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MILK CONSUMPTION IN EIGHTEEN SMALL ALABAMA COMMUNITIES

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INTRODUCTION

The impression seems to have some prevalence that the per capita milk consumption in the South is considerably under the average per capita milk consumption for the country as a whole.

In 1926 an opportunity presented itself of ascertaining the actual per capita milk consumption in 18 small Alabama communities which had requested the Alabama State Board of Health to make a survey of their general public health status. The Rockefeller Foundation and the Alabama State Board of Health made a survey which included a house-to-house canvass. Following a conference between the representatives of that Foundation and of the United States Public Health Service it was determined to secure simultaneously data on per capita milk consumption. The figures presented in this report have been compiled from the data collected.

PERSONNEL AND METHODS OF SURVEY

The detailed surveys were made by a number of trainees of the International Health Training School for Health Officers located at Montgomery, Ala. All of the trainees were graduate physicians with two exceptions. These were Harvard Medical School undergraduates.

In conducting the survey the following questions relative to milk consumption were asked:

(1) How many persons are there in your household?

(2) How many pints of sweet milk per day do you use for cooking and drinking?

(3) How many pints of buttermilk per day do you use for cooking and drinking?

(4) Do you secure any of this milk from a dairy? If so, how much?

LOCATION AND CHARACTERISTICS OF TOWNS SURVEYED

The number of towns surveyed for which milk consumption figures were secured was 18. These were located in 13 different Alabama counties, situated in all sections of the State.

The towns, their total population, colored population, and per cent of colored population, as determined from the surveys are given in Table 1.

TABLE 1.—*Data regarding towns surveyed*

Name of community	Total population	White population	Colored population	Per cent of colored population	Name of community	Total population	White population	Colored population	Per cent of colored population
Flomaton	618	489	129	20.9	Lafayette	1,968	1,266	702	35.7
Louisville	429	362	67	15.6	Boligee	129	92	37	28.7
Tallassee	2,201	2,025	176	8.0	Eutaw	1,318	683	635	48.2
Alexander City	3,075	2,252	823	26.8	Pell City	582	471	111	19.1
Dadeville	1,171	725	446	38.1	Fort Deposit	538	390	148	27.5
Opelika	5,725	3,282	2,443	42.7	Calera	854	653	201	23.3
Camp Hill	1,039	655	384	37.0	Andalusia	3,840	2,942	898	23.4
Auburn	3,468	2,380	1,088	31.4	Goodwater	759	568	191	25.2
Clanton	1,733	1,365	368	21.2		30,409	21,166	9,243	30.4
Clayton	962	566	396	41.2					

In none of these communities had milk-control work been inaugurated at the time the survey was made. There had therefore been no systematic effort to improve the quality or increase the per capita consumption of milk.

TOTAL MILK CONSUMPTION PER CAPITA

For various reasons all of the data desired were not secured for all of the towns surveyed. Table 2 gives the total per capita milk consumption of those towns for which this figure was obtained:

TABLE 2.—*Total per capita milk consumption*

Community	Population	Total consumption of milk		Community	Population	Total consumption of milk	
		Pints per day	Pints per capita per day			Pints per day	Pints per capita per day
Tallassee	2,201	1,923	0.87	Boligee	129	160	1.24
Dadeville	1,171	1,370	1.17	Eutaw	1,318	1,486	1.13
Alexander City	3,075	2,389	.78	Pell City	582	606	1.04
Opelika	5,725	3,774	.66	Fort Deposit	538	446	.83
Camp Hill	1,039	1,324	1.27	Calera	854	946	1.11
Auburn	3,468	2,327	.67	Andalusia	3,840	4,031	1.05
Clanton	1,733	2,185	1.26	Goodwater	759	1,000	1.32
Clayton	962	961	1.00				
Lafayette	1,968	2,833	1.44	Total	29,362	27,761	.95

The total per capita consumption of milk shown in this table varies from a minimum of 0.66 pint per capita per day (Opelika)

to a maximum of 1.44 pints per capita per day (Lafayette). The average for the 16 towns is 0.95 pint per capita per day. This figure and the individual consumption figures for the various towns should be compared with the figure of 0.83 pint per capita per day reported as the average consumption for 90 cities of over 70,000 population each, embracing most of the larger cities of the country, reported in Public Health Bulletin No. 164, United States Public Health Service, 1926. The figures in this bulletin pertain to the year 1923.

Hiscock and Rice's report (1924 Report International Association of Dairy and Milk Inspectors) gives an average per capita milk consumption of 0.81 pint per capita for 168 cities of over 25,000 population.

It will be evident, therefore, that the small communities of Alabama actually consume more milk per capita than is reported for the large cities of the country.

MILK CONSUMPTION BY RACE

The following table gives the per capita milk consumption by race for each of the communities for which this information was obtained:

TABLE 3.—*Per capita milk consumption by race*

Community	Per capita consumption of milk		Community	Per capita consumption of milk	
	White	Colored		White	Colored
Dadeville	1.88	0.48	Fort Deposit	0.97	0.47
Auburn	.85	.27	Andalusia	1.27	.33
Clanton	1.39	.76	Goodwater	1.53	.68
Boligee	1.54	.49			
Eutaw	1.35	.88	Average (weighted)	1.23	.40
Pell City	1.20	.40			

It is evident from Table 3 that the per capita consumption of milk among negroes in small southern communities is less than half that of white.

CONCLUSIONS OF THE MALARIA COMMISSION, HEALTH SECTION, LEAGUE OF NATIONS, AT THE CONFERENCE IN GENEVA, JUNE 25–29, 1928

The malaria commission of the health section of the League of Nations has undertaken an inquiry into the most economic and efficient methods of combating malaria in view of the fact that during and since the war malaria has greatly increased in eastern Europe and has spread northward and westward from endemic centers to areas in Russia, Albania, Bulgaria, the Kingdom of the Serbs, Croats,

and Slovenes, and Greece which had been relatively free from this scourge.

Two general reports have been published based upon the collective experience of the members of the commission and data accumulated through study tours in many countries. While the advice contained in these reports is primarily for the guidance of governments in southeastern Europe, they are of considerable interest to public health administrators who have to deal with malaria in other countries.

The following, taken from the report of the first subcommission on antimalaria methods, represent an agreement reached by malariaologists of the Old and New World regarding the principles of malaria control:

"1. The subcommission again emphasized a recommendation already contained in the second report, that the prevention of malaria must be guided by scientific knowledge. Although scientific discoveries have not yet resulted in the eradication of malaria, it does not follow that new researches will be of no assistance to the hygienist. In the wide field of malariology so many points remain obscure that the conclusion must be reached that success in the prevention of malaria requires a wider knowledge of the disease, of the parasite, and of the mosquito. The campaign against malaria must be based on a specialized and systematic study of the disease. For this reason, it is necessary that each country should have an organization specially devoted to this work. The exchange of views in the subcommission emphasizes that this organization should be of a scientific character, dealing with research rather than with measures of application, with malaria solely rather than with malaria as part only of a public health study. The problem is sufficiently complex to engage permanently the attention of large numbers of workers in countries with varying climatic conditions. These workers would be consulted by technicians responsible for the application of antimalaria measures and would indicate the lines along which the campaign should be carried out.

"*Each government should establish a central permanent organization, either independent or attached to an institute, composed of several selected workers who would devote their whole time to malaria research and would act as scientific advisers.*

"2. The present widely varying views of hygienists are constantly demonstrated in all conferences on malaria, these views being based on experience acquired in countries widely separated geographically and by social and economic conditions. Each malariologist energetically defends his point of view, because each is convinced by his own experience and is therefore correct as far as his own district is concerned. When, however, a conference of malariologists attempts to set out general principles, it becomes clear that there are no methods

of constant and unchanging value. Each method, according to the social and economic conditions, has a variable coefficient of necessity, efficacy, and cost. This coefficient will vary, for example, from the north to the south from a temperate region to a tropical area, and from a dry to a moist climate. The method must be adapted to the exigencies of the particular region. Moreover, a method must not be condemned because it is not immediately successful. For each method there is a minimum standard of efficiency, which must be evaluated with regard to a particular region only when it has been applied with a certain degree of intensity and for a certain time.

"*The subcommission is not in favor of utilizing all available methods of control in the same locality at the same time. It considers it preferable to employ only the method or methods which, with the means available, can be brought above the standard called 'mimimum effective degree of perfection.'*

"3. The description of antimalaria measures applied for a longer or shorter time in various countries, such as Italy and the United States of America, attracts attention to the methods applied and results obtained; and there is a great temptation to imitate one or the other of these models. Imitation, in antimalaria work, is dangerous. What may be imitated is the confidence, energy, and spirit of perseverance which have ensured the success of these campaigns, and the discernment with which measures suitable to the existing conditions were adopted. The fact that there are certain regions in the world where there is anophelism without malaria should not lead to skepticism in regard to antilarval measures. The conclusion to be drawn from success is that the method selected was the one indicated by the conditions.

"*Subject to certain defined limitations, determined by a knowledge of local conditions, there should be considerable freedom of choice as regards the particular methods of malaria control to be adopted. The subcommission deprecates the use of measures in one region solely on the ground that they have been successful in another where, perhaps, circumstances and conditions are quite different.*

"4. In view of the fact that the use of quinine in malaria is primarily for treatment, the subcommission decided to refer the subject of the therapeutic value of quinine, etc., to the subcommission on the use of quinine.

"*No. 4 of the agenda was transferred to the agenda for the third subcommission.*

"*5. Whatever other means may be employed in malarial localities, the subcommission considers that it is essential in the first place to treat the sick.*

"6. Each method possesses only a relative value. To give it an absolute value is to risk discouraging the hygienist by disillusion.

During the very full discussion by the subcommission, stress was constantly laid on the need for avoiding as far as possible such methods as might lead to discouraging results. Thus it was felt that, while the subcommission laid down as a primary obligation the treatment of the sick, it was important to realize that such treatment only in the first place lessened the severity of the disease. This warning the subcommission formulated in the terms of the following resolution:

"*The good results of early diagnosis and efficient treatment are more apparent in the reduction of the severity of the disease than in the reduction of its incidence.*

"7. There is, then, for each method, not only a coefficient of expediency, but also a coefficient of efficacy. Moreover, there is a coefficient of time. It must not be forgotten that all methods are definitely influenced by these factors. If the commission had not wished carefully to avoid mixing general principles with recommendations of special application, it would have been possible to advise the adoption of the various methods consecutively and thus to try, for example, first, treatment, then antimosquito measures, and later 'bonification'.[1] This would have involved the danger that too little time might be allotted to the testing of each method. The principal factor in the success of any method is the energy of the hygienist employing it.

"*The execution of the measures must reach a sufficiently high degree of efficiency ('minimum effective degree of perfection') before its effect on incidence becomes appreciable.*

"8. All malariologists are agreed as to the value of antimalaria work as a factor in social progress and general hygiene, especially in connection with rural populations. Malaria prophylaxis contributes greatly, not only to the development of the land, but also to the growth of civilization.

" 'Integral bonification,' which may be regarded as the final object of all antimalaria measures, requires a long period for its accomplishment. Extensive undertakings may provoke a temporary local increase in the amount of malaria, partly owing to the necessary aggregation of workers, unless other methods to prevent it are carried out during the time of danger. Treatment of the sick, destruction of adult *Anopheles*, mechanical protection, and antilarval methods each have a great value during this critical period.

"*The improvement of the conditions of the inhabitants which results from the development of widespread 'bonification' is one of the deter-*

[1] The term "bonification" is used by the Italians to connote the reclamation of land for agricultural purposes, whether by drainage, by irrigation, by filling, or some combination of methods. Complete or "integral bonification" signifies that the land has been reclaimed, settled, and placed under intensive cultivation and a condition of economic and sanitary well-being established.

mining factors in the regression of malaria. The work done is efficacious only in so far as it leads to intensive cultivation of the ground.

"It is certain, however, that the use of antilarval measures whilst more extensive works are being carried out is of great value, inasmuch as it reduces the anopheline density and serves to bridge the dangerous period which accompanies and follows such undertakings.

"9. Discussions on antimalaria measures are marked by a character of their own, as there is hardly any subject in public health on which such divergent views exist, but concerning which the basic principles are so firmly established. It is in the application of these measures in particular cases upon which opinions vary so widely.

"The methods recommended are to be read in the light of a relationship between general principles and particular cases. The subcommission could not produce a mere book of formulæ containing set instructions for all cases, but was able to lay down fundamental principles on which the health expert could rely while using his own initiative and judgment. The conclusions arrived at by the subcommission derive their practical value from the fact that they have been established on the basis of a large and varied experience acquired under many different conditions.

"The commission considers that the first duty of administrations which have to organize antimalaria measures is to provide for the treatment of the malarious sick, with the additional object of reducing sources of infection.

"Simultaneously, or subsequently, according to the circumstances and conditions of the various regions, a study of the causes of endemicity should be undertaken with the object of choosing and carrying out the most efficacious, the cheapest, and best-adapted method or methods in the solution of the local problem. Provision should also be made either for radical measures (large bonification, drainage) or for other temporary measures (antilarval work).

"The commission is of the opinion that in all cases the use of mechanical protection and measures against the adult insects are desirable.

* * * * * * *

"These resolutions on methods of malaria control are in harmony with the principle unanimously accepted that the proper solution can be found only by careful observation and analysis of the factors involved in each individual situation.

"The subcommission has, however, been able to agree upon some general principles for the guidance of governments.

"Long and varied experience, together with research, has taught that the principles embodied in these resolutions are fundamental to an intelligent prosecution of antimalaria work by any government which would have a maximum of effectiveness at a minimum of cost and with small risk of disappointment at the results achieved."

TRANSACTIONS OF THE EIGHTH ANNUAL CONFERENCE OF STATE SANITARY ENGINEERS, 1927

Public Health Bulletin No. 183, recently released, contains the transactions of the Eighth Annual Conference of State Sanitary Engineers.

A number of committee reports in this publication are of general interest. The report of the Joint Committee of the Conference and the American Public Health Association setting forth the final standards for swimming pools and bathing places will have widespread application and should prove to be very helpful to all persons interested in the design, operation, and sanitation of swimming pools. The report of the committee on sewage treatment gives an interesting résumé of the progress being made in Ohio to obtain careful and scientific operation of sewage-treatment plants.

A paper on the electropure process of milk treatment describes a method of pasteurizing milk, several installations of which have been approved in Pennsylvania.

PUBLIC HEALTH ENGINEERING ABSTRACTS

Up-to-date sewage works. Hoscar and Pemberton Installation (Wigan, England). R. B. Donald. Munic. Eng. Sanit. Record, 79, 544 (1927). Abstract by C. H. Badger in *Chemical Abstracts*, vol. 22, No. 13, July 10, 1928, p. 2423.

