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MORTALITY IN CERTAIN STATES DURING 1935 WITH COMPARATIVE DATA FOR RECENT YEARS[1]

This report presents mortality data for 26 States, the District of Columbia, and Hawaii for the calendar year 1935. In addition to the death rate from all causes, rates are shown for 16 specific causes and for infant and maternal mortality.

The rates are computed from current and generally preliminary reports furnished by State departments of health. Because of some lack of uniformity in the method of classifying deaths according to cause, some delayed death certificates, and various other reasons, these preliminary rates cannot be expected to agree in all instances with final rates published by the Bureau of the Census. The final figures are based on a complete review and retabulation of the individual death certificates from each State. The preliminary rates given in the accompanying table are intended to serve as a current index of mortality until final figures are available.

The populations used for 1931–34 are the official estimates as published by the Bureau of the Census. These estimates for at least 1934 are corrected to agree with the population of the United States as computed from births, deaths, immigration, and emigration since the 1930 Census. Since no estimates have been prepared for States for 1935, the figures used represent an extrapolation from the 1934 estimates with an annual increment of approximately that used by the census in the years 1930–34.

Much has been said about the inaccuracy of population estimates for current and depression years because of population shifts and other factors. One of the largest movements has been from city to farm, and so the population estimates for cities are particularly unreliable. Estimates for whole States such as used in this report are likely to be less in error because urban-rural shifts do not necessarily mean interstate shifts. It is believed that the populations used in computing rates for this report are sufficiently reliable for the purpose at hand, namely, the comparison of the trend of mortality from year to year in the various States; the comparison of the actual rates for one State with those for others should be reserved for final figures in which the causes of death are classified in a uniform manner for all States.

[1] From the Office of Statistical Investigations, U. S. Public Health Service.

For purposes of comparison, the mortality rates for a few preceding years are given. These comparative rates are based on records from the same sources as those for the current reports. Although final mortality figures are often available for earlier years, the provisional figures are retained as being more comparable with current preliminary rates.

In table 1 the death rates for important causes for groups of States have been brought together. The majority of the rates are based on data from 26 States, with a population of about 85 million. The discussion which follows is based largely on the rates for States summarized in table 1, namely, those with data for the given cause for the whole 5-year period included in the report. While the rates in this group of States may not be the same as those for the total of all States, it is probable that the trend of the rates in these States will be comparable with the trend in the country as a whole.

Table 2 is a summary of death rates by quarters; the detailed tables 3 and 4 show rates for the year as a whole for each State, including some with data for only a part of the 5-year period.

The death rate from all causes in the group of 25 States with data for all 5 years was 10.8 per 1,000 in 1935, as compared with 10.9, 10.6, 10.7, and 11.0 in 1934, 1933, 1932, and 1931, respectively. In 12 of the 25 States the rate in 1935 was less than in 1934, in 9 it was higher, and in 4 States it was the same in the 2 years. In the 23 States with data available by quarters, the rate per 1,000 (annual basis) for the first quarter was 12.0 as compared with 11.9 in 1934; for the second, 11.0 as compared with 11.1; for the third, 9.6 as compared with 10.0; and for the fourth quarter the rate was 10.9 in both 1935 and 1934. In three of the four quarters the rates are almost the same in the 2 years. On the whole, the 1935 rate cannot be said to represent much change from that for 1934.

Infant mortality was somewhat lower in 1935 than in any of the 3 preceding years—52 per 1,000 live births as compared with 58 in 1934 and 56 in each of the years 1933 and 1932. The rate in 1935 decreased from that in 1934 in 21 and increased in the other 3 of the 24 States.

The tuberculosis death rate continued its uninterrupted decline, being 52.5 per 100,000 in 1935, as compared with 54.5, 56.5, and 60.2 for 1934, 1933, and 1932, respectively. Of the 26 States on which these rates are based, 16 showed a decline, 8 an increase, and 2 remained the same in 1935 as in 1934.

The minor epidemic of influenza that occurred in the first quarter of 1935 has been described in some detail in the Public Health Reports.[2] As compared with 1934, which was exceptionally free from

[2] Influenza and Pneumonia Mortality in a Group of About 95 Cities in the United States During Four Minor Epidemics, 1930-35, With a Summary for 1920-35. By Selwyn D. Collins and Mary Gover. Public Health Reports, Nov. 29, 1935 (Reprint No. 1720).

influenza, this very small epidemic was sufficient to account for a widespread but small increase in influenza and pneumonia mortality. In the group of 26 States the influenza death rate in 1935 was 19.2 per 100,000, as compared with 15.0, 22.8, and 25.2 in 1934, 1933, and 1932, respectively. In all except 1 of the 26 States, the rate for 1935 was above that for 1934, and in that State the rate was the same in the 2 years. The pneumonia death rate for 1935 was 80.1 per 100,000, as compared with 78.7, 69.0, and 75.7 in 1934, 1933, and 1932, respectively. Of the 26 States, the pneumonia rate was higher in 17 and lower in 9 States in 1935 than in 1934.

