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PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

August 15–September 11, 1937

The accompanying tables summarize the prevalence of eight important communicable diseases based on weekly telegraphic reports from State Health Departments. The reports from each State are published in the Public Health Reports under the section "Prevalence of Disease." Table 1 gives the number of cases of poliomyelitis reported by each State in recent weeks of 1937 and in corresponding weeks of 1936, 1935, and 1934, and table 2 gives the number of cases of eight important communicable diseases, including poliomyelitis, for the 4-week period ending September 11, the number reported for the corresponding period in 1936, and the median number for the years 1932–36.

DISEASES ABOVE MEDIAN PREVALENCE

Poliomyelitis.—A total of 6,407 cases of poliomyelitis has been reported since the first of January, as compared with 2,036 and 7,278 during the same period in 1936 and 1935, respectively. The number of cases is more than three times that of last year, when the prevalence was confined mostly to the East South Central region, but did not reach the level of 1935, when the disease was epidemic at this time in States along the Atlantic Coast, nor that of 1931 (10,193 cases), when a more severe epidemic was in progress in the North Atlantic regions. In 1934 and 1933 the numbers of cases for this period totaled 5,290 and 3,038. In 1934 the disease was epidemic in California and other western States; in 1933 a minor outbreak occurred in the North Atlantic regions; and in 1932, with a total of 2,446 cases, not considered epidemic, the highest incidence was also reported from the North Atlantic States.

Table 1 shows for each State the number of cases of poliomyelitis reported since the beginning of the current year, with comparative data for the corresponding period in the 3 preceding years. It includes also the weekly number of cases in each State for recent weeks of 1937.

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TABLE 1.—*Poliomyelitis cases reported in each State during recent weeks of 1937* [1]

Division and State	37 weeks ended—				Cases reported in 1937 for week ended—										
	Sept. 15, 1934	Sept. 14, 1935	Sept. 12, 1936	Sept. 18, 1937	July 10	July 17	July 24	July 31	Aug. 7	Aug. 14	Aug. 21	Aug. 28	Sept. 4	Sept. 11	Sept. 18
All States [2]	5,290	7,278	2,038	6,407	255	275	324	401	409	455	492	622	641	817	879
New England:															
Maine	11	67	28	93	2	0	4	3	13	8	6	8	19	12	16
New Hampshire	8	37	3	16	0	1	1	2	0	1	1	5	4	0	1
Vermont	8	12	9	19	0	1	0	0	0	2	3	5	0	1	6
Massachusetts	54	869	45	298	3	2	10	13	12	25	41	51	44	44	41
Rhode Island	1	197	2	11	0	0	0	0	1	2	0	1	3	0	4
Connecticut	13	246	8	63	2	0	0	2	3	8	6	7	10	13	16
Middle Atlantic:															
New York	155	2,990	128	437	6	10	8	10	17	22	39	64	52	91	91
New Jersey	54	258	20	92	1	1	1	5	3	6	14	8	10	13	21
Pennsylvania	82	120	61	185	0	1	0	6	11	14	21	22	19	37	40
East North Central:															
Ohio	144	71	72	431	9	14	20	48	38	45	22	50	31	66	59
Indiana	35	21	16	113	1	8	7	15	7	8	12	7	11	18	10
Illinois	136	136	195	552	2	8	11	26	28	32	54	46	106	130	81
Michigan	114	421	45	271	1	2	4	10	14	24	21	31	34	49	57
Wisconsin	46	46	14	133	1	0	2	2	6	10	6	13	23	19	45
West North Central:															
Minnesota	49	43	11	149	0	1	1	1	9	5	10	14	18	30	52
Iowa	20	33	22	126	0	1	3	3	4	8	7	14	16	26	35
Missouri	22	24	25	247	22	4	16	16	16	16	13	29	25	36	47
North Dakota	6	5	6	5	0	0	0	0	0	0	0	0	3	1	0
South Dakota	25	5	6	17	0	0	0	0	1	0	1	0	5	4	3
Nebraska	11	9	11	147	0	4	4	11	7	14	15	19	19	27	18
Kansas	45	16	25	144	3	4	4	7	13	13	13	15	14	20	30
South Atlantic:															
Delaware	3	5	1	7	1	0	0	0	0	0	0	1	0	5	0
Maryland	18	59	9	61	0	0	1	7	3	13	5	7	6	11	7
District of Columbia	6	55	2	17	0	0	0	1	0	1	3	3	4	0	2
Virginia	51	635	36	49	3	3	1	5	4	4	1	2	3	3	5
West Virginia	55	34	21	53	0	2	1	4	12	1	5	7	4	2	2
North Carolina	35	593	37	86	4	8	9	6	4	6	5	4	8	1	4
South Carolina	10	26	16	21	0	1	1	1	1	2	0	1	0	1	1
Georgia	12	14	52	63	6	4	3	2	6	0	5	4	2	0	5
Florida	14	14	16	25	0	0	0	1	0	2	3	1	2	4	1
East South Central:															
Kentucky	76	214	47	113	7	5	18	33	9	2	4	4	8	4	4
Tennessee	38	62	224	98	11	7	10	6	3	1	1	5	2	3	1
Alabama	38	48	355	60	4	1	1	1	3	4	2	4	5	7	3
Mississippi	18	9	93	241	20	20	13	13	8	11	11	8	10	10	4
West South Central:															
Arkansas	11	14	6	282	36	36	48	26	16	19	10	7	6	12	9
Louisiana	13	79	17	95	8	7	7	5	7	8	6	4	4	7	8
Oklahoma	9	10	8	355	55	46	53	28	30	23	19	25	9	14	19
Texas	79	59	24	522	36	52	31	42	58	45	51	34	36	21	33
Mountain: [2]															
Montana	235	5	9	17	1	0	1	0	2	1	3	1	3	1	4
Idaho	97	1	12	6	0	0	0	0	0	0	0	0	1	0	0
Wyoming	4	1	2	29	0	1	1	1	2	6	0	10	0	2	5
Colorado	13	7	18	129	0	1	3	2	2	8	21	28	20	21	21
New Mexico	12	5	7	17	1	0	2	0	0	2	1	1	0	1	3
Arizona	88	12	3	17	2	0	2	1	0	0	0	2	1	2	3
Utah	7	5	2	14	0	0	0	0	0	1	0	1	2	5	4
Pacific:															
Washington	435	24	34	31	0	0	0	0	1	0	3	5	1	2	10
Oregon	35	8	14	32	0	0	1	1	2	1	3	0	2	4	2
California	2,839	554	221	418	8	19	21	34	33	36	25	44	38	37	46

[1] A similar table appeared in the PUBLIC HEALTH REPORTS for Sept. 3, 1937, p. 1208.
[2] Exclusive of Nevada, from which State no reports are received.

As this disease is usually most prevalent during the months of August and September, more than 4,000 of the 6,407 cases reported to date this year occurred during the 8 weeks ending September 11. Later reports (week ending Sept. 18) show a total of 879 cases—the highest weekly incidence reported this year. The current epidemic

started in the West South Central region, spread into the North Central regions and then to the Atlantic coast areas. During this period 117 cases were reported from Colorado and 268 from California, but other States in the western regions have reported only about the usual seasonal incidence. The Middle Atlantic region is low in relation to the preceding 5-year median, but all other regions show considerable excesses.

Measles.—The incidence of measles (2,972 cases) was about 60 percent above that (1,861 cases) for the corresponding period in 1936 and was also considerably above the average for the season. Each region except the New England and Pacific regions reported an increase over last year, but the disease appeared to be unusually prevalent in the Middle Atlantic, East North Central, and South Central regions.

Meningococcus meningitis.—The meningococcus meningitis incidence (216 cases) stood approximately at the 1936 level. For this period in 1935, 1934, and 1933 the numbers of cases totaled 268, 129, and 129, respectively. The number of cases reported from the South Atlantic and South Central regions was somewhat above the seasonal expectancy, but in all other regions the incidence was about normal.

Smallpox.—Smallpox still maintained a relatively high level. For the 4 weeks ending September 11 there were 222 cases reported, as compared with 141, 117, and 70 for the corresponding period in the years 1936, 1935, and 1934, respectively. The Central and Western regions have been almost entirely responsible for the high incidence of this disease that has prevailed during the past 3 years, while the Atlantic coast regions have been practically free from the disease.

DISEASES BELOW MEDIAN PREVALENCE

Typhoid fever.—The number of cases (2,467) of typhoid fever, although slightly above the low record of 2,355 cases reported for this period in 1936, was well below the usual seasonal incidence. The increase over last year was due almost entirely to an excess of cases in the East North Central and West South Central regions. Compared with the preceding 5-year median the incidence of typhoid fever was low in the country as a whole and also in each region except the West South Central and Pacific regions.

TABLE 2.—*Number of reported cases of 8 communicable diseases in the United States during the 4-week period Aug. 15–Sept. 11, 1937, the number for the corresponding period in 1936, and the median number of cases reported for the corresponding period 1932–36* [1]

Division	Diphtheria			Influenza [2]			Measles [3]			Meningococcus meningitis		
	Current period	1936	5-year median	Current period	1936	5-year median	Current period	1936	5-year median	Current period	1936	5-year median
United States [1]	1,468	1,393	2,058	1,193	834	1,279	2,972	1,861	2,385	216	220	160
New England	28	21	62	3	7	6	124	233	204	7	7	7
Middle Atlantic	128	169	198	22	33	30	963	683	730	40	47	38
East North Central	185	201	256	161	93	226	751	213	474	29	37	39
West North Central	78	105	184	167	53	58	139	58	174	19	18	19
South Atlantic	466	317	493	336	225	413	240	235	317	47	41	15
East South Central	232	235	428	57	65	120	243	60	88	28	23	15
West South Central	214	201	400	318	221	176	126	93	93	22	13	8
Mountain	51	39	47	45	62	26	189	78	87	8	21	5
Pacific	86	105	105	84	75	68	197	208	208	16	13	13
	Poliomyelitis			Scarlet fever			Smallpox			Typhoid fever		
United States [1]	2,572	626	1,251	3,450	3,492	3,990	222	141	117	2,467	2,355	3,315
New England	284	17	27	142	212	253	0	0	0	44	40	52
Middle Atlantic	390	69	686	595	727	749	0	0	0	265	297	297
East North Central	749	129	170	1,024	1,098	1,129	28	19	24	464	257	561
West North Central	394	23	69	431	401	401	44	33	15	173	209	248
South Atlantic	111	64	64	303	291	486	0	0	5	434	454	688
East South Central	88	225	70	243	172	276	21	1	2	395	520	664
West South Central	265	13	15	194	114	185	5	1	11	519	393	481
Mountain	127	14	10	214	138	118	71	73	8	78	107	112
Pacific	164	72	72	304	339	335	53	14	28	95	78	78

[1] 48 States. Nevada is excluded, and the District of Columbia is counted as a State in these reports.
[2] 44 States and New York City. The median is for the years 1933–36, only; the data for 1932 are not comparable.
[3] 46 States. Mississippi and Georgia are not included.

