endemic.
Dairen.....	June 7-July 4....	2		
Hongkong.....	May 10-Oct. 24....	16	12	Total Jan. 4-Aug. 31: Cases, 99; deaths, 70.
Nanking.....	May 23.....			Present.
Newchwang.....	June 13-Oct. 17....			Do.
Pakhol.....	Apr. 17.....			Present, and in San-hu, 20 miles distant.
Shanghai.....	May 18-Nov. 1....		38	Deaths among natives.
Tientsin.....	June 6-Sept. 26....	2		
Tsingtau.....	May 19-July 5....	21	3	
Cuba:				
Habana.....	Nov. 2-23.....	4	1	
Dutch East Indies:				
Borneo.....	May 17-Sept. 12....	790	261	In the western part, Aug. 22 present in Pontianak.
Java.....				In the western part, May 3- Sept. 19: Cases, 2,832; deaths, 574, including Batavia.
Batavia.....	May 3-Sept. 19....	205	55	
Tegal.....	Aug. 2-8.....	19	6	
Egypt:				
Alexandria.....	June 4-Oct. 21....	46	18	
Cairo.....	May 21-Sept. 30....	203	77	
Port Said.....	May 21-June 6....	4		
France:				
Bordeau.....	June 7-July 11....		4	
Marseille.....	May 1-31.....		2	
Paris.....	May 24-Oct. 10....	35	2	
Germany.....				May 31-Aug. 22: Cases, 16.
Hamburg.....	June 7-27.....	5		
Kehl.....	May 1-31.....		1	
Gibraltar.....	June 8-27.....	1	1	
Great Britain:				
Leeds.....	June 6-July 18....	4		
Southampton.....	June 29-July 4....	1		
Greece:				
Athens.....	July 6-12.....		1	
Goumentza.....	Oct. 18-24.....	2		

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.****Reports Received from June 27 to Dec. 11, 1914—Continued.****SMALLPOX—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
<b>Greece—Continued.</b>				
Kavalla.....	Oct. 4-24.....	3		
Patras.....	Sept. 2-Nov. 15.....		18	
Saloniki.....	May 31-Nov. 7.....		94	June 6: Present in a mild form among 20,000 refugees from Asiatic Turkey, Chio, and Mitylenc; Sept. 19, cases, 2.
<b>India:</b>				
Bombay.....	May 19-Oct. 3.....	92	60	
Calcutta.....	May 10-Oct. 10.....		251	
Karachi.....	May 24-July 25.....	13	4	
Madras.....	May 17-Oct. 17.....	41	6	
Rangoon.....	Apr. 1-Aug. 31.....	12	2	
<b>Indo-China:</b>				
Salgon.....	May 12-Oct. 12.....	8	3	
<b>Italy:</b>				
Turin.....	July 20-26.....	2		
<b>Japan:</b>				
Hakodate.....	Oct. 18-24.....	1		
Kobe.....	June 19-23.....	1		
Nagasaki.....	May 18-Oct. 18.....	58	19	
Taiwan (Formosa).....	May 3-Oct. 10.....	19	6	
Yokohama.....	June 23-29.....	1		
<b>Honduras:</b>				
Puerto Cortez.....	Sept. 1-30.....		6	
<b>Mexico:</b>				
Chihuahua.....	May 18-Nov. 8.....	18	15	
Guadalajara.....	Aug. 31-Oct. 10.....		3	
Juarez.....	Aug. 1.....	2		
Mazatlan.....	June 17-Nov. 17.....	3	4	
Mexico.....	Jan. 17-Feb. 21.....	99	16	
Monterey.....	June 30-Sept. 20.....		9	
Tampico.....	May 11-July 31.....		70	
Vera Cruz.....	June 1-Oct. 31.....	17	6	
<b>Norway:</b>				
Trondhjem.....	.....do.....	38		
<b>Peru:</b>				
Callao.....				June 22, Aug. 8, and Oct. 8, present Epidemic.
Lima.....	Oct. 28.....			
<b>Philippine Islands:</b>				
Samar Province.....				First quarter 1914, severe outbreak.
<b>Portugal:</b>				
Lisbon.....	June 14-Oct. 3.....	17		
<b>Portuguese East Africa:</b>				
Lourenco Marquez.....	Aug. 1-31.....		1	
<b>Russia:</b>				
Batum.....	Feb. 1-Aug. 31.....	9		
Libau.....	Oct. 12-18.....	1		
Moscow.....	May 10-Oct. 10.....	47	9	
Odessa.....	May 10-Oct. 3.....	9		
Riga.....	May 31-July 25.....	14		
St. Petersburg (Petrograd).....	May 24-Oct. 10.....	300	125	
Vladivostok.....	Apr. 2-May 13.....	8	1	
Warsaw.....	Feb. 1-May 2.....	146	61	
<b>Servia:</b>				
Belgrade.....	May 25-July 19.....	12	2	
<b>Siam:</b>				
Bangkok.....	June 13-Sept. 5.....		10	
<b>Spain:</b>				
Almeria.....	July 1-31.....		1	
Barcelona.....	June 14-July 31.....		28	
Do.....	Nov. 7-13.....		5	
Cadiz.....	May 1-31.....		5	
Madrid.....	June 1-Oct. 31.....		9	
Seville.....	Sept. 1-30.....		1	
Valencia.....	June 7-Nov. 7.....	112	18	
<b>Straits Settlements:</b>				
Singapore.....	Sept. 27-Oct. 3.....	1		
<b>Switzerland:</b>				
<b>Cantons—</b>				
Basel.....	May 31-Sept. 19.....	34		
Geneva.....	July 5-11.....	1		
Grisons.....	June 7-13.....	1		
Zurich.....	July 1-Aug. 8.....	2		

**CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued.****Reports Received from June 27 to Dec. 11, 1914—Continued.****SMALLPOX—Continued.**

Places.	Date.	Cases.	Deaths.	Remarks.
Turkey in Asia:				
Beirut.....	June 1-Oct. 24.....	94	29	
Damascus.....	Mar. 15-Aug. 20.....	905	460	
Jerusalem.....	May 3-July 25.....	33	2	
Mersina.....	Aug. 2-8.....	2	.....	
Smyrna.....	May 13-Oct. 3.....	8	7	
Trebizond.....	May 19-Oct. 17.....	.....	.....	Present.
Tripoli.....	Oct. 3-24.....	6	.....	
Turkey in Europe:				
Constantinople.....	June 14-Sept. 12.....	.....	9	
Union of South Africa:				
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# SANITARY LEGISLATION.

## MUNICIPAL ORDINANCES, RULES, AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

### GREAT FALLS, MONT.

**Milk and Milk Products—Production, Care, and Sale. (Ord. 414, June 29, 1914, as Amended by Ord. 418, July 13, 1914.)**

**SECTION 1.** That no person, persons, partnership, or corporation shall engage in the sale, delivery, or distribution of milk, cream, buttermilk, skimmed milk, or sour milk in the city of Great Falls without first having obtained a license so to do from the city clerk of said city; and no person shall bring or send milk, cream, buttermilk, or sour milk for sale in said city except through a licensed dealer as hereinafter provided.

**SEC. 2.** The word "person" shall, for the purpose of this ordinance, hereinafter be construed to include individual, copartnership, firm, and corporation.

**SEC. 3.** Every person desiring to engage in the sale, delivery, or distribution of milk, cream, buttermilk, skimmed milk, or sour milk in the city of Great Falls, before doing so, shall make application to the city clerk of the said city of Great Falls for a license for that purpose, which application shall be in writing upon the form prescribed by the board of health of said city, and shall be approved by the health officer of said city.

**SEC. 4.** Said application shall state fully:

(a) The full name and place of residence of said applicant. The exact location of the place or places from which said applicant obtains milk, and, if said applicant obtains milk from other persons, the name of the person or persons from whom said applicant obtains milk.

(b) The number of cows in each herd supplying said milk or any portion thereof.

(c) The manner in which said applicant intends to dispose of said milk, and the location of the place where he proposes to conduct said business if same shall be fixed.

**SEC. 5.** The fee charged for the license herein provided shall be as follows: For selling milk or cream from a wagon, \$12 per year per wagon; from a dairy, restaurant, creamery, or milk company, \$12 per year; from a house, or when delivered by hand, at the rate of \$1 per year for each cow supplying such milk or milk products; and all moneys so received shall be credited to the "public health and safety fund" of the city of Great Falls, to be used by the board of health and the city council of the city of Great Falls in carrying out the provisions of this ordinance: *Provided, however,* That the city treasurer shall collect license fees from the 1st day of July, 1914, to the 1st day of May, 1915, collecting the amount in each case which the proportionate part of this remaining year bears to a full year.



