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CURRENT PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES [1]

June 17–July 14, 1934

The prevalence of certain important communicable diseases, as indicated by weekly telegraphic reports from State health departments to the United States Public Health Service, is summarized in this report. The underlying statistical data are published weekly in the Public Health Reports, under the section entitled "Prevalence of Disease."

Poliomyelitis.—This disease has been epidemic in Los Angeles and vicinity for the past 2 months, but the peak was apparently reached during the week ending June 23, when 340 cases were reported in the State of California. By the end of the current 4-week period the weekly number of cases had declined to 207 (week ending July 14), and the figures for the week ending July 21, presented in the accompanying tables, indicated a further decline to 154 cases for the State.

TABLE 1.—*Poliomyelitis cases reported in California and nearby States during recent weeks of 1934*

Week ended—	California				Oregon	Washington	Arizona	Idaho	Montana	Wyoming	Utah	Colorado	New Mexico	Texas
	Los Angeles City	Los Angeles County outside of city	San Francisco	Remainder of State										
May 5	2	3	0	(1)	1	0	2	3	0	0	0	0	0	2
12	7	8	0	(1)	0	0	10	1	1	0	0	0	0	2
19	9	29	0	(1)	0	1	2	2	0	0	0	0	0	1
26	51	44	3	(1)	2	0	2	1	0	0	0	0	0	0
June 2	110	62	4	(1)	1	1	0	0	0	0	0	0	0	0
9	156	64	9	44	1	0	1	0	0	0	0	2	0	1
16	99	100	20	54	0	2	3	2	1	0	0	0	0	1
23	122	82	27	109	1	2	0	0	1	0	0	0	1	0
30	126	83	15	73	4	1	2	2	1	0	0	0	0	6
July 7	95	49	15	107	2	2	2	4	3	0	1	0	0	5
14	91	52	4	60	2	8	2	2	1	0	0	0	0	2
21	63	35	3	53	1	12	4	1	3	0	0	1	0	11

[1] Data incomplete.

During the 4 weeks ending July 14, 1,309 cases were reported in the United States, of which number 700 were in Los Angeles city and

[1] From the Office of Statistical Investigations, U.S. Public Health Service. The numbers of States included for the various diseases are as follows: Typhoid fever, 48; poliomyelitis, 48; meningococcus meningitis, 48; smallpox, 48; measles, 47; diphtheria, 48; scarlet fever, 48; influenza, 43 States and New York City. The District of Columbia is counted as a State in these reports. These summaries include only the 8 important communicable diseases for which the Public Health Service receives regular weekly reports from the State health officers.

county and 410 in the remainder of California, with only 199 cases in the other States. Table 1 shows by weeks the reported cases in various subdivisions of California and in adjacent States. Apparently there has been very little spread of the epidemic to other States. In the south the neighboring State of Arizona has reported a few cases and in the north Oregon, Washington, Idaho, and Montana reported a few cases. None of the other Mountain States has reported more than one or two cases. With a disease that normally is as rare as poliomyelitis and with the small populations in these Mountain and other sparsely settled States, anything more than one or two cases a month is above the normal expectancy.

Table 2 shows by geographic areas the weekly reports of poliomyelitis from April 29 to July 21, 1934, with comparative data for 1933 and 1932. Of the various geographic sections, none except the Pacific, Mountain, and possibly the South Central (Texas accounts for the increase) shows any appreciable excess over preceding years.

TABLE 2.—*Poliomyelitis cases reported in different geographic areas in recent weeks of 1934 and in corresponding weeks of 1933 and 1932*

Geographic areas	Week ended—											
	May 5	May 12	May 19	May 26	June 2	June 9	June 16	June 23	June 30	July 7	July 14	July 21
Total, all areas: [1]												
1934	34	46	46	118	179	294	320	376	338	316	279	229
1933	26	16	18	20	14	16	11	26	41	40	81	116
1932	17	15	15	26	24	28	30	42	42	43	46	49
Total, all areas (exclusive of California):												
1934	21	26	10	26	16	21	47	36	41	50	72	75
1933	25	15	14	18	14	14	10	22	37	37	78	111
1932	15	11	13	25	21	27	28	37	38	40	44	45
California:												
1934	13	20	36	92	163	273	273	340	297	266	207	154
1933	1	1	4	2	0	2	1	4	4	3	3	5
1932	2	4	2	1	3	1	2	5	4	3	2	4
Mountain and Pacific [1] (exclusive of California):												
1934	6	12	5	5	2	4	8	5	10	14	15	22
1933	2	2	1	2	0	1	1	1	0	1	1	2
1932	0	2	0	1	0	3	3	3	4	4	3	1
East and West South Central:												
1934	4	3	2	2	4	5	4	7	9	11	8	14
1933	3	3	3	2	6	2	3	3	4	13	6	14
1932	5	2	1	4	2	9	5	8	6	9	6	6
South Atlantic:												
1934	3	1	0	1	2	4	5	7	4	5	9	5
1933	3	1	4	2	0	0	0	3	4	3	6	14
1932	3	0	2	4	7	3	2	4	5	3	4	4
West North Central:												
1934	1	2	1	4	4	0	4	0	3	3	5	1
1933	1	1	1	1	1	2	0	6	1	4	9	14
1932	0	0	1	3	0	1	1	6	7	5	5	4
East North Central:												
1934	2	3	1	7	2	4	12	3	7	5	11	12
1933	8	5	4	4	4	6	2	5	10	5	8	13
1932	4	6	3	4	5	8	9	6	8	8	8	12
New England and Middle Atlantic:												
1934	5	5	1	7	2	4	14	14	8	12	24	21
1933	8	3	1	7	3	3	4	4	18	11	48	54
1932	3	1	6	9	7	3	8	10	8	11	18	18

[1] No reports are available from Nevada.

Typhoid fever.—Increases in typhoid fever incidence were apparent in all sections of the country during the 4 weeks ended July 14, but that fact is not especially significant as the incidence usually increases very sharply at this season of the year. Of the 2,132 cases reported for the period, the South Atlantic States reported 516 and the South Central States 925—a total of about two-thirds of all the cases. Considering this period in relation to preceding years, the current incidence for the country as a whole was the lowest for this period in 4 years. In all regions except the West North Central, Mountain, and Pacific, the number of cases fell considerably below that reported for last year. In the West North Central section, Missouri reported 82 cases for the current period as against 53 last year; New Mexico, in the Mountain area, reported 29 as against 5 last year; while the rise in the Pacific area was due to a slight increase in California.

Diphtheria.—The number of cases of diphtheria reported for the current 4-week period was 1,592, as compared with 1,722, 2,071, and 2,459 for the corresponding periods in the years 1933, 1932, and 1931, respectively. The States of Minnesota, Missouri, and Kansas, in the West North Central area, seemed mostly responsible for a 30 percent increase in that region over last year's figure; and Alabama, in the East South Central section, reported a rather high incidence, making the figure for that region about 20 percent above that for the same period last year. Other areas showed very appreciable decreases or closely approximated last year's incidence.

Meningococcus meningitis.—The number of cases of meningococcus meningitis reported for the current 4-week period was 133, which was about 10 percent lower than the figure for the corresponding period in each of the years 1933 and 1932. For this period in 1931 and 1930 the number of cases was 244 and 347, respectively. Each geographic area except the Mountain reported a decrease from last year's figure. In the Mountain area 12 cases were reported during the current 4-week period as compared with none last year. Nine of the twelve occurred in Wyoming.

Measles.—Measles continued to decline. However, the number of cases (34,925) reported for the 4 weeks ended July 14, was 1.8 times that reported for the corresponding period last year and about 1.3 times the number in 1932 and 1931. All sections of the country reported significant declines in the incidence from the preceding 4-week period, but the numbers of cases in each geographic area were still considerably in excess of last year's figures for the same period.

Smallpox.—The incidence of smallpox reached its lowest level for the current year during the 4 weeks ended July 14. The number of cases reported was 204, which was less than 50 percent of the cases reported for the corresponding period in each of the years 1933 and

1932. For this period in 1931 and 1930 the numbers of cases reported were 1,675 and 3,111, respectively. Each geographic area shared in the favorable situation. From Wisconsin (East North Central section), where the disease has been unusually prevalent, only 26 cases were reported for the current period as against 69 for the preceding 4 weeks, and in Texas, in the West South Central area, the number of cases dropped from 121 for the preceding period to 50 for the current period.