Scarlet fever.—This disease continued to maintain a low level in relation to recent years. In the North Central region, where the disease has been unusually prevalent for the past 3 years, the incidence has dropped to a more normal level, and while the South Atlantic and South Central regions reported an excess of cases over 1936, the incidence in each region compared very favorably with that of preceding years. In the Mountain region the number of cases was somewhat above the incidence of recent years but it may be possible that the seasonal increase of this disease that usually occurs soon after the middle of September has begun earlier in that region.

Diphtheria.—The number of cases of diphtheria reported for the current period was 1,468, as compared with 1,393, 2,058, and 1,975 for the corresponding period in the years 1936, 1935, and 1934, respectively. The increase of diphtheria over last year that has prevailed since about the middle of June has been confined largely to the South Central and Western regions. During the current period, however, the incidence in those regions dropped to about the usual level and

the disease appeared to be more prevalent in the South Atlantic region. States in that region reporting a large number of cases were North Carolina (137), Virginia (98), Georgia (95), and South Carolina (43).

Influenza.—The number of cases (1,193) of influenza represented an increase of about 40 percent over the number reported for the corresponding period in 1936, but it very closely approximated the incidence in each of the 3 preceding years. For the country as a whole the current incidence fell slightly below the average of the 4 preceding years; the distribution by geographic regions shows that the incidence in the West North Central and West South Central regions was somewhat above the normal seasonal incidence, while other regions closely approximated the 4-year average or fell below it.

MORTALITY, ALL CAUSES

The average mortality rate for large cities for the 4 weeks ending September 11, based on data received from the Bureau of the Census, was 9.9 per 1,000 inhabitants (annual basis). The rates for the separate weeks were 10.2, 9.8, 10.2, and 9.4. The interruption that occurred in the usual seasonal decline of the death rate during the third week of the period was no doubt mostly due to the heat. During this period cities in the East North Central and Atlantic coast regions showed the largest excesses in mortality.

REDUCING RESIDUAL TYPHOID IN MICHIGAN

Since 1933, the Michigan State Department of Health has been conducting an intensive State-wide effort to eradicate residual typhoid fever, and an interesting report [1] on the third year of the undertaking (1935) has just been made by Dr. Filip C. Forsbeck, of the State bureau of communicable diseases, who has had charge of the work.

The general plan has been to investigate every case of typhoid fever reported in the State and obtain information regarding the source and mode of infection and other important epidemiological data, to examine contacts, and to locate and treat carriers. As Dr. Forsbeck points out, such a thorough follow-up of typhoid fever cases in part-time territory by the State department of health has certain advantages not directly connected with typhoid eradication. It is learned to what extent cases are diagnosed and not reported, to what extent isolation is enforced or how the rules and regulations regarding communicable diseases on dairy farms are ignored.

A new low typhoid fever death rate for the State of 0.69 per 100,000 population was reported for 1935, as compared with 8.1 in 1920 and

[1] *Michigan Department of Health, Lansing.* Typhoid Fever Eradication, 1935. (Mimeographed.)

1.3 in 1934. Improvement in reporting was shown, with a new record of 10.4 cases reported for each death from typhoid—well above the ratio of 8 cases per death given as a perfect score by the American Public Health Association appraisal form. This improvement is stated to be due largely to the follow-up of positive laboratory reports.

Eight outbreaks occurred in 1935, as compared with seven in 1934 and eight in 1933. Three of these outbreaks were traced to carriers (one to a case). The mode or medium of infection was raw milk in two outbreaks, water in one, and undetermined in two. In these latter five outbreaks the cases were associated, respectively, with a club meeting, a store, a cafe, a boarding house, and a thresher's dinner. In the 4 years 1932–35 about one-fourth of the cases occurred in outbreaks and three-fourths were classified as endemic cases. About 10 percent were traced to milk and about 5 percent to water. There has been some decrease in the relative amount of "outbreak" typhoid.

Forty-two carriers were discovered in 1935 as compared with 44 in 1934 and 29 in 1933—119 had been discovered prior to 1935, making a total of 161 by the end of that year. Thirteen carriers became inactive in 1935, leaving a total of 120 active carriers. Forty-one, or 24.2 percent, of all carriers discovered have been transferred to the inactive list, because of death, cure, being lost, or removal to another State. Of course the ultimate objective, with solution of the carrier problem, is to make this 100 percent. It is important to note that for the fifth consecutive year a new high carrier discovery rate was established—11.8 carriers being discovered per 100 cases, as compared with 9.0 in 1934 and 6.4 in 1933. In 1935 a higher percentage of cases (2.5 percent) were found to remain chronic carriers than in any previous year, but it is not known how much of this increase is due to chance and how much to improved administrative and bacteriologic technique. Five carriers submitted to cholecystectomy in 1935, only three of whom were reported cured. A total of 18 cholecystectomies has been performed, of which 16, or 88.8 percent, resulted in cure. No case of typhoid fever has been traced to any of these 18 persons. It is estimated that (on the basis of Michigan's experience of 0.08 case per carrier year) this action has prevented the occurrence of 40 cases and 4 deaths.

It is pointed out that it is exceptional for a patient to have a positive feces report. The specimens may have been obtained either too late or too early, or the case may not have had a positive feces stage. The sound public health practice of insisting on two negative feces release specimens, which is now required, is indicated by the increase in the percentage of cases finally proved to be chronic carriers.

The highest incidence of typhoid fever in Michigan, according to occupation, is found among trained nurses, the rate for the 4-year period 1932–35 being 45 per 100,000 as compared with a rate of 8.9 for the State. Of the cases occurring among nurses in the years 1933–35, only four of the patients had ever been immunized against typhoid fever, and this group includes trainees and graduates of the State's foremost training schools. Of the four nurses who had been immunized, one started treatment the day before onset, one 8 months before, another had been immunized 8 years before, and the fourth at an unknown period.

FURTHER FIELD STUDIES ON THE SELENIUM PROBLEM IN RELATION TO PUBLIC HEALTH

By M. I. Smith, *Principal Pharmacologist*, and B. B. Westfall, *Assistant Chemist, Division of Pharmacology, National Institute of Health, United States Public Health Service*

In a preliminary field survey made to determine the possibility of selenium intoxication in man in selenium-endemic regions, Smith, Franke, and Westfall (*1*) reported finding selenium in the urine of a large percentage of the rural population living on seleniferous soil in sections of Wyoming, South Dakota, and Nebraska. No conclusions could be drawn regarding the significance of those findings, because no definite causal relationship could be discovered between the manifestations of ill-health observed and the occurrence and concentration of selenium in the urine. The more or less characteristic features of so-called "alkali" disease in livestock, which are now believed to be due to selenium poisoning, could not be discerned with reasonable certainty in man; nor was there definite information available concerning the nature or sources of selenium or of the actual amounts absorbed. It appeared necessary, therefore, to make a more detailed and more intensive study, first, of the symptomatology in relation to the amount of selenium excreted, and, second, concerning the most probable sources of selenium to which man may be exposed.

With this object in view a relatively small area of four counties was selected from the much larger area covered by the preliminary survey. This area included three counties, Lyman, Tripp, and Gregory, in South Dakota, and adjacent Boyd County in Nebraska. These four counties, lying immediately west of the Missouri River, had been found, in the course of the preliminary survey, to be the worst area with reference to the occurrence of selenium in the soil, the incidence of so-called "alkali" disease in livestock, and the incidence of relatively high concentration of selenium in human urine. Fifty families which had given evidence of the absorption of consid-

erable selenium in our preliminary field survey in April 1936 were selected for this second investigation, made in September of the same year. Specimens of urine were obtained, usually from two or more members of a family, so as to secure data on the excretion level of selenium in those who presented no symptoms as well as in those who presented suggestive symptoms. In addition, samples of foodstuffs entering directly or indirectly into the dietary of the family group were obtained for analysis. These included drinking water, dairy products, eggs, meats, cereals, and vegetables. Owing to the drought conditions which prevailed during the summer of 1936, vegetables were relatively scarce. The cereal grains produced locally, it was learned, are seldom used for human consumption, but are used largely for animal feed; therefore they usually constitute only an indirect source of selenium to the rural family group.

The analytical procedure used for the determination of selenium in these materials was essentially the same as previously described, based on the distillation of the liberated selenium as the volatile bromide, precipitation by reduction, and quantitative estimation of the colloidal precipitate with the nephelometer (*1*).

The results of this study are shown in the accompanying tables.

Tables 1–A, 1–B, and 1–C summarize the data on the selenium concentration in the urine, the age of the individual, and whatever symptoms appeared worthy of note in 100 subjects representing 50 families. There are several points of interest in connection with these tables. The urinary concentration of selenium appears generally fairly uniform for each family group, irrespective of the age or other conditions of the individuals comprising the family. In only five families, nos. 7, 85, 14, 16, and 60, were there marked individual differences in the urinary concentration of selenium. Neither age nor any other obvious factor would seem to account for it. Whether a mere coincidence or not, it seems strange that in every instance the low values were found in the urines of the female members of the family. Barring the possibility of some differences in degree of diuresis which might easily account for differences in the selenium concentration in the urine, individual peculiarities in dietary habits would seem to be the most probable explanation; for, as will be shown later, some foodstuffs on any given seleniferous farm may carry considerable selenium while others contain little or none.

