

PUBLIC HEALTH REPORTS

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FLEAS AND PLAGUE.

RECENT ADDITIONS TO OUR KNOWLEDGE OF THE MECHANISM BY WHICH FLEAS PROBABLY SPREAD THE DISEASE.

Because of the presence of plague in the ground squirrels of California and the rats of Seattle and Habana, the question of the manner of transmission of the infection is one of special interest to health officers who may at any time be called upon to combat the disease. Recently a report by A. W. Bacot and C. J. Martin, both of Lister Institute, appeared in the *Journal of Hygiene, Plague Supplement III*, Cambridge, 1914, giving the results of certain experiments carried on regarding the mechanism of transmission of plague by fleas. The experiments seem to add materially to our knowledge of the subject and probably to throw considerable light upon the previously noted, but not understood, seasonal prevalence of the disease in certain localities.

The following is essentially an abstract of the main features of the report:

From a study of the epidemiology of plague, the belief that the flea played an important rôle in the spread of the disease was advanced as early as 1897-98. In 1902-1904 it was quite conclusively shown by animal experimentation that the disease could be spread from rat to rat by this agency. It was also demonstrated that the puncture in the skin made by the flea in the act of feeding affords a wound through which it is possible for plague bacilli to enter, and animals were infected by the application of infectious material to areas on which fleas had been allowed to feed.

In its second report (1907) the Commission for the Investigation of Plague in India, in discussing the possible methods by which the flea may transmit plague, mentions that it may be "by a regurgitation of the stomach contents through the esophagus and pharynx, the bacilli being then injected with the saliva, or on the pricker, or being rubbed into the wounds made by the pricker." The commission, however, found that the infection could be conveyed by smearing recent flea bites with infectious blood or virulent cultures of plague bacilli and considered that the possibility of the transmission of infection among

rodents by rats rubbing flea feces into recent flea bites had been demonstrated. The commission, however, did not feel justified in expressing an opinion as to whether the rubbing of infectious feces in this way into recent flea bites was the usual method of infection.

Bacot and Martin repeated the experiments of the plague commission, and were able to infect rats by applying to a recently flea-bitten area the spleen from a plague rat, or a strong emulsion of plague bacilli from the stomachs of fleas which had been fed on plague-infected animals. While 9 out of the 10 rats to which spleen had been applied died of plague in less than three days, only 5 out of 23 rats to which the emulsion from flea stomachs had been applied died of plague. This suggested that the plague bacilli from the contents of fleas' stomachs had lost certain properties, with the result that they produced infection through flea bites less easily than bacilli from plague spleens.

The experiment was carried out of allowing fleas which had previously fed upon infected animals to bite fresh animals under such conditions that there was little probability of the punctures made in feeding becoming contaminated with infected flea feces. It was found that animals could thus be infected, although it was usually necessary for a considerable number of fleas to bite a rat, and only a relatively small proportion of the animals became infected in this way. The authors took this to show that infection may be conveyed by fleas during the act of feeding without fecal contamination of the wound, but that infection by no means occurs every time a flea with plague-bacilli in its stomach feeds on a susceptible animal. However, when 20 fleas which had been shown to have plague bacilli in their feces were allowed to feed on each rat on two successive days, 9 out of 13 of the rats died of plague. The authors believed this indicated that the proportion of infection rises with the number of opportunities for infected fleas to feed upon the animal.

The authors found that in certain fleas which had fed upon infected animals, tenacious masses of plague bacilli had formed in the stomach and frequently occluded the lower end of the esophagus, with the result that while the flea could bite and suck blood into its esophagus, the blood could not get through the occluded part into the stomach. In this way the flea was unable to feed, although hungry and making repeated attempts. They also noticed that the blood in the distended esophagus, failing to enter the stomach, would frequently be regurgitated through the mouth upon cessation of the sucking act.

Fleas (*Xenopsylla cheopis*) in which the esophagi were occluded with these tenacious masses of plague bacilli were allowed to bite rats, one or two fleas being allowed to feed upon each rat on one or two, or sometimes three, days in succession. Of four rats used, all died of plague.

The authors summarized their work as follows:

Under conditions precluding the possibility of infection by dejecta it was found that two species of rat fleas, *Xenopsylla cheopis* and *Ceratophyllus fasciatus*, fed upon septicemic blood, can transmit plague during the act of sucking, and that certain individuals suffering from a temporary obstruction at the entrance to the stomach were responsible for most of the infections obtained, and probably for all.

In a proportion of infected fleas the development of the bacilli was found to take place to such an extent as to occlude the alimentary canal at the entrance to the stomach. The culture of pest appears to start in the intercellular recesses of the proventriculus and grows so abundantly as to choke this organ and extend into the esophagus. Fleas in this condition are not prevented from sucking blood as the pump is in the pharynx, but they only succeed in distending an already contaminated esophagus, and, on the cessation of the pumping act, some of the blood is forced back into the wound. Such fleas are persistent in their endeavors to feed, and this renders them particularly dangerous. Fleas suffering from obstruction do not necessarily perish, and in course of some days the culture obliterating the lumen of the proventriculus may autolyse and the passage again become pervious. They are, however, incapable for the time being of imbibing fresh fluid, and are, therefore, in danger of drying up if the temperature is high and the degree of saturation of the atmosphere low. Although, as far as our observations go, they withstand desiccation quite as well as normal fleas which are not fed, their length of life must be short directly hot, dry weather sets in, and we are led to wonder whether this fact may not, to some extent, explain why in India epidemic plague is confined to the cooler and moister seasons, and particularly why in Northern and Central India the epidemics are abruptly terminated on the onset of the hot, dry weather.

MORBIDITY REPORTS IN LOUISIANA.

An amendment was made to the Sanitary Code of Louisiana April 24, 1914, requiring physicians to report cases of notifiable diseases both to the State health officer and to the local board of health. These reports are to be made within 24 hours. The requirement insures that both the local and State health departments will receive prompt notice of cases and at all times have current information of the prevalence and geographic distribution of the controllable diseases.

Requiring reports to be made to both the local and State health departments is not at present a common practice in this country. It seems, however, to be necessary in States in which adequate provision has not been made for efficient local health officers under the control and supervision of the State health department.

SANITATION MISAPPLIED.

By ARTHUR M. STIMSON, Passed Assistant Surgeon, United States Public Health Service.

A popular reflection of the activities in recent years along public health lines is seen in the public exploitation of the adjective "sanitary." At every turn we encounter "sanitary" groceries, bakeries,

restaurants, barber shops, etc., so labeled, while glaring advertisements inform us that such and such clothing, food, or appliance is strictly "sanitary." In so far as this condition implies an active interest on the part of the public in the preservation of its health, it is a hopeful sign, and we must admit that the modern advertising agency has on the whole a very accurate estimate of public interest. So much the better if the advertised sanitary properties or facilities materialize on investigation, and it is a pleasure to acknowledge that certain commercial enterprises are offering to the public and to their employees conditions and products which mark a real progress in the prevention of disease.

On the other hand, where the sanitary influence exists in name only or by implication in the presence of some "sanitary-looking" mysterious apparatus or exterior it too frequently occurs that a false sense of security is indulged in by the user, and quite possibly to his detriment. An example of the latter condition is observed in the ignorant use or rather misuse of disinfectants and deodorants. Disinfectants have their proper uses and are indispensable under some circumstances, notably in rendering the body waste products harmless at the bedside of persons sick with certain communicable diseases. Deodorants, however, are of questionable value and may even conceal a menace, since they at best absorb or neutralize an odor which may indicate the presence of some harmful substance which ought to be disposed of, and at worst merely substitute a stronger and perhaps less disagreeable odor, without in either case having destroyed the dangerous substance whose presence they hide. The same is true where disinfectants, although good in themselves, are so misapplied as not to effectively attack the dangerous substance. For example, certain "disinfectant" and "deodorant" appliances may be frequently seen in public toilets in hotels, railway cars, etc., which occasionally add a drop or so of "disinfectant" (possibly good in itself) to the pan or bowl, and undeniably add a very strong and frequently unpleasant odor to the apartment.

Where these appliances are superimposed upon modern satisfactory plumbing and a water carriage system of disposal they are manifestly superfluous, and where they are used in connection with a pan closet, as in railway carriages, they are ineffectual, since there is no possibility of their contents being thoroughly mixed with the dejecta in amounts adequate to accomplish any good. Moreover the manner of their installation is such that in some instances offensive and possibly dangerous material, which would otherwise have been washed away, accumulates on the delivery pipe of the apparatus where no disinfectant can reach it, but where flies may have ready access to it. In spite of their lack of real efficiency, great potency seems to be ascribed to these concerns, since a poor type of toilet fixture and a lack of

mechanical cleanliness in the apartment depend for excuse upon their presence.

A word about dirt and mechanical cleanliness. "Dirt" means various things to the housewife, the sanitarian, the surgeon, the chemist, and the bacteriologist, depending on its composition and location. A surgeon might operate successfully in a room which a housewife considered untidy, but not with a knife which she would pass as clean. A bacteriologist might carry out successful research in a cellar which a dainty housewife would hesitate to enter, but not by using glassware cleaned by her methods. The sanitarian must appreciate the various standpoints from which "dirt" is viewed, and must balance that cleanliness which is practical against what is theoretically desirable. But if his viewpoint is sufficiently inclusive, he will contend that grossly visible dirt, in the sense of the housewife, is always prejudicial to sanitary conditions. Even if the dirt does not of itself contain disease germs, its presence conduces to practices which are menaces to health. Promiscuous spitting on the floor is admittedly a dangerous practice. Will a person (capable of doing it at all) be more apt to spit on the floor of a neat apartment or on that of a dirty, ill-kept one? Will householders be more apt to dump rubbish and filth on the muddy banks of a black, foul-smelling stream, or on the grassy slopes of a clear and wholesome river? There are incorrigibles, it is true, with whom the law must deal, but the general run of our citizens are susceptible to their surroundings, and respond to a neat, well-cared for environment, by improving their habits and practices, and incidentally their sanitary condition as a body.

It behooves those who are concerned with the handling and accommodation of employees and patrons, especially in large numbers, to subject the "sanitary" measures which they employ to the critical scrutiny of common sense, aided here and there at the technical points by expert information. Otherwise they are sure to lose in the end, to the advantage of more progressive competitors, and (since there is no reason to impute to the business man a disproportionate lack of the altruistic impulse) they will be missing a great opportunity for inculcating the lessons of genuine sanitation.

PURE DRUGS AND THE PUBLIC HEALTH.

By MARTIN I. WILBEET, Assistant in Pharmacology, Hygienic Laboratory, United States Public Health Service.

Food and drug laws are generally recognized as being economic measures designed to prevent dishonest practices or gross adulteration and thereby secure to the purchaser an equitable return and the assurance that the food or drug product purchased will be true to

name or nature as represented by the seller. The pure drug features of these laws, however, combined with the laws designed to restrict the practice of pharmacy to specially trained and capable individuals, also have, or should have, an evident bearing on public health in that the purchaser is led to assume that the licensed druggist is directly responsible for the character and purity of the drugs sold.

The methods adopted for enforcing these laws in the past have not always been in accord with the securing of the best results from a public-health point of view, and even in States where the control of laws regulating the nature and purity of drug products is in the hands of the State board of health the tendency has been to discourage rather than encourage adequate and satisfactory control of all medical supplies.

Some indication of the nature and variability of the products sold as medicine may be had from a comparative study of Hygienic Laboratory bulletins embodying in the form of annual compilations a "Digest of Comments on the Pharmacopœia of the United States and on the National Formulary."

These bulletins, though not compiled especially for this purpose, reflect from year to year the available material regarding published activities of food and drug laboratories so far as they relate to pharmacopœial or official drugs and preparations, and the sum total of the reported activities well indicates the general trend of the trade so far as it is influenced by the present-day method of drug-law enforcement.

A compilation of the analytical reports embodied in previously published bulletins shows that out of a total of more than 9,000 samples of 6 pharmacopœial preparations reported on during the years 1907 to 1911, inclusive, more than 4,000, or approximately 45 per cent, were found to be not in compliance with the requirements of the Pharmacopœia. That approximately this same ratio still holds is evidenced by the available annual reports of State boards of health and State food and drug commissioners, abstracted in Hygienic Laboratory Bulletin No. 93, embodying a Digest of Comments on the Pharmacopœia of the United States and on the National Formulary for the calendar year ending December 31, 1912. Among the reports reflected in this bulletin we find that the chemist of the Indiana board of health states that of 365 samples of drugs analyzed 156, or 42.7 per cent, were illegal in that they did not comply with the standards or requirements. The food and drug commissioner of South Dakota reports that of 326 samples examined 118, or 36.3 per cent, were not passed, and in New Hampshire of 421 samples of drugs examined by the chemist of the board of health 180, or 42.8 per cent, were not conformable.

Further evidence regarding existing conditions will be found in the accompanying table showing the total number of samples of 26 drugs

and preparations reported on during 1912, the number that were rejected or found to be illegal, and the number of reporters on each individual article.

Table showing reported results of analysis of samples of 26 official articles—a compilation of data included in Hygienic Laboratory Bulletin No. 93.

	Number of reporters.	Number of samples.		Per cent of samples rejected.
		Examined.	Rejected.	
Alcohol.....	7	98	47	47.9
Ammonia, aromatic spirit of.....	5	116	78	67.2
Ammonia, water.....	4	19	11	57.8
Asafetida.....	10	256	200	78.1
Belladonna, tincture of.....	3	14	6	42.8
Camphor, spirit of.....	19	802	423	52.7
Camphor, liniment of.....	8	597	99	16.5
Ferric chloride, tincture of.....	7	680	219	32.2
Ferrous iodide, sirup of.....	8	549	88	16.0
Ginger, tincture of.....	9	74	30	40.5
Iodine, tincture of.....	18	984	474	48.1
Lard.....	8	265	53	20.0
Lemon extract.....	10	252	100	39.6
Lime water.....	10	635	98	15.4
Linseed oil.....	12	367	138	37.6
Olive oil.....	13	912	69	7.6
Opium, camphorated tincture of.....	5	91	30	32.9
Opium, tincture of.....	11	252	125	49.6
Peppermint, spirit of.....	14	270	139	51.4
Solution of hydrogen dioxide.....	13	1,026	90	8.7
Solution of potassium arsenite.....	7	570	128	22.4
Sulphur.....	6	70	35	50.0
Sweet spirit of niter.....	22	609	336	55.1
Turpentine, oil of.....	8	639	132	20.6
Vanilla.....	12	286	116	40.5
Witch hazel.....	5	91	24	26.3
Total.....		10,524	3,288	31.2

As an object lesson this table is well worth studying from various points of view. Not the least important in this connection is the suggestion that, despite the apparently large number of samples examined, the present-day method of enforcing food and drugs laws is hopelessly inadequate so far as offering to control, even in a moderate degree, the nature and purity of drug products as they reach the consumer.

The limitations imposed by the present method of enforcing the drug feature of food and drugs laws is well illustrated by a table recently published by L. P. Brown, food and drug commissioner of Tennessee (*Am. Food J.*, 1912, v. 7, July, p. 9), showing the number of States in which food and drugs laws are actually being enforced, the number of employees in each State, and the number of samples analyzed in one year. This table states that no less than 44 political divisions of the United States make some attempt to enforce laws of this type. The total number of employees recorded is 465, an average of but 10 to each State. The total number of samples examined during one year is given as 83,498, and from a study of several annual reports it is fair to assume that not more than from 20 to 25 per cent of these samples represent drug products or products used as drugs.

When one remembers that in the United States alone there are no less than 40,000 retail drug stores, and that each one of these stores has in stock from 1,000 to 20,000 separate articles used or offered for use as medicine, the futility of endeavoring to control or even to seriously influence the nature and purity of products sold as medicines by an occasional examination of one or more preparations is at once apparent.

That the present-day method of enforcing food and drugs laws is efficient in some directions must be admitted, and the possibilities in this line are well indicated in the above table. Given a product that is more or less easily examined by chemical means and for which a reasonably high standard has been established by the Pharmacopœia, by statute, or by regulation, little or no difficulty is encountered in materially improving the conditions under which such an article is marketed, and thus securing for the consumer a reasonably reliable product if he will but exercise ordinary care in making his purchases from reputable dealers.

One instance of this type is olive oil, which up to a comparatively few years ago was considered to be among the most adulterated of all commercial products. This oil, though largely if not preponderantly, used as a food product, is also of value as a medicine and can now be classed among the generally pure articles used for medicinal purposes.

Another article that has been materially improved through systematic examination and accompanying publicity is "solution of hydrogen peroxide." This preparation is also used quite extensively in the arts as a bleaching material, and formerly it was quite common to find the comparatively impure and usually weak technical product on sale in drug stores for medicinal purposes. Improved methods of manufacture, the use of preservatives, and the exercise of a little additional care in keeping the preparation have evidently combined to change this preparation from one that was considered to be uniformly impure to one that complies fairly well with the spirit though not the exact letter of the present pharmacopœial requirements. Disregarding the frequent presence of a preservative, only 8.7 per cent of the preparations examined were found to be deficient in strength or contaminated. This figure, when one considers the unstable nature of the product, compares very favorably, indeed, with the low percentage (7.5 per cent) of samples of olive oil rejected during the same period.

Oil of turpentine is another product that is rapidly being improved, and the economically closely related linseed oil, while still above the general average for all of the products reported on during 1912, also evidences a marked improvement over previously reported conditions. These two products are very widely used for technical pur-

poses and occupy rather an anomalous position as drugs. The frequency with which they are now found to be of inferior quality is no doubt due to the fact that little or no attempt has as yet been made to regulate their identity or purity for technical purposes, and because of the much lower price of the impure technical products they are very frequently sold in place of the official, or pharmacopœial, articles for medicinal use.

The opposite of these rather promising conditions is shown in connection with *asafetida*, a drug product of somewhat uncertain value that is, nevertheless, used quite extensively, largely perhaps because of its penetrating odor and disagreeable taste. The pharmacopœial requirements for this drug are unnecessarily high and the chemical tests for identity and purity quite inadequate. It is, therefore, not at all surprising to learn that more than 78 per cent of the samples of *asafetida* examined did not comply with the requirements of the Pharmacopœia.

This drug is, however, but one of a number of articles that are of uncertain medicinal value, are difficult to control from a chemical point of view, and are more frequently found to be below standard than above. This one fact, that there are hundreds of more or less widely used drugs for which we have little or no data on which to base a chemical control of the finished preparation, serves to further illustrate the difficulty of exercising any adequate control of medicinal preparations through a city, State, or Federal laboratory.

That some form of control is essential is evidenced by the head of one of the leading drug houses in England, who is reported as saying that the thousands of samples of crude drugs examined annually in his laboratories yield abundant evidence to show that constant and efficient control is necessary if the purity of medicinal products is to be maintained and progress achieved on the lines of modern science.

The reports of the several officials intrusted with the enforcement of laws relating to the production and sale of drugs have emphasized time and again that much of the material that is now being sold as medicine in this country is either directly harmful or absolutely useless, and that from a public-health point of view considerable progress is necessary before the consumer is as adequately safeguarded as he should be.

It is generally recognized that once a seal is broken, a package opened, or a cork drawn, the manufacturer can no longer be held responsible for the content of the package, and, quite irrespective of the nature of the medicine, the pharmacist in dispensing a portion of an original package assumes all responsibility for the nature and purity of the article.

That this responsibility of the pharmacist is as yet not appreciated and that much progress must be made in the enforcement of existing

laws before the public is as adequately protected as it should be, or has a right to expect, is evidenced by the shortcomings of the pharmaceutical preparations included in the table referred to above, particularly those preparations usually made on a comparatively small scale in the retail drug store. From the point of view of State or national officials, these preparations offer the most serious difficulties in the way of control, through the intervention of Federal or State laboratories, and yet they are of considerable importance from a medical point of view in that they include some of the most widely used medicines we now have. It has been well said that medicine, particularly the use of medicines, as a science can make little or no progress until physicians know more of the nature and composition of the articles they use as medicines and of the action or influence of these articles on the healthy as well as the diseased organisms.

How little actual reliance can be put in the average drug preparation at the present time will be appreciated when we learn that fully 50 per cent of such widely used articles as aromatic spirit of ammonia, spirit of camphor, tincture of iodine, tincture of opium, spirit of peppermint, and spirit of nitrous ether have been found to be adulterated or below standard.

Table showing variations in the active principles of drugs reported during the calendar year ending Dec. 31, 1912.

[A compilation of data included in Hygienic Laboratory Bulletin No. 93.]

	Number of reporters.	Number of samples.	Minimum per cent.	Maximum per cent.	U. S. P. requirements.
Belladonna leaves....	5	144	0.175	0.563	0.3 per cent mydriatic alkaloids.
Belladonna root.....	6	115	.11	.780	0.45 per cent mydriatic alkaloids.
Guarana.....	3	41	3.720	5.16	3.5 per cent alkaloidal principles.
Hydrastis.....	8	114	2.3	4.85	2.5 per cent hydrastine.
Hyoseyamus.....	4	120	.043	.234	0.08 per cent mydriatic alkaloids.
Ipecac.....	10	253	1.24	2.75	1.75 per cent ipecac alkaloids.
Jalap.....	6	173	3.67	21.76	7 per cent total resin.
Stramonium.....	4	127	.14	.470	0.25 per cent mydriatic alkaloids.

Some additional argument for more adequate control of the identity, purity, and strength of materials used as medicine is offered by the table including a compilation of data showing the variability of well-known and widely used drugs which can, in a measure at least, be controlled by assay and analysis. Preparations of these drugs, on assay, are less frequently found to be above than below standard and even a standardized preparation is far from being permanently so.

As is well known, all pharmaceutical preparations and many drugs and chemicals deteriorate on keeping, and this deterioration is not so much dependent on time alone as on a number of accompanying factors, as light, heat, atmospheric conditions, and the general lack of care or technical knowledge in storing the various substances. All in

all, it is safe to assert that no matter how excellent a drug or preparation may be when it leaves the producer there are many possibilities for it to become worthless, if not positively dangerous, through carelessness or neglect before it reaches the consumer.

The general subject of changes produced in a drug because of deterioration due to improper keeping has received altogether too little attention and it is not generally recognized that many of the formerly well known drugs have probably been discredited because of their failure to accomplish the object for which they were administered, a failure perhaps largely due to some form of contamination or to decomposition not recognized by the dispenser.

In addition to the changes in drugs that may be produced by heat, by the constituents of the air, by ferments, or by microorganisms, some recent observations by Neuberg, of Berlin, suggest that nearly all types of organic compounds acquire a pronounced photosensitiveness when they are mixed with inorganic compounds. Iron salts, it is said, provoke such changes most strikingly, and it is quite possible that otherwise innocuous materials may thus be converted, in part at least, into decidedly harmful compounds.

In addition to this possible deterioration of medicaments, which can be averted, to a considerable degree at least, by constant care and watchfulness, there are a number of other factors that should be taken into consideration in connection with the dispensing of medicines to the consumer. Not the least important of these several factors is the accuracy and also the sensitiveness of scales, weights and measures. On page 43 of Hygienic Laboratory Bulletin No. 93 will be found several references that bear out this assertion. One observer found that not one of 36 graduates examined was correct. Some were better than others, but all were bad. In the State of Kansas nearly one-half of the prescription weights examined were condemned, and of the 718 prescription scales examined 195 were found to be unfit for use.

The inability or unwillingness of retail druggists to assume proper responsibility is further evidenced by the recommendation of one man to use ready-made tablets in place of weighing out small quantities of potent drugs. The fallacy of this advice has more latterly been emphasized by the fact that compressed as well as other tablets, even under most favorable conditions, may vary from 10 to 30 per cent from the quantities claimed. Under conditions not so favorable even greater variations have been observed, and in cases where tablets have been made to sell at inordinately low prices it has been found that expensive chemicals were present only in traces sufficient to give qualitative tests.

