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SICKNESS AMONG MALE INDUSTRIAL EMPLOYEES DURING THE FIRST QUARTER OF 1932

By DEAN K. BRUNDAGE, *Statistician, Office of Industrial Hygiene and Sanitation,
United States Public Health Service*

The widespread prevalence of sickness reported as influenza during the first quarter of 1932 caused a smaller number of disabilities lasting eight calendar days or longer than was anticipated from the reports of cases without reference to their duration or severity received from various States and cities in the United States. Apparently, many cases did not cause disability for a period as long as eight days. The fatality rate evidently was extremely low, the Metropolitan Life Insurance Co. reporting a decrease of 41 per cent in the death rate from influenza during the first three months of 1932 as compared with that for the like months of 1931; and a decrease of 26 per cent in the mortality from pneumonia.¹ These decreases occurred in spite of the fact that the outbreak of influenza in January and February, 1931, although widespread, was not severe, and therefore affords no abnormal basis of comparison with health conditions in 1932.

That the type of influenza which prevailed was mild is attested further by the low incidence rate of disability from pneumonia (all forms). The expectancy for pneumonia is about 3 cases annually per 1,000 male industrial workers. During the first three months of 1932, reports of sickness from industrial groups showed that cases of pneumonia were occurring at the rate of only 2.6 cases annually per 1,000 men. In the first three months of the year the frequency of pneumonia usually attains its seasonal maximum, so that the indicated rate of 2.6 is extremely low for such a period. This rate was 37 per cent below the incidence recorded for the same three months one year ago, 45 per cent below the rate two years ago, and was only one-half the frequency indicated for pneumonia during the first quarter of 1929. Deaths from pneumonia in the industrial population show a similar, although less abrupt, declining tendency. Commenting on mortality in the first four months of 1932, the Metropolitan Life

¹ Statistical Bulletin, Metropolitan Life Insurance Co., Vol. XIII, No. 4, April, 1932, p. 2.

Insurance Co. states that the low death rate for pneumonia "has never before been even closely approached during the like period of any year." ²

Relatively low also in the first quarter of 1932 were the morbidity rates for the numerically important diseases of the upper respiratory tract, such as bronchitis (acute and chronic), and diseases of the pharynx and tonsils, including tonsillitis. For these as a group the frequency was lower than in the corresponding months of any of the three preceding years. New cases of tuberculosis of the respiratory system appear to have occurred at comparatively low frequency.

TABLE 1.—*Frequency of disability lasting eight calendar days or longer in the first quarter of 1932 compared with the same quarter of 1931, 1930, and 1929. (Male morbidity experience of 27 industrial establishments which reported their cases to the United States Public Health Service during all four years)* ¹

Diseases and disease groups which caused disability (numbers in parentheses are disease title numbers from the International List of the Causes of Death, Fourth Revision, Paris, 1929)	Annual number of disabilities per 1,000 men in first quarter of—			
	1932	1931	1930	1929
Sickness and nonindustrial injuries ³	118.8	135.5	117.0	175.5
Nonindustrial injuries.....	10.7	10.6	11.4	11.9
Sickness ³	108.1	124.9	105.6	163.6
Respiratory diseases.....	58.7	75.2	50.4	105.2
Influenza and grippe (11).....	37.4	50.7	22.9	77.4
Bronchitis, acute and chronic (106).....	6.2	6.1	7.0	7.1
Pneumonia, all forms (107-109).....	2.6	4.1	4.7	5.1
Diseases of the pharynx and tonsils (115a).....	5.8	7.1	8.6	8.3
Tuberculosis of the respiratory system (23).....	1.0	1.3	1.1	1.2
Other respiratory diseases (104, 105, 110-114).....	5.7	5.9	6.1	6.1
Nonrespiratory diseases.....	49.4	49.7	55.2	58.4
Diseases of the stomach, cancer excepted (117, 118).....	4.3	3.8	4.8	4.7
Diarrhea and enteritis (120).....	1.1	.7	1.2	.9
Appendicitis (121).....	3.3	3.7	4.3	4.7
Hernia (122a).....	1.8	1.9	1.9	1.8
Other digestive diseases (115b, 116, 122b-129).....	3.0	2.9	3.3	3.5
Rheumatic group, total.....	13.5	12.4	13.0	13.4
Rheumatism, acute and chronic (56-58).....	6.3	6.3	6.6	6.2
Diseases of the organs of locomotion (156b).....	4.7	3.7	3.8	4.4
Neuralgia, neuritis, and sciatica (87a).....	2.5	2.4	2.6	2.8
Neurasthenia and the like (part of 87b).....	1.3	1.4	1.4	1.3
Other diseases of the nervous system (78-85, part of 87b).....	.9	1.2	1.4	1.3
Diseases of the heart and arteries, and nephritis (90-99, 102, 130-132).....	3.6	4.2	4.7	4.3
Other genito-urinary diseases (133-138).....	2.0	2.6	2.2	2.4
Diseases of the skin (151-153).....	2.3	2.7	3.6	4.4
Epidemic and endemic diseases except influenza (1-10, 12-13, 33, 37, 38, part of 39 and 44).....	3.0	3.1	3.6	5.4
Ill-defined and unknown causes (200).....	2.2	1.7	2.3	2.0
All other diseases (19-22, 24-32, 36, part of 39 and 44, 40-43, 45-55, 59-77, 88, 89, 100, 101, 103, 154-156a, 157, 162).....	7.1	7.4	7.5	8.3
Average number of males covered in the record.....	145,747	158,891	161,642	159,152
Number of companies included.....	27	27	26	23

¹ Except that the rates for 1930 and 1929 cover 26 and 23 companies, respectively, instead of 27 in 1931 and 1932. The rates for the corresponding period of preceding years differ somewhat from those shown in earlier publications, because data for additional groups have become available in the meantime.

² Exclusive of disability from the venereal diseases.

For nonrespiratory diseases as a whole the rate was virtually the same as in the like months of 1931. The frequency of minor digestive illnesses (diseases of the stomach, and diarrhea and enteritis) exhibits no trend one way or the other, but for appendicitis a dwindling rate

is in evidence. The hernia rate is virtually the same for the first quarter of each of the four years under review. Neurasthenia appeared to be increasing somewhat during the last nine months of 1931, but in the first quarter of 1932 the rate was the same as in the corresponding period of 1929. A marked decrease occurred in the incidence of diseases of the skin, thus continuing the favorable trend for this group of diseases noted in the statistics for 1931.³

Sickness as a whole shows a remarkably favorable rate. If one deducts influenza, the first quarter of 1932 displays the lowest sickness incidence rate of the four periods under review in Table 1.

These results are based on reports of cases of illness causing absence from work for more than one week among the male members of 27 industrial sick-benefit organizations which reported to the Public Health Service continuously during 1931 and 1932, and of 26 and 23 organizations, respectively, in 1930 and 1929. Identical companies reported in 1931 and 1932, and in 1929 and 1930 the group was almost the same. The records covered about 146,000 men in the first quarter of 1932, and about 160,000 in the same months of each of the three preceding years.

The establishments included in the table are scattered all over the United States with a preponderance of reporting units located north of the Ohio and Potomac Rivers and east of the Mississippi. The record applies to the employed population only, so that it does not adequately mirror the effect of the economic depression upon health. However, a large number of the men included are employed on curtailed working schedules with concomitant reduction of individual and family incomes and the standard of living.

OBSERVATIONS ON THE AGGLUTINATION OF PROTEUS X ORGANISMS IN ROCKY MOUNTAIN SPOTTED FEVER

By GORDON E. DAVIS, *Bacteriologist*, and R. R. PARKER, *Special Expert*,
*United States Public Health Service*¹

Studies on the agglutination of *proteus* X organisms in Rocky Mountain spotted fever have been reported by Kelly (1923), Kerlee and Spencer (1929), and Spencer and Maxcy (1930). Similar experimental studies have been presented by Kuczynski (1927), Otto (1928), and Munter (1928). These results were reviewed briefly by Spencer and Maxcy and more recently by Felix and Rhodes (1931).

This report presents the results of tests of human sera, extending over a period of four years, and also includes some additional observations.

¹ Contribution from the Rocky Mountain Spotted Fever Laboratory, Hamilton, Mont.

² Cf. Sickness among male industrial employees during the last three months of 1931, and a summary of sickness frequency by years since 1920. Pub. Health Rep., vol. 47, No. 18, Apr. 29, 1932, p. 999.

CULTURES AND METHODS

Spencer and Maxcy have emphasized the "broader affinities" of the agglutinins produced in Rocky Mountain spotted fever as compared with those in typhus. In our later studies we have used as many as 10 cultures of *proteus* X organisms including O and H forms, and four other cultures which had been isolated by Doctor Anigstein from rats infected with the virus of tropical typhus and which were received through the courtesy of Surg. R. R. Spencer. Our results with the latter group have been essentially negative and need not be reported in detail.

The original Kingsbury and Warsaw strains were received directly from Doctor Fletcher, of the Federated Malay States. Later we used both OXK and HXK obtained from Doctor Felix, of the Lister Institute. Cultures OX₂ and HX₂ (Weil) were received from Doctor Moltke, who had in turn received them from Doctor Sierakowski, of Warsaw. Cultures X₁₀H and X₁₀ (Kral) were also received from Doctor Moltke. The following strains were received from the National Institute of Health: X₁₀ Breinl (N. I. H. No. 560), OX₁₀ Felix (N. I. H. No. 568), "Weil's proteus" (N. I. H. No. 271), and the Warsaw strain (N. I. H. No. 533). The Warsaw strain received from Doctor Fletcher grew more and more sparsely, eventually showing only pin-point colonies, and finally no further growth could be obtained. It was replaced by Warsaw (N. I. H. No. 533), which also came from the original culture received from Doctor Fletcher. Culture No. 271 is the organism used by Kelly and by Kerlee and Spencer in the study of Rocky Mountain spotted fever and has been used extensively in the Southern States in the diagnosis of endemic typhus.

During the past year all cultures have been checked repeatedly for O and H characteristics by the following methods: (1) The "water of condensation" of an agar slant was inoculated and the tubes were incubated in an upright position. (2) One drop from a dilute saline suspension was placed on the surface of an agar plate dried for 24 hours at 37° C., spread with a sterile bent glass rod, and incubated in an inverted position for 24 hours. Types OX₂ and OXK have shown no tendency to spread. Type X₁₀ has always resulted in definite colonies with a slight marginal spreading. Weil and Felix (1917) have designated this form as a type intermediate between a pure O and an H. Moltke (1927) also noted this type of colony in certain of his cultures and states that such cultures produce a pure O serum. No. 568, which was reported as an O strain, has at times shown definite colonial formation, but is also a vigorous

spreader. All other cultures cover the agar slant and likewise the agar plate.

The technique has been altered from time to time and will be indicated as such changes were made. Throughout all tests, however, the titer of a serum is recorded as the highest serum dilution showing 50 per cent agglutination or more.

Table 1 gives the results of tests made in 1928 and 1929 on 21 sera using four strains of *proteus* X. OXK was the strain received from Doctor Fletcher. The Warsaw (W) strain was the one indicated as growing in pin-point colonies and finally showing no growth whatever.

Some of these sera had been heated at 55° C. and preserved with equal parts of glycerin. The organisms were washed from 24-hour agar slants with physiologic saline and standardized to 500 p. p. m. silica standard (Standard Methods of Water Analysis, 1925). No preservative was used. Equal parts (0.5 c c) of the suspensions and serial dilutions of sera were mixed and incubated in the water bath at 38° C. for 12 to 20 hours, followed by refrigeration from 5 to 7 hours. The periods of incubation and refrigeration were purely experimental and are not given in detail, since no advantage over the periods commonly used was shown.