"The plants and the sewage treatment are described. The area of the Hoscar works is 272¾ acres and the area of the Pemberton works, which treats storm water only, is 118 acres. All sewage passes through ½-inch bar screens and raking apparatus electrically driven. Sludge in the different tanks is removed automatically or by gravitation to sludge-drying beds. Storm water is pumped into 4 reinforced tanks. The sewage received at Hoscar is treated with 3 to 5 grains of aluminic ferric after the removal of the rough solids. It then passes through a preliminary settling tank to three settling tanks, thence to a receiving chamber, and on to two batteries of 11 bacteria beds each. The sludge beds are made of graded coke and cinders. The bacteria beds are made of specially graded slag resting on aeration tile. The effluent and the effluent from the humus tanks pass into the river Douglas. Provision is made for a daily water flow of 3,300,000 and a weekly water flow three to six times this amount."

New Sewage Works at Coseley, Staffs (England). E. E. W. Berrington. Munic. Eng. Sanit. Record 79,574 (1927). Abstract by C. H. Badger in *Chemical Abstracts*, vol. 22, No. 13, July 10, 1928, p. 2423.

"Coseley is divided into two equally populated areas as regards the treatment of sewage. As all of the sewage of the north area would have to be pumped, it was found to be more economical to drain in the adjoining district of Bilston. The outfall works and sewers, the purification works, and the method of purification of the south area are described. Use is made of screening and detritus chambers, liquefying tanks, storm-water tanks, separating tanks, followed by filtration through circular percolating filters, the effluent from the filters being passed through humus tanks and thence into a brook."

Dunfermline (Scotland) Waterworks. J. D. Cape. Munic. Eng. Sanit. Record 79, 611 (1927). Abstract by C. H. Badger in *Chemical Abstracts*, vol. 22, No. 13, July 10, 1928, pp. 2423–2424.

"The works were opened in 1924, the total cost being 400,000 pounds. The whole of the district supply is by gravitation. There are 130 miles of mains from 36 inches in diameter downward. An attachment to the Venturi meters gives information when consumption rises above a certain figure. Serious bursts are therefore immediately noticed. To get rid of objectionable taste and smell from a weed, *Nitella flexilis*, which grew abundantly in the reservoir in summer, an application of 1 part CuSO to 10,000,000 parts water was tried. The water was reported free from smell in four days. This treatment is repeated annually. The application of three-fourths grain lime per gallon was unsuccessful."

Sewage Disposal in the Country. Anon. *Weekly Bulletin*, California Department of Public Health, vol. 7, No. 26 and 27, August 4 and 11, 1928, pp. 100–113. (Abstract by P. S. Fox.)

In a very interesting form of questions and answers the writer explains the operation of septic tanks. First of all he refutes the common statements that septic tanks purify sewage and that they will never become filled with solids. The following five requisites for good sewage disposal are listed: (1) An available area of about 0.1 to 0.5 acre per 100 persons, depending upon the nature of the soil; (2) a loamy, sandy, absorptive soil, with good underdrainage; (3) absence of bed rock, hardpan, and ground water for a depth of at least three feet; (4) a plumbing installation economical in the use of water; (5) proper size and design of septic tank and leaching system. These units can not be too large, and the most porous soil in the vicinity should be used. In addition, a few hints are given in regard to economical plumbing in country homes.

Methods of Sewage Disposal to Fit the Individual Circumstances of the Area. E. A. Sandford Fawcett. *The Surveyor*, vol. 73, No. 1091, June 29, 1928, pp. 695–696. (Abstract by H. R. Crohurst.)

The author, in an address delivered at the annual meeting of the Institution of Municipal and County Engineers, gives his observations of sewage treatment methods from the viewpoint of the engineering department of the Ministry, which sees not only the designs but the results of all types of sewage treatment works, dealing with many different types of sewage and trade waste, under varying conditions, in all parts of the country.

The essential points necessary for the proper design of sewage works are first outlined, followed by a summary of the existing methods of sewage treatment, first where the outfall is to be into the sea or tidal estuary; second, where the outfall is to be into nontidal rivers, streams, or other fresh water.

The main points to be considered when selecting a method of sewage disposal for any district are summarized as follows: (1) The sewage disposal requirements of the district and to what extent other areas may be affected by the proposals; (2) what the district can afford to spend in meeting its sewage disposal requirements, having regard to its rates, its margin of borrowing powers, and its commitments or requirements for other essential services; (3) whether the sewage can be conveyed and dealt with by gravitation so as to avoid the cost of pumping; (4) what is the simplest and least costly method of disposal which will meet the requirements of the case satisfactorily; (5) whether the sewage can be dealt with in combination with other disposal works existing or proposed so as to avoid the establishment of separate works; (6) where the area is not already sewered, whether the separate, partially separate, or combined system of sewerage will enable the sewage and storm water to be dealt with most efficiently and economically.

Stress is laid on the selection of the simplest designs and methods of treatment to meet the requirements of each particular case, because so many districts are unable to afford either the capital cost of the works or the annual cost of skilled supervision which is so necessary to operate successfully any complicated system.

Ministry of Health Form No. 9, used by the engineering inspectors for the purpose of ascertaining full particulars of all existing and proposed schemes of sewage disposal, in connection with which they hold inquiries, is reproduced in detail.

Pollution Problems in the State of Washington and Their Solution. H. W. Nightingale. Trans. Am. Fish. Soc. 57, 294–300 (1927). Abstract by C. M. McCay in *Chemical Abstracts*, vol. 22, No. 14, July 20, 1928, p. 2630.

"Domestic sewage free from trade wastes is not harmful to fish life unless it reduces the O_2 content to less than 30 per cent saturation. Sulphite wastes from pulp mills are very destructive, since the wastes from a fifty-ton sulphite mill equal the sewage from a city of 81,000. No special toxic action with sulphite wastes has been found. The wastes from a mill using the lime-soda process have proved very destructive to young fry. Black-ash wastes are very destructive to seed clams. A discussion of the legal control of industrial wastes is included."

Toxicity Experiments with Fish in Reference to Trade Waste Pollution. D. L. Belding. Trans. Am. Fish. Soc. 57, 100–19 (1927). Abstract by C. M. McCay in *Chemical Abstracts*, vol. 22, No. 14, July 20, 1928, p. 2630.

"The factors that must be considered in studying the effects of pollution of water upon fish are the species of test fish, the hardiness of the individuals, the age, and the size. The environment factors that must be controlled are the chemical characteristics of the water, the size of containers, the oxygen content, and the temperature of the water. Brook trout, rainbow trout, chinook salmon, carp, goldfish, and suckers were studied. Brook trout of about 200 grams in weight are the most satisfactory. HNO_3, HCl, and H_2SO_4 produce the same symptoms of loss of equilibrium and irregular respiration at a pH of 4 to 5. M. L. D. is 1:100,000. Organic acid presents greater diversity of actions. Trout can survive after immersion in 1:200 of AcOH. Phenol is marked by its irritating action, but produces no evidence of O_2 hunger. Tannic acid injures the gills and produces O_2 hunger. NH_4OH, NaOH, and KOH differ only in degree of toxicity. KOH is less marked in activity. Lead arsenate produces no characteristic symptoms. $Ca(OCl)_2$ produces characteristic head-balancing motions. $CuSO_4$ shows wide variations in toxicity. Fish once poisoned do not recover in fresh water. $FeSO_4$ has a low toxicity. $HgCl_2$ kills fish, leaving them with pale gills and auricles filled with blood. $KMNO_4$ will color fish yellow, but they promptly recover in fresh pure water. H_2S produces respiratory paralysis. Fish can recover in fresh water. The author includes tables comparing his data with those of previous workers."

Length of Life of Anopheles quadrimaculatus after Beginning of Control of Production. L. L. Williams and A. E. Legare. *Southern Medical Journal*, vol. 21, No. 9, September, 1928, pp. 735–737. (Abstract by M. A. Barber.)

Adult *Anopheles* disappeared within 10 to 14 days after the destruction by control measures of larvae in neighboring breeding places. Where control measures were discontinued, adult *Anopheles* reappeared within 14 to 21 days after the last application of the larvicide. The authors conclude: "These observations in general indicate that larval control need not commence earlier than 10 days prior to that date on which adult control is necessary. At the end of the season, larvicides need not be applied later than two or three weeks before that date after which adult control is no longer necessary."

Malaria Survey in Irrigated Regions of Rio Grande River in New Mexico. M. A. Barber. *Southern Medical Journal*, vol. 21, No. 9, September, 1928, pp. 737–738. (Abstract by M. A. Barber.)

This article gives an account of surveys made in the Rio Grande Valley of New Mexico during portions of the years 1926 and 1927. Two regions, one near Espanola in northern New Mexico, and another near Las Cruces, southern New Mexico, have *Anopheles* (*A. pseudopunctipennis* and *A. maculipennis*) in large numbers and a considerable amount of malaria, the rate of which is rapidly increasing in the more southerly region. The elevations of the two localities are, respectively, 5,600 feet and 3,800 feet above the sea. Further work has been done in these localities and a more extensive paper will be published.

Airplanes and Paris Green in Control of Anopheles Production. S. S. Cook and L. L. Williams. *Southern Medical Journal*, vol. 21, No. 9, September, 1928, pp. 754–760. (Abstract by M. A. Barber.)

The article gives a description of the spread of Paris green by airplanes at Quantico and Chopawamsic Bays, Va. Four charts illustrate the decline throughout the summer of the production of adult *Anopheles* in the treated localities and compare such production with that of a control, nontreated locality of Aquia Bay. For use in airplane dusting a dilution of 33 per cent of Paris green in powdered soapstone proved most satisfactory for all conditions. In calm weather an excellent distribution of dust was obtained at a height of 150 to 200 feet above the water. The dust penetrated all types of vegetation indigenous on the Atlantic coast.

Suitable intervals between dustings varied with the season. At Quantico they ranged from 6 to 13 days. The materials cost approximately 70 cents per acre per season. Practically any type of plane is suitable for distributing Paris green, and a simple box with sloping sides makes a suitable hopper. One plane can handle 20 square miles of breeding surface per week.

Limitations in the Use of Top Minnows in Anopheles Mosquito Control in California and Observations on Anopheline Flight Activities. W. B. Herms. *Southern Medical Journal*, vol. 21, No. 9, September, 1928, pp. 761–762. (Abstract by M. A. Barber.)

In a large percentage of breeding places in California it is difficult to maintain effective mosquito control by *Gambusia* on account of winter floods which carry away the minnows. The pools left by the receding streams are prolific sources of *Anopheles*. Arrangements are being made in one locality to overwinter several thousands of minnows in a concrete tank for repopulating streams swept out by the winter floods.

Anopheles do not fly far from their breeding places in California except in the case of two annual flights, spring and fall migrations, which take place in February and at the close of the breeding season in late September and early October. Males do not participate in these flights, which are probably made to secure the dispersal of the species. The transmission of malaria is not affected by these flights except in a certain degree by the autumn migration. Further investigations are in progress to determine the relation of these flights to malarial infectivity.

Prophylaxis of Undulant Fever. Diagnosis of Melitensis Infection in Animals. E. Cesari. *Rev. Gen. de Med. Vet.* 1928, January 15, vol. 37, No. 433, pp. 1–9. From *Tropical Diseases Bulletin*, vol. 25, No. 7, July, 1928, pp. 505–506.

"This paper refers to the undoubted spread of undulant fever in France and points out that from the animal point of view it is no longer a question only of goats, but sheep, cows, and pigs must also be considered as possible infective agents.

"The author refers to the regulation published in 1903, which gives public authorities the power to segregate infected animals and herds and to prohibit

the sale of their milk. Working on this statute Cesari considers that a great deal can be done to limit the spread of undulant fever. He points out, however, that infection with *melitensis*, unless it produces actual abortion, may give rise to no symptoms whatever in goats or sheep.

"He cites two instances in which cases of undulant fever had arisen and the source of infection (goats' milk) was definitely traced to small itinerant herds of goats. These animals appeared to be in perfect health, but by dint of carrying out agglutination reactions with the serum of all the goats and culturing samples of milk, he was able to show definite evidence of infection in two of these herds. These herds were isolated and the sale of their milk was stopped:

"By such a system of prophylaxis he suggests that a great deal could be done by veterinary officers to check the spread of the disease."

Recent Researches into Undulant Fever in the U. S. A. Taliaferro Clark. *Bull. Office Internat. d'Hyg. publique*, Oct., 1927, vol. 19, No. 10, pp. 1460–1462. From *Tropical Diseases Bulletin*, vol. 25, No. 7, July, 1928, pp. 514–515.

"Up to recent years it was belived that undulant fever in the United States of America was confined to the Mexican frontier. But lately it has been definitely recorded as occurring in Texas and in Arizona. In 1922 a small epidemic was recorded in Phoenix, Arizona. Practically all the cases gave a history of the consumption of goats' milk. The clinical type of the disease, the causal organism, and the source are the same as those of the similar infection in the Mediterranean.

"But more recently it has been found that in the United States infections occur due to the bovine variety, *Br. abortus*. This bacillus causes contagious abortion both in pigs and cattle. Abortion in pigs is extremely common. These animals are all intended for the slaughter house, and are sent there irrespective of infection. As a result, cases of undulant fever are fairly common among workers in the abattoirs.

"An infected cow although apparently in good health may continue to excrete the bacillus in the milk for many months. Many people, therefore, are exposed to infection from consumption of such milk unless it is pasteurized; but, fortunately, *Br. abortus* in milk is not highly pathogenic for man. Yet undoubted cases of infection from *Br. abortus* in raw cow's milk have been recorded in America, as evidenced by the absorption of agglutination tests and the isolation of the organism from the cow's milk.

The Hygiene Laboratory in Washington has reported 23 cases of undulant fever due to *Br. abortus* in the last five years. In eight of these, infection was traced to the consumption of milk; two were laboratory infections; in six others the infection was contracted by handling sick animals—pigs or cows; one other case was that of an agricultural expert who was called in to advise in the treatment of abortion in cattle on a farm—16 days after his visit he developed undulant fever, from which he died. These cases were scattered over eleven different States in North America.

"One hundred and ten sera which did not react to typhoid were tested against *abortus* and six showed a high titer for this organism of diagnostic significance."

The Smoke Problem on Tyneside. Harold Kerr. *Journal of the Royal Sanitary Institute*, vol. 48, No. 10, April, 1928, pp. 559–563. (Abstract by Leonard Greenburg.)

The soot fall on both sides of the river at Tyneside is usually over 800 tons per square mile per year. During the period of the coal strike it amounted to 600 tons per square mile per year, whereas in a densely populated residential portion the soot fall is approximately one-half that on the Quayside. A gauge

on the Town Moor indicated a soot fall of approximately one-quarter that on the Quayside.

Doctor Kerr recounts the effects of smoke, so well known to all of us at this time. He emphasizes, however, the very important portion of the problem, namely, the maintenance of buildings and the enormous cost involved in cleansing materials. He also cites the importance of sunlight as a health factor. The use of coke or coal, carbonized at low temperatures, is advocated.