In conclusion it may be reiterated that the more evident shortcoming in the present-day enforcement of pure-drugs laws is the general failure to properly place the responsibility for the nature,

kind, and purity of the medicines supplied to the consumer where it belongs. This shortcoming is being corrected, to some extent at least, by recently enacted laws to regulate the practice of pharmacy by placing the responsibility squarely on the person dispensing the drug.

The proper enforcement of laws designed to regulate the practice of pharmacy in conjunction with pure-drugs laws should relieve physicians and the public of any doubt as to the composition, purity, quality, and strength of all drugs and medicinal preparations used in the treatment of disease. As these laws are enforced at the present time it is plainly evident that the methods of control are inadequate and do not serve to safeguard public health as well as they could or should.

Boards of health and other State and Federal officials intrusted with the enforcement of these laws should endeavor to call attention to the desirability of having druggists exercise a close scrutiny of the drugs and preparations included in their stock, to keep drugs, chemicals, and preparations in suitable containers, to throw away old or useless material, and to see that scales, weights, and measures are reliable and accurate under the conditions imposed upon them.

Some effort should also be made to see that drug stores are equipped with the necessary analytical apparatus with which to analyze or examine all supplies and thus assist in maintaining a more efficient control of the articles sold as medicine.

Consistent and efficient control of the identity, purity, and strength of all drugs and preparations as furnished the consumer would make for progress in the science of medicine and should prove to be an important factor in promoting public health.

STATE AND INSULAR HEALTH AUTHORITIES.

Alabama.

Board of censors of the State medical association acting as a committee of public health:

- W. H. Sanders, M. D., chairman, Montgomery.
- I. L. Watkins, M. D., Montgomery.
- S. W. Welch, M. D., Talladega.
- Chas. A. Mohr, M. D., Mobile.
- V. P. Gaines, M. D., Mobile.
- D. F. Talley, M. D., Birmingham.
- Louis W. Johnston, M. D., Tuskegee.
- R. M. Cunningham, M. D., Birmingham.
- Glenn Andrews, M. D., Montgomery.
- S. G. Gay., M. D., Selma.

Executive health officer:

- W. H. Sanders, M. D., Montgomery.

Registrar:

- H. G. Perry, M. D.

Laboratory:

- P. B. Moss, M. D., director.

Appropriation for health department:

\$25,000 for current year; an additional \$1,200 for clerk.

Fiscal year ends September 30.

Arizona.

Board of health:

- George W. P. Hunt, governor, president, Phoenix.
- George P. Bullard, attorney general, vice president, Phoenix.
- Robert N. Looney, M. D., secretary, Prescott.

Executive health officer:

- Robert N. Looney, superintendent of public health, Prescott.

Chemist and bacteriologist:

- Charles A. Meserve, M. D., Tucson.

Appropriation for health department:

\$2,800 for current year.

Appropriation for laboratory, chemist, and bacteriologist:

\$2,700 for current year.

Fiscal year ends June 30.

Arkansas.

Board of health:

- Frank B. Young, M. D., president, Springdale.
- Morgan Smith, M. D., secretary, Little Rock.
- B. A. Fletcher, M. D., Augusta.
- G. A. Warren, M. D., Black Rock.
- W. P. Parks, M. D., Mena.
- S. A. Southall, M. D., Lonoke.
- L. A. Buckner, M. D., Dermott.

State health officer:

Morgan Smith, M. D., Little Rock.

Appropriation for health department:

\$8,950 for biennial period ending March 31, 1914.

Fiscal year ends March 31.

California.

Board of health:

- Martin Regensberger, M. D., president, San Francisco.
- James H. Parkinson, M. D., vice president, Sacramento.
- Donald H. Currie, M. D., secretary, Sacramento.
- Wallace A. Briggs, M. D., Sacramento.
- W. LeMoyné Wills, M. D., Los Angeles.
- O. Stansbury, M. D., Chico.
- Edward F. Glaser, M. D., San Francisco.

Executive health officer:

Donald H. Currie, M. D., Sacramento.

Bureau of administration:

John F. Leinen, director, Sacramento.

Bureau of tuberculosis:

Burt F. Howard, M. D., director, Sacramento.

Bureau of registration of nurses:

Anna C. Jamme, R. N., director.

Bureau of the hygienic laboratory:

Wilbur A. Sawyer, M. D., director, Berkeley.

Bureau of foods and drugs:

Myer E. Jaffa, M. S., director, Berkeley.

Bureau of sanitary engineering:

Charles Gilman Hyde, C. E., acting director, Berkeley.

Bureau of vital statistics:

George D. Leslie, Ph. B., director and statistician, Sacramento.

Appropriations for health department:

Salaries.....	\$25, 100
Support of food and drug laboratory.....	22, 500
Support of hygienic laboratory.....	10, 000
Traveling and contingent expenses.....	3, 750
Printing.....	4, 000
Occupational diseases.....	1, 000
Contagious diseases.....	100, 000
Tuberculosis.....	3, 750

Other sources of revenue:

Nurses' registration fees, \$10 a fee.

Fees for certified copies of births, marriages, and deaths, 50 cents a certificate.

Cold-storage licenses, \$50 a year.

Pure food fines—one-half of what is collected.

Fiscal year ends June 30.

Colorado.

State board of health:¹

- Sherman Williams, M. D., president.
- Jacob Campbell, M. D., vice president, Boulder.
- Paull S. Hunter, M. D., secretary and executive officer, Denver.
- Crum Epler, M. D., treasurer, Pueblo.
- S. R. McKelevy, Denver.
- H. F. Merryweather, Denver.
- L. G. Crosby, M. D., Ouray.
- A. W. Scott, Fort Collins.

¹ These data were taken from a report furnished a year ago.

Connecticut.**Board of health:**

Edward K. Root, M. D., president, Hartford.
 Albert W. Phillips, M. D., Derby.
 Lewis Sperry, South Windsor.
 Arthur J. Wolff, M. D., Hartford.
 Louis J. Pons, M. D., Milford.
 J. Frederick Jackson, Hamden.
 Joseph H. Townsend, M. D., secretary, Hartford, Conn.

Executive health officer:

Joseph H. Townsend, M. D., Hartford.

Bacteriologist and director of laboratory:

Herbert W. Conn, Ph. D., Middletown.

Sanitary inspector:

George C. Ham., Ph. B., Naugatuck.

Appropriation for health department:

\$46,000 for two years ending September 30, 1915.

Fiscal year ends September 30.

Delaware.**Board of health:**

William P. Orr, M. D., president, Lewes.
 J. W. Clifton, M. D., Smyrna.
 A. E. Frantz, M. D., Wilmington.
 W. F. Haines, M. D., Seaford.
 J. A. Draper, M. D., Wilmington.
 E. R. Steele, M. D., Dover.
 C. A. Ritchie, M. D., Wilmington.

Executive health officer:

A. E. Frantz, M. D., Wilmington.

Pathologist and bacteriologist:

H. J. Watson.

Appropriation for health department:

\$8,000 for current year.

Fiscal year ends June 30.

District of Columbia.**Executive health officer:**

William C. Woodward, M. D.

Assistant health officer:

John L. Norris, M. D.

Chief contagious disease service:

William C. Fowler.

Bacteriologist:

J. J. Kinyoun, M. D.

Chemist:

R. L. Lynch, M. D., Phar. D.

Chief sanitary inspector:

C. R. Holman.

Chief food inspector:

H. Young, D. V. S.

Appropriation for health department:

For salaries of regular force.....	\$63, 620
For enforcement of the provisions of the act of Congress to prevent the spread of contagious diseases, \$12,000 for personal services and \$12,000 for supplies for the smallpox hospital.....	24, 000
For the maintenance of disinfecting service, which includes compensation for personal services, purchase and maintenance of horses, wagons, harness, etc.....	5, 000
For the enforcement of the act to provide for the drainage of lots.....	1, 500
For special services in connection with the detection of the adulteration of drugs and foods.....	100
For the equipment and maintenance of the bacteriological laboratory...	1, 000
For the contingent expenses for the enforcement of an act of Congress to regulate the sale of milk.....	1, 000
For the necessary inspection of dairy farms, including \$240 per annum each to the health officer, assistant health officer, medical inspector in charge of contagious diseases, and six inspectors of dairy farms for maintenance of vehicles, also \$150 per annum to three sanitary inspectors for maintenance of motor cycle and bicycles.....	6, 000
For isolating wards of Garfield and Providence Hospitals, \$6,000 and \$4,000 per annum, respectively.....	10, 000
For maintenance, including personal services of public crematory.....	2, 000
For the installation of an additional furnace for public crematory.....	3, 000
For treatment of ponds of stagnant water.....	200
Total.....	117, 420

Fiscal year ends June 30.

Florida.

Board of health:

- F. J. Fearnside, president, Palatka.
- C. G. Memminger, Lakeland.
- S. R. Mallory, Pensacola.

Executive health officer:

Joseph Y. Porter, M. D., Jacksonville.

Bacteriologist:

Henry Hanson, M. D., Jacksonville.

Veterinarian:

Charles F. Dawson, M. D., Jacksonville.

Appropriation for health department:

One-half mill tax levy, approximately \$100,000, in 1913.

Fiscal year ends December 31.

Georgia.

Board of health:

- Samuel C. Benedict, M. D., president, Athens.
- Howard J. Williams, vice president, Macon.
- H. F. Harris, M. D., secretary, Atlanta.
- W. W. Owens, M. D., Savannah.
- A. D. Little, M. D., Thomasville.
- Thomas J. McArthur, M. D., Cordele.
- James H. McDuffie, M. D., Columbus.
- Robert F. Maddox, Atlanta.
- W. L. Funkhouser, M. D., Rome.
- Giles Hathcock, M. D., Lula.
- Doughty, W. H., jr., M. D., Augusta.
- Walker, J. L., M. D., Waycross.
- M. S. Brown, M. D., Fort Valley.

Executive health officer:

H. F. Harris, M. D., Atlanta.

Laboratories:

H. F. Harris, M. D., director, Atlanta.

K. R. Collins, M. D., assistant director.

Director of field sanitation, in charge of Rockefeller Hookworm Commission work in Georgia:

A. G. Fort, M. D.

Director of publicity department:

E. R. Park, M. D.

Appropriation for health department:

\$30,500 for current year.

Fiscal year ends December 31.

Hawaii.

Territorial board of health:¹

J. S. B. Pratt, M. D., president.

Attorney General Wade Warren Thayer.

F. C. Smith.

A. R. Keller.

D. Kalaoukalani, sr.

George R. Carter.

W. C. Hobdy, M. D.

Secretary Territorial board of health:

K. B. Porter, Honolulu.

Idaho.

Board of health:

W. R. Hamilton, M. D., president, Weiser.

O. B. Steely, M. D., Pocatello.

J. H. Peterson, attorney general, Boise.

F. P. King, State engineer, Boise.

Ralph Falk, M. D., Secretary, Boise.

Executive health officer:

Ralph Falk, M. D., Boise.

Bacteriologist:

E. E. Laubaugh, M. D., Boise.

Chemist:

H. Louis Jackson, Boise.

Sanitary and pure-food inspector:

James H. Wallis.

Appropriation for health department:

\$63,080 for current year.

Fiscal year ends December 31.

Illinois.

Board of health:

John A. Robison, M. D., president, Chicago.

T. A. Freeman, M. D., Mattoon.

A. Szwajkart, M. D., Chicago.

R. D. Luster, M. D., Granite City.

J. J. Hassett, M. D., McLeansboro.

T. B. Lewis, M. D., Hammond.

Executive health officer:

C. St. Clair Drake, M. D., Springfield.

¹ These data were taken from a report furnished a year ago.

Bacteriologist:

George F. Sorgatz, M. D., Springfield.

Chief inspector lodging-house department:

George Delvigne, Chicago.

Appropriation for health department:

\$105,265 for current year.

Fiscal year ends September 30.

Indiana.

Board of health:

T. Henry Davis, M. D., president, Richmond.

James S. Boyers, M. D., vice president, Decatur.

John R. Hicks, M. D., Covington.

H. H. Sutton, M. D., Aurora.

J. N. Hurty, M. D., Phar. D., secretary, Indianapolis.

Executive officer:

J. N. Hurty, Indianapolis.

Epidemiologist:

William F. King, M. D., assistant secretary.

Bacteriological laboratory:

William Shimer, A. B., M. D., superintendent.

Food and drug commissioner and chemist:

H. E. Barnard, B. S.

Engineer and water chemist:

J. A. Craven, C. E.

Sanitary engineer:

R. L. Sackett, C. E.

Statistician:

Charles A. Carter, M. D.

Appropriation for health department:

\$76,532 for current year.

Other sources of revenue:

The Pasteur Laboratory is supported by 5 per cent of the dog tax for the whole State. This amounts to \$7,032 annually. There is also available about \$430 annually, derived from licenses issued to cold-storage establishments.

Fiscal year ends September 30.

Iowa.

Board of health:

G. W. Clarke, governor, Des Moines.

W. S. Alle, secretary of state, Des Moines.

J. L. Bleakley, auditor of state, Des Moines.

W. C. Brown, treasurer of state, Des Moines.

Walter L. Bierring, M. D., president, Des Moines.

George F. Severs, M. D., Centerville.

John L. Tamisiea, M. D., Missouri Valley.

H. A. Dittmer, M. D., Manchester.

Lafayette Higgins, C. E., Des Moines.

Guilford H. Sumner, secretary, Des Moines.

Executive health officer:

Guilford H. Sumner, M. D., Des Moines.

Sanitary engineer:

Lafayette Higgins, Des Moines.

Bacteriologist:

Henry Albert, M. D., Iowa City.

Appropriation for health department:

General appropriation.....	\$5,000
Vital statistics.....	2,000
General sanitary investigations.....	2,000

Fiscal year ends June 30.

Kansas.

Board of health:

- O. D. Walker, M. D., president, Salina.
- B. J. Alexander, M. D., Hiawatha.
- C. H. Lerrigo, M. D., Topeka.
- Clay E. Coburn, M. D., Kansas City.
- W. D. Hunt, M. D., Emporia.
- W. O. Thompson, M. D., Dodge City.
- J. S. Cummings, M. D., Bronson.
- Jessie T. Orr, M. D., Olathe.
- V. C. Eddy, M. D., Colby.
- C. D. Welch, attorney, Coffeyville.
- S. J. Crumbine, M. D., secretary, Topeka.

Executive health officer:

- S. J. Crumbine, M. D., Topeka.

Advisory board:

- J. J. Sippy, M. D., epidemiologist, Topeka.
- F. O. Marvin, A. M., C. E., sanitary adviser, Lawrence.
- G. R. Jones, C. E., S. B., consulting engineer, Lawrence.
- C. A. Haskins, B. S., sanitary engineer, Lawrence.
- C. C. Young, M. S., director of water survey, Lawrence.
- E. H. S. Bailey, Ph.D., chemist, Lawrence.
- J. T. Willard, M. S., food analyst, Manhattan.
- L. E. Sayre, Ph.M., drug analyst, Lawrence.
- R. S. Magee, M. D., pathologist, Topeka.
- Sara E. Greenfield, M. D., bacteriologist, Topeka.
- F. W. Blackmar, sociologist, Lawrence.
- W. J. V. Deacon, statistician, Topeka.
- J. F. Tilford, Ph. C., assistant chief food and drug inspector, Topeka.

Division of epidemiology:

- J. J. Sippy, M. D., epidemiologist, Topeka.

Division of vital statistics:

- W. J. V. Deacon, registrar, Topeka.

Division of food and drugs:

- J. F. Tilford, assistant chief food and drug inspector, Topeka.

Division of water and sewage:

- Prof. C. A. Haskins, civil engineer, Lawrence.

Division of bacteriology:

- S. E. Greenfield, M. D., bacteriologist, Topeka.

Water laboratory at University of Kansas:

- Prof. C. C. Young, director, Lawrence.

Food laboratory at University of Kansas.

- Prof. E. H. S. Bailey, director, Lawrence.

Drug laboratory:

- Prof. L. E. Sayre, director, Lawrence.

Food laboratory at agricultural college:

- Prof. J. T. Willard, director, Manhattan.

Division of publicity and general education:

- S. J. Crumbine, M. D., director, Topeka.

Appropriation for health department:

\$30,550 for current year.

Other sources of revenue:

Salaries of directors of laboratories, laboratory analysts and helpers, laboratory maintenance and salaries of three engineers of the State board of health, and other expert special workers are borne by the budget of the University of Kansas and State Agricultural College at Lawrence and Manhattan, respectively, which total an aggregate sum estimated to be about \$30,000 per annum.

Fiscal year ends June 30.

Kentucky.

Board of health:

- John G. South, M. D., president, Frankfort.
- C. A. Fish, M. D., Frankfort.
- O. C. Robertson, M. D., Owensboro.
- Charles Z. Aud, M. D., Cecilian.
- I. A. Shirley, M. D., Winchester.
- George T. Fuller, M. D., Mayfield.
- W. W. Richmond, M. D., Clinton.
- A. T. McCormack, M. D., secretary, Bowling Green.

Advisory board:

- J. W. Newman, secretary live stock sanitary board, Frankfort.
- J. H. Kastle, director experiment station, Lexington.
- R. M. Allen, head pure food and drug division, Lexington.
- J. W. Gayle, M. D., secretary, State board of pharmacy, Frankfort.
- James P. McCreary, governor, president State tuberculosis commission, Frankfort.
- Roy L. French, secretary State tuberculosis commission, Frankfort.
- John Mass, secretary State board of embalmers, Louisville.

Executive health officer:

- A. T. McCormack, M. D., Bowling Green.

State sanitary engineer and chief bureau water analysis:

- E. H. Mark, M. D., Bowling Green.

Chief bureau of bacteriology and of bacteriological laboratory:

- L. H. South, M. D., Bowling Green.

State registrar:

- W. L. Heizer, M. D., Bowling Green.

Appropriation for health department:

\$30,000 for current year.

Other sources of revenue:

**Rockefeller Sanitary Commission—
\$19,000 for health work.**

Fiscal year ends June 30.

Louisiana.

Board of health:

- Oscar Dowling, M. D., president, New Orleans.
- A. H. Gladden, M. D., vice president, Monroe.
- T. T. Tarlton, M. D., Grand Coteau.
- Herman Oechsner, M. D., New Orleans.
- H. B. White, M. D., Gueydan.
- B. A. Ledbetter, M. D., New Orleans.
- William M. Perkins, secretary, New Orleans.

Executive health officer.

- Oscar Dowling, M. D., New Orleans.

Pure food and drug division:

- Oscar Dowling, M. D., commissioner, New Orleans.

Supervisor vital statistics:

William M. Perkins, M. D., New Orleans.

State sanitarian and director hookworm department:

S. D. Porter, M. D.

Bacteriologist:

W. H. Seemann, M. D.

Sanitary engineer:

J. H. O'Neill.

Appropriation for health department:

\$40,000 for current year.

Fiscal year ends December 31.

Maine.

Board of health:

Charles D. Smith, M. D., president, Portland.

G. M. Woodcock, M. D., Bangor.

Richard H. Stubbs, M. D., Augusta.

Prof. Marshall P. Cram, Brunswick.

W. L. Haskell, M. D., Lewiston.

Eugene W. Goss, Auburn.

A. G. Young, M. D., secretary, Augusta.

Executive health officer:

A. C. Young, M. D., Augusta.

Laboratory of hygiene:

Prof. Henry D. Evans, director, Augusta.

Appropriation for health department:

Board of health.....	\$7,000
Printing and binding.....	2,500
Department of vital statistics.....	3,000
State laboratory of hygiene.....	5,500
Epidemic fund.....	2,000
Total.....	20,000

Fiscal year ends December 31.

Maryland.

Board of health:

William H. Welch, M. D., president, Baltimore.

Nathan R. Gorter, M. D., commissioner, Baltimore.

Edgar A. Jones, Cambridge.

John E. Creiner, Baltimore.

Edgar Allan Poe, attorney general, Baltimore.

William W. Ford, M. D., Baltimore.

John S. Fulton, M. D., Baltimore.

Executive health officer:

John S. Fulton, M. D., Baltimore.

Bureau of communicable diseases:

C. W. G. Rohrer, M. D., acting chief, Baltimore.

Bureau of vital statistics:

Frederic V. Beitler, chief, Baltimore.

Food and drug commissioner:

Charles Caspari, jr., M. D., Baltimore.

Bureau of chemistry:

W. B. D. Penniman, M. D., chief, Baltimore.

Bureau of sanitary engineering:

Robert B. Morse, chief, Baltimore.

Appropriation for health department:

\$60,000 for current year.

No fiscal year. An arbitrary year from January 1 to December 31 has been adopted.

Massachusetts.

Board of health:

Henry P. Walcott, M. D., chairman, Cambridge.
Milton J. Rosenau, M. D., Boston.
H. F. Mills, C. E., Lowell.
Robert W. Lovett, M. D., Boston.
C. E. McGillicuddy, LL. B., Worcester.
Clement F. Coogan, Pittsfield.
Joseph A. Plouff, Ware.

Executive health officer:

Mark W. Richardson, M. D., Boston.

Assistant to the Secretary:

Wm. C. Hanson, M. D., Boston.

Chemical laboratory:

H. W. Clark, chief chemist, North Andover.

Food and drug laboratory:

H. C. Lythgoe, chief analyst, Boston.

Bacteriological laboratory:

H. N. Jones, bacteriologist, Brookline.

Pathological laboratory:

Theobald Smith, M. D., pathologist, Forest Hills.

Dairy, slaughtering, and cold-storage inspection:

A. H. Rose, D. V. M., supervising inspector, Concord.

Chief engineer:

X. H. Goodnough, Boston.

Engineer in charge Neponset River construction:

E. M. Blake, Brookline.

Appropriation for health department:

\$188,300 for the current year.

Other sources of revenue:

Neponset Valley fund—

\$90,000 for the protection of the public health in the valley of the Neponset River.

Fiscal year ends November 30.

Michigan.

Board of health:

Victor C. Vaughan, M. D., president, Ann Arbor.
Thomas M. Koon, M. D., vice president, Grand Rapids.
John L. Burkart, M. D., Lansing.
Charles M. Ranger, A. B., Battle Creek.
John H. Kellogg, M. D., Battle Creek.
Edward T. Abrams, M. D., Hancock.
Andrew P. Biddle, M. D., Detroit.

Executive health officer:

John L. Burkart, M. D., Lansing.

Laboratory:

M. L. Holm, M. D., bacteriologist.

Sanitary engineering division:

E. D. Rich, C. E.

Appropriation for health department:

\$33,500 for current year.

Other sources of revenue:

Sanitary engineer's salary and expenses paid from general fund of the State.

Fiscal year ends June 30.

Minnesota.**Board of health:**

W. A. Jones, M. D., president, Minneapolis.
 B. J. Merrill, M. D., vice president, Stillwater.
 W. C. Chambers, M. D., Blue Earth.
 C. W. More, M. D., Eveleth.
 C. Graham, M. D., Rochester.
 O. J. Hagan, M. D., Moorhead.
 C. L. Greene, M. D., St. Paul.
 Frank Burton, M. D., Minneapolis.
 Egil Boeckmann, M. D., St. Paul.

Executive health officer:

H. M. Bracken, M. D., St. Paul.

Division of epidemiology:

A. J. Chesley, M. D., Minneapolis.

Laboratory division:

R. H. Mullin, M. D., director, Minneapolis.

Engineering division:

F. H. Bass, director, Minneapolis.

Tuberculosis advisory commission:

H. L. Taylor, M. D., chairman, St. Paul.
 Robinson Bosworth, M. D., executive secretary, St. Paul.
 Patrick A. Smith, M. D., secretary, Faribault.
 James L. Camp, M. D., Brainerd.
 Charles L. Scofield, M. D., Benson.
 Pearl M. Hall, M. D., Minneapolis.