SEC. 6. The license herein provided for, when issued shall not be transferable without the express consent of the city council having first been obtained, and such license when issued shall not extend beyond the 1st day of May, next, after the issuance of the same: *Provided further*, That any such license may be revoked or suspended at any time by the board of health when any of the provisions of this ordinance or any of the provisions of the dairy and food laws of the State of Montana covering the sale or distribution of milk or cream or milk products shall have been violated by the holder of said license. the said board of health shall give the holder of said license written notice of at least two days before the date of hearing of the time and place of such hearing and of the charges made, at which time and place the said board of health may conduct a hearing, and in the event the charges made are proven then that the board of health shall have full authority to revoke said license, and that the findings of said board of health shall be final and conclusive upon questions of the foregoing.

SEC. 7. Every person engaged in the sale, delivery, or distribution of milk in said city shall notify, in writing, the board of health of said city immediately upon the changing of the source of supply of said milk. Said notice shall state the exact location of the new place from which said milk is procured, the number of cows producing the same, the quantity received, and the name of the person or persons supplying the same.

SEC. 8. No person shall sell or deliver, or have in his possession for sale, in the city of Great Falls any milk or cream which is adulterated, or to which water has been added, or which contains any preservative, foreign, or unhealthful ingredient, constituent, or substance, or cream which does not contain 18 per cent butter fat, or milk or cream which has been kept at a temperature above 60° F., or which has been stored or transported in an unclean manner, or which is produced by cows which are diseased or which are kept or stabled under unhealthful, filthy, or insanitary conditions, or which have access to any yard or premises which contain undue accumulation of manure, barnyard sewerage, or mud; nor shall any milk be sold or delivered in said city which is procured from any farm or dairy where any contagious, infectious, or communicable disease may exist.

SEC. 9. No person shall sell, hold, or offer for sale in the city of Great Falls any milk containing: (a) More than 88.25 per cent of watery fluid; or (b) less than 8.50 per cent of milk solids exclusive of butter fat; or (c) less than 3.25 per cent butter fat; or (d) at 60° F. the specific gravity of which is not between 1.029 and 1.033; or (e) containing any pathogenic bacteria; or (f) containing more than 200,000 bacteria per cubic centimeter; or (g) produced by a herd which contains any diseased cattle; or (h) produced by any cow or cows within 20 days before or 7 days after parturition (calving); or (i) produced by any cow or cows fed on garbage, refuse, swill, moist distillery waste, or other improper food, or which do not receive a proper and sufficient supply of pure drinking water and wholesome food: *Provided*, That subdivisions a, b, c, and d of this section do not apply to milk sold under the name of "skimmed" milk, as hereinafter provided.

SEC. 10. For the purpose of inspection the health officer and his assistants or any member of the board of health are authorized to enter any building, room, or premises, either within or without the corporate limits of the city of Great Falls, where milk, cream, or milk products are produced for sale, sold, or held for sale within the city of Great Falls. The aforesaid health officer or his assistant, or any member of the board of health, are empowered to open any can, vessel, or package, whether in transit or otherwise, containing milk or cream for sale or consumption in the city of Great Falls, and take therefrom a

suitable sample for examination or analysis: *Provided*, That they shall pay therefor the current market price. Examination or analysis shall be made with such instruments or appliances as are in general use for that purpose at the time of inspection.

SEC. 11. That the health officer or his assistant shall at least once a month throughout each year make a written report in duplicate, one of which shall be presented to the board of health and the other to the city council, which said report shall contain a detailed statement regarding each and every person, persons, partnership, or corporation engaged in the sale, delivery, or distribution of milk and cream or milk products as hereinbefore mentioned and which said report shall show in detail the result of the test and examination in each instance.

SEC. 12. Every person using a wagon or vehicle for the sale or distribution of milk, cream, buttermilk, skim milk, or sour milk within the city of Great Falls shall keep the name of the owner thereof and the license number in plain legible letters and figures not less than 2 inches in height upon the side of said wagon or vehicle. All wagons, vehicles, and utensils used for delivery, distribution, handling, or storing of milk shall at all times be kept in a cleanly condition and free from any substance liable to contaminate milk or milk products. Rusty or broken cans shall not be used in the handling, storing, or delivery of milk.

SEC. 13. No person shall transfer any milk or cream intended for sale, offer or hold for sale, milk from one can, bottle, or receptacle into another can, bottle, or receptacle, on any street, alley, or thoroughfare, or upon delivery wagon, or other vehicle, or in any exposed place in the city of Great Falls except in a creamery, milk depot, or inclosed premises of the customer or dealer in milk.

SEC. 14. No person shall bring into the city of Great Falls for sale, offer or hold for sale, milk from which the cream has been removed, whether in whole or in part, unless sold as "skimmed milk" from can, vessel, or container on the side of which there shall be prominently displayed in plain legible letters not less than 1 inch in height the words "Skimmed milk." Skimmed milk shall contain not less than 9.50 milk solids.

SEC. 15. All dealers in milk shall have a room separate and apart from horse or cow stable or other place which is liable to contaminate milk. Said milk room or dairy shall be properly lighted and ventilated and shall be used exclusively for handling and storing milk and milk products. The construction of said milk room or dairy shall be such that same may be kept clean and sanitary at all times. All vats and utensils used in the handling or storing of milk shall be made of nonabsorbent material. Windows of said milk room or dairy shall be screened and doors shall be fitted with self-closing wire-screen doors of mesh sufficiently fine to exclude all flies and insects, and all vats shall be covered or screened.

SEC. 16. No person shall remove from any dwelling or place in which exists any case of contagious, infectious, or communicable disease any bottles or other receptacles used in the sale or distribution of milk, except with the permission of the health officer, after quarantine has been released. No person suffering from any venereal or communicable disease shall be employed to handle or come in contact with milk or milk products. Milk tickets shall not be used more than once.

SEC. 17. The health officer of the city of Great Falls may condemn or exclude from sale in the city of Great Falls any or all milk or cream which are produced in whole or in part on premises to which access, for the purpose of inspection has been refused the health officer or his assistant. The health

officer, or any of his assistants, or any member of the board of health, may seize or confiscate any milk, cream, or other milk products sold, offered for sale, or held with intent to sell within the city of Great Falls, contrary to any section of this ordinance, and may pour out, color, or otherwise denaturize any or all milk, cream, or other milk products so seized, to prevent the use of same for food purposes. The health officer, or any of his assistants, may affix, or cause to be affixed, to any can, receptacle, or vehicle containing any condemned milk, cream, or other milk products a card or tag stating that same has been condemned and the reason therefor. Said tag or card, so attached shall be deemed due and sufficient notice of condemnation. No milk, cream, or other milk products condemned as herein provided shall be used for human food, sold, held, or offered for sale in the city of Great Falls. The health officer, or his assistants, shall not be required to take sample of milk or cream which shall show a temperature higher than the allowed temperature specified in this ordinance, but may condemn any or all milk or cream showing a higher temperature than that specified.

SEC. 18. Cows kept for the production of milk for sale or consumption in the city of Great Falls shall be free from tuberculosis (pasteurized cream excepted). Before any license shall be granted to any applicant under the provisions of this ordinance the cows from which said applicant proposes to obtain milk shall have been tested by some person or persons legally qualified to administer the tuberculin test or tests and who shall be approved by the board of health. For the purpose of diagnosis of tuberculosis in any of said cows the tuberculin test, or any official approved method for the detection of tuberculosis, may be used under the direction of the board of health. For the purpose of identification, all cows tested as herein provided shall be suitably tagged or branded, and all reacting animals isolated from the herd or disposed of according to the laws of the State of Montana governing the disposal of animals which have reacted to the tuberculin test.

SEC. 19. Utensils used for the sale, handling, or delivery of milk or cream in the city of Great Falls shall, before using, be thoroughly washed with pure water and sal soda or some other cleaning agent that will not contaminate the same, and shall be thoroughly sterilized with boiling water, dry heat, or steam at a temperature of not less than 212° F., and shall be placed on a rack or some appliance to air until wanted for use. Shippers' cans shall be thoroughly rinsed with clean water before being returned to the shipper or producer.

SEC. 20. Any person operating, owning, or managing any hotel, restaurant, or other place where meals and lunches are served who shall serve, sell, or expose for sale any milk, cream, or other milk products shall be subject to the requirements of this ordinance and the inspection herein provided for: *Provided, however,* That no license shall be required unless milk shall be sold at wholesale or retail. Cans, bottles, crates, or containers used for the sale or delivery of milk shall be kept in a clean condition until returned to dealer supplying the same.

SEC. 21. Stables in which cows from which milk is obtained for sale, delivery, or distribution in the city of Great Falls are housed or confined shall be cleaned not less than once daily. Cleaning of manure or removal of bedding and litter shall be performed not less than one-half hour prior to milking. Manure shall be removed to not less than 30 feet from any such stable. Said stables shall contain not less than 500 cubic feet per cow, and shall be properly ventilated and lighted. Said stables shall be fitted with either cement or tight plank floors which can be properly cleaned. If the stable contains a loft, the same shall be properly ceiled. All stables shall be whitewashed inside at least twice yearly, and no undue amount of dust or filth shall be allowed to

accumulate. All barnyards and premises to which cows have access which are kept wholly or in part for the production of milk or cream for sale or delivery in the city of Great Falls shall be kept free and clean from any undue accumulation of manure, barnyard sewage, or mud. The health officer may condemn or exclude from sale in the city of Great Falls milk produced on premises where the provisions of this section are not complied with.