TABLE 1.—*Agglutination of proteus X strains by sera from cases of Rocky Mountain spotted fever (series 1928 and 1929)*

Serum designation	Days after onset	Agglutinin titer with <i>proteus</i> X strains				Serum designation	Days after onset	Agglutinin titer with <i>proteus</i> X strains			
		OXK	W	271	560			OXK	271	568	560
G. L.-----	3	20	80	20		R. A.-----	14	20	1,280		1,280
S.-----	5	40	40	160	80	R. N.-----	16	80	2,560	2,560	2,560
F. K.-----	7	20	80	80	40	J. B.-----	7	160		40	40
B. A.-----	8	40	160	160		J. B.-----	16	160	2,560	2,560	2,560
K.-----	9	40	20	40	40	S. Mc.-----	21	40	20	40	40
S.-----	10	40	40	40	40	S. W.-----	22	1,280	320	80	160
J. C. Y.-----	11	0	80		80	J. D. L.-----	25	40	640	1,280	640
D. A.-----	11	40	1,280	640	640	J. M.-----	30	20	640	640	320
M. G.-----	12	80	40	80	40	C. B.-----	33	80	640	320	320
J. Q. A.-----	12	40	40	40	40	E. L. L.-----	35	40	5,120	2,560	1,280
H. R. A.-----	14	640	640	320	2,560						

The maximum titers (Table 1) were obtained from the eleventh through the thirty-fifth day following onset. However two sera, designated as M. G. and S. Mc., taken on the twelfth and twenty-first days, respectively, show nothing of diagnostic importance. It is worthy of note that four sera, viz, J. B. (2 samples), H. R. A. and S. W., agglutinated OXK in serum dilutions of 160, 640, and 1,280, respectively. In the case of J. B., the only one from which two samples were secured, there was no rise in titer for OXK agglutinins, while there was a marked rise in agglutinins for at least two other strains.

Table 2 gives the results of agglutination tests, made in 1930, on 22 sera. With a few exceptions these sera were preserved with equal parts of glycerin. The suspensions were standardized as in the former series. No preservative was used. The incubation period was two hours at 37° C., followed by 48 hours in the electric refrigerator. The highest titers were obtained from the eleventh to the nineteenth day following onset.

TABLE 2.—*Agglutination of proteus X strains by sera from cases of Rocky Mountain spotted fever (series 1930)*

Serum No.	Days after onset	Agglutinin titer with <i>proteus X</i> strains				Serum No.	Days after onset	Agglutinin titer with <i>proteus X</i> strains			
		OXK	271	568	560			OXK	271	568	560
161	2	80	20	40	105	19	80	0	0		
103	4	40	10	20	135	10	0	0	0		
147	5	80	10	40	114	11	40	40	40		
144	5	160	320	320	119	11	40	320	640		
133	5	40	40	20	132	13	80	640	640		
104	5	40	0	0	141	14	80	10	0		
128	7	40	20	10	101	15	80	640	640		
109	7	80	20	20	116	19	640	640	640		
106	9	40	40	40	98	21	80	20	40		
115	9	80	10	0	125	21	160	320	320		
99	10	80	0	10	145	21	40	40	80		

Table 3 gives similar results on 14 sera obtained in 1931. These sera were tested unheated and without glycerin. Eighteen- to 24-hour cultures were standardized as formerly just before use without any preservative. Incubation was at 37° C. for two hours followed by 40 to 48 hours at 5°-6° C.

TABLE 3.—*The agglutination of proteus X organisms by sera from cases of Rocky Mountain spotted fever (series 1931)*

Serum No.	Days after onset	Agglutinin titer for <i>proteus X</i> organisms									
		OXK	HXK	OX ₁	HX ₁	OX ₁₂	HX ₁₂	W	271	560	568
193	2	160	160	80	0	0	0	80	0	80	0
186	5	20	20	0	0	0	0	20	0	0	0
190	6	0	40	20	80	0	20	0	40	40	0
191	9	40	40	0	40	0	0	20	0	0	0
185	10			640					160		
198	10	80	40	160	160	40	20	40	20	0	40
205	10	0	20	640	320	80	80	0	20	160	1,280
227	10	80	40	160	40	160	160	40	0	80	320
182	12	40		40	0	320	160	1,280	640		80
204	13	0	0	1,280	1,280	320	320	1,280	0	640	320
196	14	40	40	0	20	0	0	0	0	20	0
178	17	20		160	0	20	0	160	0		40
187	20	20	20	1,280	2,560	80	80	80	0	80	80
209	21	80	80	10,240	5,120	1,280	1,280	2,560	20	1,280	1,280

Three sera (Nos. 198, 196, and 178), all taken within the period when agglutinins are often highest, failed to agglutinate any strain in a serum dilution higher than 1:160. Four sera (Nos. 185, 204, 187, and 209) contained agglutinins for X₂ in concentrations as high as, or

higher than, for any other organism. No. 209 is especially noteworthy in this respect. However, this serum gave no protection when equal parts of serum (0.5 c c) and *passage* virus, mixed and allowed to remain at room temperature for 30 minutes, were injected into a guinea pig intraperitoneally. Neither did it exhibit any protective properties against graded doses of virus of endemic typhus.

Table 4 is a record of agglutination tests made in 1931 on sera from nine individuals from whom two or more sera were procured.

TABLE 4.—*The agglutination of proteus X organisms by sera taken from nine individuals at different periods*

Sera	Days after onset	Agglutinin titer for <i>proteus X</i> organisms										
		OXK	HXK	OX ₂	HX ₂	OX ₁₉	HX ₁₉	W	271	560	568	
G. B.	8	40		0		80		0	0			0
	20	40		1,280	160	80	40	160	40	40	80	80
	79	40		0	0	0	40	40	0	0	0	40
R. C.	9	80		160					320	160		
	5 mo.	40	40	40	40	80	20	20	160	160	80	
M. K.	8	20		40				0	0	0		
	16	40		20					40	20		
	27	20		20		0				20		
O. B.	9	0		0					0	0		
	24	80	40	80	20	160	160	160	320	320	320	
A. B.	13	40	80	2,560	2,560	40	80	320	80	640	160	
	88	80	80	80	40	80	80	80	160	160	160	
	11	40	20	20	0	0	0	0	80	0	0	
W. S.	18	160	320	80	20	320	20	320	640	640	640	
	30	80	80	20	0	640	1,280	320	80	160	160	
	4 mo.	40	20	20	20	40	0	20	160	80	80	
B. L.	3	80							40	40		
	13	160							1,280		1,280	
R.	12				160				80	80		
	20				320				320		640	

Three sera in Table 4 are of special interest, two for their high agglutinin content for *proteus X*₂ and one for the absence of agglutinins.

The serum of G. B. contained agglutinins only of the OX₂ type in a serum dilution which might be considered of diagnostic importance. These agglutinins were entirely absent on the eighth day after onset and had completely disappeared in approximately two and a half months.

The serum of A. B. also contained agglutinins for *proteus X*₂ in a far greater concentration than for any other strain used. These had fallen to a negligible level in three months.

The number of cultures used in testing the serum of M. K. was limited by the amount of serum available. At no time did the agglutinin titer rise above that of normal serum in spite of the fact that sera were procured at optimum periods as determined in other tests. Moreover, serum taken 27 days after onset protected guinea pigs against multiple lethal doses of *passage* virus.

Two other sera are worthy of mention. A mild strain of virus was recovered in the guinea pig from the blood of O. B. taken on the ninth

day of the disease at a time when agglutinins were entirely absent. Blood taken on the twenty-fourth day gave a considerable degree of protection, but the agglutinin titer did not rise above 1:320.

The serum of W. S., taken on the eighteenth day, showed a marked rise in titer when compared with the 11-day serum. On the thirtieth day there was a decided drop in agglutinins for three test suspensions, while agglutinins for HX₁₉ had increased. The patient was still hospitalized at this time.

We have obtained sera from 26 individuals (Table 5) recovered from spotted fever at intervals varying from one month to 33 years. Sera obtained one (No. 195) and three (No. 223) months after onset contained O agglutinins above normal level. All other sera were essentially negative. This is not in accord with the findings of Felix (1930) in epidemic typhus. Felix states: "O agglutinins for X₁₉ due to a previous typhus infection may be present in dilutions of the serum generally accepted as diagnostic even many years after an attack of typhus fever."

TABLE 5.—The agglutination of proteus X organisms by sera from individuals recovered from Rocky Mountain spotted fever

Serum No.	Period after onset	Agglutinin titer for proteus X organisms									
		OXK	HXK	OX ₁	HX ₁	OX ₁₉	HX ₁₉	W	271	560	568
195	1 month	40	40	640	160	160	640	640	0	640	160
171	2½ months	0	0	0	0	0	40	40	0	0	40
176	2½ months	0	0	0	0	0	0	20	0	40	0
223	3 months	80	40	320	80	0	40	160	80	160	160
166	2 years	20	0	40	20	20	20	40	40	40	40
180	2 years	0	0	80	20	20	0	40	0	0	20
207	2 years	80	80	20	20	20	0	80	40	40	0
172	3 years	40	40	80	40	40	20	80	160	160	40
169	4 years	20	20	80	20	0	0	20	20	40	20
164	5 years	80	0	40	0	20	0	80	80	40	40
170	5 years	20	40	40	0	0	0	40	80	20	40
212	6 years	20	0	20	0	0	0	20	0	0	0
210	7 years	0	20	0	0	0	0	0	0	20	0
206	9 years	40	0	20	0	0	20	0	0	0	0
183	10 years	0	0	0	0	0	0	20	80	0	0
220	11 years	80	0	20	0	0	80	40	80	80	40
167	14 years	40	0	0	0	0	0	0	0	0	0
203	15 years	40	40	20	0	0	20	0	0	40	0
242	15 years	40	20	20	0	80	0	40	40	80	0
174	17 years	20	20	80	320	0	0	80	20	0	0
181	17 years	80	40	20	0	40	40	80	20	40	80
235	17 years	20	20	0	0	40	20	20	80	40	40
219	18 years	20	80	80	40	40	0	0	320	80	0
165	22 years	0	0	80	0	0	0	40	0	40	0
168	30 years	20	0	40	0	20	0	40	40	40	80
175	33 years	20	40	20	0	0	0	0	0	40	0

Table 6 is a record of the results of agglutination tests on sera from six fatal cases. Although it is unusual to find agglutinins within such short periods after onset, Spencer and Maxcy have reported a titer of 2,560 in a single case as early as the fifth day of illness, and we have recorded several instances in which the agglutinin titer, within this period, might be considered of diagnostic importance. Serum No.

151 B was obtained on the eleventh day about two hours post-mortem. In no serum were we able to detect an agglutinin content above normal.

TABLE 6.—*Agglutination of proteus X strains by sera from six fatal cases of Rocky Mountain spotted fever*

Serum	Days after onset	Agglutinin titer for <i>proteus X</i> organisms										
		OXK	HXK	OX ₂	HX ₂	OX ₁₉	HX ₁₉	W	271	560	568	
189.....	4.....	20	20	0	0	40	0	40	0	80	0	Died 4th day. Died 5th day.
221.....	4.....	40		20	0	0	40	40	80	80	40	
155.....	5.....	40							20	20	40	Died 12th day. Died 11th day.
151-A.....	6.....								80	20	20	
151-B.....	2 hours post-mortem.								80	20	20	
192.....	7.....	40	40	40	0	0	20	20	0	160	0	Died 9th day. Died 7th day.
208.....	7.....	40	40	20	20	0	0	40	0	0	40	

HEAT LIABILITY OF AGGLUTININS

The heat resistance of agglutinins for *proteus X* organisms has formed the subject of a number of papers. Havens (1927) has found that these agglutinins in the sera of individuals ill with or convalescent from endemic typhus are unaffected when heated at 56° C. for one hour, but are completely destroyed when heated at 62° C. for the same length of time. Felix and Olitzki (1929) have reported that heating the sera (diluted 1:50) of European typhus patients at 55° C. for 40 minutes reduces the agglutinin content by 40 to 60 per cent, and that heating at 65° C. completely destroys them.

Table 7 gives the agglutinin titer of 12 Rocky Mountain spotted fever sera before heating and after heating at 55° C. for 30 minutes. We chose this time and temperature, not to determine the actual point of destruction of agglutinins, but rather as a practical test, inasmuch as many sera are thus heated in certain routine serological procedures.

Our results were not constant. A similar finding has been reported by Moltke (loc. cit., p. 163). In fact, he found that some OX₂ sera were unaffected by heating at 65° C. Some of our sera, e. g., 171, 187, and 188, showed no reduction in titer, while others, e. g., 209 and 217, resulted in a fall of 50 per cent or more.

In one instance (No. 209) this procedure raised the agglutinin titer for HX₂ practically to the same level as that for OX₂ (heated serum): However, heating serum No. 187 not only raised the titer for HX₂ fourfold but also to twice the titer for OX₂, while the titer for OX₂ remained unchanged. The agglutinin content (X₁₉—271 and 568) of some low titer sera, e. g., Nos. 197, 205, and 219, was reduced to a negligible level. It appears that heating at 55° C. for 30 minutes effects marked differences in individual sera. It is possible that these differences may be explained by the globulin content of the sera as suggested by Felix and Olitzki.