TABLE 1–A.—*Urinary selenium and symptomatology in 22 families in Lyman County, S. Dak.*

Family No.	Family Initials	Urinary selenium, micrograms per 100 cc	Age and symptoms
22	H. W. B.	21 (28)[1]	55. Icteroid pigmented (chloasma?) skin, bad teeth.
		20	25. History of pulmonary tuberculosis.
23	T. C.	12	31. No definite symptoms.
		30	58. No definite symptoms.
83	H. F. C.	13	50. Bad teeth.
		38 (55)	46. Symptoms of cardio-renal disease.
		40	7. History of recurrent "sick-spells".
		108 [2]	22. History of chronic indigestion.
86	J. D.	43 (23)	14. Sallow, history of chronic indigestion.
		61	44. History of recurrent attacks of indigestion and "biliousness".
90	W. D.	48 (73)	5. No symptoms.
9	J. D.	18	12. Sallow, herpes, subject to carbuncles.
		20	35. Bad teeth.
89	E. D.	88	62. Icteroid skin, bad teeth.
7	A. J. E.	105 (120)	68. Bad teeth, icteroid skin, history of chronic indigestion.
		48 (50)	61. Icteroid skin, bad teeth, symptoms of cardio-renal disease.
85	F. F.	128	42. Chronic indigestion.
		31 (55)	36. Acneiform eruption.
5	B. F.	23	28. Had been jaundiced, was recently operated on for suspected cholecystitis.
		36	14. Sallow.
24	B. H.	20	50. Rheumatoid arthritis.
		30	52. Chronic indigestion.
		36	6. No symptoms.
80	J. H.	33	48. Bad teeth, icteroid skin, chronic indigestion.
		27	15. No symptoms.
109	H. L.	19	58. Icteroid skin.
		54	66. Chronic indigestion, bad teeth.
27	I. M.	29 (26)	12. Sallow, bad teeth.
		56	8. Sallow, acneiform eruption.
12	F. W. M.	40	44. Bad teeth, icteroid skin.
		73	40. Sallow.
		27 (38)	16. Acneiform eruption.
28	L. E. N.	63 (76)	56. No definite symptoms.
91	G. R.	25	42. Bad teeth, rheumatoid arthritis.
		51 (68)	10. Sallow.
		32	13. Sallow.
14	J. F. S.	21	68. Icteroid skin, chronic indigestion (ulcer?).
		49	25. No definite symptoms.
		106	63. Chronic indigestion (ulcer?), bad teeth, icteroid and pigmented (chloasma?) skin.
107	C. J. T.	94	40. Bad teeth, history of chronic indigestion and "bilious attacks".
97	F. H.	25	10. Vitiligo.
		27	7. No symptoms.
		32	11. No symptoms.
106	J. W. R.	25	46. History of chronic indigestion and recurrent jaundice.
108	E. S.	20	48. Icteroid skin and mucous membranes.

[1] Figures in parentheses indicate urinary selenium found in the same individual 5 months previously.
[2] Member of same family, but for past year residing on neighboring farm.

The figures in parentheses in the third column of tables 1–A, 1–B, and 1–C indicate the urinary selenium concentration found in the same individuals 5 months previously. Such data are available for 28 individuals representing 22 families. Analysis of these figures indicates a fairly uniform trend, with relatively little change, suggesting that the absorption of selenium on any given farm at different times of the year remains fairly constant. In 5 of the 28 individuals (families 78, 74, 19, and 46) a rather marked increase in the urinary selenium was noted in September over that found in April. It is probable that had there been more rainfall during the summer and a more abundant supply of garden vegetables there might have been more such differences.

TABLE 1–B.—*Urinary selenium and symptomatology in 18 families, Tripp and Gregory Counties, S. Dak.*

Family		Urinary selenium, micrograms per 100 cc	Age and symptoms
No.	Initials		
70	H. J. D	34	69. No definite symptoms.
78	W. F	100 (78)	52. Bad teeth, slightly icteroid skin.
		114 (39)	53. Bad teeth, dermatitis, chronic indigestion.
75	M. K	46 (25)	50. Atrophic nails, bad teeth, icteroid skin, vitiligo.
		65	48. No symptoms.
74	B. N	103 (28)	12. Sallow.
		110	23. Bad teeth, icteroid skin.
76	T. T	43 (65)	52. Icteroid skin, chronic indigestion (duodenal ulcer?).
		73	54. Bad teeth, pathological nails.
16	F. B	105	59. Icteroid skin, chronic indigestion.
		133 (111)	29. Bad teeth, icteroid skin, chronic indigestion.
		36	55. Icteroid skin.
116	M. C	23	41. History of recurrent jaundice and chronic indigestion.
		35	47. Bad teeth, sallow.
117	H. C	43	18. No symptoms.
		53	12. Pallid, recurrent attacks of indigestion.
57	W. DeJ	65 (73)	14. No symptoms.
		25	10. No symptoms.
62	T. M. D	35 (32)	15. No symptoms.
		48	5. No symptoms.
21	F. M	34	19. No symptoms.
		25	65. Bad teeth, icteroid skin, rheumatoid arthritis.
51	H. J	20	7. No symptoms.
		27 (35)	5. No symptoms.
52	C. K	26 (53)	5. No symptoms.
19	C. B. K	198 (80)	51. Icteroid skin, bad teeth, chronic indigestion.
		124 (47)	44. Icteroid skin, chronic indigestion.
64	L. B. L	64 (45)	4. Pallid.
60	G. P	35	23. Pathological nails.
		117	6. Pallid.
68	G. S	29	45. Hyperthyroidism.
		34 (24)	60. Bad teeth.
56	L. C. T	28	11. Bad teeth, sallow.

TABLE 1–C.—*Urinary selenium and symptomatology in 10 families, Boyd County, Nebr.*

Family		Urinary selenium, micrograms per 100 cc	Age and symptoms
No.	Initials		
33	W. D. A	30	45. Icteroid skin, history of recurrent jaundice.
		35	27. Bad teeth.
113	L. A	20	33. Chronic indigestion.
		20	33. No definite symptoms.
		24	76. Icteroid skin.
37	C. C	35	45. Icteroid skin, history of "bilious attacks."
		32	47. Icteroid and pigmented (chloasma?) skin.
34	E. H	65	35. Icteroid skin, chronic indigestion.
		23	33. History of recurrent attacks of indigestion.
		47	7. Had appendectomy with no apparent benefit.
118	E. H	64	22. History of chronic indigestion (gastric ulcer?).
47	H. M	98	35. History of chronic indigestion.
		80	7. Pallid.
		70 (66)	6. Pallid.
46	E. M	63	34. Icteroid skin, bad teeth.
		88 (38)	12. Recurrent attacks of indigestion, appendectomy with no apparent benefit.
45	H. M	25	21. No symptoms.
44	J. P	43 (63)	24. No definite symptoms.
		55	57. Icteroid skin.
38	G. P	38	22. Sallow, recurrent attacks of indigestion.
		45	33. No symptoms.
		56	62. Bad teeth, icteroid skin, history of recurrent attacks of indigestion with jaundice.

Regarding the symptomatology, the observations detailed in tables 1–A, 1–B, and 1–C may be summarized by saying that the conditions seen in the 100 individuals presented the following frequency:

No obvious symptoms	24
Gastrointestinal disturbances	31
Bad teeth	27
Icteroid discoloration of the skin	28
History of recurrent jaundice	5
Vitiligo	2
Pigmentation of the skin (chloasma?)	3
Sallow and pallid color, especially in younger individuals	17
Dermatitis	5
Rheumatoid arthritis	3
Pathological nails	3
Cardiorenal disease	2

None of the above-listed symptoms, seen in 76 percent of the entire group, can be regarded as specific of selenium poisoning, and it is not certain that any one is the direct result of continual ingestion of selenium. In the light of the experimental data recently published on the chronic toxicity and pathology of selenium in lower animals (*2*), we believe that the high incidence of gastrointestinal disturbances is significant. The incidence of jaundice and frank symptoms of hepatitis is probably too low for selenium to be definitely implicated, though in chronic poisoning in experimental animals with doses of inorganic selenium probably not far removed from those absorbed in the present group microscopic lesions of the liver are frequent (*2*). The high incidence of icteroid discoloration of the skin, we believe, is in some way related to the ingestion of selenium, though the precise relationship is not clear. In experimental animals with mild or moderate chronic selenium poisoning (both inorganic as well as organic selenium), marked bilirubinemia has not been observed so far.[1] Whether or not other pigments are involved is not yet clear. The high incidence of bad teeth seems equally uncertain, for no gross changes in tooth structure of experimental animals in chronic selenium poisoning have as yet been found. Whether or not any of the cases have blood changes of a nature often seen in experimental animals in chronic selenium poisoning will remain a matter of conjecture until the subject is studied. The other conditions enumerated seem scarcely frequent enough to be associated with selenium.

A critical study of the data would seem to indicate, on the whole, that the continuous exposure to small doses of organic selenium is not as harmful as might be expected from the toxic nature of the element in the form of selenite or selenate. The evidence as to the relative toxicity in rats of inorganic selenium and the organic variety as it occurs naturally in foodstuffs is conflicting (*3*, *4*, *5*). It is possible that the relative lethal concentrations of the two types of

[1] Unpublished data.

selenium in rats may be quite different from the relative concentrations required to produce organic or functional damage in tissues and organs of higher animals. The former has little bearing on the human problem, the latter an important one. Experimental data which we have recently presented indicate that in chronic poisoning with inorganic selenium in cats the excretion level of selenium in the urine bears a rather definite relationship to the daily dose ingested, so that for doses ranging between 0.02 and 0.25 mg of selenium per kilo per day the concentration percent of selenium in the urine under normal conditions of diuresis is from 150 to a little over 200 percent of the daily per kilogram dose (*6*). Further observations with naturally occurring organic selenium now in progress seem to indicate a somewhat lower excretion level and a correspondingly greater storage of selenium in the tissues.[1] We may reasonably assume, therefore, that our subjects detailed in tables 1–A, 1–B, and 1–C have been absorbing probably continually in the neighborhood of from 0.01 to 0.1, and possibly as much as 0.2 mg per kilo per day. None of the subjects of our study has lived on seleniferous farms less than 3 years, and the great majority have lived on such farms from 10 to 40 years. Since the experimental evidence is against acquired tolerance for selenium and rather for its cumulative effects (*2*), the only plausible explanation left is the probable lower toxicity of organic selenium compared with inorganic.