Scarlet fever.—The incidence of scarlet fever dropped more than 50 percent during the current 4 weeks from that reported for the preceding 4-week period. The number of cases (7,571) represented, however, an increase of approximately 12 percent over the figure for the corresponding period in each of the years 1933 and 1931 and was almost the same as that for 1932. Reports of the highest incidence continued to come from the East and West North Central sections, where the disease has been unusually prevalent throughout the current year. While the excess over last year has not been great, the Pacific area has also reported a little higher incidence for each 4-week period during the current year than was recorded for the corresponding period last year.

Influenza.—The influenza incidence was close to the average for recent years. For the 4 weeks ended July 14 the number of cases for the entire reporting area totaled 967. The situation was favorable in all sections of the country.

Mortality, all causes.—The average mortality rate for large cities for the 4 weeks ended July 14, as reported by the Bureau of the Census, was 10.5 per 1,000 inhabitants (annual basis). For the corresponding periods in 1933, 1932, and 1931 the rate was 9.9, 10.0, and 11.2, respectively.

STUDIES IN CHEMOTHERAPY

I. THE ACTION OF SODIUM FORMALDEHYDE SULPHOXYLATE IN BACTERIAL INFECTIONS

By Sanford M. Rosenthal, *Senior Pharmacologist, United States Public Health Service, National Institute of Health*

Formaldehyde sulphoxylate has been recently introduced into therapy as an antidote in acute mercurial poisoning (1) (2). It is a powerful reducing agent, reducing the oxidation-reduction indicators, pheno-safranin and betaine viologen. It is of low toxicity, comparatively stable in the body, and following injections into animals it confers this reducing action to the various body fluids. Some of its characteristics have been described in the previous work, and a more detailed account of its pharmacology will be published later.

Test-tube experiments showed sulphoxylate to possess no bactericidal action against staphylococci, pneumococci types I and III, meningococci, or colon bacilli. Neither could any trypanocidal action be demonstrated in the test tube or in the living rat. While it is excreted largely in the urine, previous experiments by Dr. Elias Elvove and myself have shown it to confer no bactericidal action to the urine against *Staphylococcus albus* and the colon bacillus.

However, because of the marked alteration in reducing power in the body produced by sulphoxylate, experiments were done to determine the effect of this drug upon bacterial infections in the living animal. It was found that a high percentage of mice could be saved from fatal doses of living pneumococci, inoculated intraperitoneally, by treatment with subcutaneous injections of sulphoxylate following the bacterial inoculation.

In the following experiments a virulent strain of type I pneumococcus, kept at the National Institute of Health, was employed. The strain was kept on blood agar; and for the intraperitoneal inoculations a 4- to 5-hour broth culture, made from an 18-hour broth culture, was used. The dilutions to be injected were made up in sterile broth, and 0.5 cc was injected intraperitoneally in all mice. Albino mice of 14 to 20 grams weight were employed. The formaldehyde sulphoxylate [1] was injected subcutaneously in the back. A 9- to 12-percent aqueous solution was used, and, unless otherwise stated, the injections were made immediately following the bacterial inoculation. The therapy was repeated daily for 3 or 4 days, and the surviving animals have been symptom free when kept under observation for at least 1 to 2 weeks.

RESULTS

Table 1 shows the toxicity of sulphoxylate following the subcutaneous injection of a 10-percent solution in mice. No deaths occurred at 2.5 grams per kilo, while only at 4.0 grams per kilo did the majority of animals die. The deaths which occurred were within a few hours of the injection, and the surviving animals have shown no detectable after-effects. A large number of toxicity experiments on rats with various preparations of sulphoxylate have shown that 2.0 grams per kilo of the purified drug ($NaHSO_2.HCHO.2H_2O$) can be slowly injected intravenously into rats without ill effects. In subsequent experiments upon infected mice, an occasional death was produced (within a few hours after the first injection) by 2.5 grams per kilo,

[1] In these experiments the sodium formaldehyde sulphoxylate used was prepared by Metz & Co., lot no. 15. This preparation was 90 percent $NaHSO_2.HCHO.2H_2O$, chemical analysis indicating that the remaining 10 percent could be accounted for by moisture. Purified preparations of this compound can also be obtained from Merck & Co., Dermatological Research Co., the Diarsenol Co., and some other manufacturers of neoarsphenamine. If other preparations are used, due account must be taken of the amount of moisture in the compound.

injected subcutaneously. In the following experiments 1.5 to 2.0 grams per kilo were given subcutaneously at the first injection and 1.5 grams per kilo at three or four subsequent injections.

Table 2 shows the results of this therapy in mice inoculated intraperitoneally with type I pneumococcus. The organism was more virulent in the earlier experiments, but in all cases a high degree of protection was obtained.[2]

In table 3 the results of delayed therapy are shown. The initial injections of sulphoxylate were not given until 3 and 8 hours, respectively, after the intraperitoneal injections of pneumococci. A marked curative action was obtained here also, 70 percent of the treated animals surviving, as compared with no survivals among the controls.

In all of these experiments, death in the animals was established as being due to pneumococcus infection by autopsy appearance and by the demonstration of large numbers of pneumococci in pleural exudates or in the cardiac blood.

Table 4 shows the absence both of bactericidal and of significant bacteriostatic action of sulphoxylate when added to broth cultures of the pneumococcus employed in the above experiments.

Extension of this work is in progress, by Dr. Sara E. Branham and other members of the staff of the National Institute of Health, to determine the effect of formaldehyde sulphoxylate and related compounds upon other bacterial infections in animals. The chemical approach to the problem is being made with Dr. Raymond M. Hann.

TABLE 1.—*Toxicity of sodium formaldehyde sulphoxylate when injected subcutaneously into mice*

Number of mice	10 percent formaldehyde sulphoxylate subcutaneous injection	Deaths	Time of death after injection	Percent mortality
	Grams per kilo		*Minutes*	
10	2.5	0		0
10	3.0	2	45 60	20
5	3.5	1	150	20
5	4.0	3	180 180 160	60

[2] Preliminary experiments by Dr. Branham and the author with strains of pneumococci rendered extremely virulent to mice (by mouse passage) have shown that the protection by sulphoxylate is not marked if overwhelming doses of pneumococci are used—doses in terms of M.L.D. serveral thousand times as potent as the ones employed in the experiments described above.

TABLE 2.—*Effect of subcutaneous therapy with formaldehyde sulphoxylate upon type I pneumococcus infection produced by intraperitoneal inoculation in mice*

Number of mice	Pneumococcus dilution, 0.5 cc intraperitoneally	Formaldehyde sulphoxylate subcutaneously	Deaths in—				Percent mortality
			1 day	2 days	3 days	4 days	
5	1 to 400,000	None	4	1			100
5	1 to 400,000	1.5 grams per kilo daily		1			20
14	1 to 325,000	None	9	2			80
14	1 to 325,000	1.5 grams per kilo daily	1	1			14
10	1 to 375,000	None	5				50
10	1 to 375,000	1.5 grams per kilo daily					0
8	1 to 375,000	2.5 grams per kilo first day, then 1.5 grams.					0
5	1 to 250,000	None		2	1		60
5	1 to 250,000	2.0 grams per kilo first day, then 1.5 grams.					0
5	1 to 50,000	None	1	2	1		80
5	1 to 50,000	2.0 grams per kilo first day, then 1.5 grams.			1		20
4	1 to 5,000	2.0 grams per kilo first day, then 1.5 grams.					0
5	1 to 1,000	2.0 grams per kilo first day, then 1.5 grams.			1		20

TABLE 3.—*Effect of subcutaneous sulphoxylate therapy administered at 3 hours and at 8 hours after the intraperitoneal inoculation of pneumococci into mice*

Number of mice	Pneumococcus dilution, 0.5 cc intraperitoneally	Formaldehyde sulphoxylate, 10 percent, subcutaneously	Interval between injection and therapy	Deaths in—				Percent mortality
				1 day	2 days	3 days	4 days	
			Hours					
10	1 to 25,000	None		4	6			100
10	1 to 25,000	1.8 grams per kilo first day, then 1.5 grams per kilo daily for 3 days.	3	1	1	1		30
10	1 to 25,000	1.8 grams per kilo first day, then 1.5 grams per kilo.	8		2	1		30

TABLE 4.—*Absence of bactericidal or appreciable bacteriostatic action of sulphoxylate upon pneumococcus type I in the test tube—tubes were inoculated with 1 drop of a broth culture of pneumococci to 10 cc of broth*

Concentration of sulphoxylate	Pneumococcus type I 24-hour broth culture	Smear
None	Heavy growth	Pneumococci+++.
1 to 1,000	do	Do.
1 to 500	do	Do.
1 to 200	Moderate growth	Do.
1 to 100	Slight growth	Pneumococci+.
1 to 200	No organisms added; no growth	Negative.