TABLE 7.—Heat liability of *X agglutinins*. The sera indicated below were heated at 55° C. for 30 minutes and tested with such *X* strains as had given positive results in relatively high dilutions of the unheated sera

Serum No.	OX ₂		HX ₂		OX ₁₉		HX ₁₉		271		560		568		W	
	H	U	H	U	H	U	H	U	H	U	H	U	H	U	H	U
171.....	{ 640	640														
	{ 2,560	2,560														
182.....									{ 80	160						
									{ 320	640						
185.....	{ 80	320														
	{ 640	640														
187.....	{ 1,280	1,280	2,560	640												
	{ 5,120	5,120	10,240	2,560												
183.....	{ 160	160														
	{ 640	320														
197.....									{ 40	80						
										320						
204.....	{ 160	320		160	80	80	80	80			160	160			160	160
	{ 640	1,280		640	320	320	320	320			320	640			320	1,280
205.....	{ 80	160												320		
	{ 320	640												40	1,280	
209.....	{ 1,280	2,560	1,280	640	80	320	80	320			160	320	80	320	320	640
	{ 10,240	10,240	5,120	5,120	640	1,280	640	1,280			1,280	1,280	320	1,280	640	2,560
216.....	{ 80	160								320	640	640	640			
	{ 320	320								1,280	1,280	5,120	1,280			
217.....	{ 320	1,280	160	160												
	{ 1,280	2,560	640	2,560												
219.....									{ 20	160						
										320						

H = Heated; U = unheated sera.
 The upper figure indicates 100 per cent agglutination. The lower figure expresses the highest serum dilution in which there was definite agglutination.

DISCUSSION

Varying results in the agglutination of *proteus X* organisms by sera from individuals ill with or convalescent from typhus or typhuslike diseases have been attributed by Felix, in part, to the failure to follow a definite technique. Much of the discussion has centered about (1) methods of cultivation of the test organisms, (2) the use of killed or living organisms in the agglutination tests, (3) the preservation of sera with glycerin, and (4) the failure to distinguish between O and H types of agglutinins.

Medium.—In cultivating the organisms, Felix has stipulated that “the agar medium should be prepared from fresh meat bouillon, not from meat extracts.” We have used dehydrated nutrient agar (Difco) in all our reported studies. The temporary or permanent changes which an organism may undergo as the result of slight variations in environment is indicative of the necessity of a standard procedure for comparative purposes. It is possible that the type of cultivation used by us may exert an adverse influence on the agglutinability of *proteus X* organisms. If this is true it appears that X₂ is much more stable in this respect than X₁₉. In a few instances we have made duplicate tests with organisms carried on fresh meat bouillon agar and on dehydrated medium and have not found the results in favor of the former method. We feel that, as a very prac-

tical point, an extended comparison of these methods might well be made before discarding the dehydrated medium.

Killed or living cultures.—It will be noted that, in order to make our results absolutely comparable on this point, and especially to avoid any question concerning the use of formalin, we have used only fresh suspensions of organisms in all tests. However, there is not complete agreement on the effects of formalin. Felix has found that formalin inhibits the O type of agglutination. Spencer and Maxcy report, "In our experience, however, formalinized suspensions can be used with equal facility and accuracy provided the concentration of the preservative be kept at a minimum." Felix and Craigie are in agreement that the inhibition phenomenon is not brought about by the action of formalin directly on the somatic antigen. Felix adds that "neither can it be explained by the direct action of the disinfectant on the toxophore group of the O agglutinin," and, further, that the presence of H antigen is necessary to bring about the phenomenon. Craigie, however, finds that "unsensitized formalinized flagella impede the agglutination of the sensitized somata to which they are attached"; also, that "when the flagella are detached by violent agitation of the suspension, normal somatic agglutination takes place." If, therefore, formalin affects neither the O antigen nor the O agglutinin it appears that a formalinized suspension would have the same practical advantage as an alcoholized suspension, especially when dealing with pure O strains such as OX₂, which, in our experience, has never shown any H characteristics.

Glycerin.—We have tested OX₂ using (a) serial dilutions of glycerin (C. P. redistilled) in saline, (b) sera that have agglutinated OX₂ in relatively high dilutions with and without equal parts of glycerin, and (c) normal sera with and without glycerin, and have been unable to detect any nonspecific agglutination attributable to the glycerin. Moreover, it will be noted that in the agglutination tests for 1931 no glycerin was used, yet several of the highest titers were obtained with OX₂.

O and H agglutinins.—The significance of the O type of agglutinin is well established for European typhus. In our Rocky Mountain spotted fever studies HX₁₉ strains are sometimes agglutinated by a higher serum dilution than the OX₁₉ strain which we used. However, there are such wide differences in the agglutination of the several X₁₉ strains that, not possessing O and H types of each strain, we have been unable definitely to evaluate the results in Rocky Mountain spotted fever. Moreover, Craigie has shown that flagella are especially sensitive to agglutination, and consequently may give an exaggerated idea of the titer of the serum.

As a rule, OX₂ was agglutinated in higher serum dilutions than HX₂, but there were exceptions.

The high titers obtained with OX₂ are of outstanding interest. Felix and Rhodes have shown that the O antigen of X₂ and X₁₉ have little in common. We have amply confirmed this observation. Of 6 anti-*proteus* rabbit sera which have agglutinated X₁₉ strains in a serum dilution as high as 1:40,000, only one has agglutinated OX₂ in a serum dilution as low as 1:100.

It will be remembered that X₂ was originally replaced by X₁₉, as a diagnostic culture in European typhus, because the latter was agglutinated by much higher serum dilutions. Several of our Rocky Mountain spotted fever sera, however, have agglutinated OX₂ *only*, or have agglutinated this strain in higher serum dilutions than X₁₉ strains.

CONCLUSIONS

1. Although the agglutination of *proteus* X organisms occurs in a considerable proportion of cases of Rocky Mountain spotted fever, the number of strains necessary to secure agglutination in sufficiently high titers to be of possible diagnostic significance and the irregularity with which such results are obtained indicate that with the available strains the agglutination test can not be considered a diagnostic procedure in a measure comparable to agglutination tests in certain other diseases, e. g., tularæmia.

2. The relatively high titers obtained with OX₂ are to be noted.

3. In order that the agglutination test should be most significant, at least two serum samples should be secured, one between the tenth and fifteenth days and another a week or 10 days later. A third sample taken during convalescence is also desirable.

4. Our results indicate that agglutinins for *proteus* X organisms in Rocky Mountain spotted fever disappear more quickly than in typhus fever.

5. Heating at 55° C. for 30 minutes effects marked differences in individual sera.

6. The agglutination and protection tests made with sera 209 (Table 3) and M. K. (Table 4), the first showing a high agglutinin titer and low protective value, the latter a low agglutinin titer and high protective value, suggest that there is no necessary correlation between the agglutinin titer and the protective properties of convalescent sera.

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DEATHS DURING WEEK ENDED JUNE 25, 1932

Summary of information received by telegraph from industrial insurance companies for the week ended June 25, 1932, and corresponding week of 1931. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)

	Week ended June 25, 1932	Corresponding week, 1931
Policies in force.....	72, 457, 832	75, 148, 752
Number of death claims.....	12, 405	13, 184
Death claims per 1,000 policies in force, annual rate.....	9. 0	9. 1
Death claims per 1,000 policies, first 25 weeks of year, annual rate.....	10. 2	10. 6

Deaths¹ from all causes in certain large cities of the United States during the week ended June 25, 1932, infant mortality, annual death rate, and comparison with corresponding week of 1931. (From the Weekly Health Index, issued by the Bureau of the Census, Department of Commerce)

[The rates published in this summary are based upon mid-year population estimates derived from the 1930 census]

City	Week ended June 25, 1932				Corresponding week, 1931		Death rate ² for the first 25 weeks	
	Total deaths	Death rate ³	Deaths under 1 year	Infant mortality rate ⁴	Death rate ³	Deaths under 1 year	1932	1931
Total (85 cities).....	7, 105	10. 1	591	4. 48	11. 2	638	12. 0	12. 9
Akron.....	30	5. 9	0	0	8. 1	2	7. 6	8. 2
Albany ⁵	35	14. 0	2	41	11. 3	3	14. 6	15. 1
Atlanta ⁶	73	13. 5	7	68	12. 2	7	13. 8	15. 6
White.....	43	12. 0	5	74	8. 8	5	10. 8	12. 4
Colored.....	30	16. 4	2	57	19. 0	2	19. 7	22. 0

See footnotes at end of table.

Deaths ¹ from all causes in certain large cities of the United States during the week ended June 25, 1932, infant mortality, annual death rate, and comparison with corresponding week of 1931—Continued

City	Week ended June 25, 1932				Corresponding week, 1931		Death rate ² for the first 25 weeks	
	Total deaths	Death rate ²	Deaths under 1 year	Infant mortality rate ³	Death rate ²	Deaths under 1 year	1932	1931
Baltimore ⁴	162	10.3	15	53	13.8	18	14.1	15.7
White.....	119	9.3	11	50	13.5	12	13.1	14.4
Colored.....	43	15.0	4	64	15.3	6	18.5	21.8
Birmingham ⁶	69	13.0	11	115	12.0	5	11.8	14.5
White.....	26	7.9	1	16	8.1	4	9.2	11.2
Colored.....	43	21.3	10	270	18.3	1	15.9	19.9
Boston.....	196	13.0	16	48	13.1	17	15.2	15.2
Bridgeport.....	22	7.8	1	18	11.0	2	11.3	12.1
Buffalo.....	138	12.3	21	101	12.8	15	13.5	14.2
Cambridge.....	26	11.9	2	41	15.1	4	13.6	13.4
Camden.....	21	9.2	1	18	11.8	4	15.5	15.5
Canton.....	23	11.1	3	75	6.8	5	9.9	11.1
Chicago ⁵	622	9.2	41	40	10.3	63	10.5	11.3
Cincinnati.....	110	12.4	6	39	16.8	4	15.6	16.8
Cleveland.....	192	10.9	19	62	10.9	12	11.6	12.0
Columbus.....	52	9.1	1	10	12.5	3	14.1	14.7
Dallas ⁶	78	14.4	15	12	12.8	12	10.8	12.1
White.....	62	13.9	12	3	9.2	7	9.9	10.6
Colored.....	16	17.2	3	3	29.7	5	15.1	19.1
Dayton.....	30	7.5	0	0	12.5	1	12.5	13.1
Denver.....	73	13.0	3	29	13.0	7	15.3	14.8
Des Moines.....	33	11.8	4	69	19.1	3	11.9	11.8
Detroit.....	221	6.7	30	54	8.5	22	8.3	9.2
Duluth.....	17	8.7	1	29	11.3	0	11.2	11.2
El Paso.....	27	13.2	5	5	18.4	5	14.2	17.0
Erie.....	22	9.7	4	85	10.2	1	12.0	11.5
Evansville.....	14	6.9	0	0	14.0	1	10.2	12.0
Fall River ⁷	20	9.1	2	53	5.9	1	12.6	12.9
Flint.....	17	5.2	2	29	3.2	1	8.2	7.7
Fort Wayne.....	25	10.8	0	0	13.2	2	10.6	11.4
Fort Worth ⁶	33	10.1	6	6	10.3	1	10.4	11.7
White.....	26	9.4	3	3	10.0	1	10.0	11.2
Colored.....	7	13.7	3	3	11.5	0	12.5	14.0
Grand Rapids.....	33	9.9	3	51	11.2	0	9.3	9.9
Hartford.....	30	9.2	3	40	10.6	11	11.1	11.5
Houston ⁶	77	12.4	5	5	11.3	10	10.3	10.7
White.....	50	10.9	2	2	8.8	1	13.4	13.8
Colored.....	27	16.5	3	3	13.3	6	13.2	14.4
Indianapolis ⁶	97	13.5	7	57	13.3	6	13.2	14.4
White.....	83	13.2	6	55	13.5	4	12.9	13.9
Colored.....	14	15.9	1	69	11.5	2	15.7	17.7
Jersey City.....	55	9.0	9	75	11.9	12	11.8	12.7
Kansas City, Kans. ⁶	25	10.6	1	22	12.3	2	12.8	14.2
White.....	22	11.5	0	0	10.0	0	12.4	13.1
Colored.....	3	6.6	1	128	22.2	2	14.5	18.8
Kansas City, Mo.....	89	11.2	12	136	12.4	6	12.7	14.2
Knoxville ⁶	18	8.4	2	51	7.6	0	12.4	13.5
White.....	15	8.4	2	56	6.8	0	11.3	12.5
Colored.....	3	8.6	0	0	11.7	0	17.9	19.1
Long Beach.....	25	8.1	5	131	9.2	0	9.3	10.3
Los Angeles.....	249	9.4	23	68	10.8	22	11.0	11.2
Louisville ⁶	65	11.0	3	27	11.5	1	13.6	15.5
White.....	47	9.4	3	31	10.2	1	12.3	13.8
Colored.....	18	19.7	0	0	18.6	0	20.8	24.7
Lowell ⁷	15	7.8	3	78	16.6	5	14.5	13.7
Lynn.....	23	11.7	1	28	4.6	1	11.3	10.9
Memphis.....	83	16.5	3	33	15.9	9	16.5	17.0
White.....	42	13.5	1	17	13.4	6	12.9	14.0
Colored.....	41	21.3	2	60	20.0	3	22.4	21.9
Miami.....	24	11.0	3	84	7.9	3	11.9	12.7
White.....	14	8.3	1	39	5.4	0	10.7	11.6
Colored.....	10	20.7	2	201	16.5	3	16.1	16.3
Milwaukee.....	71	6.2	8	38	8.7	19	9.2	10.0
Minneapolis.....	66	7.2	2	13	10.7	7	10.9	11.7
Nashville ⁶	44	14.7	9	134	17.1	3	15.3	17.4
White.....	28	12.8	6	118	12.0	2	12.9	15.0
Colored.....	16	19.5	3	187	30.5	1	18.9	23.7
New Bedford ⁷	22	10.2	2	58	13.9	2	12.3	13.3
New Haven.....	30	9.6	1	20	12.5	1	12.9	12.7