THE SOURCES OF SELENIUM

The analytical data on the most probable sources of selenium to which man may be exposed in the seleniferous region studied are outlined in tables 2, 3, and 4. In table 2 the incidence of selenium in drinking water, milk, eggs, and meat is shown. It will be seen that out of 44 samples of drinking water from wells varying in depth from 20 to several hundred feet only about 23 percent showed the presence of selenium in the relatively small amounts of from 5 to 33 micrograms per 100 cc. No definite relationship between the depth of the well and the selenium content of the water could be discovered. Milk, of which 50 samples were obtained, showed some selenium in every instance, the amounts varying usually from 16 to 127 micrograms per 100 g. In a few instances milk was obtained from so-called "alkalied" cows and its selenium content compared with the milk pooled from the entire herd of the farm, but no constant marked differences were noted. Eggs and meats have invariably shown the highest concentration and the highest incidence of contamination with selenium. Unfortunately but few specimens of meat were obtained, for at the time when the field survey was conducted it did not appear probable that meats would constitute an important source

[1] Unpublished data.

of selenium. We had had at that time some information on the distribution and storage of selenium in the tissues of animals in chronic poisoning with inorganic selenium and our results had indicated that only small amounts of selenium could be found in muscle (*6*). Since then we have been accumulating data on the storage of selenium in the tissues of animals in chronic poisoning with selenium-bearing cereal grains and the experimental evidence [1] fully confirms the field findings concerning the relatively high selenium content of meats. Of the six samples of meat secured, four samples of canned or salted pork contained 117, 160, 330, and 800 micrograms per 100 g, respectively, one sample of raw chicken muscle contained 219, and one sample of cooked lean beef contained 222 micrograms per 100 g. All the meat samples were, of course, from local stock slaughtered for the exclusive use of the family group.

TABLE 2.—*The selenium content of water, milk, eggs, and meat*

Material	Total number of samples	Number of samples showing—			Micrograms of selenium per 100 cc or g	
		No selenium	Traces	Positive	Minimum	Maximum
Water	44	20	14	10	5	33
Milk	50	0	6	44	16	127
Eggs	32	0	0	32	25	914
Meats	6	0	0	6	117	800

Of the 32 samples of eggs, 22 percent contained less than 100 micrograms of selenium per 100 g, and 78 percent contained it in excess of 100 micrograms per 100 g. It seemed of interest to ascertain the distribution of selenium in the different parts of the egg. Accordingly, separate analyses were made in several instances of the white, yolk, and shell, with the following rather inconstant results.

Concentration of selenium in parts of egg expressed in micrograms per 100 grams

Sample	White	Yolk	Shell
1	110	119	----------
2	390	226	----------
3	500	695	402
4	178	91	307
5	128	86	Trace
6	120	103	----------

Table 3 summarizes the selenium content of bread and cereal grains. Of the 11 samples of bread it will be noted that only 6 contained estimable amounts of selenium, and it is not certain whether the small amounts of selenium found had been present in the flour or were added to the flour with the milk, eggs, etc., often used in baking. In

[1] Unpublished data.

every instance the flour had been purchased from local mills.[2] The other cereals enumerated in this table are of no direct importance, for only in exceptional instances were they used for human consumption. Even wheat is not as a rule used directly, but is usually exchanged for flour at some conveniently located mill where the selenium content of the grain may be reduced by dilution to a small or even negligible amount. Since all the cereal grains are, however, used for animal feed, the figures in the table illustrate the manner in which selenium finds its way into the human body.

TABLE 3.—*The selenium content of bread and cereal grains*

Material	Total number of samples	Number of samples showing—			Micrograms of selenium per 100 cc or g	
		No selenium	Traces	Positive	Minimum	Maximum
Bread	11	0	5	6	25	100
Wheat	8	0	1	7	115	1,880
Corn	21	1	0	20	100	1,490
Barley	7	0	0	7	165	575
Oats	3	0	0	3	200	1,000
Rye	3	0	0	3	87	330

Table 4 shows the incidence and occurrence of selenium in vegetables obtained from a few gardens of the 50 farms comprising this study. Some of the samples were canned from the 1935 season and some were fresh from the garden. In a number of instances several different varieties were obtained from the same garden patch to ascertain whether or not the selenium content of closely growing vegetables on a common soil is the same. The results seem to indicate that not all plants have the same capacity for absorbing selenium from a given soil. Thus it would seem that such vegetables as potatoes, cucumbers, beets, tomatoes, and carrots are generally low in selenium, while cabbage, rutabaga, and especially onions can concentrate selenium to a very high degree. The number of samples we were able to obtain from any one place was limited, and we cannot make a very positive general assertion on this point, but our observations do seem to confirm Beath's findings to the effect that certain native range plants such as astragalus, oonopsis, woody aster, and others can concentrate selenium to a far greater extent than certain other range plants growing alongside of them (7).

[2] 5 had been purchased from Gregory Mills and 6 from Trisco Mills.

TABLE 4.—*The selenium content of vegetables*

Material	Total number of samples	Number of samples showing—			Micrograms of selenium per 100 cc or g	
		No selenium	Traces	Positive	Minimum	Maximum
Cucumber	12	2	3	7	12	55
Potato	12	0	2	10	24	94
Beets	13	1	4	8	32	118
Tomato	17	1	3	13	18	122
Carrots	10	0	4	6	43	130
Peas and beans	9	0	3	6	38	204
Cabbage	5	0	0	5	23	452
Rutabaga	2	0	0	2	172	600
Onion	19	0	1	18	36	1,780

In table 5 we have attempted to correlate the urinary concentration of selenium found in human subjects on a given farm with the selenium concentration of such samples of foodstuffs as we have been able to secure. The results show very clearly that the selenium content of the foodstuffs entering directly or indirectly into the human dietary determines the extent of selenium absorption in man, and that the chief sources of selenium in man are the animal foods, such as meats, eggs, and milk, vegetables playing only a secondary and variable role. Indeed it would seem that the selenium content of the urine of man is a very good criterion of the occurrence and extent of selenium on a given farm.

TABLE 5.—*Relation of urinary selenium to food selenium, micrograms per 100 cc or g*

Family no.	Urinary selenium, micrograms per 100 cc	Food selenium, micrograms percent (figures in parentheses show number of samples analyzed)				
		Milk	Eggs	Meat	Vegetables	Cereal grain
97	25, 27, 32	Trace	57	----	Trace (7)	Trace (1).
51	20, 27	----	135	160	36 (1)	190 (1).
22	20, 21	36	140	----	41–74 (2)	Trace (1).
113	20, 20, 24	25	145	----	30–82 (2)	0 (1).
52	26	25	32	----	Trace–58 (4)	
83	13, 38, 40	34	----	219	----	
27	29, 56	22	----	222	----	
76	43, 73	35	408	330	27–105 (5)	
107	94	39	365	----	Trace–18 (2)	
47	70, 80, 98	57	308	----	23–204 (5)	330 (1).
74	103, 110	Trace	412	----	----	45–100 (2).
78	100, 114	36	504	----	103–1,780 (2)	360 (1).
16	105, 36, 133	114	----	----	242 (1)	250–1,880 (5).
19	124, 198	127	----	800	126 (1)	420–1,000 (3).

SUMMARY AND CONCLUSIONS

A field study was made during September 1936 of a selected group comprising 50 rural families in a highly seleniferous area in 4 counties of South Dakota and Nebraska.

One hundred urine specimens from as many subjects were analyzed for selenium. The selenium concentration for the whole group varied from 20 to 198 micrograms per 100 cc. There was, as a rule, little variation in the urinary concentration of selenium for the several members of the same family or for the same individual at different times, thus indicating that the excretion level of selenium in man is a fairly reliable index of the availability of selenium and of the hazard to which he is exposed.

Outside of a high incidence of symptoms pointing to gastric or intestinal dysfunction, and a few instances of apparent hepatic dysfunction, both probably the result of continual selenium ingestion, no other evidence of ill health was seen that could be ascribed to selenium with any degree of certainty.

Analysis of many samples of locally produced foodstuffs which enter directly or indirectly into the human dietary indicates that meat, eggs, and milk, and vegetables when available, constitute the most important and most constant sources of selenium to which man is exposed in the selenium endemic region studied.

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(5) Martin: Am. J. Bot., **23**:471 (1936).
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HOW EXPENDITURES FOR SELECTED PUBLIC HEALTH SERVICES ARE APPORTIONED [1]

By JOSEPH W. MOUNTIN, *Surgeon, United States Public Health Service*

When assembling and analyzing data designed to show how expenditures for selected public health services are apportioned, it is necessary to operate within limits that are clearly set forth, since programs of public health may differ among communities as to content and to method of administration. The variations in actual patterns of organizations arise from an interplay of two main factors: difference in the assignment of responsibilities to particular agencies and difference in the emphasis that is placed on specific services. Another factor which complicates the analysis is the difficulty of determining the population over which costs and services are actually distributed.

Composites of personnel and of expenditures for all agencies in counties have been chosen in preference to corresponding indexes for the minor civil divisions, because agencies tend to have overlapping

[1] From the Division of Public Health Methods, National Institute of Health.

jurisdictions. The services under consideration are those health-promotion activities that commonly constitute the program of health departments and voluntary health agencies. In order that there may be a basis for comparison, unusual items that entail disproportionately high expenditures are omitted. In the excluded category are collection of refuse, building inspection, medical relief, and the operation of hospitals and allied institutions. Obviously no account can be taken of social action in fields of general welfare that may contribute only indirectly to personal or community health.

The 94 [2] counties comprising the group appearing in this analysis were limited to those which included areas chosen to satisfy the requirements of the National Health Inventory in its survey of chronic diseases rather than to present schemes of health administration commonly found in this country. The counties were selected so as to give representation to different social, economic, and industrial conditions and to encompass whatever variation in illness incidence that may be experienced throughout the United States. The sample must be accepted as being weighted with populous counties and those having a high percentage of urban inhabitants. In these counties, however, the lesser political units such as villages, boroughs, and townships are well represented.

TABLE 1.—*Distribution of expenditures for selected public health services in 94 counties according to population of county and type of agency with administrative responsibility*

Population group	Number of counties	Population	Total expenditures	Per capita expenditures			
				Total	Health departments	Other official agencies	Non-official agencies
All groups	94	33,978,479	$29,310,895	$0.86	$0.52	$0.11	$0.23
Under 20,000	15	191,274	103,355	.54	.32	.14	.08
20,000–59,999	25	856,580	340,573	.40	.23	.13	.04
60,000–99,999	14	1,020,428	503,476	.48	.31	.11	.07
100,000–249,999	13	2,244,347	1,781,276	.79	.41	.17	.21
250,000–499,999	13	4,919,583	3,575,381	.73	.43	.12	.18
500,000 and over	14	24,746,267	23,006,834	.93	.57	.10	.26

During the fiscal year ended in 1936, a total of approximately $29,500,000 was expended by all agencies of the 94 counties. This amount distributed over the 34 million inhabitants is equivalent to about 86 cents per capita. From table 1 the reader will observe that, with one apparent exception, the more populous groups of counties lead in per capita expenditures. The apparent exception, which occurs in the group lowest in population, can be attributed to unusual expenditures by a few contained counties that receive large grants-in-aid from an endowment. Generally speaking, public health or-

[2] Five counties included in New York City have been classified as a single county area.

ganization reaches its highest development in cities of large size. The health program of a large city tends to have a leavening influence on health for the whole county of which the city is a part, since many urban services extend beyond the limits of the large city.