A regional smoke abatement committee for the district of Tyneside has been organized in order to insure uniformity of action throughout the area. The committee is not concerned with prosecutions as much as with the production of the public interest in this question, and the formulation of plans for cooperation in order to deal with the problem. The importance of trained smoke inspectors, as well as engineers and firemen, is emphasized, and the lessons learned in other cities are cited as examples of this technique. For example, in the city of Glasgow, it is pointed out, the soot fall has been halved in the last 12 years and the requirements there at this time make it illegal for a chimney to produce smoke for more than one-half minute in each half hour. At Wakefield furnace owners have formed a smoke abatement committee of their own and render the corporation assistance in this work. In West Riding this same procedure has been followed and excellent results have been obtained there through the use of skilled and experienced smoke inspectors. The importance of watchfulness on the part of the local authorities in the production of smoke from the corporation's own plants is emphasized.

The Smoke Problem on Tyneside. J. T. Dunn. *Journal of the Royal Sanitary Institute*, vol. 48, No. 10, April, 1928, pp. 564–565. (Abstract by Leonard Greenburg.)

This is a discussion and enlargement of certain portions of the paper presented by Dr. Harold Kerr, and serves to emphasize the effect of smoke on plants, pointing out that tarry dust injuries vegetation.

The author points out that approximately 120,000 pounds sterling would be saved the British Government in the upkeep of some 6,000 Government buildings throughout the country if city air were of the same purity as country air. The Manchester Corporation compared the cost of household washing in Manchester as contrasted with Harrogate. After all differences were eliminated in so far as possible, save the effect of the smoky atmosphere of Manchester, it was found that the weekly washing in this city cost on an average 7½ pence more than that of Harrogate, making a total bill for washing of some 250,000 pounds sterling excess in the city of Manchester.

Doctor Dunn points out that domestic smoke presents a more difficult problem than does industrial smoke and emphasizes the growing use of gas and low temperature coke in place of coal. It is true that coke fires must often be lighted with coal, and may advantageously be mixed with coal where grates are very small, but coke can always be successfully burned if one makes an effort to burn it. Electricity is, of course, advantageous but more costly even than gas.

DEATHS DURING WEEK ENDED OCTOBER 27, 1928

Summary of information received by telegraph from industrial insurance companies for the week ended October 27, 1928, and corresponding week of 1927. (From the Weekly Health Index October 31, 1928, issued by the Bureau of the Census, Department of Commerce)

	Week ended Oct. 27, 1928	Corresponding week, 1927
Policies in force	71, 746, 869	69, 179, 971
Number of death claims	13, 742	11, 869
Death claims per 1,000 policies in force, annual rate	10. 0	8. 9

Deaths from all causes in certain large cities of the United States during the week ended October 27, 1928, infant mortality, annual death rate, and comparison with corresponding week of 1927. (From the Weekly Health Index, October 31, 1928, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Oct. 27, 1928		Annual death rate per 1,000 corresponding week, 1927	Deaths under 1 year		Infant mortality rate, week ended Oct. 27, 1928 [2]
	Total deaths	Death rate [1]		Week ended Oct. 27, 1928	Corresponding week, 1927	
Total (69 cities)	6,478	11.1	12.1	717	723	58
Akron	48			9	6	98
Albany [3]	28	12.2	9.6	3	1	61
Atlanta	59	12.1	14.9	8	2	
White	26		10.4	4	1	
Colored	33	(4)	25.4	4	1	
Baltimore [3]	180	11.3	14.3	22	40	70
White	135		11.8	18	29	72
Colored	45	(4)	28.6	4	11	63
Birmingham	53	12.5	12.5	4	4	34
White	25		10.2	1	2	14
Colored	28	(4)	16.0	3	2	68
Boston	188	12.3	13.1	21	27	58
Bridgeport	22			1	1	18
Buffalo	142	13.4	13.4	6	15	26
Cambridge	25	10.4	9.3	2	2	36
Camden	19	7.3	12.9	1	2	16
Canton	20	9.0	11.5	5	2	119
Chicago [3]	629	10.4	11.8	62	68	53
Cincinnati	109	13.8	15.7	18	9	109
Cleveland	159	8.2	9.1	20	15	54
Columbus	63	11.1	13.2	16	4	150
Dallas	41	9.9	12.8	8	6	
White	27		11.9	6	6	
Colored	14	(4)	19.0	2	0	
Dayton	36	10.2	8.4	3	3	50
Denver	82	14.6	13.3	6	11	
Des Moines	24	8.3	11.6	0	2	0
Detroit	268	10.2	11.4	56	33	86
Duluth	15	6.7	12.7	1	6	23
El Paso	29	12.9	9.2	3	6	
Erie	25			2	3	41
Fall River [3]	16	6.2	11.0	1	5	17
Flint	23	8.1	12.8	7	11	89
Fort Worth	38	11.8	8.6	7	3	
White	32		8.7	6	3	
Colored	6	(4)	8.0	1	0	
Grand Rapids	39	12.4	7.1	3	4	45
Houston	66			12	11	
White	45			12	8	
Colored	21	(4)		0	3	
Indianapolis	78	10.7	12.1	6	8	46
White	67		11.7	4	8	35
Colored	11	(4)	15.1	2	0	121
Jersey City	61	9.8	11.5	7	7	52
Kansas City, Kans	23	10.2	14.6	0	1	0
White	18		14.1	0	1	0
Colored	5	(4)	17.2	0	0	0
Kansas City, Mo	102	13.6	14.2	10	10	71

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.
See footnotes 3 and 4 at end of table.

Deaths from all causes in certain large cities of the United States during the week ended October 27, 1928, infant mortality, annual death rate, and comparison with corresponding week of 1927. (From the Weekly Health Index, October 31, 1928, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Oct. 27, 1928		Annual death rate per 1,000 corresponding week, 1927	Deaths under 1 year		Infant mortality rate, week ended Oct. 27, 1928
	Total deaths	Death rate		Week ended Oct. 27, 1928	Corresponding week, 1927	
Knoxville	17	8.4	13.3	1	2	22
White	15		12.2	1	2	24
Colored	2	(4)	21.4	0	0	0
Los Angeles	249			22	6	63
Louisville	81	12.9	13.5	14	5	117
White	63		13.1	10	5	95
Colored	18	(4)	16.0	4	0	276
Lowell	36	17.1	10.9	6	2	125
Lynn	26	12.9	9.5	7	0	176
Memphis	52	14.3	17.5	6	5	70
White	25		14.0	3	4	56
Colored	27	(4)	23.9	3	1	94
Milwaukee	101	9.7	10.0	12	13	54
Minneapolis	83	9.5	12.9	5	11	30
Nashville	31	11.7	22.3	3	8	47
White	19		16.9	3	2	64
Colored	12	(4)	36.2	0	6	0
New Bedford	14	6.1	8.7	2	3	43
New Haven	27	7.5	12.1	7	6	99
New Orleans	120	14.6	17.4	16	19	77
White	69		15.1	8	14	58
Colored	51	(4)	24.1	8	5	116
New York	1,270	11.0	11.4	130	112	53
Bronx Borough	168	9.2	9.0	8	15	24
Brooklyn borough	398	9.0	10.0	50	44	50
Manhattan borough	543	16.2	15.5	58	40	69
Queens borough	118	7.2	8.3	14	12	56
Richmond borough	43	14.9	14.9	0	1	0
Newark, N. J	90	9.9	9.9	12	9	62
Oklahoma City	29			3	4	
Omaha	41	9.6	10.0	3	2	35
Paterson	32	11.5	11.6	2	1	35
Philadelphia	448	11.3	11.1	36	48	48
Pittsburgh	169	13.2	15.0	17	25	56
Portland, Oreg	55			1	6	11
Providence	56	10.2	14.3	5	11	44
Richmond	56	15.1	15.0	7	2	91
White	25		12.6	2	1	41
Colored	31	(4)	20.6	5	1	184
Rochester	61	9.7	11.1	8	11	65
St. Louis	202	12.5	15.8	25	25	84
St. Paul	37	7.7	11.5	3	6	29
Salt Lake City [3]	35	13.3	11.5	1	1	16
San Antonio	55	13.2	16.3	15	14	
San Diego	37	16.2	17.6	0	4	0
San Francisco	150	13.4	14.1	5	5	31
Schenectady	19	10.6	11.2	2	3	63
Seattle	79	10.8	8.8	8	6	82
Somerville	19	9.7	6.7	0	0	0
Spokane	21	10.1	9.6	0	2	0
Springfield, Mass	33	11.5	11.3	6	0	95
Syracuse	38	10.0	10.3	6	7	73
Tacoma	22	10.4	10.2	1	1	26
Toledo	70	11.7	9.7	8	4	77
Trenton	34	12.8	11.4	2	7	34
Utica	23	11.5	17.1	1	8	23
Washington, D. C.	129	12.2	12.4	13	15	74
White	77		9.9	6	6	50
Colored	52	(4)	19.5	7	9	129
Waterbury	12			1	2	29
Wilmington, Del	20	8.1	10.3	1	2	26
Worcester	42	11.1	9.6	5	3	61
Yonkers	24	10.3	9.7	4	1	91
Youngstown	29	8.7	9.2	6	7	80

[3] Deaths for week ended Friday, Oct. 26, 1928.

[4] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans., 14; Knoxville, 15; Louisville, 17; Memphis, 38; Nashville, 30; New Orleans, 26; Richmond, 32; and Washington, D. C., 25.

PREVALENCE OF DISEASE

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

UNITED STATES

CURRENT WEEKLY STATE REPORTS

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

Reports for Weeks Ended October 27, 1928, and October 29, 1927

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended October 27, 1928, and October 29, 1927

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927
New England States:								
Maine	4	7	3	----	71	35	0	0
New Hampshire	1	----	8	----	38	----	0	----
Vermont	6	9	----	----	3	2	0	0
Massachusetts	115	120	7	9	199	180	2	1
Rhode Island	12	17	----	1	22	1	0	0
Connecticut	18	32	3	3	48	11	0	1
Middle Atlantic States:								
New York	149	289	[1] 11	15	224	96	27	1
New Jersey	111	147	5	5	62	12	6	2
Pennsylvania	193	206	----	----	319	247	5	4
East North Central States:								
Ohio	103	----	10	----	125	----	10	----
Indiana	79	61	9	7	12	8	0	0
Illinois	187	163	11	9	92	27	4	4
Michigan	202	115	----	3	29	75	15	3
Wisconsin	30	49	28	24	90	44	5	5
West North Central States:								
Minnesota	48	61	3	4	20	8	1	3
Iowa	15	13	----	----	----	6	0	1
Missouri	59	78	10	1	13	8	3	2
North Dakota	14	7	----	----	5	1	1	0
South Dakota	4	4	----	2	1	3	0	1
Nebraska	26	12	4	----	12	1	1	0
Kansas	41	46	1	8	7	37	1	1
South Atlantic States:								
Delaware	2	2	----	----	1	17	0	0
Maryland [2]	35	28	9	19	36	22	1	1
District of Columbia	35	25	----	----	----	3	0	0
Virginia	----	----	----	----	----	----	----	----
West Virginia	39	20	11	9	10	5	0	0
North Carolina	238	176	----	----	20	275	0	0
South Carolina	70	93	533	429	----	150	0	0
Georgia	37	59	78	51	8	6	0	0
Florida	5	33	1	13	----	1	0	0

[1] New York City only.

[2] Week ended Friday.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended October 27, 1928, and October 29, 1927—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927
East South Central States:								
Kentucky	37						0	
Tennessee	67	47	27	30	6	36	1	0
Alabama	101	132	60	35	7	36	1	0
Mississippi	47	97					0	0
West South Central States:								
Arkansas	23	29	33	54		26	0	0
Louisiana	34	54	10	4	9	4	0	0
Oklahoma [1]	67	150	25	22	4	21	1	1
Texas	69	65	47	54	5	9	0	0
Mountain States:								
Montana	4	2			19	3	0	0
Idaho	1	2					1	1
Wyoming	2	4				1	0	0
Colorado	9	22			4	1	1	1
New Mexico	5	15			1	12	0	0
Arizona	6	1					0	0
Utah [2]		7	2		1	1	1	0
Pacific States:								
Washington	7	27			23	21	0	1
Oregon	26	14	25	25	13	11	1	0
California	92	105	1,392	16	14	46	5	4

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927
New England States:								
Maine	1	6	16	55	7	0	6	9
New Hampshire	0		11		1		1	
Vermont	0	6	6	11	3	0	0	0
Massachusetts	9	66	103	201	0	0	5	9
Rhode Island	0	4	8	13	0	3	2	1
Connecticut	6	9	22	38	0	0	1	6
Middle Atlantic States:								
New York	20	31	150	197	0	3	84	54
New Jersey	3	8	56	90	1	0	11	13
Pennsylvania	8	18	164	243	0	0	25	27
East North Central States:								
Ohio	8	51	164		6		19	
Indiana	1	19	67	109	24	7	20	14
Illinois	6	25	174	194	19	4	26	33
Michigan	1	18	136	129	11	5	8	13
Wisconsin	0	9	88	102	12	9	5	7
West North Central States:								
Minnesota	8	6	72	155	1	3	6	3
Iowa	1	8	45	30	0	33	3	8
Missouri	0	12	87	111	5	25	11	29
North Dakota	3	2	22	33	0	12	1	1
South Dakota	0	6	15	25	2	24	2	4
Nebraska	0	14	31	41	4	4	2	5
Kansas	1	14	72	114	9	25	9	13
South Atlantic States:								
Delaware	1	0	0	4	0	0	1	2
Maryland [2]	3	3	28	34	0	0	24	22
District of Columbia	1	1	14	16	0	0	0	0
Virginia		2						
West Virginia	7	9	101	68	6	3	40	32
North Carolina	2	1	150	145	3	12	25	19
South Carolina	3	2	21	30	0	1	19	32
Georgia	0	0	35	44	0	0	27	31
Florida	0	3	3	11	0	0	0	13

[1] Week ended Friday.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended October 27, 1928, and October 29, 1927—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927	Week ended Oct. 27, 1928	Week ended Oct. 29, 1927
East South Central States:								
Kentucky	0	----	56	----	2	----	13	----
Tennessee	1	2	52	46	0	1	59	66
Alabama	3	1	35	35	3	2	32	27
Mississippi	1	0	20	33	1	14	13	9
West South Central States:								
Arkansas	2	2	32	34	0	1	15	39
Louisiana	0	2	8	14	1	0	13	29
Oklahoma [1]	1	7	29	53	2	14	48	62
Texas	2	3	8	24	4	7	16	7
Mountain States:								
Montana	1	0	7	21	21	15	4	2
Idaho	3	2	6	12	10	4	1	0
Wyoming	0	1	15	16	12	1	1	1
Colorado	3	6	16	43	5	0	7	12
New Mexico	1	3	13	19	0	0	14	21
Arizona	0	1	1	2	0	0	1	3
Utah [1]	1	2	14	8	3	42	2	2
Pacific States:								
Washington	15	21	22	36	10	11	6	6
Oregon	3	26	21	16	30	17	2	20
California	7	30	174	129	13	2	14	6

[1] Exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week:

State	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
February, 1928										
South Dakota	2	16	----	----	87	----	3	229	32	1
August, 1928										
Hawaii Territory	3	40	245	----	8	----	0	0	0	6
September, 1928										
Florida	1	61	75	186	7	16	4	15	1	24
Idaho	2	3	----	----	1	----	6	36	18	12
Montana	4	14	----	----	15	----	17	30	29	38
North Carolina	1	430	----	----	56	----	6	247	27	164
Oklahoma [1]	2	241	93	1,283	34	66	2	107	14	405
Pennsylvania	24	508	----	1	448	2	69	430	1	315
South Dakota	2	4	----	----	3	----	9	28	19	12
Virginia	4	220	930	159	152	44	9	174	4	143
Washington	9	44	27	1	66	----	82	76	59	52

[1] Exclusive of Oklahoma City and Tulsa.