Because of the tendency toward alternately high and low rates from the common communicable diseases of children, year-to-year comparisons do not tell much about the real trend of these diseases. Measles and whooping-cough rates returned to more normal levels after the exceptionally high rates of 1934, but the rate for measles was still above the rates for both 1933 and 1932, and the whooping-cough rate was above that for 1933. The death rates for scarlet fever, diphtheria, and poliomyelitis were approximately the same as in 1934, with about half of the States showing slight increases and the other half showing decreases from the 1934 rates.

Meningococcus meningitis was higher than in any of the 3 preceding years—2.0 per 100,000 as compared with 0.8, 1.1, and 1.3 in 1934, 1933, and 1932, respectively. In 25 of the 26 States the rate was higher in 1935 than in 1934, and in the other State it was the same in the 2 years. In the last preceding period of high meningitis rates, the peaks in the various States came in 1929 and 1930.

Typhoid fever decreased to 1.9 per 100,000 in 1935 as compared with 2.3 in 1934 and 2.5 in 1933. In 20 of the 26 States the rate was lower in 1935 than in 1934. Deaths among children under 2 years of age from diarrhea and enteritis amounted to 7.6 per 100,000 total population, as compared with 10.7, 9.4, and 9.4 in 1934, 1933, and 1932, respectively. In 24 of the 25 States the rate decreased in 1935 as compared with 1934.

The death rate from diabetes was approximately the same in 1935 and 1934 (23.3 and 23.2, respectively), but in both years the rates were above those for 1933 and 1932.

Cancer continued its steady increase, the rate of 111 per 100,000 in 1935 being greater than in any other year included; 18 of the 26 States increased in 1935 as compared with 1934.

Diseases of the heart continued an upward trend, with a rate of 255 for 1935 as compared with 250, 231, and 224 for 1934, 1933, and 1932, respectively; 20 of the 24 States increased in 1935 over 1934.

Nephritis was lower in 1935 than in the preceding year, 82 per 100,000, as compared with 85. In 19 of the 25 States, the 1935 rate was less than that for 1934.

The rate for cerebral hemorrhage was almost the same as the rates in the 3 preceding years. Of 22 States with available data, 13 showed increases and 9 decreases in 1935 as compared with 1934.

TABLE 1.—*Summary of mortality from certain causes in a group of States, 1931–35* [1]

Diseases (numbers in parentheses are from the International List of Causes of Death, fourth revision, 1929)	1935	1934	1933	1932	1931
	Death rate per 1,000 population				
25 States (population July 1, 1935, 83,358,000):					
All causes	10.8	10.9	10.6	10.7	11.0
	Deaths under 1 year per 1,000 live births				
24 States (live births 1935, 1,299,048):					
Total infant mortality	52	58	56	56	60
18 States (live births 1935, 1,021,952):					
All infant mortality except malformations and early infancy	21	24	23	24	28
	Deaths of mothers per 1,000 live births				
24 States (live births 1935, 1,299,048):					
Maternal mortality	5.3	5.5	5.6	5.9	6.2
	Death rate per 100,000 population				
26 States (population July 1, 1935, 85,111,000):					
Typhoid fever (1, 2)	1.9	2.3	2.5	3.0	3.5
Measles (7)	2.7	4.3	1.7	1.4	2.4
Whooping cough (9)	3.4	5.1	3.1	3.9	3.6
Scarlet fever (8)	2.0	1.9	1.9	1.9	2.0
Diphtheria (10)	2.3	2.4	2.7	3.5	4.0
Acute anterior poliomyelitis (16)	.8	.6	.6	.7	2.0
Meningococcus meningitis (18)	2.0	.8	1.1	1.3	2.1
Influenza (11)	19.2	15.0	22.8	25.2	23.3
Pneumonia, all forms (107–109)	80.1	78.7	69.0	75.7	80.1
Tuberculosis, all forms (23–32)	52.5	54.5	56.5	60.2	64.5
Cancer (45–53)	110.8	108.6	104.7	102.3	99.9
Diabetes mellitus (59)	23.3	23.2	21.9	22.2	20.6
25 States (population July 1, 1935, 83,358,000):					
Diarrhea and enteritis under 2 years (119)	7.6	10.7	9.4	9.4	13.1
25 States (population July 1, 1935, 81,780,000):					
Nephritis, all forms (130–132)	82.2	84.6	81.8	85.3	85.0
24 States (population July 1, 1935, 80,027,000):					
Diseases of the heart (90–95)	254.9	249.6	230.8	223.9	216.7
22 States (population July 1, 1935, 65,132,000):					
Cerebral hemorrhage, apoplexy (82, a, b)	85.1	84.1	83.1	84.3	83.7