In comparing the combined expenditures of this group of counties with the outlays for similar public health services by counties entered in the Inter-Chamber of Commerce Health Conservation Contest [3] one finds that the Health Inventory counties exceed by about 16 cents per capita. The Contest counties as a whole are less urban in character than the Health Inventory group. Another part of the difference may be attributed to the practice of excluding from the Contest counties portions not under the jurisdiction of the county health department. Counties containing large cities are affected in particular by this procedure. While the Health Inventory counties devote larger sums to public health than do those reported by the Contest, still it is well to point out that the Health Inventory counties expend only about half the amount of money per capita commonly regarded [4] as necessary for the support of those elementary public health services which form the basis of this comparison.

Notwithstanding the fact that the services under consideration are well defined in character and generally accepted as being of primary interest to health departments, there appears to be a wide dispersion of responsibility for their administration. The extent of this dispersion is suggested by data in table 1. Towards defraying a gross per capita expenditure of 86 cents, governments contribute 52 cents through their health departments and 11 cents through other official agencies, while nonofficial agencies supply the remaining 23 cents. Among those classed as "Other official agencies," boards of education lead in sums devoted to health work. Public welfare departments rank second in order, yet the amount of funds at their disposal for health work is considerably below that of educational authorities. Voluntary agencies submitted information which portrays a wide range of programs covering services that exist in varying combinations. When these agencies are classified as to groups and interests, nursing organizations are found to report the largest expenditures. Second place in some counties is occupied by agencies expressing major interest in tuberculosis, while in others child health occupies this position. Maternity hygiene, mental hygiene, and social hygiene each have a large number of sponsors, but the sums at their disposal are not large.

Earlier in the paper it was pointed out that per capita expenditures tend to increase as counties are found in the higher population brackets.

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[3] Walker, W. F., and Feldman, L.: Consolidated county expenditures for selected public health service. Am. J. Pub. Health, vol. 27, no. 2, February 1937.

[4] Hiscock, Ira V.: Community health organization. The Commonwealth Fund, New York, N. Y. 1932.

Agencies of the three classes, health departments, other official, and nonofficial, share somewhat disproportionately in these increases. The unusually high per capita figures reported by the group of counties below 20,000 population have already been explained. After excluding this group of counties, which may be regarded as atypical, there is found a general upward trend in expenditures by both the health departments and nonofficial agencies. This trend is very definitely exaggerated in the group containing 500,000 or more inhabitants. The practice with regard to proportionate assignment of responsibility among agencies of different classes would appear to be fairly uniform among the counties in various population groups. In a few instances, however, smaller counties discharge more services through official agencies other than health departments, but this practice is not so apparent when all small counties are considered as a group. The parallelism in rates of expenditures by health departments and by nonofficial agencies for the counties of different sizes is not in keeping with the common impression that activities of voluntary agencies tend to compensate for deficiencies in the programs supported by taxation.

Another item of particular interest to health administrators is the practice pursued under varying circumstances with regard to proportionate allotments for operating expenses and for salaries of employees presenting qualifications of different types. Data bearing on these points may be found in tables 2 and 3. One shows the variation in distribution of expenditures as it may be affected by population of the county, and the other describes the practice followed by agencies operating under different auspices.

TABLE 2.—*Distribution of expenditures for selected health services in 94 counties according to population group of counties and purpose of expenditures*

Population group	Number of counties	Total expenditures	Percentage distribution of expenditures					
			Salary					Operating costs
			Physicians	Dentists	Nurses	Inspectors	Others	
All counties	94	$29,310,895	0.14	0.02	0.30	0.08	0.25	0.21
Under 20,000	15	103,355	.24	.03	.30	.06	.10	.27
20,000–59,999	25	340,573	.23	.01	.32	.06	.15	.23
60,000–99,999	14	503,476	.17	.02	.24	.08	.16	.33
100,000–249,999	13	1,781,276	.15	.04	.35	.08	.19	.19
250,000–499,999	13	3,575,381	.13	.01	.27	.07	.25	.27
500,000 and over	14	23,006,834	.14	.02	.30	.09	.25	.20

In this group of 94 counties approximately 80 percent of the expenditures is allotted to salaries and the remainder to operation. Operating expenses include, as a rule, such items as transportation, communication, office supplies, and materials used in the conduct of a laboratory. Rent may be a sum of considerable importance in the

budget of voluntary agencies; however, this is seldom true of official agencies since they usually are housed in public buildings. In the smaller counties, agencies allot proportionately more of their funds for operating expenses than do those in more populous classes. This is to be expected, since many administrative costs are somewhat fixed, hence they tend to be relatively high in small budgets. About 30 percent of salary funds is set apart for nurses; this is by far the largest group item in the salary budget. The percentage is fairly consistent among counties of different classes. The salary item for employees designated "Others" follows in the order of magnitude. This is a large but varied group ranging in skill from janitors to administrators and laboratory workers. The higher development of laboratory, clerical, and statistical services in the populous counties accounts in a large measure for the greater proportion of expenditures devoted to salaries of groups designated as "Others."

TABLE 3.—*Distribution of expenditures for selected health services in 94 counties according to type of agency in control and purpose of expenditures*

Type of agency	Total budget	Percentage distribution of expenditures					
		Salary					Operating costs
		Physicians	Dentists	Nurses	Inspectors	Others	
All agencies	$29,310,895	0.14	0.02	0.30	0.08	0.25	0.21
Health departments	17,631,904	.15	.01	.23	.14	.28	.19
Other governmental	3,845,204	.27	.04	.42	.01	.15	.11
Nongovernmental	7,833,787	.05	.02	.40	.01	.21	.32

When the proportionate distribution of health budgets is studied in relation to the policy of various agencies, distinct differences are to be noted. (See table 3.) As compared with agencies of other types, health departments favor inspectors and employees designated as "Others." This merely expresses greater responsibilities for sanitation programs and the operation of laboratories. It must be understood that health departments are the largest employers of physicians and nurses, even though the percentage of their budgets assigned for these salaries may not be as great as that reported by other agencies. Such proportionately low operating costs as are reported from health departments may be explained in part by the large size of those departments when compared with agencies in other categories. Those agencies designated as "Other governmental" rank first in the proportion of funds devoted to salaries of physicians and nurses. School boards dominate the picture in this agency group, and they are known to employ nurses and physicians almost exclusively. The high percentage of funds that nongovernmental agencies also devote to nurses

is to be expected since this group is made up largely by visiting nurse associations, and agencies especially interested in child care. Such agencies would be expected to have high operating costs since they must transport their field nurses, pay rent, and furnish large quantities of materials used in caring for patients both in clinics and in homes.

Especially the person concerned with health administration will be interested in the following points that are brought out by the foregoing analysis: Responsibility for public health service rests with so many agencies that there must be considerable loss in effectiveness of program and in economy of administration. In a group of 94 counties, distinctly above the average in resources, expenditures for selected public services fell below amounts regarded as necessary to support adequate organizations. Salaries of public health nurses account for nearly one-third of all funds expended. Both governmental agencies other than health departments and those which are nonofficial devote a particularly high percentage of their funds to nursing. Practically all sanitary inspectors are employed by health departments. Health departments, too, support most of the laboratory service and employ more persons for clerical positions in proportion to total employees than is true of other agencies. Nonofficial agencies, however, report the highest operating costs. Other data not presented in this paper show that the distribution of expenditures is determined very largely by the various combinations of items that comprise the programs of agencies having different sets of responsibilities.

DEATHS DURING WEEK ENDED SEPT. 11, 1937

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

	Week ended Sept. 11, 1937	Corresponding week, 1936
Data from 86 large cities of the United States:		
Total deaths	6,883	6,976
Average for 3 prior years	6,950	
Total deaths, first 36 weeks of year	316,367	316,804
Deaths under 1 year of age	483	501
Average for 3 prior years	515	
Deaths under 1 year of age, first 36 weeks of year	20,351	20,068
Data from industrial insurance companies:		
Policies in force	69,801,191	68,415,419
Number of death claims	8,943	8,880
Death claims per 1,000 policies in force, annual rate	6.7	6.8
Death claims per 1,000 policies, first 36 weeks of year, annual rate	10.0	10.1

PREVALENCE OF DISEASE

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

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

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Sept. 18, 1937, and Sept. 19, 1936

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936
New England States:								
Maine	3	1	1			8	0	3
New Hampshire		1				1	0	0
Vermont	2				1	3	0	0
Massachusetts		7			10	17	1	1
Rhode Island					2		0	0
Connecticut	4		1	2	2	3	0	0
Middle Atlantic States:								
New York	10	18	[1] 6	[1] 2	74	36	5	4
New Jersey	12	10	4	8	20	14	2	1
Pennsylvania	22	14			84	16	7	2
East North Central States:								
Ohio	12	14	15	8	55	12	7	1
Indiana	13	15	8	7	3	2	0	1
Illinois	23	28	8	4	44	10	1	3
Michigan	12	13			14	14	3	1
Wisconsin	5	4	20	6	40	17	1	0
West North Central States:								
Minnesota	2	5			5	6	0	0
Iowa	2	2			3	3	0	0
Missouri	21	6	11	18	43		2	0
North Dakota	1		2	4	2		1	0
South Dakota	1					2	1	0
Nebraska		3				1	0	0
Kansas	4	9	3		5	1	0	0
South Atlantic States:								
Delaware						2	1	0
Maryland [2]	6	3	4	2	5	7	2	3
District of Columbia	2	5					0	0
Virginia [2]	32	23			6	4	1	2
West Virginia	16	5	18	2	9	2	3	4
North Carolina [3]	72	53			18	6	0	2
South Carolina [3]	18	27	104	94	7		1	0
Georgia [3]	30	27					0	1
Florida [3]	17	5		3	6		1	0
East South Central States:								
Kentucky	33	11	7		8	13	2	3
Tennessee	45	43	22	7	18	1	3	6
Alabama [3]	30	29	10	11	2		2	2
Mississippi [3] [4]	9	19					0	0