See footnotes at end of table.

Deaths¹ from all causes in certain large cities of the United States during the week ended June 25, 1932, infant mortality, annual death rate, and comparison with corresponding week of 1931—Continued

City	Week ended June 25, 1932				Corresponding week, 1931		Death rate ² for the first 25 weeks	
	Total deaths	Death rate ³	Deaths under 1 year	Infant mortality rate ⁴	Death rate ⁵	Deaths under 1 year	1932	1931
New Orleans ⁶	165	18.2	20	114	14.1	11	15.6	17.6
White.....	94	14.6	10	87	12.1	7	13.2	14.3
Colored.....	71	27.0	10	103	19.0	4	21.5	25.9
New York.....	1,264	9.2	77	34	10.4	103	11.4	12.3
Bronx Borough.....	170	6.4	5	14	8.7	13	8.4	9.0
Brooklyn Borough.....	446	8.7	33	37	9.8	40	10.6	11.4
Manhattan Borough.....	456	13.4	24	34	15.0	41	17.5	18.8
Queens Borough.....	143	6.4	12	50	6.1	7	7.4	7.9
Richmond Borough.....	44	13.7	3	59	11.8	2	14.2	14.2
Newark, N. J.....	89	10.4	3	16	10.2	9	11.4	12.6
Oakland.....	45	7.9	3	38	10.2	4	10.8	11.0
Oklahoma City.....	27	6.9	2	27	11.1	7	10.4	12.0
Omaha.....	58	13.9	3	34	10.6	4	13.8	14.3
Paterson.....	33	12.4	5	91	12.4	1	13.3	14.8
Peoria.....	17	8.0	3	83	13.5	2	11.6	12.9
Philadelphia.....	394	10.4	33	51	10.7	28	13.4	14.7
Pittsburgh.....	128	9.8	19	87	12.0	16	13.6	16.2
Portland, Oreg.....	47	7.9	2	26	9.7	2	11.7	12.2
Providence.....	53	10.8	6	58	12.9	8	14.3	14.1
Richmond ⁶	36	10.2	1	15	11.6	6	14.1	16.7
White.....	21	8.3	0	0	7.5	2	11.6	14.1
Colored.....	15	14.9	1	46	21.7	4	20.5	23.2
Rochester.....	68	10.6	5	48	10.7	5	12.6	12.9
St. Louis.....	192	12.1	12	43	18.5	27	14.1	16.5
St. Paul.....	29	5.4	3	32	9.8	4	10.8	11.3
Salt Lake City ⁷	29	10.4	2	31	8.8	1	11.1	12.6
San Antonio.....	58	12.3	12	11	11.9	13	14.2	16.1
San Diego.....	46	14.7	5	108	11.7	2	14.8	14.6
San Francisco.....	149	11.8	7	48	10.8	2	13.0	13.5
Schenectady.....	17	9.2	0	0	11.4	1	11.0	11.1
Seattle.....	85	11.8	3	30	8.3	2	12.2	12.1
Somerville.....	13	6.4	1	40	10.4	0	9.6	10.5
South Bend.....	17	8.0	1	29	6.8	2	7.9	8.8
Spokane.....	29	13.0	2	53	11.2	1	12.5	12.8
Springfield, Mass.....	30	10.2	3	51	8.9	5	11.8	13.0
Syracuse.....	42	10.2	3	39	12.7	3	12.3	12.4
Tacoma.....	16	7.7	0	0	12.1	3	12.6	13.0
Tampa ⁶	13	6.3	1	29	10.4	4	12.1	12.8
White.....	10	6.1	0	0	9.4	3	11.5	11.9
Colored.....	3	6.9	1	158	14.1	1	14.0	16.3
Toledo.....	76	13.2	3	33	11.1	7	12.3	12.8
Trenton.....	32	13.5	4	79	14.7	4	16.5	17.9
Utica.....	32	16.3	2	57	12.7	2	16.5	15.3
Washington, D. C. ⁶	148	15.7	14	79	13.5	10	17.2	16.9
White.....	93	13.6	9	74	12.4	7	15.4	14.5
Colored.....	55	21.0	5	89	16.2	3	22.1	23.2
Waterbury.....	18	9.3	4	132	7.2	1	9.9	10.3
Wilmington, Del. ⁷	27	13.2	1	23	14.2	1	16.0	15.5
Worcester.....	31	8.2	1	14	9.8	3	13.0	13.7
Yonkers.....	39	14.3	4	103	8.6	1	8.3	9.5
Youngstown.....	21	6.3	1	16	7.8	2	10.2	10.9

¹ Deaths of nonresidents are included. Stillbirths are excluded.

² These rates represent annual rates per 1,000 population, as estimated for 1932 and 1931 by the arithmetical method.

³ Deaths under 1 year of age per 1,000 estimated live births. Cities left blank are not in the registration area for births.

⁴ Data for 81 cities.

⁵ Deaths for week ended Friday.

⁶ For the cities for which deaths are shown by color, the percentages of colored population in 1930 were as follows: Atlanta, 33; Baltimore, 18; Birmingham, 38; Dallas, 17; Fort Worth, 16; Houston, 27; Indianapolis, 12; Kansas City, Kans., 19; Knoxville, 16; Louisville, 15; Memphis, 38; Miami, 23; Nashville, 28; New Orleans, 29; Richmond, 29; Tampa, 21; and Washington, D. C., 27.

⁷ Population Apr. 1, 1930; decreased 1920 to 1930, no estimate made.

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 2, 1932, and July 4, 1931

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended July 2, 1932, and July 4, 1931

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended July 2, 1932	Week ended July 4, 1931	Week ended July 2, 1932	Week ended July 4, 1931	Week ended July 2, 1932	Week ended July 4, 1931	Week ended July 2, 1932	Week ended July 4, 1931
New England States:								
Maine.....	1	2			58	25	0	0
New Hampshire.....	1				11	36	0	0
Vermont.....		1			116	43	0	0
Massachusetts.....	45	39	1	1	563	300	3	0
Rhode Island.....	6	11			12	99	0	0
Connecticut.....	4	10	2	1	133	131	0	2
Middle Atlantic States:								
New York.....	57	113	13	16	1,434	1,108	4	4
New Jersey.....	20	33	4	2	409	334	1	6
Pennsylvania.....	54	52			656	1,018	1	4
East North Central States:								
Ohio.....	37	15	5	1	818	390	3	2
Indiana.....	10	6	5	1	29	129	2	4
Illinois ¹	33	80	49	9	293	753	3	9
Michigan.....	20	35	2	1	1,498	237	4	3
Wisconsin.....	10	13	11	11	630	499	2	1
West North Central States:								
Minnesota.....	8	4	1	1	14	58	0	1
Iowa.....	4	1			3	7	1	0
Missouri.....	21	13			16	27	0	2
North Dakota.....		2			47	8	0	1
South Dakota.....		8		1	3	3	0	0
Nebraska.....	5	1			4		0	0
Kansas.....	5	5	1		100	28	1	2
South Atlantic States:								
Delaware.....	1	1			1	35	0	0
Maryland ¹	6	6	3	1	21	180	0	1
District of Columbia.....	8	3			6	18	0	0
Virginia ¹	7				38		0	
West Virginia.....	7	5	4		111	163	1	2
North Carolina ¹	12	7	1		247	203	0	1
South Carolina.....	2	9	121	86	60	63	0	0
Georgia ¹	5	2	9		5	33	2	2
Florida ¹	2	6			6	12	0	1

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended July 2, 1932, and July 4, 1931—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended July 2, 1932	Week ended July 4, 1931	Week ended July 2, 1932	Week ended July 4, 1931	Week ended July 2, 1932	Week ended July 4, 1931	Week ended July 2, 1932	Week ended July 4, 1931
East South Central States:								
Kentucky.....	6				32	36	0	0
Tennessee.....	3	1	5	1		26	0	2
Alabama ¹	10	7	3	2		19	1	3
Mississippi.....	4	7					0	0
West South Central States:								
Arkansas.....	6		5		1	7	0	0
Louisiana.....	10	18	6	20	7		1	1
Oklahoma ⁴	7	5	4	17	28	4	1	0
Texas ¹	21	16	19	3	16	26	0	1
Mountain States:								
Montana.....			3		38	3	0	0
Idaho.....	3				3		0	1
Wyoming.....					35	7	0	0
Colorado.....	8	3			57	169	0	0
New Mexico.....	3	4			3	10	0	0
Arizona.....				1	2	8	0	0
Utah ¹		2		3	4	10	0	0
Pacific States:								
Washington.....	4	11			86	46	1	0
Oregon.....	3	2	5	9	58	13	0	0
California.....	20	53	3	16	126	269	0	0
Total.....	499	614	275	194	7,838	6,593	32	56

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended July 2, 1932	Week ended July 4, 1931	Week ended July 2, 1932	Week ended July 4, 1931	Week ended July 2, 1932	Week ended July 4, 1931	Week ended July 2, 1932	Week ended July 4, 1931
New England States:								
Maine.....	1	2	15	30	0	0	2	4
New Hampshire.....	0	0	10	2	0	0	0	0
Vermont.....	0	1	3	2	0	21	0	0
Massachusetts.....	2	5	210	136	0	0	1	7
Rhode Island.....	0	0	21	16	0	0	0	0
Connecticut.....	1	2	34	22	0	0	1	1
Middle Atlantic States:								
New York.....	4	5	376	252	1	39	6	13
New Jersey.....	0	0	126	91	0	1	5	0
Pennsylvania.....	0	1	285	254	0	1	15	19
East North Central States:								
Ohio.....	1	5	174	134	6	45	17	24
Indiana.....	1	0	34	47	5	72	7	6
Illinois ¹	4	4	129	131	1	27	20	14
Michigan.....	0	2	274	240	4	13	11	6
Wisconsin.....	2	2	23	46	0	19	3	0
West North Central States:								
Minnesota.....	2	0	23	24	0	3	0	2
Iowa.....	0	0	12	12	9	36	1	4
Missouri.....	0	1	17	21	6	6	4	16
North Dakota.....	5	0	14	6	3	9	3	0
South Dakota.....	0	0	2	2	3	3	3	4
Nebraska.....	0	0	11	5	2	7	0	5
Kansas.....	0	2	9	6	6	20	6	6
South Atlantic States:								
Delaware.....	0	0	7	9	0	0	0	0
Maryland ¹	0	0	31	23	0	0	10	6
District of Columbia.....	0	0	5	6	0	0	1	0
Virginia ¹	0		6		0		35	
West Virginia.....	0	0	11	13	0	3	25	10
North Carolina.....	3	2	31	14	0	1	42	31
South Carolina.....	2	0	3	0	0	0	47	68
Georgia ¹	0	1	2	11	0	4	54	38
Florida ¹	0	0	4	3	1	0	5	1

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended July 2, 1932, and July 4, 1931—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended July 2, 1932	Week ended July 4, 1931	Week ended July 2, 1932	Week ended July 4, 1931	Week ended July 2, 1932	Week ended July 4, 1931	Week ended July 2, 1932	Week ended July 4, 1931
East South Central States:								
Kentucky.....	1	0	9	27	2	8	72	6
Tennessee.....	0	0	7	1	7	8	91	14
Alabama ¹	0	0	11	10	2	9	20	26
Mississippi.....	0	0	3	1	1	15	20	15
West South Central States:								
Arkansas.....	0	1	1	3	1	14	19	22
Louisiana.....	1	1	5	6	0	25	27	25
Oklahoma ⁴	0	0	19	7	0	26	14	27
Texas ¹	4	2	24	14	3	70	25	24
Mountain States:								
Montana.....	0	0	3	4	1	1	3	2
Idaho.....	0	0	2	0	0	3	3	0
Wyoming.....	0	1	5	7	0	2	0	0
Colorado.....	0	0	7	20	0	11	5	10
New Mexico.....	0	0	6	2	0	1	6	4
Arizona.....	0	0	3	1	0	0	2	1
Utah ¹	0	0	0	1	0	4	0	1
Pacific States:								
Washington.....	4	0	4	12	13	11	4	1
Oregon.....	0	0	19	7	3	25	2	4
California.....	4	5	56	45	9	8	8	9
Total.....	42	45	2,077	1,726	89	571	644	476

¹ New York City only.