[1] See tables 3 and 4 for names of States included for each disease. The District of Columbia is counted as a State.

TABLE 2.—*Mortality from certain causes in each quarter of 1935, 1934, 1933, and 1932 in the 23 [1] States with available data*

[Estimated population July 1, 1935: 77,959,000]

Period	All causes, rate per 1,000 population	Rate per 1,000 live births			Death rate per 100,000 population (annual basis)																		
		Total infant mortality	All except malformations and early infancy	Maternal mortality	Typhoid fever (1, 2)	Measles (7)	Scarlet fever (8)	Whooping cough (9)	Diphtheria (10)	Influenza (11)	Poliomyelitis (16)	Lethargic encephalitis (17)	Meningococcus meningitis (18)	Tuberculosis, all forms (23–32)	Cancer, all forms (45–53)	Diabetes mellitus (59)	Diseases of the nervous system (78–89)	Cerebral hemorrhage, apoplexy (82a, b)	Diseases of the circulatory system (90–103)	Diseases of the heart (90–95)	Diseases of the respiratory system (104–114)	Pneumonia, all forms (107–109)	Diseases of the digestive system (115–129)	Diarrhea and enteritis under 2 years (119)	Nephritis (130–132)
January–December:																									
1935	10.9	52	21	5.2	1.7	2.8	2.1	3.0	2.1	17.6	0.7	0.6	2.1	52.3	116.2	24.5	104.8	86.0	285.6	258.9	91.6	79.8	66.3	6.9	80.4
1934	11.0	56	24	5.4	2.2	3.6	2.0	4.1	2.2	13.9	.6	.6	.8	53.9	113.9	24.3	100.3	84.8	284.2	253.7	89.4	77.7	70.4	9.7	84.1
1933	10.7	55	22	5.5	2.2	1.5	2.0	2.7	2.4	22.7	.6	.8	1.1	56.1	109.8	23.3	101.4	83.7	267.5	234.4	83.3	71.2	68.3	8.7	82.2
1932	10.9	56	23	5.8	2.6	1.3	2.1	3.7	3.3	26.8	.7	.7	1.4	59.7	107.4	23.3	103.0	85.0	261.7	227.5	91.0	77.9	68.3	9.0	84.9
January–March:																									
1935	12.0	62	30	5.9	.8	4.5	3.0	3.4	2.2	41.4	.2	.6	2.3	55.4	112.9	27.4	112.8	92.1	316.3	286.9	137.3	123.6	64.3	4.2	87.5
1934	11.9	63	20	6.0	.9	5.4	3.1	3.9	2.3	25.7	.3	.6	1.0	57.1	110.8	27.3	110.6	92.0	321.4	285.6	133.7	118.7	64.1	5.7	92.9
1933	11.9	65	30	6.2	1.1	1.8	3.0	2.6	2.4	61.7	.2	.7	1.6	59.6	108.4	27.0	112.6	93.1	296.0	259.6	125.5	111.4	61.1	5.4	89.1
1932	11.9	60	26	6.3	1.7	1.8	3.1	4.5	4.2	41.7	.5	.8	2.1	64.5	105.7	26.1	111.9	92.9	289.1	251.6	131.5	116.5	64.0	5.4	93.9
April–June:																									
1935	11.0	53	22	5.4	1.1	5.7	2.8	4.5	1.4	13.4	.3	.7	2.8	56.0	117.2	23.7	106.6	85.6	287.3	261.1	94.2	81.0	67.6	7.4	82.4
1934	11.1	58	25	6.1	1.7	7.0	2.3	5.1	1.4	11.5	.6	.5	1.0	57.2	115.2	24.5	101.4	84.6	285.0	254.3	91.5	78.5	70.5	8.3	86.1
1933	10.5	53	20	5.8	1.5	3.2	2.4	2.7	1.3	11.7	.4	.7	1.2	60.1	109.3	22.8	103.0	84.1	263.4	229.7	73.0	60.8	68.0	8.0	83.5
1932	10.8	58	24	6.2	1.6	2.7	2.7	4.3	2.4	23.0	.4	.6	1.5	65.0	106.8	22.9	104.5	84.4	262.0	227.9	85.0	72.7	67.6	8.0	86.3
July–September:																									
1935	9.6	43	15	4.7	3.1	.7	.9	2.4	1.5	4.3	1.7	.5	1.4	48.9	115.3	21.4	92.2	76.1	245.3	221.8	45.6	36.4	69.4	9.9	70.9
1934	10.0	51	20	4.9	3.8	1.3	.8	4.6	1.4	4.2	1.1	.8	.6	50.4	113.4	21.0	89.1	76.0	242.8	218.3	44.2	36.0	78.8	15.5	75.9
1933	9.4	48	17	5.2	3.7	.5	.8	3.2	1.5	4.5	1.2	1.1	.6	52.5	109.4	19.9	88.1	72.0	227.7	198.7	42.3	33.4	75.6	12.9	72.7
1932	9.4	49	18	5.6	4.3	.4	.7	3.4	2.1	5.1	1.3	.7	.8	54.7	106.4	18.9	88.8	73.5	218.4	188.2	42.5	33.4	76.6	14.5	73.9
October–December:																									
1935	10.9	49	19	4.9	1.8	.3	1.8	1.7	3.3	11.9	.7	.5	1.7	49.0	119.3	25.4	107.7	90.3	294.4	266.4	90.3	79.2	63.7	6.0	78.3
1934	10.9	54	24	4.7	2.3	.9	1.8	3.1	3.5	14.2	.5	.6	.8	51.2	116.0	24.6	100.6	86.6	288.5	257.5	89.3	78.3	67.9	9.4	81.8
1933	10.9	54	22	4.9	2.5	.8	2.0	2.4	4.5	13.6	.6	.9	.8	52.1	111.9	23.5	102.1	85.7	283.5	250.1	93.1	80.1	68.3	8.5	83.6
1932	11.4	58	25	5.3	2.6	.5	1.7	2.4	4.6	37.6	.7	.7	1.0	54.7	110.7	25.2	106.9	89.3	277.5	242.8	105.4	89.2	65.0	7.9	85.4