Appropriation for health department:

General fund	\$14, 500
Communicable disease fund	15, 000
Vital statistics fund	5, 000
Laboratory fund	18, 000
Sanitary engineering fund	7, 000
Pasteur institute fund	7, 000

Fiscal year ends July 31.

Mississippi.**Board of health:**

M. J. Alexander, M. D., president, Tunica.
 G. S. Bryan, M. D., Amory.
 John Darrington, M. D., Yazoo City.
 T. E. Ross, M. D., Hattiesburg.
 E. A. Cheek, M. D., Arcola.
 I. W. Cooper, M. D. Newton.
 Theodore Borroum M. D., Corinth.
 S. E. Eason, M. D., New Albany.
 J. Sidney Sharp, M. D., Grenada.
 W. W. Reynold, M. D., Meridian.
 W. W. Hall, M. D., Lumberton.
 C. E. Catchings, M. D., Woodville.
 J. R. Jiggitts, M. D., Canton.

Executive health officer:

E. H. Galloway, M. D., Jackson.

Director of public health:

W. S. Leathers, M. D., University.

Chief sanitary inspector:

W. H. Rowan, M. D., Jackson.

Director of the laboratory:

C. R. Stingily, M. D., Jackson.

Deputy State registrar:

F. L. Watkins, M. D., Jackson.

Appropriation for department of health:

Other sources of revenue:

Rockefeller Sanitary Commission:

\$20,000 per year for the eradication of hookworm disease.

Fiscal year ends December 31.

Missouri.

Board of health:

F. H. Matthews, M. D., president, Liberty.

G. O. Cuppaidge, M. D., vice president, Moberly.

J. A. B. Adcock, M. D., secretary, Jefferson City.

G. B. Schulz, M. D., Cape Girardeau.

R. L. Wills, M. D., Neosho.

Ira W. Upshaw, M. D., St. Louis.

T. H. Wilcoxon, M. D., Bowling Green.

Executive health officer:

J. A. B. Adcock, M. D., Jefferson City.

Chief statistician:

U. A. McBride, Jefferson City.

State bacteriologist:

George H. Jones, M. D., Jefferson City.

Appropriation for health department:

\$23,500 for current year.

Fiscal year ends December 31.

Montana.

Board of health:

D. J. Donohue, M. D., president, Glendive.

W. J. Butler, M. D., vice president, Helena.

W. F. Cogswell, M. D., secretary, Helena.

Samuel V. Stewart, governor, Helena.

D. M. Kelly, attorney general, Helena.

C. E. K. Vidal, M. D., Great Falls.

E. F. Maginn, M. D., Butte.

Executive health officer:

W. F. Cogswell, M. D., Helena.

Bacteriologist:

Emil Starz, Helena.

Chemist:

Prof. W. M. Cobleigh, Bozeman.

Appropriation for health department:

\$23,600 for current year.

Fiscal year ends February 28.

Nebraska.

Board of health:

John H. Morehead, governor, Lincoln.

Grant G. Martin, attorney general, Lincoln.

James E. Delzell, superintendent of public instruction, Lincoln.

Board of secretaries:

E. Arthur Carr, M. D., president, Lincoln.
 P. F. Dodson, M. D., vice president, Wilber.
 C. T. Burchard, M. D., treasurer, Falls City.
 H. B. Cummins, M. D., secretary, Seward.

State health inspector:

W. H. Wilson, M. D., Lincoln.

Department of Bacteriology:

William F. Wild, M. D., director.

Department of vital statistics:

W. H. Wilson, director.

Appropriation for health department:

\$10,500 for current year.

Fiscal year ends April 30.

Nevada.

Board of health:

W. H. Hood, M. D., president, Reno.
 O. P. Johnstone, M. D., Reno.
 S. L. Lee, M. D., secretary, Carson.

Executive health officer:

S. L. Lee, M. D., Carson.

State hygienic laboratory:

W. B. Mack, M. D., director.

Appropriation for health department:

\$3,500 for current year.

Fiscal year ends December 31.

New Hampshire.

Board of health:

Samuel D. Felker, governor, Rochester.
 James P. Tuttle, attorney general, Manchester.
 Robert Fletcher, C. E., president, Hanover.
 Frank E. Kittredge, M. D., Nashua.
 D. E. Sullivan, M. D., Concord.
 Irving A. Watson, M. D., secretary, Concord.

Executive health officer:

Irving A. Watson, M. D., Concord.

Laboratory of hygiene:

Irving A. Watson, M. D., director, Concord.
 Charles D. Howard, B. S., chemist, Concord.
 H. N. Kingsford, M. D., bacteriologist, Hanover and Concord.

Appropriation for health department:

\$25,000 for current year.

New Jersey.

Board of health:

John H. Capstick, president, Montville.
 William H. Chew, vice president, Salem.
 Herbert W. Johnson, Haddonfield.
 Richard C. Newton, M. D., Montclair.
 Oliver Kelly, Oak Tree.
 Jacob C. Price, M. D., secretary, Branchville.

Executive health officer:

Jacob C. Price, M. D., Branchville.

Bureau of contagious diseases and sanitary inspection:

A. Clark Hunt, M. D., chief.

Bureau of vital statistics:

David S. South, registrar and chief.

State laboratory of hygiene:

R. B. Fitz-Randolph, director.

Bureau of food, drugs, water, and sewerage:

R. B. Fitz-Randolph, chief.

Bureau of creamery and dairy inspection:

George W. McGuire, chief.

Appropriation for health department:

\$130,325 for current year.

Fiscal year ends October 31.

New Mexico.

Board of health:

L. G. Rice, M. D., president, Albuquerque.

W. T. Joyner, M. D., vice president, Roswell.

W. E. Kaser, M. D., secretary and treasurer, East Las Vegas.

J. A. Massie, M. D., Santa Fe.

W. R. Lovelace, M. D., Fort Sumner.

C. W. Gerber, M. D., Las Cruces.

G. V. Hackney, San Marcial.

Executive health officer:

W. E. Kaser, M. D., Las Vegas.

Appropriation for health department:

None.

Fiscal year ends December 31.

New York.

Public health council:

Hermann M. Biggs, M. D., Albany.

Simon Flexner, M. D., New York.

Henry M. Ogden, C. E., Ithaca.

Mrs. Elmer Blair, Albany.

Homer Folks, Yonkers.

Edwin Clark, M. D., Buffalo.

Executive health officer:

Hermann M. Biggs, M. D., commissioner of health, Albany.

Deputy commissioner of health:

Linsly R. Williams, M. D., Albany.

Consulting staff:

Frederick C. Curtis, M. D., Albany.

Prof. Walter F. Wilcox, Cornell University, Ithaca.

Prof. C. E. A. Winslow, College of the City of New York.

Division of sanitary engineering:

Theodore Horton, chief engineer, Albany.

Division of laboratories and research:

Augustus B. Wadsworth, M. D., director, Albany.

Division of communicable diseases:

William B. May, M. D., director, Albany.

Division of publicity and education:

Division of child hygiene:

Henry L. K. Shaw, M. D., Albany.

Division of vital statistics:

_____, Albany.

Division of public health nursing:
 _____.

Division of tuberculosis:
 _____.

Appropriation for health department:

\$316,720 for current year.

Fiscal year ends October 1.

North Carolina.

Board of health:

J. Howell Way, M. D., president, Waynesville.

Richard H. Lewis, M. D., Raleigh.

J. L. Ludlow, C. E., Winston-Salem.

W. O. Spencer, M. D., Winston-Salem.

Thomas E. Anderson, M. D., Statesville.

Charles O'H. Laughinghouse, M. D., Greenville.

Edward J. Wood, M. D., Wilmington.

A. A. Kent, M. D., Lenoir.

Cyrus Thompson, M. D., Jacksonville.

Executive health officer:

W. S. Rankin, M. D., Raleigh.

Bureau of county health work:

P. W. Covington, M. D.

Bureau of education and engineering:

Warren H. Booker.

Bureau of hookworm disease:

C. L. Pridgen, M. D.

Bureau of vital statistics:

J. R. Gordon, M. D.

Appropriation for health department:

Between \$50,000 and \$55,000 for current year.

Other sources of revenue:

From the Rockefeller Sanitary Commission, \$16,000.

From the State treasurer for tuberculosis sanatorium, \$20,000.

From patients to sanatorium, \$12,000 to \$15,000.

Fiscal year ends November 30.

North Dakota.

Board of health:

Andrew Miller, attorney general, president, Bismarck.

A. M. Call, M. D., vice president, Rugby.

C. J. McGurran, M. D., secretary, Devils Lake.

Executive health officer:

C. J. McGurran, M. D., Devils Lake.

Bacteriologist:

G. F. Ruediger, M. D.

Pure food commissioner:

Prof. E. F. Ladd.

Appropriation for health department:

\$2,700, exclusive of pure food and laboratory departments. The bacteriological and pure food departments have separate appropriations.

Fiscal year ends June 30.

Ohio.

Board of health:

John W. Hill, C. E., president, Cincinnati.
H. T. Sutton, vice president, Zanesville.
Josiah Hartzell, Ph. D., Canton.
R. H. Grube, M. D., Xenia.
William T. Miller, M. D., Cleveland.
Homer C. Brown, D. D. S., Columbus.
Oscar Hasencamp, M. D., Toledo.
Timothy S. Hogan, attorney general, Columbus.

Executive health officer:

E. F. McCampbell, Ph. D., M. D., secretary board of health, Columbus.

Assistant secretary:

James E. Bauman, Columbus.

Division of communicable diseases:

F. G. Boudreau, M. D., C. M., director, Columbus.

Division of sanitary engineering:

W. H. Dittoe, director, Columbus.

Division of laboratories:

T. R. Brown, Ph. D., director, Columbus.

Division of public health education and tuberculosis:

R. G. Paterson, Ph. D., director, Columbus.

Division of occupational diseases:

E. R. Hayhurst, M. D., director, Columbus.

Division of plumbing inspection:

William C. Groeniger, director, Columbus.

Appropriation for health department:

\$90,828.13 for current year.

Fiscal year ends February 15.

Oklahoma.

State commissioner of health:

J. C. Mahr, M. D., Oklahoma City.

Appropriation for health department:

\$32,700 for the current year.

Oregon.

Board of health:

E. B. Pickel, M. D., president, Medford.
E. A. Pierce, M. D., vice president, Portland.
C. J. Smith, M. D., Portland.
Andrew C. Smith, M. D., Portland.
W. B. Morse, M. D., Salem.
Alfred Kinney, M. D., Astoria.
Calvin S. White, M. D., secretary, Portland.

Executive health officer:

Calvin S. White, M. D., Portland.

Bacteriologist:

Miss Emma Howe.

Clerk of vital statistics:

Miss A. L. McBride.

Appropriation for health department:

\$16,000 for current year.

Fiscal year ends December 31.

Pennsylvania.**Executive health officer:**

Samuel G. Dixon, M. D., L. L. D., commissioner of health, Harrisburg.

Assistant to commissioner:

J. W. Warren, M. D., Harrisburg.

Advisory board:

Adolph Koenig, M. D., Pittsburgh.

Lee Masterton, C. E., Johnstown.

Charles B. Penrose, M. D., Philadelphia.

B. H. Warren, M. D., West Chester.

George W. Guthrie, M. D., Wilkes-Barre.

Clarence J. Marshall, V. M. D., Harrisburg.

Division of medical inspection:

B. Franklin Royer, M. D., chief medical inspector, Harrisburg.

Laboratories and experimental station:

J. B. Rucker, jr., M. D., chief of the laboratories, Philadelphia.

Division of sanatoria:

F. C. Johnson, M. D., medical director, Sanatorium for Tuberculosis, No. 1, Mont Alto.

W. G. Turnbull, M. D., medical director, Sanatorium for Tuberculosis, No. 2, Cresson.

Division of tuberculosis dispensaries:

T. H. A. Stites, M. D., medical inspector, Harrisburg.

Division of distribution of biological products:

J. Moore Campbell, M. D., chief, Harrisburg.

Division of sanitary engineering:

———, chief engineer.

Bureau of vital statistics:

Wilmer R. Batt, M. D., State registrar, Harrisburg.

Division of accounting and purchasing:

E. I. Simpson, chief, Philadelphia.

Division of supplies:

Charles Hartzell, superintendent, Harrisburg.

Appropriation for health department:

\$4,204,280 for two years, June 1, 1913, to June 1, 1915.

Fiscal year ends June 1.

Philippine Islands.**Director of health:**

Victor G. Heiser, surgeon, United States Public Health Service, Manila.

Assistant director of health:

Vicente de Jesus, M. D., Manila.

Baguio Hospital division:

Frank W. Vincent, M. D., chief, Baguio, Benguet.

Bontoc Hospital division:

Henry Pick, M. D., acting chief, Bontoc, Mountain Province.

Butuan Hospital division:

Florentine Ampil, M. D., chief, Butuan, Agusan.

Clerical division:

D. W. Egner, chief, Manila.

Culion leper colony division:

Paul Clements, M. D., chief, Culion.

Inspection division:

Vicente de Jesus, M. D., chief, Manila.

Iwahig penal colony division:

Jose Marfori, M. D., acting chief, Puerto Princesa, Palawan.

Philippine General Hospital division:

John E. Snodgrass, M. D., superintendent, Manila.

Philippine Training School for Nurses:

Miss Elsie P. McCloskey, chief nurse and superintendent, Manila.

Prison sanitation division:

J. W. Smith, M. D., chief, Manila.

Property division:

B. D. Burnham, chief, Manila.

Sanitary engineering division:

George H. Guerdrum, chief, Manila.

San Lazaro Hospital division:

Almon P. Goff, M. D., chief, Manila.

Southern Islands Hospital division:

Arlington Pond, M. D., chief, Cebu.

Statistical division:

Manuel Gomez, M. D., chief, Manila.

Appropriation for health department:

\$867,234.17. In addition there is available approximately \$100,000 for new construction and repairs.

Fiscal year ends December 31.

Porto Rico.

Board of health:

Francisco del Valle Atilas, M. D., president, San Juan.

Jose N. Carbonell, M. D., San Juan.

Jorge Dominguez, San Juan.

Eliseo Font y Guillot, M. D., San Juan.

Jose J. Monclova, San Juan.

Gustavo Munoz y Diaz, M. D., San Juan.

Jose Lugo-Vina, M. D., San Juan.

Francis W. Dalrymple, San Juan.

Executive health officers:

William F. Lippitt, M. D., director of sanitation, San Juan.

William R. Watson, M. D., assistant director of sanitation.

Institute of tropical medicine and hygiene:

William F. Lippitt, M. D., president, San Juan.

Francisco J. Hernandez, M. D., secretary, San Juan.

W. W. King, M. D., San Juan.

Isaac Gonzales Martinez, M. D., San Juan.

Pedro Gutierrez Igaravidez, M. D., San Juan.

Appropriation for health department:

Sanitation service proper.....	\$539, 240. 00
Leper colony.....	12, 051. 00
Quarantine hospital.....	3, 460. 00
Suppression of anemia.....	16, 052. 65
Emergency fund, control and suppression of epidemics.....	35, 881. 57
Institute of tropical medicine and hygiene.....	24, 032. 33
Total.....	630, 717. 55

Fiscal year ends June 30.

Rhode Island.**Board of health:**

Alexander B. Briggs, M. D., president, Ashaway.
 Rev. George L. Locke, Bristol.
 Rufus E. Darrah, M. D., Newport.
 James O'Hare, Ph. C., Providence.
 John H. Bennett, M. D., Pawtucket.
 Robert M. Smith, M. D., Riverpoint.
 William L. Harris, M. D., Providence.
 Gardner T. Swarts, M. D., secretary, Providence.

Executive health officer:

Gardner T. Swarts, M. D., Providence.

Appropriation for health department:

\$17,000 for 1913.

Fiscal year ends December 31.

South Carolina.**Board of health:**

The State board of health consists of the South Carolina Medical Association, together with the attorney and comptroller generals of the State.

Executive committee:

Robert Wilson, jr., M. D., Charleston.
 D. B. Frontis, M. D., Ridge Spring.
 C. C. Gambrell, M. D., Abbeville.
 E. A. Hines, M. D., Seneca.
 W. J. Burdell, M. D., Lugoff.
 William Egleston, M. D., Hartsville.
 W. M. Lester, M. D., Columbia.
 Thomas J. Peoples, attorney general, Columbia.
 A. W. Jones, comptroller general, Columbia.

Executive health officer:

James A. Hayne, M. D., Columbia, S. C.

Laboratory:

F. A. Coward, M. D., director.

Director of rural sanitation:

J. La Bruce Ward, M. D.

Appropriation for health department:

\$42,220 for current year.

Fiscal year ends December 31.

South Dakota.**State board of health:¹**

W. L. Vercoe, M. D., president, Deadwood.
 R. T. Dott, M. D., vice president, Salem.
 P. B. Jenkins, M. D., superintendent and secretary, Waubay.

Tennessee.**Board of health:**

R. E. Fort, M. D., president, Nashville.
 A. M. Gamble, M. D., vice president, Maryville.
 V. A. Biggs, M. D., Martin.
 T. F. Peck, Nashville.

Executive health officer:

R. Q. Lillard, M. D., Lebanon.

¹ These data were taken from a report furnished a year ago.

Director of rural sanitation:

Olin West, M. D., Nashville.

Bacteriologist:

William Litterer, M. D., Nashville.

Pure-food and drug inspector:

Lucius P. Brown, Nashville.

Registrar of vital statistics:

H. H. Shoulders, M. D., Nashville.

Appropriation for health department:

\$120,000 for current year.

Fiscal year ends March 19.

Texas.

Board of health:

Ralph Steiner, M. D., president, Austin.

B. F. Calhoun, M. D., Beaumont.

Hugh McLaurin, M. D., Dallas.

K. H. Beall, M. D., Fort Worth.

B. M. Worsham, M. D., El Paso.

T. T. Jackson, M. D., San Antonio.

S. M. Lister, M. D., Houston.

Executive health officers:

Ralph Steiner, M. D., health officer, Austin.

M. H. Boerner, M. D., assistant health officer.

Bacteriologist:

G. M. Graham, M. D., Austin.

Registrar of vital statistics:

R. P. Babcock, Austin.

Appropriation for health department:

\$57,200 for current fiscal year.

Fiscal year ends August 31.

Utah.

Board of health:

F. S. Bascom, M. D., president, Salt Lake City.

T. B. Beatty, M. D., secretary, Salt Lake City.

W. R. Calderwood, M. D., Salt Lake City.

Fred Stauffer, M. D., Salt Lake City.

C. E. McDermid, M. D., Winter Quarters.

A. F. Doremus, Salt Lake City.

H. K. Merrill, M. D., Logan.

Executive health officer:

T. B. Beatty, M. D., Salt Lake City.

Appropriation for health department:

\$24,300 for the calendar years 1913 and 1914.

Fiscal year ends December 31.

Vermont.

Board of health:

Charles S. Caverly, M. D., president, Rutland.

Henry D. Holton, M. D., Brattleboro.

F. Thomas Kidder, M. D., treasurer, Woodstock.

Charles F. Dalton, M. D., secretary, Burlington.

Executive health officer:

Charles F. Dalton, M. D., Burlington.

Laboratory of hygiene:

B. H. Stone, M. D., director, Burlington.

Sanitary engineer:

J. W. Votey, C. E., Burlington.

Inspector:

Henry A. Ladd, M. D., Burlington.

Appropriation for health department:

For laboratory of hygiene, \$15,000.

For board of health, \$3,500.

For board of health tuberculosis commission, \$2,000.

Other sources of revenue:

Salaries and expenses of the secretary, sanitary engineer, and inspector are paid from the general unappropriated funds of the State.

Fiscal year ends December 31.

Virginia.

Board of health:

W. M. Smith, M. D., president, Alexandria.

S. W. Hobson, M. D., vice president, Newport News.

J. B. Fisher, M. D., secretary, Midlothian.

A. G. Crockett, M. D., Max Meadows.

T. C. Firebaugh, M. D., Harrisonburg.

Lewis E. Harvie, M. D., Danville.

George Ben Johnston, M. D., Richmond.

George B. Lawson, M. D., Roanoke.

Stuart McGuire, M. D., Richmond.

L. T. Royster, M. D., Norfolk.

Reid White, M. D., Lexington.

O. C. Wright, M. D., Jarratts.

Executive health officer:

Ennion G. Williams, M. D., commissioner of health, Richmond.

Bureau of rural sanitation:

A. W. Freeman, M. D., assistant commissioner, in charge.

Laboratory:

Meade Ferguson, Ph. D., bacteriologist.

Bureau of sanitary engineering:

Richard Messer, C. E., sanitary engineer.

Bureau of inspections:

Roy K. Flannagan, M. D., director.

Bureau of vital statistics:

W. A. Plecker, M. D.

Catawba Sanatorium:

J. J. Lloyd, M. D., in charge.

Appropriation for health department:

Exclusive of Catawba Sanatorium..... \$35,000

Catawba Sanatorium..... 50,000

Other sources of revenue:

From Rockefeller Sanitary Commission: ~~\$14,000~~ for hookworm work. Fees for inspecting hotels, about \$18,000.

Fiscal year ends March 1.

Washington.

Board of health:

- E. J. McCaustland, C. E., president, Seattle.
- Elmer E. Heg, M. D., Seattle.
- Wilson Johnston, M. D., Spokane.
- Mrs. R. C. McCredie, Sunnyside.
- Fred. S. Hedges, M. D., Everett.
- J. H. Perkins, Olympia.

Executive health officer:

- Eugene R. Kelley, M. D., commissioner of health, Seattle.

Bacteriologist:

- Edward P. Fick, M. D., Seattle.

Assistant registrar:

- Miss M. V. Goodman, Seattle.

Appropriation for health department:

\$15,000 for the current year. Additional for printing, \$1,500.

Fiscal year ends March 31.

West Virginia.

Board of health:

- W. W. Golden, president, Elkins.
- S. L. Jepson, M. D., secretary, Wheeling.
- J. L. Pyle, Chester.
- J. H. Shipper, Gerrardstown.
- J. E. Robins, Charleston.
- J. A. Rusmisell, Buckhannon.
- H. M. Eymer, Harrisville.
- W. J. Davidson, Parkersburg.
- H. A. Barbee, Point Pleasant.
- H. A. Brandebury, Huntington.
- G. D. Lind, Greenwood.
- George P. Daniel, Marshes.

Executive health officer:

- S. L. Jepson, M. D., commissioner of health, Wheeling.

Hygienic laboratory:

- John N. Simpson, M. D., director.

Appropriation for health department:

\$15,000 for current year.

Fiscal year ends December 31.

Wisconsin.

Board of health:

- Whyte, W. F., M. D., president, Watertown.
- E. S. Hayes, M. D., Eau Claire.
- C. H. Sutherland, M. D., Janesville.
- H. A. Meilike, M. D., Clintonville.
- Otho Fiedler, M. D., Sheboygan.
- C. H. Stoddard, M. D., Milwaukee.
- C. A. Harper, M. D., secretary, Madison

Executive health officer:

- C. A. Harper, M. D., Madison.

Bureau of education:

_____, _____.

Bureau of contagious diseases:

- C. A. Harper, M. D., Madison

Bureau of sanitary engineering:

W. G. Kirchoffer, Madison.

Bureau of vital statistics:

L. W. Hutchcroft, statistician, Madison.

Laboratory:

M. P. Ravenel, director, Madison.

Appropriation for health department:

\$40,000 for current year.

Fiscal year ends June 30.

Wyoming.

Board of health:

Herbert T. Harris, M. D., president, Basin.