**SEC. 22.** Each and every day that a violation of this ordinance shall continue shall constitute a separate and distinct offense.

**SEC. 23.** Any person violating any of the provisions of this ordinance shall be punished for the first offense by fine not exceeding \$10 and costs of prosecution, and in default of the payment of any fine or costs the court may imprison such person in the city jail of the city of Great Falls until such fine is paid, not, however, to exceed 10 days; for a second offense by a fine not exceeding \$50 and costs of prosecution, and in default of the payment of such fine the court may imprison such person in the city jail of the city of Great Falls, not, however, to exceed 25 days; and for each subsequent offense by a fine not exceeding \$200 and costs of prosecution, and in default of the payment of such fine the court may imprison such person in the city jail of the city of Great Falls, not, however, to exceed 90 days.

#### HAVERHILL, MASS.

##### Lodging Houses and Tenements—Overcrowding. (Reg. Bd. of H., Sept. 15, 1914.)

**SECTION 1, B.** No owner, lessee, or keeper of any tenement house, lodging house, or boarding house shall cause or allow any of such houses to be overcrowded, or allow so great number of persons to dwell or sleep in such house or houses or any portion thereof as thereby to cause danger to health; and no such place or room shall be so overcrowded that there shall be less than 500 cubic feet of air, with a floor space of 50 square feet, to each occupant of such place, building, or room. No room used as a living or sleeping room shall hereafter be built without directly opening to the outdoor air.

##### Rabies—Control of—Care of Suspected Animals. (Reg. Bd. of H., Sept. 15, 1914.)

**SECTION 1.** Whenever the owner or person having the custody or possession of any animal shall observe or learn that such animal has shown symptoms of rabies, or has acted in a manner which would lead to the suspicion that it might have rabies, such owner or person having the custody or possession of such animals shall immediately notify the board of health or its agent and shall allow said agent or other official of the board of health or the inspector of animals to make an inspection or examination of such animal, and to quarantine such animal until it shall be established to the satisfaction of said official that such animal has or has not rabies.

**SEC. 2.** Whenever any animal shall be bitten by another animal having rabies the owner or person having the custody or possession of the animal so bitten shall, upon being informed thereof, either kill such animal or quarantine it and keep it tied up or confined for a period of six months, and the agent of the board of health or the inspector of animals shall have power, in his discretion, to kill or quarantine the animal so bitten in case the owner or person having the custody or possession thereof shall fail to do so immediately or in case the owner or person having the custody or possession thereof is not readily accessible.

**HUTCHINSON, KANS.****Garbage—Care and Disposal. (Ord. 1140, Sept. 4, 1914.)**

**SECTION 1.** Every owner or occupant of any house, hotel, restaurant, building, flat, apartment, or tenement in this city, where persons reside, board, or lodge, or where animal or vegetable food is prepared or served shall provide for such house, hotel, restaurant, building, flat, apartment, or tenement, and at all times maintain, in good order, a vessel or vessels for garbage. For each flat, apartment, or tenement building one such vessel for each floor, flat, apartment, or story of such buildings, and if such floor, flat, apartment, or story be occupied by more than five persons, then one of such vessels for each additional five persons. Every occupant, tenant, or person in charge of such house, hotel, restaurant, building, flat, apartment, or tenement shall cause to be deposited in said vessel all garbage produced in or brought therein. Such vessels for garbage shall be water-tight and made of metal, with a close-fitting metal cover, and shall have a capacity of not less than 10 gallons. The word "garbage" shall be taken to mean and include any and all rejected waste food, offal, and no person shall deposit in such can or vessel anything except garbage, and no person except the owner thereof, his agents or servants, shall deposit garbage in such vessel, or remove, displace, injure, deface, destroy, uncover, or in any manner disturb such vessel or the contents thereof. Such vessel shall be put at a place in or near the alley, easily accessible for the removal of its contents.

**SEC. 2.** All garbage shall be removed as often as and to such distance from the city as the health department shall direct, and no person, except an officer or employee of the health department or garbage contractor or subcontractor as herein provided, or a person who may be specially licensed by the board of commissioners to do so, shall remove any garbage through the streets, alleys, or other public places or ways of this city. The health department shall have the power to prescribe such rules as it may deem proper to govern the manner and time for the collection and removal of garbage. All wagons used for the collection and removal of garbage shall be fitted with a good and substantial water-tight steel tank or tanks with a close-fitting top, so as to prevent the escape of any of the contents therefrom, and shall have the words, "Garbage wagon" plainly painted thereon so as to be legible at least 80 feet. All such wagons shall be thoroughly cleaned and disinfected at least twice a week, and such wagons shall not remain a longer time at any one place than is actually necessary for the loading, and they shall not be permitted to stop or stand at any public place. When any special license shall be granted there shall be designated therein the particular places or portions of the city from which garbage may be removed, and the persons so licensed shall enter into bond with the city in such penal sum as the board of commissioners shall fix, conditioned as provided in the following section. Such licensee shall pay to the city a fee of \$25 for the privilege granted thereby. No such special license shall be granted except during the period of 30 days immediately prior to the expiration of the contract provided for in the next section.

**SEC. 3.** The clerk shall advertise for bids for the removal of garbage of the city beyond the city limits, for a term of not more than four years, with the right of the board of commissioners to reject any and all bids. The contract or contracts, as may be, shall be awarded to the highest responsible bidder or bidders, who shall execute a bond to the city in the sum of not less than \$1,000, with sureties as shall be approved by the board of commissioners, conditioned for the full and faithful performance of all the agreements of said contract and a complete compliance with the ordinances of the city and the rules and

regulations of the health department in relation thereto. And such contract shall contain the maximum prices to be charged by such contractor for the removal of garbage.

SEC. 4. Any person violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor and fined in any sum not less than \$5 nor more than \$100.

### JACKSON, TENN.

#### Privies—Construction and Care. (Reg. Bd. of H., Mar. 16, 1914.)

RULE 1. No privy or surface closet shall hereafter be used, maintained, or built except such as are so constructed as to render them fly proof and easily cleaned.

RULE 2. The floor shall be solid and water-tight and shall cover the entire base of the building inside the walls.

RULE 3. The house shall be without cracks through which flies may enter. It shall be provided with a tight self-closing door, and shall be lighted and ventilated by one or more openings, said opening or openings to give space not less than 4 square feet. All openings, whether for ventilation or otherwise, which are not provided with doors, windows, or shutters, shall be screened for the exclusion of flies. Doors shall be kept closed.

RULE 4. The roof of each privy or surface closet shall be water-tight, and if sloped to the rear of the house, it shall project not less than 6 inches beyond the rear wall of the house.

RULE 5. The seat shall have a self-closing hinged cover over the box openings. That flies may be excluded, the compartment under the seat, in which stands the night-soil container, shall be tightly constructed of sound lumber, without cracks or crevices. The inside dimensions of the night-soil compartment shall be not less than 16 inches in width (from front to back) and not less than 16 inches in height. Each side of the night-soil compartment shall be provided with a wire-screened opening of not less than 6 inches square, and shall be situated in the upper portion of the compartment. Cleats shall be nailed to the floor of the compartment in such a way that the night-soil container shall always be properly centered under the openings in the seat.

RULE 6. There shall be provided for each opening in the seat a tightly and substantially constructed box made of 1-inch heart pine, and it shall be water-tight. It shall be of not less than the following dimensions, inside measurements: 14 inches in length, 14 inches in width, and 14 inches in depth. The box shall rest on the floor of the night-soil compartment in such a position that the top shall not be more than 2 inches below the undersurface of the closet seat. Whenever such box shall cease to be water-tight it shall be replaced by a sound one.

RULE 7. There shall be provided at the back of each privy an opening for the removal of the night-soil container, which opening shall be provided with a substantial, tightly fitting let-down cover hinged to the back of the house and so constructed as to prevent warpings and to prevent access of flies to the night soil. This cover shall be provided with a hook or button and shall always be kept closed.

RULE 8. All privies hereafter constructed shall be located on the premises so as to be readily accessible to the city scavengers.

RULE 9. All alterations or repairs which shall hereafter be made on any privy in the city of Jackson shall be made in accordance with the rules and regulations of the board of health, and whenever it shall become necessary to

entirely reconstruct or change the location of any existing privy, the new privy shall be constructed throughout in conformity with said requirements. Whenever, in the opinion of the board of health, the condition of any privy is such that it can not be put in a sanitary condition, the board of health shall order a new privy constructed in conformity with said rules and regulations. Whenever a privy can not be kept in a sanitary condition on account of the large number of people having access to same, then the board of health shall order a larger one built.

**RULE 10.** All privies shall be kept clean at all times. The door of the house shall not be allowed to remain open at any time unless there is a self-closing fly door in addition to that required under the above rules. The cover to the seat or seats shall be kept closed at all times when the privy is not in use. No wash water, garbage, kitchen slops, or other liquid wastes shall be emptied into the privy. No night soil from any person suffering from typhoid fever or other serious bowel trouble shall be deposited in any privy without being previously disinfected in such manner as directed or approved by the city board of health.