REFERENCES

(1) Rosenthal, Sanford M.: Pub. Health Rep., 48: 1543. (1933.)
(2) Rosenthal, Sanford M.: Jour. Am. Med. Assoc., 102: 1273. (1934.)

HEART DISEASE AMONG SEAMEN[1]

By H. ARENBERG, *Acting Assistant Surgeon, United States Public Health Service, Ellis Island, N.Y.*

The last decade has witnessed a considerable increase in the incidence of heart disease as well as an advance in the mortality rate therefrom. This increase has been progressive, so that cardiac disease in its various manifestations has headed the list of causes of death in the United States for at least 15 years (1). This may seem to imply an indictment of preventive medicine from the standpoint of public health. However, paradoxical as it may seem, Riesman (2) calls it a "triumph of preventive medicine"; for in his opinion the increase in incidence is indirectly the result of a lower mortality from other diseases (3).

It is recognized that a larger percentage of individuals reach the higher age levels now than was the case two decades ago; consequently a greater number become subject to the diseases characteristic of middle and old age, and the more frequent occurrence of heart disease is attributable to this fact. According to Benjamin (4), the increase is actually in the older ages; he believes that in the younger brackets there has been a decrease.

Judging from the volume of current literature, the importance of cardiac conditions is fully recognized by the medical profession. Whether or not sufficient stress has been placed upon the preventive aspects of heart disease is another matter. In order to determine the incidence of heart disease among seamen and what percentage of these cardiac cases could be placed in the preventive category, an analysis of a series of patients presenting themselves for treatment at the United States Marine Hospital, Ellis Island, N.Y., has been made, with special reference to both the etiological and clinical factors.

In view of the fact that more than half of the patients admitted to this hospital are foreigners who frequently do not speak English, an accurate and trustworthy history is often difficult to obtain; therefore, early and borderline cases of heart disease are easily overlooked. For this reason, a cardiac clinic was established where only cardiovascular examinations are made. Originally it was planned that all patients admitted to the hospital were to be examined by the cardiac service, either at the clinic or at the bedside; later it appeared that only about 40 percent of all admissions were so examined.

Out of 6,486 admissions in a period of 18 months, a little over 2,500 were subjected to the special cardiac examination. This number presumably included all positive cases and all those suspected of cardiovascular abnormalities by the ward physicians on the respective services.

[1] This includes merchant seamen, foreign seamen, and a very small group of Coast Guardsmen.

The examination by the cardiac service included a history, particularly with reference to etiological factors, a cardiac examination, and a blood-pressure determination. A rough estimation of cardiac reserve was made by having the patient hop on one foot for half a minute, or perform some other exercise or effort, dependent upon his physical condition. Murmurs or irregularities in rhythm otherwise not detectable often became distinguishable on reexamination after such effort, while other murmurs, as well as premature contractions, frequently disappeared after exertion. All patients suspected of any deviation from the normal, including those with so-called functional murmurs, were subjected to fluoroscopic and electro-cardiographic study on at least one occasion; and in instances where fluoroscopy was not feasible, a 7-foot heart film or a bedside X-ray film of the chest was made.

The writer examined personally on at least one occasion all those suspected of having cardiac abnormalities and all positive cases. In all instances he followed up the latter until their disposition. He also examined personally most of the negative cases, while the remainder were examined under his immediate supervision. Doubtful and complicated cases were seen in consultation by Dr. Irving R. Roth, consultant cardiologist of the Public Health Service.

Out of 2,500 admissions examined, a diagnosis of heart disease was made in 207 instances on 189 different individuals. The remainder were considered free from cardiovascular abnormality. There were 183 males and 6 females, this being approximately the relative proportion of admissions of male to female patients at this hospital.

It is interesting to note that the above number of patients represented 38 different countries, located in almost every part of the world. Only 37 percent of the patients were natives of the United States.

Forty-five of those afflicted, or 23.8 percent, gave a definite history or had positive serology of luetic infection, or both. This is an appalling percentage, but only slightly more than half of these patients were actually suffering from syphilitic cardiac disease. The following diagnoses of heart disease were made:

TABLE 1.—*Etiological diagnoses*

Etiological diagnoses	Age extremes	Number of cases	Percentage
Rheumatic	21–49	40	21.0
Syphilitic	26–60	26	14.0
Hypertensive	21–76	60	32.0
Atherosclerotic, including coronary disease and occlusion	41–81	30	15.7
"Cor pulmonale"	43–53	2	1.0
Hyperthyroid	29–37	3	1.6
Congenital	19–38	3	1.6
Functional, including 4 angina pectoris	46–73	20	10.5
Pericarditis	26–59	3	1.6
Endocarditis	36–49	2	1.0
Total		189	100.0

The percentage relationship, as seen from table 1, does not correspond closely with the figures given by different investigators (1) (5). This is particularly noticeable in the larger groups. The percentage of the rheumatic group, 21, is less than half that given by Paul D. White, 54 percent. This may be due to the almost exclusive adult male population at this hospital, and also to the fact that 63 percent of the total group were of foreign origin, who are perhaps less subject to rheumatic fever infections than North Americans. This conclusion is borne out to some extent by the fact that whereas only 37 percent of the entire group were natives of the United States, 57 percent of the rheumatic group were native born. The percentage in the syphilitic group is 3 to 4 times as large as that given by White. On the other hand, considering that about 95 percent of the seamen are tobacco users, most of them being excessive smokers, and that very many are also heavy consumers of alcohol, the arteriosclerotic types, including coronary disease and angina pectoris, are poorly represented in this series. This was also noted by Hedley (6).

Study of the foregoing table will show three important groups of heart disease, comprising 82 percent of the total. The first is the rheumatic group, with 21 percent, the second is the syphilitic, with 14 percent, and the third is the combined hypertensive and atherosclerotic, with 47 percent. It is true that the profession is quite in the dark concerning the etiology of atherosclerosis and even more so of hypertension. It is also agreed that the curtain of mystery has not been raised from the obscure rheumatic infections; hence preventive measures are strictly limited in these two very important groups of cases, although, admittedly, a proper regimen and other measures are applicable in the latter. The field of syphilis, however, offers a wonderful opportunity for preventive medicine. Connor (7), in his very interesting historical account of cardiovascular syphilis, calls attention to this opportunity and challenges the profession to take advantage of it.

TABLE 2.—*Correlation of etiological and anatomical diagnoses*

Anatomical diagnoses	Etiological diagnoses					
	Atherosclerotic	Hypertensive	Rheumatic	Syphilitic	Others	Total
Aortic aneurysm	2			7		9
Aortic sclerosis	4					4
Aortic insufficiency			6	14		20
Cardiac hypertrophy and dilatation	10	52	37	18	19	136
Endocarditis, bacterial					2	2
Mitral insufficiency			9			9
Mitral stenosis and insufficiency			19			19
Mitral and aortic, combined lesions			7			7
Myocarditis, acute			4			4
Myocardial infarction	5	1				6
Pericarditis	1	2			3	6

RHEUMATIC GROUP

Of the 40 cases of rheumatic heart disease, 18 had a history of rheumatic fever on one or more occasions, 5 gave histories of chorea, and 1 repeated attacks of tonsillitis. Twenty-six had mild to severe symptoms; the others were not aware of their condition. Their ages ranged from 21 to 49.

