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ACCIDENTAL PSITTACOSIS INFECTION AMONG THE PERSONNEL OF THE HYGIENIC LABORATORY

By G. W. McCoy, *Director, Hygienic Laboratory, United States Public Health Service*

Experimental work on psittacosis was begun at the Hygienic Laboratory on January 16, 1930. Eleven cases of the disease developed among the personnel of the institution with onset of the first definite symptoms between January 25 and March 15, 1930.

The psittacosis work was carried on in one of the main laboratory buildings. Usually there are 54 persons employed in this building, which houses the activities of the division of pathology and bacteriology and certain administrative units of the laboratory. About 20 per cent of these persons developed the disease. In a building about 85 feet distant, but connected by a tunnel and a causeway, 57 persons are employed, none of whom became infected. In a third building, somewhat isolated from the other buildings, 10 persons are employed, and these also escaped. Thus, all of the cases occurred among the 44 per cent of the personnel of the entire laboratory, employed in one building, while no case developed among the 56 per cent of the personnel employed in the other buildings. People from each of the other buildings had free access to the building to which the infection was confined, but for the most part they did not visit it frequently nor for prolonged periods.

During the period when work on psittacosis, which involved the handling of infected materials or infected birds, was in progress, five members of the staff of the laboratory were engaged in the studies. Three of these handled infected parrots and parrakeets, and two of these persons developed psittacosis. Two workers were engaged in a study of cultures; and of these one became infected, although it is by no means certain that this one became infected from the cultures under investigation.

The two cases among the three persons working with infected birds were readily accounted for by the close contact with the contaminated materials required by their work. The third person in this group of those directly exposed to infection worked with infected birds during the period when all of the cases excepting the first one were infected, but remained well.

Two bacteriologists were engaged in the study of cultures derived from cases of psittacosis in man and those from healthy and from

infected birds. One of these persons remained well, while the other, who worked only with cultures in the third and fourth or later generations, developed the disease. None of these cultures was, or is, regarded as causative of the disease in birds or in man, and it is considered probable that the infection was derived from some source other than these cultures.

None of the eight remaining cases could be satisfactorily traced to any recognizable source of infection, as none of these individuals had anything to do with the work on psittacosis. As previously stated, they all worked in the building in which the psittacosis work was carried on, though that work was confined to certain rooms to which only those engaged on the problem had access. The usual safeguards employed in connection with studies of dangerous infections were observed throughout the study.

There were no good grounds for believing that any one of these 11 cases was due to contact with persons in the incubation stage of, or sick with, psittacosis. This view is strengthened by the fact that no case developed among members of families of victims or among persons caring for the sick.

The cases are listed here in the order of their occurrence:

No.	Duties	Exposure to infected birds	First symptoms
1	Laboratory assistant	Yes	Jan. 25, 1930
2	Research worker	Yes	Feb. 6, 1930
3	Night watchman	No	Feb. 15, 1930
4	Laboratory assistant	No	Feb. 28, 1930
5	Research worker	No	Mar. 10, 1930
6	Foreman	Doubtful [1]	Mar. 11, 1930
7	Media maker	No	Mar. 12, 1930
8	Cleaner	No	Mar. 13, 1930
9	Research worker	No	Do.
10	....do	No	Mar. 14, 1930
11	Cleaner	No	Mar. 15, 1930

[1] This man carried supplies to the door of the room in which infected birds were kept.

It will be observed that there was a rather long and fairly uniform interval between cases down to and including the fourth case, while the remaining seven cases form a group with dates of onset varying only to such an extent as to lead to the suspicion that all were infected from a common source, though we do not now know just what that source was. If we consider the usual period of incubation as 9 or 10 days (and there is much evidence to justify this), it is obvious that the members of the group of seven cases probably were infected in the early part of March.

The clinical picture (including physical signs) was sufficiently characteristic to put the diagnosis beyond reasonable question in each case. The first case proved fatal, while the remaining cases varied greatly in severity, but the victims recovered.

While it has long been recognized that infected parrots or other birds constituted a source of danger, this, so far as we know, is the first example of the infection occurring through the medium of contaminated environment without contact with infected birds. This occurrence suggests that the infectiveness of the virus of psittacosis for man is of a very high order.

A NEW MENINGOCOCCUS-LIKE ORGANISM (*Neisseria flavescens* n. sp.) FROM EPIDEMIC MENINGITIS[1]

By SARA E. BRANHAM, *Bacteriologist, United States Public Health Service*

Of 155 strains of meningococci received at the Hygienic Laboratory during 1928 and 1929, 90.8 per cent could be typed according to the classification of Gordon and Murray (1) (2). All of these strains showed moist, translucent colonies on blood agar, fermented dextrose and maltose, were nonpigmented, and were agglutinated more or less by polyvalent antimeningococcus serums from eight different manufacturers. The remaining strains did not fall into any of these four serological groups represented in the Gordon-Murray classification, and they were not agglutinated by any of the polyvalent serums studied. Nine per cent, comprising 14 strains, formed a homogeneous antigenic group among themselves, each strain being agglutinated by antiserums prepared with each of the other strains. Table 1 indicates this relation of the strains to each other and shows the lack of cross agglutination with any of the four well-known groups of meningococci.

These 14 strains were isolated from the spinal fluid of cases of cerebrospinal meningitis occurring during a single outbreak in one locality, viz, Chicago, Ill., in 1928. They were among 47 strains received from that city at approximately the same time, through the courtesy of Dr. F. O. Tonney, of the Chicago Department of Health. The remaining 33 were typical meningococci; 17 corresponded serologically with Gordon's Type IV, 4 with Type III, 2 with Type II, and 10 with Type I.

The case histories do not indicate that the clinical picture associated with these four uniformly atypical strains was different from that associated with the usual forms. Information was obtained concerning 11 of the 14 cases. They were all subacute and ran a relatively long course. At least 9 were given polyvalent antimeningococcus serum freely, and 7 of these recovered. Four are known to have died. No information could be obtained about the remaining cases.

Histories of the remaining 33 Chicago cases associated with typical meningococci do not indicate any striking difference. There were

[1] From the Hygienic Laboratory, Washington, D. C.

very few fulminating cases represented by these strains. Nine of the 33 patients died.

TABLE 1.—*Showing serological relationship of the 14 new strains and lack of cross agglutination with any of the 4 well-known groups of meningococci*

Antigen strains	Serum 248 (strain 155)						Serum 465 (strain 218)						Serum 475 (strain 221)						Type Serum I (strain 176)					
Serum dilutions	50	100	200	400	800	1600	50	100	200	400	800	1600	50	100	200	400	800	1600	50	100	200	400	800	1600
1-128	2	1	0	0	0	0	2	2	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0
2-129	4	4	4	4	0	0	2	1	1	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0
3-155	4	4	3	3	1	1	3	3	3	2	1	0	2	2	1	0	0	0	0	0	0	0	0	0
4-156	4	4	3	2	1	0	4	4	3	3	2	1	3	2	1	0	0	0	0	0	0	0	0	0
5-157	2	2	1	0	0	0	2	2	2	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0
6-159	3	3	3	2	1	1	3	3	2	0	0	0	3	2	2	0	0	0	0	0	0	0	0	0
7-160	3	2	2	1	0	0	3	3	1	1	1	0	4	4	3	2	2	1	0	0	0	0	0	0
8-208	4	3	2	2	1	0	4	3	2	1	1	0	2	2	0	0	0	0	0	0	0	0	0	0
9-209	3	2	2	2	1	0	2	2	2	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0
10-217	3	3	3	2	1	0	3	3	3	2	1	0	2	2	2	2	0	0	0	0	0	0	0	0
11-218	3	2	1	1	0	0	4	4	3	2	1	1	4	3	2	1	0	0	0	0	0	0	0	0
12-219	4	4	4	4	0	0	4	4	3	2	1	0	2	2	0	0	0	0	0	0	0	0	0	0
13-221	3	2	1	1	0	0	3	3	3	3	1	0	3	3	3	1	1	0	0	0	0	0	0	0
14-223	3	2	2	2	1	0	3	3	3	2	1	1	3	3	3	2	1	0	0	0	0	0	0	0
176 (I)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4	4	3	2	1
55 (II)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0
57 (III)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0
60 (IV)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Antigen strains	Type Serum II (strain 55)						Type Serum III (strain 57)						Type Serum IV (strain 60)					
Serum dilutions	50	100	200	400	800	1600	50	100	200	400	800	1600	50	100	200	400	800	1600
1-128	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0
2-129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3-155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4-156	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7-160	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8-208	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9-209	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
10-217	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11-218	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12-219	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13-221	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14-223	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
176 (I)	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0
55 (II)	3	3	3	3	2	1	2	2	2	1	1	0	0	0	0	0	0	0
57 (III)	2	2	2	0	0	0	2	3	3	3	3	2	0	0	0	0	0	0
60 (IV)	0	0	0	0	0	0	0	0	0	0	0	0	4	4	4	3	1	0

0=No agglutination.
4=Complete agglutination.

Aside from a lack of serological relationship, these 14 strains differ from typical meningococci in other ways. Colonies on blood agar are less moist than those of meningococci. They produce a golden yellow pigment and do not ferment any of the carbohydrates generally used in classifying this genus; viz, dextrose, levulose, maltose, and saccharose. They grow very poorly upon dextrose agar, upon which meningococci usually develop luxuriantly, but grow well upon blood agar and semisolid agar.

Morphologically these 14 strains are indistinguishable from other members of the genus *Neisseria* in that they are Gram-negative, biscuit-shaped cocci occurring in flattened pairs. Individual cells

vary in size and in intensity of staining, and the occurrence of giant forms of the cocci is common.

In 1906 von Lingelsheim (3) described 3 groups of yellow cocci of this genus, calling them *Diplococcus pharyngis flavus* I, *Diplococcus pharyngis flavus* II, and *Diplococcus pharyngis flavus* III. These three types varied from each other serologically, in type of yellow pigment, and in fermentation reactions, although all fermented at least dextrose and maltose.

Elser and Huntoon (4), in 1909, described 3 chromogenic groups which they designated by the Roman numerals I, II, and III. Their grouping differed from that of Lingelsheim, II including both I and II of the former classification, and I adding a new group. Bergey (5) has considered these groups of Elser and Huntoon as distinct species and called them *Neisseria perflava*, *Neisseria flava*, and *Neisseria subflava*.

The 14 strains described in this paper can not be placed in any of these species because of their failure to ferment any of the carbohydrates referred to above.

J. E. Gordon (6), studying the Gram-negative cocci found in colds and influenza in Chicago during 1921, found several strains which produced a yellow pigment and fermented no carbohydrates. Because of this latter feature he considered them a subgroup of *N. catarrhalis*.

The 14 strains which form the subject of this paper resemble those described by J. E. Gordon both in pigment production and lack of fermentative ability; but they do not resemble the strains of *N. catarrhalis* that we have obtained. Aside from cultural differences we have been unable to discover any serological relation to *N. catarrhalis*. *N. catarrhalis* is not agglutinated by any of the serums prepared with these 14 strains, nor are any of these 14 strains agglutinated by sera prepared with *N. catarrhalis* (see Table 2). Except for morphological similarity, which is possessed by all members of this genus, failure to ferment sugars is the only characteristic which they possess in common.

Another non-fermenting species of this genus was reported by von Lingelsheim (3) in 1906. He called it *Micrococcus cinereus*. Very few strains of this organism have been reported, and many classifications omit reference to it altogether. The most satisfactory description is given in the last edition of Lehmann and Neumann's Bakteriologische Diagnostik (7). No reference to pigment production by that organism has been found.

None of the 14 new strains described in this paper are agglutinated by normal horse serum, nor do they agglutinate spontaneously under ordinary conditions. A tendency to settle out can be overcome by a careful adjustment of the pH of the salt solution used in making

serum dilutions and antigen suspensions. This slight settling out was not sufficient to mask, or to be mistaken for, true agglutination.

TABLE 2.—*Showing the lack of serological relationship between the new strains and N. catarrhalis*

Antigen strain	Serum 528 (N. catarrhalis)						Serum 529 (N. catarrhalis)						Serum 248 (strain 155)						Serum 475 (strain 221)						Saline control
Serum dilutions	50	100	200	400	800	1600	50	100	200	400	800	1600	50	100	200	400	800	1600	50	100	200	400	800	1600	
1-128	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	2	2	2	0	0	0	0
2-129	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	3	3	1	0	0	0	0
3-155	0	0	0	0	0	0	0	0	0	0	0	0	4	4	3	3	0	0	2	2	0	0	0	0	0
4-156	0	0	0	0	0	0	0	0	0	0	0	0	4	4	3	2	0	0	2	2	1	0	0	0	0
5-157	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	0	0	0	2	2	2	0	0	0	0
6-159	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	2	1	0	3	2	2	1	0	0	0
7-160	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	1	0	0	3	3	2	1	0	0	0
8-208	0	0	0	0	0	0	0	0	0	0	0	0	4	3	2	2	0	0	3	2	1	0	0	0	0
9-209	1	1	0	0	0	0	1	1	0	0	0	0	3	2	2	2	1	0	2	2	1	1	0	0	0
10-217	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	2	1	0	2	2	2	0	0	0	0
11-218	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	1	0	0	3	3	2	1	0	0	0
12-219	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	0	0	0	2	2	0	0	0	0	0
13-221	1	1	1	0	0	0	0	0	0	0	0	0	2	2	1	0	0	0	3	2	2	0	0	0	0
14-223	0	0	0	0	0	0	0	0	0	0	0	0	3	2	2	2	1	0	3	3	3	2	1	0	0
15 N. catarrh	3	3	3	3	2	0	3	3	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0

0=No agglutination.
4=Complete agglutination.

These 14 strains do not seem to correspond with any species of the genus *Neisseria* in which, on morphological grounds, they so obviously belong. The suggestion of Wilson and Smith (8) that all members of this genus other than the meningococcus and the gonococcus be placed together in a species called *Neisseria pharyngis* does not offer a satisfactory disposition of these strains which have been isolated only from spinal fluid in epidemic meningitis.

The natural habitat of the members of the genus *Neisseria*, other than the gonococcus, is the naso-pharynx. Meningeal invasion by any of these other than the meningococcus is only of occasional occurrence. A total of a dozen or more reports of cases due to *N. catarrhalis* may be found in a careful search of the literature (9). A single case due to *N. subflava* was reported last year (10). Cases due to the gonococcus are not unknown; but none of these microorganisms has been incriminated in an epidemic. The meningococcus has been considered the sole cause of epidemic cerebrospinal fever.

The occurrence of the type of organism reported in this paper in 14 out of 47 cases, in an epidemic in which all 4 of the usual types of meningococci were also involved, will undoubtedly cause many to feel that these 14 strains should also be considered as a variety of the meningococcus. There is much to be said for this point of view. Nevertheless, to consider this form a variety of *N. intracellularis* would alter the definition of a meningococcus and would lead to confusion and contradiction. Since it does not ferment dextrose and maltose, produces a pigment, and shows no serological

relation to the meningococcus group, it differs fundamentally in the characters recognized as specific for *N. intracellularis*. The only alternative appears to be to recognize a new species on the principle that it is much easier to suppress a synonym, if necessary, than to untangle confused descriptions based on erroneously determined species. This form is consequently designated as *Neisseria flavescens* n. sp., *flavescens* literally translated meaning "becoming a golden yellow."

SUMMARY

During an epidemic of cerebrospinal meningitis in which all 4 of the usual types of meningococci were involved, an apparently new form was isolated from the spinal fluid of 14 cases. In morphology this microorganism is indistinguishable from the other members of the genus *Neisseria*. It differs from the meningococcus in pigment production, lack of fermentative action, and in antigenic relationship. These 14 strains form a homogeneous group culturally, biochemically, and serologically. The name *Neisseria flavescens* n. sp., is proposed for this new form.

Since 30 per cent of the spinal fluid strains received from this locality belong to this group (comprising 9 per cent of the total number of strains received at the Hygienic Laboratory during 1928–29), since it is not represented in any of the therapeutic polyvalent serums now manufactured, and since the mortality in these cases was at least 30 per cent, the occurrence of *N. flavescens* in epidemic meningitis warrants special attention.

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SEAMEN WITH VENEREAL DISEASE IN THE PORT OF NEW YORK

A COOPERATIVE STUDY MADE BY THE AMERICAN SOCIAL HYGIENE ASSOCIATION, THE NEW YORK TUBERCULOSIS AND HEALTH ASSOCIATION, THE WELFARE COUNCIL OF NEW YORK CITY, AND THE UNITED STATES PUBLIC HEALTH SERVICE

Report prepared by ANNABEL M. STEWART, *Research Bureau, Welfare Council of New York City*

(The first part of this report was published in PUBLIC HEALTH REPORTS for April 11, 1930)[1]

CHAPTER IV

PROVISION FOR TREATMENT

Since 1798, American merchant seamen have received treatment in the United States marine hospitals and at other relief stations originally established and maintained through direct contributions by seamen. In 1884 the Government ceased to collect funds from the seamen. The marine hospitals and other relief stations of the Public Health Service are now maintained by direct appropriations of Congress and represent the contribution of the Government to the maintenance of the American merchant marine and the welfare of its merchant seamen.

An American seaman (a seaman employed on a merchant vessel flying the American flag) is entitled to free treatment at any marine hospital or other relief station of the Public Health Service. He needs only to identify himself to the medical officer in charge by presenting a master's certificate [2] or other evidence of eligibility. A foreign seaman (a seaman on a vessel of foreign registry) is treated as a pay patient and must present a request for treatment from the master of his vessel or consul of his country.

UNITED STATES LAWS AND REGULATIONS

Treatment on shore for American seamen.—Under existing law there is ample authority for free treatment of American seamen suffering from injury or illness, venereal diseases included, at hospitals and other relief stations maintained by the Public Health Service. While this authority permits treatment of seamen at the expense of the Public Health Service in hospitals with which it has contracts, where such treatment is requested by the medical officer in charge at the station, it does not otherwise permit attention by private physicians or hospitals at the expense of the Government. Temporary relief, in cases of emergency, may be furnished at certain designated ports where there is no Public Health Service medical officer, at the request of a duly authorized customs officer. Under regulations promulgated by the Secretary of the Treasury, a seaman must meet certain require-

[1] The complete report will be issued later as a separate publication as "Reprint No. 1365."
[2] See Appendix.

ments to be entitled to treatment by the Public Health Service. He must be employed on board, or have been employed within 60 days, "in the care, preservation, or navigation of any registered, enrolled, or licensed vessel of the United States, or in the service on board of those engaged in such care, preservation, or navigation," and he must have had previously at least 60 days' continuous service on such a vessel or vessels. The regulations further provide that no person employed on a vessel under five tons or on a canal boat engaged in the coasting trade shall for that reason be entitled to any benefit or relief from the service.

If a seaman does not change his occupation or retire from active service, he may be kept under treatment by the Public Health Service as long as necessary. But to be entitled to further treatment, after having received continuous treatment at an out-patient office for a period of two months, he must furnish a new certificate of service showing that he still is following his vocation of seaman, or has been prevented from resuming this occupation by reasons not under his control.

While only temporary relief is contemplated and admission to hospital is not intended to permit an indefinite residence for cause other than actual disease or injury, the Public Health Service has maintained a liberal policy with regard to hospitalization. With respect to venereal diseases in particular, it is believed that a far greater proportion of cases among seamen are given hospital treatment by the Public Health Service than is the case in private practice or in the practice of other hospitals and clinics. Occasionally the local hospital facilities of the Public Health Service are so taxed that it becomes necessary to give treatment to certain classes of venereal disease cases at an out-patient office, but whenever hospitalization is considered necessary some way is found to care for the disabled seamen, even if beneficiaries of the service must be sent to other institutions under contract.

Treatment at sea for American seamen.—A law has recently been passed providing that masters, mates, and pilots, in taking their first licenses, must undergo an examination to show ability to give first aid for various diseases. A ship's manual of sanitation, care and treatment, including venereal diseases, has been published by the Public Health Service.

While the Public Health Service may occasionally furnish emergency relief to a seaman on a ship in port, it is not authorized to furnish treatment on ships, except that seamen engaged in deep-sea fishing may be given emergency relief by medical officers on Coast Guard vessels.