Summary of Monthly Reports from States—Continued

	Cases
February, 1928	
South Dakota:	
Chicken pox	35
Mumps	27
Trachoma	1
Whooping cough	26
August, 1928	
Hawaii Territory:	
Chicken pox	4
Cunjunctivitis	10
Dysentery (amebic)	1
Hookworm disease	3
Impetigo contagiosa	3
Leprosy	7
Mumps	7
Plague	2
Tetanus	3
Trachoma	4
Whooping cough	11
September, 1928	
Anthrax:	
Pennsylvania	1
Chicken pox:	
Florida	1
Idaho	14
Montana	20
North Carolina	17
Oklahoma [1]	28
Pennsylvania	192
South Dakota	9
Virginia	31
Washington	158
Dengue:	
Flordia	1
Dysentery:	
Florida	17
Oklahoma [1]	63
Pennsylvania	2
Virginia	227
Washington	1
German measles:	
Montana	2
North Carolina	2
Pennsylvania	16
Washington	32
Impetigo contagiosa:	
Washington	1
Lethargic encephalitis:	
Pennsylvania	8
Washington	3
September, 1928—Continued	
Mumps:	Cases
Florida	2
Idaho	1
Oklahoma [1]	16
Pennsylvania	266
South Dakota	2
Washington	49
Ophthalmia neonatorum:	
Oklahoma [1]	3
Pennsylvania	12
Paratyphoid fever:	
Florida	1
Idaho	4
Puerperal fever:	
Pennsylvania	1
Rabies in animals:	
Idaho	1
Washington	1
Scabies:	
Washington	8
Septic sore throat:	
North Carolina	15
Oklahoma [1]	8
Tetanus:	
Pennsylvania	12
Trachoma:	
North Carolina	1
Oklahoma [1]	9
Pennsylvania	3
South Dakota	3
Tularæmia:	
Montana	1
Oklahoma [1]	1
Typhus fever:	
Florida	10
Virginia	1
Whooping cough:	
Florida	33
Idaho	10
Montana	8
North Carolina	229
Oklahoma [1]	18
Pennsylvania	1,367
South Dakota	18
Virginia	251
Washington	52

[1] Exclusive of Oklahoma City and Tulsa.

ADMISSIONS TO HOSPITALS FOR THE INSANE, APRIL, 1928

Reports for the month of April, 1928, showing new admissions to hospitals for the care and treatment of the insane, have been received by the Public Health Service from 114 institutions located in 35 States, the District of Columbia, and the Territory of Hawaii. Twenty-two of these institutions are corporate or private. These

hospitals reported a total of 167,199 patients on April 30, 1928, including those on parole.

The following table shows the numbers of new admissions for the month of April, 1928, by psychoses:

First admissions to 114 hospitals for the insane, April, 1928

Psychoses	Number of first admissions		
	Male	Female	Total
Traumatic psychoses	8	4	12
Senile psychoses	136	123	259
Psychoses with cerebral arteriosclerosis	170	98	268
General paralysis	185	52	237
Psychoses with cerebral syphilis	26	8	34
Psychoses with Huntington's chorea	2	5	7
Psychoses with brain tumor	1	1	2
Psychoses with other brain or nervous disease	24	13	37
Alcoholic psychoses	114	18	132
Psychoses due to drugs and other exogenous toxins	11	10	21
Psychoses with pellagra	9	19	28
Psychoses with other somatic diseases	33	41	74
Manic-depressive psychoses	192	229	421
Involution melancholia	20	29	49
Dementia præcox	290	224	514
Paranoia and paranoid conditions	35	33	68
Epileptic psychoses	57	40	97
Psychoneuroses and neuroses	28	36	64
Psychoses with psychopathic personality	22	4	26
Psychoses with mental deficiency	63	43	106
Undiagnosed psychoses	118	99	217
Without psychosis	143	59	202
Total	1,687	1,188	2,875

Fifty-eight and seven-tenths per cent of the new admissions were males and 41.3 per cent were females, giving a ratio of 142 males per 100 females. The 114 institutions on April 30, 1928, had 89,040 male patients and 78,159 female patients; the ratio being 114 males per 100 females.

Dementia præcox constituted 17.9 per cent of the first admissions; manic-depressive psychoses 14.6 per cent; psychoses with cerebral arteriosclerosis, 9.3 per cent; senile psychoses, 9 per cent; general paralysis, 8.2 per cent; undiagnosed psychoses, 7.5 per cent; and 7 per cent were recorded as without psychosis.

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 98 cities reporting cases used in the following table are situated in all parts of the country and have an estimated aggregate population of more than 31,400,000. The estimated population of the 92 cities reporting deaths is more than 30,705,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended October 20, 1928, and October 22, 1927

	1928	1927	Estimated expectancy
Cases reported			
Diphtheria:			
42 States	2,039	2,422	
98 cities	749	1,004	1,102
Measles:			
41 States	1,268	1,372	
98 cities	238	324	
Poliomyelitis:			
43 States	138	545	
Scarlet fever:			
42 States	2,126	2,181	
98 cities	664	690	736
Smallpox:			
42 States	219	196	
98 cities	17	42	20
Typhoid fever:			
42 States	612	769	
98 cities	107	118	131
Deaths reported			
Influenza and pneumonia:			
92 cities	652	491	
Smallpox:			
92 cities	0	0	

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence the number of cases of the disease under consideration that may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding weeks of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during non epidemic years.

If the reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1919 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviation from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

City reports for week ended October 20, 1928

Division, State, and city	Population July 1, 1926, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine:									
Portland	76,400	2	1	2	0	0	1	1	1
New Hampshire:									
Concord	[1] 22,546	0	0	0	0	0	0	0	1
Manchester	84,000	0	3	1	0	1	0	0	0
Vermont:									
Barre	[1] 10,008	0	0	0	0	0	0	0	0
Burlington	[1] 24,089	1	1	0	0	0	0	1	0
Massachusetts:									
Boston	787,000	28	43	17	4	0	2	4	27
Fall River	131,000	0	4	2	0	0	55	0	1
Springfield	145,000	4	3	16	0	0	2	2	2
Worcester	193,000	1	6	5	0	0	1	2	3
Rhode Island:									
Pawtucket	71,000	1	1	1	0	0	0	0	1
Providence	275,000	0	7	10	0	0	13	0	9
Connecticut:									
Bridgeport	[2]	1	7	3	1	1	2	0	4
Hartford	164,000	6	6	7	0	0	1	1	3
New Haven	182,000	1	1	0	0	0	1	0	3

[1] Estimated, July 1, 1925.

[2] No estimate made.

City reports for week ended October 20, 1928—Continued

Division, State, and city	Population July 1, 1926, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MIDDLE ATLANTIC									
New York:									
Buffalo	544,000	10	14	7	-------	0	2	2	19
New York	5,924,000	0	135	76	19	6	28	16	150
Rochester	321,000	11	11	1	-------	2	0	2	6
Syracuse	185,000	4	6	3	-------	0	0	2	8
New Jersey:									
Camden	131,000	4	8	3	0	0	0	0	3
Newark	459,000	19	12	29	2	3	1	12	7
Trenton	134,000	2	3	0	0	0	1	0	5
Pennsylvania:									
Philadelphia	2,008,000	34	61	42	-------	2	4	1	33
Pittsburgh	637,000	30	29	11	-------	1	2	6	21
Reading	114,000	9	3	0	-------	0	2	0	2
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	411,000	5	13	7	0	2	0	0	12
Cleveland	960,000	39	59	22	5	1	8	1	8
Columbus	285,000	4	11	2	1	0	0	0	3
Toledo	295,000	42	14	2	1	1	6	2	3
Indiana:									
Fort Wayne	99,900	3	4	4	0	0	0	0	0
Indianapolis	367,000	10	15	9	0	0	0	0	6
South Bend	81,700	-------	3	-------	-------	-------	-------	-------	-------
Terre Haute	71,900	0	3	1	0	1	1	0	2
Illinois:									
Chicago	3,048,000	81	76	101	7	3	16	10	55
Springfield	64,760	2	2	0	1	1	0	0	5
Michigan:									
Detroit	[2] 1,242,044	65	70	42	0	2	6	8	23
Flint	136,000	5	12	4	0	0	0	0	7
Grand Rapids	156,000	13	6	1	0	1	0	2	1
Wisconsin:									
Kenosha	52,700	4	1	0	0	0	0	0	0
Milwaukee	517,000	90	24	6	0	0	4	2	7
Racine	69,400	15	2	1	0	0	2	0	2
Superior	[1] 39,671	0	0	1	0	0	0	0	1
WEST NORTH CENTRAL									
Minnesota:									
Duluth	113,000	17	3	0	0	0	0	9	1
Minneapolis	434,000	82	32	5	0	0	32	4	8
St. Paul	248,000	52	18	3	0	1	0	9	5
Iowa:									
Davenport	[1] 52,469	8	2	0	0	-------	0	0	-------
Des Moines	146,000	0	6	1	0	-------	0	0	-------
Sioux City	78,000	4	3	0	0	-------	0	5	-------
Waterloo	36,900	3	0	1	0	-------	1	20	-------
Missouri:									
Kansas City	375,000	14	10	2	0	1	3	1	6
St. Joseph	78,400	0	2	1	0	0	0	0	1
St. Louis	830,000	12	48	35	0	1	3	3	-------
North Dakota:									
Fargo	[1] 26,403	2	0	0	0	0	0	0	0
Grand Forks	[1] 14,811	0	0	0	0	-------	0	0	-------
South Dakota:									
Aberdeen	[1] 15,036	1	0	0	0	-------	0	0	-------
Sioux Falls	[1] 30,127	0	1	0	0	-------	0	0	-------
Nebraska:									
Lincoln	62,000	1	2	1	0	0	0	0	0
Omaha	216,000	1	12	16	0	0	0	1	3
Kansas:									
Topeka	56,500	5	3	1	0	1	0	0	0
Wichita	92,500	3	4	1	0	0	0	1	1

[1] Estimated, July 1, 1925. [2] Special census.

City reports for week ended October 20, 1928—Continued

Division, State, and city	Population July 1, 1928, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC									
Delaware:									
Wilmington	124,000	1	4	0	0	0	4	0	2
Maryland:									
Baltimore	808,000	16	31	14	3	1	1	9	26
Cumberland	[1] 33,741	1	0	0	0	0	0	1	0
Frederick	[1] 12,035	0	1	1	0	0	0	0	0
District of Columbia:									
Washington	528,000	2	17	37	0	0	5	0	14
Virginia:									
Lynchburg	[3] 38,493	1	4	4	0	0	0	6	2
Norfolk	174,000	1	4	5	0	0	0	1	2
Richmond	189,000	1	25	29	0	0	0	0	4
Roanoke	61,900	2	7	8	0	0	0	0	1
West Virginia:									
Charleston	50,700	0	3	5	0	0	0	0	0
Wheeling	[1] 56,208	2	3	0	0	0	5	7	1
North Carolina:									
Raleigh	[1] 30,371	0	5	2	0	0	0	0	0
Wilmington	37,700	0	1	0	0	0	0	0	2
Winston-Salem	71,800	0	5	4	0	0	1	0	0
South Carolina:									
Charleston	74,100	0	2	5	18	1	0	1	1
Columbia	41,800	2	2	0	0	0	0	4	3
Greenville	[1] 27,311		2						
Georgia:									
Atlanta	(2)	0	12	8	25	1	2	0	2
Brunswick	[1] 16,809	0	0	0	0	0	0	0	0
Savannah	94,900	0	3	4	1	0	0	2	1
Florida:									
Miami	[3] 131,286	0	1	2	1	0	2	0	2
St. Petersburg	[3] 47,629		0			0			0
Tampa	102,000	0	2	5	0	0	0	1	1
EAST SOUTH CENTRAL									
Kentucky:									
Covington	58,500	0	2	1	0	0	0	0	1
Louisville	311,000	2	9	5	0	0	0	0	6
Tennessee:									
Memphis	177,000	0	11	10	0	0	1	0	0
Nashville	137,000		7						
Alabama:									
Birmingham	211,000	3	8	5	9	4	0	0	4
Mobile	66,800	0	2	5	0	1	0	0	1
Montgomery	47,900	1	3	7	0		1	0	
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	[1] 31,643	4	2	2	0		0	0	
Little Rock	75,900	0	3	0	0	1	0	2	0
Louisiana:									
New Orleans	419,000	0	10	10	2	1	0	0	10
Shreveport	59,500	0	2	3	0	0	0	0	0
Oklahoma:									
Oklahoma City	(2)	1	5	13	0	0	0	0	3
Tulsa	133,000	0	4	14	2		1	5	
Texas:									
Dallas	203,000	1	15	21	2	2	0	0	1
Fort Worth	159,000	2	4	9	1	1	0	1	0
Galveston	49,100	0	0	0	0	0	0	0	0
Houston	[1] 164,954	0	5	12	0	0	0	0	7
San Antonio	205,000	0	2	1	0	1	0	0	0
MOUNTAIN									
Montana:									
Billings	[1] 17,971	3	0	0	0	0	0	0	1
Great Falls	[1] 29,883	7	2	0	0	0	5	0	0
Helena	[1] 12,037	0	0	1	0	0	1	0	1
Missoula	[1] 12,668	0	0	0	0	0	0	0	0

[1] Estimated July 1, 1925. [2] No estimate made. [3] Special census.