² Typhus fever, 15 cases: 1 case in Illinois, 1 case in Virginia, 1 case in North Carolina, 6 cases in Georgia, 2 cases in Florida, 3 cases in Alabama, and 1 case in Texas.

³ Week ended Friday.

⁴ Figures for 1932 are exclusive of Oklahoma City and Tulsa and for 1931 are exclusive of Tulsa only.

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	Menin- gococ- cus menin- gitis	Diph- theria	Influ- enza	Ma- laria	Mea- sles	Pel- lagra	Polio- mye- litis	Scarlet fever	Small- pox	Ty- phoid fever
<i>May, 1932</i>										
Colorado.....	2	27	-----	1	459	-----	0	100	8	9
Michigan.....	19	45	42	4	11,650	-----	5	2,010	41	18
Oklahoma ¹	4	31	74	58	84	32	0	39	80	6
Oregon.....	1	17	127	1	1,035	-----	0	29	23	7
Rhode Island.....	-----	17	-----	-----	303	-----	1	237	0	1
South Carolina.....	-----	50	2,507	764	649	345	2	15	2	44
South Dakota.....	2	16	15	-----	35	-----	1	19	2	1
Texas.....	2	103	122	449	-----	-----	3	87	-----	18
Virginia.....	9	47	1,320	23	623	65	4	170	1	41
Washington.....	8	30	171	-----	1,126	-----	3	103	76	23
West Virginia.....	8	71	118	-----	1,059	1	-----	81	3	28
Wisconsin.....	3	24	103	-----	9,118	-----	1	296	8	7

¹ Oklahoma City and Tulsa not included.

<i>May, 1932</i>			
Chicken pox:	Cases	Rabies in animals:	Cases
Colorado.....	390	Rhode Island.....	1
Michigan.....	1,048	South Carolina.....	18
Oklahoma ¹	24	Washington.....	3
Oregon.....	97	Rocky Mountain spotted or tick fever:	
Rhode Island.....	27	Colorado.....	8
South Carolina.....	111	Oregon.....	24
South Dakota.....	29	Washington.....	1
Virginia.....	439	Scabies:	
Washington.....	231	Oregon.....	23
West Virginia.....	72	Septic sore throat:	
Wisconsin.....	1,060	Michigan.....	31
Conjunctivitis:		Oklahoma ¹	9
Oklahoma ¹	1	Oregon.....	2
Dengue:		Rhode Island.....	1
South Carolina.....	10	Washington.....	1
Diarrhea:		Tetanus:	
South Carolina.....	1,034	Oklahoma ¹	2
Diarrhea and dysentery:		Washington.....	1
Virginia.....	657	Trachema:	
Dysentery:		Oklahoma ¹	5
Oklahoma ¹	6	South Dakota.....	1
Washington.....	2	Wisconsin.....	1
German measles:		Trichiniasis:	
Washington.....	58	South Dakota.....	1
Wisconsin.....	39	Tularaemia:	
Hookworm disease:		South Carolina.....	2
South Carolina.....	116	Virginia.....	2
Impetigo contagiosa:		Wisconsin.....	1
Colorado.....	2	Typhus fever:	
Oklahoma ¹	1	South Carolina.....	1
Oregon.....	35	Virginia.....	4
Lethargic encephalitis:		Undulant fever:	
Michigan.....	2	Michigan.....	2
Oregon.....	1	Virginia.....	4
Washington.....	6	Washington.....	2
Wisconsin.....	2	Wisconsin.....	3
Mumps:		Vincent's angina:	
Colorado.....	432	Colorado.....	10
Michigan.....	1,398	Oklahoma ¹	1
Oklahoma ¹	19	Oregon.....	11
Oregon.....	86	Washington.....	4
Rhode Island.....	106	Whooping cough:	
South Carolina.....	154	Colorado.....	161
South Dakota.....	34	Michigan.....	1,304
Washington.....	115	Oklahoma ¹	56
West Virginia.....	4	Oregon.....	115
Wisconsin.....	655	Rhode Island.....	48
Ophthalmia neonatorum:		South Carolina.....	195
Oklahoma ¹	1	South Dakota.....	32
South Carolina.....	10	Virginia.....	1,391
Paratyphoid fever:		Washington.....	123
South Carolina.....	5	West Virginia.....	225
Puerperal septicemia:		Wisconsin.....	966
Washington.....	8		

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 93 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 32,225,000. The estimated population of the 86 cities reporting deaths is more than 30,665,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

¹ Exclusive of Oklahoma City and Tulsa.

Weeks ended June 25, 1932, and June 27, 1931

	1932	1931	Estimated expectancy
<i>Cases reported</i>			
Diphtheria:			
46 States.....	555	677	
93 cities.....	223	324	572
Measles:			
45 States.....	9,464	9,910	
93 cities.....	3,326	3,597	
Meningococcus meningitis:			
46 States.....	32	75	
93 cities.....	20	37	
Poliomyelitis:			
46 States.....	42	40	
Scarlet fever:			
46 States.....	2,586	2,474	
93 cities.....	1,056	1,058	786
Smallpox:			
46 States.....	201	470	
93 cities.....	13	47	38
Typhoid fever:			
46 States.....	553	375	
93 cities.....	64	64	52
<i>Deaths reported</i>			
Influenza and pneumonia:			
86 cities.....	367	413	
Smallpox:			
86 cities.....	0	0	

City reports for week ended June 25, 1932

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 1923 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.....	1	0	0		0	0	2	2
New Hampshire:								
Concord.....	0	0	0		0	3	0	1
Nashua.....	0	0	0		0	0	0	0
Vermont:								
Barre.....	0	0	0		0	0	0	1
Burlington.....	0	0	0		0	1	2	0
Massachusetts:								
Boston.....	59	23	8	2	0	186	57	9
Fall River.....	0	2	0		0	20	0	2
Springfield.....	12	2	0		0	108	2	4
Worcester.....	11	2	0		0	31	1	2
Rhode Island:								
Pawtucket.....	0	0	0		0	0	0	0
Providence.....	2	4	4		1	2	2	2
Connecticut:								
Bridgeport.....	2	4	0		0	35	0	1
Hartford.....		2						
New Haven.....	11	0	0		0	0	10	1

City reports for week ended June 25, 1932—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			
SOUTH ATLANTIC—continued								
District of Columbia:								
Washington.....	28	7	4	-----	0	14	0	6
Virginia:								
Lynchburg.....	3	0	0	-----	0	1	0	2
Norfolk.....	0	0	0	-----	0	1	0	3
Richmond.....	2	1	0	-----	0	1	0	0
Roanoke.....	1	0	0	-----	0	1	0	0
West Virginia:								
Charleston.....	0	0	1	-----	0	3	0	1
Huntington.....	0	-----	0	-----	0	6	0	0
Wheeling.....	3	0	0	-----	0	46	0	0
North Carolina:								
Raleigh.....	0	0	0	-----	0	1	0	0
Wilmington.....	6	0	0	-----	0	0	0	0
Winston-Salem.....	0	0	1	-----	0	23	1	0
South Carolina:								
Charleston.....	0	0	0	2	0	0	0	1
Columbia.....	5	0	0	-----	0	13	0	0
Georgia:								
Atlanta.....	5	1	1	4	1	2	0	7
Brunswick.....	3	0	0	-----	0	0	0	0
Savannah.....	0	0	0	4	1	31	0	0
Florida:								
Miami.....	0	1	2	1	0	0	0	1
Tampa.....	2	1	2	-----	0	0	0	0
EAST SOUTH CENTRAL								
Kentucky:								
Covington.....	-----	0	-----	-----	-----	-----	-----	-----
Tennessee:								
Memphis.....	1	0	0	-----	1	-----	0	2
Nashville.....	0	0	3	-----	0	1	1	2
Alabama:								
Birmingham.....	7	1	1	-----	0	1	6	3
Mobile.....	0	0	0	-----	0	0	0	1
Montgomery.....	0	0	0	-----	-----	0	0	-----
WEST SOUTH CENTRAL								
Arkansas:								
Fort Smith.....	0	0	0	-----	-----	0	0	-----
Little Rock.....	-----	0	-----	-----	-----	-----	-----	-----
Louisiana:								
New Orleans.....	0	6	13	2	3	2	0	7
Shreveport.....	0	0	0	-----	0	5	4	3
Texas:								
Dallas.....	1	3	4	1	1	7	0	6
Fort Worth.....	6	1	3	-----	1	1	0	2
Galveston.....	0	0	0	-----	0	0	0	0
Houston.....	1	2	4	-----	0	15	0	1
San Antonio.....	0	2	0	-----	0	0	0	0
MOUNTAIN								
Montana:								
Billings.....	0	0	0	-----	0	0	0	0
Great Falls.....	0	0	0	-----	0	2	0	0
Helena.....	2	1	0	-----	0	0	0	0
Missoula.....	0	0	0	-----	0	0	0	0
Idaho:								
Boise.....	0	0	0	-----	0	3	0	0
Colorado:								
Denver.....	36	5	2	-----	1	58	28	2
Pueblo.....	11	0	0	-----	0	0	1	2
New Mexico:								
Abuquerque.....	0	0	0	-----	0	0	2	0
Arizona:								
Phoenix.....	0	0	0	-----	0	2	0	1
Utah:								
Salt Lake City.....	50	3	0	-----	0	0	13	3
Nevada:								
Reno.....	0	0	0	-----	0	0	0	0