It appears that the only statute relating to the furnishing of treatment by the owner of a vessel to seamen during a voyage is section

4569 of the Revised Statutes, which requires American vessels in foreign or intercoastal trade to carry a chest of medicines.[3] But under common law there seems little doubt that seamen are entitled to "maintenance and cure" at the expense of the owner of the vessel if they are "injured or fall sick in the service of the ship" during a voyage. This has been so held by the United States Supreme Court.

Several decisions interpreting the common law have indicated that owners of vessels are not bound to furnish treatment to seamen for venereal diseases on the ground that such diseases were not acquired "in the service of the ship"; but a recent decision of the Comptroller General on this point holds—

> The fact that an American seaman may be suffering from a venereal disease the result of his own vices or misconduct does not relieve the owners or operators of the vessel on which he last served of their obligation to furnish such maintenance and hospitalization as may be necessary in connection with or incident to his return to a port of the United States.

While this decision has the effect of law until it is reversed by the courts or otherwise nullified, as far as expenditures by Government officials are concerned, it is not considered necessarily binding upon vessel owners in connection with their dealings with seamen. In other words, as an official of the Public Health Service states, "this means that the Comptroller's decision prohibits officers of the United States from disbursing United States funds for treatment of venereal diseases in connection with or incident to the return of a seaman to a port of the United States. But since this is only a decision and not a law, it is not binding on the shipping companies in so far as it states what they must do." It is not believed that the decision is likely to be questioned. The letter from the Comptroller General containing this decision has been reproduced in the Appendix.

A sick or destitute seaman signed off his vessel in a foreign port may be cared for by United States consular officers. A fund in the State Department is available for this purpose, but is applied in a very restricted manner, since the whole intention is to repatriate the man and not to provide treatment for him. The seaman is returned as rapidly as possible to the United States where the treatment outlined above is available for him.

Treatment for foreign seamen.—Although alien seamen with venereal disease are excluded from admission to the United States under the immigration laws, these seamen are permitted to land in this country temporarily for medical treatment or for their ultimate departure, removal, or deportation from the United States pursuant to regulations prescribed by the Secretary of Labor. Such treatment is, as a

[3] The standardization of ships' medicine chests has been discussed by the International Labor Organization. It is not the intention that ships of different countries should have identical medicine chests on board but merely that there should be a common basic store of medicines.

rule, of an emergency nature and incomplete, since these seamen are in hospital only the few days that their ships are in port for unloading and loading. The steamship companies pay for this treatment and naturally they desire to repatriate their men as soon as possible.

The United States is not a party to the international agreement respecting facilities to be given to merchant seamen for the treatment of venereal disease. This agreement was signed at Brussels, December 1, 1924, and has been ratified by several nations. By it they undertake to maintain venereal-treatment centers in their principal ports free of charge to merchant seamen of all nationalities. In the United States, seamen from foreign vessels may legally be admitted to relief stations of the Public Health Service as pay patients, the consul or the ship's master becoming a surety for the funds which, when collected by the collector of customs, are turned into the United States Treasury. By the act of March 3, 1875, Congress fixed 25 cents as the charge to be made for the per diem cost of hospital care of foreign seamen, but authorized the Secretary of the Treasury to adjust the rate. At present it is $3.80 per patient per day, or approximately the actual cost of treatment in marine hospitals. The cost of out-patient treatment for foreign seamen has been similarly fixed at $1.

When an alien seaman is treated for a venereal disease at a Public Health Service relief station, it is the practice under the laws of some foreign countries to require the seaman to pay for the treatment if the disability is known to have been the result of his own misconduct.

Application of regulations to seamen studied.—The schedules indicated the source of payment for the hospital treatment being received by the 961 seamen studied. As the regulations have indicated, American citizens and others serving under the American flag are entitled to free treatment by the United States Government. Treatment given seamen employed on foreign ships is paid for by the steamship companies. Emergency treatment of alien seamen detained at Ellis Island Hospital by the immigration authorities because of venereal disease is also at the expense of the steamship companies.

TABLE 16.—*Financial provision for treatment*

Treatment provided by—	Number of beneficiaries
Total	961
United States Government	840
Steamship company	116
Foreign consulate	5

Nearly 90 per cent of the men were beneficiaries of the United States. The others were paid for in all but five instances by the steamship companies.

PROVISION FOR TREATMENT BY SHIPPING COMPANIES

Reference has been made to the survey, undertaken by the United States Public Health Service in connection with this study, to ascertain the venereal-disease control measures in the shipping industry at the port of New York. Not all the companies were interviewed, but an attempt was made to survey a sufficient number to give a fair cross-section of the practice of the industry as a whole. The information was obtained chiefly through personal interviews with officers of shipping companies. In a few instances the vessels were visited and medical officers and members of the crews were interviewed.

The activities of the shipping industry in New York against venereal disease, in addition to the examinations and inspections discussed at the beginning of Chapter III, may be included under (1) chemical prophylaxis and (2) treatment of infected individuals.

Chemical prophylaxis.—No uniformity was found in the application of chemical prophylaxis. Less than half of the companies surveyed had made any attempt to distribute prophylactic tubes among the men on the ships and few had provided even very simple prophylactic stations. The report states:

> While prophylactic tubes are distributed on ships by some of the companies, it is believed that, with the exception of two or three lines, little is being done in an intensive way to encourage the use of chemical prophylaxis by the members of crews on American vessels. It is not believed that this method of prevention can be made effective unless an intensive effort is made, through the development of active interests on the part of masters and other ships' officers, to see that the men actually are urged to protect themselves after exposure.

Treatment of infected individuals.—It appears to be the practice on all ships carrying medical officers to furnish temporary treatment, free or otherwise, for cases of venereal disease developing at sea. Such ships are relatively few as compared with the total number of vessels operated out of New York, since ships carrying less than 50 passengers are not required to have a doctor and it is doubtful whether treatment given at sea plays any important part in the control of venereal disease among seamen generally. This means that the majority of men sailing on cargo boats and freighters must trust to the diagnosis of captain, boatswain, or chief steward. Of service here is the recent law which requires of masters, mates, and pilots first-aid knowledge of various diseases, as well as the ship's manual of treatment published by the United States Public Health Service.

On the other hand, it seems to be the general practice to hospitalize at foreign ports, cases of venereal disease discovered on voyages away from the United States. In some instances the company pays for the treatment and in others the cost is deducted from the seaman's wages. On two of the lines surveyed the ships' medical officers are authorized to charge seamen for treatment for venereal diseases at

sea at the rate of $10 to $12 a voyage. The high cost of the necessary drugs is undoubtedly a factor in these charges.

With reference to this custom the report reads:

> The practice of permitting ships' surgeons to charge for treatment given at sea, which exists on some of the lines, is considered a matter of no little importance in connection with control of venereal diseases among the men. This practice causes the concealment of many cases which would seek treatment aboard ship if such treatment were furnished free. This lack of treatment in the early stage, particularly of syphilis, often decreases the probability of cure, and in the case of gonorrhea results in complications which cause unnecessary disability for the sailor.

While a Supreme Court interpretation of the common law has indicated in a broad way that seamen are entitled to "maintenance and cure" if they "fall sick in the service of the ship," it frequently has been held by other competent legal authority that to be entitled to medical relief at the expense of his employer the seaman must not have acquired his disease away from the ship and as a result of his own misconduct. It appears, therefore, that the companies are not legally bound to furnish free treatment for venereal disease, although many of them do so. On this point attention is called to the decision of the Comptroller General to which reference has already been made.[4]

In a general way it may be said that control measures against venereal disease appear to be receiving more direct attention by foreign companies operating out of New York than by American companies. This may in part be due to immigration requirements.

PROVISION FOR TREATMENT BY UNITED STATES GOVERNMENT

The United States Public Health Service, as already stated, maintains three hospitals in the Port of New York for the treatment of seamen. These are located at Ellis Island, at Stapleton (Staten Island), and at 67 Hudson Street (Manhattan).

Ellis Island Hospital.—The venereal disease section of Ellis Island Hospital at the time when this study was made, consisted of nine wards with a capacity of about 175. The patients in these wards were (1) members of the crews of vessels flying the American flag, some of whom were American citizens and others, aliens; (2) Coast Guardsmen; (3) alien seamen employed on vessels flying foreign flags, who were sent to the hospital by immigration officials; and (4) aliens detained at the request of the immigration authorities because of venereal infections.

Conditions at Ellis Island Hospital were the subject of comment in the annual report of the Surgeon General of the United States Public Health Service for the fiscal year 1928.[5]

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[4] See p. 852.

[5] Annual report of the Surgeon General of the Public Health Service of the United States for the fiscal year 1928, p. 251.

During the winter months the wards devoted to acute cases were almost constantly filled, and on various occasions it was a problem to find beds for new arrivals. This hospital, designated several years ago to receive only the overflow patients from the marine hospital at Stapleton, which is kept filled at all times with merchant seamen, now treats more merchant seamen and other old-line beneficiaries than immigrants * * *. This, coupled with the fact that the tenure of occupancy at Ellis Island is temporary and uncertain, emphasizes the urgent need for new construction to enlarge the marine hospital at Stapleton.

The hospital buildings are in bad physical condition. Only emergency repairs have been made, and although * * * $117,000 for hospital improvement [was voted in 1928], the medical officer in charge states that "a sum five times the amount of the present appropriation is needed to renovate the entire plant." He believes that unless the additional and necessary repairs are made, the hospital will not be habitable much longer.

The lack of outdoor recreational facilities for nurses and other employees, inadequate quarters for attendants, and the lack of any housekeeping facilities for married officers are detrimental to the operation of the hospital.

Stapleton Hospital.—The Stapleton Hospital, beautifully situated on Staten Island at the Narrows, had two wards reserved for venereal cases at the time of the study, each with 29 beds—a total of 58 beds for such cases in a 288-bed hospital.

The hospital accommodation was inadequate, for the Surgeon General's report stated further with reference to this hospital:

The need for a larger hospital is evidenced not only by the fact that nearly 1,782 merchant seamen were diverted to the marine hospital at Ellis Island, which merchant seamen are reluctant to enter, but during the past winter it was not an uncommon occurrence for patients applying for admission at Stapleton to be kept waiting in the office until beds could be made available for them by the discharge of other patients still in need of hospital care, but less so than the new arrivals. It has been repeatedly necessary to discharge patients, sometimes homeless, who should have remained in the hospital until fit for duty, to make room for new arrivals more acutely ill.[6]

The Treasury Department has recently authorized the expenditure of $2,500,000 for new construction at the Stapleton Hospital. Petitions had been received from merchants and civic associations in Stapleton requesting that the institution be removed to Quarantine Station on the ground that it was arresting development in the near-by district, but the shipping interests in New York Harbor opposed a new site as being less convenient for sick and injured seamen.

Hudson Street Hospital.—Hudson Street Hospital, although fully equipped as a hospital in all matters except ward facilities, is operated solely as an out-patient service, with substations at the barge office, post-office building on Thirty-third Street, and the Seamen's Church Institute, 25 South Street. At this hospital, patients are treated whose condition is not serious enough to require hospitalization or who have originally been in the hospital and require follow-up attention.

[6] Ibid., page 260.

The ideal toward which the physicians in charge are working is that the patient should take a 6-weeks' course of treatment for syphilis, then go to sea for his rest period of 10 weeks before reporting for a second course. This procedure should then be repeated until cure is effected. Such a plan is obviously dependent upon the continuous cooperation of the patient and upon his ability both to find work while on shore, or otherwise to maintain himself, and to find sea employment that fits into the plan. In a gratifying number of cases the goal has been reached.

Treatment cards.—Since much of the hospital care given seamen is incomplete, the Public Health Service has recently issued a "treatment card" for their use. This card provides space for diagnoses and a record of treatment received so that the sailor, in passing from port to port and from doctor to doctor, may continue treatment without loss of time. These cards are not yet in routine operation, at least in the port of New York. Their usefulness would be increased if on the back were printed a list of the marine hospitals in the United States with addresses, office hours, and other pertinent information. This should also be posted on all American boats. There have been instances of men in need of immediate hospital care reporting to Hudson Street Hospital. After waiting to see the admission officer they would learn that that particular hospital did not give bed care, would then have to return to their ship, or spend the night elsewhere, and make the trip to Stapleton Hospital the next day. It is important to have widely disseminated the information which would obviate such dangerous delays.

REFERRAL OF CASES AND THEIR TREATMENT

The schedules in this sample study contained items relating to the referral of the men to the hospital and their treatment both previous to and after admission to hospital.[7]

How referred to hospital.—The patients' replies as to how they were referred to hospital at the time of the study are summarized as follows:

TABLE 17.—*Referral to hospital*

Referred by—	Number
Total	961
Own initiative	332
Steamship lines	216
Immigration Department	102
Hospitals and other agencies	272
Individuals	14
No data	25

[7] Much of this material was analyzed and tabulated by the Social Hygiene Committee of the New York Tuberculosis and Health Association.

Type of hospital patient.—The patients were classified into in and out patients according to whether they were under treatment at Ellis Island and Stapleton Hospitals or, in the latter case, at the Hudson Street office. The in-patients were further grouped into two classes—those who at the time of the interview were confined to bed and those who then were ambulatory.

TABLE 18.—*Type of hospital patient*

Type	Number
Total	961
In-patients	587
Ambulatory	384
Bed	5
Not specified	198
Out-patients	374

The out-patients were the less acute cases while the others had ordinarily been hospitalized not only for bed care but also for reasons relating to public safety.

Treatment previous to admission.—Table 19 shows the type of treatment the men reported receiving before admission to hospital at time of the study. It will be recalled that some of them were chronic cases of long standing and that one-half of them reported previous infections. Some 300 of the men reported having had two, three, four, or five of the types of treatment specified in the table.

TABLE 19.—*Treatment previous to admission to hospital*

Type of treatment	Number
Institution	397
Self-treatment	379
Private physician	213
Ship's physician	75
Drug store	66
Ship's officer	14
"Quack"	5
No previous treatment	159
No data	33

From this it is clear that ships' physicians are playing a minor rôle in the care of venereal diseases, while the amount of "self-treatment," with its use of drug-store remedies, is far too large. Among the institutions in which previous treatment had been received, were hospitals and clinics in many other ports of the United States and in foreign countries as well.

Promptness with which treatment was sought.—Members of the medical and social service staffs at the hospitals are concerned about

the length of time that often elapses after the man is "signed off" his ship on the completion of the voyage before he reports to the hospital. It seems to be the practice with many not to report until they have spent the money received as wages for the last trip and are practically stranded. This leads to a train of grave consequences for the in-patients when later they are discharged from Stapleton or Ellis Island. After leaving the hospital without funds they are often obliged to "sign on" another ship immediately, although they may have been referred to Hudson Street for further treatment. For the out-patient hospital this delay in beginning treatment presents a peculiarly serious problem, since employment and maintenance have to be found if the patient is to receive the required care. The difficulties involved are considered later in this chapter.

Table 20 indicates the time the men were unemployed before beginning treatment.

TABLE 20.—*Time unemployed at admission to hospital*

Time unemployed	Number of patients		
	Total	Ellis Island and Stapleton Hospitals	Hudson Street Hospital
Total	961	587	374
None	407	297	110
Less than 1 week	217	124	93
1 week and less than 1 month	162	86	76
1 month	79	43	36
2 months	24	14	10
3 months	6	5	1
4 months	4	3	1
5 months	1	1	
6 months	2	2	
7 months	2	1	1
No data	57	11	46

More than one-quarter of the patients, it will be noted, had been unemployed more than a week and an eighth more than a month before they reported for treatment.

Length of time under care.—Something of the amount of attention and service devoted to these cases may be gleaned from examining the length of time they were under care. In 813 instances a record of the date of the patient's discharge was entered on the schedule. The remainder were still open at the close of the study. The number of days under care for all the discharged patients and for patients still under care at the close of the study is given in Table 21.

TABLE 21.—*Time under care*

Time under care	For discharged patients[1]	For patients still under care
Total	813	148
Less than 1 day	18	3
1 day and less than 1 week	50	8
1 week and less than 2 weeks	70	5
2 weeks to a month	182	27
1 to 2 months	268	17
2 to 3 months	116	10
3 to 4 months	32	13
4 to 6 months	33	20
6 to 8 months	4	11
Over 8 months	2	3
Not specified	38	21

[1] Including 1 who died while under treatment.

It will be recalled that more than three-fifths of these men were in-patients, practically all ambulatory, while less than two-fifths were clinic patients who might have been aiding in their own support. The period of care for alien seamen is usually a brief one, and as a rule they are returned to their own countries on the first homeward-bound ship. In spite of these circumstances, at least 529 of those discharged and those still under treatment had received care for over one month, and at least 118 for over three months.

Status of all cases at close of study.—Table 22 gives the status of the 961 cases at the close of the study as this was recorded on the schedules.

TABLE 22.—*Status of cases at close of study*

Status	Number of patients
Total	961
Discharged	812
Treatment complete	109
Treatment incomplete	477
Interval	155
Stage not specified	71
Died while under care	1
Still under care	148

"Treatment complete" indicated that the patient had received all the treatment that the doctor then believed necessary; "treatment incomplete," that the patient gave up his treatment or was finally discharged for some reason before he had received all the treatment then considered necessary; and "interval," that the patient was to rest for a period and then return for further treatment.

Among the 812 discharged patients were 400 who had been transferred to other hospitals or to the out-patient department at Hudson

Street. It was recorded that 158 others had returned to employment—140 on sea and 18 on land. A point to be discussed later in the chapter relates to the employment difficulties of these men.

Condition on discharge.—The outcome of the care received is shown in Table 23, which gives the condition of the patients on discharge.

TABLE 23.—*Condition on discharge*

Condition	Number of patients
Total	812
Arrested	160
Improved	391
Not improved	109
Not specified	152

"Arrested" means that the disease had become latent and for practical purposes might be regarded as nonexistent at the time of discharge. "Improved" indicates a less degree of progress.

A patient may be discharged from hospital on request even if in an infectious state. The schedules indicated that 128 of the discharged patients were still infectious and 364 noninfectious.

PROVISION FOR TREATMENT BY VENEREAL-DISEASE CLINICS

An earlier section of this report [8] refers to the number of seamen who had secured treatment at the clinics for venereal disease which were locally maintained. The following pages indicate something as to the number of these institutions, their location, and conditions under which treatment is provided.

In addition to the clinic maintained at the United States Marine Hospital at Hudson Street, the 1929 Directory of Social Agencies lists 49 institutions in the city of New York with venereal disease clinics for male patients. Only 20 of these clinics, however, according to the survey made in connection with this study by the associated outpatient clinics committee of the New York Tuberculosis and Health Association, had treated any seamen for either gonorrhea or syphilis during the calendar year 1928.

All these clinics stated that venereally diseased seamen of the mercantile marine, both American and foreign, were accepted if they met the general requirements of the clinic as to residence, fees, etc.

At least four institutions of the group reporting any considerable number of cases stated that no fee was charged for treatment. Admission fees, which ranged from 20 cents to $1.50 in the nominal-fee and pay clinics, might be waived in cases of indigent seamen. The social service department, where one was connected with the clinic, investigated ability to pay.

[8] See PUBLIC HEALTH REPORTS for Apr. 11, 1930, p. 794.

The cost of medicines used in all the clinics varied. For arsphenamine the range was from no charge to $5; and for mercury, from no charge to $3. The range for a Wassermann was from no charge to $2.

Nearly all these clinics prefer not to accept seamen as out-patients, because they have found that, as a rule, seamen become delinquent after a few visits and fail to follow out the entire course of treatment suggested by the doctors. In the survey referred to above, two institutions made a careful check of their records to ascertain how many of their patients returned for treatment. At one institution it was found that of 27 seamen registered in the syphilis clinic, 7 made from 2 to 10 visits; 5 made more than 10. These 5 patients received more than the first series of treatments. In another clinic, of 38 seamen registered for syphilis, 19 returned; of the 28 registered for gonorrhea, 16 returned. This record showed that just half—47 out of the 93 registered at the two institutions—returned for treatment. The same proportion also held in other clinics, according to the opinion ventured by their personnel.

In the majority of cases the patients were referred to the clinics, according to the findings of the survey, by other patients and friends. Consuls had referred patients to three institutions and were assuming financial responsibility for them. In only one institution was there record that steamship companies had referred seamen and paid for their treatment. Four clinics referred coastwise seamen to other ports for treatment.

Facilities for hospitalization were available at 13 of the clinics, and 15 others, with no facilities for hospitalization for venereal diseases, referred their patients to Bellevue Hospital, City Hospital, Metropolitan Hospital, or a United States marine hospital. The others failed to state what arrangements were made for hospitalization.