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Sept. 18, 1937, and Sept. 19, 1936—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936
West South Central States:								
Arkansas	16	7	1	----	1	----	0	0
Louisiana [3]	10	11	2	7	----	----	2	1
Oklahoma [4]	3	10	10	16	1	1	2	1
Texas [3]	26	33	79	20	20	10	0	3
Mountain States:								
Montana	1	----	----	5	8	1	0	0
Idaho	----	----	----	1	3	----	0	0
Wyoming	1	----	----	----	1	4	0	0
Colorado	11	3	----	----	7	3	1	0
New Mexico	2	1	----	----	2	10	0	0
Arizona	9	2	15	9	----	4	0	0
Utah [4]	7	1	----	----	10	1	0	0
Pacific States:								
Washington	----	----	----	1	10	11	0	0
Oregon	3	1	10	4	7	2	0	0
California	17	30	10	15	21	40	1	4
Total	565	499	371	256	577	288	53	49
First 37 weeks of year	15,435	16,474	275,825	141,043	243,814	268,660	4,389	6,110

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936
New England States:								
Maine	16	1	3	6	0	0	1	1
New Hampshire	1	0	1	3	0	0	1	0
Vermont	6	0	3	2	0	0	3	0
Massachusetts	41	1	45	43	0	0	5	4
Rhode Island	4	0	4	12	0	0	0	1
Connecticut	16	0	12	9	0	0	4	4
Middle Atlantic States:								
New York	91	12	88	86	0	0	36	20
New Jersey	21	1	16	13	0	0	12	19
Pennsylvania	40	8	73	105	0	0	50	22
East North Central States:								
Ohio	59	17	133	111	0	0	83	39
Indiana	10	3	44	36	5	0	3	17
Illinois	81	48	101	96	0	4	28	26
Michigan	57	11	81	76	2	4	10	7
Wisconsin	45	4	27	68	0	1	6	4
West North Central States:								
Minnesota	52	3	23	27	2	4	5	2
Iowa	35	4	24	18	2	2	1	4
Missouri	47	4	74	25	3	0	33	23
North Dakota	0	2	4	3	0	14	0	1
South Dakota	3	0	14	9	0	0	1	0
Nebraska	18	0	10	5	1	0	0	1
Kansas	30	3	31	18	0	0	14	7
South Atlantic States:								
Delaware	0	0	3	1	0	0	1	1
Maryland [3]	7	7	30	17	0	0	17	5
District of Columbia	2	0	5	8	0	0	1	0
Virginia [3]	5	5	7	12	0	0	18	24
West Virginia	2	7	26	29	0	0	15	28
North Carolina [3]	4	1	31	48	1	0	9	28
South Carolina [3]	1	0	8	6	0	0	14	13
Georgia [3]	5	9	20	22	0	0	13	32
Florida [3]	1	1	1	4	0	0	6	0

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Sept. 18, 1937, and Sept. 19, 1936—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936	Week ended Sept. 18, 1937	Week ended Sept. 19, 1936
East South Central States:								
Kentucky	4	1	31	31	0	5	25	56
Tennessee	1	17	21	36	0	0	12	31
Alabama [3]	3	13	20	14	0	0	6	13
Mississippi [3] [4]	4	6	8	58	0	0	7	19
West South Central States:								
Arkansas	9	1	6	5	0	0	13	7
Louisiana [3]	8	2	7	7	0	0	18	14
Oklahoma [5]	19	1	12	2	0	0	11	24
Texas [3]	33	5	24	27	1	0	56	28
Mountain States:								
Montana	4	0	37	11	3	5	3	16
Idaho	0	1	9	4	4	0	8	1
Wyoming	5	2	6	-------	0	0	0	1
Colorado	21	8	9	12	1	3	6	2
New Mexico	3	4	6	2	0	0	16	20
Arizona	3	2	7	-------	0	0	6	3
Utah [4]	4	0	36	3	0	0	0	0
Pacific States:								
Washington	10	10	12	13	14	2	6	5
Oregon	2	2	16	10	5	0	5	7
California	46	15	89	88	4	0	16	20
Total	879	242	1,298	1,241	48	44	604	600
First 37 weeks of year	6,391	2,261	168,788	182,651	8,184	6,070	10,614	9,769

[1] New York City only.
[2] Rocky Mountain spotted fever, week ended Sept. 18, 1937, 4 cases, as follows: Maryland, 1; Virginia, 3.
[3] Typhus fever, week ended Sept. 18, 1937, 68 cases, as follows: North Carolina, 1; South Carolina, 1; Georgia, 28; Florida, 7; Alabama, 14; Mississippi, 2; Louisiana, 1; Texas, 14.
[4] Week ended earlier than Saturday.
[5] Figures for 1936 are 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
August 1937										
Alabama	18	48	14	765	15	18	13	25	18	67
Georgia	3	79	24	823	12	29	17	32	0	103
Illinois	16	63	21	48	286	3	195	311	16	106
Indiana	5	24	13	4	72	-------	34	82	15	26
Michigan	2	41	5	10	209	-------	102	412	2	65
Minnesota	6	8	4	-------	15	-------	43	92	18	9
Nevada	-------	-------	-------	-------	-------	-------	[1] 1	4	0	2
New Jersey	6	19	9	6	189	-------	36	52	0	31
Ohio	10	39	19	6	372	-------	184	302	-------	237
Tennessee	4	41	37	229	70	30	10	44	1	167
Virginia	11	67	51	22	61	7	11	30	0	97

[1] Delayed report of case occurring in July.

Summary of monthly reports from States—Continued

August 1937

	Cases
Actinomycosis:	
Illinois	2
Anthrax:	
New Jersey	1
Chicken pox:	
Alabama	37
Georgia	8
Illinois	136
Indiana	16
Michigan	91
Minnesota	31
New Jersey	67
Ohio	79
Tennessee	11
Virginia	3
Conjunctivitis, infectious:	
Georgia	12
Dengue:	
Alabama	1
Georgia	1
Diarrhea and enteritis:	
Ohio (under 2 years)	75
Dysentery:	
Georgia (amoebic)	13
Georgia (bacillary)	26
Illinois (amoebic)	14
Illinois (amoebic carriers)	40
Illinois (bacillary)	104
Michigan (amoebic)	5
Michigan (bacillary)	10
Minnesota (amoebic)	1
Minnesota (bacillary)	3
New Jersey (amoebic)	2
New Jersey (bacillary)	3
Ohio (amoebic)	1
Ohio (bacillary)	7
Tennessee (amoebic)	3
Tennessee (bacillary)	56
Virginia (diarrhea included)	521
Encephalitis, epidemic or lethargic:	
Alabama	1
Georgia	1
Illinois	7
Indiana	1
Minnesota	3
New Jersey	1
Ohio	6
German measles:	
Alabama	3
Illinois	36
Michigan	40
New Jersey	30
Ohio	15
Tennessee	3
Hookworm disease:	
Georgia	421
Michigan	1
Tennessee	2
Impetigo contagiosa:	
Tennessee	7
Lead poisoning:	
Illinois	2
Ohio	16
Mumps:	
Alabama	51
Georgia	13
Illinois	198
Indiana	9
Michigan	220
New Jersey	123
Ohio	48
Tennessee	46
Virginia	40
Ophthalmia neonatorum:	
Alabama	1
Illinois	7
Minnesota	3
New Jersey	7
Ohio	71
Tennessee	4
Virginia	3
Paratyphoid fever:	
Georgia	5
Illinois	5
Michigan	6
Minnesota	1
New Jersey	5
Ohio	1
Tennessee	12
Virginia	1
Puerperal septicemia:	
Georgia	1
Ohio	5
Tennessee	2
Rabies in animals:	
Alabama	58
Illinois	34
Indiana	58
Michigan	1
New Jersey	4
Rabies in man:	
Alabama	1
Illinois	1
Michigan	1
Tennessee	1
Rocky Mountain spotted fever:	
Illinois	2
Indiana	1
New Jersey	1
Tennessee	5
Virginia	11
Septic sore throat:	
Georgia	30
Illinois	10
Michigan	9
Minnesota	8
Septic sore throat—Con.	
Ohio	57
Tennessee	8
Virginia	6
Tetanus:	
Alabama	4
Illinois	4
Michigan	3
Minnesota	1
New Jersey	2
Ohio	3
Tennessee	3
Virginia	5
Trachoma:	
Illinois	92
Michigan	1
Tennessee	8
Trichinosis:	
Illinois	2
Michigan	2
New Jersey	1
Tularaemia:	
Georgia	2
Illinois	2
Michigan	1
Minnesota	6
Tennessee	2
Virginia	1
Typhus fever:	
Alabama	73
Georgia	146
Tennessee	4
Undulant fever:	
Alabama	8
Georgia	4
Illinois	8
Indiana	1
Michigan	8
Minnesota	10
New Jersey	5
Ohio	4
Virginia	2
Vincent's infection:	
Illinois	14
Michigan	21
Tennessee	4
Whooping cough:	
Alabama	99
Georgia	297
Illinois	751
Indiana	131
Michigan	955
Minnesota	282
Nevada	9
New Jersey	310
Ohio	1,005
Tennessee	211
Virginia	242

CASES OF VENEREAL DISEASES REPORTED FOR JULY 1937

These reports are published monthly for the information of health officers in order to furnish current data as to the prevalence of the venereal diseases. The figures are taken from reports received from State and city health officers. They are preliminary and are therefore subject to correction. It is hoped that the publication of these reports will stimulate more complete reporting of these diseases.