Anna C. Hurd, M. D., Sheridan.

W. A. Wyman, M. D., secretary, Cheyenne.

Executive health officer:

W. A. Wyman, M. D., Cheyenne.

Appropriation for health department:

\$1,500.

Fiscal year ends April 1.

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.

SMALLPOX.

Indiana—Evansville.

Surg. Oakley, of the Public Health Service, reported by telegraph that during the week ended May 2, 1914, 14 cases of smallpox had been notified in Evansville, Ind., making a total of 1,308 cases since the beginning of the outbreak.

Maryland—Canton.

The State Department of Health of Maryland reported by telegraph May 4, 1914, that a new focus of smallpox infection had been reported in Maryland, through the notification of 5 cases of the disease in Canton, Baltimore County.

Maryland—Jessup.

The State Department of Health of Maryland reported by telegraph April 29, 1914, that a new focus of smallpox infection had been reported in the notification of 1 case at Jessup, Anne Arundel County, Md.

Texas—Galveston.

Surg. Bahrenburg, of the Public Health Service, reported by telegraph that during the week ended May 1, 1914, 11 cases of smallpox had been notified in Galveston, Tex.

New York Report for March, 1914.

Places.	New cases reported during month.	Deaths.	Vaccination history of cases.			
			Vaccinated within 7 years preceding attack.	Last vaccinated more than 7 years preceding attack.	Never successfully vaccinated.	History not obtained or uncertain.
New York:						
Chautauqua County	6			2	4	
Clinton County	7		1		6	
Dutchess County	1		1			
Erle County	15			1	13	1
Essex County	1					1
Franklin County	2					2
Niagara County	17				7	10
Orleans County	2				2	
Seneca County	1				1	
Steuben County	3		1		2	
New York City	4					4
Total.....	59		3	3	35	18

SMALLPOX—Continued.

Miscellaneous State Reports.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Oregon (Mar. 1-31):			Texas (Mar. 1-31)—Continued.		
Counties—			Counties—Continued.		
Clackamas	7		Hunt	5	
Columbia	3		Johnson	22	
Multnomah	17		Jones	1	
Umatilla	16		Kleberg	15	
Wasco	4		Medina	70	6
Washington	1		Montague	7	
Total	48		Navarro	2	1
			Nueces	49	
Texas (Mar. 1-31):			Parker	5	
Counties—			Reeves	1	
Anderson	5		Rockwall	13	
Archer	1		Tarrant	70	
Atascosa	1		Throckmorton	10	
Bell	3		Travis	12	
Calhoun	8		Van Zandt	14	
Cameron	2		Walter	6	
Childress	6		Williamson	4	
Coke	52		Total	672	8
Comal	14				
Dallas	155		Utah (Mar. 1-30):		
Denton	10		Counties—		
Erath	8		Cache	3	
Galveston	36		Carbon	1	
Grayson	1		Juab	3	
Gregg	40	1	Morgan	18	
Jackson	4		Salt Lake	83	
Hale	8		Utah	3	
Hall	1		Weber	15	
Hamilton	6		Total	126	
Howard	5				

City Reports for Week Ended Apr. 18, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Altoona, Pa.	1		Los Angeles, Cal.	2	
Austin, Tex.	1		Marinette, Wis.	1	
Baltimore, Md.	11	2	Massillon, Ohio.	1	
Butte, Mont.	6		Milwaukee, Wis.	36	
Cincinnati, Ohio.	4		Moline, Ill.	1	
Danville, Ill.	1		Morristown, N. J.	1	
Detroit, Mich.	11		Muncie, Ind.	1	
Duluth, Minn.	2		Nashville, Tenn.	18	
Erie, Pa.	1		Philadelphia, Pa.	1	
Evansville, Ind.	13		Portland, Oreg.	3	
Kansas City, Kans.	16		Richmond, Va.	1	
Kearny, N. J.	2		St. Louis, Mo.	1	
Knoxville, Tenn.	13		Seattle, Wash.	2	
La Crosse, Wis.	1		Spokane, Wash.	5	
Lexington, Ky.	4	1	Superior, Wis.	1	
Little Rock, Ark.	3		Toledo, Ohio.	15	

TYPHOID FEVER.

State Reports for March, 1914.

Places.	New cases reported during month.	Places.	New cases reported during month.
Hawaii:		New York—Continued.	
Hawaii—		Rockland County.....	1
East Kau district.....	1	St. Lawrence County.....	12
Hamakua district.....	5	Schenectady County.....	2
North Kona district.....	1	Seneca County.....	1
Puna district.....	3	Steuben County.....	3
South Hilo district.....	8	Sullivan County.....	2
Kauai—		Tioga County.....	1
Kawaihaua district.....	4	Tompkins County.....	1
Waimea district.....	3	Ulster County.....	2
Molokai Island.....	1	Washington County.....	5
Oahu—		Wayne County.....	1
Ewa district.....	2	Westchester County.....	5
Honolulu.....	2	New York City.....	64
Waialanae.....	1		
Total.....	31	Total.....	266
New York:		Oregon:	
Albany County.....	18	Clackamas County.....	1
Broome County.....	3	Clatsop County.....	2
Cattaraugus County.....	4	Jackson County.....	3
Cayuga County.....	3	Marion County.....	12
Chautauqua County.....	26	Multnomah County.....	3
Chemung County.....	3	Polk County.....	1
Chenango County.....	1	Yamhill County.....	5
Clinton County.....	1	Total.....	27
Columbia County.....	1	Texas:	
Dutchess County.....	17	Coleman County.....	2
Erie County.....	35	Dallas County—	
Franklin County.....	2	Dallas.....	2
Greene County.....	7	Denton County.....	3
Jefferson County.....	7	Floyd County.....	4
Monroe County.....	2	Galveston County—	
Montgomery County.....	3	Galveston.....	1
Niagara County.....	14	Kleburg County—	
Onondaga County.....	3	Kingsville.....	1
Ontario County.....	3	Parker County.....	1
Orange County.....	4	Travis County—	
Orleans County.....	1	Austin.....	1
Oswego County.....	3	Total.....	15
Otsego County.....	1		
Rensselaer County.....	4		

City Reports for Week Ended Apr. 18, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Baltimore, Md.....	2	5	Oakland, Cal.....	3	2
Boston, Mass.....	2	1	Pasadena, Cal.....	1	1
Brookton, Mass.....	1	1	Passaic, N. J.....	1	1
Buffalo, N. Y.....	5	4	Pawtucket, R. I.....	1	1
Cambridge, Mass.....	1	1	Philadelphia, Pa.....	8	2
Chelsea, Mass.....	1	1	Pittsburgh, Pa.....	7	1
Chicago, Ill.....	18	5	Pittsfield, Mass.....	1	1
Cincinnati, Ohio.....	1	1	Plainfield, N. J.....	1	1
Cleveland, Ohio.....	3	1	Portland, Ore.....	1	1
Duluth, Minn.....	1	1	Providence, R. I.....	2	1
Elmira, N. Y.....	1	1	Reading, Pa.....	1	1
Erie, Pa.....	2	1	Richmond, Va.....	1	1
Evansville, Ind.....	1	1	Rutland, Vt.....	1	1
Fall River, Mass.....	1	1	Sacramento, Cal.....	5	1
Grand Rapids, Mich.....	3	3	Saginaw, Mich.....	1	1
Johnstown, Pa.....	1	1	St. Louis, Mo.....	6	1
Kansas City, Kans.....	1	1	San Diego, Cal.....	2	1
Los Angeles, Cal.....	5	2	South Bend, Ind.....	2	1
Lowell, Mass.....	1	1	South Bethlehem, Pa.....	1	1
Morristown, N. J.....	2	2	Spokane, Wash.....	3	1
Nashville, Tenn.....	2	2	Toledo, Ohio.....	15	2
Newark, N. J.....	4	1	West Hoboken, N. J.....	1	1
New Castle, Pa.....	1	1	Wheeling, W. Va.....	3	1
New Orleans, La.....	2	1	Wilmington, N. C.....	2	1
Newton, Mass.....	1	1	York, Pa.....	1	1
Norristown, Pa.....	1	1			

CEREBROSPINAL MENINGITIS.

New York Report for March, 1914.

Places.	New cases reported during month.	Places.	New cases reported during month.
State of New York:		State of New York—Cont'd:	
Cattaraugus County.....	1	Seneca County.....	1
Cayuga County.....	1	Steuben County.....	1
Fulton County.....	2	Wayne County.....	1
Monroe County.....	2	Westchester County.....	1
Oneida County.....	1	New York City.....	29
Orange County.....	1	Total.....	43
Otsego County.....	1		
Rockland County.....	1		

City Reports for Week Ended Apr. 18, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Baltimore, Md.....		1	Los Angeles, Cal.....	1	
Boston, Mass.....		1	Lowell, Mass.....	1	
Chelsea, Mass.....	1		Milwaukee, Wis.....	1	1
Chicago, Ill.....	4		Nashville, Tenn.....	1	
Cincinnati, Ohio.....	1		New Orleans, La.....	1	1
Cleveland, Ohio.....	1	2	Philadelphia, Pa.....	1	
Clinton, Mass.....	1	1	Rochester, N. Y.....	1	
Dunkirk, N. Y.....	1		St. Louis, Mo.....	2	
Fall River, Mass.....	1	1	Worcester, Mass.....	1	1
Jersey City, N. J.....	1	1			

POLIOMYELITIS (INFANTILE PARALYSIS).

New York Report for March, 1914.

The State Board of Health of New York reported that during the month of March, 1914, 1 case of poliomyelitis had been notified in Dutchess County, N. Y.

City Reports for Week Ended April 18, 1914.

During the week ended April 18, 1914, poliomyelitis was notified by cities, as follows: Boston, Mass., 1 case; Fall River, Mass., 1 case; Pittsburgh, Pa., 1 case.

ERYSIPELAS.

City Reports for Week Ended April 18, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Baltimore, Md.....	1	1	Los Angeles, Cal.....	1	
Boston, Mass.....	1	1	McKeesport, Pa.....	1	
Braddock, Pa.....	1		Milwaukee, Wis.....	3	
Bridgeport, Conn.....	2		Montclair, N. J.....		1
Brockton, Mass.....	1		Newark, N. J.....		1
Buffalo, N. Y.....	7	1	Passaic, N. J.....	2	
Chicago, Ill.....	15	6	Philadelphia, Pa.....	24	1
Cincinnati, Ohio.....	5		Pittsburgh, Pa.....	8	
Cleveland, Ohio.....	5	3	Reading, Pa.....	3	
Dayton, Ohio.....	1	2	Rochester, N. Y.....	3	1
Detroit, Mich.....		1	Rockford, Ill.....	1	
Erie, Pa.....	1		St. Louis, Mo.....	10	
Harrisburg, Pa.....	2		South Bethlehem, Pa.....		1
Hartford, Conn.....	2		Trenton, N. J.....		2
Jersey City, N. J.....	4		York, Pa.....	1	
Kalamazoo, Mich.....	3				

LEPROSY.

New York Report for March, 1914.

The State Board of Health of New York reported that during the month of March, 1914, 2 cases of leprosy had been notified in the State of New York, 1 case each in Clymer, Chautauqua County, and New York City.

PELLAGRA.

During the week ended April 18, 1914, pellagra was notified by cities as follows: Hartford, Conn., 1 case; Lowell, Mass., 1 death; Lynn, Mass., 1 case with 1 death; Nashville, Tenn., 2 cases with 1 death; Providence, R. I., 1 death.

PLAGUE.

Rats Collected and Examined.

At San Francisco, during the week ended April 18, 1914, 1,420 rats were collected, 12 found dead, and 1,021 examined for plague infection. No plague-infected rat was found.

California—Squirrels Collected and Examined.

During the week ended April 18, 1914, ground squirrels were examined in California for plague infection as follows: Alameda County, 92; Contra Costa County, 255; Merced County, 9; Monterey County, 19; San Benito County, 116; San Joaquin County, 46; Santa Clara County, 13. No plague-infected squirrel was found.

Maintenance of a Squirrel-Free Zone.

During the week ended April 18, 1914, 167 acres of land in Alameda County, 780 acres in San Joaquin County, and 230 acres in Stanislaus County were treated by waste-ball method.

PNEUMONIA.

City Reports for Week Ended Apr. 18, 1914.

Places.	Cases.	Deaths.	Places.	Cases.	Deaths.
Austin, Tex.		1	Manchester, N. H.	3	3
Binghamton, N. Y.	4	3	New Castle, Pa.	4	
Braddock, Pa.	1		Philadelphia, Pa.	38	87
Chicago, Ill.	175	141	Pittsburgh, Pa.	19	37
Cleveland, Ohio	27	23	Reading, Pa.	1	3
Dunkirk, N. Y.	1	1	Rochester, N. Y.	9	14
Duluth, Minn.	1	1	Sacramento, Cal.	1	
Erie, Pa.	1		Schenectady, N. Y.	3	1
Galesburg, Ill.	3	3	South Bethlehem, Pa.	1	
Grand Rapids, Mich.	1	1	Spokane, Wash.	2	2
Kalamazoo, Mich.	4	2	Steeltown, Pa.	1	
Kansas City, Kans.	7	11	Wilkes-Barre, Pa.	1	2
Los Angeles, Cal.	10	5	York, Pa.	1	
McKeesport, Pa.	1				

RABIES.

California—Oakland—Rabies in animals.

Surg. Long, of the Public Health Service, reported by telegraph that during the week ended May 2, 1914, 3 cases of rabies in dogs had been reported in Oakland, Cal.

Washington—Seattle—Rabies in animals.

Surg. Lloyd, of the Public Health Service, reported by telegraph that during the week ended May 2, 1914, 5 cases of rabies in dogs had been reported in Seattle, Wash.

ROCKY MOUNTAIN SPOTTED FEVER.

Oregon—Grant County.

The State Board of Health of Oregon reported that during the month of March, 1914, 1 case of Rocky Mountain spotted fever had been notified in Grant County, Oreg.

TETANUS.

During the week ended April 18, 1914, tetanus was notified by cities as follows: Jersey City, N. J., 1 case; Philadelphia, Pa., 1 case with 1 death.

SCARLET FEVER, MEASLES, DIPHTHERIA, AND TUBERCULOSIS.

Alameda, Cal.—Measles.

Surg. Long, of the Public Health Service, reported by telegraph that during the week ended May 2, 1914, 54 cases of measles had been notified in Alameda, Cal., and that 97 cases had been notified in the same city during the month of April.

Duluth, Minn.—Scarlet fever.

Acting Asst. Surg. Cheney, of the Public Health Service, reported by telegraph that during the week ended May 2, 1914, 10 cases of scarlet fever had been notified in Duluth, Minn.

Pittsburgh, Pa.—Scarlet fever.

Surg. Stoner, of the Public Health Service, reported by telegraph that during the week ended May 2, 1914, 105 cases of scarlet fever, with 3 deaths, had been notified in Pittsburgh, Pa., making a total of 3,248 cases, with 157 deaths, reported since the beginning of the outbreak, August 1, 1913.

State Reports for March, 1914.

States.	Cases reported.		
	Scarlet fever.	Measles.	Diphtheria.
Hawaii.....		11	189
New York.....	2,621	6,870	1,878
Oregon.....	24	561	28
Texas.....	133	42	

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

City Reports for Week Ended Apr. 18, 1914.

Cities.	Population, United States census 1910.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Over 500,000 inhabitants:										
Baltimore, Md.	558,485	204	19	1	32		19		38	24
Boston, Mass.	670,585	280	39	1	77		127	2	49	15
Chicago, Ill.	2,185,283	758	125	16	140	3	117	8	268	82
Cleveland, Ohio.	560,663	185	35	7	30	1	21	1	34	20
Philadelphia, Pa.	1,649,008	624	45	7	288		51	7	71	76
Pittsburgh, Pa.	533,905	173	37	6	34		79	3	39	28
St. Louis, Mo.	687,029	261	36	1	144	3	46	1	50	27
From 300,000 to 500,000 inhabitants:										
Buffalo, N. Y.	423,715	166	16	3	25		15		17	20
Cincinnati, Ohio.	364,463	135	13	1	3		16	1	30	22
Detroit, Mich.	465,766	155	33	2		1	21	2		12
Los Angeles, Cal.	319,198	120	7	1	8		10		40	22
Milwaukee, Wis.	373,857	113	13	2	49	1	31	2	14	19
Newark, N. J.	347,469	107	21		145	2	53	1	51	19
New Orleans, La.	339,075	129	19		46	2	5		41	16
Washington, D. C.	331,069	113	11	1	16		11		16	12
From 200,000 to 300,000 inhabitants:										
Jersey City, N. J.	267,779	81	10	1	19		25	2	19	11
Kansas City, Mo.	248,381	85	10	2	18		8		4	11
Portland, Oreg.	207,214		4		55				3	7
Providence, R. I.	224,326	81	7		19	3	8		6	6
Rochester, N. Y.	218,149	78	5		72		16	1	2	8
Seattle, Wash.	237,194	57			6		1		16	9
From 100,000 to 200,000 inhabitants:										
Bridgeport, Conn.	102,054	48	3	4	19	1	6		4	2
Cambridge, Mass.	104,839	29	3		40		6		11	7
Dayton, Ohio.	116,577	50	7	1	11		4	1		1
Fall River, Mass.	119,295	52	2				5		10	1
Grand Rapids, Mich.	112,571	2	2		29	1	5	1	5	1
Lowell, Mass.	106,294	36	2		28				4	2
Nashville, Tenn.	110,364	45	1		7				9	6
Oakland, Cal.	150,174				23				5	2
Richmond, Va.	127,628	54			7		1		9	5
Spokane, Wash.	104,402		1		43		1			
Toledo, Ohio.	168,497	93	3	1	9	1	3		7	10
Worcester, Mass.	145,986	59	2		14	2	5	1	5	7
From 50,000 to 100,000 inhabitants:										
Altoona, Pa.	52,127	18	1				1			2
Bayonne, N. J.	55,545		1		8		5		3	
Brockton, Mass.	56,878	16	2		12	1	6		3	2
Camden, N. J.	94,538		4		4		7		9	
Duluth, Minn.	78,466		1		8		18		3	2
Erie, Pa.	66,525	34	3		12					
Evansville, Ind.	69,647	25	1		6		3	1	1	4
Harrisburg, Pa.	64,186	18	2	1	26				8	1
Hartford, Conn.	98,915	41	6		9		3			1
Hoboken, N. J.	70,324		4		11		3		9	
Johnstown, Pa.	55,482	25	10		18		1			
Lynn, Mass.	89,336	26	4		1		12		8	
Manchester, N. H.	70,063	16	2		9		9			
New Bedford, Mass.	96,652	44	1	1			5		12	3
Passaic, N. J.	54,773	19			15		3		3	2
Pawtucket, R. I.	51,622						3			
Reading, Pa.	96,071	39			9		11	1	1	5
Saginaw, Mich.	50,510	24	4				1		1	2
Schenectady, N. Y.	72,826	20	5	1			3		3	3
South Bend, Ind.	53,684	24	2		1		2			3
Springfield, Ill.	51,678	13								1
Springfield, Mass.	88,926	30								2
Trenton, N. J.	96,815	51	3		1		17	3	8	2
Wilkes-Barre, Pa.	67,105	25	3	1	101	2	7		3	
From 25,000 to 50,000 inhabitants:										
Atlantic City, N. J.	46,150	13	2		7		3		3	
Aurora, Ill.	29,807	28	1							3
Austin, Tex.	29,860	9					1			1
Binghamton, N. Y.	48,443	24			48		5		4	4
Brookline, Mass.	27,792	7			6		2			
Butte, Mont.	39,165	23	1		7		5		4	2
Chelsea, Mass.	32,452	9	3		15		8		4	1
Chicopee, Mass.	25,401	6								
Danville, Ill.	27,871	10	3		2					

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

City Reports for Week Ended Apr. 18, 1914—Continued.

Cities.	Popula- tion, United States census 1910.	Total deaths from all causes.	Diph- theria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
From 25,000 to 50,000 inhabit- ants—Continued.										
East Orange, N. J.	34,371	3	2		40		3		1	2
Elmira, N. Y.	37,176	12			3		2			
Everett, Mass.	33,484	8	1		3		5		3	4
Fitchburg, Mass.	37,826	10	1		3		6		1	
Haverhill, Mass.	44,115	21	4		2		9		5	2
Kalamazoo, Mich.	39,437	22	3		110		2		11	3
Knoxville, Tenn.	36,346				5					
La Crosse, Wis.	30,417	8	1							1
Lancaster, Pa.	47,227		1		2		3		2	
Lexington, Ky.	35,099	20	1		29		2			2
Little Rock, Ark.	45,941	31	1		23					
Lynchburg, Va.	29,494	13			1					1
Malden, Mass.	44,404	9	1		8		7		2	
McKeesport, Pa.	42,694	14			1		1			
Newcastle, Pa.	36,280						3			1
Newport, Ky.	30,389	13	2				3		1	1
Newport, R. I.	27,149	9	1							3
Newton, Mass.	39,806	10			23		5			
Niagara Falls, N. Y.	30,445	11	2	1	3				1	
Norristown, Pa.	27,875	15			26		3		2	1
Orange, N. J.	29,630	12	1		18		2		2	2
Pasadena, Cal.	30,291	10							1	2
Pittsfield, Mass.	32,121	12	1				3			
Portsmouth, Va.	33,180	10	3		4		4			1
Racine, Wis.	38,002	12					2		1	
Roanoke, Va.	34,874	14	1		77		5		2	1
Rockford, Ill.	45,401	12	1				4			
Sacramento, Cal.	44,696	12			1				1	2
San Diego, Cal.	39,578	3							2	2
South Omaha, Nebr.	26,219	7								
Superior, Wis.	40,384	7	2				4			
Taunton, Mass.	34,219	26	4				3			4
Waltham, Mass.	27,834	7	1	1	3		4		1	
West Hoboken, N. J.	35,403		3	1	6		6		1	1
Wheeling, W. Va.	41,641	19			3		1			2
Wilmington, N. C.	25,748	8			9				1	1
York, Pa.	44,750		1		1				1	
Less than 25,000 inhabitants:										
Alameda, Cal.	23,383	9			20		1			1
Ann Arbor, Mich.	14,817	6			1				4	
Beaver Falls, Pa.	12,191						1			
Braddock, Pa.	19,357		1		2		2			
Cambridge, Ohio.	11,327	4					1			
Clinton, Iowa.	13,075	5	1				2			
Coffeyville, Kans.	12,687		1		7		2		2	1
Concord, N. H.	21,497	9	2							1
Cumberland, Md.	21,839	6	5		2		5		1	
Dunkirk, N. Y.	17,221	3					2			1
Galesburg, Ill.	22,039	13								
Harrison, N. J.	14,498	1			1		1		1	
Kearny, N. J.	18,659	5	1		3		1			
Kokomo, Ind.	17,010	7			2		9			2
Marinette, Wis.	14,610	2	1				2			
Massillon, Ohio.	13,879	5	1		1		3			1
Medford, Mass.	23,150		1		1		14	2		
Melrose, Mass.	15,715	1			1				1	
Moline, Ill.	24,199	5	1							
Montclair, N. J.	21,550	9			54		3		2	
Morristown, N. J.	12,507	6	1		4		1		1	
Muncie, Ind.	24,005	8	1				4			
Muscatine, Iowa.	16,178	2		1						1
Nanticoke, Pa.	18,877	6	1		1		2		6	
Newburyport, Mass.	14,949	13								
North Adams, Mass.	22,019	8							1	
Northampton, Mass.	19,431	5			4		3			
Palmer, Mass.	8,610	1								
Plainfield, N. J.	20,550	7			2					
Portsmouth, N. H.	11,269		1				2			
Pottstown, Pa.	15,599	4			1					
Rutland, Vt.	13,546	6					1			
Saratoga Springs, N. Y.	12,693	3			1					
South Bethlehem, Pa.	19,973	11			15		1			
Steelton, Pa.	14,246	2			4					
Wilksburg, Pa.	18,924	7	2		1		10		1	2
Woburn, Mass.	15,308	4			1					1

IN INSULAR POSSESSIONS.