Only four clinics reported that patients had been referred for hospitalization during 1928. The number of referrals was 82. This included 11 at one institution where there was no out-patient service for venereal diseases and patients were admitted directly to the hospital for treatment. The cost of hospitalization in hospitals where treatment was not free varied from $2.50 to $5 a day.

In only a few instances was any record given to the patient as to the treatment he had received—dates and results of Wassermann tests, etc. The general policy seemed to be that no such record was given unless the patient or an interested agency requested it.

Medication was generally not given to patients for self-treatment at sea. The six institutions which did give medication for this purpose reported it was "only in acute cases of gonorrhea." "Frequently potassium iodide is given," one clinic stated, "and occasionally bismuth, where it is not possible to get medication on the boats and the patient seems to be intelligent."

With regard to the use of locally supported medical institutions, a distinction is usually drawn between those which are supported by municipal funds and those supported by funds privately raised. Among the seamen are some who are bona fide residents of New York City. These are eligible to receive any services provided for the residents of the city. Besides these there are United States citizens who are nonresidents of New York City, and there are aliens. It is questionable whether the provision of treatment for these latter classes is a local responsibility. The privately supported agencies are free to serve them. The United States Government has assumed responsibility for seamen on ships of American registry, both citizens and aliens. The management of the situation in its local, national, and even international aspects is a subject which might be explored further.

PROVISION FOR OUT-PATIENTS DURING TREATMENT

The average number of new patients who register at Hudson Street Hospital each month for out-patient treatment for the venereal diseases is about 450. For a considerable portion of these men the two great needs are land employment to provide for living expenses and maintenance until it is secured. Men in hospital for treatment who have been recently discharged from their ships with pay often spend all of it at the hospital canteen and then report for out-patient treatment practically penniless. Others soon exhaust their slender savings for living expenses while in attendance at the clinic. Sometimes when a man or boy has family or relatives in port he will not go to them for help because he is unwilling that they should know of his condition.

Sailors are proverbially improvident and their comraderie makes it easy to go a long way on the borrowing basis; but in order to avail themselves of the free treatment provided by the Government, many of the patients must be given temporary relief in the form of lodging and meals, and other emergency needs must be met until they have secured employment and become self-sustaining. The hospital service section at the Hudson Street clinic, which serves the seamen in these regards as far as its one worker finds it possible, reports that it is difficult to secure such temporary relief. The relief-giving agencies of the city maintain that sailors are the responsibility of the seamen's agencies and the seamen's agencies reply that while at times they do give relief, they were not established for this purpose and are not justified in diverting funds and attention from their proper activities. Some of the seamen's agencies have expressed the opinion that a central relief agency for seamen should be set up which could deal with the men on a case-work basis rather than on a basis of ordinary relief-giving.

Maintenance.—Only a limited number of seamen's agencies provide sleeping accommodation in their buildings, and only two or three of these at most could be counted upon to respond to appeals from the hospital service section on behalf of men reporting for treatment without money or work. Considerable telephoning was involved in each instance and the burden of this relief giving fell heaviest on one agency.

Frank discussion of the situation at meetings of the seamen's section of the Welfare Council resulted in a plan, to which all the agencies concerned agreed in principle, by which quotas would be set for the seamen's agencies, and the social service worker at Hudson Street could call upon them for sleeping accommodation for that number of men each day. The two agencies which assumed quotas were the Seamen's Church Institute and the Sailors' Home and Institute of the American Seamen's Friend Society. The plan was in successful operation from March until the middle of May, 1929, although the desired provision for 20 was not attained. This arrangement also enabled the social service worker to concentrate upon more constructive aspects of the social and physical rehabilitation of out-patients; but in May the Seamen's Church Institute found it necessary to revert to the former basis of caring for men upon request.

Hudson Street Hospital has a social service auxiliary, a volunteer committee seriously interested in the social service work at the hospital and its development.[9] The committee has made available a relief fund to provide meal tickets, carfare, and other incidental expenses, outright or by loan according to circumstances.

Employment.—Placing these men in suitable shore jobs presents many obstacles, although evening clinics are provided so that reporting for treatment need not interfere with work. The hospital service section itself is able to place some men directly or through an employment bureau and others find their own jobs, often of a type detrimental to their own or the public health, as, for example, work in restaurants; but a large number go back to sea while still in need of treatment. The Seamen's Service Conference in 1925 appointed a special committee to consider temporary employment of venereally diseased patients. One of the physicians at Hudson Street Hospital reported to this committee that in one month 365 men in need of treatment had shipped out because of failure to find employment on land to maintain themselves for the period required.

Temporary work only is needed, since the patient must ordinarily return to sea within 60 days if he is to retain his status as seaman, and so he joins the city's floating population of casual workers. Certain jobs are closed to the man under treatment—those in hospitals, hotels, restaurants, and factories where food or candy is handled—because medical certificates are required for such employ-

[9] The committee has met the standards set up by the American Association of Hospital Social Workers and is a corporate member of the association.

ment; but, as indicated above, the regulations are not always enforced. Some seamen who have never worked on shore are very difficult to place. The popular view that seamen are not dependable also militates against their suitable placement.

As the men are physically below par they can not undertake burdensome tasks. When they overtax themselves, many break down and have to cease work altogether. Some require light work because they are weakened by the periods of fasting incidental to their treatment.

The hospital service section has developed a clientele of employers through whom it places men in jobs as porters, watchmen, elevator operators, ushers, and "stand-by" workers during the day on ships tied up in the harbor. There is not a large number of such jobs, and fee-charging employment agencies are used and fees for the jobs are advanced by the Social Service Auxiliary of the hospital. Men sent to these agencies are carefully instructed as to the kind of work they should do.

Table 24 indicates for the 110 Hudson Street patients for whom information was available on the schedules, the number employed while under treatment, how this employment was secured, and its type. There were 53 who were not employed, and of the remainder many undoubtedly had secured work but failed to report that fact. As in most occupational classifications, the terms are often overlapping and do not indicate clearly the work undertaken, but the table will give some understanding of the kind of employment the men secured.

TABLE 24.—*Employment while under treatment*

Type of work	How secured			
	Total	Hospital	Employment bureau	Own initiative
Total	110	17	25	68
Not specified	35	2	9	24
Odd jobs	16	5	2	9
Harbor service	9			9
Porter	6	3	2	1
Watchman	6	1	1	4
Elevator operator	5	1	1	3
Laborer	5		1	4
Factory hand	3	1	1	1
Messenger	3	1	1	1
Painter	3	1		2
Fireman	2		2	
Bartender	1		1	
Bricklayer	1			1
Carpenter	1			1
Check room manager	1		1	
Employment scout	1			1
Furrier	1			1
Janitor	1			1
Lather	1		1	
Machinist	1			1
Machinist's helper	1			1
Mechanic	1	1		
Nurseryman	1			1
Radio assembler	1		1	
Stenographer	1		1	
Supervisor on interior decorations of buildings	1			1
Waiter	1			1
Window cleaner	1	1		

In times of more or less serious unemployment, when permanent residents of New York are searching in vain for jobs, it becomes impossible to find short-time employment for these seamen. Many of them then become discouraged and "sign on" again with treatment incomplete.

The Employment Center for the Handicapped, set up in 1927 by the amalgamation of four agencies for the placement of handicapped workers, continued the practice it had inherited of accepting for placement seamen under treatment for venereal disease. It understood the problems involved and came to be regarded as a valuable resource, but after a time it found that it was overburdened with the number of out-patients registered from Hudson Street. It finally decided, and the decision was regarded as justifiable by the seamen's agencies concerned, that it would no longer accept syphilitic cases for placement in short-time jobs but would continue to accept gonorrheal cases, since the term of treatment for the latter was often of several months' duration. Some of these men may have lost their status as seamen in continuing treatment beyond 60 days.

The "selling" of handicapped people to employers is a slow and costly undertaking, and employees who do not remain on their jobs jeopardize the whole work of the placement organization. An employer who has been educated into setting aside jobs for handicapped men does not understand why an apparently able-bodied man should be sent as an applicant. The Center had faced these problems and also realized that designating seamen as "handicapped" injured their chances of employment, because some employers would not consider them if they knew or suspected the nature of the handicap. The question arose also as to whether the men presented a real physical handicap in that they were not permanently incapacitated and whether after all, preference should not be given, when there were not enough jobs, to the more seriously handicapped applicants.

Sheltered Workshop: The project for a convalescent or sheltered workshop for the seamen who can not be absorbed into industry is under discussion by committees from the seamen's and employment sections of the Welfare Council. While the sheltered workshop is costly to operate, the expense would probably be less than that involved in relief as now granted. And, in addition, an opportunity for the patients to do some special work in which they were interested with the consequent relief from worry as to means of subsistence, would have its own curative effect.

Cooperation between hospital social service departments and other seamen's agencies.—Early in 1929 a decision was reached by some of the seamen's agencies that the wisest policy was to centralize all relief giving around the marine hospital—that is, to give relief on the basis of physical disability. This necessitated a definite plan of

cooperation between the social service departments of these hospitals and the other seamen's agencies. The proposed relationship was discussed at meetings of the seamen's section, and in February, 1929, a committee was appointed to make recommendations. The report of the committee was submitted in March and adopted, but the plan is not yet in operation. It provided, in part, that no seaman should leave Ellis Island or Stapleton hospitals without his financial condition having first been informally ascertained and a referral slip for presentation to a seamen's agency given him if in need of relief. A system of referral between agencies and hospitals was also suggested.

Convalescent care.—Provision for convalescent care is greatly needed. The United States Public Health Service is aware that the marine hospitals at present lack such facilities, for the 1928 report of the Surgeon General, to which reference has been made,[10] stated with regard to Stapleton Hospital that it was "repeatedly necessary to discharge patients, sometimes homeless, who should have remained in the hospital until fit for duty, to make room for new arrivals more acutely ill." A similar situation is developing at Ellis Island. Others not sick enough to be in hospital are yet too sick to return to work. While the enlargement of the hospital at Stapleton undoubtedly will reduce the amount of premature discharging, it is ordinarily uneconomical to use hospital beds for convalescent patients.

Some of the seamen's agencies have complained that they are being forced to provide convalescent care when seamen come to them too weakened in health to work and without funds. Many are said to be sent from Stapleton Hospital to the Seamen's Church Institute, where they are allowed accommodation without charge for a few days. Other agencies also give lodging and meals to men in need of convalescent care.

While resources for the care of convalescent patients in New York are substantial, it is true that this class of patient is not eligible to enter many of these institutions. Some convalescent homes have met the need in part by caring for convalescent seamen whose venereal condition has cleared up but who have other difficulties remaining, such as anemia or heart condition. Certain agencies have been able to provide clothing and transportation for needy seamen being sent to these homes for convalescent care.

The schedules brought to light two further aspects of this question. First, chronic cases are sometimes retained in the hospital when further medical care is of no avail, and they should be transferred elsewhere, perhaps to Sailors' Snug Harbor or some other institution. The case of a man of 56 may be cited as an illustration. This patient was treated for two and a half months for his condition of blindness (tertiary syphilis) and discharged as incurable. After a month's

[10] See p. 856.

absence he returned, reported his wife was too old and feeble to give him any home care, and was readmitted. The doctor in charge stated the case was hopeless and beyond medical aid. At the close of the study, five months later, the man was still in the hospital. At Ellis Island Hospital considerable progress has been made in transferring chronic cases elsewhere.

The chaplain's department at the Staten Island Hospital evidently was unable to help the seamen who were discharged in a penniless condition or failed to realize the situation revealed by many of these records. The following quotations from a few of them show the need:

"Without even car fare to New York City from Staten Island, no home and no employment"; "absolutely without funds or employment"; "destitute, no clothing, no work"; "no work, no funds"; "without work, funds, or home"; "without funds, not even car fare, and no employment"; "no home, no money, not sufficient clothing to keep warm"; "discharged to continue treatment at No. 70 (16 years old), not a cent in his pocket and no home."

The necessity for the provision of convalescent care as a link in the chain of effective treatment of the sick is everywhere recognized. Especially is it essential for patients without homes or families. Without it, there is often a loss of the investment already made in hospital treatment.

The logic which lies back of the demand for resources for convalescent care grows out of two circumstances: First, it is wasteful to give a man an expensive course of treatment if it just falls short of setting him back firmly on his own feet and he is turned out to drift for himself at a critical and uncertain period in his physical and mental rehabilitation; second, it is wasteful to prolong the stay of a patient in the hospital beyond the time when he needs active hospital care.

SEAMEN'S COMMENTS

Suggestions made by the seamen as to treatment mainly concerned provision for prophylaxis. The statement of a British sailor that if free prophylactic treatment were provided for sailors by the ship's authorities, he and other members of the crew would take advantage of it, was confirmed by several. On the other hand, different seamen who had served in the Navy regretted that the merchant marine, unlike the Navy, could not require men to take treatment and thought that very few would voluntarily seek it. Fewer suggested that prophylactic treatment after shore leave should be compulsory than thought seamen would welcome facilities for such treatment under competent instruction.

Complaint was made that after an infection appeared there was no medical treatment available; even though a medicine chest was aboard, there was no one to tell what medicine to use or how. In-

stances were given of men who had applied to officers for remedies but found none to be available and so throughout the voyage had only such treatment as members of the crew suggested.

The custom of fee charging by the ship's doctor was referred to in several cases. Perhaps this was largely due to the drugs employed; but treatment that had been begun was soon discontinued because of the expense involved.

CHAPTER V

SOCIAL FACTORS IN THE PROBLEM

In an earlier section reference was made to the necessity of understanding the social characteristics of these seamen if proper steps were to be taken to protect their families and other members of the community from the spread of the venereal diseases through them. In that section, their ages, marital condition, and citizenship status were reviewed. It is now proposed to supplement those data with other information on their educational background, employment, use of leisure time on shipboard and on shore leave, and knowledge of the diseases before infection.

EDUCATIONAL STATUS

Schooling.—The school-leaving age and the grade then attained, as reported by the seamen studied, have been tabulated in Tables 25 and 26.

TABLE 25.—*School-leaving age*

Age at leaving school	Number
Total	961
No schooling	26
Under 10	17
10 to 14	424
15	158
16	139
17	74
18	31
19	19
20 and over	47
No data	26

Table 25 shows that the men for whom data were given fall into two equal groups—those who had received no schooling or had attended only to 14 years of age (467) and those whose schooling continued after they were 14 (468). The 26 with no schooling included 18 negroes, five white men, two Chinese, and one American Indian. Four of the negroes and two of the white men were born in the United States; 21 of the group were single. Despite the fact of

no schooling, five were able to read one language and three could read, write, and speak their native language and had a reading knowledge of another.

The school grade attained or completed is indicated in Table 26.

TABLE 26.—*Grade attained on leaving school*

Grade	Number
Total	961
No schooling	26
Third grade	39
Fourth and fifth grades	94
Sixth and seventh grades	222
Eighth grade	270
1 year of high school	46
2 years of high school	57
3 years of high school	22
4 years of high school	63
1 or more years of college	25
No data	97

Of the 838 who gave information as to their progress in school, 213 had instruction in high school or college. Among the 625 who did not begin high school, 270 reported that they had reached or completed the eighth grade. In the whole group of 961 men, therefore, 40 per cent had received either no schooling or less than an eighth-grade education; 28 per cent had left school with the eighth grade, and 22 per cent had some high-school or college work.

Literacy.—Table 27 summarizes the data available on the men's reading, writing, and speaking knowledge of English and languages other than English and relates these data to the racial groups.

TABLE 27.—*Literacy, by race and principal language*

Knowledge of languages	Race			
	Total	White	Negro	Other
Total	961	784	147	30
Reads, writes, and speaks	931	775	128	28
English as principal language	587	502	76	9
No other language	475	407	63	5
Some knowledge of one or more others	112	95	13	4
Other than English as principal language	344	273	52	19
No other language	31	21	10	----
Some knowledge of one or more others, but no English	3	2	1	----
Some knowledge of one or more others, including English	310	250	41	19
Speaks, but can not read or write	28	8	18	2
English as principal language	14	7	7	----
No other language	7	2	5	----
Some speaking knowledge of one or more others	7	5	2	----
Other than English as principal language	14	1	11	2
No other language	10	1	7	2
Some speaking knowledge of one or more others, but no English	3	----	3	----
Some speaking knowledge of one or more others, including English	1	----	1	----
No data	2	1	1	----

Thus it appears that written information could be read in English by 897 of the 961 men. Foreign languages would be required by 34

and oral instruction by 28. In 13 of these latter cases it would be necessary to give this information in a language other than English.

Some knowledge of three or more languages was claimed by 77 of the men—43, two other languages; 28, three others; and 6, four others.

Beside the intensely practical aspect of literacy as a condition in the education of these men on the character of their disease and its social significance, it is also of fundamental importance in the whole organization of their recreational and leisure-time interests. The man who can not even read the newspaper must be peculiarly exposed to temptation to spend his leisure in other ways.

Seamen afloat present a unique opportunity in adult education. Consideration might well be given to the provision of educational facilities for men at sea in somewhat the same way as the Frontier College of Canada has functioned for the workers in the remote lumber and construction camps of the Dominion.[11]

WORK AND WAGES

The appeal of the sea when once "in the blood" is hard to resist. Occasionally a sailor may try employment on shore, but sooner or later he is likely to return to sea. Seamen have been the victims of harsh and unjust conditions of work, and despite the improvement that has taken place, their life is not an easy one.

The seamen's act of 1915, frequently referred to as the La Follette law, was the culmination of more than 100 years of effort to secure legislation to better conditions of employment at sea. It is entitled "An act to promote the welfare of American seamen in the merchant marine of the United States."

Shipping offices.—Among the evils to which seamen were long subject was the payment of excessive charges to "crimps," or keepers of sailors' lodging houses, and others acting as agents for the supplying of ships' crews. The disgraceful conditions which formerly obtained with reference to the shipping of seamen is described in the following quotation from an address delivered in 1899 by the Rev. A. R. Mansfield (who at that time was just entering upon his long period of work with the organization now known as the Seamen's Church Institute of New York) and printed in the Sailors' Magazine for December, 1899:

> Only those who are in close touch with shipping interests, or who are well informed, know what tyranny exists. * * * When a ship arrives, has been made fast to the wharf, or anchored down the bay, the runners for those worst of men, the boarding-house masters, board her, in some cases with the owners' or agents' permission, and demand the sailor to tell where he intends to board, and with bottles of rum induce him, by misrepresentation, by flattery, by threats, they try to secure him, and if these fail, and a ready and satisfactory answer is

[11] The bunkhouse man—a study of work and play in the camps of Canada, 1903–1914. By Edmund W. Bradwin. New York. Columbia University Press, 1928.

not given, I know for a fact in many cases he receives an unexpected blow, which nearly or altogether stuns him.

Too strong language can not be used to describe and condemn most of these sailor houses and resorts. The sailor's stay in port may be a week, a month, or longer, according to the amount of wages due him, but his treatment will be the same as long as his money lasts, and when it has gone he will as surely be cast adrift.

You know the old story, how the boarding-house keeper makes a trifling advance of money, and what is worse, of credit, when the sailor lands because a number of days elapse before the shipowners pay off their crews, and "Jack," who, because he has been drunk and stupid, does not know what has occurred, when paid off is presented with a heavy bill for money advanced. If the bill represents a larger amount than the wages, the sailor is shipped off at once, an allotment note is given to the boarding-house keeper (which system, by the way, has been the cause of the greatest abuses—the one great cause of the deterioration of seamen), who declares the sum is owing him for board and clothing.

The Seamen's Christian Association, in its 1928 annual report, records a similar story:

Under former working conditions the seaman landed in port in debt; had to go to a credit lodging house; was kept there until he had run up a big enough debt to cover all that he could earn on the next voyage when he was taken by the boarding-house keeper as a mere chattel and delivered to the captain of the outgoing ship, who cashed (at a substantial discount) the promissory note of the poor wretch for all that he was going to earn during the coming voyage. Of course, he landed in the next port again penniless and the same process was repeated until the end of his life. He was never able to check or audit the accounts, and it is said that he was usually charged for items never incurred.