**RULE 11.** The sanitary officers and the city scavengers are required to report to the board of health any and all violations of the above rules and regulations. Under said rules and regulations the owner of the premises is responsible for the construction of the privies and the occupant is responsible for their proper maintenance.

The penalty prescribed by law for the violations of the above rules and regulations is not less than \$5 and not more than \$50.

The rules and regulations of the board of health, regulating and governing the construction and maintenance of dry-surface closets in Jackson, passed April 24, 1912, are hereby repealed.

### **KANKAKEE, ILL.**

#### **Foodstuffs—Protection of—Screening and Flytraps Required. (Ord. Mar. 16, 1914.)**

**SECTION 1.** That all fruits, vegetables, meats, fish, fowls, and other articles of food supply displayed in the city of Kanakee, Ill., for sale outside of buildings shall be contained in receptacles which shall securely protect the same from contamination from flies, dust, dirt, or other injurious contamination, and that said receptacles shall be constructed at a height of not less than 15 inches from the sidewalk when placed outside the place of business.

**SEC. 2.** That every building, room, basement, inclosure, or premises occupied, used, or maintained as a bakery, confectionery, cannery, packing house, slaughterhouse, creamery, restaurant, hotel, grocery, meat market, or any establishment used for the preparation, manufacture, packing, storage, sale, or distribution of any food as defined by statute which is intended for sale shall be properly and adequately equipped with doors and screens to prevent contamination of the product from flies and with flytraps of such standard construction as may be approved by the city health officer, in such quantity and number as to catch all flies attracted to such premises, and to be placed in suitable places, cared for daily, and their contents destroyed by the persons owning or maintaining such places or premises.

**SEC. 3.** It is hereby made the duty of the city health officer to see that the provisions of this ordinance are rigidly observed.

**SEC. 4.** A violation of any of the provisions of this ordinance shall subject the person offending to a fine of not less than \$3 nor more than \$25 for each offense, and the like amount for each day premises are maintained in a condition prohibited by the provisions of this ordinance.

### NEW YORK, N. Y.

#### **Communicable Diseases—Notification of Cases. (Reg. Bd. of H., Aug. 25, 1914.)**

*Resolved*, That section 133 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

**SEC. 133.** It shall be the duty of every physician and of the commissioners or managers or the principal, supervisor, superintendent, or physician of each and every hospital, public institution, or dispensary in this city to report to the department of health, in writing, the full name, age, and address of every person suffering from any one of the infectious diseases included in the list appended, with the name of the disease, within 24 hours of the time when the case is first seen: Acute anterior poliomyelitis (infantile paralysis), anthrax, Asiatic cholera, diphtheria (croup), dysentery (epidemic), epidemic cerebrospinal meningitis, glanders, gonorrhoeal ophthalmia, hookworm disease, leprosy, malarial fever, measles, mumps, paratyphoid, plague, pulmonary tuberculosis, rabies, rubella (German measles, r theln), scarlet fever, septic sore throat, smallpox, tetanus, trachoma, tuberculous meningitis, typhoid fever, typhus, varicella (chicken-pox), whooping cough, and yellow fever.

#### **Communicable Diseases—Notification of Cases by Any Person Having Knowledge Required. (Reg. Bd. of H., Aug. 25, 1914.)**

*Resolved*, That section 136 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

**SEC. 136.** It shall be the duty of every person having knowledge of the existence of any person afflicted with any one of the infectious diseases named in section 133, who requires or appears to require the attention of the department of health, at once to report to the department all facts in regard to the case.

#### **Puerperal Septicemia and Suppurative Conjunctivitis—Notification of Cases. (Reg. Bd. of H., Aug. 25, 1914.)**

*Resolved*, That section 144 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

**SEC. 144.** It shall be the duty of the physician or physicians and the officers and managers of every sanatorium, sanitarium, day nursery, convalescent home, home for children, reformatory, training school, boarding school, hospital dispensary, or institution for the care or treatment of persons in the city of New York immediately to report or cause to be reported to the said department the name, age (so far as can be ascertained), and residence of every person received therein or treated thereat who is afflicted with puerperal septicemia or suppurative conjunctivitis, with the name of the disease with which the person is afflicted; and such physicians, officers, and managers shall also report the name and address of the physician or midwife in attendance at the time of the onset of the disease, which information it is hereby made the duty of every institution herein specified to obtain and record among its records.



**Industrial Diseases and Injuries—Notification of Cases. (Reg. Bd. of H., Aug. 25, 1914.)**

*Resolved*, That section 134 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

SEC. 134. It shall be the duty of every physician and of the commissioners or managers or the principal, supervisor, superintendent, or physician of each and every hospital, public institution, or dispensary in this city to report to the department of health in writing the full name, age, and address of every person suffering from any one of the infectious diseases included in the list appended, with the name of the disease, within 24 hours of the time when the case is first seen.

*Occupational diseases and injuries.*—Arsenic poisoning, bisulphide of carbon poisoning, brass poisoning, calsson disease (compressed-air illness), carbon monoxide poisoning, dinitro-benzine poisoning, lead poisoning, mercury poisoning, methyl alcohol or wood naphtha poisoning, naphtha poisoning, natural-gas poisoning, phosphorus poisoning.

**Hospitals, Sanatoria, etc.—Suitable Place Required for the Isolation of Persons Suffering From Communicable Diseases. (Reg. Bd. of H., Aug. 25, 1914.)**

*Resolved*, That section 140 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

SEC. 140. In every sanatorium, sanitarium, day nursery, convalescent home, home for children, reformatory, training school, boarding school, hospital, dispensary, or institution for the care or treatment of persons in the city of New York there shall be provided and maintained a suitable room or rooms for the isolation of persons suffering from such infectious diseases as the rules and regulations of the department of health may from time to time designate as being subject to the provisions of this section, and such persons shall immediately be isolated in such room or rooms.

**Communicable Diseases—Interference with Inspector Prohibited—Mutilation of Placards Forbidden. (Reg. Bd. of H., Aug. 25, 1914.)**

*Resolved*, That section 137 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

SEC. 137. No person shall interfere with or obstruct the entrance to or inspection or examination of any building or house, or the occupants thereof, by the inspectors or officers of the department of health, when any case of one of the infectious diseases named in section 133 has been reported as existing in such house or dwelling; nor shall any person interfere with or obstruct, mutilate, or tear down any notice of this department posted in or on any premises in the city of New York.

**Communicable Diseases—Hospitalization. (Reg. Bd. of H., Aug. 25, 1914.)**

*Resolved*, That section 139 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

SEC. 139. Whenever an inspector of this department shall report in writing that any person is sick of any infectious disease, under such circumstances that the continuance of such sick person in the place where he or she may be is dangerous to the lives or health of other persons residing in the neighborhood, the sanitary superintendent, an assistant sanitary superintendent, or

the director of the bureau of infectious diseases, upon the report of a medical inspector of the department, may cause the removal of such sick person to one of the hospitals under the charge of this department or to a hospital designated by the board of health.

**Tuberculosis—Pulmonary—Enforcement of Rules and Regulations for Prevention of. (Reg. Bd. of H., Aug. 25, 1914.)**

*Resolved*, That section 138 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

SEC. 138. It shall be the duty of every person sick with pulmonary tuberculosis, and of every person in attendance upon anyone sick with the said disease, and of the authorities of public and private institutions or dispensaries wherein any occupant is afflicted with the said disease, to observe and enforce all the sanitary rules and regulations of the department of health for preventing the spread of pulmonary tuberculosis.

**Communicable Diseases—School Attendance. (Reg. Bd. of H., Aug. 25, 1914.)**

*Resolved*, That section 145 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

SEC. 145. No principal or superintendent of any school, and no parent, master, or custodian of any child or minor (having the power and authority to prevent) shall permit any child or minor having acute poliomyelitis (infantile paralysis), chicken-pox, diphtheria (croup), epidemic cerebrospinal meningitis, measles, mumps, rubella (rotheln), scarlet fever, smallpox, or whooping cough, or any child or minor in any family, or living with any family, in which any such disease exists, or has recently existed, to attend any public or private school until the department of health shall have given its permission therefor, nor shall any such principal, superintendent, parent, master, or custodian permit any child or minor to be unnecessarily exposed, or to needlessly expose any other person to the taking or to the infection of any contagious disease.

**Common Eating and Drinking Utensils—Use Prohibited in Public Places. (Reg. Bd. of H., Feb. 17, 1914.)**

*Resolved*, That section 189 of the Sanitary Code be, and the same is hereby, amended to take effect March 1, 1914, so as to read as follows:

SEC. 189. The use of common eating or drinking utensils, in any public place, park, street, or avenue, public institution, or in any hotel, theater, factory, school, public hall, or in any railroad car or ferry boat, or in any railway station or ferry house, or the furnishing of any such common eating or drinking utensils for use in any such place, is hereby prohibited.