HAWAII.

Examination of Rats and Mongoose.

Rats and mongoose have been examined in Hawaii for plague infection as follows: Week ended April 4, 1914—Honolulu, 338, Hilo, 2,503; week ended April 11, 1914—Honolulu, 352, Hilo, 2,450. No plague-infected animal was found.

PORTO RICO.

Examination of Rodents.

During the week ended April 10, 1914, 755 rats and 203 mice were examined in Porto Rico for plague infection. No plague-infected rodent was found.

FOREIGN REPORTS.

CHINA.

Plague—Plague-Infected Rats—Hongkong.

During the two weeks ended March 21, 1914, 104 cases of plague with 72 deaths were notified at Hongkong.

During the same period 4,879 rats were examined at Hongkong for plague infection. Of this number 42 were found plague infected.

CUBA.

Plague.

A case of plague was notified at Habana May 1, 1914, and on May 6, 1914, 1 case, making a total of 18 cases with 3 deaths notified in Cuba since March 5, 1914.

Communicable Diseases—Habana.

Communicable diseases have been notified in Habana as follows:

APRIL 10-20, 1914.

Disease.	New cases.	Deaths.	Remain- ing under treat- ment.
Diphtheria	22	.....	18
Leprosy .....	.....	.....	262
Malaria	12	.....	5
Measles	41	1	140
Paratyphoid fever	3	.....	4
Plague	4	1	6
Scarlet fever	36	1	57
Typhoid fever	7	1	29
Varicella	28	.....	42

¹ From the interior of the Republic.

GIBRALTAR.

Quarantine Against El Arish Removed.

The quarantine measures imposed at Gibraltar March 10, 1914, on account of plague, against El Arish, Morocco, were removed April 6, 1914.

JAPAN.

Plague—Typhus Fever.

During the period from April 27 to May 4, 1914, 3 cases of plague were notified at Tokyo. During the same period 316 cases of typhus fever were notified at Tokyo and 20 cases at Yokohama.

MEXICO.

Smallpox—Vera Cruz.

During the week ended April 25, 1914, 5 cases of smallpox, occurring among refugees, were notified at Vera Cruz.

MOROCCO.

Typhus Fever—Tangier.

Typhus fever was reported present at Tangier April 11, 1914.

PERU.

Summary of Plague, 1913.

During the year 1913, 869 cases of plague with 459 deaths were notified in Peru. The cases were distributed according to Provinces and months as follows:

	Remaining Dec. 31, 1912.	New cases:	Deaths.	Remaining Dec. 31, 1913.
PROVINCES.				
Ancachs.....	2	25	21	.....
Arequipa.....	7	42	21	.....
Cajamarca.....	.....	29	9	.....
Callao.....	5	34	18	.....
Lambeyque.....	9	290	158	19
Libertad.....	26	271	147	21
Lima.....	2	154	69	9
Piura.....	2	24	16	2
Total.....	53	869	459	51
MONTHS.				
January.....	53	159	95	55
February.....	55	129	64	65
March.....	65	106	61	61
April.....	61	32	24	20
May.....	20	21	7	18
June.....	18	24	11	10
July.....	10	33	9	18
August.....	18	17	8	9
September.....	9	48	21	25
October.....	25	82	49	29
November.....	29	129	62	49
December.....	49	89	48	51
Total.....	53	869	459	51

In addition there were notified 10 cases in regard to which the date and place of origin were not stated.

RUSSIA.

Plague—Ural Territory.

From March 2 to 13, 1914, 16 cases of plague with 15 deaths were notified in a village in the Lbistchensky district, Ural territory, Russia. The first case, from which apparently the infection spread, was of the pneumonic type.

ZANZIBAR.**Examination of Rats—Zanzibar.**

During the week ended March 14, 1914, 960 rats were examined at Zanzibar for plague infection. No plague-infected rat was found.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX.**Reports Received During Week Ended May 8, 1914.****CHOLERA.**

Places.	Date.	Cases.	Deaths.	Remarks.
India:				
Bassein.....	Mar. 1-7.....	1	1	
Bombay.....	Mar. 22-28.....	2	1	
Calcutta.....	Mar. 15-21.....	.....	87	
Negapatam.....	Mar. 1-14.....	2	2	
Rangoon.....	Feb. 16-28.....	4	3	
Straits Settlements:				
Singapore.....	Mar. 8-14.....	2	1	
Turkey in Europe:				
Kirk Kilisse.....	Mar. 16.....	2	2	

YELLOW FEVER.

Venezuela:				
Caracas.....	Feb. 1-28.....	.....	3	

PLAGUE.

Ceylon:				
Colombo.....	Mar. 15-28.....	23	22	Total Jan. 25-Mar. 26: cases, 100; deaths, 88; of which 71 fatal cases were septicæmic and 29 cases, with 17 deaths, bubonic.
China.....				Jan. 17-Mar. 1, present in localities 15 miles from Chaoyang, and in Chin Khoi, Hak Is, Hwellai, Ko Khoi, Khoi Tau, Kun Pau, Sua Ming Sia, and Toa Phau.
Hongkong.....				Apr. 30-May 6: Cases, 203.
Cuba:				
Habana.....	Apr. 30-May 6....	2	1	Total, Mar. 5-May 6: Cases 17; deaths, 3.
Egypt.....				Total, Jan. 1-Apr. 6: Cases, 20; deaths, 9.
Port Said.....	Feb. 11-Apr. 6....	2	1	
Provinces—				
Dakahlia.....	Mar. 23.....	1	.....
Garbieh.....	Apr. 3.....	1	.....
Menouf.....	Mar. 31-Apr. 2....	2	2	
India:				
Bassein.....	Mar. 1-15.....	31	27	
Bombay.....	Mar. 22-28.....	145	129	
Calcutta.....	Mar. 15-21.....	.....	16	
Karachi.....	Mar. 22-Apr. 4....	195	155	
Negapatam.....	Mar. 1-14.....	9	9	
Rangoon.....	Feb. 16-28.....	126	115	
Japan:				
Tokyo.....				To Apr. 27, cases 17; Apr. 18-May 4, cases 3.
Mauritius.....	Mar. 31-Feb. 12...	12	7	
Peru.....				Total year 1913: ¹ Cases, 869; deaths, 459.
Mollendo.....	Apr. 4.....			Present.
Salaverry.....	Mar. 17-25.....	3	1	
Trujillo.....	Mar. 31.....	16	.....	In hospital.
Russia:				
Astrakhan, government—				
Lbistchensky, district..	Mar. 2-13.....	16	15	
Venezuela:				
Caracas.....	Apr. 7.....		1	Case notified Apr. 12.

¹ Report by months and departments, p. 1180.

CHOLERA, YELLOW FEVER, PLAGUE, AND SMALLPOX—Continued
Reports Received During Week Ended May 8, 1914—Continued.
SMALLPOX.

Places.	Date.	Cases.	Deaths.	Remarks.
Australia.....				Mar. 4-13, 5 cases in the metropolitan area of Sydney and 8 in the country districts.
Brazil:				
Bahia.....	Mar. 22-28.....		1	Apr. 4, 48 cases present.
Para.....	Mar. 29-Apr. 11.....		8	
Pernambuco.....	Feb. 16-28.....		2	
Rio de Janeiro.....	Mar. 15-28.....	35	12	
Canada:				
Montreal.....	Apr. 19-25.....	1		
Ottawa.....	do.....	1		
Ceylon:				
Colombo.....	Mar. 22-28.....	1		
China:				
Dairen.....	Mar. 15-28.....	5	2	
Hongkong.....	Mar. 8-29.....	17	10	
Shanghai.....	Mar. 16-22.....	4	6	
Egypt:				
Alexandria.....	Apr. 1-15.....	3		
Cairo.....	Mar. 12-18.....	33	3	
France:				
Nantes.....	Apr. 5-11.....	1		
Paris.....	Apr. 29-May 4.....	4		
Toulon.....	Jan. 1-31.....		1	
Guatemala:				
Guatemala.....	Apr. 21.....			Present.
India:				
Bombay.....	Mar. 1-28.....	80	45	
Calcutta.....	Mar. 8-21.....		44	
Karachi.....	Mar. 22-Apr. 4.....	12	5	
Madras.....	do.....	13	9	
Rangoon.....	Feb. 1-28.....	17	1	
Japan.....				Total Jan. 1-31: Cases, 2.
Nagasaki.....				Mar. 5, 2 cases.
Taiwan.....	Mar. 22-28.....	1		
Mexico.....				Apr. 25: 5 cases occurred among refugees in Vera Cruz.
Monterey.....	Mar. 16-29.....	7		
Morocco:				
Tangier.....	Apr. 11.....			Present.
Portugal:				
Lisbon.....	Apr. 12-18.....	3		
Turkey:				
Constantinople.....	Apr. 5-11.....		1	

Reports Received from Dec. 27, 1913, to May 1, 1914.
CHOLERA.

Places.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary:				
Bosnia-Herzegovina—				
Brod.....	Nov. 13-18.....	2		
Kostjnica.....	do.....	1		
Novigrad.....	Oct. 26-Nov. 5.....	1		
Sjekocac.....	Nov. 6.....	1		
Travnik, district.....	Dec. 10-16.....	6		
Vranduk.....	Nov. 20.....	1		
Zenica.....	Oct. 20-Nov. 19.....	9	2	
Croatia-Slavonia—				
Pozenga.....	Nov. 18-Dec. 1.....	2		
Syrmien—				
Adaseveci.....	do.....	6	2	
Semlin.....	do.....	1	1	
Vitrovia—				
Dobrovic.....	do.....	2	2	
Hungary.....				Total, Sept. 1-Dec. 29: Cases, 729; deaths, 372; Dec. 29, free.
Bacs-Bodrog, district.....	Nov. 9-Dec. 29.....	52	31	
Jasz-Nagy-Kun-Szolnok—				
Szolnok.....	Nov. 9-15.....	2	2	
Maramaros.....	Nov. 30-Dec. 6.....	1	1	
Pest Pills—				
Soroksar.....	Nov. 9-22.....	2	1	

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

Reports Received from Dec. 27, 1913, to May 1, 1914—Continued.

CHOLERA—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Austria-Hungary—Continued.				
Szabolcs—				
Nyiregyhaza.....	Nov. 9-15.....	1	1	
Temes—				
Varasiget.....	do.....		1	
Torontal.....	Nov. 9-Dec. 13.....	27	19	
Ung—				
Jasza.....	Nov. 9-15.....	1	1	
Ceylon:				
Colombo.....	Nov. 9-Jan. 17.....	33	19	
Galle.....	Feb. 9.....	1		
China:				
Hongkong.....	Nov. 9-Mar. 22.....	10	4	
Dutch East Indies:				
Java—				
Batavia and Tanjong Priok.....	Nov. 9-Feb. 14.....	47	35	
Do.....	Jan. 18-24.....	1	1	
Samarang.....	Nov. 30-Dec. 27.....	47	25	
Sumatra—				
Padang.....	Dec. 1-Jan. 24.....	136	101	
India:				
Bassein.....	Feb. 1-28.....	14	12	
Bombay.....	Nov. 10-Mar. 21.....	23	11	
Calcutta.....	Nov. 9-Mar. 14.....		1,012	
Madras.....	Nov. 16-Mar. 7.....	14	5	
Moulmine.....	Jan. 4-Feb. 28.....	23	23	
Negapatam.....	do.....	106	87	
Rangoon.....	Nov. 1-Dec. 31.....	5	1	
Do.....	Jan. 1-31.....	2	1	Feb 1-4: 11 cases with 8 deaths. Year 1913: Cases, 432; deaths, 13. Total, Jan. 1-Feb. 10: Cases, 16; deaths, 13.
Indo-China				
Cholon.....	Jan. 21-31.....	1		
Laos (Shan States).....	Jan. 1-10.....	10		Along the upper Mekong River.]
Phanri.....	Jan. 1-Feb. 10.....		3	
Saigon.....	Jan. 13-Feb. 23.....	3		
Philippine Islands:				
Manila.....	Nov. 9-Mar. 14.....	86	56	Total, Aug. 23-Jan. 24: Cases, 186; deaths, 124. Third quarter, 1913: Cases, 14; deaths, 6. Fourth quarter, 1913: Cases, 107; deaths, 104. Jan. 3, 1 fatal case on s. s. Sigismund from Rabal, New Guinea. At the necropsy pathological lesions of cholera and beriberi were found.
Provinces.....				
Bulacan—				
Bulacan.....	Dec. 14-20.....			Present in vicinity.
Meycauayan.....	do.....			Present.
Capiz.....				Total, Dec. 17-23: Cases, 26; deaths, 18. Feb. 21, still present.
Banga.....	Dec. 17-20.....			Present.
Capiz.....	Jan. 28.....			Do.
Calivo.....	Dec. 17-Jan. 24.....			1 death daily.
New Washington.....	do.....			Present.
Cavite—				
Santa Cruz.....	Nov. 13-19.....			Do.
Cebu.....				
Cebu.....	do.....			Do.
Opon.....	Nov. 19.....	1		On Mactan Island.
Pampanga.....	Dec. 7-Jan. 28.....			Present in Guagua, Macabete, San Fernando, and other places.
Pangasinan.....	Dec. 19-29.....			Present in Dagupan, Lingayen, San Carlos, and Urdaneta.
Rizal—				
Las Pinas.....	do.....	1		
Pasig.....	Nov. 19.....			Present.
Pateros.....	Jan. 28.....			Do.
Rizal.....	do.....			Do.
Roumania.....				Total, Nov. 14-Dec. 7: Cases, 18; deaths, 15.

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

Reports Received from Dec. 27, 1913, to May 1, 1914—Continued.

CHOLERA—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Russia:				
Bessarabia—				
Ismail.....	Oct. 26-Nov. 8.....	6	1	
Ekaterinoslav.....	do.....	1		
Kherson.....	do.....	6	9	
Taurids—				
Dneiper district.....	do.....	1	2	
Servia.....				Nov. 10-24: 8 cases with 2 deaths in the districts Podrigne and Pojarevatz.
Siam:				
Bangkok.....	Nov. 2-Feb. 21.....		115	
Straits Settlements:				
Singapore.....	Nov. 2-Mar. 7.....	22	20	
Kedah, province.....	Feb. 4.....			Present.
Turkey in Asia:				
Aivali.....	Jan. 10-23.....	9	6	
Beirut.....	Dec. 23.....	2	1	From among troops on the s. s. Bahr Amer from Rodosto.
Smyrna.....	Dec. 16-Jan. 8.....	11	4	
Trebizond.....	Dec. 9-Jan. 24.....	22	16	Dec. 9-16: 6 cases among troops from s. s. Guldjemat. Jan. 17, 1 case in the city.
Turkey in Europe:				
Adrianople.....	Feb. 28-Mar. 28.....	99	38	Among the military.
Constantinople.....	Nov. 25-Feb. 15.....	141	56	Total, Aug. 2-Feb. 18: Cases, 216; deaths, 86. Total, Jan. 1-Mar. 21: Cases, 30; deaths, 14; Mar. 24, 1 fatal case.
Dardanelles.....	Jan. 9-20.....	10	9	
Gallipoli.....	Jan. 1-3.....	2	2	
Pera.....	Jan. 3-10.....	5		
Rodosto.....	Dec. 21-Jan. 9.....	22		

YELLOW FEVER.

Brazil:				
Bahia.....	Nov. 23-Mar. 28.....	22	25	Apr. 1-21: Cases, 24; deaths, 17.
Ceara.....	Nov. 1-30.....		2	
Pernambuco.....	Mar. 1-15.....		17	
Ecuador:				
Guayaquil.....	Nov. 1-Dec. 31.....	9	6	
Do.....	Jan. 1-Feb. 15.....	12	3	
Milagro.....	Jan. 1-Feb. 28.....	6	4	
Naranjito.....	Jan. 1-31.....	3	2	
Mexico:				
Merida.....	Dec. 10-11.....	1	1	From Campeche.
Do.....	Jan. 4-10.....	1	1	Do.
Southern Nigeria:				
Lagos.....	Oct. 20-Dec. 28.....	5	1	Among Europeans from a vessel. Feb. 26, present.
Do.....	Feb. 13-14.....	2		
Omitsha.....	Jan. 24.....	1		
Togo:				
Lome.....	Sept. 12.....	1		
Trinidad:				
Brighton.....	Dec. 30.....	1		Total, Nov. 22-Dec. 30: Cases, 10; deaths, 3. Mar. 26, 1 case, 3½ miles distant.
Labrea.....	Mar. 27.....	1		
Venezuela:				
Carcas.....				Feb. 28, 1 case.

PLAGUE.

Arabis:				
Debal.....	Mar. 7.....			Present.
Australia:				
Thursday Island Quarantine Station.....	May 21.....	5		Pestis minor from s. s. Taynan from Hongkong to Townsville.
Azores:				
Teroira—				
Angra-Heroismo.....	Dec. 21.....		1	

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

Reports Received from Dec. 27, 1913, to May 1, 1914—Continued.

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Bahia.....	Nov. 23-Mar. 21...	26	17	
Pernambuco.....	Dec. 16-31.....		1	
Do.....	Jan. 1-Feb. 23.....		2	
Rio de Janeiro.....	Nov. 16-22.....	1	1	
British East Africa:				
Kisumu.....	Sept. 12-Oct. 13.....	2		Jan. 14-Nov. 15, 1913: Cases, 20; deaths, 22.
Mombasa.....	Sept. 12-Dec. 15.....	31	16	Feb. 6-Dec. 15: Cases 200; deaths, 173, including previous reports.
Nairobi.....	Sept. 12-Nov. 15.....	3	3	
Ceylon:				
Colombo.....	Jan. 25-Mar. 14.....	56	45	
Kandy.....	Jan. 25-Feb. 7.....	1		From Colombo.
Chile:				
Iquique.....	Nov. 9-Jan. 31.....	18	9	
Do.....	Jan. 11-Mar. 28.....	19	12	
Santiago.....	Mar. 11-15.....		2	
China.....				Mar. 14, present in Ampo and Tah-tau-po.
Amoy.....	Feb. 18.....		5	Present in the island. Mar. 7, still present in Amoy.
Hongkong.....	Nov. 2-Mar. 21.....	244	195	Apr. 23-29: Cases, 193.
Shanghai.....	Oct. 1-7.....	1		Apr. 22, 1 case.
Cuba:				
Artemisa.....	Apr. 23.....	1		
Habana.....	Mar. 5-Apr. 30.....	15	2	
Dutch East Indies:				
Java.....				Total in East Java, year 1913: Cases, 11,218; deaths, 10,556.
Provinces—				
Kediri.....	Nov. 1-Dec. 31.....	547	481	
Do.....	Jan. 1-Feb. 28.....	406	380	
Madioen.....	Nov. 1-Dec. 31.....	151	140	
Do.....	Jan. 1-Feb. 28.....	284	251	
Pasoeroean, including Malang.	Nov. 1-Dec. 31.....	1,550	1,463	
Do.....	Jan. 1-Feb. 28.....	1,481	1,295	
Surabaya.....	Nov. 1-Dec. 31.....	93	93	
Do.....	Jan. 1-Feb. 28.....	99	90	
Ecuador:				
Babahoyo.....	Nov. 1-Dec. 31.....	1		
Duran.....	Dec. 1-31.....	1		
Do.....	Jan. 1-31.....	1	1	
Guayaquil.....	Nov. 1-Dec. 31.....	349	157	
Do.....	Jan. 1-Feb. 28.....	71	32	
Manta.....	Dec. 1-31.....	8		
Milagro.....	Nov. 1-Dec. 31.....	2	1	
Naranjito.....	.....do.....	3	1	
Yaguachi.....	Nov. 1-30.....	2	2	
Do.....	Jan. 1-31.....	1	1	
Egypt.....				Jan. 1-Dec. 24, 1913: Cases, 654 deaths, 304. Jan. 1-Feb. 18: Cases, 15; deaths, 7.
Alexandria.....	Feb. 10.....	1	1	
Cairo.....	Feb. 13-22.....	2		
Port Said.....	Feb. 10.....	2	2	
Provinces				
Assiout.....	Jan. 5.....	1	1	
Assouan.....	Dec. 10.....	1		
Do.....	Jan. 5.....	1	1	
Fayoum.....	Feb. 19.....	1		
Garbieh.....	Dec. 11.....	1		
Do.....	Jan. 15-17.....	7	2	
Minieh.....	Dec. 9-24.....	3	1	
Do.....	Jan. 8-29.....	2	2	
German East Africa: ¹				
Dar es Salaam.....	Mar. 13.....	1	1	Pneumonic.
Hawaii:				
Kukuihaele.....	Apr. 18.....		1	
India.....				Total Jan. 1, 1913-Jan. 3, 1914: Cases, 238,198; deaths, 198,875: Jan. 4-31: Cases, 34,714; deaths, 28,061.
Bassein.....	Jan. 4-Feb. 28.....	130	109	Total, Jan. 1, 1913-Jan. 3, 1914 Cases, 304; deaths, 283.
Bombay.....	Nov. 9-Mar. 21.....	521	447	
Calcutta.....	Nov. 2-Mar. 14.....		47	

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

Reports Received from Dec. 27, 1913, to May 1, 1914—Continued.

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
India—Continued.				
Karachi.....	Nov. 9-Mar. 21.....	430	399	
Madras.....	Nov. 16-Feb. 14.....	5	3	
Moulmine.....	Jan. 4-24.....		18	Jan. 1, 1913-Jan. 3, 1914: Cases, 574; deaths, 576.
Negapatam.....	Feb. 1-28.....	32	32	
Rangoon.....	Oct. 26-Dec. 31.....	74	68	
Do.....	Jan. 1-Feb. 14.....	202	196	
Indo-China				
Saigon.....	Nov. 11-Mar. 16.....	28		
Japan				
Kobe.....	Dec. 1-7.....	1		
Taiwan— Kagi.....	Feb. 1-Mar. 21.....	69	59	
Tokyo.....				Apr. 18, 5 cases in the vicinity.
Yokohama.....	Jan. 4-10.....	1	1	Total Sept. 19-Jan. 10: Cases, 22; deaths, 18.
Mauritius.....	Jan. 1-Mar. 29.....	20	10	Total year 1913: Cases, 305; deaths, 183.
Morocco:				
Casablanca.....	Jan. 7.....	1	1	
El-Arish (Larache).....	Sept. 17.....	1		Among the military.
Fedala.....	Mar. 16-25.....	3	1	
New Caledonia:				
Bourail.....	Sept. 1-Oct. 14.....	8	2	In a school of the tribe of the Azaren.
Peru				
Ancachs—				
Casma.....	Feb. 9-15.....	2		Dec. 1-Feb. 8, present.
Nepena.....	Nov. 1-Jan. 18.....			Do.
Arequipa—				
Mollendo.....	Dec. 1-Feb. 22.....	14		
Cajamarca—				
Contumaza.....	Jan. 19-24.....	12		Feb. 8, present.
Callao—				
Callao.....	Jan. 19-Feb. 22.....	7		
Lambayeque—				
Chiclayo.....	Dec. 1-Feb. 15.....	72		
Ferrenaje.....	Dec. 1-Feb. 8.....	18		
Guadalupe.....	Dec. 1-Feb. 22.....	21		Dec. 1-Feb. 8, present.
Pacasmayo.....	Jan. 25-Feb. 15.....	5		
Libertad—				
San Pedro.....	Dec. 1-Feb. 8.....	34		
Salaverry.....	Feb. 16-22.....	8		Mar. 2-10: Cases, 2.
Trujillo.....	Dec. 1-Feb. 22.....	73		
Lima				
Lima.....	Dec. 1-Jan. 18.....	6		
Lima.....	Dec. 1-Feb. 22.....	48		
Pisco.....	Dec. 1-Jan. 18.....	2		
Monsefu.....	do.....	2		
Piura—				
Catacaos.....	Dec. 1-Feb. 15.....	13		
Piura.....	Dec. 1-Jan. 24.....	10		Feb. 8, present.
Philippine Islands:				
Manila.....	Nov. 23-Mar. 14.....	12	11	Third quarter, 1913: Cases, 2; deaths, 1. Fourth quarter, 1913: Case, 1; death, 1.
Russia:				
Saratov.....	Feb. 11.....	1		
Ural territory				
Djakisabevsk district—				
Djumarta.....	Nov. 9-10.....	5	1	
Djantayu.....	Nov. 8-10.....	2	2	
Kizilu.....	Nov. 8.....	1	1	
Fourteenth village.....	Nov. 7-9.....	6		
Sarbas.....	Nov. 8-10.....	13	7	
Kaziljar district.....	Nov. 5-10.....	39	24	In Assaukurt, Baitchurek, Bis-kuduk, and Djamankuduk.
Lbistchensky district—				
Issum Tube.....	Oct. 20-Nov. 10.....	138	127	
Kalmikov.....	Nov. 4-10.....	6	6	
Siam:				
Bangkok.....	Nov. 2-Feb. 21.....		20	

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

Reports Received from Dec. 27, 1913, to May 1, 1914—Continued.