The seamen's welfare agencies in the port helped in the fight to abolish this custom of shipping seamen. No seaman may now be charged a fee for a job on seaboard. The seamen's act makes it unlawful to receive or dispose of seamen's wages in any way prior to their being earned; but the facilities in the port of New York for securing jobs at sea are unorganized. Steamship companies, fee-charging employment agencies (fees paid by the steamship companies), seamen's unions, and philanthropic agencies for seamen all place men on shipboard. Some steamship companies maintain their own shipping bureaus and so bear the cost of securing crews; others make use of fee-charging employment offices or the eight offices maintained by the philanthropic agencies. The companies pay these agencies for this service directly or give donations for their work.

The employment bureaus maintained by the seamen's philanthropic agencies provide land employment as well. This work presents difficulties that have been described in the section on employment problems of men under hospital treatment.[12]

Even if the law is strictly observed, and there is much hearsay evidence that sailors often find it advantageous to tip the shipping

[12] See pp. 864 and 865.

agent, the unemployed sailor may still be under the necessity of visiting dozens of employment offices before he secures a berth.

The task of introducing some system into this chaotic field of employment might well be studied by the employment committee recently appointed by the State commissioner of labor and under whose auspices a study is being made of the public employment facilities in New York City maintained by the State department of labor.

If ever the United States Employment Service should be established on an efficient basis, consideration might well be given to setting up on a national basis a division for seamen which should have regard for their peculiar employment problems. In this connection it should be recalled that the second International Labor Conference, held at Genoa in 1920, discussed "the provision of facilities for finding employment for seamen." A draft convention was adopted providing that the business of finding employment for seamen should not be carried on as a commercial enterprise for pecuniary gain, but that free public employment offices should be provided, either jointly by representative associations of shipowners and seamen under the control of a central authority, or, in the absence of such joint action, by the State itself. By January, 1929, this convention had been ratified by 16 members of the International Labor Organization in addition to action by separate States or Provinces of federal countries.

Articles of agreement.—At the beginning of a voyage articles of agreement are signed. These specify wages, destination of the vessel, and other particulars, and constitute the contract between the sailor and the ship's master. If the ship is sailing to a foreign port or to a United States port on the Pacific coast, the articles must be signed before a shipping commissioner, but if the vessel is "engaged in the coastwise trade, or the trade between the United States and the Dominion of Canada, or Newfoundland, or the West Indies, or the Republic of Mexico," this procedure is optional, at the request of the master or owner.

The New York Legal Aid Society, as the result of cases before its seamen's branch, has recommended legislation to make it compulsory that all shipping articles be signed before a shipping commissioner. The attorney in chief of the society, in his annual report for 1927, wrote:

> I can not emphasize too strongly my unchangeable opinion that all seamen should sign articles before a shipping commissioner. From my observations of many years I am able to bear witness that section 4520 of the Revised Statutes of the United States, which dispenses with the shipping commissioner both on signing on and paying off, works unnecessary and inexcusable hardships on the men. As it is now constituted, the law, in such cases, makes the captain the king of all he surveys. He prepares the articles, without any supervision on the part of any disinterested agency, he prefers charges against members of his crew, hears the cases, determines the facts, and passes judgment. In the ordinary course of

events he logs the alleged offender and nobody checks up on him. Incidentally all loggings revert to the companies.

I would suggest that the law provide the following: (1) All articles should be signed before a shipping commissioner; (2) the shipping commissioner should supervise all pay offs; (3) all disputes relative to loggings may, at the option of the parties, be referred to the shipping commissioner for decision; (4) all fines and forfeitures in pay, less the costs of hiring substitutes, should be turned over to the United States shipping commissioner to be disposed of as are unclaimed deserters' wages under the present law.[13]

The 1928 report also urged legislation in this regard.

The possibility of drafting an international code of law for the regulation of conditions on board ship, and particularly the relationships between seamen and their employers, was discussed at the first maritime session of the International Labor Organization in 1920 and has been prominently before it since. The commission set up to study the question drew attention in its report to the fact that in most countries a systematic codification of seamen's law has not yet been undertaken; but, because "seamen form to a large extent an international community," it considered a common international code desirable. The 1921 conference adopted the commission's proposal that each member of the organization should as a first step "undertake the embodiment in a seamen's code of all its laws and regulations relating to seamen in their activities as such." The International Labor Office was requested to make, with the least possible delay, the investigations necessary for establishing such a code and has issued a 900-page volume on "Seamen's Articles of Agreement." This volume contains a collection of laws and regulations relating to the engagement, discharge, repatriation, and discipline of seamen in various countries, and the legislation of 40 different countries, including the United States, has been arranged in such a way as to bring out the points common to any of them and the differences which may exist between them. At the 1926 International Labor Conference a draft convention on the subject was adopted. By January, 1929, four members of the organization had incorporated it in their legislation.

A bill for the codification of the existing navigation laws of the United States was introduced into the Senate in November, 1926. It was not considered at that session, although the Committee on Commerce reported unanimously in favor of its adoption. Since then the Shipping Board has published an extensive list of suggested amendments, but these have been strongly criticized by the International Seamen's Union. The bill has not yet been enacted into law.

Discharge.—When a seaman completes a foreign or intercoastal voyage he must be discharged and paid off before a shipping commissioner. Discharge before a commissioner is optional at the

[13] Annual report of the Legal Aid Society for the year 1927, pp. 37-38.

conclusion of other voyages under the same conditions as for the signing of articles of agreement. The master gives the seaman a certificate of discharge, which specifies the name of the vessel, nature and duration of the voyage, capacity on board, and time and place of discharge, and gives as well a report on "conduct, character, and qualifications," or the master may state that he declines to give a report upon any or all of such particulars of conduct.

Seamen encounter many difficulties because they have not retained their discharges.[14] These are necessary, for example, to prove eligibility for free treatment by the Public Health Service, for admission to Sailors' Snug Harbor, and for naturalization as a seaman.

It has been urged that discharges be issued in book form to constitute a "continuous discharge book." A few companies do this. Objection has been made by seamen on the ground that the report on character forms part of the discharge. In no other line of work, they say, do records of a man's experience and of his former employers' estimates of his character form part of a permanent record of employment that is brought to the attention of every prospective employer. Such a record, they assert, often brings to his attention unfavorable incidents of many years previous that may have been completely lived down and further may also involve the personal whims and prejudices of former employers.

With regard to this character record, the draft convention concerning seamen's articles of agreement, which was adopted by the 1926 International Labor Conference, stipulates that any document containing a record of a seamen's employment on board a vessel "shall contain no statement as to the quality of his work."

It would seem that provision might well be made for the adoption of the continuous discharge book containing records "limited to matters of fact and not of opinion."

Occupation on ship.—When on shipboard seamen are required to do a certain amount of work or to stand their watches. There is time off for rest and recreation and then there is a watch again. The work varies from that which needs little more than physical strength to occupations demanding highly trained and professional men. Nautical schools maintained by four states—Massachusetts, New York, Pennsylvania, and Texas—train young Americans for service in the merchant marine, and several shipping companies have cadet corps to train young men for ships' officers.

The men in this study were grouped, according to employment on ship, as licensed officers, members of the deck, engine, or steward's departments, and others, the latter being a miscellaneous group com-

[14] A nationally organized employment service for seamen would doubtless have as one of its functions the maintenance of individual records, copies of which could be supplied on request.

posed, for example, of musicians or those engaged in personal service on the passenger liners.

TABLE 28.—*Occupation on ship*

Occupation	Number
Total	961
Deck department	357
Engine department	313
Steward's department	273
Other	10
Licensed officer	8

The large number in the steward's department attracts attention in view of the interstate quarantine regulations previously referred to,[15] providing that on vessels in operation in interstate traffic no person shall be employed as a cook or waiter or otherwise in the serving of food who is known or suspected to have any communicable disease. It seems likely that some of these men were so employed.

Previous occupation.—The wide range of occupations in which the men had been engaged previous to discharge at end of their last sea voyage is indicated in Tables 29 and 30. The previous employment for 720 has been classified as on sea, for 225 on land, and for 16 there was no information. It was often difficult to decide from information recorded on the schedule whether the employment specified had been on sea or land. Occupation was specified for 470 of the workers at sea and for all on land. Occupational classifications, as has been previously pointed out, often overlap and do not give a clear indication of the work involved, but the variety of occupations, particularly on land, gives added emphasis to the cosmopolitan character of the group studied.

TABLE 29.—*Previous sea occupation*

Occupation	Number	Occupation	Number
Total	720	Mate, first	1
		Mate, second	3
Able seaman	90	Mate, third	1
Baker	2	Mechanic	5
Barge captain	1	Messman	34
Boatswain	5	Musician	1
Butcher	2	Oiler	44
Carpenter	6	Ordinary seaman	15
Coal passer	6	Pantryman	4
Cook	28	Porter	1
Cook's helper	1	Printer	1
Deckhand	9	Pumpman	2
Draftsman	1	Quartermaster	12
Electrician	1	Radio operater	2
Engine department	1	Stand-by worker	1
Engineer	15	Steward	60
Engineer, third assistant	6	Trimmer	2
Fireman	72	U. S. Navy	1
Fisherman	1	Watchman	1
Galleyman	1	Watertender	11
Harbor worker	3	Winchman (lumber schooner)	1
Machinist	2	Wiper	11
Master mariner	1	Not specified	250
Mate	2		

[15] See PUBLIC HEALTH REPORTS for Apr. 11, 1930, p. 790.

TABLE 30.—*Previous land occupation*

Occupation	Number	Occupation	Number
Total	225	Iron worker	1
		Janitor	1
Actor	1	Laborer	48
Acrobat	1	Longshoreman	4
Auto mechanic	5	Machinist	5
Baker	2	Machinist's helper	1
Barber	1	Mechanic	2
Bellboy	6	Mechanic's helper	1
Bookkeeper	1	Messenger	1
Bricklayer	2	Mill worker	1
Butcher	1	Oil tester	1
Butler	1	Painter	6
Cable operator	1	Pin boy (bowling alley)	1
Candymaker	1	Pipefitter	3
Carpenter	2	Plumber's helper	1
Chauffeur	4	Policeman and detective	3
Clerk	15	Porter	1
Coal miner	3	Power engineer	1
Cook	8	Printer	1
Dairy worker	1	Printing pressman	1
Draftsman	1	Railroad shop hand	1
Driver	1	Restaurant worker	3
Driver's helper	1	Riding master	1
Electrician	4	Road construction hand	1
Electrician's helper	2	Salesman	2
Elevator operator	3	Sheet-metal worker	1
Engineer	2	Shipyard helper	1
Engine-room hand	1	Shoe store manager	1
Expressman	1	Soldier (U. S. Army)	8
Factory hand	10	Storekeeper	1
Farm and garden help	6	Street-car conductor	1
Fireman	11	Student	6
Furniture mover	1	Truckdriver	1
Garage helper	1	Upholsterer	1
Gas station helper	1	Waiter	8
Hospital attendant	1	Watchmaker	1

Employment during 1927.—The number of months of employment reported by the men for the previous year, 1927, is given below:

TABLE 31.—*Months employed during 1927*

Number of months	Number employed
Total	961
None	8
Less than 1 month	1
1 month	4
2 months	18
3 months	13
4 months	19
5 months	25
6 months	64
7 months	45
8 months	108
9 months	106
10 months	158
11 months	109
12 months	204
No data	79

One-fifth of the men (197), it will be observed, were employed for periods ranging from no employment during the year through seven months of employment; less than half of them (471) were reported to have had 10 or more months of employment.

For certain of these men a portion of the period of unemployment was undoubtedly due to stay in hospital; but such extended unem-

ployment, especially for those with small wages, means that aid from some source must be forthcoming when they are ill. Those who work with the seamen comment on the generosity which seamen show each other; but this, at most, could provide for only a part of maintenance required for weeks, and even months, of idleness. An earlier chapter has commented on difficulties involved in securing employment while under out-patient treatment.[16]

Length of sea service.—The periods of time during which these men have followed the sea show something of their life experience. It will be recalled that a high proportion of them were young men whose period of service could not have been long. Length of sea service reported—total service, and that on American and on foreign vessels—has been combined in Table 32.

TABLE 32.—*Length of sea service*

Length of service	Number of men with specified period of service				
	Total	Both services	American only	Foreign only	No data
Total	961	288	609	54	10
Under 5 years	434	58	346	30	----
Under 1 year	58	2	53	3	----
Under 6 months	19	1	16	2	----
6 months to 1 year	39	1	37	1	----
1 year	75	1	68	6	----
2 years	97	10	81	6	----
3 years	102	15	82	5	----
4 years	102	30	62	10	----
5 to 9 years	261	88	161	12	----
10 to 14 years	142	67	68	7	----
15 to 19 years	48	31	14	3	----
20 to 24 years	34	23	9	2	----
25 to 29 years	14	10	4	----	----
30 to 34 years	7	4	3	----	----
35 to 39 years	6	3	3	----	----
40 years	4	3	1	----	----
No data	11	1	----	----	10

The fact that seamen on ships of foreign registry are not eligible for free treatment in the marine hospitals, although they may receive it at the expense of their consul or steamship company, naturally operates to keep them out of these institutions and hence out of such a study as this. Nearly two-thirds of these seafaring men had sailed on American vessels only. The modal group (the group composed of men with the most frequently occurring length of service) had seen less than 5 years of sea service. Nearly one-eighth had followed the sea from 15 to 40 years.

Forty years was the longest period of sea service recorded and four men each had sailed the seas for that number of years. These were all of the white race; one was born in the United States, and the others in Ireland, Norway, and Switzerland. Two of the foreign

[16] See pp. 864 and 865.

born were naturalized and the other had taken out first papers. Two were deckhands, one was a chief mate, and the other a first engineer.

Monthly income.—The scale of wages under the United States Shipping Board is the highest for seamen on ocean and coastwise vessels, except that some companies pay more to masters. The monthly pay for master, under the Shipping Board at the time the questionnaires were filled out, ranged from $270 to $350, according to the type of vessel. Chief engineers received from $240 to $310, and first mates or first assistant engineers, from $175 to $200. The wage for an able seaman was $62.50 and for an ordinary seaman, $47.50.

Vacations with pay are not granted, and in sea service there is no scale of promotion within a rank except as one is transferred to a vessel of a higher rating. Certain of the steamship companies, both American and foreign, maintain pension schemes which give some measure of protection for old age to their beneficiaries. Bonus systems are also in operation to cut down labor turnover. If, for example, the employees of one company return after a specified number of days they receive a 5 per cent increase in wages.

Table 33 gives a distribution of the men by race and by monthly income. A man's "keep" on shipboard is given in addition to the money wage he receives when paid off at the end of the voyage.

TABLE 33.—*Monthly cash income*

Amount received	Number receiving specified amounts, by race			
	Total	White	Negro	Other
Total	961	784	147	30
No cash income	1	1		
Under $25	15	5	9	1
$25 to $49	223	155	65	3
$50 to $74	527	449	56	22
$75 to $99	94	80	11	3
$100 to $124	40	36	4	
$125 to $149	21	21		
$150 to $174	16	16		
$175 to $199	5	5		
$200 and over	8	8		
No data	11	7	3	1

More than half of the whole group, 527, or 55 per cent, were receiving from $50 to $74 a month. White men composed 85 per cent of this group and of the group receiving $75 to $99 a month (a slightly larger percentage of white men than in the whole group of 961), 90 per cent of the group receiving $100 to $124, and all the groups receiving $125 and more. More than two-thirds of those of other races were in the wage group of $50 to $74 a month, but the largest number of the negroes were receiving from $25 to $49 a month. A student on one of the State nautical school ships was receiving no cash income.

A further tabulation for the 527 in the wage group $50 to $74 a month showed that the largest number receiving any particular wage were the 95 with a monthly income each of $62.50 The next largest group, 80 in number, were receiving $65 a month. The modal monthly wage (the monthly wage received by the largest number) therefore for the 961 men was $62.50.

The lowest wage, $12 a month, was received by two Brazilian negroes. Another Brazilian negro was receiving $14; a Chinese, $15; an alien white (an apprentice officer), $16; and another alien white, $17. The last two were held at Ellis Island for deportation. The lowest wage received on a boat under American registry was $20, paid to a deck boy and an ordinary seaman.

Of the 161 white men with an income of less than $50 a month, 11, or 7 per cent, were married, while the married negroes numbered 16, or 22 per cent, of the 74 in the same income classification. Obviously their wives or other relatives assisted in the support of their homes, if they had any.

At the other end of the scale the highest wage received was $285, paid in one case only. Three were receiving $265, one $245, another an average of $225, and a sixth was receiving $218.

USE OF LEISURE TIME ON SHIPBOARD AND ASHORE

Few fields of social inquiry present greater difficulties in the collection of accurate information than does the field of leisure-time interests. This field forms, however, a most important phase of life and can not therefore be ignored. In this study the 961 men were asked to tell how they spent their leisure time and Table 34 summarizes the information received.

TABLE 34.—*Leisure-time activities*

Activity	Number of men engaging in	Number of men not engaging in	No data
Attendance at moving pictures	778	50	133
Reading	757	[1] 64	[1] 140
Drinking	720	180	61
Card playing	444	154	363
Dancing	323	201	437
Athletics	281	139	541
Pool	263	209	489
Study	133	[1] 145	[1] 683

[1] Table 27 (p. 870) shows 28 men who can not read.

With reference to reading and study it will be recalled that 28 men reported that they could not read any language. This would reduce by 28 the number who might have used their leisure for reading or study.

The men who read specified the following choices: Fiction, 488; newspapers and magazines, 235; scientific, 81; classics, 11; and history, 4. Some of these were overlapping choices.

Nautical subjects were the chief interest for study and were the first preference expressed by 53 of the men. The others were as follows: Mechanical arts, 41; languages, 9; history, 5; aviation, 3; and philosophy and sociology, 3.

The type of athletics indulged in was stated by 60 to be outdoor and by 17, indoor. Forty mentioned swimming and seven, boxing.

In answering questions as to their drinking habits, several of the men stated that they drank in foreign ports and not in American. Of the 720 who stated that they drank, 94 have been classified as drinking to excess. In many instances the seaman stated he drank "moderately" and then added he was "drunk two or three times a month." Such have been included in the 94 with those who frankly admitted that they drank to excess.

Almost one-quarter of the men stated that they had relatives in port—150, members of their immediate family and 69 others, relatives by blood or marriage. For some of this number their leave ashore would be largely spent in visiting with family or relatives. Workers in the seamen's agencies, on the other hand, report that many seamen have so completely lost touch with home and family connections that even when on leave and near, they make no effort to resume the relationship.

The popularity of somewhat sedentary activities, such as reading, motion pictures, card playing, and even drinking, stands out in this list. Only about one-third reported that they engaged in dancing and a smaller number in athletics. It is of course true that many of the seamen have daily work requiring more active physical exercise than most occupations and so they may not have the same desire or need for it as those who lead more sedentary lives.

Seamen's comments.—Almost invariably "drinks and then girls" were sought as soon as the men went ashore on leave to seek amusement after the monotony of the voyage. Scarcely any other use of time in port was mentioned. Lonesome for the companionship of women, and strangers in the city, they find that the simplest way for them to meet girls is to go to cabarets and dance halls and these came in for frequent mention as places where girls might be "picked up." One sailor reported that it was a common practice, more so in foreign than American ports, for owners of the cabarets to send men to the ships with cards advertising drinks and music. It was understood that girls were to be found there also. Mention was made that in New York printed cards were freely distributed among colored young people advertising that card parties were being organized at given addresses in Harlem. Sailors patronized these "card parties," which

were in reality week-end parties, lasting from Friday night until Monday morning. Drinks and girls were supplied.

Houses of prostitution were visited "in every port," according to statements by many sailors. Others characterized this as the routine in a sailor's life. Girls were "picked up" by many on the street as well as in dance halls, restaurants, and drinking places. Record after record stated that the sailor became intoxicated, did not recall anything beyond that, but soon developed an infection.

Probable source of first infection.—Corroboration of these statements as to use of shore leave is found in their replies to the question concerning the probable source of their first infection. Most of the men answered this question frankly and their replies are indicated in Table 35.

TABLE 35.—*Probable source of first infection*

Source	Number of patients
Total	961
Commercial prostitute	676
Charity girl	187
Conjugal	1
Accidental	4
Others	9
Not known	5
No data	79

The terms in the above table have been used as customarily employed. A "commercial prostitute" receives payment and is either found in a house of prostitution to which strangers may go, or is not easily accessible and is found by chance or by introduction from some one else. The "charity girl" may be friend or stranger, but she receives no money and very often is not a prostitute.