Anatomically, the rheumatic lesions diagnosed were as follows: 19 stenosis and insufficiency of the mitral valve, 4 stenosis and insufficiency of the mitral valve, with insufficiency of the aortic valve, 2 mitral and aortic insufficiency, 1 stenosis and insufficiency of the mitral and aortic valves, 4 rheumatic myocarditis in active rheumatic fever patients, and 1 aortic insufficiency. Nine had pure mitral insufficiency, a diagnosis one hesitates to make. Of these, 5 had a history of rheumatic fever, 1 a history of chorea, and 1 of repeated attacks of tonsillitis. All except 3 of this group had fluoroscopic examination, or bedside films of the chest, with evidence of encroachment on the retrocardiac space or enlargement of the heart chambers.

There were 10 cases of auricular fibrillation, 1 of which was of the paroxysmal type. All of these patients had mitral stenosis; 4 of them died, and 1 was restored to normal rhythm by quinidine. Seven showed right axis deviation and 15 left axis deviation. There were 2 cases of conduction defects in the auriculo-ventricular path and 2 with T-wave changes. Deep Q_3 waves were noted in 2 cases. There were 8 deaths, 1 of which was reported from another hospital; 4 died of congestive failure, 2 died of embolism, 1 of pneumonia, and 1 of uremia. There were 3 post-mortem examinations.

LUETIC GROUP

In the luetic group there were 26 patients. Twenty-five of these had a history of syphilis or positive serology, or both. The age limits were 26 to 60. The patient 26 years of age had a large aneurysm of the aorta, resulting in death at that age. Fourteen had aortic insufficiency, 5 of which were associated with hypertension. There were 7 aortic aneurysms and 5 instances of aortitis only. Twenty of the group had mild to severe dyspnoea; 7 had substernal pain. Three with comparatively large aneurysms were entirely symptomless, and the condition was discovered on routine examination.

Electrocardiographically, 15 of this group showed left axis deviation, 1 intraventricular block, 2 partial auriculo-ventricular block, 4 T-wave changes, and 1 paroxysmal auricular fibrillation. Roentgenographically, there was evidence of slight to marked enlargement of the heart in 18 and aneurysm of the aorta in 7. One of these had also an aneurysm of the abdominal aorta. There were 5 deaths, 2

in the insufficiency group, and 3 in the aneurysm group, of which 1 died in another hospital. There were four necropsies.

HYPERTENSIVE GROUP

Hypertensive heart disease was the largest group in the series, occurring in 32 percent, or 60 out of 189. The age limits for this condition were 21 to 76. Of these, 9 had papilloedema and renal insufficiency on admission, 3 of which were considered of the arteriolar disease type; the others had severe glomernal nephritis. The ages of the nephritics ranged from 21 to 48. The remainder of the cases were considered of the essential type. Blood pressure ranged from 154/90 to 266/180, with the higher limits in the arteriolar and nephritic subgroup. Sixteen were free from symptoms. In the remainder, symptoms varied from mild to severe, with uremia in three instances. Six were admitted with evidence of hemiplegia and one developed the condition in the hospital. Three patients had terminal pericarditis, two of which were uremic.

Electrocardiograms showed T-wave changes in 13. They were considered due either to ventricular stress or to myocardial damage in cases where coronary disease was suspected to coexist. Six showed auricular fibrillation, 30 left axis deviation, and 8 conduction-system defects. Only 56 had records of fluoroscopic examinations or roentgenograms. All except 4 showed enlargement, while 6 had dilatation of the arch of the aorta. In this group there were 12 deaths. Of these 4 were attributed to congestive failure, 3 to uremia, 2 to cerebral hemorrhage, 1 to coronary thrombosis, 1 to rupture of the aorta, and 1 to pneumococcic meningitis following pneumonia. There were six necropsies.

ATHEROSCLEROTIC GROUP

In the atherosclerotic group, there were 30 cases. Twelve of these had diseases of the coronary arteries, associated with mild to moderate hypertension, 5 of which resulted in occlusion; 4 had disease of the aorta and aortic valve, while 2 had aneurysm of the aorta. The age extremes were 41 and 71. Twenty had dyspnoea, and 13 precordial pain. One had hemiplegia on admission, due to cerebral thrombosis. This patient died later following amputation of a leg after occlusions of the femoral and coronary arteries. Electrocardiograms showed evidence of left axis deviation in 13 and T-wave changes in 11, of which 3 were typical of myocardial infarction. There were 2 cases of auricular fibrillation, and 2 of auriculur flutter, one of which showed a paroxysm of 1:1 response of 240 rate. This occurred in a coronary occlusion case, which subsequently improved (8). There were 2 instances of left bundle branch block and 1 of extremely low voltage. The latter patient died 2 days later of ruptured heart. X-ray

examinations gave evidence of 2 aortic aneurysms and 13 cardiac enlargements. Four had dilated and calcified arches. There were 2 deaths in this group and 1 necropsy.

OTHER ETIOLOGICAL TYPES

The series also includes 2 cases of "Cor pulmonale", or cardiac hypertrophy due to chronic pulmonary emphysema. One was 41 and the other 53 years of age. The first patient had moderate emphysema and cyanosis; the other had severe cyanosis, marked emphysema, and moderate polycythemia. Both had right sided cardiac hypertrophy and right axis deviation; one was luetic. Ayerzas disease was suspected in the more severe case, which was fatal; but necropsy revealed no endarteritis of the pulmonary circulation.

There were 3 cases of heart disease due to hyperthyroidism. Two of these had slight left ventricular enlargement and left axis deviation. All had tachycardia. Their ages were 29 to 38.

Congenital heart disease contributed 3 cases to the series, ages 19 to 38. Two were diagnosed as patent ductus arteriosus and one dextrocardia. Roentgen evidence was obtained in all three and all had right axis deviation.

A diagnosis of pericarditis as a separate entity was made in 3 instances. There was an adherent pericardium in a patient with pulmonary tuberculosis, an acute pericarditis as a complication of influenza, and an acute terminal pericarditis in a case of agranulocytosis. There were 2 deaths and 2 necropsies, with confirmation of the clinical diagnoses.

Acute endocarditis was poorly represented in the series, while subacute endocarditis was strikingly absent. There were 2 cases of acute bacterial endocarditis, 1 due to *Streptococcus hemolyticus* in a pneumonia patient, the other in a case of aortic insufficiency due to lues complicated by a periurethral abscess. The latter was considered the source of the endocardial infection. *Staphylococcus aureus* was reported as the causative agent after death. The two patients died, and necropsy was done in both instances.

There were 4 cases of angina pectoris, 1 of which had lues. Their ages were 46 to 63. They showed no distinctive electrocardiographic or roentgenographic evidence.

There were 7 cases of congestive failure, classed under "Functional" group in table 1, where no definite cardiac or valvular lesion was discovered. All showed enlargement and triangulation of the heart, frequently accompanied by slight effusion in the right base. One had auricular fibrillation and four left axis deviation.

There was one case of effort syndrome in an otherwise normal heart.

CARDIAC ARRYTHMIAS

Auricular fibrillation was the most frequent form of arrhythmia. It was noted in 28 patients in the series, or in 14.8 percent of the 189 cases. Ten were in the rheumatic group, 6 in the hypertensive group, 1 was in the luetic, and 2 were in the arteriosclerotic group. Eight cases of auricular fibrillation were of undetermined source. Three of these, discovered on routine examination, had no other evidence of heart disease and no symptoms (9). Five had slight dyspnoea on exertion, with evidence of cardiac enlargement. Their ages ranged from 43 to 73, with the younger ones in the symptomless category. One was restored to normal rhythm by quinidine.

TABLE 3.—*Electrocardiographic findings*

Electrocardiographic findings	Etiological groups						
	Atherosclerotic	Hypertensive	Rheumatic	Undetermined	Syphilitic	Others	Total
Auricular fibrillation	2	6	9	8	0	1	26
Paroxysmal auricular fibrillation			1		1		2
Auricular flutter	2						2
Axis deviation:							
Right axis			7			5	12
Left axis	13	30	15	4	15	2	79
Conduction defect:							
A.V. partial block			2		2		4
B.B. block	2						2
Intraventricular block		8			1		9
Paroxysmal tachycardia	1						1
Deep Q_3 wave			2				2
T-wave changes	11	13	2		4		30

POST-MORTEM FINDINGS

During the period of 18 months that this work was carried on there were 138 deaths in the hospital, 85 of these, or 61 percent, coming to autopsy. Fifty-three deaths were from the tuberculosis service, while 33 out of 138 died from heart disease. In 27 instances heart disease was the primary and fatal lesion; in the other 6 deaths it was the secondary or contributory factor. Considering that the tuberculosis population takes up from 25 to 30 percent of the hospital capacity, the cardiac mortality, relatively and proportionately, tops the list. This is in agreement with mortality statistics in general (1) (2) (4) (5).