City reports for week ended October 20, 1928—Continued

Division, State, and city	Population July 1, 1928, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
MOUNTAIN—continued.									
Idaho:									
Boise	[1] 23,042	0	0	0	0	0	0	0	0
Colorado:									
Denver	285,000	18	16	3	-------	3	2	7	0
Pueblo	43,900	4	3	0	0	0	0	3	2
New Mexico:									
Albuquerque	[1] 21,000	0	1	0	0	0	0	0	1
Utah:									
Salt Lake City	133,000	41	4	3	0	4	0	8	1
Nevada:									
Reno	[1] 12,665	0	0	0	0	0	0	0	2
PACIFIC									
Washington:									
Seattle	([2])	33	7	1	0	-------	1	2	-------
Spokane	109,000	41	4	0	0	-------	10	0	-------
Tacoma	106,000	0	4	1	0	0	1	14	1
Oregon:									
Portland	[1] 282,383	11	11	15	1	0	3	1	6
California:									
Los Angeles	([2])	13	40	18	13	2	4	11	21
Sacramento	73,400	1	2	0	0	0	0	23	4
San Francisco	567,000	10	17	8	28	6	0	1	3

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine:											
Portland	1	5	0	0	0	0	1	0	0	0	14
New Hampshire:											
Concord	0	0	0	0	0	1	0	0	0	0	11
Manchester	1	2	0	0	0	1	0	0	0	0	18
Vermont:											
Barre	0	0	0	0	0	0	0	0	0	0	3
Burlington	0	1	0	0	0	0	0	0	0	0	7
Massachusetts:											
Boston	33	33	0	0	0	13	3	2	0	12	232
Fall River	2	2	0	0	0	1	1	1	2	2	23
Springfield	5	7	0	0	0	2	0	0	0	5	34
Worcester	8	3	0	0	0	1	0	0	0	3	45
Rhode Island:											
Pawtucket	0	2	0	0	0	0	0	0	0	0	18
Providence	3	8	0	0	0	0	0	0	0	1	73
Connecticut:											
Bridgeport	4	1	0	0	0	4	0	0	0	1	32
Hartford	4	2	0	0	0	1	0	0	0	3	46
New Haven	5	3	0	0	0	1	2	0	0	1	38
MIDDLE ATLANTIC											
New York:											
Buffalo	15	7	0	0	0	12	4	0	0	50	128
New York	64	76	0	0	0	98	24	37	6	71	1,474
Rochester	5	0	0	0	0	3	0	1	0	8	62
Syracuse	6	5	0	0	0	1	1	0	0	25	47
New Jersey:											
Camden	2	1	0	0	0	1	0	0	0	3	29
Newark	9	1	0	0	0	9	2	0	0	23	110
Trenton	1	3	0	1	0	2	0	0	0	0	30
Pennsylvania:											
Philadelphia	47	28	0	0	0	30	9	8	0	92	471
Pittsburgh	32	20	0	0	0	11	2	2	0	20	174
Reading	1	1	0	0	0	1	0	0	0	8	31

[1] Estimated, July 1, 1925. [2] No estimate made.

City reports for week ended October 20, 1928—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	10	17	0	2	0	6	1	0	0	2	127
Cleveland	23	17	0	1	0	14	2	0	0	50	183
Columbus	8	14	0	0	0	5	1	0	0	6	59
Toledo	10	11	0	0	0	3	0	2	1	8	74
Indiana:											
Fort Wayne	1	3	0	0	0	0	1	0	0	0	24
Indianapolis	8	20	1	0	0	7	1	2	1	5	94
South Bend	2		1				0				
Terre Haute	2	1	0	0	0	1	0	0	0	0	29
Illinois:											
Chicago	72	56	0	0	0	49	7	5	0	29	670
Springfield	2	3	0	0	0	0	0	0	0	1	21
Michigan:											
Detroit	55	39	1	0	0	21	5	2	1	59	287
Flint	10	4	0	1	0	1	1	0	0	16	34
Grand Rapids	7	2	1	0	0	2	0	0	0	11	32
Wisconsin:											
Kenosha	1	2	0	0	0	0	0	1	0	2	6
Milwaukee	18	24	0	0	0	5	0	0	0	45	100
Racine	3	3	0	0	0	1	0	0	0	10	19
Superior	2	2	0	0	0	0	0	0	0	0	3
WEST NORTH CENTRAL											
Minnesota:											
Duluth	7	5	0	0	0	1	1	1	0	0	24
Minneapolis	36	12	1	0	0	2	1	1	0	8	95
St. Paul	16	6	3	0	0	5	1	2	0	26	49
Iowa:											
Davenport	1	0	0	1			0	0		0	
Des Moines	9	8	0	0			0	0		0	38
Sioux City	2	2	1	0			0	0		1	
Waterloo	1	19	0	0			1	0		5	
Missouri:											
Kansas City	11	4	1	0	0	10	3	0	0	7	89
St. Joseph	3	2	0	0	0	1	0	0	0	0	19
St. Louis	28	9	0	0	0	7	5	1	0	7	222
North Dakota:											
Fargo	2	4	0	0	0	0	0	0	0	0	4
Grand Forks	0	1	0	0			0	0		1	
South Dakota:											
Aberdeen	2	0	0	0			1	0		0	
Sioux Falls	1	4	1	0			0	0		0	9
Nebraska:											
Lincoln	1	3	0	0	0	0	0	0	0	1	
Omaha	4	2	0	1	0	2	0	0	0	0	56
Kansas:											
Topeka	4	5	0	0	0	0	0	0	0	13	8
Wichita	4	1	0	0	0	0	0	0	0	1	27
SOUTH ATLANTIC											
Delaware:											
Wilmington	3	0	0	0	0	0	1	0	0	0	30
Maryland:											
Baltimore	11	14	0	0	0	11	7	8	0	52	222
Cumberland	1	2	0	0	0	0	0	2	0	0	10
Frederick	0	0	0	0	0	0	0	0	0	0	2
Dist. of Columbia:											
Washington	13	12	0	0	0	11	3	6	1	8	134
Virginia:											
Lynchburg	3	1	0	0	0	0	0	1	0	0	9
Norfolk	2	0	0	0	0	3	1	2	0	0	
Richmond	8	3	0	0	0	4	1	0	1	2	62
Roanoke	3	9	0	0	0	1	1	0	3	0	27
West Virginia:											
Charleston	2	5	0	0	0	0	1	1	0	0	18
Wheeling	4	0	0	0	0	0	2	1	0	2	22

City reports for week ended October 20, 1928—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
SOUTH ATLANTIC—continued											
North Carolina:											
Raleigh	3	1	0	0	0	0	0	1	0	0	11
Wilmington	1	0	0	0	0	0	1	0	0	0	10
Winston-Salem	3	0	0	0	0	1	0	0	0	1	15
South Carolina:											
Charleston	1	0	0	0	0	4	2	0	0	0	33
Columbia	0	1	0	0	0	1	0	0	0	1	18
Greenville	1		0				1				
Georgia:											
Atlanta	7	14	0	0	0	8	0	1	0	1	71
Brunswick	0	1	0	0	0	1	0	0	0	0	4
Savannah	1	2	0	0	0	4	1	0	0	1	31
Florida:											
Miami	0	2	0	0	0	0	0	1	0	0	21
St. Petersburg	0		0		0	0	0		0		7
Tampa	0	0	0	0	0	1	0	0	0	0	24
EAST SOUTH CENTRAL											
Kentucky:											
Covington	2	5	0	0	0	3	0	0	0	2	20
Louisville	5	7	0	0	0	6	3	0	0	3	91
Tennessee:											
Memphis	5	7	1	0	0	1	3	5	0	1	61
Nashville	4		0				3				
Alabama:											
Birmingham	4	5	0	0	0	5	2	0	0	2	67
Mobile	0	0	0	0	0	0	0	0	0	0	26
Montgomery	0	2	0	0	0	0	0	0	0	0	
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	1	1	0	0			0	0		0	
Little Rock	3	7	0	0	0	2	0	0	0	0	
Louisiana:											
New Orleans	4	2	0	0	0	5	3	0	0	1	124
Shreveport	1	1	0	0	0	2	1	2	0	0	35
Oklahoma:											
Oklahoma City	2	5	0	0	0	1	1	0	0	0	27
Tulsa	3	2	0	0			1	3		4	
Texas:											
Dallas	5	5	0	0	0	0	2	0	0	2	49
Fort Worth	2	1	0	4	0	1	0	0	0	0	24
Galveston	0	0	0	0	0	1	0	0	0	0	10
Houston	1	2	0	0	0	6	0	0	0	0	53
San Antonio	1	0	0	0	0	7	0	0	0	0	58
MOUNTAIN											
Montana:											
Billings	0	0	0	0	0	0	0	0	0	0	7
Great Falls	1	0	1	0	0	0	0	0	0	0	9
Helena	0	2	0	0	0	1	0	0	0	0	2
Missoula	0	0	0	0	0	0	0	0	0	0	8
Idaho:											
Boise	0	0	0	0	0	0	0	0	0	0	12
Colorado:											
Denver	8	4	0	0	0	5	1	3	0	4	79
Pueblo	1	1	0	0	0	1	0	3	0	0	7
New Mexico:											
Albuquerque	2	1	0	0	0	6	0	0	0	0	9
Utah:											
Salt Lake City	2	3	0	7	0	2	3	0	0	1	26
Nevada:											
Reno	0	0	0	0	0	0	0	0	0	0	5

City reports for week ended October 20, 1928—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
PACIFIC											
Washington:											
Seattle	8	5	1	1			1	3		11	
Spokane	5	2	1	1			1	0		0	
Tacoma	2	0	1	1	0	0	1	1	0	1	23
Oregon:											
Portland	9	7	3	23	0	2	1	0	1	1	76
California:											
Los Angeles	14	18	3	0	0	27	3	0	1	50	299
Sacramento	1	20	1	0	0	1	1	0	0	14	30
San Francisco	8	14	1	1	0	9	1	1	0	4	139

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Massachusetts:									
Boston	0	1	1	0	0	0	2	3	1
Worcester	0	0	0	0	0	0	1	1	0
MIDDLE ATLANTIC									
New York:									
Buffalo	0	1	0	0	0	0	1	0	0
New York	23	12	2	5	0	0	14	15	3
Rochester	0	0	0	0	0	0	0	1	0
Pennsylvania:									
Philadelphia	0	0	3	2	0	1	1	2	0
Pittsburgh	0	2	0	0	0	0	0	0	0
EAST NORTH CENTRAL									
Ohio:									
Cleveland	1	0	0	0	0	0	1	1	0
Toledo	1	0	0	0	0	0	0	2	0
Indiana:									
Fort Wayne	0	0	0	0	0	0	0	1	0
Illinois:									
Chicago	2	2	0	0	2	2	4	2	1
Michigan:									
Detroit	15	8	0	0	0	0	1	0	0
Wisconsin:									
Milwaukee	2	1	0	0	0	0	0	0	0
Racine	0	0	1	1	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Minneapolis	1	1	1	1	0	0	0	3	0
St. Paul	0	0	0	0	0	0	0	1	0
Missouri:									
Kansas City	0	2	0	0	0	0	0	0	0
St. Louis	0	2	0	0	0	0	0	0	0
Kansas:									
Wichita	0	0	0	0	0	0	0	1	1
SOUTH ATLANTIC [1]									
Maryland:									
Baltimore	0	0	1	0	0	0	1	3	0
District of Columbia:									
Washington	0	0	1	1	0	0	0	2	0

[1] Typhus fever; 1 case at Savannah, Ga., 1 death at Billings, Mont.

City reports for week ended October 20, 1928—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
SOUTH ATLANTIC—continued									
West Virginia:									
Wheeling	0	0	0	0	0	0	0	1	0
North Carolina:									
Winston-Salem	0	0	0	0	3	0	0	0	0
South Carolina:									
Charleston [2]	0	0	0	0	3	4	0	0	0
Columbia	0	0	0	0	0	1	0	0	0
Florida:									
Miami	0	0	0	0	1	0	0	0	0
EAST SOUTH CENTRAL									
Tennessee:									
Memphis	2	0	0	0	1	1	0	0	0
Alabama:									
Birmingham	0	0	0	0	0	0	0	0	1
Mobile	0	0	0	0	0	2	0	0	0
WEST SOUTH CENTRAL									
Louisiana:									
Shreveport	0	0	0	0	0	2	0	0	0
Texas:									
Dallas	0	0	0	0	0	0	0	1	0
MOUNTAIN									
Montana:									
Billings [1]	1	0	0	1	0	0	0	0	0
Colorado:									
Pueblo	1	0	0	0	0	0	0	2	0
PACIFIC									
Washington:									
Seattle	0	0	0	0	0	0	1	8	0
Tacoma	0	0	0	0	0	0	1	1	1
Oregon:									
Portland	0	0	0	0	0	0	0	4	0
California:									
Los Angeles	0	1	0	0	0	0	0	1	0
Sacramento	0	0	0	0	0	1	0	0	0
San Francisco	0	0	2	1	0	0	1	0	0

[1] Typhus fever; 1 case at Savannah, Ga., 1 death at Billings, Mont.
[2] Dengue; 2 cases at Charleston, S. C.

The following table gives the rates per 100,000 population for 101 cities for the 5-week period ended October 20, 1928, compared with those for a like period ended October 22, 1927. The population figures used in computing the rates are approximate estimates as of July 1, 1928 and 1927, respectively, authoritative figures for many of the cities not being available. The 101 cities reporting cases had estimated aggregate populations of approximately 31,657,000 in 1928 and 31,050,000 in 1927. The 95 cities reporting deaths had nearly 30,961,000 estimated population in 1928 and nearly 30,370,000 in 1927. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, September 16 to October 20, 1928—Annual rates per 100,000 population compared with rates for the corresponding period of 1927 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Sept. 22, 1928	Sept. 24, 1927	Sept. 29, 1928	Oct. 1, 1927	Oct. 6, 1928	Oct. 8, 1927	Oct. 13, 1928	Oct. 15, 1927	Oct. 20, 1928	Oct. 22, 1927
101 cities	79	103	89	129	99	143	116	144	[2] 125	170
New England	67	91	62	109	103	133	124	128	145	123
Middle Atlantic	62	95	72	123	83	129	83	123	84	142
East North Central	92	105	97	129	92	157	111	138	[3] 133	199
West North Central	92	87	76	123	127	144	136	119	127	129
South Atlantic	86	105	135	164	135	170	198	202	[4] 232	193
East South Central	160	81	155	66	130	152	190	157	[5] 190	167
West South Central	92	203	108	194	172	194	208	252	196	265
Mountain	62	233	106	188	106	126	44	197	62	152
Pacific	54	76	72	120	64	99	79	154	72	219

MEASLES CASE RATES

101 cities	18	27	18	25	27	40	32	50	[2] 40	54
New England	48	40	55	53	85	119	69	133	179	186
Middle Atlantic	15	30	10	33	18	56	27	53	19	64
East North Central	20	18	22	13	23	11	31	17	[3] 24	21
West North Central	18	20	14	6	43	12	49	14	76	22
South Atlantic	16	36	14	29	21	31	37	69	[4] 32	45
East South Central	5	15	0	20	5	56	10	127	[5] 11	51
West South Central	4	0	8	4	4	8	0	54	0	37
Mountain	0	45	9	0	44	27	53	18	71	72
Pacific	10	52	41	47	41	44	18	57	41	57

SCARLET FEVER CASE RATES

101 cities	63	67	76	83	99	103	115	96	[2] 111	117
New England	101	123	83	102	90	140	138	130	152	151
Middle Atlantic	24	42	38	59	42	100	57	63	69	73
East North Central	91	69	100	101	132	102	153	108	[3] 137	127
West North Central	103	59	115	79	181	107	140	174	138	137
South Atlantic	68	106	74	106	112	123	135	90	[4] 115	161
East South Central	65	46	150	117	150	66	234	81	[5] 149	147
West South Central	28	50	84	103	148	66	96	87	72	79
Mountain	53	152	62	36	18	126	80	108	88	278
Pacific	77	71	87	76	112	76	97	97	151	136

SMALLPOX CASE RATES

101 cities	1	6	2	4	3	5	1	6	[2] 3	7
New England	0	0	0	0	0	0	0	0	0	0
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	1	1	1	1	5	1	2	5	[3] 3	0
West North Central	4	8	2	12	2	14	0	26	2	42
South Atlantic	0	0	0	4	0	4	0	2	[4] 0	7
East South Central	0	10	5	0	0	0	0	0	[5] 0	5
West South Central	4	0	4	8	0	4	4	4	0	0
Mountain	0	161	9	54	9	54	9	72	62	72
Pacific	5	21	15	24	18	31	5	16	10	21

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1928 and 1927, respectively.
[2] South Bend, Ind., Greenville, S. C., and Nashville, Tenn., not included.
[3] South Bend, Ind., not included.
[4] Greenville, S. C., not included.
[5] Nashville, Tenn., not included.