Place of first infection.—Some 900 of the men indicated the country and place, ordinarily a port city, where their first infection was contracted. Almost every country represented in the countries of birth of the men was reported, but it is impossible to indicate which ports constituted the greatest menace without information as to the number of trips the men's ships had made to these ports in comparison with others visited. If treatments were generally given on shipboard and careful records kept, data would then be available as to the relative standing of ports as a source of venereal-disease infection. Despite this, it may be of interest to note that the United States was specified by 410 as the country where their first infection was received. This is not surprising in view of the fact that nearly one-half of the whole group were born in the United States. New York City, with other places within the port of New York, accounted for 116 of the 410. The remainder mentioned 85 other cities, practically all seaports, as the

places where they had first become infected. The largest number tabulated for any one of these cities was under 25.

On many schedules the workers recorded information which the sailors gave as to ports in foreign countries and in the United States, as well as districts in these ports, where prostitutes were to be found in large numbers. In some cases even the names and addresses of the women and girls were given. One dance hall in New York City was mentioned in particular as a place frequented mostly by sailors and by prostitutes and other girls waiting to be "picked up." This information can be made available to authorities in all of these places if it should seem desirable to do so.

KNOWLEDGE OF DISEASES

Knowledge before infection.—The men were questioned as to the extent of their knowledge of the venereal diseases before their first infection and how this knowledge was obtained. Their replies are tabulated in Table 36.

TABLE 36.—*Extent of knowledge before first infection*

Knowledge	Number
Total	961
None	264
Vague	388
Knowledge of prevention	198
No data	111

Of the 586 who stated that they had some knowledge of the venereal diseases before infection, 542 indicated how this had been received. Table 37 gives this information.

TABLE 37.—*Source of knowledge*

Source	Number
Total	961
Friends and acquaintances	317
Printed materials	131
Army and Navy lectures	75
Others	14
Physicians	5
No knowledge	264
No data	155

Additional information on the men's knowledge of these diseases came from the workers' comments on the schedules and from statements which several seamen wrote at the request of one of the investigators. These gave their experiences and suggested means to acquaint seamen with facts about the venereal diseases.

Seamen's comments.—The definite impression gained from comments made by these seamen and by social workers in contact with them is that there is a general lack of knowledge on the venereal

diseases, much misinformation, and that the seriousness of the diseases is not realized.

One gave it as his opinion that many seamen consider an infection a trivial matter and discuss among themselves the number of cases they have had and how they have cured themselves. Others, it was said, believe infection a matter of luck and always "take a chance." Numerous records revealed that discussions of the crew among themselves were their only source of knowledge, and many men said that on shipboard they had never seen anything in print on the subject. One of these was reported to have served on 14 American vessels and another on foreign ships for 10 years.

Table 37 indicates that seamen seldom have the benefit of the advice of physicians on this matter. Even from doctors at the clinics they seemed unable to secure information. One man who had wished to make some queries of the clinic doctors discovered they were so rushed that there was no opportunity. Another patient, thinking of marriage, desired to discuss this matter with the doctor, but found him too busy. "Too many fellows around" stopped another seaman from asking the questions he had in mind.

While most of the seamen's suggestions had to do with prophylaxis, there were some who commented on the need for general information on this subject. One, for example, remarked that all seafaring men should receive clear and frank information from qualified persons on all of the aspects of these infections, for they now hear only vaguely of them. The desirability of having printed information available was also mentioned. Several asked for printed materials for themselves or friends; one sailor passed around among his mates the pamphlet given him by the social service worker, and as a result several came in for examination.

Educational campaign.—The need for instruction to seamen on the venereal diseases has been conclusively demonstrated by the seamen's comments. Work in this regard has been done by the United States Public Health Service for several years in preparing pamphlets dealing with the venereal diseases and other health matters. In its effort to reach a large part of the personnel on ships the Public Health Service has had the cooperation of the American Merchant Marine Library Association, which in 1928 placed such pamphlets on 1,848 American ships. Some of the steamship companies maintain complete medical departments, which have carried on health educational activities among members of their crews. The American Social Hygiene Association in the national field, and the social hygiene committee of the New York Tuberculosis and Health Association in the local, regard educational work as an indispensable phase of their activities.[17]

[17] The chapter on "Social Facilities for Seamen in the Port" will be published in the next issue of PUBLIC HEALTH REPORTS.

With the growth of the shipping industry and the increasing interest in public health matters generally, both public and private agencies have become more concerned about the venereal diseases, especially in their bearing on seamen. This study has served to emphasize anew the need which the Public Health Service is seeking to meet in the intensive educational campaign it has recently undertaken. In cooperation with the shipping companies, the Public Health Service has distributed material to instruct seamen in the nature and manifestations of venereal diseases and is eager to secure a wider cooperation among owners and operators of ships in making provision both for physical examination of their men and prophylactic treatment. The problem of venereal disease as it relates to seamen is considered an integral part of the whole health program—personal hygiene, hygiene of quarters, and the prevention and cure of tuberculosis and other diseases. An advance on many fronts is considered more likely to succeed in enlisting the seaman's sympathetic cooperation than repeated assault on venereal disease alone.

(The concluding chapters of this report, dealing with the social facilities for seamen in the port of New York, and presenting the conclusions, will be published in the following issue of PUBLIC HEALTH REPORTS.)

COURT DECISION RELATING TO PUBLIC HEALTH

Bovine tuberculosis eradication law upheld.—(Nebraska Supreme Court; State ex rel. Spillman, Atty. Gen., *v.* Splittgerber et al., 229 N. W. 332; decided Feb. 28, 1930.) An action was brought to enjoin the defendants from obstructing or preventing by force or otherwise any member or agent of the State department of agriculture from applying the tuberculin test to defendants' cattle, pursuant to chapter 12 of the 1927 laws. The defendants contended that the testing law was unconstitutional and sought, in a cross petition, to have the agents of the department enjoined from entering their premises for the purpose of applying the tuberculin test to their cattle. Judgment went for the plaintiff in the trial court, and on appeal to the supreme court the judgment was affirmed.

The supreme court referred to the case of State *v.* Heldt (115 Nebr. 435, 213 N. W. 578, 579), and quoted the following therefrom:

> It is within the province of the legislature in the exercise of police power to require the examination, inspection, and testing of cattle for bovine tuberculosis, and if such disease is found to exist, to make provisions for the summary destruction of the diseased animals.

The court also stated as follows:

> * * * The legislature may in the exercise of the police power require that the owners of breeding cattle submit their animals to the tuberculin test and may adopt reasonable measures for carrying out the requirement. (Fevold *v.* Board of Supervisors, 202 Iowa 1019, 210 N. W. 139.) And the legislature may use its discretion in adopting a classification making a distinction between the testing

of breeding cattle and feeding cattle when the object to be accomplished is for the public interest. * * *

DEATHS DURING WEEK ENDED APRIL 5, 1930

Summary of information received by telegraph from industrial insurance companies for the week ended April 5, 1930, and corresponding week of 1929. (From the Weekly Health Index, April 9, 1930, issued by the Bureau of the Census, Department of Commerce)

	Week ended Apr. 5, 1930	Corresponding week, 1929
Policies in force	75,712,783	73,813,366
Number of death claims	15,574	16,414
Death claims per 1,000 policies in force, annual rate	10.7	11.6

Deaths from all causes in certain large cities of the United States during the week ended April 5, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929. (From the Weekly Health Index, April 9, 1930, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Apr. 5, 1930		Annual death rate per 1,000, corresponding week, 1929	Deaths under 1 year		Infant mortality rate, week ended Apr. 5, 1930 [2]
	Total deaths	Death rate [1]		Week ended Apr. 5, 1930	Corresponding week, 1929	
Total (63 cities)	7,985	14.3	13.7	792	771	[3] 73
Akron	47			7	7	64
Albany [4]	42	18.2	16.9	4	4	87
Atlanta	74	15.1	17.0	5	11	53
White	32			2	6	63
Colored	42	(5)	(5)	3	5	48
Baltimore [4]	249	15.6	15.7	22	26	75
White	185			14	17	60
Colored	64	(5)	(5)	8	9	129
Birmingham	67	15.7	16.4	8	11	75
White	28			0	5	0
Colored	39	(5)	(5)	8	6	189
Boston	250	16.3	14.8	26	18	73
Bridgeport	34			2	2	34
Buffalo	175	16.4	14.5	24	22	107
Cambridge	35	14.5	15.3	2	2	37
Camden	42	16.2	13.1	7	6	127
Canton	20	8.9	8.5	8	1	199
Chicago [4]	819	13.5	12.5	95	73	84
Cincinnati	165			29	12	172
Cleveland	201	10.4	10.2	15	17	45
Columbus	91	15.9	11.7	13	1	127
Dallas	57	13.6	14.6	7	9	
White	44			7	5	
Colored	13	(5)	(5)	0	4	
Dayton	35	9.9	10.7	2	3	30
Denver	98	17.4	15.4	8	15	83
Des Moines	33	11.3	10.6	3	2	52
Detroit	346	13.1	13.9	54	53	83
Duluth	18	8.0	9.4	1	2	27
El Paso	39	17.3	14.2	3	8	
Erie	28			1	1	21
Fall River [4]	28	10.9	12.8	8	2	183
Flint	25	8.8	11.9	6	3	70
Fort Worth	36	11.0	15.9	4	4	
White	29			3	4	
Colored	7	(5)	(5)	1	0	
Grand Rapids	57	18.1	14.0	3	10	46
Houston	64			6	8	
White	37			4	7	
Colored	27	(5)	(5)	2	1	
Indianapolis	111	15.1	15.3	5	4	37
White	91			2	3	17
Colored	20	(5)	(5)	3	1	161
Jersey City	79	12.7	11.7	13	8	113
Kansas City, Kans	39	17.2	15.0	2	3	47
White	26			1	3	27
Colored	13	(5)	(5)	1	0	217

Footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended April 5, 1930, infant mortality, annual death rate, and comparison with corresponding week of 1929—Continued

City	Week ended Apr. 5, 1930		Annual death rate per 1,000, corresponding week, 1929	Deaths under 1 year		Infant mortality rate, week ended Apr. 5, 1930 [2]
	Total deaths	Death rate [1]		Week ended Apr. 5, 1930	Corresponding week, 1929	
Kansas City, Mo	112	14.9	14.1	8	7	62
Knoxville	20	9.9	11.4	3	1	70
White	17			3	1	78
Colored	3	(3)	(3)	0	0	0
Los Angeles	259			21	24	64
Louisville	85	13.5	10.6	6	3	52
White	65			6	3	59
Colored	20	(3)	(3)	0	0	0
Lowell	23			3	4	71
Lynn	12	5.9	10.4	1	2	25
Memphis	97	26.6	20.3	9	9	107
White	51			5	5	92
Colored	46	(3)	(3)	4	4	135
Milwaukee	111	10.6	13.3	14	28	70
Minneapolis	94	10.8	11.3	8	7	52
Nashville	73	27.3	20.2	9	3	139
White	45			6	3	123
Colored	28	(3)	(3)	3	0	190
New Bedford	32			3	3	77
New Haven	35	9.7	11.4	3	2	58
New Orleans	159	19.3	18.1	17	9	98
White	89			10	5	88
Colored	70	(3)	(3)	7	4	118
New York	1,731	15.0	13.8	138	172	58
Bronx Borough	209	11.4	10.7	7	23	16
Brooklyn Borough	586	13.2	11.7	61	55	65
Manhattan Borough	690	20.5	19.6	49	67	80
Queens Borough	195	11.9	10.9	16	23	46
Richmond Borough	51	17.6	14.5	5	4	93
Newark, N. J	108	11.9	13.8	11	14	58
Oakland	46	8.8	12.4	3	4	36
Oklahoma City	39			4	10	79
Omaha	60	14.0	15.0	2	5	23
Paterson	35	12.6	19.1	4	8	70
Philadelphia	563	14.2	13.9	62	48	92
Pittsburgh	195	15.1	15.0	24	26	88
Portland, Oreg	62			3	6	37
Providence	81	14.8	14.6	8	10	73
Richmond	49	13.1	13.9	6	5	89
White	27			3	3	67
Colored	22	(3)	(3)	3	2	131
Rochester	87	13.8	12.6	9	8	80
St. Louis	255	15.7	15.3	13	13	42
St. Paul	55			5	3	51
Salt Lake City [4]	53	20.0	11.7	6	3	94
San Diego	28			4	0	84
San Francisco	175	15.6	15.5	9	6	62
Schenectady	29	16.2	12.3	4	1	125
Somerville	20	10.2	7.6	3	3	98
Spokane	24	11.5	16.7	3	3	78
Springfield, Mass	40	13.9	15.7	3	8	47
Syracuse	51	13.3	13.6	4	9	50
Tacoma	29	13.7	12.3	1	1	26
Toledo	89	14.8	11.2	5	2	46
Trenton	34	12.8	16.5	4	5	74
Utica	44	22.0	17.0	6	1	170
Washington, D. C	156	14.7	11.8	19	9	110
White	90			6	1	52
Colored	66	(5)	(5)	13	8	231
Waterbury	19			1	2	26
Wilmington, Del	34	13.8	15.8	1	4	23
Worcester	65	17.2	18.2	8	9	104
Yonkers	27	11.6	11.2	3	2	72
Youngstown	41	12.3	9.6	7	3	110

[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.
[3] Data for 72 cities.
[4] Deaths for week ended Friday.
[5] 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 April 5, 1930, and April 6, 1929

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended April 5, 1930, and April 6, 1929

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929
New England States:								
Maine	1	7	11	7	30	293	1	1
New Hampshire	2	3	3	13	16	37	0	0
Vermont	2	2			51	2	0	0
Massachusetts	82	70	13	18	1,099	399	10	6
Rhode Island	2	14		1	2	87	0	0
Connecticut	11	23	7	19	31	587	0	4
Middle Atlantic States:								
New York	122	308	[1] 58	[1] 35	1,401	1,268	22	42
New Jersey	113	114	19	10	1,275	343	3	2
Pennsylvania	136	199			1,412	2,201	17	35
East North Central States:								
Ohio	56	53	15	110	738	1,418	8	8
Indiana	32	16			80	491	18	0
Illinois	151	136	23	34	691	1,635	16	19
Michigan	38	69	2	13	1,571	739	39	88
Wisconsin	13	20	36	30	656	914	4	0
West North Central States:								
Minnesota	10	13	1		309	682	1	1
Iowa	9	4			512	26	9	0
Missouri	23	30	12	1	113	107	18	21
North Dakota	8	6			17	83	1	2
South Dakota	12	3	1		69	38	0	0
Nebraska	11	18		10	501	81	3	2
Kansas	11	15	2	21	629	432	4	3
South Atlantic States:								
Delaware	2	4			9	28	0	0
Maryland [2]	23	28	33	40	42	105	1	1
District of Columbia	9	8	1	1	8	21	0	1
Virginia							3	
West Virginia	17	7	42	28	88	310	1	1
North Carolina	21	16	14		33	45	10	0
South Carolina	10	10	926	558		22	2	0
Georgia	7	10	85	44	215	16	2	1
Florida	10	8		3	396	79	1	0
East South Central States:								
Kentucky					61	70	1	2
Tennessee	6	5	66	22	63	19		1
Alabama	13	10	147	59	242	190	6	3
Mississippi	10	10					12	

[1] New York City only.

[2] Week ended Friday.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended April 5, 1930, and April 6, 1929—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929
West South Central States:								
Arkansas	3	3	44	31	25	135	6	3
Louisiana	28	10	13	30	86	68	1	8
Oklahoma [3]	13	13	68	74	271	85	4	9
Texas	62	29	200	166	178	207	3	2
Mountain States:								
Montana		7			4	110	2	2
Idaho	4	1		2	14	1	2	7
Wyoming		1			67	28	1	0
Colorado	8	8		1	728	27	0	10
New Mexico	8	10		13	94	1	3	0
Arizona	10	2	1	1	34		3	11
Utah [2]	1	9	4		228	10	20	4
Pacific States:								
Washington	8	5		3	446	138	7	8
Oregon	9	7	26	69	93	171	1	2
California	54	36	28	74	2,216	49	12	14

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929
New England States:								
Maine	1	0	52	86	0	14	3	2
New Hampshire	0	0	22	16	0	0	2	0
Vermont	0	0	22	4	1	5	0	0
Massachusetts	2	1	294	303	0	5	6	2
Rhode Island	0	0	17	20	0	0	0	0
Connecticut	0	0	117	66	0	0	1	0
Middle Atlantic States:								
New York	0	3	605	652	4	0	19	12
New Jersey	1	0	244	179	0	0	2	2
Pennsylvania	1	1	546	570	2	0	13	22
East North Central States:								
Ohio	1	4	337	290	215	44	14	8
Indiana	0	0	176	219	174	92	1	12
Illinois	1	0	519	408	174	113	2	6
Michigan	0	2	310	532	72	37	2	10
Wisconsin	1	0	167	192	22	3	3	1
West North Central States:								
Minnesota	0	0	127	97	2	2	1	11
Iowa	0	0	76	149	111	45	0	0
Missouri	0	0	119	64	48	46	2	5
North Dakota	0	0	44	22	18	0	1	2
South Dakota	0	0	15	32	33	27	0	0
Nebraska	0	0	86	146	51	47	0	5
Kansas	0	0	113	183	131	79	4	3
South Atlantic States:								
Delaware	0	0	12	6	0	0	1	0
Maryland [2]	1	0	127	50	0	0	3	2
District of Columbia	0	0	17	22	0	0	0	0
Virginia						12		
West Virginia	0	0	40	39		15	6	6
North Carolina	1	0	28	30	22	23	2	2
South Carolina	3	1	11	16	0	4	6	2
Georgia	0	0	23	17	0	0	1	8
Florida	0	0	3	1	0	1	0	3
East South Central States:								
Kentucky	0	1	59	152	21	3	7	0
Tennessee	1	0	37	41	6	7	7	2
Alabama	0	0	15	17	7	10	3	4
Mississippi	0	0	5	7	9	0	4	8

[2] Week ended Friday.
[3] Figures for 1930 are exclusive of Oklahoma City and Tulsa, and for 1929 are exclusive of Oklahoma City.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended April 5, 1930, and April 6, 1929—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929	Week ended Apr. 5, 1930	Week ended Apr. 6, 1929
West South Central States:								
Arkansas	0	0	10	8	12	6	3	6
Louisiana	0	0	18	43	3	8	7	2
Oklahoma [3]	0	0	18	52	94	109	4	8
Texas	1	0	54	88	162	128	6	6
Mountain States:								
Montana	0	0	44	25	9	3	6	4
Idaho	0	0	4	3	13	31	3	0
Wyoming	0	0	8	8	3	5	0	0
Colorado	0	0	41	43	12	18	0	0
New Mexico	0	0	11	17	10	1	2	3
Arizona	0	0	14	8	28	17	0	1
Utah [2]	1	0	5	8	0	2	2	0
Pacific States:								
Washington	1	0	51	38	103	33	0	6
Oregon	0	1	28	52	28	34	2	1
California	4	1	164	413	73	58	5	5

[2] Week ended Friday.
[3] Figures for 1930 are exclusive of Oklahoma City and Tulsa, and for 1929 are exclusive of Oklahoma City.