[1] Includes all States for which data are available by quarters for the 4 years covered. For a few causes 1 to 3 States were omitted because of missing data. The States are California, Connecticut, District of Columbia, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Maryland, Michigan, Minnesota, Montana, Nebraska, New Jersey, New York, Pennsylvania, Rhode Island, South Dakota, Tennessee, Virginia, and Wisconsin.

TABLE 3.—*Mortality in certain States, 1931–35*

State	Deaths, all causes, per 1,000 population					Maternal mortality, per 1,000 live births				
	1935	1934	1933	1932	1931	1935	1934	1933	1932	1931
Total [1]	10.8	10.9	10.6	10.7	11.0	5.3	5.5	5.6	5.9	6.2
California	11.6	11.1	11.2	10.9	11.3	4.7	4.4	4.8	5.8	6.3
Connecticut	10.1	10.2	10.1	10.1	10.4	4.3	5.3	6.0	5.7	6.8
District of Columbia	17.0	16.5	15.9	16.1	15.9	6.1	3.6	4.8	7.9	6.1
Georgia	11.4	11.8	10.4	10.9	11.1	7.2	7.4	7.7	9.5	10.0
Idaho	10.8	10.6	9.6	9.2	9.6	6.2	5.8	4.4	4.4	4.5
Illinois	10.8	11.1	10.5	10.5	11.1	4.7	5.2	5.0	5.1	5.4
Indiana	11.4	12.3	11.6	11.8	11.9	5.2	5.3	5.4	4.9	5.6
Iowa	10.5	10.6	10.2	10.2	10.3	5.4	5.6	4.9	4.4	4.1
Kansas	10.7	10.5	10.4	10.1	10.0	5.3	5.5	4.8	5.4	5.8
Louisiana	10.8	10.6	10.6	10.6	10.9	8.0	8.1	8.1	8.2	8.9
Maryland	12.3	12.3	12.2	12.5	13.2	5.0	5.1	4.9	4.6	6.0
Michigan	9.9	9.9	9.6	9.7	9.8	4.9	5.3	5.5	5.7	5.9
Minnesota	9.9	10.1	9.6	9.6	9.6	4.9	4.8	4.5	4.1	4.6
Mississippi	9.5	9.9	10.4	9.9	10.8					
Montana	11.7	10.4	9.7	9.7	9.7	4.6	5.7	5.8	5.7	7.0
Nebraska	9.4	9.5	9.2	9.2	9.1	5.7	5.5	4.2	5.0	5.1
New Jersey	10.1	10.3	10.4	10.1	10.6	4.5	5.4	5.1	5.7	5.9
New York	11.2	11.4	11.2	11.3	11.6	5.1	5.2	6.8	6.1	5.9
North Carolina	10.1	10.7	9.3	9.4	10.2	6.6	6.9	6.4	6.8	7.8
Pennsylvania	10.8	10.8	10.6	10.9	11.3	4.9	5.2	5.1	5.4	5.7
Rhode Island	10.9	10.7	11.1	11.5	11.4	4.3	5.7	5.6	5.7	5.5
South Carolina						9.6	9.2			
South Dakota	8.9	9.3	8.8	8.2	8.6	5.5	4.5	4.1	3.7	4.9
Tennessee	10.9	10.9	10.2	10.7	10.7	6.9	6.3	6.1	6.6	6.8
Virginia	11.7	11.6	10.8	10.9	11.6	5.3	5.7	5.6	6.6	7.4
Washington	11.3	10.9				5.2	4.7			
Wisconsin	10.1	10.0	9.8	10.0	10.1	3.7	4.2	4.7	4.3	4.3
Hawaii	7.8	8.8	9.6	9.7	9.8	4.3	5.4	5.8		
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over	8.4	8.5	8.6	8.6	8.8					