Interesting findings at the post-mortem table were as follows:

A hemopericardium from rupture of the left ventricle following myocardial infarction from coronary thrombosis 4 days previously. Rupture of the heart was suspected before necropsy, as the patient died suddenly when apparently comfortable.

A hemopericardium due to rupture of an apparently normal aorta with extensive separation of the media from the externa down to the common iliacs, in a hypertensive case. This was the second instance

of spontaneous rupture of the aorta in 2 years at this hospital. The first case was reported in the literature by the writer (10).

A patent ductus arteriosus was found within the sac of an aortic aneurysm of a male 49 years of age in the luetic group.

A chronic endocarditis, with rupture of an aortic cusp producing insufficiency of the valve, and healed endocarditis of the pulmonary and the mitral valves in a case which was considered syphilitic aortic insufficiency clinically.

An acute endocarditis in a case of periurethral abscess. This case was not seen by the cardiac service and is not included in the tables.

Adherent tuberculous pericarditis in two tuberculous patients.

Endocarditis of the tricuspid valve.

Coexistence of a healed rheumatic endocarditis of the mitral and aortic valves, with luetic aortitis, and a small aneurysm and insufficiency of the aortic valve in a case clinically considered mitral insufficiency and aortic stenosis and insufficiency of rheumatic origin.

SUMMARY

Heart disease among seamen bears a similar relationship, from the standpoint of etiology, to that in the population at large, with the exception of the greater incidence in the syphilitic group and a correspondingly lower incidence in the rheumatic and arteriosclerotic groups.

One hundred and eighty-nine different cases of heart disease in patients of a United States marine hospital are presented and reviewed. Heart disease was responsible for 33 out of 138 deaths in a period of 18 months. Barring tuberculosis, heart disease is the leading cause of death among all diseases at this hospital. The importance and the opportunity for prevention, especially in the luetic group among seamen, is stressed. A plea is made for the establishment of a cardiac service in all the larger hospitals of the Public Health Service.

REFERENCES

(1) De Porte, J. V.: Heart disease in general medical practice; preliminary report of morbidity survey conducted by New York State Department of Health. Am. Heart Jour., vol. 8 (1933), p. 476; and Heart disease in State of New York; statistical review of mortality and morbidity. Ibid., vol. 5 (1930), p. 652.

(2) Riesman, D., and Harris, S. E.: Disease of the coronary arteries, with a consideration of data on the increasing mortality of heart disease. Am. Jour. Med. Sci., vol. 187 (1934), p. 1.

(3) Cohn, Alfred E., and Lingg, Claire: Heart disease from the point of view of the public health. Am. Heart Jour., vol. 9 (1934), p. 283.

(4) Benjamin, J. E.: Some present-day ideas concerning heart disease from public health point of view. Ohio State Med. Jour., vol. 28 (1932), p. 843.

(5) White, Paul D.: Heart disease. Macmillan Co., 1931.

(6) Hedley, O. F.: Observations on heart disease in marine hospital practice (Stapleton, N.Y.). Pub. Health Rep., vol. 48 (1933), p. 565.
(7) Conner, Lewis A.: Development of knowledge concerning role of syphilis in cardiovascular disease. Jour. Am. Med. Assoc., vol. 102 (1934), p. 575.
(8) Bourne, G.: Three cases of paroxysmal auricular flutter. Lancet, vol. 1 (1933), p. 686.
(9) Fowler, W. M., and Baldridge, C. W.: Auricular fibrillation as the only manifestation of heart disease. Am. Heart Jour., vol. 6 (1930), p. 183.
(10) Arenberg, H.: Spontaneous rupture of the aorta. Am. Heart Jour., vol. 8 (1932), p. 217.

COURT DECISION ON PUBLIC HEALTH

Prosecution for polluting waters dismissed because of insufficiency of complaint.—(Texas Court of Criminal Appeals; *Lester* v. *State*, 71 S.W.(2d) 278; decided May 2, 1934.) Article 698 of the Texas Penal Code penalizes one who shall pollute any water course, body of water, etc., by depositing or discharging therein, "or in such proximity thereto as that it will probably reach and pollute the water" thereof, any crude petroleum, oil, sewage, or polluting matter, etc. In a prosecution thereunder in which there was a conviction for polluting a water course and lake, the information did not follow the above-quoted part of the statute but, instead, stated as follows: "Cast crude petroleum and oil in proximity to such water course that such crude petroleum and oil reached such water course." A motion to quash, based on the foregoing averment, was overruled, but the court of criminal appeals said that, in its opinion, it should have been sustained. In reversing the trial court's judgment and ordering the prosecution dismissed, the appellate court said:

* * * It seems plain that there might have arisen causes, circumstances, and conditions in any case, not reasonably to be foreseen when the oil in question was deposited or put in some tank or reservoir, by means and because of which unexpected and untoward happening such oil was thrown or discharged into some not too distant water course. Would such proof as here indicated meet the demand of the above statute? We think not.

If an individual or corporation build adequate oil tanks on a hillside and fill them with oil and a tornado sweep their contents into the stream at the foot of the hill, while of necessity this would have been a putting of the oil where it reached the water course, still no court would hold upon such showing that this law had been violated. There are many other conceivable ways in which polluting substances might reach a water course or a lake from points of location or discharge when the causes by means of which they reach the water were not such as could have been reasonably foreseen or prevented. Illustrations ad libitum might be adduced.

This law demands and we hold that the complaint must aver the depositing, casting, or discharge of the alleged polluting substance either in such water course or body of water or else in such proximity thereto as that such polluting substances would probably reach and pollute the water.

DEATHS DURING WEEK ENDED JULY 14, 1934

[From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce]

	Week ended July 14, 1934	Corresponding week, 1933
Data from 86 large cities of the United States:		
Total deaths	7,168	6,888
Deaths per 1,000 population, annual basis	10.0	9.6
Deaths under 1 year of age	553	558
Deaths under 1 year of age per 1,000 estimated live births	51	[1] 46
Deaths per 1,000 population, annual basis, first 28 weeks of year	12.0	11.4
Data from industrial insurance companies:		
Policies in force	67,711,737	67,765,248
Number of death claims	12,966	12,824
Death claims per 1,000 policies in force, annual rate	10.0	9.9
Death claims per 1,000 policies, first 28 weeks of year, annual rate	10.5	10.3

[1] Data for 81 cities.

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 July 21, 1934, and July 22, 1933

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended July 21, 1934, and July 22, 1933

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended July 21, 1934	Week ended July 22, 1933	Week ended July 21, 1934	Week ended July 22, 1933	Week ended July 21, 1934	Week ended July 22, 1933	Week ended July 21, 1934	Week ended July 22, 1933
New England States:								
Maine	1	1	----	----	1	----	0	0
New Hampshire	----	----	----	----	69	7	0	0
Vermont	----	1	----	----	7	7	0	0
Massachusetts	8	12	----	----	126	191	5	3
Rhode Island	----	7	----	----	16	----	0	0
Connecticut	2	7	----	1	44	40	0	1
Middle Atlantic States:								
New York	16	26	[1] 3	[1] 1	254	367	3	3
New Jersey	10	17	----	1	484	153	3	0
Pennsylvania	28	29	----	----	569	261	2	3
East North Central States:								
Ohio	5	14	1	6	173	41	1	1
Indiana	13	13	10	10	48	24	0	1
Illinois	17	10	18	12	357	89	8	0
Michigan	11	29	----	----	77	64	0	0
Wisconsin	7	4	14	5	476	55	0	0
West North Central States:								
Minnesota	3	8	1	1	19	33	0	1
Iowa	6	5	----	----	40	6	0	1
Missouri	16	22	6	----	36	15	2	1
North Dakota	10	4	----	----	73	16	0	0
South Dakota	1	1	----	----	15	----	0	0
Nebraska	2	4	----	----	2	12	0	0
Kansas	3	4	1	2	25	7	2	1
South Atlantic States:								
Delaware	----	1	----	----	2	1	0	0
Maryland [2]	7	4	2	2	34	9	0	0
District of Columbia [2]	3	----	2	1	5	12	0	1
Virginia [2] [4]	17	11	----	----	211	37	1	1
West Virginia	9	9	3	2	68	3	0	0
North Carolina	9	14	4	1	90	82	0	3
South Carolina [4]	----	11	44	79	22	101	0	0
Georgia [4]	3	9	----	----	----	33	0	1
Florida [4]	9	6	----	----	12	46	0	0