The term "public place" as used herein shall be construed to include:

(a) Any place where goods, wares, or merchandise are sold or offered for sale.

(b) Any department, bureau, building, or office of a municipal corporation.

The term "factory" as used herein shall be construed to include any workshop or manufacturing or business establishment where persons are employed at labor.

**Food and Drink—Utensils Used to be Thoroughly Cleansed. (Reg. Bd. of H., May 5, 1914.)**

*Resolved*, That section 49b of the Sanitary Code be, and the same is hereby, adopted so as to read as follows:

**SEC. 49b.** All utensils used in the preparation, service, and sale of any food or drink intended for human consumption shall be properly cleansed after being used, and no such utensil shall, under any circumstances, be used a second time unless it shall have been, after the previous use thereof, so cleansed. In such cleansing the use of water which has become insanitary by previous use is prohibited.

**Ice Cream—Manufacture and Storage. (Reg. Bd. of H., Apr. 21, 1914.)****EQUIPMENT.**

1. Side walls and ceilings of rooms in which ice cream is manufactured or stored shall have a surface of smooth, hard material, or kept well painted at all times with waterproof paint, and they shall be tight. The floors shall be made of impermeable material, preferably cement. The floors shall be sloped to one or more drains which are properly trapped and sewer connected.

2. All windows shall be properly screened with an equivalent of 18-mesh copper waterproof screens; said screens shall be kept clean at all times. During the fly season, the doors shall be provided with proper screens.

3. The room or rooms must be provided with appliances for washing or sterilizing all utensils employed in the mixing, freezing, storage, sale, or distribution of ice cream, and all such utensils after use shall be thoroughly washed in boiling water or sterilized by steam.

4. Vessels used in the manufacture and sale of frozen products shall not be employed for any other purpose.

5. Lavatories and washrooms shall be adjacent to toilet rooms, shall be supplied with soap, running water, and fresh towels daily for each employee, and shall be maintained in a sanitary condition. Workmen before commencing work and after visiting the toilet room shall wash their hands and arms thoroughly in clean water.

6. Dressing rooms shall be provided, separated from the room in which manufacturing is conducted.

7. All establishments in which ice cream is manufactured shall be adequately ventilated and sufficiently lighted naturally or by artificial means.

8. No person shall be allowed to live or sleep in any building used as a factory or shop, unless the factory or shop is separated by impervious walls without doors or windows or other openings leading directly from the parts of the building used for living or sleeping purposes.

9. No horses, cows, or other animals shall be stabled or kept in any building where ice cream is made, unless the factory or shop is separated from the places where the horses, cows, or other animals are stabled or kept by impenetrable walls and without doors, windows, or other openings.

**METHODS.**

10. All establishments shall be equipped with facilities for the proper cleansing of the hands of operators. All persons, immediately before engaging in the mixing of the ingredients entering into the composition of frozen products or its subsequent freezing or handling, shall thoroughly wash his or her hands and keep them clean during such manufacturing and handling.

11. All workroom employees shall be clean in person at all times and shall wear clean washable clothing and caps. They shall not smoke or chew tobacco while at work. They shall not touch the product with their hands at any time. Employees may be specially designated to cut and wrap brick ice cream and to fill fancy molds and, as this work necessitates some handling of the product, such employees must be scrupulously clean and wear clean washable clothing and caps.

12. All vehicles, platforms, and racks used in the conveyance of ice cream for sale or distribution shall be kept in a cleanly condition.

13. No person suffering from an infectious disease shall be employed in an ice-cream manufacturing plant.

14. No old or salted ice cream, or ice cream returned to the manufacturer for any cause whatever shall again be used in the manufacture of ice cream.

15. All ice cream kept for sale in any shop, restaurant, or other establishment shall be stored in a covered box or refrigerator. Such box or refrigerator shall be properly drained and cared for, and shall be kept tightly closed except during such intervals as are necessary for the introduction or removal of ice cream or ice, and they shall be kept only in such locations and under such conditions as shall be approved by the department of health. Suitable means or appliances shall be provided for the proper cleansing or sterilizing of freezers, vats, or mixing cans or tanks, piping, and all utensils used as containers for ice cream or its components, and all tools used in making or the direct handling of ice cream, and such apparatus, utensils, and tools after use shall be thoroughly cleansed and rinsed with boiling water or sterilized with live steam.

16. Vessels used in the manufacture and sale of ice cream shall not be employed for any other purpose by any person.

17. No person shall take back any broken package of ice cream, nor any unbroken package which contains soft or melted ice cream; no ice cream shall, under any circumstances, be melted and refrozen.

18. All garbage shall be kept in tightly covered metal receptacles outside of the premises where frozen products are manufactured.

#### **Foodstuffs—Care of. (Reg. Bd. of H., May 5, 1914.)**

*Resolved,* That section 49 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

SEC. 49. Every person being the owner, lessee, occupant, or in charge of any room, stall, or place where any food or drink intended for human consumption shall be stored or kept, or shall be held or offered for sale, shall put and keep such room, stall, and place, and its appurtenances in a cleanly and wholesome condition, and every person having charge, or interested or engaged, whether as principal or agent, in the care of or in respect to the custody or sale of any food or drink intended for human consumption, shall put and preserve the same in a cleanly and wholesome condition, and shall not allow the same, or any part thereof, to be poisoned, infected, or rendered unsafe or unwholesome for human food or drink.

#### **Foodstuffs—Protection of. (Reg. Bd. of H., May 27, 1914.)**

*Resolved,* That the following interpretations to be placed upon the various requirements of section 46 of the Sanitary Code, as suggested by the committee on food inspection of the advisory council, be, and the same are hereby, approved:

**Stands and pushcarts and open containers.**—The strictest interpretation of the provision of section 46 of the Sanitary Code will be applied to stands and pushcarts and open containers at all times, and no covering other than of a fixed and permanent character will be recognized as conforming to the requirements of said section.

**Candy.**—Within the meaning of this section, all candy stored, sold, or offered for sale or displayed or transported must be covered with a covering such as glass, wood, metal, pasteboard, paper, or other suitable material so as to adequately protect it from flies, dust, dirt, or other contamination.

**Bakery products.**—All breadstuffs, cakes, pies, and confectionery kept, held, offered, or displayed for sale must at all times be protected from the contamination of flies, dust, and unwarranted human handling by being inclosed or covered with some suitable covering. When displayed for sale, glass cases should be used, the back of which may be inclosed in close-mesh wire screening.

**Groceries.**—All foodstuffs not protected by a fly and dust proof wrapper must be protected by covering or cases of glass, metal, wood, or close-mesh wire screening, so as to protect the same from flies or other contamination.

**Butcher shops and markets.**—All meats, poultry, game, fish, and similar products when displayed for sale must be protected so as to preserve them from unwarranted human handling, contamination of flies, and dust by being kept within closed refrigerating display cases or properly covered by close-mesh wire screening. Smoked meats, sausages, hams, and other products of a similar character which are covered by a permanent protected cover need not be kept as above indicated.

**Restaurants and public eating places.**—At restaurants and public eating places all food must be protected from contamination by flies, dust, and unwarranted handling by being inclosed in glass or metal cases or cases covered with close-mesh wire screening. Where pies, sections of pies, sandwiches, cakes, or similar products are securely wrapped in individual paper coverings they will be deemed as satisfactorily protected within the provision of section 46 of the Sanitary Code.

**Meat—Cooling and Removal of Entrails Required.** (Reg. Bd. of H., July 28, 1914.)

*Resolved,* That section 45 of the Sanitary Code be, and the same is hereby, amended, to take effect immediately, so as to read as follows:

Sec. 45. No meat or dead animal above the size of a rabbit shall be taken to any public or private market, nor shall any such meat or dead animal be stored or held, kept, or offered for sale in any such place until the same shall have been fully cooled after killing, nor until the entrails and feet (except of poultry and game and except the feet of swine) shall have been removed.

**Habit-Forming Drugs—Sale of.** (Reg. Bd. of H., July 28, 1914.)

*Resolved,* That section 182 of the Sanitary Code be, and the same is hereby, amended, to take effect immediately, so as to read as follows:

Sec. 182. No cocaine or salts of cocaine, alpha or beta eucain, either alone or in combination with other substances, or any substance under any other name giving a physiological reaction similar to the physiological reaction of cocaine, and no opium or preparation of opium, and no morphine or salts of morphine, and no *cannibis indica* or preparation of *cannibis indica*, or the derivatives of either or any of the substances named herein, shall be held or offered for sale or sold or given away at retail by any person in the city of New York, except

upon the written prescription of a duly licensed physician, veterinarian, or dentist.

Nothing hereinbefore mentioned, however, shall apply to compounded mixtures containing opium or morphine or cannabis indica or their derivatives for external use only, in the form of liniments, ointments, oleates, or plasters.

**Drugs—Sale of—Prosecutions for Violation of Regulation. (Reg. Bd. of H., Sept. 29, 1914.)**

*Resolved*, That the director of the bureau of food inspection be, and he is hereby, directed to institute no prosecutions for the violation of section 182 on or before December 1, 1914, by which time, namely, four months and three days from the time of the revision of the ordinance, all retail druggists will have had ample time to dispose of such stock as may have been prepared for sale before July 28, 1914, the sale of which is forbidden under the revised ordinance.