City reports for week ended June 25, 1932—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						
PACIFIC											
Washington:											
Seattle.....	34	2	0			12	5				
Spokane.....	14	2	0			22	0				
Tacoma.....	2	1	1		0	46	0	2			
Oregon:											
Portland.....	1	4	0		0	33	4	2			
Salem.....	0	1	0	3		3	2	0			
California:											
Los Angeles.....		24									
Sacramento.....	9	1	0	2	1	6	0	2			
San Francisco.....	21	9	2		0	74	8	5			
Division, State, and city	Scarlet fever		Smallpox			Typhoid fever			Whooping cough, cases reported	Deaths, all causes	
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported	Tuberculosis, deaths reported	Cases, estimated expectancy	Cases reported			Deaths reported
NEW ENGLAND											
Maine:											
Portland.....	1	2	0	0	0	1	0	0	0	7	21
New Hampshire:											
Concord.....	0	0	0	0	0	1	0	0	0	0	13
Nashua.....	0	0	0	0	0	0	0	0	0	0	
Vermont:											
Barre.....	0	0	0	0	0	0	0	0	0	0	4
Burlington.....	0	0	0	0	0	0	0	0	0	1	6
Massachusetts:											
Boston.....	48	74	0	0	0	13	1	3	0	42	196
Fall River.....	3	6	0	0	0	0	0	0	0	2	20
Springfield.....	4	12	0	0	0	0	0	0	0	6	27
Worcester.....	7	15	0	0	0	1	0	3	0	17	31
Rhode Island:											
Pawtucket.....	1	0	0	0	0	0	0	0	0	0	11
Providence.....	7	12	0	0	0	0	0	1	0	7	53
Connecticut:											
Bridgeport.....	4	4	0	0	0	1	0	0	0	1	22
Hartford.....	2		0			0					
New Haven.....	2	7	0	0	0	3	1	0	0	11	30
MIDDLE ATLANTIC											
New York:											
Buffalo.....	16	32	1	0	0	7	1	0	0	14	138
New York.....	144	258	0	1	0	102	11	4	0	117	1,264
Rochester.....	8	21	0	0	0	6	0	1	0	1	65
Syracuse.....	5	7	0	0	0	1	0	0	0	43	42
New Jersey:											
Camden.....	3	8	0	0	0	2	0	0	0	1	21
Newark.....	15	19	0	0	0	10	0	0	0	8	95
Trenton.....	3	6	0	0	0	2	0	0	0	1	32
Pennsylvania:											
Philadelphia.....	59	84	0	0	0	21	1	3	1	41	394
Pittsburgh.....	24	37	0	0	0	7	0	0	0	24	123
Reading.....	2	6	0	0	0	0	0	0	0	6	25
Scranton.....		11		0				0		11	
EAST NORTH CENTRAL											
Ohio:											
Cincinnati.....	12	7	1	1	0	3	0	0	0	8	110
Cleveland.....	26	37	1	0	0	16	1	2	0	90	192
Columbus.....	4	3	1	0	0	2	1	0	0	24	53
Toledo.....	10	5	1	0	0	3	0	0	1	71	76

City reports for week ended June 25, 1932—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
EAST NORTH CENTRAL—continued											
Indiana:											
Fort Wayne	1	1	1	0	0	0	0	2	0	3	27
Indianapolis	8	0	5	0	0	2	0	0	0	26	17
South Bend	2	2	1	0	0	0	0	0	0	0	16
Terre Haute	1	1	0	0	0	2	0	1	0	0	
Illinois:											
Chicago	89	119	1	0	0	42	2	2	0	77	622
Springfield	2	1	0	0	0	0	0	1	0	1	19
Michigan:											
Detroit	78	160	1	0	0	17	1	0	0	129	221
Flint	10	1	1	0	0	0	0	0	0	18	17
Grand Rapids	7	2	0	0	0	1	0	0	0	18	33
Wisconsin:											
Keosha	0	2	0	0	0	0	0	0	0	7	6
Madison	2	5	0	0	0	0	0	0	0	10	
Milwaukee	19	13	0	0	0	6	1	0	0	68	71
Racine	3	0	0	0	0	0	0	0	0	1	11
Superior	2	1	0	0	0	0	0	0	0	2	8
WEST NORTH CENTRAL											
Minnesota:											
Duluth	6	1	0	0	0	1	0	0	0	0	17
Minneapolis	20	8	0	1	0	2	1	0	0	3	66
St. Paul	11	4	1	0	0	1	0	0	0	35	31
Iowa:											
Des Moines	3	1	3	0	0	0	0	0	0	0	38
Sioux City	1	1	1	2	0	0	0	0	0	0	
Waterloo	0	1	1	0	0	0	0	1	0	0	
Missouri:											
Kansas City	6	5	0	0	0	9	0	1	0	11	89
St. Joseph	0	0	1	0	0	1	0	0	0	3	38
St. Louis	28	8	2	0	0	9	2	3	0	14	192
North Dakota:											
Fargo	1	1	0	0	0	0	0	0	0	0	7
Grand Forks	0	0	0	0	0	0	0	0	0	0	
South Dakota:											
Aberdeen	0	0	0	0	0	0	0	0	0	0	
Nebraska:											
Omaha	2	2	3	0	0	0	0	0	0	1	58
Kansas:											
Topeka	1	1	0	0	0	0	1	0	0	54	80
Wichita	2		1			0					
SOUTH ATLANTIC											
Delaware:											
Wilmington	2	2	0	0	0	0	0	0	0	7	27
Maryland:											
Baltimore	22	18	0	0	0	11	2	1	0	73	162
Cumberland	0	1	0	0	0	0	0	1	0	0	17
Frederick	0	0	0	0	0	0	0	0	0	0	3
District of Col.:											
Washington	12	5	1	0	0	15	1	1	0	13	148
Virginia:											
Lynchburg	0	0	0	0	0	0	1	0	0	20	12
Norfolk	1	0	0	0	0	1	0	0	0	2	20
Richmond	1	2	0	0	0	3	1	2	0	0	35
Roanoke	0	3	0	0	0	2	0	0	0	1	12
West Virginia:											
Charleston	1	4	0	0	0	1	1	2	0	0	23
Huntington	0	0	0	0	0	0	0	0	0	0	
Wheeling	1	1	0	0	0	0	0	0	0	4	12
North Carolina:											
Raleigh	0	0	0	0	0	1	0	0	0	5	17
Wilmington	0	0	0	0	0	1	0	2	1	9	11
Winston-Salem	1	4	0	0	0	1	0	0	0	9	10
South Carolina:											
Charleston	0	0	0	0	0	1	1	2	0	0	12
Columbia	0	1	0	0	0	1	2	0	0	0	4

City reports for week ended June 25, 1932—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culosis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths, all causes
	Cases, esti- mated expect- ancy	Cases re- ported	Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		
SOUTH ATLANTIC— continued											
Georgia:											
Atlanta.....	2	4	2	0	0	3	1	4	0	8	73
Brunswick.....	0	0	0	0	0	0	0	2	0	0	3
Savannah.....	0	0	0	0	0	2	0	1	1	2	47
Florida:											
Miami.....	0	0	0	0	0	1	1	1	0	0	24
Tampa.....	0	1	0	0	0	1	1	0	0	0	16
EAST SOUTH CEN- TRAL											
Kentucky:											
Covington.....	0		0				0				
Tennessee:											
Memphis.....	3	0	1	0	0	8	3	3	0	11	83
Nashville.....	1	2	1	0	0	2	2	3	0	10	44
Alabama:											
Birmingham.....	2	1	1	0	0	4	2	1	0	8	69
Mobile.....	0	0	0	2	0	0	1	0	0	0	21
Montgomery.....	0	0	0	0			0	0		2	
WEST SOUTH CEN- TRAL											
Arkansas:											
Fort Smith.....	0	1	0	0			1	0		1	
Little Rock.....	0		0				0				
Louisiana:											
New Orleans.....	4	8	0	0	0	11	3	3	2	0	165
Shreveport.....	1	0	0	0	0	0	0	0	3	1	51
Texas:											
Dallas.....	2	7	1	0	0	1	1	2	0	20	78
Fort Worth.....	1	1	1	1	0	1	1	1	0	0	33
Galveston.....	0	0	0	0	0	0	1	0	0	0	9
Houston.....	1	0	1	0	0	6	1	0	0	0	77
San Antonio.....	0	0	0	0	0	7	1	1	0	0	58
MOUNTAIN											
Montana:											
Billings.....	0	0	0	0	0	0	0	0	0	0	11
Great Falls.....	0	0	0	0	0	0	0	0	0	0	12
Helena.....	0	0	0	0	0	0	0	0	0	0	12
Missoula.....	0	0	0	0	0	0	0	0	0	0	6
Idaho:											
Boise.....	0	0	0	0	0	0	0	0	0	0	9
Colorado:											
Denver.....	7	16	0	0	0	6	1	0	0	40	70
Pueblo.....	0	0	0	0	0	0	0	0	0	1	8
New Mexico:											
Albuquerque.....	0	0	0	0	0	4	0	0	0	1	9
Arizona:											
Phoenix.....	1	0	0	0	0	8	0	0	0	0	
Utah:											
Salt Lake City.....	2	2	0	0	0	0	0	1	0	12	29
Nevada:											
Reno.....	0	0	0	0	0	0	0	0	0	0	2
PACIFIC											
Washington:											
Seattle.....	6	4	1	0			0	2		0	
Spokane.....	3	1	4	0			0	0		6	
Tacoma.....	2	3	2	3	0	1	0	0	0	2	16
Oregon:											
Portland.....	3	0	6	0	0	4	0	0	0	0	47
Salem.....	0	0	0	0	0	0	0	0	0	3	
California:											
Los Angeles.....	21		4				2				
Sacramento.....	2	0	0	0	0	3	0	0	1	5	37
San Francisco.....	12	3	0	3	0	14	0	0	0	3	149

City reports for week ended June 25, 1932—Continued

Division, State, and city	Meningo- coccus men- ingitis		Lethargic en- cephalitis		Pellagra		Poliomyelitis (infan- tile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, esti- mated expect- ancy	Cases	Deaths
NEW ENGLAND									
Massachusetts:									
Boston.....	4	1	0	0	0	0	0	0	
MIDDLE ATLANTIC									
New York:									
New York.....	5	1	2	1	0	0	2	3	1
Rochester.....	1	0	0	0	0	0	0	0	0
Pennsylvania:									
Philadelphia.....	0	0	0	0	1	1	0	0	1
EAST NORTH CENTRAL									
Ohio:									
Cincinnati.....	0	1	0	0	0	0	0	0	0
Columbus.....	0	0	1	0	0	0	0	0	0
Indiana:									
Indianapolis.....	2	0	0	0	0	0	0	0	0
Illinois:									
Chicago.....	1	1	1	0	0	0	0	0	0
Michigan:									
Detroit.....	3	0	0	0	0	0	1	0	0
WEST NORTH CENTRAL									
Missouri:									
Kansas City.....	1	1	0	0	1	0	0	0	0
St. Joseph.....	1	0	0	0	0	0	0	0	0
St. Louis.....	0	0	0	1	0	0	0	0	0
SOUTH ATLANTIC¹									
Maryland:									
Baltimore.....	1	0	0	0	1	0	0	0	0
District of Columbia:									
Washington.....	0	0	0	0	0	0	0	1	1
West Virginia:									
Charleston.....	1	1	0	0	0	0	0	0	0
South Carolina:									
Charleston.....	0	1	2	0	0	0	0	0	0
Georgia:									
Atlanta.....	0	0	1	1	5	2	0	0	0
Savannah ¹	1	0	0	0	2	1	0	0	0
EAST SOUTH CENTRAL									
Tennessee:									
Memphis.....	0	0	0	0	1	1	0	0	0
WEST SOUTH CENTRAL									
Louisiana:									
Shreveport.....	0	0	0	0	0	1	0	0	0
Texas:									
Dallas.....	0	0	0	0	0	0	0	1	0
Houston.....	0	0	0	0	0	0	0	1	0
San Antonio.....	0	0	0	0	0	1	0	2	1
PACIFIC									
California:									
San Francisco.....	0	0	0	0	0	0	0	1	0

¹ Typhus fever, 3 cases and 1 death: 2 cases at Savannah, Ga., and 1 case and 1 death at Tampa, Fla.

The following table gives the rates per 100,000 population for 98 cities for the 5-week period ended June 25, 1932, compared with those for a like period ended June 27, 1931. The population figures used in computing the rates are estimated

mid-year populations for 1931 and 1932, respectively, derived from the 1930 census. The 98 cities reporting cases have an estimated aggregate population of more than 34,000,000. The 91 cities reporting deaths have more than 32,400,000 estimated population.