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended July 21, 1934, and July 22, 1933—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended July 21, 1934	Week ended July 22, 1933	Week ended July 21, 1934	Week ended July 22, 1933	Week ended July 21, 1934	Week ended July 22, 1933	Week ended July 21, 1934	Week ended July 22, 1933
East South Central States:								
Kentucky	3	3	31	----	75	9	1	1
Tennessee	5	9	8	11	68	47	0	1
Alabama [4]	21	12	4	2	57	26	1	2
Mississippi [2]	3	9	----	----	----	----	2	0
West South Central States:								
Arkansas	----	6	----	1	----	59	0	0
Louisiana	11	13	3	8	15	5	0	1
Oklahoma [2]	2	4	13	----	4	10	1	1
Texas [4]	41	42	57	62	176	113	1	0
Mountain States:								
Montana	1	----	----	----	4	2	0	0
Idaho	1	1	----	4	2	----	0	1
Wyoming [2]	----	----	----	----	55	1	0	0
Colorado	8	----	----	----	74	13	1	0
New Mexico	1	3	----	1	39	9	0	0
Arizona	----	2	----	----	2	16	0	0
Utah [2]	----	----	----	----	2	24	0	0
Pacific States:								
Washington	----	4	----	----	36	27	1	0
Oregon	----	1	8	17	14	62	0	0
California	29	31	16	12	140	177	3	2
Total	342	423	249	242	4,118	2,312	38	31

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended July 21, 1934	Week ended July 22, 1933	Week ended July 21, 1934	Week ended July 22, 1933	Week ended July 21, 1934	Week ended July 22, 1933	Week ended July 21, 1934	Week ended July 22, 1933
New England States:								
Maine	0	0	6	18	0	0	6	2
New Hampshire	0	0	1	8	0	0	0	1
Vermont	0	0	6	----	0	0	0	0
Massachusetts	5	19	63	108	0	0	4	9
Rhode Island	0	0	3	4	0	0	0	2
Connecticut	0	2	7	25	0	0	0	2
Middle Atlantic States:								
New York	11	27	136	118	0	0	17	43
New Jersey	2	1	38	48	0	0	4	11
Pennsylvania	3	5	107	126	0	0	22	16
East North Central States:								
Ohio	4	6	67	106	0	1	10	26
Indiana	2	0	26	19	0	0	10	24
Illinois	4	7	102	98	0	2	45	30
Michigan	2	0	123	58	0	0	4	4
Wisconsin	0	0	63	25	6	6	2	4
West North Central States:								
Minnesota	0	10	27	17	0	0	0	0
Iowa	0	0	19	8	2	0	1	1
Missouri	0	0	21	15	0	1	63	16
North Dakota	0	1	5	1	0	0	1	0
South Dakota	0	2	----	3	0	0	1	1
Nebraska	0	0	1	14	2	1	0	3
Kansas	1	1	11	14	1	0	10	15
South Atlantic States:								
Delaware	0	0	----	----	0	0	5	2
Maryland [2]	0	0	12	32	0	0	11	22
District of Columbia [2]	2	0	4	2	0	0	0	0
Virginia [3] [4]	1	1	18	26	0	1	38	59
West Virginia	1	12	21	7	0	0	23	33
North Carolina	1	1	10	23	0	0	24	40
South Carolina [4]	0	0	2	5	0	0	58	52
Georgia [4]	0	0	2	5	0	0	77	37
Florida [4]	0	0	----	1	0	0	3	2

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended July 21, 1934, and July 22, 1933—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended July 21, 1934	Week ended July 22, 1933	Week ended July 21, 1934	Week ended July 22, 1933	Week ended July 21, 1934	Week ended July 22, 1933	Week ended July 21, 1934	Week ended July 22, 1933
East South Central States:								
Kentucky	1	1	12	12	0	1	41	68
Tennessee	0	9	18	8	1	0	82	92
Alabama [4]	1	1	6	15	0	0	57	26
Mississippi [2]	1	0	12	4	0	0	21	16
West South Central States:								
Arkansas	0	1	1	1	0	1	16	25
Louisiana	0	1	6	5	0	0	31	39
Oklahoma [5]	0	0	6	1	0	0	63	36
Texas [4]	11	1	40	27	15	6	105	61
Mountain States:								
Montana	3	1	3	----	0	0	2	4
Idaho	1	0	2	----	0	2	1	0
Wyoming [2]	0	0	2	5	0	0	0	0
Colorado	1	0	8	10	0	0	3	4
New Mexico	0	0	3	1	0	0	9	9
Arizona	4	0	----	3	0	0	5	4
Utah [2]	0	0	1	6	0	0	1	1
Pacific States:								
Washington	12	1	10	11	5	7	6	4
Oregon	1	0	19	5	0	8	7	2
California	154	5	81	67	0	2	9	8
Total	229	116	1,131	1,115	32	39	898	856

[1] New York City only.
[2] Week ended earlier than Saturday.
[3] Rocky Mountain spotted fever, week ended July 21, 1934, 5 cases, as follows: District of Columbia, 1; Virginia, 2; Wyoming, 2.
[4] Typhus fever, week ended, July 21, 1934, 33 cases, as follows: Virginia, 1; South Carolina, 1; Georgia, 7; Florida, 2; Alabama, 2; Texas, 20.
[5] Exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States 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
June 1934										
Florida	----	26	3	64	456	5	7	6	0	9
Georgia	----	25	64	327	465	45	5	10	1	152
Idaho	5	7	5	----	32	----	13	6	6	4
Illinois	29	126	50	55	7,507	1	10	1,370	1	80
Kansas	3	39	1	3	983	1	2	84	12	27
Louisiana	4	46	21	418	427	20	1	29	2	89
Maryland	----	25	7	----	2,448	3	2	117	0	25
Massachusetts	5	41	----	1	3,382	1	4	732	0	4
Michigan	9	32	4	6	1,342	----	2	1,193	2	32
Minnesota	3	34	2	----	517	----	1	248	9	15
Nevada	----	4	6	----	104	----	5	3	0	4
Oregon	----	6	82	3	145	----	7	119	13	10
Rhode Island	----	4	----	----	123	----	0	39	0	4
Texas	2	228	426	2,911	2,466	109	8	167	116	191
West Virginia	2	50	35	----	522	1	5	177	0	60

June 1934

	Cases
Actinomycosis:	
Illinois	1
Kansas	2
Anthrax:	
Illinois	1
Chicken pox	
Florida	5
Georgia	62
Idaho	5
Illinois	1,166
Kansas	85
Louisiana	8
Maryland	106
Massachusetts	1,150
Michigan	930
Minnesota	485
Nevada	11
Oregon	128
Rhode Island	65
Texas	372
West Virginia	95
Conjunctivitis:	
Kansas	3
Diarrhea:	
Maryland	7
Dysentery:	
Florida	3
Georgia (amoebic)	14
Georgia (bacillary)	252
Illinois (amoebic)	21
Illinois (amoebic carriers)	307
Kansas (amoebic)	2
Louisiana	8
Maryland	21
Massachusetts (amoebic)	7
Massachusetts (bacillary)	12
Michigan	17
Minnesota (amoebic)	6
Oregon (amoebic)	1
Texas	165
German measles:	
Illinois	716
Kansas	44
Maryland	56
Massachusetts	92
Michigan	358
Rhode Island	2
Hookworm disease:	
Georgia	145
Louisiana	22
Impetigo contagiosa:	
Kansas	1
Maryland	4
Oregon	29
Jaundice, epidemic:	
Oregon	4
Lead poisoning	
Illinois	1
Leprosy:	
Louisiana	3
Massachusetts	1