Reports from States

State	Syphilis		Gonorrhea	
	Cases reported during month	Monthly case rates per 10,000 population	Cases reported during month	Monthly case rates per 10,000 population
Alabama	1,506	5.26	423	1.48
Arizona	48	1.18	99	2.44
Arkansas [1]	615	3.04	338	1.67
California	2,148	3.55	2,286	3.77
Colorado	141	1.32	59	.55
Connecticut	200	1.15	117	.67
Delaware	197	7.61	66	2.55
District of Columbia	186	3.00	178	2.88
Florida	1,834	11.17	345	2.10
Georgia	1,780	5.82	477	1.56
Idaho	38	.78	52	1.07
Illinois	2,424	3.09	1,506	1.93
Indiana	214	.62	122	.35
Iowa [1]	299	1.18	216	.85
Kansas	177	.94	61	.32
Kentucky [2]				
Louisiana	194	.91	120	.57
Maine [1]	37	.43	77	.90
Maryland [3]	325	1.94	227	1.36
Massachusetts	514	1.16	506	1.14
Michigan	735	1.54	694	1.45
Minnesota	255	.97	266	1.01
Mississippi	2,156	10.74	2,637	13.13
Missouri	660	1.67	460	1.16
Montana [1]	54	1.02	40	.75
Nebraska	78	.57	113	.87
Nevada [4]				
New Hampshire	15	.30	4	.08
New Jersey	648	1.50	224	.52
New Mexico [1]	121	2.87	37	.88
New York [3]				
North Carolina	2,240	6.48	361	1.04
North Dakota [3]				
Ohio [1]	1,144	1.70	463	.69
Oklahoma [1]	642	2.54	343	1.36
Oregon	125	1.23	249	2.45
Pennsylvania [5]	1,641	1.62	200	.20
Rhode Island	77	1.13	92	1.35
South Carolina [2]				
South Dakota [3]				
Tennessee	1,035	3.61	607	2.12
Texas	586	.96	205	.34
Utah	2	.04	7	.14
Vermont [2]				
Virginia	1,557	5.83	439	1.64
Washington	189	1.15	260	1.58
West Virginia	347	1.90	162	.89
Wisconsin [5]	223	.77	56	.19
Wyoming [4]				
Total	27,407	2.52	15,199	1.40

See footnotes at end of table.

Reports from cities of 200,000 population or over

State	Syphilis		Gonorrhea	
	Cases reported during month	Monthly case rates per 10,000 population	Cases reported during month	Monthly case rates per 10,000 population
Akron, Ohio	53	1.95	46	1.69
Atlanta, Ga	118	4.11	111	3.87
Baltimore, Md	409	4.96	169	2.05
Birmingham, Ala	151	5.35	68	2.41
Boston, Mass	211	2.67	199	2.52
Buffalo, N. Y	128	2.16	83	1.40
Chicago, Ill	1,107	3.10	867	2.43
Cincinnati, Ohio [2]				
Cleveland, Ohio	233	2.50	133	1.43
Columbus, Ohio	84	2.75	13	.43
Dallas, Tex	210	7.25	86	2.97
Dayton, Ohio	35	1.66		
Denver, Colo	74	2.49	55	1.85
Detroit, Mich. [2]				
Houston, Tex. [2]				
Indianapolis, Ind	21	.56	35	.93
Jersey City, N. J. [2]				
Kansas City, Mo	38	.90	5	.12
Los Angeles, Calif	606	4.23	652	4.55
Louisville, Ky	169	5.22	84	2.59
Memphis, Tenn	268	10.04	159	5.96
Milwaukee, Wis. [2]				
Minneapolis, Minn	61	1.25	86	1.77
Newark, N. J	229	4.94	110	2.37
New Orleans, La. [2]				
New York, N. Y	8,669	11.87	1,992	2.73
Oakland, Calif	61	2.01	81	2.67
Omaha, Nebr	50	2.27	44	2.00
Philadelphia, Pa. [2]				
Pittsburgh, Pa	98	1.43	25	.37
Portland, Oreg. [4]				
Providence, R. I	48	1.85	34	1.31
Rochester, N. Y	52	1.54	57	1.69
St. Louis, Mo	239	2.86	233	2.78
St. Paul, Minn	33	1.17	32	1.13
San Antonio, Tex. [2]				
San Francisco, Calif	233	3.47	283	4.22
Seattle, Wash	47	1.24	56	1.47
Syracuse, N. Y	125	5.74	77	3.53
Toledo, Ohio				
Washington, D. C. [5]	186	3.00	178	2.88

[1] Incomplete.
[2] No report for current month.
[3] Reported by clinics.
[4] Not reporting.
[5] Only cases of syphilis in the infectious stage are reported.
[6] Reported by social-hygiene clinic.

WEEKLY REPORTS FROM CITIES

City reports for week ended Sept. 11, 1937

This table summarizes the reports received weekly from a selected list of 140 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								
Data for 90 cities:											
5-year average	143	68	15	118	288	325	3	348	102	940	----
Current week [1]	81	30	14	198	270	273	3	304	68	925	----
Maine:											
Portland	0	----	0	0	1	0	0	0	0	1	21
New Hampshire:											
Concord	0	----	0	0	0	0	0	1	0	0	5
Manchester	0	----	0	0	0	0	0	1	0	0	7
Nashua	0	----	0	0	1	0	0	0	0	13	3
Vermont:											
Barre	----	----	----	----	----	----	----	----	----	----	----
Burlington	0	----	0	0	0	0	0	0	0	0	7
Rutland	0	----	0	0	0	0	0	0	0	0	6
Massachusetts:											
Boston	1	----	0	3	16	3	0	6	0	13	166
Fall River	0	----	0	1	1	0	0	0	0	14	15
Springfield	0	----	0	1	0	3	0	2	0	14	31
Worcester	0	----	0	1	3	0	0	1	0	4	43
Rhode Island:											
Pawtucket	0	----	0	0	0	1	0	0	0	0	8
Providence	0	----	0	0	0	5	0	0	1	18	41
Connecticut:											
Bridgeport	0	1	0	0	4	2	0	1	0	1	25
Hartford	0	----	0	0	1	1	0	1	3	3	24
New Haven	0	1	0	2	0	0	0	0	1	1	23
New York:											
Buffalo	0	----	0	3	3	5	0	7	3	7	121
New York	11	2	1	34	43	24	0	70	12	112	1,152
Rochester	0	----	0	0	0	0	0	0	0	13	58
Syracuse	0	----	0	1	3	0	0	0	0	16	42
New Jersey:											
Camden	0	----	1	0	1	0	0	1	0	0	36
Newark	0	1	0	2	3	1	0	4	0	15	85
Trenton	0	----	0	1	1	2	0	3	0	0	34
Pennsylvania:											
Philadelphia	3	----	0	2	15	5	0	18	3	22	399
Pittsburgh	0	----	0	7	7	6	0	5	1	14	150
Reading	0	----	0	3	1	0	0	0	0	0	20
Scranton	0	----	0	1	----	0	0	----	0	4	----
Ohio:											
Cincinnati	----	----	----	----	----	----	----	----	----	----	----
Cleveland	0	4	0	10	5	15	0	9	4	53	154
Columbus	1	----	0	2	2	4	0	4	1	10	73
Toledo	1	----	0	5	4	3	0	2	2	19	51
Indiana:											
Anderson	0	----	0	0	1	0	0	0	0	5	6
Fort Wayne	0	----	0	0	0	0	0	0	0	0	18
Indianapolis	3	----	0	4	6	3	0	5	0	19	84
Muncie	0	----	0	0	1	0	0	0	0	0	9
South Bend	0	----	0	1	0	2	0	0	0	1	15
Terre Haute	0	----	0	0	0	1	0	0	0	0	27
Illinois:											
Alton	0	----	0	2	0	3	0	0	0	0	4
Chicago	1	7	3	21	12	42	0	34	2	68	561
Elgin	0	----	0	0	0	0	0	0	0	0	7
Moline	0	----	0	0	1	1	0	0	0	4	10
Springfield	0	----	0	1	0	2	0	0	0	3	16
Michigan:											
Detroit	7	----	2	14	9	22	0	12	3	66	207
Flint	0	----	0	1	1	9	0	0	0	8	16
Grand Rapids	0	----	0	2	1	0	0	0	0	12	32
Wisconsin:											
Kenosha	0	----	0	3	0	1	0	1	0	2	7
Madison	0	----	0	0	0	2	0	0	0	7	----
Milwaukee	0	----	0	9	2	7	0	2	0	55	63
Racine	0	----	0	3	0	1	0	0	0	0	11
Superior	0	----	0	0	0	0	0	0	0	0	8

[1] Figures for Barre, Cincinnati, and Boise estimated; reports not received.

City reports for week ended Sept. 11, 1937—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								
Minnesota:											
Duluth	0	------	0	1	1	2	0	0	0	6	13
Minneapolis	0	------	0	1	3	6	0	1	0	10	92
St. Paul	0	------	0	3	2	0	0	1	1	25	53
Iowa:											
Cedar Rapids	0	------	--------	1	-------	0	0	-------	0	4	--------
Davenport	1	------	--------	0	-------	1	0	-------	0	0	--------
Des Moines	0	------	--------	0	-------	3	0	-------	0	0	28
Sioux City	1	------	--------	0	-------	0	0	-------	0	0	--------
Waterloo	1	------	--------	0	-------	1	0	-------	0	3	--------
Missouri:											
Kansas City	2	------	0	1	2	3	0	3	1	4	79
St. Joseph	1	------	0	0	1	0	0	2	0	0	18
St. Louis	4	1	0	23	3	14	1	3	3	8	175
North Dakota:											
Fargo	0	------	0	0	0	0	0	0	0	40	4
Grand Forks	0	------	--------	0	-------	0	0	-------	0	2	--------
Minot	0	------	0	0	0	0	0	0	0	12	5
South Dakota:											
Aberdeen	0	------	--------	0	-------	0	0	-------	0	4	--------
Nebraska:											
Omaha	0	------	0	0	7	0	0	2	0	0	52
Kansas:											
Lawrence	0	------	0	0	1	0	0	0	0	2	5
Topeka	0	------	0	0	1	2	0	0	0	11	21
Wichita	0	------	0	0	2	3	0	0	3	2	19
Delaware:											
Wilmington	0	------	0	0	1	0	0	0	0	5	23
Maryland:											
Baltimore	3	2	0	2	12	7	0	14	4	60	171
Cumberland	0	------	0	0	0	1	0	0	0	1	6
Frederick	0	------	0	0	0	0	0	0	0	0	3
District of Columbia:											
Washington	3	2	2	2	6	3	0	10	0	8	136
Virginia:											
Lynchburg	0	------	0	0	1	0	0	0	0	1	13
Richmond	3	------	0	0	1	1	0	1	2	4	51
Roanoke	0	------	0	0	1	1	0	0	0	1	12
West Virginia:											
Charleston	1	------	0	0	0	0	0	0	0	0	9
Wheeling	0	------	0	0	0	2	0	0	0	4	19
North Carolina:											
Gastonia	0	------	--------	0	-------	0	0	-------	0	3	--------
Raleigh	0	------	0	0	0	1	0	0	0	3	9
Wilmington	0	------	0	0	0	0	0	0	0	3	11
Winston-Salem	1	------	0	0	0	1	0	0	0	6	7
South Carolina:											
Charleston	0	------	0	0	4	0	0	1	2	0	19
Columbia	0	------	0	0	1	0	0	3	0	0	18
Florence	0	------	0	1	0	0	0	0	0	0	9
Greenville	0	------	0	0	0	0	0	1	0	0	6
Georgia:											
Atlanta	3	------	0	0	9	5	0	6	1	2	87
Brunswick	1	------	0	0	0	0	0	0	0	0	4
Savannah	4	------	0	0	1	0	0	3	0	4	32
Florida:											
Miami	0	------	1	8	2	0	0	1	1	0	43
Tampa	0	1	1	1	1	0	0	0	0	0	26
Kentucky:											
Covington	0	------	0	0	0	0	0	1	0	1	12
Lexington	0	------	0	0	0	0	0	2	1	5	20
Louisville	1	------	0	1	4	10	0	2	0	17	55
Tennessee:											
Knoxville	0	------	1	0	1	0	0	1	2	0	20
Memphis	1	------	0	0	1	1	0	5	2	8	70
Nashville	0	------	0	0	0	1	0	1	0	2	38
Alabama:											
Birmingham	2	1	0	2	1	0	0	4	0	0	52
Mobile	0	------	0	0	1	0	0	3	0	0	23
Montgomery	1	------	--------	0	-------	1	0	-------	0	2	--------
Arkansas:											
Fort Smith	0	------	--------	0	-------	3	0	-------	1	0	--------
Little Rock	0	------	0	0	4	0	0	5	1	1	11