State	Infant mortality rate per 1,000 live births									
	Total infant mortality					All except malformations and early infancy				
	1935	1934	1933	1932	1931	1935	1934	1933	1932	1931
Total [2]	52	58	56	56	60	21	24	23	24	28
California	50	52	53	53	57	20	22	24	23	26
Connecticut	39	50	48	48	54					
District of Columbia	59	64	65	73	71	25	32	27	33	35
Georgia	69	80	68	65	69					
Idaho	51	50	47	58	59	20	18	14	32	27
Illinois	46	58	51	52	56	17	24	20	21	25
Indiana	54	56	53	55	57	23	27	24	26	28
Iowa	47	53	50	48	51	19	21	19	20	22
Kansas	49	48	53	48	48	21	19	23	18	19
Louisiana	68	70	71	66	68	37	40	39	36	40
Maryland	62	69	65	70	79	30	33	31	35	45
Michigan	47	52	51	54	56	17	19	18	22	22
Minnesota	46	49	50	43	47	17	18	20	15	17
Montana	56	52	49	49	56					
Nebraska	42	46	51	43	47	16	16	19	15	19
New Jersey	47	49	46	52	57					
New York	48	52	54	53	57	19	21	22	22	33
North Carolina	67	77	66	67	73					
Pennsylvania	50	54	52	59	65	23	26	24	31	34
Rhode Island	47	54	56	57	61	16	18	17	23	22
South Carolina	80	87								
South Dakota	50	59	55	51	58	24	27	25	23	28
Tennessee	64	75	71	69	70	39	47	44	42	44
Virginia	64	68	63	66	72					
Washington	45					15				
Wisconsin	47	50	49	51	53	17	19	17	19	20
Hawaii	67	75	72	76	75	37	48	44		

[1] All causes includes 25 States; maternal mortality 24 States. States not having data for all 5 years are not included in the totals.

[2] Infant mortality includes 24 States; all except malformations and early infancy, 18 States.