June 1934—Continued

Lethargic encephalitis:	
Florida	1
Georgia	2
Illinois	5
Kansas	5
Maryland	1
Massachusetts	1
Michigan	2
Minnesota	2
Milk sickness:	
Illinois	1
Mumps:	
Florida	40
Georgia	81
Idaho	3
Illinois	949
Kansas	137
Louisiana	4
Maryland	78
Massachusetts	467
Michigan	307
Oregon	40
Rhode Island	5
Texas	81
West Virginia	13
Ophthalmia neonatorum:	
Illinois	4
Kansas	1
Maryland	1
Massachusetts	65
Rhode Island	1
Paratyphoid fever:	
Georgia	3
Illinois	2
Kansas	2
Michigan	2
Oregon	2
Texas	13
Puerperal septicemia:	
Illinois	5
Rabies in animals:	
Illinois	43
Kansas	6
Louisiana	7
Maryland	2
Massachusetts	28
Rabies in man:	
Illinois	1
Massachusetts	2
Rocky Mountain spotted fever:	
Idaho	8
Maryland	6
Oregon	2
Scabies:	
Oregon	9
Septic sore throat:	
Georgia	26
Illinois	21
Louisiana	2
Maryland	7
Massachusetts	22
Michigan	45
Oregon	10
Rhode Island	1
West Virginia	11

June 1934—Continued

Tetanus:	
Georgia	1
Illinois	8
Kansas	1
Louisiana	4
Maryland	1
Massachusetts	1
Michigan	2
Trachoma:	
Georgia	1
Illinois	3
Massachusetts	5
Minnesota	1
Oregon	1
Trichinosis:	
Massachusetts	1
Michigan	2
Tularaemia:	
Georgia	5
Illinois	1
Maryland	1
Michigan	1
Minnesota	5
Nevada	3
Texas	8
Typhus fever:	
Florida	3
Georgia	32
Illinois	1
Louisiana	1
Maryland	5
Texas	30
Undulant fever:	
Georgia	6
Illinois	15
Kansas	13
Louisiana	2
Maryland	6
Massachusetts	2
Michigan	10
Minnesota	12
Oregon	1
Texas	5
Vincent's infection:	
Illinois	61
Kansas	4
Maryland	15
Michigan	26
Oregon	8
Whooping cough:	
Florida	84
Georgia	329
Idaho	66
Illinois	1,447
Kansas	604
Louisiana	31
Maryland	468
Massachusetts	970
Michigan	915
Minnesota	198
Nevada	26
Oregon	214
Rhode Island	162
Texas	1,640
West Virginia	515

DENGUE IN MIAMI, FLA.

A report from Miami, Fla., for the week ended July 21, 1934, shows 80 cases of dengue. It has been estimated that there had been 1,000 cases of dengue in and near Miami to July 24.

TYPHOID FEVER AMONG CIRCUS EMPLOYEES IN MICHIGAN

Under date of July 25, 1934, 7 cases of typhoid fever were reported in Michigan among employees of a traveling circus, with 50 other employees suspiciously ill.

WEEKLY REPORTS FROM CITIES

City reports for week ended July 14, 1934

[This table summarizes the reports received regularly from a selected list of 121 cities for the purpose of showing a cross section of the current urban incidence of the communicable diseases listed in the table. Weekly reports are received from about 700 cities, from which the data are tabulated and filed for reference]

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Maine:											
Portland	0		0	0	4	3	0	0	1	2	31
New Hampshire:											
Concord	0		0	0	0	0	0	0	0	0	11
Manchester	0		0	0	0	0	0	2	0	0	11
Nashua	0			5		1	0		0	0	
Vermont:											
Barre	0		0	0	0	0	0	0	0	0	3
Burlington	0		0	8	0	1	0	1	0	0	14
Massachusetts:											
Boston	2		0	43	15	9	0	9	0	48	180
Fall River	0		0	0	0	0	0	4	0	10	18
Springfield	0		0	2	0	1	0	1	0	3	31
Worcester	0		0	0	1	14	0	3	0	10	40
Rhode Island:											
Pawtucket	1		0	0	0	0	0	0	0	0	10
Providence	1		0	16	3	2	0	1	0	13	57
Connecticut:											
Bridgeport	0		0	0	2	1	0	1	0	1	17
Hartford	0		0	20	2	1	0	0	0	2	30
New Haven	0		0	1	1	0	0	1	0	9	29
New York:											
Buffalo	3		0	4	12	5	0	4	0	52	97
New York	25	3	5	129	53	39	0	85	8	192	1,228
Rochester	0		0	10	1	8	0	0	0	6	49
Syracuse	0		0	31	0	2	0	0	0	21	31
New Jersey:											
Camden	0		0	0	1	0	0	1	0	5	29
Newark	0		0	12	3	4	0	6	1	40	70
Trenton	0		0	0	0	2	0	2	0	1	30
Pennsylvania:											
Philadelphia	0	1	0	18	18	14	0	23	2	142	432
Pittsburgh	4		0	97	13	13	0	3	2	32	130
Reading	1		0	2	1	0	0	0	0	15	19
Scranton	3			9		0	0		0	4	
Ohio:											
Cincinnati	2		0	0	4	4	0	9	0	8	110
Cleveland	6	2	1	144	3	19	0	14	1	75	181
Columbus	1		0	0	3	4	0	4	0	21	73
Toledo	0		0	32	2	18	0	1	1	82	57
Indiana:											
Fort Wayne	1		0	1	1	1	0	0	0	0	23
Indianapolis	1		0	10	5	3	0	4	0	8	
South Bend	0		0	10	1	3	0	0	0	0	17
Terre Haute	0		0	0	1	0	0	1	0	0	23
Illinois:											
Chicago	5		2	209	28	76	0	33	8	104	659
Springfield	3	1	0	1	1	1	0	1	1	15	21
Michigan:											
Detroit	1		0	25	7	21	0	18	1	104	215
Flint	0		0	1	3	2	0	1	0	9	29
Grand Rapids	0		0	4	0	5	0	0	1	5	28
Wisconsin:											
Kenosha	0		0	10	1	1	0	0	0	4	10
Milwaukee	2		0	161	6	44	0	2	0	74	96
Racine	0		0	2	0	6	0	2	0	19	15
Superior	0		0	5	0	0	0	0	0	0	8
Minnesota:											
Duluth	0		0	3	2	1	0	0	0	1	20
Minneapolis	5		0	3	1	4	0	2	0	6	87
St. Paul	2		0	1	4	0	0	4	1	27	48
Iowa:											
Davenport	0			0		1	0		0	0	
Des Moines	1			0		5	0		0	0	33
Sioux City	0			1		0	0		0	10	
Waterloo	0			1		2	0		0	0	
Missouri:											
Kansas City	1		0	4	4	4	0	8	0	8	104
St. Joseph	2		0	0	1	1	0	1	0	0	44
St. Louis	7		0	2	2	1	0	7	1	48	180