PLAGUE—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Tripoli:				
Bengazi.....	Jan. 31.....			Present.
Turkey in Asia:				
Beirut.....	Dec. 10-23.....	2	2	
Jiddah.....	Feb. 2-Mar. 11....	5	2	
Venezuela:				
Caracas.....	Apr. 12.....	1		
Zanzibar.....	Dec. 31-Jan. 21....	5	3	On s. a. President from Dar-es-Salaam.

SMALLPOX.

Algeria:				
Departments—				
Algiers.....	Sept. 1-Dec. 31....	10		
Constantine.....	Oct. 1-Dec. 31....	15		
Oran.....	Sept. 1-Nov. 30....	216		Feb. 1-28: Cases, 5; deaths, 4.
Arabia:				
Aden.....	Nov. 25-Mar. 9....	6	6	
Maskat.....	Nov. 30-Dec. 6....	10		Dec. 20; present.
Matarah.....	Dec. 23-Jan. 10....	9		Nov. 30, present; Mar. 7, still present.
Argentina:				
Buenos Aires.....	Nov. 1-30.....		1	
Rosario.....	Dec. 1-31.....	1		
Australia:				
New South Wales.....				Total July 1, 1913-Jan. 31, 1914: Cases, 1,078.
Sydney, metropolitan area.....				July 1, 1913-Jan. 8, 1914: Cases, 1,032. Feb. 1-Mar. 3: 12 cases in the metropolitan area of Sydney and 7 cases at Singleton.
Western Australia—				
Fremantle.....				Dec. 2: 1 fatal case on R. M. S. Malwa, from London via Port Said, Aden, and Colombo.
Victoria—				
Melbourne.....				At Point Napean quarantine station, Jan. 19: 1 case from F. M. S. Caledonian from Noumea via Sydney.
Austria-Hungary:				
Coastland—				
Trieste.....	Jan. 25-31.....	3		
Galicia.....	Feb. 15-21.....	1		
Krain.....	Mar. 1-14.....	4		
Lower Austria—				
Vienna.....	Jan. 4-24.....	6		
Moravia.....	Jan. 18-Feb. 21....	5		
Silesia.....	Feb. 15-18.....	1		
Tyrol and Vorarlberg.....	Nov. 23-Feb. 21....	6		
Upper Austria.....	Dec. 14-Feb. 21....	20		
Belgium:				
Liege.....	Mar. 1-7.....		6	
Brazil:				
Bahia.....	Nov. 23-Mar. 21....	33		
Para.....	Dec. 1-Mar. 28....	80	77	
Pernambuco.....	Nov. 1-Feb. 15....		76	
Rio de Janeiro.....	Nov. 9-Mar. 14....	506	95	
Canada:				
Manitoba—				
Winnipeg.....	Feb. 14-Apr. 4....	21		
Ontario—				
Cornwall.....	Feb. 26-Apr. 4....	1		
Fort William.....	Feb. 24-Mar. 2....	1		
Hamilton.....	Jan. 1-Mar. 31....	30		
Ottawa.....	Dec. 7-Apr. 4....	23		
Toronto.....	do.....	14	1	
Quebec—				
Montreal.....	Dec. 7-Apr. 18....	91		
Quebec.....	Jan. 24-31.....	1		
Canal Zone:				
Panama.....				Nov. 1-30: Santo Tomas hospital, 1 case from a vessel from Callao.
Ceylon:				
Colombo.....	Nov. 30-Dec. 6....	1		

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

Reports Received from Dec. 27, 1913, to May 1, 1914—Continued.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
China:				
Amoy.....	Dec. 14-Jan. 10.....	.....	.....	Present.
Antung.....	Jan. 4-Mar. 29.....	5	2	
Chefoo.....	Feb. 22-Mar. 7.....	2	1	
Dairen.....	Dec. 7-Mar. 14.....	19	4	
Hankow.....	Nov. 2-Feb. 28.....	14	1	
Hongkong.....	Dec. 14-Mar. 7.....	15	11	
Mukden.....	Mar. 8-15.....	3	1	
Nanking.....	Jan. 24.....	.....	.....	Do.
Shanghai.....	Dec. 8-Mar. 15.....	14	18	Deaths among natives.
Tientsin.....	Nov. 9-15.....	.....	1	
Ting Chow.....	Jan. 5.....	.....	.....	Epidemic, 130 miles from Amoy.
Tsing Tau.....	Jan. 15-Feb. 28.....	4	.....
Tong An.....	Dec. 27.....	.....	.....	Present, 20 miles from Amoy.
Cuba:				
Sagua la Grande.....	Feb. 1-28.....	1	1	
Dutch East Indies:				
Java.....	.....	.....	.....	Dec. 13-Feb. 21: 322 cases with 91 deaths in the western part, and 100 cases with 63 deaths in the interior.
Batavia.....	Nov. 27-Jan. 11.....	66	69	
Besoeki.....	Oct. 19-29.....	227	47	
Madioen.....	Oct. 19-28.....	36	12	
Surabaya.....	Oct. 28-Jan. 31.....	6	.....
Surakarta.....	Oct. 19-Dec. 6.....	481	91	
Sumatra—				
Padang.....	Jan. 1-31.....	.....	.....	Present.
Egypt:				
Alexandria.....	Nov. 26-Mar. 25.....	29	13	
Cairo.....	Nov. 19-Mar. 11.....	160	84	
Port Said.....	Dec. 3-Mar. 4.....	7	1	
France:				
Bordeaux.....	Mar. 8-14.....	.....	1	
Marseille.....	Nov. 1-Feb. 28.....	.....	113	
Nantes.....	Feb. 1-Mar. 28.....	5	2	
Nice.....	Nov. 1-Dec. 31.....	2	.....
Paris.....	Nov. 23-Mar. 21.....	40	.....
St. Etienne.....	Nov. 16-Mar. 14.....	12	4	
Germany:				
Berlin.....	Feb. 8-14.....	2	.....	Dec. 7-Mar. 28: Cases, 26.
Bremen.....	do.....	1	.....
Breslau.....	do.....	1	.....
Hamburg.....	Dec. 11-25.....	4	.....
Kehl.....	Jan. 1-31.....	4	1	
Lubeck.....	Feb. 15-21.....	1	.....
Gibraltar.....	Dec. 1-Mar. 22.....	6	.....
Great Britain:				
Aberdeen.....	Feb. 22-Mar. 21.....	6	1	
Cardiff.....	Feb. 16-21.....	1	.....
Edinburgh.....	Mar. 1-7.....	.....	1	
Liverpool.....	Mar. 15-21.....	1	.....	From a vessel.
London.....	Jan. 18-Mar. 22.....	6	.....
Nottingham.....	Dec. 21-27.....	28	.....
Southampton.....	Feb. 2-28.....	1	.....
Greece:				
Achaia and Elis, Province.....	Mar. 8-14.....	7	5	Jan. 28-Feb. 12: Present in the barracks at Athens and at the surrounding country.
Piraeus.....	Jan. 18-Feb. 12.....	19	11	Jan. 29, present.
Grenada:				
St. Georges.....	Mar. 22-28.....	4	.....	In St. Andrews Parish, 20 miles from St. Georges.
Guadeloupe:				
Pointe a Pitre quarantine station, Islet a Cosson.....	Feb. 16-23.....	10	1	From among returned troops from s. s. Perou from Havre, via Bordeaux and Santander.
India:				
Bombay.....	Nov. 23-Feb. 28.....	78	35	
Calcutta.....	Nov. 2-Mar. 7.....	.....	142	
Karachi.....	Nov. 2-Mar. 14.....	25	5	
Madras.....	Nov. 2-Mar. 21.....	53	16	
Indo-China:				
Saigon.....	Nov. 11-24.....	1	1	
Italy:				
Genoa.....	Mar. 1-15.....	1	1	
Leghorn.....	Dec. 21-27.....	1	.....
Naples.....	Jan. 3.....	1	.....
Turin.....	Dec. 22-28.....	1	.....

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

Reports Received from Dec. 27, 1913, to May 1, 1914—Continued.

SMALLPOX—Continued.

Places.	Date.	Cases.	Deaths.	Remarks.
Japan.....				Total Jan. 1-Dec. 31: Cases, 108; deaths, 39, exclusive of Taiwan. Total Feb. 1-28: Cases, 15; deaths, 3.
Fukuoka ken.....	Dec. 1-31.....	2		
Nagasaki.....	Jan. 1-Mar. 22.....	3	1	Feb. 1-Mar. 8: 15 cases, 2 deaths.
Tokyo.....	Nov. 1-Mar. 7.....	10		
Yokohama.....	Jan. 6-12.....	1	1	
Mauritius.....	Oct. 2-25.....	60	4	
Mexico:				
Acapulco.....	Dec. 6-Apr. 4.....	5	4	
Aguascalientes.....	Dec. 1-Mar. 29.....		112	
Chihuahua.....	Dec. 29-Apr. 16.....		17	
Cruz.....	Apr. 2.....			Epidemic in vicinity.
Durango.....	Apr. 1-May 31.....		77	
Guadalajara.....	Jan. 11-Feb. 14.....	89	46	
Imuris.....	Dec. 29-Jan. 4.....	5		
Juarez.....	Feb. 15-Apr. 4.....	1	4	
Llano.....	Jan. 17.....	8		
La Paz.....	Jan. 16-22.....	3	1	
Manzanillo.....	Mar. 21-27.....	2		
Mexico.....	Oct. 26-Jan. 17.....	129	40	
Monterey.....	Nov. 17-Mar. 14.....	5	4	
Salina Cruz.....	Jan. 18-24.....	1	1	
San Luis Potosi.....	Nov. 25-Jan. 24.....	4	7	
Tampico.....	Dec. 24-Mar. 10.....	200	58	Feb. 1-24: 22 cases, with 16 deaths.
Vera Cruz.....	Dec. 6-Apr. 11.....	68	30	
Morocco:				
Casablanca.....	Mar. 7.....			Present.
Netherlands, The.....	Feb. 8-14.....	1	1	
New Zealand.....				Apr. 8, 1913, to Jan. 7, 1914: Cases, 2,000, including report, p. 2863, vol. 28.
Norway:				
Trondhjem.....	Nov. 1-Feb. 28.....	19		
Peru:				
Callao.....	Jan. 26.....			Still epidemic, Mar. 7, improving.
Lima.....	do.....			Do.
Philippine Islands:				
Manila.....				Third quarter, 1913: Cases, 15. Fourth quarter, 1913, Cases, 18.
Portugal:				
Lisbon.....	Nov. 16-Apr. 4.....	21		
Russia:				
Moscow.....	Dec. 14-Mar. 21.....	67	18	
Odessa.....	Nov. 16-Mar. 28.....	42	2	
Riga.....	Jan. 1-Apr. 4.....	43	4	Feb. 22-Mar. 28: Cases, 18.
St. Petersburg.....	Nov. 23-Mar. 21.....	84	24	
Vladivostok.....	Dec. 22-Jan. 28.....	5		
Warsaw.....	Oct. 5-Jan. 3.....	73	43	
Servia:				
Belgrade.....	Nov. 7-Mar. 28.....	142	50	
Siam:				
Bangkok.....	Jan. 25-Feb. 21.....		3	
Spain:				
Almeria.....	Nov. 1-Jan. 31.....		9	
Barcelona.....	Nov. 30-Mar. 14.....		101	
Madrid.....	Nov. 1-Feb. 28.....		98	
Seville.....	do.....		2	
Valencia.....	Dec. 1-Mar. 14.....	13		
Straits Settlements:				
Penang.....	Nov. 2-Dec. 6.....	13	1	
Singapore.....	Nov. 2-22.....	2		
Sweden:				
Malmö.....	Mar. 22-28.....	13		
Switzerland:				
Canton—				
Basel.....	Nov. 23-Mar. 28.....	123		
Genoa.....	Nov. 23-29.....	3	1	
Turkey in Asia:				
Adana.....	Jan. 10-24.....	2		Dec. 28, epidemic.
Beirut.....	Nov. 23-Mar. 21.....	318	137	
Jaffa.....	Dec. 6-Feb. 28.....	25	6	
Jerusalem.....	Feb. 1-28.....	1		
Mersina.....	Jan. 4-Mar. 7.....	3	3	
Smyrna.....	Nov. 16-Mar. 14.....		176	
Tarsus.....	Dec. 28-Feb. 8.....			Still present.
Trebizond.....	Jan. 11-24.....			Present.
Tripoli.....	Jan. 25-Mar. 14.....	93	6	
Turkey in Europe:				
Constantinople.....	Nov. 20-Apr. 4.....		23	
Saloniki.....	Dec. 1-Apr. 4.....		93	

SANITARY LEGISLATION.

STATE LAWS AND REGULATIONS PERTAINING TO PUBLIC HEALTH.

HAWAII.

Vegetables—Permit Required for Growing for Sale—Use of Nightsoil Prohibited.
(Reg. Bd. of H., Mar. 13, 1914.)

Resolved by the Board of Health of the Territory of Hawaii, That the following rules and regulations be, and the same are hereby, adopted to govern the growing and sale of vegetables in the city and county of Honolulu.

SECTION 1. On and after the 1st day of July, 1914, no vegetables shall be grown in the city and county of Honolulu by any person, firm, or corporation for sale for human consumption until a written permit for such purpose shall have been granted to such person, firm, or corporation by the Territorial board of health.

SEC. 2. It shall be unlawful to use human excreta, whether in liquid or solid form, as a fertilizer where vegetables are grown within the city and county of Honolulu for human consumption.

LOUISIANA.

Morbidity Reports—To be Made both to the State Health Officer and to the Local Board of Health. (Reg. Bd. of H., Apr. 24, 1914.)

At the meeting of the Louisiana State Board of Health, April 24, 1914, the Sanitary Code, State of Louisiana, chapter 3, section 13, was amended as follows:

It is hereby made the duty of every physician to report to the State health officer, or his authorized representative, and to the local board of health of the municipality or parish wherein he practices, any case of communicable disease which he has attended or examined or for which he has prescribed; and such report, with the exception of gonorrhoea, chancroid, and syphilis, shall state the name of the patient, the nature of the disease treated, and the place where the patient is to be found; and said report shall be made by the physician within 24 hours of the time the physician first visits, examines, or prescribes for the patient. (Cards or envelopes will be furnished all physicians, so as to save expense of postage.)

In cases of gonorrhoea, chancroid, and syphilis, the name and address of the patient only shall be omitted from the report to be made.

Where conditions warrant, the local health officer should wire or telephone the State board of health.

Abortions—Information Concerning, to be Furnished to State Board of Health and District Attorney. (Reg. Bd. of H., Apr. 14, 1914.)

CHAPTER 10, sec. 179 (b).—No physician or citizen shall withhold from the State board of health any information coming to him or her directly or indirectly concerning any physician or person who has performed, aided, or abetted in the performing or producing of an abortion. All information that might lead to the arrest and conviction of a physician or other person guilty of encouraging, aiding, abetting, or performing an abortion shall be furnished by the State health officer to the district attorney that he may prosecute.

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

LEXINGTON, KY.

Board of Health—Organization, Powers, and Duties. (Ord. 149, July 9, 1913.)

SECTION 1. Organization.—1. The mayor of the city of Lexington shall appoint a board of health, subject to the approval of the board of commissioners, under the provisions of section 2059 of the Kentucky Statutes. It shall be the duty of such board to enforce the rules and regulations of the State board of health, and to enforce all ordinances and regulations of the city of Lexington pertaining to the public health within the sanitary limits of the city of Lexington, and to assist in enforcing all of the pure-food laws of the State. The board of health, as it may deem necessary or advisable, shall make recommendations to the board of commissioners in all matters respecting the health and the sanitary conditions of the city of Lexington.

2. The board of health shall have the power and authority to examine into all nuisances, sources of filth, and causes of sickness that shall be found to exist within the corporate limits of the city of Lexington, or within 2 miles of said city limits.

3. The president and two members of said board of health shall act as a committee of public charities, and said committee shall prescribe such rules and regulations as they may deem proper, subject to the approval of the board of commissioners, concerning the admission and care of patients to be maintained by city appropriations in the charitable institutions of the city. And said committee shall require of all institutions receiving city appropriations a monthly report setting out the services rendered to said city patients.

4. The board of health shall elect one of their number as president, who shall preside at all meetings. In the absence of the president, the board shall elect one of their number president pro tem.

5. The board of health shall, within 10 days after the appointment of its members, elect a competent physician, subject to the approval of the board of commissioners, who shall be health officer of the city, and who shall be the executive head and ex officio a member of the board (Kentucky Statutes, sec. 2059).

6. The board shall meet for the transaction of business at least once in each month, and as often as necessary. Special meetings may be called by the president, the health officer, or three members of the board. Four members present shall constitute a quorum.

7. The board of health shall make such orders and regulations as it may deem necessary for its own government, subject to the approval of the board of commissioners, and it shall have the power to discharge any official of the health department and to employ his successor, subject to the approval of the board of commissioners.

8. The president shall appoint such standing committees as the needs may require.

9. The specific duties of the board of health shall be:

- (a) The prevention and abatement or suppression of nuisances.
- (b) Supervision of the collection and disposal of garbage and rubbish, and control of the collection and disposal of night soil.
- (c) Control of contagious and communicable diseases.
- (d) Preservation and classification of vital statistics.
- (e) The supervision of the water and food supply of the city.

10. The city clerk shall act as secretary for the board, and shall keep the minutes of all meetings in a minute book, which shall be preserved as are other records of the city.

Sec. 2. Personnel.—1. *The health officer.*—(a) Subject to the approval of the board of commissioners and the board of health, the health officer, as executive head of the board, shall enforce the rules and regulations of the local and State boards of health. He shall direct the work in each branch of the department to the end of securing the best public service. He shall personally visit the market house and private markets, stockyards, slaughterhouses, restaurants, bakeries, etc., to keep in touch with actual conditions, that he may better direct the work of the inspectors. He shall exact a daily report from each official of all work done outside of the office. He shall make special investigations as to the general sanitary conditions, and he shall report in July and January upon such investigations, the same to include housing of the poor, offensive trades, pollutions of streams, and like matters of sanitary interest. He shall institute prosecutions, under direction of the city attorney, for violation of any provision of the sanitary code.

(b) He shall have supervision of the laboratory and office work.

(c) He shall obtain and keep on file monthly reports from the Fayette County Tuberculosis Association within the city, from the crematory contractor or operator, from the medical inspector of schools, from the charity physicians, and he shall embody all reports in his monthly report to the board.

(d) He shall, subject to the approval of the board of commissioners, grant or refuse to grant permits to establish or conduct dairies, restaurants, bakeries, meat shops, or any other business involving the preparation or sale of food.

(e) He shall, whenever it is ascertained that any nuisance or other condition detrimental to the public health exists on any premises or in any building or other place, serve written notice upon the owner, occupant, or other person in charge of such premises, building, or other place to abate or remove said nuisance or condition within a reasonable time, such time to be stated in said notice, and, upon refusal or neglect to obey notice, he shall take such steps as shall be provided in this code to secure the enforcement of the order.

(f) The health officer shall, at the direction of the board of health, subject to the approval of the board of commissioners, revoke any permit from any person who has failed or refused to comply with the requirements of the provisions of the sections relating to the performance of the act for which the permit was issued.

(g) The health officer shall keep and file suitable records of all inspections and analyses provided for in this code.

(h) The health officer shall visit all public wards of the hospitals in the city once in each month, and he shall note in each: Overcrowding, food, cleanliness, ventilation, and attention, and he shall record, report, and file such notes. He shall visit the eruptive (isolation) hospital once in each month, or as often as shall be necessary, and he shall record, report, and file his notes of each visit.

(i) The health officer shall make monthly report to the board of health of all work done by the health department.

(j) The health officer shall perform all other acts necessary to the proper enforcement of the several sections of this code.

2. *The city chemist and bacteriologist.*—(a) The board of health of the city of Lexington is authorized and directed, subject to the approval of the board of commissioners, to select and employ some competent and reputable bacteriologist and chemist, or it may divide the work and select both a bacteriologist and a chemist, and both shall be fully qualified for the bacteriological and chemical examination of pathological and other specimens of disease, and of water, food products, and other products requiring bacteriological and chemical examination in connection with the health work.

3. *Sanitary policemen.*—(a) Sanitary policemen shall be selected by the board, subject to the approval of board of commissioners, from persons duly qualified for such work.

4. *Dairy, meat, and other food inspectors.*—(a) Dairy, meat and other food inspector shall be selected by the board, subject to the approval of the board of commissioners, from persons duly qualified for such work.

5. *The charity physicians.*—(a) In the month of January in each year the board of health shall employ, subject to the approval of the board of commissioners, four physicians to be known as charity physicians. Said employment shall be for the period of one year, or until their successors are appointed and qualify. Said physicians may be removed at any time by the board of health, subject to the approval of the board of commissioners. Vacancies shall be filled as original appointments are made.

(b) The board, subject to the approval of the board of commissioners, may select one or more physicians to attend smallpox cases, the same to be paid out of the epidemic fund.

(c) The charity physicians shall vaccinate against smallpox all indigent persons applying to them for such service. The health officer shall supply the vaccine needed.

(d) It shall be the duty of the city physicians to render medical attention to all charity patients of the city of Lexington other than those in the hospital. All calls for services for such physicians shall be made through the office of the Associated Charities of the city of Lexington, which office will apportion duties for attending city cases as nearly as possible among the four physicians. It shall be the duty of each of said physicians to attend one hour every day at the tubercular dispensary. Said physicians will make reports to the board of health at the end of each month showing the number of patients treated, giving their names, places of residence, kinds of diseases, results of treatment, number of deaths, and any other information that they may deem important.

(e) The charity physicians on visiting patients at their homes for the first time shall note, on a form supplied for this purpose, a brief report on the sanitary surroundings of said patients. And they shall promptly transmit this report, properly filled out, to the health officer.

(f) The charity physicians shall each receive the sum of \$300 per annum for their services, to be paid in monthly installments as city officials are paid.