TABLE 4.—*Death rates for various causes per 100,000 population*

State	Typhoid fever (1, 2)					Diarrhea and enteritis under 2 years (119)				
	1935	1934	1933	1932	1931	1935	1934	1933	1932	1931
Total [1]	1.9	2.3	2.5	3.0	3.5	7.6	10.7	9.4	9.4	13.1
California	1.3	1.4	1.5	1.3	1.6	7.1	9.1	8.4	8.2	11.5
Connecticut	.8	.4	.5	.5	1.0	1.7	5.1	4.7	4.2	7.8
District of Columbia	3.2	1.6	3.6	1.4	3.9	11.8	14.3	11.5	16.0	16.7
Georgia	8.8	10.6	8.4	12.6	16.7	17.1	22.1	16.7	13.2	18.8
Idaho	2.7	5.6	4.5	3.3	3.6	2.7	11.6	6.9	4.5	4.7
Illinois	1.1	1.7	1.4	1.7	1.5	4.4	8.3	6.4	6.9	3.9
Indiana	1.6	3.1	2.9	2.6	2.9	6.5	12.2	11.1	12.3	13.9
Iowa	1.3	2.2	1.0	1.7	1.4	4.0	6.9	4.0	4.5	7.6
Kansas	1.6	1.4	1.5	1.7	2.2	6.4	8.2	8.5	7.2	8.1
Louisiana	8.9	9.5	11.4	10.8	14.5	17.1	21.1	19.1	14.0	22.4
Maryland	2.6	2.4	2.2	3.1	5.4	13.5	17.3	15.1	19.6	31.3
Michigan	.6	1.4	1.0	1.1	1.4	4.2	7.5	5.8	6.3	9.2
Minnesota	.6	.5	.8	.7	.6	3.8	4.0	5.0	3.9	4.4
Mississippi	2.5	3.0	6.0	6.3	9.5	11.1	19.7	15.1	10.9	14.4
Montana	2.4	3.0	2.8	2.8	2.2	8.0	13.2	5.4	7.4	11.0
Nebraska	.4	1.1	.7	1.4	1.7	3.6	5.4	4.7	4.9	7.1
New Jersey	.6	.9	1.0	.7	1.0	3.4	5.3	4.3	5.6	9.1
New York	.5	.6	.9	1.0	1.1	5.6	6.4	6.8	6.4	8.7
North Carolina	2.4	2.7	3.9	5.0	5.1	22.6	27.2	21.0	16.8	22.2
Pennsylvania	.8	1.1	1.2	1.8	2.1	5.6	8.3	8.6	12.3	17.5
Rhode Island	.3	.7	.4	.3	1.0	5.1	4.0	4.2	8.0	8.6
South Carolina	10.8	8.9	10.5	14.7	16.6	7.6				
South Dakota	1.4	2.3	5.0	1.4	2.7	7.6	9.2	8.1	6.4	11.4
Tennessee	6.7	7.5	9.1	11.0	10.7	19.8	26.4	24.0	20.4	23.4
Virginia	3.0	3.4	4.4	5.1	7.3	11.7	17.3	16.1	14.8	22.5
Washington	1.0	1.7				3.7	2.9			
Wisconsin	.3	.6	.5	.7	.7	4.4	6.6	6.6	6.8	10.4
Hawaii	2.3	3.3	5.3	2.4	2.6	18.5	28.9	36.5	45.7	49.3
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over	1.1	1.5	1.6	1.7	2.4	5.8	8.1	7.5	8.1	12.2

State	Measles (7)					Whooping cough (9)				
	1935	1934	1933	1932	1931	1935	1934	1933	1932	1931
Total (26 States)	2.7	4.3	1.7	1.4	2.4	3.4	5.1	3.1	3.9	3.6
California	1.0	1.3	1.8	.9	1.9	1.0	2.7	3.2	2.9	2.4
Connecticut	1.9	.4	.5	1.1	2.3	1.2	1.0	1.6	2.7	2.7
District of Columbia	[2]	9.7	.8	.2	2.4	.6	7.8	1.4	4.0	5.7
Georgia	.9	18.1	2.1	.5	2.1	5.1	11.2	7.3	3.8	3.8
Idaho	2.2	3.6	.7	.2	1.8	7.4	3.3	.2	.7	6.3
Illinois	3.7	2.7	.7	.6	4.2	2.6	3.9	1.0	2.9	2.7
Indiana	2.7	6.8	.4	.4	4.5	4.0	5.7	2.1	5.0	4.3
Iowa	6.1	2.7	.2	.2	.1	1.7	3.8	2.6	2.0	2.4
Kansas	11.8	1.9	.7	1.3	.4	2.8	4.7	3.2	2.5	1.3
Louisiana	5.8	7.6	1.7	1.7	.6	3.0	10.2	5.6	4.0	5.4
Maryland	1.4	8.8	.2	1.1	5.9	2.5	7.3	4.9	5.4	7.6
Michigan	3.6	.7	2.2	3.6	.6	2.5	2.8	3.0	3.9	3.7
Minnesota	2.4	1.5	2.7	.5	.3	2.4	4.2	2.9	1.7	2.1
Mississippi	1.0	13.9	2.7	.1	.4	5.0	14.4	10.1	4.9	3.4
Montana	9.1	5.4	2.6	2.2	.4	4.3	4.7	3.0	4.1	8.9
Nebraska	6.1	1.6	.6	.1	.3	1.2	5.9	2.0	1.9	4.0
New Jersey	1.3	1.2	1.7	1.0	2.4	2.3	1.5	1.0	2.9	3.3
New York	1.5	.6	2.5	1.6	1.8	2.5	1.7	2.2	2.3	2.9
North Carolina	2.1	9.5	2.6	1.8	3.2	9.0	13.0	6.0	6.9	5.7
Pennsylvania	2.2	2.6	1.2	2.1	4.2	2.0	3.2	1.9	4.4	3.1
Rhode Island	1.0	.4	[2]	6.0	1.4	1.1	3.0	3.6	1.6	2.3
South Carolina	1.3	13.3	3.5	2.4	2.2	9.9	16.5	6.2	7.6	5.3
South Dakota	4.0	16.6	1.0	[2]	.3	4.0	7.8	6.3	6.3	5.7
Tennessee	1.4	16.3	2.4	.3	3.8	14.1	9.6	5.7	7.5	6.3
Virginia	5.5	6.2	2.1	.9	3.2	8.1	8.3	4.4	12.5	6.2
Washington	1.5	.9				1.9	2.6			
Wisconsin	2.4	2.2	.9	1.4	1.4	1.7	3.5	2.0	2.2	1.9
Hawaii	[2]	.3	.5	6.6	10.2	2.6	14.1	12.4	1.1	.3
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over	2.5	2.7	1.5	1.7	3.2	2.6	3.7	2.3	3.0	3.6