**Poisons—Sale of. (Reg. Bd. of H., Aug. 25, 1914.)**

*Resolved*, That section 66 of the Sanitary Code be, and the same is hereby, amended to take effect immediately, so as to read as follows:

SEC. 66. No person shall sell at retail or give away any poison without affixing or causing to be affixed to the bottle, box, package, parcel, or receptacle containing such poison a label upon which shall be printed in red ink, in plain, legible characters, the name of the article, the word "Poison," the name and place of business of the seller, or donor if the poison be given away, a skull and crossbones, the word "Caution," the maximum dose of the poison, and the antidote therefor.

The provisions of this section shall not apply to medicinal compounds containing poisonous drugs in therapeutic doses, when the maximum dose of such preparation is marked upon the container.

**Funerals of Persons Who Have Died of Communicable Diseases Required to be Private. (Reg. Bd. of H., Aug. 25, 1914.)**

*Resolved*, That section 142 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

SEC. 142. A public or church funeral shall not be held of any person who has died of acute poliomyelitis (infantile paralysis), Asiatic cholera, diphtheria (croup), epidemic cerebrospinal meningitis, measles, plague, scarlet fever, smallpox, typhus fever, and yellow fever, but the funeral of such person shall be private, and it shall not be lawful to invite to, or permit at, the funeral of any person who has died of any one of the above diseases, or of any infectious disease, or at any services connected therewith, any person whose attendance is not necessary, or from or to whom there is danger of contagion thereby.

**Burial—Communicable Diseases—Duties of Undertakers. (Reg. Bd. of H., Aug. 25, 1914.)**

*Resolved*, That section 141 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

SEC. 141. It shall be the duty of every undertaker having notice of the death of any person within the city of New York of acute cerebrospinal meningitis, acute poliomyelitis (infantile paralysis), Asiatic cholera, diphtheria (croup),

measles, plague, scarlet fever, smallpox, typhus fever, and yellow fever, or of the bringing of the dead body of any person who has died of any such disease into such city, to give immediate notice thereof to this department. No person shall retain, or expose, or assist in the retention or exposure of, the dead body of any such person, except in a coffin or casket properly sealed; nor shall any person allow any such body to be placed in any coffin or casket unless the body has been wrapped in a sheet saturated with a proper disinfecting solution, and the coffin or casket shall then be immediately and permanently sealed. No undertaker shall assist in the public or church funeral of any such person. No undertaker shall use, or cause or allow to be used at any funeral, or in any room where the dead body of any person shall be, any draperies, decorations, rugs, or carpets belonging to or furnished by him or under his direction.

**Burial—Length of Time Body May Remain Unburied. (Reg. Bd. of H., Aug. 25, 1914.)**

*Resolved*, That section 165 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

SEC. 165. No person shall allow to be retained unburied the dead body of any human being for a longer period than four days, or where death has resulted from acute poliomyelitis (infantile paralysis), Asiatic cholera, diphtheria (croup), epidemic cerebrospinal meningitis, measles, plague, scarlet fever, smallpox, typhus fever, and yellow fever for a longer period than 24 hours, after the death of such person without a permit from the sanitary superintendent, an assistant sanitary superintendent, or the director of the bureau of infectious diseases, which permit shall specify the length of time during which such body may be retained unburied.

**Dead Bodies—Cremation—Issuance of Permit. (Reg. Bd. of H., Sept. 29, 1914.)**

*Resolved*, That section 167a of the Sanitary Code be, and the same is hereby, adopted so as to read as follows:

SEC. 167a. No permit for the cremation of the dead body of any human being, nor transit permit for such purpose, shall be granted by the department of health until an autopsy shall have been had, or until two physicians, one of whom shall be a medical inspector of the department of health, officially designated for the purpose, shall have, respectively, filed in the said department a certificate wherein the cause of death is set forth.

**Burial or Cremation—Permit Required. (Reg. Bd. of H., Sept. 29, 1914.)**

*Resolved*, That section 167 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

SEC. 167. No interment, cremation, or other disposition of the dead body of any human being shall be made within the city of New York without a permit therefor granted by the board of health, nor otherwise than in accordance therewith, and said dead body shall be placed in a metallic or tin-lined box, or a box so constructed as to prevent the issuance of any liquids therefrom; and no sexton or other person shall assist in, or assent to, or allow any such interment, or aid or assist about preparing any grave or place of deposit for any such body, or assist in the cremation of the same, for which such permit has not been given authorizing the same. And it shall be the duty of every person who shall receive any such permit to preserve and to return the same to the department of health as its regulations may require.

**Dogs—Muzzling Required. (Reg. Bd. of H., July 28, 1914.)**

*Resolved*, That the following additional section of the Sanitary Code, for the security of life and health, to be known as section 80a, be, and the same is hereby, adopted, to take effect immediately:

**SEC. 80a.** No unmuzzled dog shall be permitted, at any time, to be on any public highway or in any public park or place in the city of New York.

**Pigeons—Keeping of. (Reg. Bd. of H., Oct. 27, 1914.)**

1. The sanitary superintendent, assistant sanitary superintendent, or a chief inspector of the sanitary bureau of the department of health are hereby authorized to issue permits to keep live pigeons for domestic purposes under and by virtue of the provisions of section 81 of the Sanitary Code.

2. There will be issued with each permit a set of regulations bearing the same number as the permit. These regulations must be complied with while the above-mentioned fowls are being kept.

3. A violation of these regulations may be sufficient cause for the revocation of a permit and the prosecution of the offender.

4. No permit from the department of health for the keeping of pigeons is necessary in unimproved sections of the city used for farming purposes.

5. The keeping of pigeons for domestic purposes shall be allowed in the city of New York under the following conditions:

(a) *Provided*, That a permit therefor, issued in accordance with the regulations of the department of health, be obtained from the said department, and *Provided also*, That the conditions imposed in such permit be fully met.

(b) No pigeons shall be kept on the same lot with a tenement house dwelling of said applicant or on an adjoining lot).

(c) No application to keep pigeons on the same lot with a building other than a tenement shall be accepted unless the applicant file with his application the written consent of the other tenant or tenants of the said building.

(d) All pigeons shall be confined to proper coops and not allowed at large.

(e) All coops shall be whitewashed or otherwise treated as approved by the department of health at least once a year, and at such other times as may be directed by the department of health, and all coops and surroundings shall be kept in a clean condition.

(f) If pigeons are to be kept on a vacant lot, the written consent of the owner of said lot, or evidence of ownership thereof by the applicant, shall be produced at the time of the presentation of the application.

(g) Pigeons shall be kept so as not to cause a nuisance.

(h) A permit to keep pigeons for domestic use shall not include the right to slaughter.

(i) No such permit for the keeping of pigeons shall be granted when the said pigeons or the coops in which they are kept, measured in the most direct line, are within 25 feet of any inhabited building (other than the dwelling of the applicant, if said pigeons are to be maintained on the same lot with the

**Fowls—Keeping of. (Reg. Bd. of H., Oct. 27, 1914.)**

1. The sanitary superintendent, assistant sanitary superintendent, or a chief inspector of the sanitary bureau of the department of health are hereby authorized to issue permits to keep live chickens, geese, ducks, or other fowl for domestic purposes under and by virtue of the provisions of section 79 of the Sanitary Code.



2. There will be issued with each permit a set of regulations bearing the same number as the permit. These regulations must be complied with while any of the above-mentioned fowls are being kept.

3. A violation of these regulations may be sufficient cause for the revocation of a permit and the prosecution of the offender.

4. No permit from the department of health for the keeping of live chickens, geese, ducks, or other fowls is necessary in unimproved sections of the city used for farming purposes.

5. The keeping of live chickens, geese, ducks, or other fowls for domestic purposes shall be allowed in the city of New York under the following conditions:

(a) *Provided*, That a permit therefor, issued in accordance with the regulations of the department of health, be obtained from the said department, and *Provided also*, That the conditions imposed in such permit be fully met.

(b) No fowls shall be kept on the same lot with a tenement house.

(c) No application to keep fowls on the same lot with a building other than a tenement shall be accepted unless the applicant file with his application the written consent of the other tenant or tenants of said building.

(d) All chickens (or other fowls) shall be confined to proper coops and runways, and shall not be allowed at large.

(e) No roosters shall be kept.

(f) All coops shall be whitewashed or otherwise treated as approved by the department of health at least once a year, and at such other times as may be directed by the department of health, and all coops, runways, and surroundings shall be kept in a clean condition.

(g) If chickens (or other fowls) are to be kept on a vacant lot, the written consent of the owner of said lot, or evidence of ownership thereof by the applicant, shall be produced at the time of the presentation of the application.

(h) Chickens (or other fowls) shall be kept so as not to cause a nuisance.

(i) A permit to keep chickens, geese, ducks, or other fowls for domestic use shall not include the right to slaughter.