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, 1930										
Kansas	29	57	22	----	1,638	----	2	571	293	5
New Mexico	17	36	7	4	349	1	2	64	4	5
March, 1930										
Arizona	19	28	75	----	95	----	1	81	130	7
Connecticut	4	85	57	1	90	----	1	580	0	6
Porto Rico	----	49	47	671	210	1	0	----	0	18
Vermont	----	6	----	----	142	----	0	49	15	----
Wyoming	3	7	2	----	46	----	0	41	35	----

February, 1930	Cases
Chicken pox:	
Kansas	556
New Mexico	104
Conjunctivitis:	
Kansas	1
New Mexico	2
Dysentery:	
New Mexico	1
German measles:	
Kansas	9
New Mexico	3
Impetigo contagiosa:	
Kansas	2
Lead poisoning:	
Kansas	1
Lethargic encephalitis:	
Kansas	1
New Mexico	1
Mumps:	
Kansas	601
New Mexico	110
Ophthalmia neonatorum:	
New Mexico	1
Paratyphoid fever:	
Kansas	1
Septic sore throat:	
Kansas	
New Mexico	1
Tetanus:	
New Mexico	1
Trench mouth:	
Kansas	2
Undulant fever:	
Kansas	1
Vincent's angina:	
Kansas	1

Whooping cough:	Cases
Kansas	330
New Mexico	26

March, 1930

Chicken pox:	
Arizona	64
Connecticut	489
Vermont	223
Wyoming	18
Colibacillosis:	
Porto Rico	4
Conjunctivitis:	
Connecticut	3
Dysentery:	
Arizona	5
Porto Rico	15
Filariasis:	
Porto Rico	4
German measles:	
Connecticut	223
Glandular fever:	
Wyoming	1
Lead poisoning:	
Connecticut	2
Lethargic encephalitis:	
Connecticut	2
Mumps:	
Arizona	304
Connecticut	178

Mumps—Continued.	Cases
Porto Rico	4
Vermont	20
Wyoming	49
Ophthalmia neonatorum:	
Connecticut	1
Porto Rico	3
Puerperal fever:	
Porto Rico	13
Rabies in animals:	
Connecticut	10
Septic sore throat:	
Connecticut	11
Tetanus:	
Connecticut	2
Porto Rico	18
Tetanus (infantile):	
Porto Rico	24
Trachoma:	
Arizona	27
Porto Rico	5
Undulant fever:	
Arizona	1
Wyoming	1
Whooping cough:	
Arizona	69
Connecticut	197
Porto Rico	73
Vermont	26
Wyoming	13

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 95 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 31,880,000. The estimated population of the 90 cities reporting deaths is more than 30,390,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended March 29, 1930, and March 30, 1929

	1930	1929	Estimated expectancy
Cases reported			
Diphtheria:			
46 States	1,239	1,394	
95 cities	515	774	889
Measles:			
45 States	15,453	12,823	
95 cities	5,454	4,311	
Meningococcus meningitis:			
45 States	277	331	
95 cities	139	123	
Poliomyelitis:			
47 States	13	13	
Scarlet fever:			
46 States	5,043	5,390	
95 cities	1,927	1,919	1,533
Smallpox:			
46 States	1,644	1,027	
95 cities	136	95	75
Typhoid fever:			
46 States	170	196	
95 cities	51	58	28
Deaths reported			
Influenza and pneumonia:			
90 cities	1,057	1,003	
Smallpox:			
90 cities	0	1	
Chicago, Ill	0	1	

City reports for week ended March 29, 1930

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 1921 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.

Division, State, and city	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	7	1	0	2	0	3	27	2
New Hampshire:								
Concord	0	0	0		0	0	0	3
Manchester	0	1	0		0	0	0	2
Vermont:								
Barre	2	0	0		0	0	1	0
Burlington	0	0	0		0	0	0	1
Massachusetts:								
Boston	32	36	12	9	1	390	82	45
Fall River	4	3	4	2	2	0	1	3
Springfield	12	4	1		0	0	0	0
Worcester	16	4	3		0	67	2	1
Rhode Island:								
Patwucket	4	1	0		0	2	0	3
Providence	7	8	2		1	0	0	14
Connecticut:								
Bridgeport	3	6	0	1	0	0	0	4
Hartford		6						
New Haven	33	1	0		0	0	5	6
MIDDLE ATLANTIC								
New York:								
Buffalo	21	12	2		0	8	11	24
New York	298	248	104	62	11	593	209	239
Rochester	12	9	1	1	0	7	1	6
Syracuse	45	5	0		1	7	104	4
New Jersey:								
Camden	2	7	4	3	2	1	1	4
Newark	48	16	25	6	0	241	28	15
Trenton	9	3	1		0	18	0	5
Pennsylvania:								
Philadelphia	93	66	19	19	5	195	101	68
Pittsburgh	45	16	16		3	276	5	45
Reading	13	3	4		0	1	2	3
Scranton	7	3	0		0	0	0	0
EAST NORTH CENTRAL								
Ohio:								
Cincinnati	14	9	5		2	14	3	6
Cleveland	143	28	15	16	6	13	49	25
Columbus	16	3	0	2	0	79	14	11
Toledo	40	4	3		0	176	26	8
Indiana:								
Fort Wayne	1	2	3		0	0	0	
Indianapolis	22	5	6		0	12	5	14
South Bend	1	1	0		0	0	0	2
Terre Haute	1	1	0		0	2	0	1
Illinois:								
Chicago	116	95	111	6	5	35	40	58
Springfield	15	1	0	1	1	2	0	0
Michigan:								
Detroit	93	46	37	2	1	837	74	32
Flint	14	3	0		0	24	2	9
Grand Rapids	1	1	0		1	0	1	10

City reports for week ended March 29, 1930—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST NORTH CENTRAL—continued								
Wisconsin:								
Kenosha	6	2	0		0	1	2	1
Milwaukee	138	15	5	2	1	17	104	18
Racine	5	2	1	1	1	6	0	2
Superior	2	0	0		0	13	0	0
WEST NORTH CENTRAL								
Minnesota:								
Duluth	9	0	0		0	51	0	0
Minneapolis	38	13	0		2	20	53	4
St. Paul	41	9	0		0	5	12	9
Iowa:								
Des Moines	2	2	1			42	1	
Sioux City		1						
Waterloo	43	0	0			41	0	
Missouri:								
Kansas City	23	4	1		0	8	1	16
St. Joseph	1	0	0		0	0	0	4
St. Louis	26	39	27		1	7	27	
North Dakota:								
Fargo	5	0	0		0	0	14	0
Grand Forks	0	0	0			1	0	
South Dakota:								
Aberdeen	10	0	1			0	0	
Sioux Falls	0	0	0			23	0	
Nebraska:								
Omaha	14	2	5		0	104	3	10
Kansas:								
Topeka	4	1	0		0	110	15	1
Wichita	12	2	0		0	31	2	1
SOUTH ATLANTIC								
Delaware:								
Wilmington	5	2	3		0	5	1	2
Maryland:								
Baltimore	132	25	10	15	1	10	6	31
Cumberland	2	0	0		0	1	0	4
Frederick	0	0	0		0	0	0	0
District of Columbia:								
Washington	20	12	13	2	1	10	0	21
Virginia:								
Lynchburg	4	1	2		0	103	9	1
Norfolk	22	2	2		0	1	47	2
Richmond	9	3	2		1	3	4	7
Roanoke	0	0	0		0	88	0	4
West Virginia:								
Charleston	16	1	0	1	1	17	0	5
Wheeling	3	1	0		1	0	0	3
North Carolina:								
Raleigh	12	0	0		0	0	0	2
Wilmington	14	0	1		0	0	0	0
Winston-Salem	13	1	0	1	0	0	19	4
South Carolina:								
Charleston	4	0	1	34	0	2	2	2
Columbia	5	0	0		0	0	15	2
Georgia:								
Atlanta	16	2	3	18	2	42	27	9
Brunswick	1	0	0		0	0	0	0
Savannah	1	1	0	3	0	1	0	7
Florida:								
Miami	7	3	1		0	1	4	1
St. Petersburg		0			0			1
Tampa	31	1	0		1	66	8	2
EAST SOUTH CENTRAL								
Kentucky:								
Covington	1	0	0		1	1	0	2
Tennessee:								
Memphis	16	4	4		1	0	23	14
Nashville	0	0	0		4	0	0	9

City reports for week ended March 29, 1930—Continued

Division, State, and city	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
		Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
EAST SOUTH CENTRAL—continued								
Alabama:								
Birmingham	12	1	2	8	4	8	3	8
Mobile	1	1	1	2	5	5	0	2
Montgomery	3	0	1	1	----	148	1	----
WEST SOUTH CENTRAL								
Arkansas:								
Fort Smith	4	0	0	----	----	24	0	----
Little Rock	5	1	0	----	0	8	2	3
Louisiana:								
New Orleans	0	9	19	7	5	46	0	14
Shreveport	15	0	0	----	0	5	9	4
Oklahoma:								
Oklahoma City	22	1	0	5	0	49	6	6
Tulsa	9	1	2	----	----	188	0	----
Texas:								
Dallas	16	4	7	1	1	142	3	8
Fort Worth	3	3	0	----	0	10	1	1
Galveston	0	0	1	----	0	0	0	1
Houston	0	4	7	----	0	0	0	11
San Antonio	2	3	2	----	3	0	0	5
MOUNTAIN								
Montana:								
Billings	0	0	0	----	0	0	6	2
Great Falls	4	0	0	----	0	0	12	1
Helena	0	0	0	----	0	0	2	0
Missoula	0	0	0	----	0	1	0	1
Idaho:								
Boise	0	0	0	----	0	0	0	0
Colorado:								
Denver	27	8	5	----	5	210	15	12
Pueblo	5	1	0	----	0	6	62	1
New Mexico:								
Albuquerque	4	0	0	----	0	35	13	2
Arizona:								
Phoenix	0	1	1	----	0	22	0	1
Utah:								
Salt Lake City	7	3	0	----	1	178	9	2
Nevada:								
Reno	0	0	0	----	0	4	0	1
PACIFIC								
Washington:								
Seattle	43	3	0	----	----	184	96	----
Spokane	18	2	0	----	----	1	0	----
Tacoma	15	1	4	----	----	33	1	4
Oregon:								
Portland	29	8	12	2	1	26	18	6
Salem	6	0	0	----	----	0	11	----
California:								
Los Angeles	101	40	7	23	0	472	58	24
Sacramento	2	2	0	----	0	22	37	4
San Francisco	38	19	6	3	1	367	109	5

City reports for week ended March 29, 1930—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		
NEW ENGLAND											
Maine:											
Portland	4	3	0	0	0	2	0	0	0	4	27
New Hampshire:											
Concord	0	0	0	0	0	2	0	0	0	0	11
Manchester	3	3	0	0	0	0	0	0	0	0	5
Vermont:											
Barre	0	0	0	1	0	1	0	0	0	0	4
Burlington	2	0	0	0	0	0	0	0	0	0	14
Massachusetts:											
Boston	83	85	0	0	0	16	1	1	0	60	248
Fall River	5	3	0	0	0	3	1	0	0	15	36
Springfield	8	1	0	0	0	2	0	0	0	9	31
Worcester	10	12	0	0	0	3	0	0	0	28	57
Rhode Island:											
Pawtucket	2	2	0	0	0	0	0	0	0	14	21
Providence	11	10	0	0	0	2	0	0	0	9	73
Connecticut:											
Bridgeport	12	12	0	0	0	4	0	0	0	1	49
Hartford	5		0				0				
New Haven	10	11	0	0	0	0	0	0	0	13	46
MIDDLE ATLANTIC											
New York:											
Buffalo	29	25	0	1	0	11	0	0	0	14	155
New York	369	354	1	0	0	115	8	21	2	47	1,703
Rochester	14	4	0	0	0	3	0	10	2	7	83
Syracuse	11	35	0	0	0	1	0	1	0	63	40
New Jersey:											
Camden	7	4	0	0	0	1	0	0	0	1	44
Newark	38	51	0	0	0	11	0	0	0	19	109
Trenton	5	14	0	0	0	3	0	0	0	1	41
Pennsylvania:											
Philadelphia	103	139	0	0	0	34	2	0	0	20	544
Pittsburgh	30	28	0	0	0	14	0	0	0	16	212
Reading	5	5	0	0	0	1	0	0	0	14	29
Scranton	1	3	0	0			0	0		2	
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	19	14	1	2	0	7	0	0	0	2	157
Cleveland	39	97	0	0	0	23	0	1	0	75	228
Columbus	10	13	1	2	0	5	0	0	0	3	84
Toledo	13	23	0	10	0	8	0	1	1	4	77
Indiana:											
Fort Wayne	6	1	1	1	0	3	1	1	0	2	25
Indianapolis	11	21	7	7	0	7	0	1	0	4	
South Bend	3	7	0	0	0	0	0	0	0	0	18
Terre Haute	2	9	0	0	0	1	0	0	0	0	23
Illinois:											
Chicago	130	261	2	6	0	32	1	1	0	48	664
Springfield	4	0	0	0	0	1	0	0	0	4	29
Michigan:											
Detroit	114	146	1	8	0	17	1	0	0	48	293
Flint	12	10	2	1	0	1	0	0	0	10	34
Grand Rapids	9	4	0	0	0	1	0	0	0	2	47
Wisconsin:											
Kenosha	2	4	1	0	0	1	0	0	0	5	8
Milwaukee	33	24	0	1	0	9	0	1	0	50	115
Racine	4	4	0	0	0	1	0	0	0	5	18
Superior	4	2	0	0	0	0	0	0	0	0	9
WEST NORTH CENTRAL											
Minnesota:											
Duluth	9	1	0	1	0	0	0	2	0	17	14
Minneapolis	51	14	3	1	0	7	0	0	0	6	90
St. Paul	33	23	0	0	0	2	0	0	0	20	69

City reports for week ended March 29, 1930—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		
WEST NORTH CENTRAL—continued											
Iowa:											
Des Moines	9	18	2	15			0	0		0	31
Sioux City	0		1				0				
Waterloo	3	1	0	23			0	0		3	
Missouri:											
Kansas City	21	32	2	4	0	5	1	0	0	20	108
St. Joseph	2	2	0	1	0	1	0	0	0	0	29
St. Louis	37	38	2	1	0	11	1	0	1	8	218
North Dakota:											
Fargo	1	0	0	3	0	0	0	0	0	14	7
Grand Forks	0	3	0	1			0	0		0	
South Dakota:											
Aberdeen	1	0	0	1			0	0		15	
Sioux Falls	2	2	0	4			0	0		0	8
Nebraska:											
Omaha	4	6	3	9	0	1	0	0	2	3	57
Kansas:											
Topeka	3	4	1	4	0	0	0	0	0	15	15
Wichita	4	31	3	1	0	0	0	0	0	1	38
SOUTH ATLANTIC											
Delaware:											
Wilmington	5	5	0	0	0	0	0	0	0	1	29
Maryland:											
Baltimore	32	89	0	0	0	23	1	1	0	18	234
Cumberland	1	0	0	0	0	2	0	0	0	0	22
Frederick	0	1	0	0	0	0	0	0	0	0	3
District of Columbia:											
Washington	25	13	1	0	0	14	1	0	0	2	153
Virginia:											
Lynchburg	0	1	0	0	0	0	0	0	0	10	9
Norfolk	2	3	0	0	0	3	0	0	0	2	
Richmond	3	2	0	0	0	1	0	0	0	0	55
Roanoke	1	0	0	0	0	1	0	0	0	2	22
West Virginia:											
Charleston	1	0	0	0	0	1	1	1	0	14	22
Wheeling	2	3	0	0	0	1	1	0	0	1	30
North Carolina:											
Raleigh	1	0	0	2	0	1	0	0	0	6	11
Wilmington	0	1	0	0	0	2	0	1	0	9	9
Winston-Salem	1	2	2	2	0	0	0	0	0	4	14
South Carolina:											
Charleston	0	1	1	0	0	3	0	0	0	0	29
Columbia	0	1	0	0	0	0	0	0	0	22	15
Georgia:											
Atlanta	4	13	4	0	0	7	0	0	0	7	83
Brunswick	0	1	0	0	0	0	0	0	0	0	2
Savannah	0	1	1	0	0	1	0	0	0	0	43
Florida:											
Miami	1	0	0	0	0	3	0	0	0	0	29
St. Petersburg	0		0		0	0	0		1		26
Tampa	1	2	0	0	0	5	1	0	0	2	26
EAST SOUTH CENTRAL											
Kentucky:											
Covington	2	2	0	0	0	1	0	0	0	0	19
Tennessee:											
Memphis	13	23	2	1	0	8	1	2	0	0	88
Nashville	4	8	0	2	0	5	0	2	0	2	67
Alabama:											
Birmingham	3	3	6	0	0	4	1	1	0	7	84
Mobile	0	1	1	0	0	1	0	0	0	0	23
Montgomery	0	2	0	0			0	0		0	

City reports for week ended March 29, 1930—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		
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	1	0	0	1			0	0		1	
Little Rock	1	2	0	2	0	1	0	0	0	0	
Louisiana:											
New Orleans	7	20	0	0	0	18	2	0	0	1	153
Shreveport	0	1	1	0	0	4	0	1	1	0	33
Oklahoma:											
Oklahoma City	2	20	2	14	0	8	0	0	0	0	40
Tulsa	3	3	2	2			0	0		12	
Texas:											
Dallas	4	7	3	2	0	1	0	0	0	0	66
Fort Worth	2	1	1	6	0	2		0	0	0	33
Galveston	1	0	0	0	0	0	0	0	0	0	14
Houston	1	1	1	3	0	4	0	0	0	0	64
San Antonio	1	1	0	5	0	10	0	1	0	0	82
MOUNTAIN											
Montana:											
Billings	1	0	0	0	0	0	0	0	0	0	9
Great Falls	1	26	1	0	0	0	0	0	0	0	4
Helena	0	0	0	0	0	0	0	0	0	3	3
Missoula	0	2	1	0	0	0	0	0	0	0	9
Idaho:											
Boise	0	1	0	0	0	0	0	0	0	2	7
Colorado:											
Denver	13	10	0	0	0	9	0	0	0	56	77
Pueblo	1	0	0	1	0	1	0	0	0	0	10
New Mexico:											
Albuquerque	0	5	0	0	0	2	0	0	0	0	11
Arizona:											
Phoenix	1	1	0	16	0	3	0	0	0	0	16
Utah:											
Salt Lake City	3	13	2	0	0	1	0	0	0	31	42
Nevada:											
Reno	1	0	0	2	0	0	0	0	0	0	6
PACIFIC											
Washington:											
Seattle	8	14	3	5			0	0		21	
Spokane	7	1	8	12			0	1		4	
Tacoma	2	2	3	10	0	0	0	0	0	17	27
Oregon:											
Portland	5	5	10	9	0	2	0	0	0	18	76
Salem	0	0	0	0			0	0		12	
California:											
Los Angeles	33	45	2	3	0	32	1	0	0	34	325
Sacramento	2	3	0	4	0	1	0	0	0	0	28
San Francisco	20	36	1	1	0	13	1	0	0	2	172

City reports for week ended March 29, 1930—Continued

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									
Maine:									
Portland	0	0	0	1	0	0	0	0	0
Rhode Island:									
Providence	0	0	0	0	0	1	0	0	0
MIDDLE ATLANTIC									
New York:									
Buffalo	0	0	0	1	0	0	0	0	0
New York [1]	19	9	1	2	0	0	1	0	0
Rochester	1	0	0	0	0	0	0	0	0
Pennsylvania:									
Philadelphia	4	3	0	1	0	0	0	0	0
Pittsburgh	2	2	0	0	0	0	0	1	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	2	1	0	0	0	0	0	0	0
Cleveland	1	1	0	0	0	0	0	0	0
Columbus	0	0	1	1	0	0	0	0	0
Indiana:									
Fort Wayne	1	0	0	0	0	0	0	0	0
Indianapolis	1	0	0	0	0	0	0	0	0
Illinois:									
Chicago	5	3	1	0	0	0	0	0	0
Springfield	1	0	0	0	0	0	0	0	0
Michigan:									
Detroit	31	3	1	0	0	0	0	0	0
Wisconsin:									
Kenosha	0	0	0	0	0	0	0	1	0
Milwaukee	2	2	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Minneapolis	1	0	0	0	0	0	0	0	0
Iowa:									
Waterloo	5	2	0	0	0	0	0	0	0
Missouri:									
Kansas City	2	3	0	0	0	0	0	0	0
St. Joseph	0	1	0	0	0	0	0	0	0
St. Louis	8	4	1	0	0	0	0	0	0
North Dakota: [2]									
Fargo	0	1	0	0	0	0	0	0	0
SOUTH ATLANTIC									
Maryland:									
Baltimore	1	0	0	0	0	0	0	0	0
District of Columbia:									
Washington	0	0	1	0	0	1	----	0	1
North Carolina:									
Raleigh	0	0	0	0	1	1	1	0	0
South Carolina:									
Charleston	0	0	0	0	3	0	0	0	0
Columbia	0	0	0	0	0	1	0	0	0
Georgia:									
Atlanta	4	1	0	0	0	1	0	0	0
Savannah	1	1	0	0	0	0	0	0	0
Florida:									
Miami [1]	0	[3] 1	----	----	----	1	0	0	----
Tampa	0	0	0	0	0	1	0	0	0

[1] Typhus fever: 2 cases; 1 case at New York City and 1 case at Miami, Fla.
[2] Undulant fever: 1 case at Omaha, Nebr.
[3] Nonresident.