Summary of weekly reports from cities, September 16 to October 20, 1928—Annual rates per 100,000 population compared with rates for the corresponding period of 1927—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	Sept. 22, 1928	Sept. 24, 1927	Sept. 29, 1928	Oct. 1, 1927	Oct. 6, 1928	Oct. 8, 1927	Oct. 13, 1928	Oct. 15, 1927	Oct. 20, 1928	Oct. 22, 1927
101 cities	27	28	22	19	25	25	22	19	[2] 18	20
New England	21	63	9	12	16	23	16	16	7	16
Middle Atlantic	23	24	26	18	25	21	20	16	23	15
East North Central	16	10	14	8	13	17	11	18	[3] 7	16
West North Central	31	14	27	20	12	28	16	22	10	22
South Atlantic	30	45	25	20	30	47	35	27	[4] 41	32
East South Central	95	86	55	117	50	20	55	30	[5] 29	30
West South Central	68	70	40	17	52	70	28	29	8	29
Mountain	27	36	18	36	124	54	88	63	53	81
Pacific	18	13	13	18	28	8	26	8	13	16

INFLUENZA DEATH RATES

95 cities	4	3	6	6	7	5	7	6	[2] 10	9
New England	2	0	5	0	7	5	9	2	2	5
Middle Atlantic	5	2	2	4	7	6	4	8	7	7
East North Central	4	1	3	5	5	1	7	3	[3] 7	5
West North Central	2	2	2	8	2	4	2	2	8	12
South Atlantic	4	11	7	4	9	4	4	7	[4] 5	11
East South Central	10	11	5	27	16	11	10	11	[5] 30	27
West South Central	4	8	29	21	8	8	29	13	21	13
Mountain	0	0	9	27	18	45	9	9	62	18
Pacific	0	0	24	7	7	3	17	3	27	14

PNEUMONIA DEATH RATES

95 cities	66	58	66	56	84	65	79	71	[2] 101	77
New England	76	70	60	58	51	81	64	95	126	86
Middle Atlantic	74	69	75	62	106	71	94	72	124	75
East North Central	59	44	51	41	76	58	67	49	[3] 87	66
West North Central	41	25	41	33	59	41	43	60	51	64
South Atlantic	84	65	77	65	91	56	91	106	[4] 110	70
East South Central	47	85	120	90	94	85	105	48	[5] 73	133
West South Central	12	68	98	93	98	68	78	68	74	85
Mountain	71	54	35	81	62	72	115	117	62	143
Pacific	91	66	64	45	47	69	54	83	98	100

[2] South Bend, Ind., Greenville, S. C., and Nashville, Tenn., not included.
[3] South Bend, Ind., not included.
[4] Greenville, S. C., not included.
[5] Nashville, Tenn., not included.

Number of cities included in summary of weekly reports, and aggregate population of cities of each group, approximated as of July 1, 1928 and 1927, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1928	1927	1928	1927
Total	101	95	31,657,000	31,050,300	30,960,700	30,369,500
New England	12	12	2,274,400	2,242,700	2,274,400	2,242,700
Middle Atlantic	10	10	10,732,400	10,594,700	10,732,400	10,594,700
East North Central	16	16	7,991,400	7,820,700	7,991,400	7,820,700
West North Central	12	10	2,633,500	2,634,500	2,566,400	2,518,500
South Atlantic	21	21	2,931,900	2,890,700	2,981,900	2,890,700
East South Central	7	6	1,048,300	1,023,300	1,000,100	980,700
West South Central	8	7	1,307,600	1,260,700	1,274,100	1,227,800
Mountain	9	9	591,100	581,600	591,100	581,600
Pacific	6	4	2,046,400	1,996,400	1,548,900	1,512,100

FOREIGN AND INSULAR

THE FAR EAST

Report for the week ended October 13, 1928.—The following report for the week ended October 13, 1928, was transmitted by the eastern bureau of the health section of the secretariat of the League of Nations, located at Singapore, to the headquarters at Geneva.

Plague, cholera, or smallpox was reported at the following ports:

PLAGUE

India.—Rangoon.
Indo-China.—Pnompenh.

CHOLERA

India.—Calcutta, Madras, Bombay.
Siam.—Bangkok.
China.—Shanghai.

SMALLPOX

India.—Bombay, Madras, Negapatam, Moulmein, Vizagapatam, Tuticorin.
French India.—Pondicherry.
Dutch East Indies.—Batavia, Pontianak.
China.—Hong Kong, Shanghai.
Indo-China.—Pnompenh.

CANADA

Provinces—Communicable diseases—Week ended October 20, 1928.—The department of pensions and national health reports cases of certain communicable diseases from seven Provinces of Canada for the week ended October 20, 1928, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	Total
Cerebrospinal fever		1		1			1	3
Influenza	16							16
Lethargic encephalitis				1				1
Poliomyelitis			2	7	8		2	19
Smallpox			31	5	1		4	41
Typhoid fever	3	4	16	21	6	13	1	64

Quebec—Communicable diseases—Week ended October 20, 1928.—During the week ended October 20, 1928, cases of communicable diseases were reported by the provincial bureau of health as follows:

Disease	Cases	Disease	Cases
Chicken pox	60	Scarlet fever	87
Diphtheria	43	Smallpox	31
Influenza	11	Tuberculosis	62
Measles	22	Typhoid fever	16
Mumps	15	Whooping cough	8
Poliomyelitis	2		

CHINA

Mongolia—Plague—October 1, 1928.—A bulletin from the Plague Prevention Bureau at Ssupingkai, dated October 1, reports 4 deaths at Chien Chia Tien on that date, and a total of 312 deaths since September 1.

No cases of plague had been reported from places along the South Manchurian Railway, and both the Chinese and Japanese authorities are endeavoring to prevent plague from invading this zone.

ITALY

Communicable diseases—June 18–July 15, 1928.—During the four weeks ended July 15, 1928, communicable diseases were reported in the Kingdom of Italy as follows:

Disease	June 18–24		June 25–July 1		July 2–8		July 9–15	
	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected
Anthrax	18	14	27	25	31	21	48	33
Cerebrospinal meningitis	5	5	6	4	10	7	6	6
Chicken pox	281	124	147	78	154	84	164	93
Diphtheria	217	135	161	112	179	122	190	123
Dysentery	11	8	13	8	15	8	24	15
Lethargic encephalitis	7	7	1	1	4	3	8	5
Measles	2,144	396	1,358	306	1,485	302	1,357	330
Poliomyelitis	23	13	11	7	16	12	20	11
Rabies							1	1
Scarlet fever	307	113	245	117	205	92	203	99
Smallpox	3	3			1	1		
Typhoid fever	291	173	299	176	377	213	521	291

NIGERIA

Lagos—Plague—January–September, 1928.—During the period from January to September, 1928, there were reported in Lagos 236 deaths from plague, as compared with 80 for the corresponding period of 1927, and 162 for the corresponding period of 1926. Preventive measures are being continued.

PANAMA CANAL ZONE

Communicable diseases—August–September, 1928.—Communicable diseases have been reported in the Canal Zone during the months of August and September, 1928, as follows:

AUGUST, 1928

Disease	Probable place of infection									
	Panama		Colon		Canal Zone		Outside the zone and terminal cities		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Anthrax			1	1					1	1
Chicken pox	6		1		1				8	
Diphtheria	6	1	1		11		3		21	1
Dysentery (amebic)	2		1				8		11	
Leprosy	1								1	
Malaria	14	1	4		95		37	2	150	3
Measles	2		1						3	
Mumps	37		11		8				56	
Pneumonia		29		11		6		9		55
Trachoma	1								1	
Tuberculosis		18		8				3		29
Whooping cough	4	1			3				7	1

SEPTEMBER, 1928

Chicken pox	3		3						6	
Diphtheria	8	1	1		2		3		14	1
Dysentery (amebic)	4		1	1			3	1	8	2
Leprosy	1								1	
Malaria	11		2		60		39	1	112	1
Measles			3				1		4	
Mumps	35		3		11		1		50	
Pneumonia		35		5		4		6		50
Poliomyelitis					1				1	
Scarlet fever			1						1	
Tuberculosis		28		2		1		2		33
Typhoid fever			1	1					1	1
Whooping cough	8		2		7				17	

YUGOSLAVIA

Communicable diseases—September, 1928.—During the month of September, 1928, communicable diseases were reported in Yugoslavia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	255	34	Rabies	3	3
Cerebrospinal meningitis	5	3	Scarlet fever	2,254	282
Diphtheria	302	45	Tetanus	36	17
Dysentery	599	84	Typhoid fever	804	62
Lethargic encephalitis	1	1	Typhus fever	6	
Measles	174	2			

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

From medical officers of the Public Health Service, American consuls, health section of the League of Nations, and other sources. The reports contained in the following table must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given:

CHOLERA

[C indicates cases; D, deaths; P, present]

Place		Mar. 11–Apr. 7, 1928	Apr. 8–May 5, 1928	May 6–June 2, 1928	June 3–30, 1928	July 1–28, 1928	Week ended— August, 1928 4	11	18	25	September, 1928 1	8	15	22	29	October, 1928 6	13	20	27
Ceylon: Colombo	C					1													
	D					1													
China:																			
Canton	C	2		1	2	8		2	2			1							1
	D	2		1	2	8		1	1			1							
Kwantung—Dairen	C													3					
	D													1					
Shanghai	C						2	1	P		1	1							
	D												3			1	1		
Swatow	C				3	7													
Dutch East Indies: Java—Batavia	C								1										
India	C	21,279	32,564	30,177	31,346	44,240	12,469	15,341	13,109	11,967	9,449	9,032							
	D	11,877	20,432	20,162	20,114	23,216	6,443	7,473	6,800	6,251	5,046	4,895							
Bassein	D	51	41	40	8														
Bombay	C	3		1		6	2	3	2	2	3	2	1						
	D	3				11		1	2	2	2	2			2	3	2		
Calcutta	C	664	446	552	462	206	14	25	29	25	17	16	17	18					
	D	442	428	410	323	133	8	11	18	14	7	10	13		12	9	6		
Madras	C	10	22	27	29	72	111	216	118	110	65	49	25	10	57				
	D	4	18	16	21	31	56	99	66	50	34	33	15	6	27	25	12		
Madras Presidency	C	1,483		1,314	878														
	D	812		675	460														
Moulmein	D			1															
Negapatam	C													1					
	D		2		13			1		2		1	5	1	1				
Rangoon	C	22	23	7	14	1	8	4	1				1						
	D	16	15	5	9	1	5	2	1				1						
Tuticorin	C	10	110					1						1					
	D	9	71																
Vizagapatam	D					7	6	12	13		5								

India (French):																			
Chandernagor	C	7				2	1	3	3			2	1						
	D	6				1	1	1	1			1	1						
Karikal	C		1				1	6	11	12	14	13	11	3	4	4			
	D		1				1	4	10	6	8	9	7	2	3	4			
Pondicherry Province	C	1	8			3	8	17	44	45	49	20	35	28	18	3			
	D	1	8			3	6	11	25	18	23	17	18	14	10	1			
Indo-China (see also table below):																			
Pnompenh	C					5			1	1	1			2					
	D					5			1	1	1			1					
Saigon	C	96	116	15	6	2						2							
	D	59	76	9	1	1						1							
Tourane	C				1														
	D				1														
Japan:																			
Osaka	C															1			
Kwangchow-Wan (see table below).																			
Persian Gulf:																			
Island of Henjam	C					1													
Jask	C					1													
Philippine Islands:																			
Bulacan Province—																			
Malolos	C					1													
Paombong	C								1										
Cagayan Province	C					1													
	D							1											
Ballesteros	C					1		2											
	D					1													
Pamplona	C				1														
	D				1														
Sanchez-Mira	C				4														
	D				2														
Cebu (port)	C					1													
Ilocos Norte Province	C					1													
	D					1													
Manila	C					4	1												
Pangasinan Province—																			
Bayambang	C					1													
	D					1													
Surigao Province—																			
Surigao	C					1		1	2										
	D					1		1	1										
Siam	C	291	349	202	203	163	9	16	3	12	2	1	11						
	D	218	234	127	144	123	4	4	2	8			9						
Ayudhaya	C				2		1	15	2	11			1				3		
	D				1			16	2	8			1				2	1	
Bangkok	C	60	74	50	7	9	1	1	1	1	1	1		3		2		1	
	D	33	35	26	4	3								1					
Dhannapuri	C												3						
	D												3						
Trad	C				1														
Straits Settlements: Singapore	C	2	1																
	D	2	1																

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

CHOLERA—Continued

[C indicates cases; D, deaths; P, present]

Place		Mar. 11–Apr. 7, 1928	Apr. 8–May 5, 1928	May 6–June 2, 1928	June 3–30, 1928	July 1–28, 1928	Week ended— August, 1928 4	11	18	25	September, 1928 1	8	15	22	29	October, 1928 6	13	20	27
On vessel:																			
S. S. Glenapp, at Yokahoma, from Shanghai	C													P					
S. S. Hawaii Maru at Singapore from Saigon, French Indo-China	C	11																	
	D	7																	
S. S. Kambangan at Batavia from Jeddah via Sabang and Palembang	C								1										
S. S. Tairea at Penang from Madras via Nagapatam	C									P									

Place		January–March, 1928	April–June, 1928	July, 1928 1–10	11–20	21–31	August, 1928 1–10	11–20	21–31	September, 1928 1–10	11–20	21–30	October, 1928 1–10
Indo-China (French) (see also table above):													
Annam	C	389	128	8	5	3		4	7	2	2		4
Cambodia	C	312	418	92	25	38		19	19	15		1	6
Cochin-China	C	1,407	1,666	65	55	33		13	15	15	9	4	6
Laos	C												
Tonkin	C	1	43	5	1	1		2					
Kwangchow-Wan	C		16		1				1				

[C indicates cases; D, deaths; P, present]