(j) No such permit for the keeping of chickens (or other fowls) shall be granted when the said chickens (or other fowls) or the coops or runways in which they are kept, measured in the most direct line, are within 25 feet of any inhabited building (other than the dwelling of the applicant if said chickens or other fowls are to be maintained on the same lot with the dwelling of said applicant or on an adjoining lot).

#### **Cellar Stables—Construction and Maintenance. (Reg. Bd. of H., Mar. 31, 1914.)**

Sec. 76. No cellar in the city of New York shall be occupied as a stable for horses, cattle, or other animals without a permit from the board of health.

*Resolved*, That the following rules and regulations relating to cellar stables in the city of New York be, and the same are hereby, adopted, to become effective May 1, 1914:

1. Every cellar stable must be adequately lighted.
2. Every cellar stable must be adequately ventilated.
3. The drains of every cellar stable must be properly connected with public sewer where practicable.

*Exception*: If there is no public sewer, drains of cellar stable must be properly connected with approved tight cesspool located outside the building.

4. Every cellar stable must be provided with a proper water supply, and all water-supplied fixtures must be properly trapped and sewer connected.

5. After May 1, 1914, the ceiling of every cellar stable for which the first application for a permit is made shall not be less than 8 feet from the floor.

6. There shall be not less than 800 cubic feet of air space for each horse.

7. Floors must be of concrete or other approved nonabsorbent material.

8. Floors of horse stalls must be of concrete or other approved nonabsorbent material, graded to a properly graded, trapped, and sewer-connected valley drain. All racks provided shall be removable.

9. Walls, ceilings, exposed woodwork, floors, horse stalls, and valley drains of cellar stables must be maintained in a clean condition at all times, and the whitewashed portions are to be rewhitewashed when necessary.

10. Every cellar stable must be maintained so as not to cause a nuisance.

11. No manure vault shall be allowed upon the premises. The loading of manure for removal must be done inside of stable without causing a nuisance.

**Waste, Soil, and Vent Pipes—Extension Above Roof Required. (Reg. Bd. of H., Mar. 31, 1914.)**

*Resolved*, That section 30 of the Sanitary Code be, and is hereby, repealed. Be it further

*Resolved*, That section 36 of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

SEC. 36. All waste, soil, and vent pipes in any building in the city of New York shall extend above the roof thereof to a height of at least 2 feet, and that portion of the pipe extending above the roof shall be of an increased diameter. All such pipes shall be so constructed and located that they shall not contribute to the creation of a nuisance.

**Water Tanks on Buildings to be Cleaned, Screened, and Ventilated. (Reg. Bd. of H., Apr. 21, 1914.)**

*Resolved*, That section 62a of the Sanitary Code be, and the same is hereby, amended so as to read as follows:

SEC. 62a. Every tank for holding water located on the roof or external part of a building shall be kept covered with a tight-fitting cover, or with an extra fine mesh screen to prevent the access of mosquitoes to the water therein; and every such tank shall be ventilated. Every tank from which water is furnished for drinking and domestic purposes shall be emptied and the inside thoroughly cleaned at least once a year and at such other times as may be directed by the sanitary superintendent or an assistant sanitary superintendent of the department of health.

**Bathing Beaches and Bathhouses—Location—Sanitary Regulation. (Reg. Bd. of H., Apr. 21, 1914.)**

1. No bathing beach shall be maintained within 500 feet of the point of discharge or outlet of any sewer which would contribute in any way to the pollution of the waters used by bathers.

2. An adequate supply of pure drinking water must be provided for patrons. Water from wells in the borough of Manhattan shall not be used for drinking. Water from wells in the other boroughs, other than the public water supply, shall not be used without a permit from the board of health.

3. Life lines and danger signs must be provided in accordance with the provisions of section 26 of the Sanitary Code.

4. Separate water-closet accommodations for each sex, approved by the department of health, must be provided, constructed, and maintained so as not to cause a nuisance or to contaminate the water used by bathers.

5. Proper and adequate facilities, approved by the department of health, must be provided for sterilizing bathing suits, towels, shoes, stockings, caps, or other articles which may be used by or hired to patrons of the establishment. All such articles that have been so hired or used must be sterilized before again rehiring or permitting the use of the same.

6. Bathhouses and the premises on which the bathing establishment is located must be maintained in a cleanly and sanitary condition.

7. The rules of the department of health governing bathing establishments must be kept posted in a conspicuous place in said establishment.

#### **Camps—Sanitary Regulation. (Reg. Bd. of H., Apr. 21, 1914.)**

1. *Water supply.*—(a) An adequate supply of drinking water must be provided on camp grounds; at least one tap provided for every four tents; said taps must be so arranged as to be easily accessible to occupants of tents. Water from wells other than public water supply can not be used without a permit from the board of health.

2. *Disposal of waste liquids.*—(a) Waste liquids shall be disposed of so as not to create a nuisance.

3. *Privy accommodations.*—(a) Sewer-connected, water-supplied, properly flushed water closets shall be provided where sewer connections are possible.

(b) Where sewer connections are not possible, dry-earth system must be used.

(c) Where dry-earth system is used the privy house and appurtenances shall be so constructed that the platform on which privy cans are set shall be at least 4 inches above the surface of the surrounding ground; said platform to be of nonabsorbent material.

(d) Privy house must be provided with sufficient seats, and seats must be provided with tight covers and closed when not in use.

(e) Privy houses must be constructed and arranged so as to prevent saturation of same by filthy liquids.

(f) Privy houses must be adequately ventilated and properly screened and protected against flies.

4. *Garbage and refuse disposal.*—(a) All garbage and refuse must be stored in metal cans with tight covers.

(b) Garbage must be removed daily from premises before 8 a. m.

5. Premises on which tent, camp, or bungalow is located must be owned by applicant, or proof furnished that premises are occupied by permission of or under lease from owner.

#### **Stationary Pool Baths Using Water Other Than River Water—Sanitary Regulation. (Reg. Bd. of H., Apr. 21, 1914.)**

Stationary pool baths using water other than river water must comply with the following requirements before a permit to maintain a bathing establishment will be granted by the board of health:

1. The pools, plungers, and mikvers must be emptied daily, and the bottom and side walls of same thoroughly scrubbed before refilling. The water of the pool must be maintained in a condition suitable for bathing purposes at all times.

2. Adequate toilet accommodations and shower baths approved by the department of health must be provided.

3. All waste water from showers, tubs, dressing rooms, water-closets, sinks, and platforms must be discharged outside the pool.

4. The floors of bathrooms must be made impervious to dampness. The side walls of bathrooms must be painted with two coats of white enamel paint, or covered with a nonabsorbent material, for a height of at least 6 feet above the floor.

5. When mats are used they must be made of rubber.

6. Stairs and stair supports leading to pools must be made of metal, stone, or cement.

7. All cushions and mattresses must be covered with nonabsorbent material.

8. Clean towels must be provided for each person. All such articles after being used must be sterilized before again permitting the use of same.

9. Persons suffering from any form of contagious, communicable, or infectious disease must not be permitted to enter or use the bathing pool.

10. Every bather, before being allowed access to the pool, shall be required to take a cleansing shower, preferably in warm water and soap, and should be required to use the toilet accommodations.

11. Bathers should not be permitted to commit any form of nuisance in the pool.

12. The rules of the department of health governing bathing establishments must be kept posted in a conspicuous place in said establishment.

#### **Floating Baths and Stationary Pool Baths Using River and Bay Water— Sanitary Regulation. (Reg. Bd. of H., Apr. 21, 1914.)**

Floating baths or stationary pool baths using, for bathing purposes, the waters of the Hudson, East, or Harlem Rivers, or New York Bay above the Narrows, must comply with the following requirements before a permit to maintain a bathing establishment will be granted by the board of health:

1. The bathing pool must be maintained water-tight, so as to prevent contamination of the contents of the pool by external sources.

2. All waste water from showers, tubs, dressing rooms, water-closets, sinks, and platforms must be discharged outside the pool.

3. The water of the pool must be maintained in a condition suitable for bathing purposes at all times. Where river or harbor water is used, it must be filtered through sand or other mechanical means of separation, and then be so treated by the use of hypochlorite of lime, ultra-violet rays, or other means as to render it clean and sanitary.

4. Persons suffering from any form of contagious, communicable, or infectious disease must not be permitted to enter or use the bathing pool.

5. Adequate toilet accommodations and shower baths approved by the department of health must be provided.

6. Every bather, before being allowed access to the pool, shall be required to take a cleansing shower, preferably in warm water and soap, and should be required to use the toilet accommodations.

7. Bathers should not be permitted to commit any form of nuisance in the pool.

8. Proper and adequate facilities approved by the department of health must be provided for sterilizing bathing suits, towels, shoes, stockings, caps, or other articles which may be used by, or hired to, patrons of the establishment. All such articles after being so hired or used must be sterilized before again rehiring or permitting the use of the same.

9. The rules of the department of health governing bathing establishments must be kept posted in a conspicuous place in said establishment.