(g) The Associated Charities is authorized and empowered to purchase the necessary drugs and medicines for the use of charity patients, and issue same to the charity physicians. The accounts for same, not to exceed \$25 per month for each month of the year, when properly approved by the health officer, shall be paid by the city as other city accounts are paid.

6. *The Fayette County Tuberculosis Society.*—(a) The Fayette County Tuberculosis Society shall make monthly reports to the health officer of work done within the city.

7. *The medical inspector of schools.*—(a) The medical inspector of schools shall make monthly reports to the health officer.

Nuisances—Polluted Wells—Privies and Cesspools—Premises—Manure—Common Towels—Feeding Cattle. (Ord. 149, July 9, 1913.)

SEC. 3. *Nuisances.*—Whatever is dangerous to human health, whatever renders the ground, the water, the air, or food a hazard or an injury to human health, and the following specific acts, conditions, and things are, each and all of them, hereby prohibited and made unlawful.

1. The deposit or accumulation of any foul, decaying, or putrescent substance, or other offensive matter, in or upon any lot, street, or highway, or in or upon any public or private place; the overflow of any foul liquids, or the escape of any gases to such an extent that the same, or any one of them, shall become, or be likely to become, haz-

ardous to health; or that the same shall, by reason of offensive odors, become a source of discomfort to persons living or passing in the vicinity thereof.

2. A polluted well, spring, or stream, or the pollution of any body of water used for drinking purposes.

3. The maintenance of any privy vault or cesspool, except as hereinafter provided.

4. Keeping any building or room in such a state of uncleanness, or the crowding of persons in any building or room in such a manner as to endanger the health of the persons dwelling therein, or so that there shall be less than 400 cubic feet of air to each adult, and 150 cubic feet of air to each child under 12 years of age occupying such building or room.

5. Allowing cellars to be used as sleeping rooms.

6. A building or portion of a building occupied as a dwelling which is not lighted and ventilated by means of at least one window in each room, said window opening to the outer air; which is not provided with a plentiful supply of pure water.

7. The accumulation of manure unless it be in a properly constructed pit or receptacle.

8. The accumulation of water in which mosquito larvæ breed.

9. The maintenance, in a public place, of a roller towel for the use of more than one person.

10. The slopping or feeding of cattle or other animals on distillery swill, within the sanitary limits of the city, unless the inclosure wherein such slopping or feeding is done be provided with means for preventing and removing the insanitary conditions associated with such slopping or feeding.

11. Any person violating any part of this section shall, upon conviction, be fined not less than \$10 nor more than \$100, and each day's continuance of any such nuisance or condition mentioned herein shall be a separate offense.

Stables and Manure. (Ord. 149, July 9, 1913.)

SEC. 4. *Special regulations—Stables.*—1. Every person owning or leasing any stable or other building where any horse, mule, or any cattle are kept shall maintain a substantial and sufficient receptacle which must be so constructed and kept as to protect the contents from rain, and to be so screened as to prevent access to flies, and all manure from such horse, mule, or cattle must be placed in such receptacle.

2. All persons owning or leasing any stable where more than six head of horses, mules, or cattle are kept shall have all manure from such animals removed from their premises twice in each week from the 1st of May to the 30th of September, and at no time shall the same be allowed to accumulate in such a manner as to become a nuisance. In no event or circumstance shall any manure be thrown or deposited in any alley, street, or public place, or suffered to remain in such places.

3. Every owner or lessee of any stable shall at all times keep, or cause to be kept, the building and premises in a clean and sanitary condition.

4. No person hauling manure through the streets shall permit the same to litter the streets.

5. Any person violating any part of this section shall, upon conviction, be fined not less than \$10 nor more than \$100, and each day's continuance of any such nuisance or condition mentioned herein shall be a separate offense.

Barbers and Barber Shops—Sanitary Regulations. (Ord. 149, July 9, 1913.)

SEC. 5. *Barber shops.*—1. Every barber's shop within the city of Lexington shall be open to this board for inspection at any time, and the following rules shall be observed therein:

(a) All barber shops, together with all furniture, shall be kept in a clean and sanitary condition.

(b) Mugs, shaving brushes, razors, scissors, clipping machines, pincers, needles, and other instruments shall be sterilized, either by immersion in boiling water or in alcohol of at least 95 per cent strength, or other effective disinfectant approved by the health officer, after each separate use. Combs and brushes shall be kept thoroughly cleaned.

(c) Clean towels shall be used for each person.

(d) Alum or other material used to stop the flow of blood shall be applied on a clean towel or other clean cloth.

(e) The use of powder puffs and sponges is prohibited, except that a sponge or puff owned by a customer may be used on him.

(f) Every barber shall thoroughly cleanse his hands immediately before serving each customer.

(g) Every barber's shop shall be well ventilated and provided with hot and cold water.

(h) No barber's shop shall be used as a sleeping room. No person shall be employed or shall operate as a barber who has any communicable disease.

(i) A copy of this article shall be posted in plain view in every barber's shop.

2. Any person violating any part of this section shall, upon conviction, be fined not less than \$10 nor more than \$100, and each day's continuance of any such nuisance or condition mentioned herein shall be a separate offense.

Street Cars—Cleaning. (Ord. 149, July 9, 1913.)

SEC. 6. *Street cars, etc.*—1. All city and interurban cars shall be thoroughly cleaned once each day, and shall be kept in a sanitary condition.

2. Any person violating any part of this section shall, upon conviction, be fined not less than \$10 nor more than \$100, and each day's continuance of any such nuisance or condition mentioned herein shall be a separate offense.

Garbage and Refuse—Care and Disposal. (Ord. 149, July 9, 1913.)

SEC. 7. *Garbage, ashes, etc.*—1. It shall be the duty of every resident, householder, tenant, hotel keeper, boarding-house keeper, retail dealer, and all parties or persons occupying dwellings within the city of Lexington to provide, or cause to be provided, and at all times keep, or cause to be kept, portable vessels or tanks for holding garbage, said vessels or tanks to be perfectly water-tight, and provided with handles on the outside and a closely fitting cover, which cover shall not be removed except when absolutely necessary. Said vessels or tanks shall be kept in the rear of the premises, in the basement, or in passageways most accessible to the collector, and never upon the street or sidewalk, and shall be of a capacity of not more than 2 bushels. All such vessels, where not easily accessible, shall be promptly delivered to the collector when called for, and shall be returned by him to their places without unnecessary delay, and no person shall in any manner interfere with said vessels or tanks, or the contents thereof, except those authorized for such duty.

2. No resident householder, tenant, hotel keeper, boarding-house keeper, or any other person shall deposit in the garbage vessel or tank any ashes, bottles, glass, tin cans, night soil, or other rubbish, and the collector shall refuse to collect such garbage until all other refuse matter has been removed therefrom, and the collector shall report at once to the health officer all such offenses.

3. No manure or putrescible matter of any kind shall be permitted to accumulate in such a way as to become offensive or objectionable.

4. Rubbish shall be removed from all premises at least once in six months.

5. No garbage, ashes, or rubbish shall be thrown or deposited in any street or alley, and the presence of such upon any street or alley shall be held to constitute a violation of this section on the part of the owner or occupant of the property upon whose

half of the street or alley such garbage, ashes, or rubbish is permitted to lie for 24 hours.

6. Any and every person failing to perform the duties required of him, or to comply with the provisions of this section, shall for every offense, upon conviction, be subject to a fine of not less than \$10 nor more than \$100, and each day's continuance of any such nuisance or condition mentioned herein shall be a separate offense.

Sewers—Connection with, Required. (Ord. 149, July 9, 1913.)

Sec. 8. Sewage.—1. Every building situated on any street in the city of Lexington where there is a public sanitary sewer shall be connected with said sewer in accordance with the ordinances of the city governing such connection, so that all sewage from the premises shall empty into the sewer, provided that such building is used, or intended to be used, as a dwelling or in which persons are employed, or intended to be employed, in any manufacture, trade, or business. It is hereby made the duty of each owner of any such building to cause the same to be connected with any public sewer already constructed as herein provided within 90 days after the passage of this ordinance, and hereafter within 90 days after a public sewer is constructed and available for use; and it is hereby made unlawful for any person to occupy or use any such building for any of the purposes above mentioned after the expiration of such 90 days unless the building is connected with the sewer as herein provided.

2. It shall be the duty of the health officer to notify in writing the owner or controller and the tenants or occupants of every building required by this section to be connected with the public sewer, and to so connect such buildings, but a failure of the health officer to give such notice shall in no case relieve any such owner, tenant, or occupant of the penalty prescribed in this section.

3. Any person who shall violate subsection 1 of this section or fail to comply with the requirements thereof shall upon conviction be fined not less than \$10 nor more than \$100 for each offense; and each day's continuance of such violation shall be deemed a separate offense.

Privies and Cesspools—Construction, Care, and Disposal of Contents. (Ord. 149, July 9, 1913.)

Sec. 9. Privies and night soil.—1. In those parts of the city not provided with sewer and water main privy vaults shall be constructed, and the construction of privy vaults and cesspools will be permitted only on premises where city water and sewer are not accessible.

2. The construction of privy vaults shall conform to the following specifications unless of equally efficient and water-tight construction which may be approved as such by the health officer.

They shall be 5 feet deep and made of either brick or concrete. The walls of such vaults, if made of brick, shall be of well-burned brick not less than 4 inches thick (one brick thick), laid in standard water-tight cement mortar, and the inside with a half-inch coat of Portland or hydraulic cement mortar, in proportion of 1 part Portland cement and 2 parts clean, sharp sand. After this coating is put on it shall be given a one-coat wash of such cement. The bottom shall be at least one brick thick, laid in such cement mortar, or of such cement concrete 6 inches thick.

3. When Portland or hydraulic cement concrete is used to construct vaults, the walls shall be at least 4 inches thick, laid to form, and the concrete shall be made 1 part live Portland or hydraulic cement, 3 parts clean, sharp sand, and 5 parts crushed stone, free from dust, and of sizes between one-quarter and 1½ inches in largest diameter, and shall be plastered and grouted inside and out as prescribed above for brick construction.

4. Vaults shall be made water-tight and their walls continued 12 inches above the ground surface to prevent surface drainage. No retempered cement shall be used.

5. Vaults shall be left uncovered until inspected and approved by the health officer or inspector. Buildings over such vaults shall be easily accessible for cleaning.

6. No old vault shall be connected with a sewer.

7. Vaults now existing on premises abutting city sewer and provided with city water shall be cleaned to within at least 4 feet of the surface and filled with earth and ashes.

8. All buildings not connected with sewers, used as residences and occupied by one family, shall be provided with a privy. No privy shall be constructed within 20 feet of any street except it be an alley, or within 3 feet of any party line, or within 10 feet of any window or door of a residence.

9. All buildings not connected with sewers, used as tenement or apartment houses and occupied by more than one family, shall be provided with one privy or a suitable separate division of the same for each family. All buildings not connected with sewer and used as lodging houses, and all such buildings where persons work or are employed, shall be provided with not less than one separate seat or convenience for each 15 persons employed or lodged in such building.

10. Each owner of property where a privy is maintained shall pay to the treasurer of the city an annual license tax thereon of \$3 for each family or for each 10 persons or fraction thereof using the same. And all such moneys so received shall constitute a fund, the privy fund, to be used solely for cleaning privies, as provided herein. Such license shall be paid at the time and in the manner provided by ordinance for the payment of other licenses. The occupant or controller of such property shall, whenever the privy becomes foul or so full as to be within 2 feet of the top, notify the health officer, who shall within a reasonable time have the same emptied and properly cleaned. No person shall deposit in any privy vault any garbage, ashes, or rubbish.

11. Cesspools may be constructed only by permission of the health officer, and must be cleaned, on order of the health officer, at the expense of the owner, occupant, or controller of the property.

12. The term sewer, as used in this ordinance, shall be construed to mean a sanitary sewer.

13. A cesspool is defined to mean a privy vault intended to recover liquid wastes from a building where persons live or are employed.

14. Any person violating any part of this section shall, upon conviction, be fined not less than \$10 nor more than \$100, and each day's continuance of any such nuisance or condition mentioned herein shall be a separate offense.

Physicians, Undertakers, and Midwives—Registration. (Ord. 149, July 9, 1913.)

SEC. 10. *Vital statistics.*—1. Every practicing physician, undertaker, and midwife shall register his name, address, and the nature of his duties with the health officer, and shall notify the health officer of any change of address, and the health officer shall send to each a copy of the State law on vital statistics, and a copy of section 9 of this code.

2. Any person violating any part of this section shall, upon conviction, be fined not less than \$10 nor more than \$100, and each day's continuance of any such violation shall be a separate offense.

Communicable Diseases—Morbidity Reports—Placarding—Burial—Quarantine—Diseases of Animals—Rabies. (Ord. 149, July 9, 1913.)

SEC. 11. *Communicable diseases.*—1. Every physician shall report in writing to the board of health the name of every patient he (or she) may have in the city of Lexington with cholera, smallpox, diphtheria, typhus, typhoid or scarlet fever, measles, tuberculosis in any form, varicella, whooping cough, epidemic dysentery, trachoma, ophthalmia neonatorum, epidemic cerebrospinal meningitis, pellagra, infantile paralysis, hookworm disease, rabies, tetanus, pneumonia, or any other communicable

disease that may be hereafter declared and published by the board of health to be dangerous to the public health, together with the precise locality where such patient may be found, immediately after such physician shall have ascertained the nature of such disease.

If any physician or midwife knows, or has reason to believe, that one or both eyes of an infant whom or whose mother he (or she) is called to visit, or treat, has become inflamed, swollen, and red and shows an unnatural discharge within two weeks after the birth of such infant, he (or she) shall, within six hours, give notice thereof to the health officer, or in his absence to the president of the board of health.

2. It shall be the duty of the board of health to cause a suitable placard to be displayed from the front of any premises where any case of measles, smallpox, scarlet fever, diphtheria, chicken pox, epidemic cerebrospinal meningitis, or whooping cough is present. It shall be unlawful for any person to remove such placard, when so placed, without the permission of the board of health, and it shall be the duty of said board, in conjunction with the attending physician, to issue the necessary instructions for the isolation of the patient.

3. Any bodies of persons dying of contagious diseases, the bodies of persons who have died of smallpox, cholera, plague, yellow fever, typhus, diphtheria, scarlet fever, or other dangerous contagious disease shall be buried within 24 hours after death (except by special permission of the board of health); and no public or church funeral shall be held in connection with the burial of persons who have died of any of the above-named diseases, and the body of any such person shall not be taken into any church, chapel, or any public place, and only the adult members of the family and such other persons as are actually necessary shall be present at the burial of such body.

4. The board of health shall have control of the hospitals for contagious diseases, and shall adopt rules and regulations for the proper management of same. Said board shall have authority to order and secure the removal and isolation of any person afflicted with a contagious disease.

5. Any person or persons having smallpox on his or her premises, and unwilling to have such person or persons so afflicted moved to the smallpox hospital, shall be required to keep a guard on such premises at his or her expense, to prevent the spread of the disease, and failure to comply with the provisions of this section shall subject the offender to a fine of not less than \$10 nor more than \$100 for each day he or she fails to comply, and any owner or other person having control of any house where there shall be one or more cases of smallpox, and who, knowing the same, shall fail to give notice thereof to the board of health within six hours after its discovery, shall, on conviction, be subject to the penalties of this paragraph.

6. No person shall fail or refuse to be vaccinated or permit any minor under his or her control to be vaccinated, when visited for that purpose by the physician employed by the city, unless such person or minor has already been effectually vaccinated at the time of said visit, or is vaccinated by some competent physician within 24 hours thereafter. The medical inspector of the city schools shall examine each pupil not submitting satisfactory evidence of vaccination, or not submitting evidence from a physician that vaccination is dangerous to the health of the child, and prevent the entrance of any one who has no vaccine mark, and notify the parent or guardian of said pupil that vaccination is an indispensable prerequisite to admission to the public schools of the city.

7. Whenever it shall be deemed necessary by the board of health to establish the true character of any disease which is suspected to be communicable, a medical examination of the person or persons affected by such disease may be ordered by said board. Any person or persons interfering with or refusing to permit such examination shall be guilty of violating this article.

8. No principal, teacher, or superintendent of any school shall knowingly permit any child sick from any disease mentioned in paragraph one of this section, or from any other communicable disease, or any child residing in any house in which whooping cough, chicken pox, infantile paralysis, scarlet fever, diphtheria, smallpox, measles, or epidemic cerebrospinal meningitis, shall exist, to attend any school until such time as the board of health certifies to such teacher, principal, or superintendent that the said child may attend school without danger of communicating the diseases to others.

9. No person from any dwelling wherein a disease dangerous to public health exists, shall take any book or magazine to or from any circulating library. The board of health shall inform the librarian of all cases of said diseases, and until a written permit is given he (or she) shall allow neither books nor magazines to be taken or returned from a dwelling where such cases exist.

10. Any person in the city of Lexington having communicable disease shall be isolated as the board of health may direct, and all buildings, clothing, property, premises, and vehicles which may be infected by emanations from such persons shall be disinfected as the board of health may direct. No premises will be disinfected after diphtheria until at least two negative cultures, taken on successive days, have been obtained from the throat of the patient, or from the nose, in a case of nasal diphtheria.

11. No person shall knowingly bring or cause to be brought into the city of Lexington any person infected with any communicable disease, except upon a permit granted by the board of health.

12. Whenever a placard shall be placed, showing the presence of smallpox, scarlet fever, or diphtheria, no person or persons, except the medical attendant and nurses, shall either enter therein or depart therefrom without the permission of the board of health.

13. Whenever a person having tuberculosis moves out of a house or an apartment, the attending physician, if there be one, or the active head of the family, shall so notify this board within 24 hours, and both of the above-mentioned persons shall be held responsible for a violation of this section.

14. Every veterinarian or other person who is called to examine or professionally attend any animal within the city of Lexington, having the glanders or farcy, rabies, tuberculosis, or other communicable disease, shall, within 24 hours thereafter, report in writing to the board of health the following facts:

- (a) A statement of the location of such diseased animal.
- (b) The name and address of the owner thereof.
- (c) The type and character of the disease.

15. Every animal which is mad, or which has hydrophobia, or which shows symptoms thereof, shall, if possible, be at once securely confined until the diagnosis is accurately made. Every animal that has been exposed to such disease shall be at once confined in some secure place for such length of time as to show that such exposure has not given such animal said disease, and the body of any animal that has died of such disease, or which, being suspected to have such disease, has been killed, shall not be disposed of, except as may be directed by the board of health.

16. Any person violating any part of this section shall, upon conviction, be fined not less than \$10, nor more than \$100, and each day's continuance of any such nuisance or condition herein shall be a separate offense.

Milk and Milk Products—Production, Care, and Sale. (Ord. 149, July 9, 1913.)

SEC. 12. *Regulating the sale of milk and milk products.*—1. No milk, cream, ice cream, or substitute therefor, which is unwholesome, or which has been watered, adulterated, reduced, or changed in any respect, by the addition of water or other substance, or by any removal of cream or butter fat, shall be brought into, held, kept, or offered for sale, at any place in the city of Lexington, nor shall any person keep, have, or

offer for sale in the said city any such milk, cream, ice cream, or substitute therefor, except as provided for in this ordinance.

2. The terms "adulterated" and "unwholesome," as used in this ordinance, shall mean: First, milk containing more than 87.50 per cent of water and fluids; second, milk containing less than 12 per cent of milk solids; third, milk containing less than 3.50 per cent of fats, or having a specific gravity of less than 10.29; fourth, milk which, notwithstanding these minimum standards, is not up to the standard produced by the complete milking of the cow or cows in the dairymen's herd; provided, that milk from a Holstein, or other herd, produced by complete milking of the cow or cows, shall not be deemed adulterated if below this standard, and so sold, and the health officer, or his agent, shall make herd tests to so determine; fifth, milk drawn from animals within seven days after parturition; sixth, milk drawn from animals fed upon wet distillery or brewery waste; seventh, milk from which any part of the cream has been removed, without so labeling; eighth, milk which has been adulterated with water, or any other fluid, or to which has been added, or into which has been introduced, any foreign substance whatsoever, except modified milk for infants or invalids, and which shall be labeled to show the nature and name of added substances; ninth, milk which consists, in whole or in part, of a diseased, contaminated, filthy, or insanitary substance, or which has been produced, transported, or kept in a condition which may render the article diseased, contaminated, or unwholesome.

3. The term "cream" in connection with this ordinance, shall be held to mean that portion of milk, rich in milk fat, which rises to the surface of milk on standing, or is separated from it by centrifugal force, is fresh and clean, and contains not less than 18 per cent of milk fat. The term "ice cream" shall mean such product made from standard cream plus the sugar, flavor, or fruit. It shall be fresh, not contaminated in any manner, and not misbranded or misrepresented: *Provided*, That nothing herein shall prohibit the sale of products from pure condensed milk, milk, skim milk, and wholesome substitutes for the albumen of cream, if so labeled, to each and every purchaser and consumer.

4. No dealer in milk, by himself or his agent, shall sell, or have in his possession with intent to sell, milk from which the cream has been removed, in whole or in part, unless sold as skim milk, and unless there shall appear in a conspicuous place on the can, or other receptacle from which such milk is sold, the words "skim milk" distinctly and legibly labeled, and in the case of dealers, restauranters, and other persons, offering such for sale or serving the same, appropriate and plain signs or labels setting forth such facts to the consuming public, nor shall any dealer in milk, or his agent or agents, sell as skim milk, milk which has less percentage of casein and solids than that contained in unskimmed milk.

5. Whenever it is found, as a rule, that milk, sold as certified milk, does not conform to the standard under which it is certified, the health officer shall give notice to both the medical milk commission and to the dairyman, or dealer in milk, and if the conditions complained of are not corrected, and the milk brought within the standard under which it is certified, within a reasonable and safe time, the health officer shall again notify the medical milk commission and the dairyman or dealer that such milk is not conforming to the standard under which it is certified, and no person or persons, firm or corporation, shall sell or offer for sale milk in the city of Lexington, as certified milk, after such notice, and which does not conform to the standard under which it is certified.

6. Any person bringing, sending, having in possession for sale, or selling, in the city of Lexington any milk or milk products which are adulterated, or misbranded, as set forth herein, shall, upon conviction, be fined not less than \$10 nor more than \$100 or by imprisonment not to exceed 50 days, or by both such fine and imprisonment. Any dairyman, milk dealer, or other person who shall have been twice convicted of selling

milk to which water has been added, such second conviction shall, *ipso facto*, act as a bar to the holding of a permit for the sale of milk in the city of Lexington.

Sec. 13. *Regulating the sanitary condition of milk and milk products.*—1. No person shall bring or send into the city, or retail in the city, any milk or cream without a permit so to do from the milk inspector, under direction of the health officer, the board of health, and the board of commissioners, said permits to be furnished gratuitously to all applicants, in accordance with paragraph 6 of this section, and to be renewed in the month of April of each year, to be valid.

2. All regular milk vehicles shall bear the name of the owner and the number of the license of the wagon or vehicle tacked thereon plainly and legibly.

3. All grocers, bakers, restaurateurs, barkeepers, and other persons having or offering for sale milk or cream, or frozen milk or cream, shall at all times keep the name or names of the person or dairyman, or dairy, from whom the milk or cream was obtained, posted in a conspicuous place, wherever such product may be sold or kept for sale. All grocers, bakers, restaurateurs, barkeepers, and other persons handling such milk shall keep the cans, refrigerators, bottles, and other receptacles in which the milk is kept or stored, clean at all times, and shall thoroughly wash and sterilize, by boiling or steam, all such vessels before the milk is poured therein.

4. Any person who offers for sale milk, skimmed or unskimmed, or cream, in the city of Lexington, whether a resident or nonresident, on being tendered the market price, shall furnish a sample of said milk to any officer representing the health department of the city who may request the same for the purpose of examination or analysis.