City reports for week ended Sept. 11, 1937—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								
Louisiana:											
New Orleans	0	1	1	0	8	2	0	6	0	5	125
Shreveport	0	----	0	0	4	0	0	2	0	0	45
Oklahoma:											
Muskogee	0	----	----	0	----	0	0	----	0	0	----
Oklahoma City	0	----	0	0	4	2	0	0	1	2	45
Texas:											
Dallas	2	----	0	0	3	2	0	0	0	0	49
Fort Worth	0	----	0	0	1	1	0	1	1	4	34
Galveston	0	----	0	0	2	1	0	0	1	0	18
Houston	10	----	0	2	6	3	0	4	8	0	81
San Antonio	0	----	0	0	1	1	0	4	2	0	54
Montana:											
Billings	0	----	0	0	0	0	0	0	0	0	7
Great Falls	0	----	0	0	0	2	0	0	0	5	5
Helena	0	----	0	0	0	0	0	0	0	1	5
Missoula	0	----	0	0	2	0	0	0	0	0	6
Idaho:											
Boise	----	----	----	----	----	----	----	----	----	----	----
Colorado:											
Colorado Springs	0	----	0	0	1	0	0	3	0	2	11
Denver	2	----	1	16	3	5	2	3	0	13	69
Pueblo	1	----	0	0	0	0	0	0	0	0	6
New Mexico:											
Albuquerque	0	----	0	0	0	1	0	2	1	4	10
Utah:											
Salt Lake City	4	----	0	1	1	6	0	0	0	11	31
Washington:											
Seattle	0	----	0	0	1	4	0	2	0	13	92
Spokane	0	----	0	0	2	1	0	1	0	2	26
Tacoma	0	----	0	0	2	3	0	0	0	2	26
Oregon:											
Portland	0	----	0	2	4	3	0	2	0	1	74
Salem	0	----	----	0	----	0	1	----	0	0	----
California:											
Los Angeles	6	4	1	7	8	15	0	16	0	34	241
Sacramento	0	----	0	1	4	0	0	3	0	8	31
San Francisco	0	2	1	0	6	4	0	4	2	18	153

City reports for week ended Sept. 11, 1937—Continued

State and city	Meningococcus meningitis		Poliomyelitis cases
	Cases	Deaths	
Maine:			
Portland	0	0	4
New Hampshire:			
Nashua	0	0	2
Massachusetts:			
Boston	0	0	7
Springfield	0	0	1
Worcester	0	0	3
Rhode Island:			
Providence	1	0	0
Connecticut:			
Bridgeport	0	0	1
New York:			
Buffalo	1	0	7
New York	1	1	51
Rochester	0	0	1
Syracuse	0	0	1
New Jersey:			
Camden	0	0	1
Newark	0	0	1
Pennsylvania:			
Philadelphia	0	0	10
Scranton	0	0	1
Ohio:			
Cleveland	0	0	12
Columbus	0	0	4
Toledo	0	0	5
Indiana:			
Indianapolis	0	0	2
Muncie	0	0	2
Terre Haute	0	0	1
Illinois:			
Chicago	1	0	62
Elgin	0	0	1
Moline	0	0	2
Springfield	0	0	1
Michigan:			
Detroit	0	0	32
Flint	0	0	1
Grand Rapids	0	0	2
Wisconsin:			
Madison	0	0	1
Milwaukee	0	0	11
Racine	0	0	1
Minnesota:			
Duluth	0	0	1
Minneapolis	0	0	8
St. Paul	0	0	10
Iowa:			
Cedar Rapids	0	0	2
Des Moines	0	0	3
Sioux City	0	0	1
Missouri:			
Kansas City	0	0	12
St. Joseph	1	0	1
St. Louis	0	0	3
North Dakota:			
Minot	0	0	1
Nebraska:			
Omaha	0	0	11
Kansas:			
Wichita	0	0	4
Delaware:			
Wilmington	3	1	0
Maryland:			
Baltimore	0	1	5
District of Columbia:			
Washington	2	0	0
West Virginia:			
Wheeling	0	0	1
Kentucky:			
Louisville	1	0	2
Tennessee:			
Memphis	0	0	1
Arkansas:			
Fort Smith	0	0	1
Little Rock	0	0	1
Louisiana:			
New Orleans	0	0	3
Shreveport	0	1	0
Oklahoma:			
Oklahoma City	0	0	1
Texas:			
Fort Worth	0	0	1
Galveston	0	0	1
Houston	0	0	8
San Antonio	0	0	1
New Mexico:			
Albuquerque	0	0	1
Colorado:			
Pueblo	0	0	5
Utah:			
Salt Lake City	0	0	5
Washington:			
Spokane	1	1	0
California:			
Los Angeles	0	0	5
Sacramento	0	0	2

Encephalitis, epidemic or lethargic.—Cases: Kansas City, 1; St. Louis, 76; Fargo, 1.
Pellagra.—Cases: Boston, 1; Charleston, S. C., 2; Savannah, 2; Birmingham, 1; New Orleans, 1; Dallas, 3.
Typhus fever.—Cases: New York, 1; Charleston, S. C., 7; Atlanta, 1; Savannah, 2; Birmingham, 1; Houston, 1; Los Angeles, 1.

FOREIGN AND INSULAR

CUBA

Provinces—Notifiable diseases—4 weeks ended August 21, 1937.—During the 4 weeks ended August 21, 1937, cases of certain notifiable diseases were reported in the Provinces of Cuba as follows:

Disease	Pinar del Rio	Habana	Matanzas	Santa Clara	Camaguey	Oriente	Total
Cancer		3	2	16	1	1	23
Chicken pox		3					3
Diphtheria	4	18	1	2	1	4	30
Dysentery (amoebic)					3		3
Dysentery (bacillary)				2			2
Leprosy	1	6			2		9
Malaria	100	34	31	186	37	204	592
Measles	2	1	5				8
Poliomyelitis		1		1		4	6
Tuberculosis	51	37	34	75	17	28	242
Typhoid fever	14	64	32	55	21	28	214
Undulant fever		1					1
Yaws				1		1	2

CZECHOSLOVAKIA

Communicable diseases—June 1937.—During the month of June 1937, certain communicable diseases were reported in Czechoslovakia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	10		Paratyphoid fever	24	3
Cerebrospinal meningitis	9	3	Poliomyelitis	22	2
Chicken pox	100	1	Puerperal fever	28	10
Diphtheria	1,816	85	Scarlet fever	1,815	21
Dysentery	47	5	Trachoma	75	
Influenza	21		Tularaemia	2	
Lethargic encephalitis	3	2	Typhoid fever	419	21
Malaria	729				

FINLAND

Communicable diseases—July 1937.—During the month of July 1937, cases of certain communicable diseases were reported in Finland as follows:

Disease	Cases	Disease	Cases
Diphtheria	196	Poliomyelitis	20
Dysentery	1	Scarlet fever	498
Influenza	574	Typhoid fever	109
Paratyphoid fever	110	Undulant fever	1

JAMAICA

Communicable diseases—4 weeks ended September 4, 1937.—During the 4 weeks ended September 4, 1937, 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		Lethargic encephalitis		1
Chicken pox		34	Poliomyelitis		1
Diphtheria	3	1	Puerperal fever		2
Dysentery	2	3	Tuberculosis	30	70
Erysipelas		1	Typhoid fever	9	81
Leprosy		3			

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 September 24, 1937, pages 1354-1368. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued October 29, 1937, and thereafter, at least for the time being, in the issue published on the last Friday of each month.

Cholera

China.—During the week ended September 11, 1937, cholera has been reported in China as follows: Hong Kong, 205 cases; Macao, 72 cases; Shanghai, 394 cases.

Plague

Dutch East Indies—Java—Pasoeroean.—During the week ended July 24, 1937, 1 case of plague with 1 death was reported in the mountain region near Pasoercean, which is about 30 miles from Surabaya, Java.

Hawaii Territory—Island of Maui—Makawao District—Omaopio.—A rat found September 3, 1937, in Omaopio, Makawao District, Island of Maui, Hawaii Territory, has been found plague infected.

India.—During the week ended September 11, 1937, plague was reported in India as follows: Karachi, 4 cases; Sind State, 4 cases.

Indochina—Cochinchina—Sadec.—During the week ended September 11, 1937, 1 case of plague was reported in Sadec, Cochinchina, Indochina.

Yellow Fever

French Equatorial Africa—Fort Archambault.—On September 14, 1937, 2 cases of yellow fever, 1 of which was a suspected case, were reported in Fort Archambault, French Equatorial Africa.

Gold Coast—Apedwa.—On September 10, 1937, 1 fatal case of yellow fever was reported in Apedwa, Gold Coast.

Ivory Coast—Gaoua.—On September 9, 1937, 2 cases of yellow fever with 1 death were reported in Gaoua, Ivory Coast, and on September 14 another suspected case was reported in the same place.

Nigeria—Abeokuta.—On September 7, 1937, 1 fatal case of yellow fever was reported in Abeokuta, Nigeria.

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