[1] Typhoid fever includes 26 States; diarrhea and enteritis, 25 States.
[2] No deaths.

TABLE 4.—*Death rates for various causes per 100,000 population*—Continued

State	Scarlet fever (8)					Diphtheria (10)				
	1935	1934	1933	1932	1931	1935	1934	1933	1932	1931
Total (26 States)	2.0	1.9	1.9	1.9	2.0	2.3	2.4	2.7	3.5	4.0
California	1.1	1.3	1.4	.9	.9	2.1	1.7	1.9	3.3	2.9
Connecticut	1.3	.8	1.4	1.1	.7	1.0	.4	1.0	1.0	.9
District of Columbia	1.6	1.6	2.6	2.6	1.0	5.6	3.0	2.8	3.2	7.1
Georgia	.7	.5	.6	.6	1.5	5.4	6.2	6.2	5.7	5.0
Idaho	6.5	2.9	.2	1.9	2.2	.7	2.9	1.8	3.1	2.5
Illinois	5.1	2.6	3.5	3.3	4.5	2.6	1.9	1.7	3.0	4.7
Indiana	3.5	3.6	2.7	2.7	3.6	4.1	3.6	4.5	5.2	4.1
Iowa	2.8	2.5	1.8	1.5	1.6	2.1	1.6	2.1	2.3	1.7
Kansas	2.4	1.8	2.1	1.7	1.2	2.0	2.2	2.9	3.9	3.7
Louisiana	.5	.6	.5	.4	.7	5.1	4.6	4.7	6.5	6.4
Maryland	1.7	1.5	2.3	1.9	1.9	1.3	1.3	1.7	3.1	4.0
Michigan	1.9	3.4	3.1	2.2	2.3	1.1	.8	2.2	2.1	3.5
Minnesota	3.0	1.2	1.4	1.6	.9	.6	.7	1.0	.9	1.4
Mississippi	.4	.7	.4	.6	.5	4.2	4.1	5.4	6.2	9.9
Montana	3.9	2.0	1.9	1.5	1.9	2.8	1.9	3.0	.9	1.7
Nebraska	2.9	1.7	1.7	2.0	1.5	1.2	1.6	1.5	4.0	3.5
New Jersey	.6	1.5	1.4	1.7	2.0	1.1	1.3	1.2	2.3	2.9
New York	1.4	1.2	1.6	2.8	1.7	.8	1.0	1.1	2.1	2.2
North Carolina	.7	1.2	1.4	1.1	2.0	4.7	6.3	6.1	4.5	7.3
Pennsylvania	2.0	2.3	2.7	2.6	2.3	1.5	2.2	2.3	4.0	3.6
Rhode Island	.4	.6	1.3	3.5	1.7	.7	.3	1.3	4.1	4.7
South Carolina	.3	.6	.8	.5	1.0	3.5	4.5	5.2	4.9	4.9
South Dakota	2.7	1.4	1.6	1.3	.6	1.7	1.0	2.3	2.9	2.6
Tennessee	1.0	2.0	1.8	.8	2.4	6.7	7.6	8.2	8.2	9.3
Virginia	1.0	1.8	2.1	1.3	1.4	4.7	6.0	6.3	5.3	8.5
Washington	1.5	1.6				.7	.5			
Wisconsin	3.6	1.8	1.2	1.5	2.1	.4	.9	.6	1.9	1.8
Hawaii	(1)	(1)	(1)	.3	(1)	.7	.5	1.8	4.8	5.7
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over	2.6	2.6	2.6	2.8	3.2	2.2	2.1	2.6	3.9	4.5