Place		Mar. 11–Apr. 7, 1928	Apr. 8–May 5, 1928	May 6–June 2, 1928	June 3–30, 1928	July 1–28, 1928	Week ended— August, 1928 4	11	18	25	September, 1928 1	8	15	22	29	October, 1928 6	13	20	27
Algeria (see also table below):																			
Algiers	C		1																
Oran	C			1	2												1		
Philippeville	C																1		
Arabia: Aden	C	651	224	7	1														
	D	529	191	9	1														
Argentina:																			
Avellaneda	C			1															
	D			1															
Buenos Aires	C			6	1														
	D			3	2														
Cordoba Province	C		5																
Entre Rios	C				5														
Loreto	C			3															
Rosario	C			1		1													
Santa Fe	C				9	1													
Santiago del Estero	C				10	1									7				
Suardi	C			2															
Azores: St. Michaels Island	C	3	5	1	1														
	D	2	2	1	1														
Bolivia: Valle Grande	C						P												
Brazil:																			
Bahia	C	28	6	3															
	D	21	6	3															
Porto Alegre	C																		
Rio de Janeiro	C	3																	
	D	3																	
British East Africa (see also table below):																			
Mombasa	C												1			1			
	D												1						
Tanganyika	C					6				1	4								
	D		10			29				1	4								
Uganda	C			84	105						13								
	D			70	85						13								

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

PLAGUE—Continued

[C indicates cases; D, deaths; P, present]

Place		Mar. 11–Apr. 7, 1928	Apr. 8–May 5, 1928	May 6–June 2, 1928	June 3–30, 1928	July 1–28, 1928	Week ended— August, 1928 4	11	18	25	September, 1928 1	8	15	22	29	October, 1928 6	13	20	27
Canary Islands:																			
Arrecife	C			1															
	D			1															
Lanzarote Village	C			1															
Las Palmas	C	4												2			1	1	
	D													1				1	
Palma Island	C									7									
	D									3									
Teneriffe	C											5						2	
	D											3							
Ceylon: Colombo	C	7	1	4	2						1	1	1						
	D	5	1	2	2						1	1	1						
Plague-infected rats																			
China:																			
Amoy	C			5		P													
Hong Kong	C		2		1	1													
	D				1														
Mongolia:																			
Chien Chia Tien	C										P	P	P	P	P				
Tungliao	C											30	130	60	57	53	70		
Urga	C												P						
Dutch East Indies:																			
Java	D																		
Batavia and West Java	C	80	47	65	61	32	10	13	12	11	2	17							
	D	80	47	65	61	32	10	13	12	11	2	17							
Plague-infected rats		3	7	9	4	2			2										
East Java and Madura	C	4	4			1	1			1									
	D	4	4			1	1			1									
Kedoe Residency	C		4			P													
Surabaya Residency	C	1	1												1				
	D	1	1												1				
Ecuador (see also table below):																			
Alausi	C			1															

Egypt:																			
Alexandria	C			1		2	1	1			1	1							
	D			2								1							
Amrieh District	C								13	13	4	1	1	5	1				
	D										2	2		1		P	1		
Assiout Province	C					2			2		1								
	D					1					1								
Beheira	C						1	1				3		2			1		
	D											1		1					
Beni-Suef	C		12	79	25	25	1	1	1	3	5	6	5						
	D		3	27	9	5				2	1	4							
Girga	C										1	3	1						
	D										1	3							
Maghagha District	C		1																
	D		1																
Menufia	C			11															
	D			2															
Minieh Province	C		48	76	76	13													
	D		9	17	24	3													
Port Said	C					1	1		3	1									
	D										1								
Sidi Barani	C					12	10												
	D					8	1												
Suez	C	14	5	3					1	1									
	D		13	1															
Plague-infected rats		2																	
Tanta	C			1		2	1	1											
	D			1															
Greece:																			
Athens and Piræus	C													2	2	2	1		
Corfu	C				15		1				1								
	D				3														
Patras	C					1		1				1							
	D					1													
Hawaii Territory: Hawaii:																			
Hamakua District—																			
Hamakua—																			
Plague-infected rats				1				1											
Honokaa	D												1	1					
Plague-infected rats				1									1	3					
Kukuihaele	D							1											
Plague-infected rats						1													
Kukaiau—Plague-infected rats								3											
Paauilo	D					1		1											
India	C	26,079	18,518	3,272	367	587	267	353	547	769	593	694							
	D	20,907	17,074	3,183	345	340	167	249	293	328	292	299							
Bassein	D	22	13	8	14	3					1								
Bombay	C	69	43	39	14	1	2	3	2	1			6						
	D	61	69	38	8	1	2	2	1	1		1	5		1				
Plague-infected rats										7		7	13						
Calcutta	D	2							2			1							

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

PLAGUE—Continued

[C indicates cases; D, deaths; P, present]

Place		Mar. 11–Apr. 7, 1928	Apr. 8–May 5, 1928	May 6–June 2, 1928	June 3–30, 1928	July 1–28, 1928	Week ended— August, 1928 4	11	18	25	September, 1928 1	8	15	22	29	October, 1928 6	13	20	27
India—Continued.																			
Madras Presidency	C	62	21	12	54	123	56	31	71	59	79	162							
	D	48	12	6	25	51	19	25	37	24	36	75							
Rangoon	C	30	16	14	31	43	7	9	2	10	4	7	2						
	D	26	14	15	28	39	7	8	2	9	3	7	1			1	4		
Vizagapatam	D				1														
Indo-China (see also table below):																			
Pnompenh	C					4			1		1	3	2				1		
	D					4			1		1	2	1				1		
Saigon	C				5					1									
	D				1					1									
Plague-infected rats					2														
Iraq:																			
Baghdad	C	5	11	13	9	1							1	3					1
	D	5	6	3	4									2					
Plague-infected rats			4	3															
Dulaim Liwa	C		1																
Kwangchow-Wan (see table below).																			
Madagascar (see also table below):																			
Tamatave	C			1	20	3	2	4	1	1	1	2	3	3	7				
	D				8	7						1	2	1	6				
Nigeria (see also table below):																			
Lagos	C	7	17	28	43	53	14	12	15	10	14	9	14	23	28	20			
	D	6	18	28	42	52	15	11	16	10	14	9	14	22	28	20			
Plague-infected rats			8	55	57	23													
Paraguay: Asuncion	C				5													3	
	D				2	2													
Peru (see table below).																			
Portugal: Lisbon	C				1														
Senegal (see also table below):																			
Thies and vicinity	C	8		72	52														
	D	4		40	40														
Siam	C	33	27	15	6	10													
	D	30	13	11	7	8													

Ayudhaya	C					2	2													
	D					1	2													
Bangkok	C	1	4																	
	D	1	2																	
Nagara	C			1	2															
Straits Settlements:																				
Ipoh	C													2						
	D													2						
Singapore	C	1																		
	D	1																		
Syria (see table below).																				
Tunisia: Bengardane region	C	8																		
	D	6																		
Turkey:																				
Adalia	C					1												1		
Constantinople	C																		1	
Union of South Africa: Orange Free State	C	5				P	P													
	D	5																		
Union of Socialist Soviet Republics:																				
Astrakhan—																				
Axary District	C				3															
	D				2															
Kirghiz District	D													54						
Krasnoiarsk District	D										1									
Chita District	C											1								
On vessel: S. S. Tymeric, at Barbados, from New Orleans	C			1																

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

PLAGUE—Continued

[C, indicates cases; D, deaths; P, present]

Place		January–March, 1923	April–June, 1928	July, 1928	August, 1928	September, 1928	October, 1928
Algeria (see also table above):							
Algiers	C	-------	1	------	------	------	------
British East Africa (see also table above):							
Kenya	C	65	86	97	144	------	------
	D	-------	5	------	34	------	------
Uganda	C	-------	-------	176	152	------	------
	D	-------	-------	151	141	------	------
Ecuador: Guayaquil	C	20	6	------	------	------	------
	D	8	2	------	------	------	------
Plague-infected rats		75	5	7	------	------	------
Indo-China (see also table above)	C	12	36	7	2	5	2
Kwangchow-Wan	C	18	27	------	------	------	------
Madagascar (see also table above)	C	940	199	45	65	------	------
	D	864	184	33	61	------	------
Ambositra Province	C	202	68	4	------	------	------
	D	191	35	4	------	------	------
Antisirabe Province	C	281	68	11	------	------	------
	D	279	67	11	------	------	------
Itasy Province	C	55	1	------	------	------	------
	D	49	1	------	------	------	------
Moramanga Province	C	56	4	2	------	------	------
	D	55	4	2	------	------	------
Tamatave	C	-------	23	10	------	------	------
	D	-------	14	9	------	------	------
Madagascar—Continued							
Tananarive Province	C	348	78	24	------	------	------
	D	292	82	23	------	------	------
Nigeria (see also table above)	C	41	91	53	------	------	------
	D	41	89	53	------	------	------
Peru	C	93	25	5	------	------	------
	D	23	6	2	------	------	------
Lima	C	6	4	------	------	------	------
	D	-------	2	------	------	------	------
Senegal (see also table above)	C	30	448	318	43	136	------
	D	17	246	164	32	83	------
Baol	C	-------	13	17	68	73	------
	D	-------	7	10	38	40	------
Cayor	C	-------	-------	40	46	20	------
	D	-------	-------	25	15	8	------
Rufisque	C	-------	46	18	2	1	------
	D	-------	31	7	------	1	------
Thies	C	-------	345	103	151	106	------
	D	-------	237	64	119	78	------
Tivaouane	C	-------	325	84	9	------	------
	D	-------	175	70	------	------	------
Syria: Beirut	C	-------	1	4	------	------	------

PLAGUE RATS ON VESSELS

Steamship *Sicily* at Liverpool from Buenos Aires and Rosario, June 8, 1928, seven plague-infected rats.

SMALLPOX

[C indicates cases; D, deaths; P, present]

Place		Mar. 11–Apr. 7, 1928	Apr. 8–May 5, 1928	May 6–June 2, 1928	June 3–30, 1928	July 1–28, 1928	Week ended— August, 1928 4	11	18	25	September, 1928 1	8	15	22	29	October, 1928 6	13	20
Algeria	C	3	12															
Algiers	C	5	4	5	15	3	5	1	2				2					
Oran	C	12	17	5	4	8	5											
Angola (see table below).																		
Arabia: Aden	C				11		1				1							
	D						1											
Brazil (see also table below):																		
Pernambuco (Recife)	D			1														
Rio de Janeiro	C	1				1												
	D	1																
British East Africa:																		
Kenya—Mombasa	C	2	1												1			
British South Africa:																		
Northern Rhodesia	C	67	628	195	15	48	53	188	6	63	150	122						
	D	9	51	17	1	5	2	9		12	7	7						
Southern Rhodesia	C	7	24	13	36	22			7	10			2					
	D		10		4	4												
Canada:																		
Alberta	C	47	12	44	9	3			4	21	6							4
Calgary	C	1																
Edmonton	C	7	3			4												
British Columbia—Vancouver	C	17	24	11	4	11						1	2	2	8	5	3	
Manitoba	C		7	4	10	4												1
New Brunswick	C			1	7		1	2	2									
Ontario	C	83	50	41	33	11	2		1	2	1	2					10	5
Kingston	C		3			2				1				1				
Ottawa	C	26	4	6	1					1	1	5						2
Toronto	C	9	11	12	3	1												
Quebec	C	112	83	78	81	62	5	9	5	8	9	7	9	3	14	11	19	31
Montreal	C	9	9	3	11	5			2		6	2	4					
Quebec	C	10	23	47	52	44	4	3	4	1	3	2	5	3	2	3		
Sherbrooke	C	3			4													
Saskatchewan	C	33	52	28	16		4	1		1		3					1	
Moose Jaw	C	7	3	1		1								2				
Regina	C	3	8	1	1									1				

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

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		Mar. 11–Apr. 7, 1928	Apr. 8–May 5, 1928	May 6–June 2, 1928	June 3–30, 1928	July 1–28, 1928	Week ended— August, 1928 4	11	18	25	September, 1928 1	8	15	22	29	October, 1928 6	13	20
Ceylon: Colombo	C	1																
	D	1																
China:																		
Amoy	C	6	9	3								P						
Antung	C		3															
Canton	C	7	2	2														
Chefoo	C	P		P	P	P	P				P							
Foochow	C	P	P		P	P		P		P		P		P				
Hong Kong	C	32	25	30	14	11	6	3	6	4	2	3	2	2		6	1	
	D	19	26	23	19	5	5	1	5	5	1	1	5			3	4	
Manchuria—																		
Changchun	C		4	6		1												
Fushun	C				6	1		1	1				1					
	D					1												
Harbin	C	7	10	27	31	11							1					
Kwantung—																		
Dairen	C	15	16	35	48	21	1	1	1					1		1		
	D	8			20	12	1	1	1									
Port Arthur	C					1	1											
	D						1											
Mukden	C	1	4	3	6								2				1	
	D				1													
Pensihu	C				1													
	D				1													
South Manchuria Railway Zone	C				5													
Shanghai—																		
Foreigners only	C	7	3	11	7	2	1	1			1	1						
Including natives	D	9	9	19	11	10	1		1								1	
Tientsin	C	13	17	9	14	1												
Chosen (see table below).																		
Curacao (alastrim)	C					2												
Dominican Republic: Santo Domingo	C	2	1															

Dutch East Indies:																		
Balikpapan	C					7												
	D					2												
Belawan Deli	C				11	4	5	1	2	1		5	5			8		
	D				3	1	2	1					2			3		
Borneo—																		
Pontianak	C						3		1	1	1	1	1	1	1		1	
	D							1		1					1			
Samarinda	C														3			
Java—																		
Batavia and West Java	C	5	1	2		2	2		4					1			1	
East Java and Madura	C		2		2	3	2	1		3				1				
	D		2			3		1										
Surabaya	C						1	3	2				3	1		1		
	D						1											
Sumatra—																		
Medan	C	7	2	10	4	5	5	1	2	1	2	5						
	D	5	3	5		2	2	1										
Palembang	C					1												
Ecuador (see table below).																		
Egypt	C	52	12	1														
	D	33	7	1														
Behera Province	C					1												
France (see table below).																		
Gold Coast (see table below).																		
Great Britain:																		
England and Wales	C	1,341	1,344	1,199	1,146	681	126	111	114	141	102	123	92	113	94	130	162	
Birmingham	C	1	1		2	1								1				
Bradford	C	19	14	17	10	2						1						
Bristol	C	12	17	10	2					2								
Cardiff	C	5	3	2														
Castleford	C	36	69	24	18	14	6	2	1	1	1	2	1	1	4	1	1	
Hull	C				1	24	6	2	3	4	6	3	1	3	2	3	1	
Leeds	C	14	1		8	1	1				4	1		1				
Liverpool	C																	
London	C	17	42	25	96	19	3		5	1		2	3	3	4	5		
Manchester	C	14	8	5	1							3			1			
Newcastle-on-Tyne	C	9	4	12	6	28		1		1						1		
Nottingham	C	13	17	20	3	6		3	5	2	1	6	2	6	1	1	2	
Plymouth	C								6		1		1	1	2			
Sheffield	C	1	14	4	2	2			1				1	3				
Stoke-on-Trent	C	12	32	24	14	5	4	4										
Weymouth	C					1												
Scotland—																		
Arbroath	C							1	3			2	1					
Dundee	C										1							
Greece (see table below).																		
Hedjaz	C			6	14	18	1											
	D			2	1	6	1											
India	C	28,034	30,436	21,489	13,497	9,981	1,775	1,742	1,245	1,456	1,233	975						
	D	5,540	6,672	5,046	3,700	2,758	535	436	350	412	293	252						
Bassein	C		1															