5. No milk dealer, dairyman, or his agents shall remove from any dwelling or house, in which there is a contagious disease, and which has been so plainly placarded, any bottle or receptacle which has been used for the purpose of receiving or storing milk that has not been disinfected as directed by the health officer. No person suffering from, or who has knowingly suffered from, within a period of 20 days, or has been exposed to, diphtheria, scarlet fever, erysipelas, cerebrospinal meningitis, smallpox, or other dangerous contagious disease, shall work or assist in or about any dairy or dairy farm; nor proprietor, manager, or superintendent shall, knowingly, permit any person suffering or exposed as aforesaid to work or assist in or about said dairy farm.

6. Permits without charge shall be required of any and all persons selling milk or cream in the city of Lexington, or bringing the same in for sale. Such permits shall apply to all dairies or other places and to all cattle producing milk for sale in the city of Lexington. It shall be the duty of the milk inspectors, acting under the health officer and the health department, to issue such permits and to see that no milk is sold in the city without permit as herein required. Permits shall be required annually on the 1st day of April, and at such other times as a new dairy or place begins the sale of milk or cream in the city of Lexington, or the production of the same for sale in the city of Lexington, and at such other times as such changes in the source of production or the place of sale as shall make the permit no longer apply to the conditions under which the permit was issued. The milk inspector, acting under the health officer and health department, shall not issue a permit to any person or persons selling or retailing milk or cream in the city of Lexington who does not furnish once in every 12 months, and at the time of the beginning of any dairy for supplying milk in the city of Lexington, a certificate on form supplied by the health department, which shall apply to, and be conditioned, as follows:

(a) Such certificates shall state that the place from which the milk which the dairyman or other person is at present selling or proposes to sell is obtained is free from disease, and that reasonable items of equipment and methods for production and sale of milk are adequate. Such certificates shall also embrace an enumeration of cattle in the dairyman's herd.

(b) The milk inspector, the health officer, or the board of health may require a veterinary examination of the cattle producing milk for sale in the city of Lexington, in-

cluding the tuberculin test and other recognized means of veterinary diagnosis, to determine as to whether or not the cattle in any herd are infected with any disease. Such inspection and examination shall not be required, and the dairyman shall not be put to the expense of such veterinary inspection, until after the milk inspector, or other agent of the health officer, has made a personal inspection of the dairyman's herd. If the dairyman so request, all such examinations shall be made at the expense of the city, or, should the dairyman so desire, the veterinary inspection may be made by any competent and reliable veterinarian employed by the dairyman. The city of Lexington, however, shall have the right, if so desired, to have its milk inspector, or other agent, present at the time of such inspection. Any such certificate of health of animals given by veterinarians, if deemed necessary, may be required under oath of the veterinarian and under oath of the owner or operator of the dairy as to any facts concerning the concealing of disease; and any dairyman who shall, with a secret injection of tuberculin, or other means, conceal disease in any animal or any herd supplying milk or milk products in the city of Lexington shall be refused a permit, or, having been issued a permit, shall have the same revoked.

Whenever any dangerous disease has been found in any cattle supplying milk or milk products in the city of Lexington, in order to continue the sale, and hold a permit so to do, the veterinarian shall tag the diseased animal, and the dairyman or other person shall remove such animal or animals from the herd, and shall have the option of quarantining the infected animal at such distance and in such manner as will safely isolate the animal and its milk. When a herd supplying milk to the city of Lexington has been twice tested, within two years, and found to be free from tuberculosis, or other disease, and where all cattle added thereafter to such herd are similarly shown by the tuberculin test, and other recognized means of veterinary inspection, to be free from disease, and where the animals are identified by a tag, then any such cattle or herd shall be regarded as a tested herd, and subsequent tests shall not be required except as the health department may have good grounds for believing that any animals in such herd are diseased.

(c) All dairymen and other persons offering milk and milk products for sale in the city of Lexington, and the veterinarian engaged to make test of animals producing such milk, shall give notice to the milk inspector before the test is made, and the milk inspector, or other agent of the health department, as provided herein, shall not only have the right to be present at such testing, but shall designate or arrange with the veterinarian and the party whose cows are to be tested, a time reasonably convenient at which such milk inspector, or agent of the health department, can be present. A detailed record of all tests and results with respect to each animal shall be filed by the veterinarian making the test with the milk inspector, and, if required, shall be filed under oath, as provided. The veterinarian making the test, or the milk inspector, or other agent of the health department, shall cause all animals showing tuberculosis to be marked and tagged, as provided under the laws and regulations of the State of Kentucky. After visiting the herd, as provided herein, the milk inspector shall give notice to the dairyman of the time within which any cattle or herds shall be tested, as a requisite for selling milk in the city of Lexington.

(d) A permit to sell milk shall not be issued to any dairy which has not the reasonable items of equipment and method necessary for the production and sale of milk in a safe and sanitary manner, or which has not a healthy herd, or whose water supply is in an unsafe condition, or where there are evidences that the employees connected with the production and sale of milk are affected with a communicable disease. And whenever the health officer, his agent, or any member of the board of health, shall, by inspection, determine that any such conditions exist, the dairyman shall be notified of the conditions objected to, and if the conditions are not changed within a reasonably safe time, to be stated in such notice, the permit shall be revoked: *Provided, however,* That if the dairyman can remove his cattle and equipment to another farm and place,

and so as to have his product free from the danger of any such conditions found, such permit shall not be revoked.

(e) No permit shall be issued to any dairyman or other person whose dairy, equipment and methods are not open to the inspection of any member of the board of health, or any agent of the city of Lexington, and any dairyman, or other person, refusing such inspection, shall be refused a permit to sell milk in the city of Lexington: *Provided, however,* that before the revoking of such permit, the dairyman, or other party interested shall be given a hearing, with the right of appeal to the board of health, the board of commissioners, and to the courts. In cases where there is danger of a contagious or infectious disease, however, the permit shall, after notice, be temporarily revoked, pending such appeal unless the herd is removed to another place, as provided in subparagraph (d).

(f) Milkers, and those engaged in the handling of milk or cream, shall maintain strict cleanliness of their hands and person while milking or while so engaged. The receptacles for milk and all cans for carrying and delivering the same shall be thoroughly cleansed with hot water and soap, or efficient washing powder, and be rinsed with boiling water, or steamed thoroughly, before each milking or before each use.

(g) Every person keeping cows for the production of milk for sale in the city of Lexington shall cause them to be kept clean at all times, and shall cause the teats and udders to be carefully cleansed by brushing, washing, or wiping before milking, and shall cause each of said cows to be properly fed and watered.

(h) Any person using any premises for keeping cows for dairy purposes, shall provide and use a sufficient number of receptacles of nonabsorbent material for the reception, storage, and delivery of milk, and shall keep them clean and wholesome at all times, and at milking time shall remove each receptacle, as soon as filled, from the room or stable in which the cows are kept; nor shall any milk or cream be stored or kept within any room used for stabling cows or other domestic animals.

(i) It shall be the duty of every person having charge or control of any premises upon which cows are kept for the production of milk for sale in the city of Lexington, to notify the health officer of the city of Lexington of the existence of any contagious or infectious disease among such cows, by letter delivered or mailed within 24 hours after the discovery thereof, or in person, and to thoroughly isolate any cow or cows so diseased, or which may reasonably be believed to be infected, and to exercise such other precautions as may be directed, in writing, by the health department.

7. Milk dealers, restaurateurs, hotel keepers, barkeepers, and other persons keeping milk for sale, shall keep and serve the milk at all times free from contamination, in clean vessels; and no consumer of milk shall deliver back to a dairyman or milk dealer any bottle or can which is not clean, and no dairyman or milk dealer shall use or refill any bottle or other receptacle received from a milk patron until same has been thoroughly steamed or scalded.

8. It shall be the duty of any physician holding a permit to practice in the city of Lexington to immediately report to the health officer whenever such physician shall suspect the existence of any communicable disease existing in the employer's family of any dairyman or milk dealer or other handler of milk for sale.

9. Where a sample of milk or other food or drug has been examined, and where it is the intention of the health officer, or any other city official, to make publication of the findings, as soon after the examination as possible, he shall transmit to the person from whom the sample was taken a copy of the results of the examination, and if such party or parties ask for further examination before publication, such examinations, sufficient in number to determine the actual condition of the product when sold in the market, shall be made, and, when published, the publication shall include all examinations or such average as will show the exact condition of the product as determined by all of the examinations. At least six examinations shall be made monthly of any milk sold in the city of Lexington as certified milk, and the product sold as certified milk

shall be judged by the standard which is established by the medical milk commission under which the certificate is granted.

10. In the enforcement of this and other sections of this ordinance, if the objection to the milk is based upon the bacteriological count, sufficient bacteriological counts shall be made of milks actually obtained from the market, as well as of milks from different sources in the dairy and the distribution, if the dairyman desires, to determine as to whether or not the high count is the exception or the rule in connection with the dairy: *Provided, however,* That nothing in this section, or in any other section of this ordinance, shall be construed to prohibit the health officer from giving warning concerning certified milk, or other milk, sold in the city of Lexington, when any contagious or infectious disease in connection with the cattle, or the persons employed in connection with the handling of the milk, or other dangers to the public health are apparent, or from the immediate revoking, temporarily, of the permit in all instances where such danger is determined.

11. In collecting samples of milk and milk products for examination, if the sample is intended for bacteriological examination the inspector shall take the same in as sterile a manner as possible so as to prevent contamination at the time of taking the sample. If the sample is not taken in the original bottle or other package, it shall be taken with sterile tubes or other sterile instruments and placed in a sterile receptacle; and all such samples intended for bacteriological examination, unless they are, as in the case of original containers of ice cream packed in iced containers of their own, shall be immediately put into a box or other receptacle containing sufficient ice, and which shall be so constructed and iced as to maintain a temperature under 56° F., and which such box or other receptacle shall have a close-fitting lid.

12. Any person, firm, company, or corporation who shall violate any of the foregoing provisions of section 13 shall, upon conviction, be fined for such offense not less than \$10 nor more than \$100.

Foodstuffs—Production, Care, and Sale—Cold Storage—Bakeries, etc. (Ord. 149, July 9, 1913.)

SEC. 14. *Regulating sanitary conditions of food products.*—1. Every building, room, basement, or cellar occupied by or used as a bakery, confectionery, cannery, packing-house, slaughterhouse, dairy, creamery, cheese factory, restaurant, hotel, grocery, meat market, or other place or apartment used for the preparation for sale, manufacture, packing, storing, sale, or distribution of any food shall be properly lighted, drained, plumbed, and ventilated, and conducted with strict regard to the influence of such condition upon the health of the operatives, employees, clerks, or other persons therein employed, and the purity and wholesomeness of the food therein produced; and for the purpose of this ordinance the term "food" as used herein shall include all articles used for food, drink, confectionery, or condiment, whether simple, mixed, or compound, and all substances or ingredients used in the preparation thereof.

2. The floors, walls, ceilings, furniture, receptacles, implements, and machinery of every establishment or place where food is manufactured, packed, stored, sold, or distributed, and all cars, trucks, and vehicles used in the transportation of food products shall at no time be kept in unclean, unhealthful, and unsanitary condition, and for the purpose of this ordinance unclean, unhealthful, and unsanitary conditions shall be deemed to exist if food in the process of manufacture, preparation, packing, storing, sale, distribution, or transportation is not securely protected from flies, dust, dirt, and as far as may be necessary, by all reasonable means, from all other foreign or injurious contamination; and if the refuse, dirt, and the waste products subject to decomposition and fermentation incident to the manufacture, preparation, packing, storing, selling, distributing, and transporting of food are not removed daily; and if all trucks, trays, boxes, baskets, buckets, and other receptacles, chutes, platforms, racks, tables, shelves, and all knives, saws, cleavers, and other utensils and machinery used in

moving, handling, cutting, chopping, mixing, canning, and all other processes are not thoroughly cleaned daily, and if the clothing of operatives, employees, clerks, and other persons therein employed is unclean.

3. The walls and ceilings of every bakery, confectionery, creamery, cheese factory, hotel and restaurant kitchen shall be well plastered, wainscoted, or ceiled with metal or lumber, and shall be oil painted or kept well lime washed, and all interior woodwork in every bakery, confectionery, creamery, cheese factory, hotel or restaurant kitchen shall be kept well oiled, or painted with oil paints, and be kept washed clean with soap and water; and every building, room, basement, or cellar occupied or used for the preparation, manufacture, packing, storage, sale, or distribution of food shall have an impermeable floor made of cement or tile laid in cement, brick, wood, or other suitable nonabsorbent material which can be flushed and washed clean with water.

4. The doors, windows, and other openings of every food-producing or distributing establishment during the fly season shall be fitted with self-closing screen doors and wire window screens of not coarser than 14-mesh wire gauze.

5. Every building, room, basement, or cellar occupied or used for the preparation, manufacture, packing, canning, sale, or distribution of food shall have convenient toilet rooms separate and apart from the room or rooms where the process of production, manufacture, packing, canning, selling, or distributing is conducted. The floors of such toilet rooms shall be of cement, tile, wood, brick, or other nonabsorbent material, and shall be washed and scoured daily. Such toilet or toilets shall be furnished with separate ventilating flues or pipes, discharging into soil pipes, or on the outside of the building in which they are situated. Lavatories and wash rooms shall be adjacent to the toilet rooms, and shall be supplied with soap, running water, and towels, and shall be maintained in a sanitary condition. Operatives, employees, clerks, and all persons who handle the material from which food is prepared, as the finished product, before beginning work, or after visiting toilet or toilets, shall wash their hands and arms thoroughly in clean water.

6. Cuspidors for the use of operatives, employees, clerks, or other persons shall be provided whenever necessary, and each cuspidor shall be thoroughly emptied and washed out daily with disinfectant solution, and 5 ounces of such solution shall be left in each cuspidor while it is in use. No operative, employee, or other person shall expectorate on the floor or walls of any building, room, basement, or cellar where the production, manufacture, packing, storing, preparation, or sale of any food is conducted.

7. No person or persons shall be allowed to live or sleep in any workroom of a bakery, kitchen, dining room, confectionery, creamery, cheese factory, or place where food is prepared for sale, served, or sold.

8. No employer shall require, permit, or suffer any person to work, nor shall any person work, in a building, room, basement, cellar, or vehicle occupied or used for the production, preparation, manufacture, packing, storage, sale, distribution, and transportation of food who is affected with any venereal disease, smallpox, diphtheria, scarlet fever, yellow fever, tuberculosis or consumption, bubonic plague, Asiatic cholera, leprosy, trachoma, typhoid fever, epidemic dysentery, measles, mumps, German measles, whooping cough, chicken pox, or other infectious or contagious disease.

9. The health officer of the city of Lexington, or other agents of the board of commissioners, shall have full power at all times to enter every building, room, basement, or cellar occupied or used or suspected of being occupied or used for the production for sale, manufacture for sale, storage, sale, distribution, or transportation of food, and to inspect the premises and all utensils, fixtures, furniture, and machinery used as aforesaid, and if upon inspection any food producing or distributing establishment, conveyance, employer, operative, employee, clerk, driver, or other person is found to be violating any of the provisions of this section, or if the production, preparation, manufacture, packing, storing, sale, distribution, or transportation of food is being

conducted in a manner detrimental to the health of the employees and operatives, or to the character or quality of the food therein produced, manufactured, packed, stored, sold, distributed, or conveyed, the health officer or the inspector making the examination or inspection shall furnish evidence of said violation to the city attorney, who shall prosecute all persons violating any of the provisions of this section: *Provided, however,* That as a constructive administrative means, under this section, and for such purpose only, the health officer may issue a notice to the person or persons in authority at the aforesaid establishment to abate the condition, or to make such improvements as may be necessary to abate it, within a period of such reasonable time as the health officer may direct. Such notice shall be in writing, and the person receiving the notice may, within five days from the issuance of the notice, appear in person or by attorney before the health officer and the mayor of Lexington to give reason why such notice or instructions shall not be obeyed.

10. Any and all places producing, handling, transporting food for sale in the city of Lexington, whether located in the city or not, shall, as a requisite for the sale of food in the city of Lexington, be open to inspection as provided in this section. And any person who shall offer for sale in the city of Lexington any food products which have been produced or handled outside of the city of Lexington and concerning which sanitary inspection has been denied as provided in this section shall, upon conviction, be subject to the penalties provided for violations of provisions of this section.

11. Any person who violates any of the provisions of this section shall be guilty of a misdemeanor and, upon conviction, shall be punished by a fine of not less than \$10 nor more than \$100 or be imprisoned not to exceed 50 days, or both such fine and imprisonment.

Sec. 15. *Cold storage.*—1. All cold-storage meats, eggs, poultry, fish, ice cream, and other cold-storage animal products shall be plainly labeled or branded to show the facts of cold storage to the consuming public. The term "cold storage" shall be construed to mean the storing and preservation of food products by cold. Except, however, such labeling and branding shall not be necessary where the ice or refrigeration is incident to the preservation of the fresh, unstored product from the producer to the consumer and without unnecessary delay.

2. No retailer shall handle cold-storage products or other products required to be preserved with ice without efficient icing arrangements or refrigeration therefor. All such products shall not be exposed to warm temperature and shall be handled as otherwise specified in the sanitary provisions of the health code of the city of Lexington and the laws of the State.

3. No product shall be served or sold in the city of Lexington which has been once removed from cold storage and exposed in the retail markets for sale and sent back into cold storage; this to include turkeys, chickens, and similar products which are taken out, for example, for the Thanksgiving and other markets and exposed in the retail market, and which, not being sold, are returned to storage for the Christmas or other markets. Cold-storage foods shall be delivered direct from cold storage, through proper facilities and sanitary conditions in the retail market, to the consuming public, and the sale of any such product which has been subjected to any condition which would render it contaminated, unwholesome, or unfit for food shall be prohibited.

4. The signs and labeling, as specified herein, shall obtain with respect to products coming into Lexington between the producer or packer and the wholesale trade, between the wholesale trade and the retail trade, and between the retail trade and the general public. Restaurants and hotels supplying such stored products shall display signs on the menu, or otherwise, to that effect. No product shall be sold as "fresh," "strictly fresh," "from the country," or by similar description which is a stored product or which is not as represented; nor, on the other hand, shall any product be sold as cold storage when such is not the case or which has been so exposed or kept as to deteriorate in quality after leaving cold storage, but shall have

such additional facts stated on the signs and labeling in the manner as may be directed by the board of health.

5. Any person who violates any of the provisions of this section shall be guilty of a misdemeanor, and, upon conviction, shall be punished by a fine of not less than \$10 nor more than \$100, or be imprisoned not to exceed 50 days, or both such fine and imprisonment.

SEC. 16. 1. Whenever the health officer, or any of his employees, shall find any article of milk, meat, or other food which is adulterated within the meaning of this ordinance, or any other article or substance which is detrimental to public health, such article shall be tagged or otherwise properly marked, giving notice that the product is suspected of being adulterated or detrimental to public health, and warning all persons not to remove the same until given permission by the health officer or the courts, and it shall be unlawful for any person or persons, firm or corporation to remove or otherwise dispose of same in violation of this section, and any person or persons, firm or corporation doing so shall be fined not less than \$10 nor more than \$50, or be imprisoned not to exceed 50 days, or both such fine and imprisonment.

2. Such tag or notice shall give notice that the article has been quarantined. The health officer or his employees shall then petition the judge of the police court for the condemnation and destruction of any such product. The owners or defenders of any such product or property shall be given the right to a hearing, first before the health officer, if they so desire, and before the court. The notice of a hearing to be before the health officer shall also state the length of time within which such hearing may be had.

3. In case the finding of the court is with the health officer, the article shall be destroyed by the health department at the expense of the owner of the property, or by the owner of the property under the supervision of the health department, and in such case all other costs shall be taxed against the owners or defenders of the property, if such appear, or shall be collected, if no one appear, against the owner or agent properly ascertained.

SEC. 17. No person shall bring any fresh meat, poultry, fish, ice cream, or other fresh meat or meat product into the city of Lexington for sale without a permit so to do from the health officer; and no person shall operate any place where fresh meat, poultry, fish, ice cream, or other fresh meat or meat product is produced, prepared, kept, offered for sale, or sold, in the city of Lexington, or any soda fountain, pop, or other bottling factory, or other place where foods are produced, prepared, stored, kept, or offered for sale, except foods which, from their method of packing, and by reason of handling in original packages, are not subject to contamination, without a permit so to do from the health officer. Such permit shall be issued annually by the health officer, free of charge, subject to the approval of the board of health and the board of commissioners, and only upon the health officer and the board of commissioners being satisfied that the place where any such products are being produced, prepared, stored, kept, or offered for sale, is operated and maintained in a condition as provided for in other provisions of this ordinance, and that such place has the equipment and method necessary for the maintenance of sanitary conditions throughout.

And whenever such sanitary conditions as provided in this ordinance shall be found not to exist, such permit shall be revoked; provided, however, that before the revokal of such permit the party or parties at interest shall be given a notice of the conditions complained of, together with statement of a time within which the conditions shall be corrected, and if, after such notice, conditions are not corrected, then shall the permit be revoked, but the party or parties at interest shall have the right to appeal to the board of health, the board of commissioners, and to the courts. Such permit shall be renewed annually on the 1st day of April to be valid, and the payment of any license fee to the city of Lexington shall not entitle the holder of such license to operate any business for which a sanitary permit is required in this

ordinance, unless such party or parties also comply with the conditions necessary for the sanitary permit. Any person or persons bringing for sale in the city of Lexington, or selling any such products as mentioned in this section without a permit so to do, or after such permit shall have been revoked, shall, upon conviction, be fined not less than \$10 nor more than \$100 for each offense, and each day's time shall constitute a separate offense.

SEC. 18. The health officer and the meat and milk inspector, acting under his direction, in addition to the inspections provided for in this ordinance, shall inspect all slaughterhouses slaughtering meat for sale in the city of Lexington. And, until the city provides by a municipal abattoir or other means for meat inspection, shall, as far as possible, inspect all animals intended for slaughter and for sale in the city of Lexington, and carcasses of same, and all meats sold in the city of Lexington under the meat inspection rules and regulations as adopted under the law by the State board of health and the director of the Kentucky Agricultural Experiment Station, with respect to such inspections and the provisions of this ordinance applying.

SEC. 19. Dairymen and other food dealers, on tendering the market price, shall deliver to the health officer or other authorized agents of the city of Lexington, a sufficient sample of food for examination under this ordinance. Such health officer or other authorized agents, shall take, or know that there has been taken, a sample which is representative of the food as actually sold on the market. No dairyman or other food dealer shall treat or in any way tamper with a sample of food delivered to such health officer or agents, or in any way provide a sample of milk or other food so treated or tampered with as to have the examination and analysis not show the actual condition of the product as sold in the market. The work of inspection and examination under this ordinance shall in no way be employed so as to give special advantage to any individual or any firm in the sale of foods. The inspectors, bacteriologists, chemists, and others operating under this ordinance shall, as far as possible, help any dairyman or other food dealer in locating the cause of trouble; but any such help or assistance shall not be used for private advertisement, except in cases where the certificate of the health officer is required to certify that a product or a process is clean and wholesome. All such help or assistance given one individual or firm shall likewise be at the service of all individuals or firms.

Any person violating any part of this section shall, upon conviction, be fined not less than \$50, nor more than \$100, and in the case of dairyman or food dealer, in addition to such fine, he shall be refused a permit to do business in the city of Lexington; and in the case of an employee or agent of the city of Lexington, in addition to such fine, he shall be discharged from such agency or employment.

SEC. 20. The word "person" as used anywhere in this ordinance shall be construed to mean any person, persons, firm, or corporation, who shall commit, or be responsible for the committing, of any acts which are made unlawful herein.