*Summary of weekly reports from cities, May 22 to June 25, 1932—Annual rates per 100,000 population, compared with rates for the corresponding period of 1931*¹

DIPHTHERIA CASE RATES

	Week ended—									
	May 28, 1932	May 30, 1931	June 4, 1932	June 6, 1931	June 11, 1932	June 13, 1931	June 18, 1932	June 20, 1931	June 25, 1932	June 27, 1931
98 cities.....	48	59	45	67	42	54	47	66	36	54
New England.....	55	50	46	46	84	41	62	41	31	67
Middle Atlantic.....	43	58	46	74	31	55	50	65	38	47
East North Central.....	36	81	35	75	34	64	34	89	30	72
West North Central.....	66	54	57	55	59	61	64	52	63	42
South Atlantic.....	25	42	27	40	27	49	22	44	27	45
East South Central.....	6	18	31	12	6	18	6	6	25	23
West South Central.....	135	54	59	68	89	27	76	85	73	68
Mountain.....	36	52	26	191	43	35	27	26	17	9
Pacific.....	67	37	80	49	59	53	67	71	11	51

MEASLES CASE RATES

98 cities.....	1,022	1,115	826	1,096	855	876	617	719	540	568
New England.....	1,376	935	1,124	933	1,177	601	1,059	635	1,001	438
Middle Atlantic.....	557	1,188	413	1,102	525	839	363	664	376	511
East North Central.....	2,379	1,302	1,952	1,445	1,868	1,303	1,298	1,159	972	920
West North Central.....	176	641	172	817	176	448	136	331	109	297
South Atlantic.....	490	2,093	333	1,476	512	1,104	392	768	294	591
East South Central.....	12	1,057	187	1,151	25	828	37	852	12	593
West South Central.....	40	294	49	254	73	149	59	88	101	47
Mountain.....	562	461	957	870	465	705	572	609	543	479
Pacific.....	748	492	522	512	611	580	394	302	613	363

SCARLET FEVER CASE RATES

98 cities.....	397	366	302	310	278	269	253	222	176	163
New England.....	645	351	546	414	410	291	417	272	343	238
Middle Atlantic.....	566	305	418	355	377	318	321	280	211	195
East North Central.....	428	437	338	422	354	356	344	310	208	240
West North Central.....	174	291	135	258	102	168	44	132	63	78
South Atlantic.....	194	239	147	198	120	123	102	77	90	93
East South Central.....	56	300	6	153	37	170	6	94	19	65
West South Central.....	53	51	43	41	23	88	13	30	56	30
Mountain.....	187	165	103	104	190	96	161	78	155	96
Pacific.....	145	110	97	86	80	80	126	57	42	57

SMALLPOX CASE RATES

98 cities.....	5	15	5	14	3	10	3	7	2	8
New England.....	0	0	0	0	0	0	0	5	0	0
Middle Atlantic.....	0	1	0	0	0	1	0	0	0	1
East North Central.....	0	11	2	16	1	12	1	5	1	5
West North Central.....	23	88	28	42	19	36	9	29	6	19
South Atlantic.....	2	24	0	18	0	0	0	14	0	12
East South Central.....	37	6	31	18	6	23	12	12	12	18
West South Central.....	0	37	7	41	3	24	0	20	0	30
Mountain.....	11	26	0	26	0	17	0	0	0	70
Pacific.....	21	12	17	33	11	25	17	16	23	6

See footnotes at end of table.

Summary of weekly reports from cities, May 22 to June 25, 1932—Annual rates per 100,000 population, compared with rates for the corresponding period of 1931—Continued

TYPHOID FEVER CASE RATES

	Week ended—									
	May 28, 1932	May 30, 1931	June 4, 1932	June 6, 1931	June 11, 1932	June 13, 1931	June 18, 1932	June 20, 1931	June 25, 1932	June 27, 1931
98 cities.....	8	7	7	6	7	7	10	9	10	10
New England.....	0	2	5	2	7	0	5	10	18	0
Middle Atlantic.....	4	8	3	5	4	7	7	12	4	4
East North Central.....	8	2	5	1	1	4	4	4	5	6
West North Central.....	2	4	2	10	6	4	6	6	12	10
South Atlantic.....	18	22	16	20	27	14	29	14	37	16
East South Central.....	31	12	31	18	12	18	37	12	44	35
West South Central.....	3	7	10	10	10	24	16	14	21	54
Mountain.....	11	17	9	17	0	9	12	0	9	52
Pacific.....	19	2	17	4	15	12	15	10	18	14

INFLUENZA DEATH RATES

91 cities.....	5	7	5	6	4	4	5	7	6	4
New England.....	0	10	5	2	0	0	5	7	7	2
Middle Atlantic.....	4	3	3	5	7	4	5	8	7	2
East North Central.....	6	5	3	2	0	4	4	5	3	6
West North Central.....	3	9	6	6	3	6	6	6	9	0
South Atlantic.....	14	18	14	14	12	6	8	4	6	6
East South Central.....	14	19	14	38	7	13	0	0	7	6
West South Central.....	3	14	10	10	0	3	13	14	14	7
Mountain.....	11	17	0	0	0	0	12	9	9	0
Pacific.....	5	5	2	7	2	5	2	5	16	2

PNEUMONIA DEATH RATES

91 cities.....	86	101	77	86	73	75	62	70	57	67
New England.....	101	111	91	120	89	60	79	65	65	60
Middle Atlantic.....	97	109	83	102	92	88	75	72	61	76
East North Central.....	66	75	60	59	46	60	42	60	43	51
West North Central.....	105	133	67	138	70	71	52	106	53	38
South Atlantic.....	116	133	98	77	96	83	76	89	73	103
East South Central.....	61	185	95	76	27	146	7	83	55	140
West South Central.....	71	128	84	86	94	79	81	76	61	90
Mountain.....	11	107	70	129	52	70	45	78	60	35
Pacific.....	51	43	53	48	44	43	53	34	54	41

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, 1932 and 1931, respectively.

² Covington, Ky., and Reno, Nev., not included.

³ Covington, Ky., not included.

⁴ Springfield, Ill., and Covington, Ky., not included.

⁵ Covington, Ky., and Boise, Idaho, not included.

⁶ Hartford, Conn., Wichita, Kans., Covington, Ky., Little Rock, Ark., and Los Angeles, Calif., not included.

⁷ Hartford, Conn., not included.

⁸ Springfield, Ill., not included.

⁹ Wichita, Kans., not included.

¹⁰ Little Rock, Ark., not included.

¹¹ Reno, Nev., not included.

¹² Boise, Idaho, not included.

¹³ Los Angeles, Calif., not included.

FOREIGN AND INSULAR

ARGENTINA

Pneumonic plague—San Luis Province.—Newspapers published in Argentina report an outbreak of pneumonic plague in the province of San Luis, Argentina. Early in June cases of the disease appeared in San Francisco, in the north central part of San Luis Province. By June 15 the disease was said to be decreasing, few new cases being reported.

CANADA

Quebec Province—Communicable diseases—Week ended June 18, 1932.—The Bureau of Health of the Province of Quebec, Canada, reports cases of certain communicable diseases for the week ended June 18, 1932, as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis.....	1	Puerperal septicemia.....	1
Chicken pox.....	93	Scarlet fever.....	72
Diphtheria.....	19	Tuberculosis.....	91
Erysipelas.....	7	Typhoid fever.....	33
German measles.....	5	Undulant fever.....	1
Measles.....	56	Whooping cough.....	43
Ophthalmia neonatorum.....	1		

CUBA

Habana—Communicable diseases—Four weeks ended June 18, 1932.—During the four weeks ended June 18, 1932, certain communicable diseases were reported in the city of Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Chicken pox.....	3		Pollomyelitis.....	1	
Diphtheria.....	12	2	Scarlet fever.....	6	
Malaria ¹	6		Tuberculosis.....	15	7
Measles.....	7	1	Typhoid fever ¹	20	6

¹ Many of these cases are from the interior.

CZECHOSLOVAKIA

Communicable diseases—April, 1932.—During the month of April, 1932, certain communicable diseases were reported in Czechoslovakia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax.....	6	1	Puerperal fever.....	50	20
Cerebrospinal meningitis.....	12	5	Scarlet fever.....	1,421	26
Diphtheria.....	1,527	80	Trachoma.....	165	.....
Dysentery.....	15	2	Typhoid fever.....	386	35
Malaria.....	81	.....	Typhus fever.....	7	.....
Paratyphoid fever.....	7	.....		

DENMARK

Communicable diseases—April, 1932.—During the month of April, 1932, cases of certain communicable diseases were reported in Denmark as follows:

Disease	Cases	Disease	Cases
Cerebrospinal meningitis.....	10	Paratyphoid fever.....	24
Chicken pox.....	55	Poliomyelitis.....	3
Diphtheria and croup.....	158	Puerperal fever.....	22
Erysipelas.....	258	Scabies.....	604
German measles.....	2	Scarlet fever.....	171
Gonorrhoea.....	773	Syphilis.....	75
Influenza.....	15,449	Typhoid fever.....	6
Lethargic encephalitis.....	5	Undulant fever (bac. abort. Bang).....	54
Measles.....	2,925	Whooping cough.....	2,741
Mumps.....	237		

GREAT BRITAIN

England and Wales—Vital statistics—January–March, 1932.—During the first quarter of the year 1932, 152,212 births and 153,426 deaths were registered in England and Wales, giving a birth rate on an annual basis of 15.3 per 1,000 population and a death rate of 15.4 per 1,000. The figures are provisional. The number of deaths of infants under 1 year of age was 13,281 for the quarter, 87 per 1,000 live births.

During the 13 weeks ended April 2, 1932, deaths from certain communicable diseases were reported in 117 county boroughs and great towns, including Greater London, as follows:

Disease	Number of deaths	Death rate per 1,000 population	Disease	Number of deaths	Death rate per 1,000 population
Diarrhea and enteritis (under 2 years).....	657	.....	Scarlet fever.....	83	0.02
Diphtheria.....	402	0.08	Smallpox.....	1	.....
Influenza.....	3,964	.78	Typhoid fever.....	15	.....
Measles.....	900	.18	Whooping cough.....	631	.12

Deaths from certain diseases in 125 smaller towns for the quarter ended March 31, 1932, were as follows:

Disease	Deaths	Disease	Deaths
Diarrhea and enteritis (under 2 years).....	74	Scarlet fever.....	8
Diphtheria.....	47	Typhoid fever.....	2
Influenza.....	896	Whooping cough.....	91
Measles.....	81		

England and Wales—Infectious diseases—Thirteen weeks ended April 2, 1932.—During the 13 weeks ended April 2, 1932, cases of certain infectious diseases were reported in England and Wales, as follows:

Disease	Cases	Disease	Cases
Diphtheria.....	11,830	Puerperal pyrexia.....	1,411
Ophthalmia neonatorum.....	1,272	Scarlet fever.....	19,464
Pneumonia.....	26,063	Smallpox.....	823
Puerperal fever.....	575	Typhoid fever.....	341

PUERTO RICO

San Juan—Notifiable diseases—Four weeks ended May 21, 1932.—During the four weeks ended May 21, 1932, cases of certain notifiable diseases were reported in San Juan, Puerto Rico, as follows:

Disease	Cases	Disease	Cases
Chicken pox.....	9	Pellagra.....	1
Diphtheria.....	8	Typhoid fever.....	2
Leprosy.....	1	Vincent's angina.....	2
Malaria.....	18	Whooping cough.....	11
Measles.....	35		

YUGOSLAVIA

Communicable diseases—May, 1932.—During the month of May, 1932, certain communicable diseases were reported in Yugoslavia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax.....	26	3	Polio-myelitis.....	1	-----
Cerebrospinal meningitis.....	14	3	Scarlet fever.....	232	14
Diphtheria and croup.....	368	38	Sepsis.....	1	2
Dysentery.....	17	-----	Tetanus.....	37	25
Erysipelas.....	124	12	Typhoid fever.....	84	19
Measles.....	839	14	Typhus fever.....	34	6
Paratyphoid fever.....	2	-----			

Place	No. ven- ber, 1931	De- cem- ber, 1931	January, 1932		February, 1932		March, 1932		April, 1932		May, 1932	
			1-10	11-20	1-10	11-20	1-10	11-20	1-10	11-20	1-10	11-20
Pondicherry Territory	C		15	2								
Pondicherry	D		15	2								
India (Portuguese)	C		1	1								
Indo-China (see also table below):	D											
Phuompenh	C		2	1					1	1	1	1
Saigon and Cholon	D		1	1					1	1	2	1
Saigon and Cholon	D		1	1					1	1	2	1
Saigon and Cholon	D		2	1					1	1	2	1
Iraq; Amara	D		2	2								
Japan:	C											
Kobe	C										1	1
Tokyo	C										1	1
Persia:	C											
Khorramabad	C	3										
Kouh Bemnan	D	10										
Philippine Islands: Capiz Province	C	26	23				11					
Siam:	D	19	20									
Ayudhaya Province	C		1	1							8	
Bangkok	D		1	2							7	
Bangkok	D		1	2							7	
Bangkok	D		1	1								
On vessel:	C											
S. S. Angora at Rangoon from Calcutta	C											
S. S. Narbada at Rangoon from Calcutta	C				1							
S. S. Shanghai Maru at Kobe from Shanghai	D											
S. S. President Wilson en route to Manila from Honolulu via Shanghai and Hong Kong	C									1		

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32

39

¹ Reports incomplete.

¹ A suspected case.