City reports for week ended July 14, 1934—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
North Dakota:											
Fargo	0		0	1	0	0	0	0	0	19	9
Grand Forks	0			0		0	0		0	6	
South Dakota:											
Aberdeen	0			3		0	0		0	5	
Sioux Falls	0			0		0	0		0	0	6
Nebraska:											
Omaha	2		0	4	1	3	0	1	0	4	44
Kansas:											
Topeka	1		0	6	0	0	0	0	0	48	24
Wichita	0		0	3	0	0	0	0	0	1	32
Delaware:											
Wilmington	0		0	2	3	0	0	2	1	4	27
Maryland:											
Baltimore	3		0	28	12	8	0	12	1	63	200
Cumberland	0		0	1	1	0	0	0	1	0	8
Frederick	0		0	0	0	0	0	1	0	0	3
District of Col.:											
Washington	1		0	7	13	3	0	17	0	24	145
Virginia:											
Lynchburg	0		0	26	0	1	0	0	0	15	3
Norfolk	1		0	0	2	1	0	4	0	8	45
Richmond	1		0	15	4	0	0	2	1	0	54
Roanoke	1		0	0	1	1	0	0	1	2	11
West Virginia:											
Charleston	0		0	7	1	0	0	1	0	0	24
Huntington	0			1		4	0		6	3	
Wheeling	1		0	5	1	5	0	0	0	5	12
North Carolina:											
Raleigh	0		0	2	1	0	0	0	1	8	9
Wilmington	0		0	0	1	0	0	0	0	14	6
Winston-Salem	1		0	0	0	0	0	1	0	19	21
South Carolina:											
Charleston	0	2	0	4	1	0	0	2	0	4	22
Columbia	0		0	0	4	0	0	0	0	0	25
Greenville	0			0		0	0		0	1	
Georgia:											
Atlanta	1	4	0	0	3	0	0	4	3	11	76
Brunswick	0		0	0	0	0	0	0	0	1	7
Savannah	0	5	0	0	2	0	0	1	2	10	21
Florida:											
Miami	0		0	14	1	1	0	1	0	5	16
Tampa	0		0	14	4	0	0	1	0	0	26
Kentucky:											
Ashland	0			0		0	0		0	8	
Lexington	0		0	1	0	1	0	1	0	15	15
Tennessee:											
Memphis	1		0	0	4	0	0	6	3	32	86
Nashville	0		1	0	2	1	0	2	4	9	53
Alabama:											
Birmingham	0	3	1	4	4	3	0	2	1	2	63
Mobile	1		0	1	0	0	0	0	0	4	16
Montgomery	0			0		0	0		1	0	
Arkansas:											
Fort Smith	0			0		0	0		0	3	
Little Rock	1		0	0	4	1	0	1	1	2	8
Louisiana:											
New Orleans	5	1	2	13	8	7	0	8	1	0	115
Shreveport	0		0	0	2	1	0	3	0	2	
Oklahoma:											
Oklahoma City	0		0	0	2	1	0	1	2	0	41
Tulsa	2			0		1	0		2	27	
Texas:											
Dallas	1		0	2	1	3	0	3	3	8	46
Fort Worth	1		0	0	2	3	0	2	2	0	30
Galveston	0		0	0	2	0	0	0	2	0	12
Houston	4		0	3	4	2	0	7	0	0	
San Antonio	1		1	1	10	2	0	6	0	0	57
Montana:											
Billings	0		0	0	0	0	0	0	0	5	4
Great Falls	0		0	0	0	0	0	1	0	0	7
Helena	0		0	0	0	0	0	0	0	0	2
Missoula	0		0	0	0	0	0	0	0	0	3
Idaho:											
Boise	0		0	2	2	0	0	1	0	1	6

City reports for week ended July 14, 1934—Continued

State and city	Diphtheria cases	Influenza		Measles cases	Pneumonia deaths	Scarlet fever cases	Smallpox cases	Tuberculosis deaths	Typhoid fever cases	Whooping cough cases	Deaths, all causes
		Cases	Deaths								
Colorado:											
Denver	4	17	0	62	2	10	0	2	0	31	64
Pueblo	0	------	0	12	0	3	0	0	0	10	14
New Mexico:											
Albuquerque	0	------	0	0	0	0	0	1	0	1	6
Utah:											
Salt Lake City	0	------	0	2	2	3	0	0	0	92	32
Nevada:											
Reno	0	------	0	0	0	0	0	0	0	0	--------
Washington:											
Seattle	0	------	1	9	4	3	2	0	1	25	81
Spokane	0	2	2	5	1	0	0	1	0	17	22
Tacoma	0	------	0	10	0	1	0	0	0	2	16
Oregon:											
Portland	0	------	0	1	2	9	0	1	0	7	60
Salem	0	------	--------	0	-------	0	0	-------	0	5	--------
California:											
Los Angeles	11	5	1	10	8	24	0	22	1	18	304
Sacramento	0	------	0	3	2	2	0	2	------	12	24
San Francisco	2	1	0	94	3	7	0	4	0	7	132

State and city	Meningococcus meningitis		Poliomyelitis cases	State and city	Meningococcus meningitis		Poliomyelitis cases
	Cases	Deaths			Cases	Deaths	
Massachusetts:				Missouri:			
Boston	2	0	1	Kansas City	1	1	0
Connecticut:				North Carolina:			
Bridgeport	1	0	0	Wilmington	0	0	1
New York:				Georgia:			
Buffalo	0	0	1	Atlanta	0	0	2
New York	1	1	4	Montana:			
New Jersey:				Helena	0	0	1
Camden	0	0	2	Nevada:			
Pennsylvania:				Reno	0	0	1
Philadelphia	0	0	2	Washington:			
Pittsburgh	2	0	1	Spokane	0	0	4
Ohio:				California:			
Cincinnati	2	1	0	Los Angeles	1	0	91
Illinois:				San Francisco	0	1	4
Chicago	1	0	3				
Michigan:							
Detroit	0	0	2				

Lethargic encephalitis.—Cases: New York, 1; Philadelphia, 1; Baltimore, 1; Houston, 1; San Francisco, 1.
Pellagra.—Cases: Concord, 1; Boston, 2; Philadelphia, 1; Washington, 1; Charleston, S.C., 3; Brunswick, 1; Savannah, 7; Memphis, 1; New Orleans, 1.
Typhus fever.—Cases: Ft. Worth, 1; Galveston, 3; San Antonio, 1.

FOREIGN AND INSULAR

IRISH FREE STATE

Vital statistics—First quarter 1934.—The following statistics for the Irish Free State for the first quarter, ended March 31, 1934, are taken from the Quarterly Return of Marriages, Births, and Deaths, issued by the Registrar General, and are provisional:

	Number	Rates per 1,000 population		Number	Rates per 1,000 population
Population	3,014,000	-------	Deaths from—Continued		
Marriages	3,244	4.30	Influenza	286	0.38
Births	14,538	19.30	Measles	14	-------
Total deaths	11,634	15.40	Puerperal sepsis	27	[2] 1.86
Deaths under 1 year	1,157	([1])	Scarlet fever	26	-------
Deaths from—			Tuberculosis (all forms)	905	1.20
Cancer	872	1.16	Typhoid fever	23	-------
Diarrhea and enteritis (under 2 years)	109	-------	Typhus fever	2	-------
Diphtheria	120	-------	Whooping cough	107	-------

[1] Deaths under 1 year per 1,000 births, 80.
[2] Per 1,000 births.

JAMAICA

Communicable diseases—4 weeks ended July 14, 1934.—During the 4 weeks ended July 14, 1934, cases of certain communicable diseases were reported in Kingston, Jamaica, and in the island outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Cerebrospinal meningitis	1	2	Leprosy	-------	3
Chicken pox	5	154	Poliomyelitis	1	1
Diphtheria	1	1	Puerperal fever	-------	1
Dysentery	3	7	Tuberculosis	45	83
Erysipelas	-------	1	Typhoid fever	27	74

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

(NOTE.—A table giving current information of the world prevalence of quarantinable diseases appeared in the PUBLIC HEALTH REPORTS for July 27, 1934, pp. 890-903. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued Aug. 31, 1934, and thereafter, at least for the time being, in the issue published on the last Friday of each month.)

Cholera

China—Hankow.—During the week ended July 7, 1934, 2 cases of cholera were reported in Hankow, China.

Plague

Argentina—Catamarca Province—Brea Chimpana.—During the month of June 1934, 2 cases of plague were reported in Brea Chimpana, Catamarca Province, Argentina.

China—Manchuria.—On July 14, 1934, 22 deaths from plague were reported in a village about 25 miles north from Tungliao, Manchuria, China.

Egypt—Alexandria.—In March 1934, plague infection in rats was reported in Alexandria, Egypt.

Smallpox

Dominican Republic—Santo Domingo.—Smallpox has been reported in Santo Domingo, Dominican Republic, as follows: 1 case during the week ended May 5, 1934, and 1 case during the week ended June 9, 1934.

Yellow fever

Brazil—Ceara State.—On April 26, 1934, yellow fever was reported in Ceara State, Brazil, as follows: 1 case and 1 death at Carius, and 1 case and 1 death at Iguatu.