**House Boats—Definition—Disposal of Waste and Refuse. (Reg. Bd. of H., Apr. 21, 1914.)**

*Resolved*, That the resolution<sup>1</sup> adopted by this board April 22, 1913, in reference to house boats be, and the same is hereby, amended so as to read as follows:

*Resolved*, That the following rules and regulations for the control of house boats be, and the same are hereby, adopted:

*Definition*.—A house boat shall be held to mean a covered boat fitted up as a dwelling or a boat with a deck cabin suitable for a dwelling, and used for dwelling purposes.

1. Each house boat shall be provided and equipped with suitable receptacles for night soil, garbage, or other refuse or waste material, except wash water.

2. No refuse or waste material of any kind, except wash water, shall be discharged into the waters in which a house boat is moored, anchored, or located.

**Analyses, Examinations, Investigations, etc., by Chemists or Experts—Presumptive Evidence of Facts. (Reg. Bd. of H., May. 27, 1914.)**

*Resolved*, That section 69a of the Sanitary Code be, and the same is hereby, adopted, to take effect immediately:

Sec. 69a. Every affidavit duly signed and acknowledged of a chemist, analyst, or other expert employed by the board of health of the department of health of the city of New York, or any analysis, examination, or investigation made by such analyst, chemist, or expert in respect to any matter, product, or thing which the said board has authority to examine, or cause to be examined, shall be presumptive evidence of the facts therein set forth.

**Mineral Water, etc.—Manufacture and Importation—Regulation of. (Reg. Bd. of H., July 28, 1914.)**

*Resolved*, That section 59 of the Sanitary Code be, and the same is hereby, amended, to take effect immediately, so as to read as follows:

Sec. 59. It shall be the duty of every manufacturer, importer, or other person who manufactures or imports, in the city of New York, any artificial or natural mineral, spring, or other water for drinking purposes, to file, under oath, with the department of health the name of such water and the exact location from which it is obtained, together with the chemical analysis and the bacteriological examination thereof, and when manufactured the exact formula used in its production, giving qualitatively and quantitatively each and every item entering into its composition.

No person shall manufacture or bottle mineral, carbonated, or table waters in the city of New York without a permit from the board of health. No permit will be required, however, where the city water supply is conducted through closed pipes and connected with a carbonated apparatus, from which it is dispensed direct to the consumer, without coming in contact with the air and not handled in any way.

**Day Nurseries—Sanitary Regulation—Medical Inspection. (Reg. Bd. of H., July 28, 1914.)**

*Resolved*, That the rules and regulations adopted by the board of health May 20, 1913, in reference to day nurseries, be, and the same are hereby, amended so as to read as follows:

1. Each child must be inspected on admission and if suspicious signs of contagious disease are noted the child must be placed in the isolation room and

<sup>1</sup> See Public Health Reports, June 26, 1914, p. 1751. See also Public Health Reports, July 25, 1913, p. 1600.

kept entirely apart from the other children and the department of health notified at once.

2. An isolation room for cases of suspected contagious diseases shall be provided.

3. All rooms devoted to nursery or kindergarten purposes shall be above the street level unless there is a cellar underneath the room so occupied.

4. The premises shall at all times be kept in a clean and sanitary condition. Dry dusting or sweeping is prohibited.

5. Adequate ventilation, lighting, and heating shall be provided. Except in extremely cold weather adequate ventilation must be maintained by means of open windows.

6. A well-ventilated room for children's outer garments shall be provided. In this room the clothing removed from the children in the morning must be placed.

7. A minimum of 200 cubic feet of air space for each child shall be provided.

8. Each iron bed or crib shall be placed so that there will be a space of 2 feet on all sides except where the head or sides of a bed or crib may touch the wall.

9. Woven-wire springs shall be provided, over which a folded blanket, protected by rubber or oilcloth sheeting, must be placed. Mattresses are not allowed.

10. The use of common wash cloths, towels, combs, and hair brushes is prohibited.

11. All diapers that have become soiled during the day shall be immediately placed in water and thereafter thoroughly washed and boiled. No diapers in an unclean condition shall be removed from the premises.

12. Unless the clothing worn by a child is thoroughly clean on admission, a snitable overapron (the property of the day nursery) shall be worn through the day, and each individual apron shall be marked for identification unless a clean apron is provided daily.

13. Adequate care must be taken of the milk, bottles, and nipples used in infant feeding.

14. No more children shall be admitted daily than are allowed by the permit of the board of health.

15. Each day nursery in the city of New York shall have attached thereto a regular physician of its selection, duly licensed under the laws of the State and in good professional standing, and immediately upon the appointment of said physician the day nursery shall notify the director of the bureau of child hygiene of the name and address of said physician.

It shall be the duty of such physician—

(a) To make a systematic examination of every regularly attending child at least twice a month, said examinations to be made at least two weeks apart.

(b) To examine each child applying for admission, and if suspicious signs of infectious diseases are noted to have such child placed in the isolation room, separate and apart from other children, and immediately notify the department of health, or if such child is found free from infectious diseases to issue a certificate to that effect and deliver same to the matron in charge of the nursery.

(c) To take a vaginal smear from every female child applying for admission and forward same to the department of health for examination, and not to issue a certificate of admission as provided in rule 2 unless the result of the examination of such smear shall be negative.

(d) To take later vaginal smears from all female children who have been denied admission because of gonorrhoeal vaginitis, or to have such smears taken by an inspector of the department of health.

16. It shall be the duty of the matron in charge of each day nursery in the city of New York—

(a) To have on file in the office of the nursery an original certificate of health, signed by the nursery physician, for each child that is a regular attendant.

(b) To have on file in the office of the nursery a record that each child regularly attending has been examined by the nursery physician at least twice a month, the said examinations to be not less than two weeks apart.

(c) To prevent the admission of children to the nursery until after they have been examined by the nursery physician and a certificate to the effect that they are free from infectious disease has been issued.

(d) To notify the department of health and the nursery physician immediately by telephone of any suspicious rash or illness which appears among the children during the absence of the nursery physician, and to isolate any child or children so affected in the isolation room.

(e) To make daily inquiry of each mother, or other person bringing the child, as to whether or not any sickness exists in the child's home, and if any suspicion is aroused as to the possibility of such home sickness being of an infectious nature, the child shall be excluded and the department of health notified, and such exclusion shall continue until a certificate of the department of health is furnished to the effect that the premises referred to are free from infectious disease.

(f) To require that every certificate of health for a female child shall not be considered complete unless attached thereto is a certificate of the department of health to the effect that the examination of the vaginal smear is negative.

(g) To exclude any female child who has been shown by examination of a vaginal smear to be affected with gonorrhoeal vaginitis, unless accompanied by a certificate of the department of health to the effect that two smears taken on successive days have shown negative results.

(h) To enforce all rules and regulations of the department of health for the conduct of day nurseries in so far as they relate to lighting, heating, ventilation, cleanliness, and general sanitary condition of the day nursery under her charge, and the care and maintenance of the attending children and their clothing, and the character and method of preservation of food.

*Note:* The department of health will assume the responsibility of instructing the day-nursery physicians in the technique of making smears for the detection of the bacilli of gonorrhoea.

The selected physician should be notified by the day-nursery authorities to apply to the diagnosis laboratory of the department of health for such assistance and instruction.

Failure to observe these rules may result in the revocation of the permit.

**Ashes, Refuse, etc.—Dumping on Vacant Lots Below Grade. (Reg. Bd. of H., Oct. 27, 1914.)**

1. No ashes, refuse, or street sweepings shall be deposited upon or used to fill up or raise the surface or level of any vacant lot or land under or above water in or adjacent to the built-up portions of the city of New York without a permit from the department of health, and such permit shall be effective only during the continued compliance with the rules and regulations of the said department.

2. Any person or persons desiring to fill such vacant land with street sweepings, refuse, and ashes shall make written application for a permit to the department of health, describing the land and their interest therein, and shall

state in such application the sources from which the material is to be obtained.

3. In the material (ashes, refuse, or street sweepings) used as fill the amount of putrescible matter shall be kept below 2½ per centum, except in the case of street sweepings, which may contain a larger amount of animal excrement or deciduous vegetable matter, and all putrescible matter shall be immediately raked out and properly buried or removed from the dump.

4. All material trimmed and sorted from the dump shall be removed at the expiration of each day's work, except glass, which may be stored in a properly screened building approved by the department of health.

5. All paper and cans shall be raked from the surface of the dump each day and properly buried or removed.

6. Every part of such dump, when filled to the required grade, shall be made level and covered with fresh earth or clean ashes.

7. No dust or offensive odors shall be allowed to escape from such dump to the detriment or annoyance of any person or persons not being therein or thereupon engaged, and no one shall fire a dump or burn anything thereon, except in a properly constructed incinerator approved by the department of health.

8. When deemed necessary the department of health may require the dump to be sprinkled to prevent the rising of dust therefrom, and may require the use of an adequate disinfecting solution to prevent the escape therefrom of offensive odors and the breeding of flies.

9. A violation of any of these regulations may be sufficient cause for the revocation of the permit and for the prosecution of the offender.