City reports for week ended March 29, 1930—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
EAST SOUTH CENTRAL									
Tennessee:									
Memphis	16	10	0	0	0	0	0	0	0
Nashville	1	0	0	0	0	0	0	0	0
Alabama:									
Montgomery	0	0	0	0	1	0	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	1	1	0	0	0	0	0	0	0
Louisiana:									
New Orleans	5	3	0	0	2	0	0	0	0
Oklahoma:									
Tulsa	1	0	0	0	0	0	0	0	0
Texas:									
Dallas	0	0	0	0	1	1	0	0	0
Fort Worth	0	0	0	0	0	2	0	0	0
San Antonio	1	0	0	0	0	0	0	0	0
MOUNTAIN									
Montana:									
Helena	1	1	0	0	0	0	0	0	0
Colorado:									
Denver	2	0	0	0	0	0	0	0	0
Utah:									
Salt Lake City	10	2	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle	3	-------	0	-------	0	-------	0	0	-------
California:									
Los Angeles	1	1	1	0	0	0	0	0	0
Sacramento	2	2	0	0	0	0	0	0	0
San Francisco	4	2	0	0	0	0	0	1	0

The following table gives the rates per 100,000 population for 98 cities for the 5-week period ended March 29, 1930, compared with those for a like period ended March 30, 1929. The population figures used in computing the rates are approximate estimates, authoritative figures for many of the cities not being available. The 98 cities reporting cases have an estimated aggregate population of more than 32,000,000. The 91 cities reporting deaths have more than 30,500,000 estimated population.

Summary of weekly reports from cities, February 23 to March 29, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	Mar. 1, 1930	Mar. 2, 1929	Mar. 8, 1930	Mar. 9, 1929	Mar. 15, 1930	Mar. 16, 1929	Mar. 22, 1930	Mar. 23, 1929	Mar. 29, 1930	Mar. 30, 1929
98 cities	[2] 107	121	90	133	[3] 104	126	100	135	[4] 84	128
New England	111	123	84	108	84	135	60	119	[5] 53	101
Middle Atlantic	109	140	89	185	99	159	102	180	84	187
East North Central	[6] 125	131	95	130	135	121	133	142	115	119
West North Central	118	135	116	144	108	152	72	131	[7] 65	139
South Atlantic	88	64	71	67	[3] 99	84	82	60	64	66
East South Central	61	55	40	68	27	55	40	41	54	41
West South Central	108	145	153	114	120	95	146	118	134	118
Mountain	[8] 0	61	86	61	26	44	86	35	43	44
Pacific	73	72	45	36	73	65	52	68	40	29

MEASLES CASE RATES

98 cities	[2] 548	578	634	537	[3] 662	679	793	757	[4] 892	716
New England	463	635	543	424	680	617	944	563	[5] 1,120	467
Middle Atlantic	364	158	440	162	418	135	568	179	644	154
East North Central	[6] 351	1,142	447	983	476	1,387	543	1,595	661	1,592
West North Central	920	1,555	918	1,699	765	1,967	973	1,882	[7] 737	1,784
South Atlantic	136	197	489	234	[3] 449	380	564	451	637	414
East South Central	850	62	810	62	715	41	1,457	137	1,093	89
West South Central	755	57	542	103	661	141	587	190	841	95
Mountain	[8] 2,004	697	2,051	818	2,386	636	2,815	766	3,424	409
Pacific	1,908	229	1,845	142	2,194	133	2,100	239	2,549	232

SCARLET FEVER CASE RATES

98 cities	[2] 367	298	329	298	[3] 346	324	323	345	[4] 315	318
New England	368	337	394	308	390	368	341	364	[5] 337	391
Middle Atlantic	325	230	298	228	345	266	310	308	315	264
East North Central	[6] 513	402	452	411	466	418	422	495	386	453
West North Central	334	321	338	356	302	368	328	292	[7] 297	310
South Atlantic	236	137	189	155	[3] 200	146	262	159	249	167
East South Central	196	219	196	198	108	232	202	308	263	267
West South Central	116	202	149	270	179	366	116	270	120	274
Mountain	[8] 685	218	292	157	369	157	343	113	446	78
Pacific	411	493	281	410	267	444	236	367	239	311

SMALLPOX CASE RATES

98 cities	[2] 31	16	25	12	[3] 25	12	25	11	[4] 22	16
New England	0	2	2	0	0	4	0	7	[5] 2	11
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	[6] 40	24	24	18	30	20	20	12	18	17
West North Central	89	15	78	6	68	31	95	12	[7] 94	25
South Atlantic	2	7	2	6	[3] 4	6	2	0	7	13
East South Central	7	7	20	7	27	7	7	7	20	41
West South Central	120	107	67	95	26	42	52	99	49	91
Mountain	[8] 51	87	9	44	9	17	34	44	26	44
Pacific	102	24	123	17	135	22	120	14	83	22

[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, 1930, and 1929, respectively.
[2] South Bend, Ind., and Denver, Colo., not included.
[3] Charleston, W. Va., and Savannah, Ga., not included.
[4] Concord, N. H., Hartford, Conn., and Sioux City, Iowa not included.
[5] Concord, N. H., and Hartford, Conn., not included.
[6] South Bend, Ind., not included.
[7] Sioux City, Iowa, not included.
[8] Denver, Colo., not included.

Summary of weekly reports from cities, February 23 to March 29, 1930—Annual rates per 100,000 population, compared with rates for the corresponding period of 1929—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	Mar. 1, 1930	Mar. 2, 1929	Mar. 8, 1930	Mar. 9, 1929	Mar. 15, 1930	Mar. 16, 1929	Mar. 22, 1930	Mar. 23, 1929	Mar. 29, 1930	Mar. 30, 1929
98 cities	[2] 8	4	8	5	[3] 6	5	8	7	[4] 8	10
New England	0	2	2	4	4	2	0	7	[5] 2	4
Middle Atlantic	4	2	4	4	5	4	7	6	15	5
East North Central	[6] 1	0	3	3	1	2	1	4	3	17
West North Central	6	8	8	4	4	2	9	6	[7] 4	8
South Atlantic	55	2	37	6	[3] 2	7	13	6	5	13
East South Central	34	14	13	7	27	7	94	27	34	27
West South Central	0	19	34	19	7	11	11	8	7	19
Mountain	[8] 0	9	0	0	51	26	17	9	0	0
Pacific	7	7	7	−17	12	10	12	19	2	0

INFLUENZA DEATH RATES

91 cities	[2] 20	39	17	34	[3] 14	33	16	27	[9] 15	18
New England	11	20	18	16	2	25	2	4	[9] 10	4
Middle Atlantic	17	30	13	25	12	31	14	23	11	12
East North Central	[6] 16	31	13	31	9	23	9	20	11	16
West North Central	15	39	3	21	6	27	12	30	6	18
South Atlantic	26	67	33	47	[3] 18	37	26	30	15	22
East South Central	59	149	66	75	96	119	88	90	110	90
West South Central	69	86	34	117	46	102	27	74	34	35
Mountain	[8] 34	52	34	61	17	35	60	78	51	52
Pacific	12	31	3	22	3	16	9	31	3	16

PNEUMONIA DEATH RATES

91 cities	[2] 198	222	170	203	[3] 164	184	165	168	[9] 167	157
New England	213	272	202	218	155	200	199	186	[9] 194	171
Middle Atlantic	230	240	191	233	204	197	168	190	197	180
East North Central	[6] 180	180	142	160	128	155	150	141	118	132
West North Central	136	228	127	195	142	180	121	189	133	150
South Atlantic	216	255	203	234	[3] 183	198	203	185	194	159
East South Central	199	284	243	239	265	201	214	172	258	172
West South Central	199	207	172	226	153	230	214	78	176	125
Mountain	[8] 223	279	146	183	120	252	189	165	172	131
Pacific	77	148	92	138	80	135	95	163	114	151

[2] South Bend, Ind., and Denver, Colo., not included.
[3] Charleston, W. Va., and Savannah, Ga., not included.
[4] Concord, N. H., Hartford, Conn., and Sioux City, Iowa, not included.
[5] Concord, N. H., and Hartford, Conn., not included.
[6] South Bend, Ind., not included.
[7] Sioux City, Iowa, not included.
Denver, Colo., not included.
Hartford, Conn., not included.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—Weeks ended March 15 and 22, 1930.—The Department of Pensions and National Health reports cases of certain communicable diseases in Canada for the weeks ended March 15 and March 22, 1930, as follows:

Week ended March 15, 1930

Province	Cerebro-spinal fever	Influenza	Poliomy-elitis	Smallpox	Typhoid fever
Prince Edward Island [1]					
Nova Scotia		4			
New Brunswick [1]					
Quebec	3		1		8
Ontario	4	12		38	9
Manitoba			1	2	
Saskatchewan	2			9	1
Alberta	1		1	2	1
British Columbia				1	
Total	10	16	3	52	19

Week ended March 22, 1930

Prince Edward Island [1]					
Nova Scotia		2			
New Brunswick					3
Quebec	4				19
Ontario	1	5		27	13
Manitoba				1	1
Saskatchewan				11	
Alberta	1		1	5	4
British Columbia	1			7	3
Total	7	7	1	51	43

[1] No case of any disease listed in the table was reported during the week.

Quebec Province—Communicable diseases—Week ended March 29, 1930.—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the week ended March 29, 1930, as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	1	Mumps	102
Chicken pox	92	Puerperal septicemia	1
Diphtheria and croup	48	Scarlet fever	101
Erysipelas	3	Tuberculosis	62
German measles	21	Typhoid fever	17
Influenza	4	Whooping cough	82
Measles	112		

CUBA

Habana—Communicable diseases—March, 1930.—During the month of March, 1930, certain communicable diseases were reported in the city of Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Chicken pox	45		Measles	2	
Diphtheria	7	3	Scarlet fever	13	1
Leprosy	2		Tuberculosis	37	11
Malaria [1]	7		Typhoid fever [1]	10	4

[1] Many of these cases from the interior of the island.

Provinces—Communicable diseases—Four weeks ended March 15, 1930.—During the four weeks ended March 15, 1930, cases of certain communicable diseases were reported in the Provinces of Cuba as follows:

Disease	Pinar del Rio	Habana	Matanzas	Santa Clara	Camagüey	Oriente	Total
Cancer		1	1	3	2	2	9
Chicken pox		46		3	1	4	54
Diphtheria	1	22		9	2	2	36
Malaria	2	7		1	8	53	71
Measles		2		22	7		31
Paratyphoid fever		1		3	3	5	12
Scarlet fever		25				2	27
Typhoid fever	21	29	5	24	3	25	107

DENMARK

Communicable diseases—January, 1930.—During the month of January, 1930, cases of certain communicable diseases were reported in Denmark, as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis	7	Paratyphoid fever	1
Chicken pox	107	Pneumonia	408
Diphtheria and croup	693	Poliomyelitis	4
Erysipelas	344	Puerperal fever	24
German measles	6	Scabies	1,178
Influenza	6,543	Scarlet fever	212
Jaundice	210	Tetanus	3
Lethargic encephalitis	15	Typhoid fever	6
Measles	1,157	Undulant fever [1]	36
Mumps	2,704	Whooping cough	1,335

[1] Reported from the State Serum Institute.

ITALY

Communicable diseases—Four weeks ended December 22, 1929.—During the four weeks ended December 22, 1929, certain communicable diseases were reported in Italy, as follows:

Disease	Nov. 25-Dec. 1		Dec. 2-8		Dec. 9-15		Dec. 16-22	
	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected
Anthrax	29	26	52	40	24	17	7	7
Cerebrospinal meningitis	13	11	11	9	10	10	11	7
Chicken pox	444	123	481	156	522	150	375	118
Diphtheria and croup	997	447	777	408	750	359	663	320
Dysentery	9	6	10	3	5	4	7	4
Lethargic encephalitis	4	4	1	1	4	3		
Measles	2,138	297	1,870	275	1,836	279	2,001	241
Poliomyelitis	19	17	16	9	14	14	9	8
Scarlet fever	758	234	556	214	589	203	411	163
Typhoid fever	855	386	796	337	687	280	516	244

MEXICO

Tampico—Communicable diseases—February, 1930.—During the month of February, 1930, certain communicable diseases were reported in Tampico, Mexico, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Chicken pox	3		Measles	4	
Diphtheria	1		Smallpox	1	
Enteritis (various)	10	24	Tuberculosis	59	32
Influenza	45		Typhoid fever	3	3
Leprosy	2		Whooping cough	11	2
Malaria	63	10			

TRINIDAD (BRITISH WEST INDIES)

Port of Spain—Vital statistics (comparative)—February, 1930.—The following statistics for the month of February for the years 1929 and 1930 are taken from a report issued by the Public Health Department of Port of Spain, Trinidad:

February

	1929	1930
Number of births	132	137
Birth rate per 1,000 population	25.9	26.4
Number of deaths	111	117
Death rate per 1,000 population	21.8	22.6
Deaths under 1 year	17	23
Infant mortality rate per 1,000 births	128.8	167.9

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

From medical officers of the Public Health Service, American consuls, International Office of Public Hygiene, Pan American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following tables 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		Sept. 22–Oct. 19, 1929	Oct. 20–Nov. 16, 1929	Nov. 17–Dec. 14, 1929	Dec. 15, 1929–Jan. 11, 1930	Week ended— January, 1930		February, 1930				March, 1930			
						18	25	1	8	15	22	1	8	15	22
China:															
Canton	C			2											
Hankow	C	4	2												
Manchuria—Dairen	C												1		
Nanking	C		P												
Shanghai	C	35													
	D	11													
Swatow	D	22	12	2											
Tientsin	C	P													
India	C	16,354	17,340	19,582	12,350	1,972	1,659	1,242	1,598						
	D	10,051	10,680	10,903	6,507	1,122	948	718	818					1	
Bombay	C	1													
Calcutta	C	160	252	265	138	44	41	33	84	65	46	53	105	97	53
	D	70	129	114	90	28	21	23	38	45	27	25	56	73	25
Madras	C		3	2											
	D		2	2											
Negapatam	C		2		1			12							
	D				1	2		2							
Rangoon	C	1	2	1	6	2			1		1	1	1	1	
	D	1	2	1	5	2			1		1			1	
Tuticorin	C	18	5	23	35	3									
	D	11	3	6	9	1									
India (French):															
Chandernagor	C	1	5	14	1									P	
	D		5	12	1										
Karikal	C				1										
Pondicherry Province	C	3		4											
	D	3		3											
India (Portuguese)	C	1													
Indo-China (see also table below):															
Pnompenh	C	61	43	4	3	2	3	3	3		2	5	2		
	D	53	37	3	3	2	2	2	2	1	2	3	1	1	2
Saigon and Cholon	C		1	2	1	2							5	1	6
	D				1	1		1					4	1	5

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

CHOLERA—Continued

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

Place		Sept. 22–Oct. 19, 1929	Oct. 20–Nov. 16, 1929	Nov. 17–Dec. 14, 1929	Dec. 15, 1929–Jan. 11, 1930	Week ended— January, 1930		February, 1930				March, 1930			
						18	25	1	8	15	22	1	8	15	22
Japan	C	34													
Kobe	C	3													
Osaka	C	14													
Siam	C	9		7	11	2		1		1	3				
	D	4		3	2						1				
Ayudhaya	C	2													
Bangkok	C	4		5	9	2		1		1	1				
	D	2		1	1										
Dhannapuri	C	2													
	D	2													
Nagara Pathom	C												1		
	D												1		
Nagara Rajsima	C	2													
	D	2													
On vessel:															
S. S. at Suva, Fiji Islands	C											1			
S. S. Sutley, at Batavia, from Calcutta	C									1					

Place		September, 1929	October, 1929	November, 1929	December, 1929			January, 1930			February, 1930	
					1–10	11–20	21–31	1–10	11–20	21–31	1–10	11–20
Indo-China (French) (see also table above):												
Annam [1]	C	1		2				1			2	2
Cambodia [1]	C	38	221	43		41		71		76	41	3
Cochin-China [1]	C	45	3	15		46		67		110	64	39
Laos	C	12										

[1] Reports incomplete.

Place		Sept. 22–Oct. 19, 1929	Oct. 20–Nov. 16, 1929	Nov. 17–Dec. 14, 1929	Dec. 15, 1929–Jan. 11, 1930	Week ended— January, 1930		February, 1930				March, 1930					Apr. 5, 1930
						18	25	1	8	15	22	1	8	15	22	29	
Argentina:																	
Andalgala.[1]																	
Rosario	C		2						P								
Plague-infected rats			3														
Santa Fe	C		1					6									
Tucuman	C		1														
Villa Lia	D											2					
Azores: Ponta Delgada	C				P												
Belgian Congo: Djugu	D			2													
Brazil:																	
Rio de Janeiro	C							1									
	D							1									
Sao Paulo.[2]																	
British East Africa (see also table below): Uganda	C	405	336	281	127	35	25	22									
	D	343	310	262	112	29	21	20									
Ceylon:																	
Colombo	C	3		5	2	3			1	2			1				
	D	1		4	1	3			1	2			1				
Plague-infected rats				1					1	1		1	1				
Galle	C	1															
Chile: Antofagasta	C					1				1							
	D																2
China: Foochow	C	P															
Dutch East Indies:																	
Batavia and West Java	C	131	266	340	286	35	43	46	43	31		1					
	D	128	262	335	280	35	43	44	42	30							
Plague-infected rats			1	8		2		1			2	1			2		
Celebes—Makassar	C			1			1										
	D						1										
Plague-infected rodents				1	4												
East Java and Madura	C	60	41	29	2												
	D	60	43	29	2												
Java and Madura	D	275	475	537	458	71	92	80	74	64	69						
Surabaya	C	4		4													
	D	2		4													

[1] On Mar. 11, 3 deaths from bubonic plague were reported in Andalgala, Catamarca Province, Argentina, since Feb. 5, 1930.
[2] 21 cases of plague with 8 deaths were reported Jan. 29, 1930, in the State of Sao Paulo, Brazil; 15 of these cases were in the city of Sao Paulo.