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

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		Mar. 11–Apr. 7, 1928	Apr. 8–May 5, 1928	May 6–June 2, 1928	June 3–30, 1928	July 1–28, 1928	Week ended— August, 1928 4	11	18	25	September, 1928 1	8	15	22	29	October, 1928 6	13	20
India—Continued.																		
Bombay	C	218	200	136	71	67	9	13	3	3	4	3	4	3	7	2	12	------
	D	120	118	78	46	33	9	8	2	2	3	3	2	3	7	------	4	------
Calcutta	C	134	171	130	61	52	10	3	3	6	4	5	3	1	------	4	------	------
	D	104	130	101	50	35	9	1	3	4	3	4	3	1	------	3	------	------
Karachi	C	1	2	3	------	3	------	------	------	------	------	------	------	------	------	------	------	------
	D	------	1	1	------	2	------	------	------	------	------	------	------	------	------	------	------	------
Madras	C	183	169	59	85	39	9	11	13	10	19	23	29	19	13	21	18	------
	D	29	38	18	10	18	2	2	5	1	5	7	------	9	6	5	7	------
Moulmein	C	------	------	------	1	9	------	3	3	3	4	------	------	------	------	------	2	------
	D	------	------	------	1	6	------	------	2	2	1	------	------	------	------	------	------	------
Negapatam	C	------	7	8	19	26	4	13	8	10	7	9	15	15	19	2	7	------
	D	------	3	1	7	4	------	1	4	4	3	1	3	3	4	1	1	------
Rangoon	C	320	167	36	30	7	1	1	------	------	------	------	------	------	------	------	------	------
	D	102	79	13	6	4	1	------	------	------	------	------	------	------	------	------	------	------
Tuticorin	C	------	------	3	------	------	------	------	------	------	------	------	------	------	1	------	2	------
Vizagapatam	C	3	2	3	8	3	------	------	1	------	------	9	5	------	------	------	------	------
	D	------	------	1	3	3	------	------	1	------	------	------	3	------	------	------	1	------
India (French):																		
Chandernagor	C	5	5	------	------	1	------	2	------	------	4	5	------	------	------	------	------	------
	D	1	1	------	------	1	------	1	------	------	------	2	------	------	------	------	------	------
Pondicherry Province	C	18	36	32	13	12	4	13	13	32	24	18	32	18	23	26	------	------
	D	18	36	23	13	12	4	11	2	28	31	14	28	14	17	18	------	------
Indo-China (see also table below):																		
Pnompenh	C	------	------	------	------	------	------	------	2	------	4	8	3	4	4	8	6	------
	D	------	------	------	------	------	------	------	2	------	3	5	3	4	1	5	2	------
Saigon	C	------	------	------	------	------	------	------	------	------	------	------	------	1	1	1	------	------
Iraq:																		
Baghdad	C	5	5	16	16	24	------	4	2	1	5	7	10	12	1	9	8	12
	D	4	3	6	10	15	------	1	1	------	2	5	3	7	1	3	3	5
Basra	C	5	4	3	2	6	------	------	2	2	------	1	------	------	6	1	9	7
	D	2	2	3	2	2	------	------	1	1	------	1	------	------	2	------	------	7
Italy	C	------	------	1	6	------	------	------	------	------	------	------	------	------	------	------	------	------
Leghorn	C	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Palermo	C	5	10	6	10	4	6	------	------	------	------	------	------	------	------	------	------	------

Ivory Coast (see table below).																		
Jamaica (outside Kingston) (alastrim)	C	13	4	2	3	1				1	1	1	1		2			
Japan:																		
Kobe	C			11														
Nagoya	C		6	2		1												
Osaka	C				4													
Tokyo City	C	15	8	2														
	D	1	1															
Tokyo prefecture (outside city)	C	24	1	1														
	D	1	2															
Yokohama	C		2	3														
	D			1														
Latvia (see table below).																		
Malta: Valetta	C														1			
Mexico (see also table below):																		
Acapulco	C			2														
	D			2														
Jalisco (State)	C	P	P		21													
Guadalajara	D	2	12	13	10	9	1	4		2	1		2					
Manzanillo	D	1																
Mazatlan	D			3	2				3									
Mexico City and surrounding territory	C		1	2		3			1	1				1		1		
	D				1					1	1							
Reynosa	C					1												
Saltillo	D			2	2													
San Luis Potosi	D													1		2		
Torreon	D															1		
Morocco (see table below).																		
Nigeria (see also table below):																		
Lagos	C	1			1													
Southern Provinces	C	93			51													
	D	35			12													
Persia (see table below).																		
Poland	C	1	9	1	3	2												
	D		1															
Portugal (see also table below):																		
Lisbon	C	5	6	7	7	8		1										
	D					1		1										
Oporto	C		1															
Senegal (see also table below): Dakar	C	29	16	29	8													
	D	20	8	7														
Siam	C	28	10	8	3	1	3				1							
	D	4	3	1	1		2											
Bangkok	C		1															
	D			1														
Spain: Valencia	C	2																
Straits Settlements: Singapore	C	1	3		1									1	1	1		
Sudan (Anglo-Egyptian)	C	332	160	168	206	144	31	78	78	65	56	35	10	51	30	19	38	
	D	100	32	20	37	35	9	6	6	13	7	6	3	18	6	6	7	
Sudan (French) (see table below).																		
Syria (see table below).																		
Taiwan: Keelung	C				1													

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

SMALLPOX—Continued

[C indicates cases; D, deaths; P, present]

Place		Mar. 11-Apr. 7, 1928	Apr. 8-May 5, 1928	May 6-June 2, 1928	June 3-30, 1928	July 1-28, 1928	Week ended— August, 1928 4	11	18	25	September, 1928 1	8	15	22	29	October, 1928 6	13	20
Tunisia: Tunis	C	4	6	3	2	8	4		1				1					
Union of South Africa:																		
Cape Province	C									P			P					
Natal	C	P			1													
Orange Free State	C	P		P	P	P												
Transvaal	C		P	P	P			P		P	P		P					
Union of Socialist Soviet Republics (see table below).																		
Upper Volta	C	2	9					33		17		P						
	D							8										
Venezuela: Maracaibo	D							1										
On vessel:																		
S. S. Arendskerk at Singapore, from Amoy, China	C	P																
S. S. Kashgar at Kobe, from Shanghai	C		P															
S. S. Ronna at Penang, from Negapatam	C			P														
S. S. Theseus, from Jeddah to Penang	C					1												
S. S. Tjileboet at Hong Kong, from Shanghai	C		P															
S. S. Yarmouth at Kingston, Jamaica, from Habana, Cuba	C	1																
S. S. Victoria at Nome, Alaska	C				8													

Place		January–March, 1928	April–June, 1928	July, 1928			August, 1928			September, 1928			October, 1928
				1–10	11–20	21–31	1–10	11–20	21–31	1–10	11–20	21–30	1–10
Indo-China (see also table above)	C	426	197	8	3	15	44	21	6	27	29	17	38
Ivory Coast	C		7		4	5				2			
	D					2							
Senegal (see also table above)	C		110							4			
	D		16										
Dakar	C		43										
	D		15										
Sudan (French)	C	15	54		17				55			P	
	D		6						33				
Syria:													
Aleppo	C	1	3					4					
Beirut	C	75	26	4	1								
	D	2											
Damascus	C	14											

Place		January–March, 1928	April, 1928	May, 1928	June, 1928	July, 1928	August, 1928
Angola	C	47	7	1			
Congo	C	36					
Cuanza-Norte	C	1					
Cuanza-Sul	C	10					
Brazil (see also table above):							
Porto Alegre	C	1					
Chosen	C	48	20	152	49		
	D	16	6	38	21		
Seoul	C	1					
Ecuador: Guayaquil	C	35	19	31	11	35	38
	D	1					
France	C	34	6	15	10	10	6
Gold coast	C	4					
Greece	C	36	1	22	31	9	3
	D	4		1	2	1	

Place		January–March, 1928	April, 1928	May, 1928	June, 1928	July, 1928	August, 1928
Latvia	C	1			1	1	
Mexico (see also table above)	D	1,064	336	622			
Morocco	C	132	19	25	10	55	1
Nigeria (see also table above)	C	592	173	194			
	D	84	46	53			
Persia	D	7					
Portugal (see also table above)	C	258		98	74	82	
	D	30		9	3	10	
Union of Socialist Soviet Republics:							
Railways, etc	C	59					
Other territories in Europe	C	1,717					
Transcaucasus, Siberia, and Central Asia	C	25					
Ukraine	C	27					

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

TYPHUS FEVER

[C indicates cases; D, deaths; P, present]

Place		Mar. 11–Apr. 7, 1928	Apr. 8–May 5, 1928	May 6–June 2, 1928	June 3–30, 1928	July 1–31, 1928	Week ended— August, 1928 4	11	18	25	September, 1928 1	8	15	22	29	October, 1928 6	13	20	27
Algeria:																			
Algiers	C	9	4	13	32	3	1	4	3	2	1	1							
	D		2		6														
Oran	C	4	11	4	7	16	1	1	1	1				2					
	D		1		1														
Bulgaria	C		26		16	P	P		3	5	2	2	2		5				
	D				2				2										
Sofia	C	20	1	20	14	1						3							
	D				6														
Chile:																			
Iquique	C					1													
	D					1													
Talcahuano	C	1																	
Valparaiso	C				3	2													
	D				1														
China:																			
Manchuria—																			
Harbin	C		2	16	23														
Kwantung	C		17	293	539	431	60					1		2	2				
South Manchuria Railway Zone	C				10	6													
Tientsin	C			2	2					1									
Chosen (see table below).																			
Czechoslovakia (see table below).																			
Egypt	C	2	3	11	7														
	D	1	1	2	3														
Alexandria	C					1	1				1		1						
	D										1								
Assiout Province	C				2	2			2										
Assouan Province	C				2				1										
	D								1										
Behera Province	C	29	32	43	7	2													
	D		7	7	2														
Cairo	C	2	4			1													
	D	1	4			1													
Dakalieh	C				1	1													
Gharbieh Province	C	23	14	5	4	1													
	D		5		3														

Kench Province	C	5	38		1														
	D		7		1														
Menoufieh Province	C		28	9	5									1					
	D		3	3	2									1					
Port Said	C					2		4	3	1			1		1				1
Suez	C			1		4	1	1	1	1		1		5	1	3			
	D			1															
Great Britain: London County	C				2														
Greece: Piræus	C				1														
Hungary: Budapest	D				2	2													
Ireland:																			
Belfast	C			2	1														
	D				1														
Irish Free State	C		1	4															
Cork County	C		1																
Dublin	C											3	1	1					
Galway County—Oughterard	C					10													
Kerry County—																			
Cahirciveen	C						1												
Tralee	C													1	7				
Japan (see also table below):																			
Hiogo	C				1														
Yamagata	C			2	2	2													
Latvia (see table below).																			
Lithuania (see table below).																			
Mexico (see also table below):																			
Durango	D					1													
Guadalajara	D			1		4													
Mexico City, including municipalities in Federal District	C	12	8	19	14	10	4	2		4	7	1	1	6	2	3			
	D	3	1	2		3	2			1	1								
Monterey	D	1																	
Morocco	C	748	591	280	214	153	39	2	2	1				3					
Palestine	C	7	6	4	8	9	5	3	3	3	2	2	3	3	4	5	1		
Peru (see table below).																			
Poland	C	382	144	226	134	96	7	19	11	18	17	19	10	19	12				
	D	25	12	17	6	5									2				
Portugal: Oporto	C					1						1							
Rumania	C	141	142	99	80	33	8	1		7	5	3	3	1					
	D	11	12	8	11	1	1				1	1	1						
Syria: Aleppo	C				2				1										
Tunisia	C	18	19	7	7				1		7								
Sfax	C														11				
Union of South Africa:																			
Cape Province	C		P	P	P	P	P	P	P	P	P		P						
Natal	C		P	3	P	P							P						
Orange Free State	C		P	P	P	P													
Transvaal	C			1		P	P												
Union of Socialist Soviet Republics (see table below).																			
Yugoslavia (see table below).																			

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

TYPHUS FEVER—Continued

[C indicates cases; D, deaths; P, present]

Place		January-March, 1928	April, 1928	May, 1928	June, 1928	July, 1928	August, 1928	September, 1928
Chosen	C	896	210	241	182	------	------	------
	D	88	19	32	24	------	------	------
Chemulpo	C	2	------	2	------	------	------	------
Gensan	C	1	------	------	------	------	------	------
	D	1	------	------	------	------	------	------
Seoul	C	10	28	18	------	5	------	------
	D	1	2	4	------	2	------	------
Czechoslovakia	C	25	------	------	------	------	------	------
Greece: Athens	C	4	13	11	9	6	------	------
	D	------	2	2	1	1	------	------
Japan	C	------	------	21	------	------	------	------
Latvia	C	27	4	1	2	------	------	------
Lithuania	C	223	66	64	32	8	11	------
	D	22	3	3	1	------	------	------

Place		January-March, 1928	April, 1928	May, 1928	June, 1928	July, 1928	August, 1928	September, 1928
Mexico (see also table above)	D	46	------	------	------	------	------	------
Peru:								
Arequipa	D	2	1	------	------	1	------	------
La Oroya	C	P	------	------	------	------	------	------
Turkey	C	17	------	7	8	6	4	------
	D	1	------	1	1	------	2	------
Union of Socialist Soviet Republics:								
Railways, etc	C	199	------	------	------	------	------	------
Transcaucasus, Siberia, and Central Asia	C	17	------	------	------	------	------	------
Ukraine	C	1,476	------	------	------	------	------	------
Other territories in Europe	C	5,167	------	------	------	------	------	------
Yugoslavia	C	34	10	19	16	12	------	6
	D	3	1	3	1	3	------	------

Place		Feb. 12–Mar. 10, 1928	Mar. 11–Apr. 7, 1928	Apr. 8–May 5, 1928	May 6–June 2, 1928	June 3–30, 1928	July 1–28, 1928	Week ended— August, 1928				September, 1928					October, 1928	
								4	11	18	25	1	8	15	22	29	6	13
Belgian Congo: Matadi	C	1		2	2													
Brazil:																		
Aracaju	D				2													
Bahia	C					4						1						
	D	1								1		1		1				
Estancia	C	1																
Pernambuco (Recife)	C					1												
Rio de Janeiro	C				2	48	40	6	4	4			4	4	1	3		
	D				2	15	21			2								
Sao Felix	C					P												
Dahomey: Grand Popo	C					3												
	D					2												
Gold Coast	C				2													
Ivory Coast	C					1												
	D					1												
Abidjan	C					1												
Ferkes-Sedougou	D						1	1										
On vessel: S. S. Bernini, at Santos, Brazil	C																	4
	D																	1