Minieh.....	C	7	1																3						
Port Said.....	D	7	1																3						
Tanta.....	C	1																							
Hawaii Territory.....	D		1																						
Hawaii Island— Hamakua.....	D		1																						
Honokaa.....	C		2																						
Plague-infected rat Kukuiatou—Plague-infected rats.....	D		1																						1
Mauia Island— Makawao.....	D		1																						
India.....	C	6,998	7,892	8,663				1,400	1,279																
Bassain.....	D	2,912	3,971	4,970				1,065	869																1
Bombay.....	D		4	4	4	4	3																		2
Plague-infected rats Madras.....	D		4	4	4	3	3																		2
Plague-infected rats Madras.....	D		5	6	8	6	3																		1
Madras.....	D	42	57	109				30	35																1
Madras Presidency.....	C																								
Rangoon.....	D	169	2,951	70				42	16																1
Plague-infected rats Iraq: Baghdad.....	D	59	155	47				14	6																1
Madagascar (see also table below): Tamatave.....	D	1	1	1				4	4																1
Peru (see table below). Senegal (see table below). Siam.....	C																								
Southwest Africa. ⁴ Syria: Beirut.....	D	1	1	1																					
Union of South Africa: Orange Free State.....	C																								1
United States: California—Los Angeles— Plague-infected rats On vessel: Steamship Columbia, at Naples, from Barcelona—Plague-infected rats.....	D	P	P	P																					1
	D							1																	1

¹ Including plague in the United States and its possessions.

² 10 cases of bubonic plague were reported in Cordoba Province, Argentina, in January, 1932. They were distant from railroad and 600 kilometers from ports.

³ An imported case.

⁴ 80 cases of plague with 15 deaths were reported in Ovamboland, Southwest Africa, up to Apr. 30, 1932. Antiplague measures have been taken.

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

PLAGUE—Continued

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

Place	De- cem- ber, 1931	Jan- uary, 1932	Feb- ru- ary, 1932	March, 1932	April, 1932	May, 1932	June, 1932	Place	De- cem- ber, 1931	Jan- uary, 1932	Feb- ru- ary, 1932	March, 1932	April, 1932	May, 1932	June, 1932
British East Africa (see also table above): Kenya.....	C 41	17	33	22	18	9	-----	Peru.....	C 21	11	2	-----	-----	-----	-----
Province—	-----	-----	-----	-----	-----	-----	-----	Department—	D 9	8	2	-----	-----	-----	-----
Chimborazo.....	C 8	11	13	-----	6	10	2	Canete.....	C 3	1	-----	-----	28	-----	-----
Loja.....	C 11	-----	-----	-----	-----	-----	-----	Liberad.....	C 1	-----	-----	-----	-----	1	-----
Indo-China.....	C 9	17	P	P	9	2	-----	Otucoo.....	C 6	6	-----	1	-----	-----	-----
Madagascar (see also table above):	D 5	9	-----	-----	6	1	-----	Lima.....	C 1	-----	1	1	1	1	-----
Province—	-----	-----	-----	-----	-----	-----	-----	Plura.....	D 1	-----	-----	-----	-----	-----	-----
Ambatolampy.....	C 23	40	25	25	-----	-----	-----	Senegal:	C 1	-----	-----	-----	-----	-----	-----
-----	D 23	38	25	25	-----	-----	-----	Dakar.....	C 10	-----	10	-----	-----	-----	-----
Ambositra.....	D 142	166	90	81	-----	-----	-----	-----	D 5	-----	5	-----	-----	-----	-----
-----	D 121	152	81	67	-----	-----	-----	Louga.....	C 2	-----	-----	-----	-----	3	-----
Antistrabe.....	C 56	53	45	54	-----	-----	-----	-----	D 2	-----	-----	-----	-----	2	-----
-----	D 51	61	45	53	-----	-----	-----	Rufisque.....	C 2	-----	-----	-----	-----	2	-----
Maevatanana.....	D 5	-----	-----	4	-----	-----	-----	-----	D 1	-----	-----	-----	-----	2	-----
-----	D 4	-----	-----	4	-----	-----	-----	Thies.....	C 1	-----	-----	-----	-----	-----	-----
Miarinarivo.....	D 14	15	13	9	4	-----	-----	-----	D 1	-----	-----	-----	-----	-----	-----
-----	D 14	15	12	9	-----	-----	-----	Yombel.....	C 9	-----	-----	9	-----	-----	-----
Moramanga.....	D 30	13	9	8	-----	-----	-----	-----	D 5	-----	-----	5	-----	-----	-----
-----	D 28	13	9	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Tananarive.....	D 248	203	148	91	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
-----	D 241	196	140	70	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

* Reports incomplete.

SMALLPOX

Place	Week ended—														
	March, 1932			April, 1932				May, 1932			June, 1932				
	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18
Aden.....			1												
Algeria:															
Algiers.....	2													1	
Constantine Department.....															
Philippeville.....					1				1						
Southern Territories.....															
Brazil:															
Porto Alegre (alastrim).....			3	1	2	1	2	3	2						
Rio de Janeiro.....			1												
Santos.....															
British East Africa: Tanganyika.....	2														
.....	56	24		P						79	11				
.....	4	7													
British South Africa:															
Northern Rhodesia.....	7	5													
Southern Rhodesia.....	1			4	1	6									
Canada:															
Alberta.....	11														
British Columbia.....	6	25	17	2	1										
.....	4	10	9	1	2										
Manitoba.....						1									
Nova Scotia.....															
Ontario.....	14	0	21	1	3	2	4		1			23			
North Bay.....															
Quebec.....	3	1	8												
Saskatchewan.....	11	35	30	5	1	1	5	2	3	1	3	0			
.....	2														
Chile: Tocopilla.....															
China:															
Amoy.....	218	183	121	16	12	8	10	7	5	4	1	3	2	3	7
Canton.....	79	91	44	5	7	3	10	4	3	3	1	2	2	2	
.....	18	27	44	21	18	29	11	24	18	22	17	9	5	9	1
Foochow.....															
Hankow.....	P	P	P	P	P	P	P	P	P	P	P	P	P	P	
.....	47	59	4	3	2	1	1	1	1	1	3				
Hong Kong.....	12	11	51	12	7	17	9	12	13	21	9	7	1	4	5
.....	1		23	7	6	7	8	2	6	6	6	2	2	4	6
Manchuria—Dairen.....	1	1	1	3	1	7	5	7	7	1	1	1	6	1	

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

SMALLPOX—Continued

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

Place	Dec. 13, 1931-Jan. 9, 1932	Jan. 10-Feb. 6, 1932	Feb. 7-Mar. 5, 1932	Week ended—													
				March, 1932				April, 1932				May, 1932				June, 1932	
				12	19	26	2	9	16	23	30	7	14	21	28	4	11	18
China—Continued.																	
Shanghai.....	O 155	163	167														
	D 41	62	67														
Swatow.....	D 2	1	1														
Tientsin.....	D	1	2	1													
Chosen (see table below).																	
Colombia: Call.....	C 1																
Dehorney.....	D																
Dutch East Indies: Batavia.....	D 1	1															
Egypt:																	
Alexandria.....	C																
Cairo.....	C 1	1															
Suez.....	C 2	3	5	7	5	1	2										
	D 1	1	1	1	1												
France (see table below).																	
Germany: Aix-la-Chapelle.....	C 198	227	258														
Gold Coast (see table below).	C 100	100	136	23	23	23	55	30	25	48	34	41	39	25	29	49	
Great Britain:	C 152	188	203	57	56	37	86	86	57	63	86	51	59	60	47	52	
England and Wales.....																	
London.....																	
Great Towns.....																	
Guatemala (see table below).																	
Guatemala (see table below).																	
Honduras: 1																	
Caba.....	D 1	1	1	1													
Puerto Castilla.....	C 1	4															
Tegucigalpa.....	C 5																
Tela.....	C																
Trujillo.....	C 35																
	D 5																
India.....	2,361	4,576	9,709	3,006	2,339	2,818	3,577	4,063	3,431	3,063	3,705	3,665					
	464	970	1,886	580	405	618	731	783	705	665							

S. S. Victoria City at Brisbane from Shanghai	C	1																		
S. S. Belasco at Mobile from Habana, Cuba, and Hall, England	C	1																		
S. S. Fraumfels at Suez from Calcutta	C																			
S. S. Uyshima Maru at Osaka from Shanghai	C	1																		
S. S. President Jackson at Yokohama from San Francisco	C	1																		
S. S. Hong Kiang via Honolulu	C																			
S. S. Swallow and Hong Kong	C																			
S. S. Hai Ning and S. S. Solviken at Hong Kong	C																			
S. S. Merkers at Aden from Colombo	C	P																		
S. S. Tiscane at Hong Kong from Shanghai and Amoy	C	2																		
S. S. Peoning at Shanghai	C	P																		
S. S. Rajula at Penang from Negapatam	C	P																		
S. S. MacGillivray at Suez from Rangoon	C																			
S. S. Tainui at Southampton from New Zealand	C																			
S. S. Gienbank at Suez from Aden	C																			
S. S. Tuscania at Suez from Bombay	C																			

Place	1932												1933							
	February, 1932			March, 1932			April, 1932			May, 1932			No-ven-ber, 1931	De-cem-ber, 1931						
	1-10	11-20	21-29	1-10	11-20	21-31	1-10	11-20	21-30	1-10	11-20	21-30								
Gold Coast.....			2																	
Indo-China (see also table above).....	C	D	1																	
Ivory Coast.....	D	C	170	145	206	309	280	275	232	175	247	146	211	78						
Syria: Beirut.....	C	D	22	47	98	86	103	113	120	80	97	64	46	37						
	D	C	1																	
	D	C	1																	
	C	D	6																	

Place	1931			March, 1932		April, 1932		May, 1932												
	No-ven-ber, 1931	De-cem-ber, 1931	Jan-u-ary, 1932	1-10	11-20	1-10	11-20	1-10	11-20											
Chosen.....	7	2	1																	
France.....	D	C	1																	
Greece.....	C	6	1																	
Guatemala.....	C																			
	D																			

* From Mar. 6 to Apr. 30, 1932, 551 cases of smallpox with 6 deaths, were reported in Sierra Leone. * A suspected case.

Place	Decem-ber, 1931	Janu-ary, 1932	Febru-ary, 1932	March, 1932	April, 1932	May, 1932
Latvia (see table below).						
Lithuania (see table below).						
Mexico:						
Guadaluajara.....	D	1				
Mexico City, including municipalities in Federal District.....	C	11	25	2	3	2
San Luis Potosi.....	D	6	9	2	2	2
Morocco.....	D	1	1	1	1	1
Palestine.....	D	9	6	3	21	9
Paraguay: Asuncion.....	D	1	3	2	4	1
Poland.....	D	4	3	1		
Portugal:	D	193	265	1		
Lisbon.....	D	14	10	21	5	4
Oporto.....	C					
Rumania.....	C	108	264	1		
Tunisia: Tunis.....	D	2	1	24	14	2
Turkey (see table below).						
Union of South Africa:						
Cape Province.....	C	P	P	P	P	P
Natal.....	C	P	P	P	P	P
Orange Free State.....	C	P	P	P	P	P
Transvaal.....	C	P	P	P	P	P
Venezuela: Caracas (see table below).						
Yugoslavia (see table below)						
On vessel: At Antiochasta, from Iquique and points north.....	C	1				

Place	Decem-ber, 1931	Janu-ary, 1932	Febru-ary, 1932	March, 1932	April, 1932	May, 1932
Chosen: Seoul.....	C		5	4		
D.....	D		1			
Czechoslovakia.....	C	10	1			
Greece.....	C	8	4	7	1	
D.....	D	1				
C.....	C	12				
Latvia.....	C					

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

YELLOW FEVER

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

Place	Dec. 13, 1931- Jan. 9, 1932	Jan. 10- Feb. 6, 1932	Feb. 7- Mar. 6, 1932	Week ended—													
				March, 1932			April, 1932			May, 1932			June, 1932				
				12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25
Brazil:																	
Bahia State.....	2																
Espanada.....																	
Ceara State.....																	
Espirito Santo State.....																	
Santa Teresa (about 56 miles from Victoria).....				1													
Parahyba State.....																	
Pernambuco State.....																	
Dahomey: Porto Novo.....																	
Gold Coast:																	
Avudua.....																	
Cape Coast.....																	
Tamale.....																	
Yapel.....																	
Nigeria.....																	