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

PLAGUE—Continued

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

Place		Sept. 22–Oct. 19, 1929	Oct. 20–Nov. 16, 1929	Nov. 17–Dec. 14, 1929	Dec. 15, 1929–Jan. 11, 1930	Week ended— January, 1930		February, 1930				March, 1930					Apr. 5, 1930
						18	25	1	8	15	22	1	8	15	22	29	
Ecuador (see table below).																	
Egypt:																	
Alexandria	C	13	11	6	2	------	------	1	3	------	------	1	------	1	1	1	1
	D	3	4	3	3	------	------	------	1	------	------	------	------	------	1	------	------
Assiout	C	1	------	1	4	------	------	------	------	------	------	------	------	------	------	------	------
	D	------	------	1	2	------	------	------	------	------	------	------	------	------	------	------	------
Assuan	C	------	------	------	2	------	------	------	------	------	------	------	------	------	------	------	------
Behera	C	------	------	1	------	2	------	------	------	------	------	------	------	3	1	------	------
Beni Suef	C	------	2	------	------	------	------	------	------	------	------	------	------	3	------	1	------
Dakahlieh	C	------	------	1	1	------	------	------	------	3	2	1	2	4	------	1	------
	D	------	------	------	1	------	------	------	------	------	------	------	------	1	------	------	------
Gharbieh	C	5	6	3	2	1	------	------	------	------	------	------	------	------	------	------	------
	D	4	------	2	1	------	------	------	------	------	------	------	------	------	------	------	------
Port Said	C	2	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
	D	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
France: Paris	C	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Greece (see also table below):																	
Messenia	C	------	2	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Patras	C	3	2	------	------	------	------	------	------	------	------	------	------	------	P	1	------
Piraeus	C	------	------	1	------	------	1	------	------	------	------	------	------	------	------	------	------
Pyrgos	C	------	6	2	------	------	------	------	------	------	------	------	------	------	------	------	------
Hawaii: Hamakua—Kukuihaele—Plague-infected rats		3	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
India	C	8,334	8,265	6,016	4,713	1,169	1,420	1,172	1,053	------	------	------	------	------	------	------	------
	D	4,395	4,374	3,457	3,093	837	874	855	742	------	------	------	------	------	------	------	------
Bassein	C	------	------	------	------	------	------	------	1	------	------	------	------	1	------	------	------
	D	------	------	------	------	------	------	------	1	------	------	------	------	1	------	------	------
Bombay	C	1	------	------	------	------	------	------	1	------	------	1	------	------	------	------	------
	D	1	------	------	------	------	------	------	1	------	------	1	------	------	------	------	------
Plague-infected rats		32	31	36	29	7	10	------	11	------	13	5	13	21	------	------	------
Madras Presidency	C	139	152	236	386	------	8	8	11	11	13	19	30	18	------	------	------
	D	64	130	108	174	------	4	5	4	10	10	17	20	14	------	------	------
Rangoon	C	5	2	1	3	1	------	------	2	1	3	1	2	------	------	------	------
	D	6	2	1	4	------	------	------	2	------	3	1	2	------	------	------	------
Plague-infected rats		6	6	2	------	------	------	------	1	------	5	1	1	------	------	------	------

Indo-China (see also table below):																		
Pnompenh	C	1	2	5			1											
	D	1	2	5			1		1	1	7		5	7	2			
Saigon and Cholon	C	2			1	1		1									P	
	D	2			1	1		1										
Iraq:																		
Baghdad	C	3	4	3	2		2	2	2		2	2	2	2	1	1		
	D	1	2	1	1			1	1				1	1				
Basra	C				1													
Naudham	C		1		1													
Italy: Naples Province	C	2																
	D	1																
Plague-infected rats		3																
Japan: Osaka (vicinity of)—Plague-infected rats					1				7		1	3	2	2				
Kwang-Chow-Wan	C						6	5										
Madagascar (see also table below):																		
Tamatave	C	5	3		4													
	D	10	3		3													
Morocco	C		3	9	12	2			2	19	6	14	9	8				
Nigeria: Lagos	C	37	58	10	15		2		4	3	1	2	1	4				
	D	35	49	10	15		2		4	3	1	2	1	4				
Plague-infected rats		89	33	21	18	4	16	14	10	15	8							
Peru (see table below).																		
Senegal (see table below).																		
Siam	C	3	1	3	11	2	1	2	3	4	4							
	D	3	1	3	9	2	1	1	2	4	4							
Bangkok	C				1								1	1				
	D				1								1	1				
Nagara Pathom	C			1	6	1	1	2	3	3	1		1					
	D			1	5	2	2	1	2	4	1		1					
Nagara Rajsima	C				2	1	1			1	1							
	D				1													
Syria: Beirut	C			1														
Tunisia:																		
Sfax district	C	13	34	20	14	3	1	11	3	19		3						
Tunis	C	25	41		42	1			5			1						
	D				21													
Union of Socialist Soviet Republics:																		
Kazaks	C				P													
Ural—Kirghiz	C	1																
Union of South Africa:																		
Cape Province	C	17	13	4					1		2							
	D	13	5		7						1							
Orange Free State	C		7	6	5	1	6	5	3	4								
	D		4	3	1	1	3	2	3	1								
Transvaal	C					1	3	2	2		1							
	D					1	2											
On vessel:																		
Steamship at Porto Novo, from Lagos	C	1																
At Rio de Janeiro, Brazil, from Argentina	C							1										

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

PLAGUE—Continued

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

Place		September, 1929	October, 1929	November, 1929	December, 1929	January, 1930	February, 1930
British East Africa (see also table above):							
Kenya	C	28	146	157	54	34	------
Uganda	C	511	384	179	216	87	------
	D	451	351	164	199	75	------
Ecuador: Guayaquil	C	7	12	14	17	8	2
	D	3	4	3	6	4	2
Plague-infected rats		8	------	9	13	4	2
Greece (see also table above)	C	5	5	2	1	------	------
	D	2	2	1	------	------	------
Indo-China (see also table above)	C	------	------	------	10	10	27
Madagascar (see also table above)	C	195	203	182	------	282	------
	D	182	193	163	------	258	------
Ambositra Province	C	9	2	42	111	------	------
	D	9	2	33	96	------	------
Antisirabe Province	C	13	17	5	16	------	------
	D	13	17	5	16	------	------
Itasy Province	C	5	------	10	19	------	------
	D	5	------	10	16	------	------
Miarinarivo	C	11	12	5	3	------	------
	D	11	11	5	3	------	------
Moramanga Province	C	5	27	4	12	------	------
	D	4	27	3	12	------	------
Madagascar—Continued.							
Tamatave Province	C	7	5	------	2	------	------
	D	1	4	------	2	------	------
Tananarive Province	C	141	141	103	97	------	------
	D	135	132	93	98	------	------
Peru	C	------	1	------	------	------	------
Senegal:							
Baol[1]	C	42	45	23	5	------	------
	D	24	13	16	2	------	------
Dakar[1]	C	26	3	17	8	------	------
	D	17	2	5	1	------	------
Louga[1]	C	108	41	------	------	------	2
	D	64	24	1	------	------	------
Rufisque[1]	C	1	------	------	------	------	------
	D	1	------	------	------	------	------
Thies[1]	C	34	3	------	------	3	------
	D	28	3	------	------	------	------
Tivaouane[1]	C	119	41	8	------	1	------
	D	55	21	4	------	------	------

[1] Incomplete reports.

SMALLPOX

Place		Sept. 22–Oct. 19, 1929	Oct. 20–Nov. 16, 1929	Nov. 17–Dec. 14, 1929	Dec. 15, 1929–Jan. 11, 1930	Week ended— January, 1930		February, 1930				March, 1930				
						18	25	1	8	15	22	1	8	15	22	29
Algeria:																
Algiers	C	1	2	3			4	1	1			1		2		
Constantine	C								1							
Oran	C			3			4	1						1		
Arabia: Aden	C	3	2	4	1				1	1		1				
	D			1												
Bolivia: La Paz (see table below).																
Brazil:																
Porto Alegre	C	2	5													
Rio de Janeiro	C				1											
British Borneo: Sarawak	C								4	2	15	2				
British East Africa (see also table below):																
Tanganyika	C	3	41	50	27	5						13				
	D		4	10	5							1				
British South Africa:																
Northern Rhodesia	C		907	54												
Southern Rhodesia	C	5	6	58	33				1	6						
	D			4	6											
Canada:																
Alberta	C	1	12	22	16	4	2	8	8		1	3		2	5	
Calgary	C	1														
Edmonton	C	3	12	11	15	4	1	8	6		1					
British Columbia—Vancouver	C	15	9	14	17	3	6	4	3	5	4	1	6	1	7	
Manitoba	C		2	6	8	1	1	1	3	2				2	1	
New Brunswick	C	1														
Ontario	C	7	17	63	51	19	13	19	12		28	8	50	38	27	
Fort William	C								4							
London	C		4													
Niagara Falls	C		1													
North Bay	C	7	5	2			1	1				1				
Ottawa	C		1	4	7	5	1	3	1	1	2	2	6	9		6
Sarnia	C		1													
Toronto	C	1	2			2										
Windsor	C		2													
Quebec	C	7	22	10	3	4	1	6								
Montreal	C						1									
Saskatchewan	C		11	40	61	12	33	19	22	2	64		10	9	11	
Regina	C				31											
Saskatoon	C	13	13													

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

SMALLPOX—Continued

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

Place		Sept. 22–Oct. 19, 1929	Oct. 20–Nov. 16, 1929	Nov. 17–Dec. 14, 1929	Dec. 15, 1929–Jan. 11, 1930	Week ended— January, 1930		February, 1930				March, 1930				
						18	25	1	8	15	22	1	8	15	22	29
Ceylon:																
Angoda, Western Province	C										10					
	D										1					
Colombo	C				1		1			2	1					
	D									2						
China:																
Canton	C			4	5	4	1		2	4	4	1	2	1	1	
	D					1	1			2	1				1	
Chungking	C	P	P	P	P	P	P	P	P	P		P				
Foochow	C	P	P	P	P	P		P		P		P				
Hong Kong	C	3	15	62	102	25	19	37	37	18	18	16	10	12	10	
	D	3	13	55	73	28	7	37	37	15	15	11	10	6	10	
Manchuria—																
Harbin	C	1	1	2	1	1	1	1								
Kwantung—Dairen	C		1		1	1		3	2		4		1			
Nanking	C		P		P	P			P	P				P		
Shanghai—																
Foreigners only	C	2	4	5	7	2	1	1	1							
Including natives	D		1	2	6	5	1		2	1	3	2	1	4	1	
Swatow	D				2		1	1	1	3	1	2			3	
Tientsin	C	3	1	4	2		1				1					
Chosen (see table below).																
Colombia:																
Barranquilla	C				1					100	1	1				
Buenaventura	C	15	50	56	13					1				1		
	D			1												
Costa Rica: San Jose	C															10
Dutch East Indies:																
Belawan Deli	C		4	1	1											
Borneo—Samarinda	C	11	8													
	D	3														
Celebes—Makassar	C	150														
	D	1														
Java—																
Batavia and West Java	C	31	11	37	17	11	2	1		2	3	4	3			
	D	6	7	8	10	5	2			1	1	2	3			
East Java and Madura	C		13	13												
	D		10													

Sanggi Islands	C			105	17		25			12						
	D			6	3											
Sumatra	C		4	1	1		2							48		
Egypt:																
Alexandria	C	1		5												
Port Said	C							2								
Great Britain:																
England and Wales	C	490	643	994	1,005	414	313	354	374	322	376	439	393	433	361	
Ashton under Lyne	C	2	1	6	3	2		1	1	3	8	7	11	5	4	
Bradford	C	6	13	20	8		1		4	2						
Cardiff	C	1	1	1												
Leeds	C					3	1	1	1	2	1		8	6	3	
London	C	156	174	321	480	158	127	157	156	138	193	183	185	210	124	
London and Great Towns	C	332	442	783	799	298	239	281	283	255	312	292	297	323	243	
	D			1		1	1			1		4		1		
Newcastle-on-Tyne	C	1		1												
Stoke-on-Trent	C	7	9	1	12	3	6		3	2	10	20	9	18	23	
Greece: Patras	C				1											
Hedjaz	C	5	7	6	11	11										
	D	1	6	1	7	1										
Honduras: Cholutsca	C	2														
India	C	3,111	3,337	7,644	12,789	4,765	6,461	7,562	7,736							
	D	661	730	1,963	3,730	1,255	1,339	1,751	1,841							
Bombay	C	16	12	42	119	85	74	86	97	112	155	173	198	233		
	D	11	8	14	57	33	25	50	56	57	74	95	117	123		
Calcutta	C	12	6	54	88	41	35	54	55	96	73	70	160	106		
	D	11	4	39	62	28	28	40	34	63	52	56	116	77		
Cochin	C	13	96	387	234	58	61	58	57	62	17	31	74	87		
	D		11	72	20	6	5	11	5	8	5	8	8	14		
Karachi	C	10	2	7	17	7	6	11	6	5	11		22	14		
	D	3	1	2	11	2	2	3	2	4	4		8	5		
Madras	C	79	58	94	85	10	22	34	39	39	47	25	48	38		
	D	8	11	11	16	3	3	4	6	5	4	12	8	8		
Moulmein	C	3	3	6	18	3	15	18	29	26	37	51	29	39		
	D		2	3	9	2	8	2	6	10	7	11	12	15		
Negapatam	C	1	1	1						1						
Rangoon	C	1		1	2		2	3	2	1	1	4	1	5	1	
	D					1	1	1	1	1	1			2	1	
Tuticorin	C						3									
Vizagapatam	C				2	2		2	1	5	2		2	4		
	D									1				1		
India (French):																
Karikal	C	2	4	1			3			4						
	D		2	1			3			2						
Pondicherry Province	C	5	19	7	20		13		1	2						
	D	3	16	7	19		10		1	1						
India (Portuguese)	C	1		1		4	7	5		10	12		11			
	D										2		3			

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

SMALLPOX—Continued

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

Place		Sept. 22–Oct. 19, 1929	Oct. 20–Nov. 16, 1929	Nov. 17–Dec. 14, 1929	Dec. 15, 1929–Jan. 11, 1930	Week ended— January, 1930		February, 1930				March, 1930				
						18	25	1	8	15	22	1	8	15	22	29
Indo-China (see also table below):																
Pnompenh	C	1	2													
	D					1										
Saigon and Cholon	C				4	1	1	1		2	1	1			2	
	D				2	1	1	1		1		1			1	
Iraq:																
Baghdad	C		9	20	16	3	1	3		2	1					
	D		3	10	5		1	1	1	1						
Basra	C			5							1					
Diyalah Liwa	C		63	46												
	D		18	7												
Kirkuk Liwa	C	16	90	70												
	D		26	19												
Mossoul	C	24	152	48	80	26					8	4				
	D	6	99	17	3	7					1	1				
Ivory Coast (see table below).																
Macao	D												2	1	2	
Mexico (see also table below):																
Aguascalientes	D	8	1													
Coahuila	D		1													
Jalisco (State): Guadalajara	D	4	1	6	9	2	3	4		1	3	6	4	3	7	5
Juarez	C	10	6	11	3			2								
	D	1	2	2	2			1								
Mexico City and surrounding territory	C	8	9	19	25	10	9	9	2	16	13	9				
	D	8	4	9	4	1	3	1	2	5	2	14				
Morelos State.[1]																
San Luis Potosi	C											1				
	D											1				
Morocco (see table below).																
Netherlands: Rotterdam	C	39	18	5	1											
	D	5	1	1												
Nigeria: Lagos	C	1			2	1	2	1	1	2						
	D				1		1	1								

Panama	C	154	11													
Persia (see table below).																
Philippine Islands: Sarangani and Balut Islands [2]	D				40	18				3						
Poland	C	1	2	4	2					2						
Portugal:																
Lisbon	C		2	3	6		1		3	7					4	
Oporto	C			1												
Rumania	C	2						1								
Siam	C	33	7	3	42											
	D	2	2	1	9		1									
Somaliland, British: Boales	C	3	25	24	5	2	14	14	5		12	7			2	
	D	4	16	9	9	1	1	1	5		2			2	3	
Straits Settlements	C					1		1								2
	D					1										1
Sudan (Anglo-Egyptian)	C	250	91	254	290	14	21	171	24	19	1	59		8	5	22
	D	16	12	45	65	1	8	20	5	2		4			2	
Sudan (French) (see table below).																
Syria (see table below).																
Tunisia: Tunis	C	6	23	47	20	1	4	1	1			3				
Turkey (see table below).																
Union of South Africa:																
Cape Province	C	P	P	P	P	P	P	P	P	P	P	P				
Natal	C			P												
Transvaal	C	P	P	P	P				P	P	P		P			
Upper Volta	C	1								17			9			
Zanzibar	C													9	2	
On vessel:																
S. S. Tairoa, at Liverpool, from London	C											1				
S. S. Karagola, at Zanzibar, from India	C								4							
S. S. Karoa, at Zanzibar	C		1													
S. S. Taipikn, at Manila, from Australia	C		1													
S. S. Umvuma, at Cape Town, from London	C	5														

[1] Newspaper reports of Feb. 4 show an epidemic of smallpox in Ionacatepec, Morelos State, Mexico, and vicinity, giving 600 deaths in preceding 2 weeks.
[2] On Feb. 1, 1930, 317 cases of smallpox with 102 deaths were reported to that date in the Sarangani and Balut Islands.

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

SMALLPOX—Continued

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

Place		August, 1929	September, 1929	October, 1929	November, 1929	December, 1929			January, 1930			February, 1930		
						1-10	11-20	21-31	1-10	11-20	21-31	1-10	11-20	21-28
Belgian Congo	C	-------	725	-------	42	41	33	-------	-------	-------	-------	-------	-------	-------
	D	-------	19	-------	2	4	-------	-------	-------	-------	-------	-------	-------	-------
Dahomey	C	-------	-------	4	19	19	-------	-------	-------	-------	-------	-------	-------	-------
Indo-China (see also table above)	C	263	64	128	245	-------	142	-------	136	140	184	148	286	-------
Ivory Coast	C	2	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
Sudan (French)	C	-------	2	-------	P	-------	17	-------	-------	4	225	12	P	201
Syria: Beirut	C	29	37	28	60	10	9	6	18	6	46	4	7	7
	D	-------	-------	1	6	-------	-------	-------	-------	-------	-------	-------	-------	-------

Place		September, 1929	October, 1929	November, 1929	December, 1929	January, 1930	February, 1930
Bolivia: La Paz	C	-------	120	22	-------	-------	-------
British East Africa (see also table above):							
Kenya	C	66	-------	278	168	12	-------
Chosen	C	-------	-------	2	-------	1	-------
Mexico: Durango (see also table above)	D	2	2	2	4	12	6
Morocco	C	3	12	41	84	29	74

Place		September, 1929	October, 1929	November, 1929	December, 1929	January, 1930	February, 1930
Nigeria	C	189	233	228	293	-------	-------
	D	34	47	45	70	-------	-------
Persia	C	62	57	-------	P	-------	-------
	D	-------	158	37	-------	-------	-------
Turkey	C	41	100	136	883	215	114
	D	9	29	12	457	66	42

Place		Sept. 22–Oct. 19, 1929	Oct. 20–Nov. 16, 1929	Nov. 17–Dec. 14, 1929	Dec. 15, 1929–Jan. 11, 1930	Week ended— January, 1930		February, 1930				March, 1930				
						18	25	1	8	15	22	1	8	15	22	29
Algeria:																
Algiers	C	10	2	1	14			2	1	3		1		2		
Constantine Department	C		1	3	2	1	2		1	3	2			2		
Oran	C			1		1	1									
Bolivia: La Paz	C		13	14												
Brazil: Sao Paulo.[1]																
Bulgaria	C			9	41											
	D			1	2											
Sofia	C		1						1							
	D		1													
Chile:																
Talcahuano	D							1								
Valparaiso	C					1										
China: Tientsin	C				1			1								
Chosen (see table below).																
Czechoslovakia (see table below).																
Egypt:																
Alexandria	C	2														
Assuan	C				9											
	D				1											
Beheira Province	C	16	2		7	6	8			5	13					
	D	4	1								5					
Cairo	C			1							5					
	D			1												
Dakahlieh	C				11											
	D				2											
Port Said	C						1		1							
Suez	C	1	1													
Greece (see table below).																
Iraq: Baghdad Liwa	C				1											
	D				1											
Ireland:																
Irish Free State	C				1											
Northern Ireland—Cookstown	C												3			
Latvia (see table below).																
Lithuania (see table below).																

[1] Press reports show that 10 deaths from typhus fever occurred in Sao Paulo, Brazil, from Nov. 3 to 30, 1929.

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

TYPHUS FEVER—Continued

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

Place		Sept. 22–Oct. 19, 1929	Oct. 20–Nov. 16, 1929	Nov. 17–Dec. 14, 1929	Dec. 15, 1929–Jan. 11, 1930	Week ended— January, 1930		February, 1930				March, 1930				
						18	25	1	8	15	22	1	8	15	22	29
Mexico: Mexico City, including municipalities in Federal district	C	9	3	5	6	3	3	2	4	4	2	3				
	D		1		2	2	1	1								
Morocco	C	5	4	2	6	7	2	7	7		2	8	11	4		
Palestine	C	3	2	1	1						1			1	1	2
Peru: Arequipa (see table below).																
Poland	C	31	62	74	61	67	96	52	81		72	55	56			
	D	3		10	4	5	7	8	1		3	2	3			
Portugal: Oporto	C	1	3	3								1			2	
Rumania	C	25	19	103	82	41	48	96	56	88	58					
	D	5	2	10	5	8	2	7	8	11	2					
Tunisia	C	1	1	3	2						3					
Turkey (see table below).																
Union of South Africa:																
Cape Province	C	P	P	P	P	P	P		P	P	P					
Natal	C	2	P	P	P	P		1		P						
Orange Free State	C	P	P	P	P	P	P	P	P	P	P					
Transvaal	C	P	P													
Yugoslavia (see table below).																

Place		September, 1929	October, 1929	November, 1929	December, 1929	January, 1930	February, 1930
Chosen: Seoul	C	1			1		17
Czechoslovakia	C	1		3		10	
France	C	1			1		
Greece: Athens	C	3	7		6	12	
Latvia	C				2		
Lithuania	C	3	6	4	5	2	70
	D		1	1	1		5

Place		September, 1929	October, 1929	November, 1929	December, 1929	January, 1930	February, 1930
Peru: Arequipa	D	1	1				
Turkey	C	4	10	2	4	2	3
	D	1					
Yugoslavia	C		1		6	26	33
	D				1	3	5

YELLOW FEVER

During the month of September, 1929, cases of yellow fever were reported as follows: Nictheroy, Brazil, 1 case; Rio de Janeiro, Brazil, 2 cases; Monrovia, Liberia, 1 case.