State	Poliomyelitis (16)					Meningococcus meningitis (18)				
	1935	1934	1933	1932	1931	1935	1934	1933	1932	1931
Total (26 States)	0.8	0.6	0.6	0.7	2.0	2.0	0.8	1.1	1.3	2.1
California	1.1	1.8	.2	.5	.8	2.0	.8	1.3	1.4	2.5
Connecticut	1.3	.1	.2	.4	5.5	1.0	.4	.5	.7	.7
District of Columbia	2.0	.6	.4	1.2	.8	18.8	1.0	2.2	2.6	5.7
Georgia	.5	.8	.7	.9	1.2	1.0	.6	.4	.8	1.8
Idaho	.9	3.3	.9	.2	.7	4.9	2.9	1.6	3.1	6.9
Illinois	.5	.4	.4	.5	1.3	2.6	1.5	2.7	2.0	3.2
Indiana	.3	.7	.3	.2	.6	2.6	.6	1.4	3.9	5.5
Iowa	.4	.3	1.6	1.0	1.1	2.0	1.1	1.4	.9	2.6
Kansas	.5	.6	.7	.6	.6	2.1	1.1	1.1	1.3	1.3
Louisiana	.7	.4	.4	.5	.9	.8	.6	1.2	1.3	2.3
Maryland	.2	.3	.2	.3	.7	5.1	.2	1.1	1.1	1.8
Michigan	.6	.5	.1	.5	2.2	.8	.5	.6	1.3	2.4
Minnesota	.4	.8	1.3	.5	2.4	1.7	.8	1.2	.9	1.6
Mississippi	.4	.9	.3	.8	.4	1.1	.7	1.0	1.0	1.5
Montana	.2	3.2	.4	1.1	2.8	2.6	1.7	.6	1.3	2.2
Nebraska	.7	.6	.3	.9	.9	2.7	1.3	.6	.5	1.6
New Jersey	.8	.3	.6	1.1	3.5	.7	.5	.6	.8	1.8
New York	1.1	.3	1.1	.5	5.2	2.1	.6	.7	1.2	2.7
North Carolina	2.0	.4	.4	.5	.6	.8	.5	.3	.5	.6
Pennsylvania	.3	.3	.6	1.5	1.0	1.2	.7	.9	1.3	1.9
Rhode Island	3.4	(1)	.1	.4	1.4	2.3	.7	.4	.4	.9
South Carolina	.7	.7	.7	.6	.9	1.3	.7	2.0	1.4	2.1
South Dakota	1.0	1.4	.9	1.1	2.3	.4	.4	.1	.4	.3
Tennessee	.9	1.2	1.2	.6	.9	4.0	1.4	.9	1.4	4.3
Virginia	1.8	.7	.4	.7	.6	4.1	1.5	1.0	1.1	1.8
Washington	.6	3.4				2.2	1.0			
Wisconsin	.2	.5	.4	.4	1.6	1.2	.7	.5	.9	1.3
Hawaii	(1)	.3	.5	.8	.8	.7	2.0	.8	2.9	2.3
Industrial policyholders Metropolitan Life Insurance Co., ages 1 and over	.8	.5	.6	1.1	2.7					

[1] No deaths.

TABLE 4.—*Death rates for various causes per 100,000 population*—Continued

State	Influenza (11)					Pneumonia, all forms (107–109)				
	1935	1934	1933	1932	1931	1935	1934	1933	1932	1931
Total (26 States)	19.2	15.0	22.8	25.2	23.3	80.1	78.7	69.0	75.7	80.1
California	8.5	5.2	13.8	18.3	13.6	61.0	54.0	61.8	64.1	66.5
Connecticut	8.6	7.4	21.5	15.3	17.3	64.9	63.9	73.6	66.0	72.3
District of Columbia	13.6	7.6	9.9	15.5	18.1	151.5	131.6	115.6	135.5	140.3
Georgia	44.8	32.9	41.5	39.0	44.1	99.8	100.5	76.3	82.9	82.9
Idaho	18.3	14.7	18.7	21.0	9.2	102.2	102.7	72.8	76.7	76.5
Illinois	15.4	10.6	15.4	24.0	20.3	76.7	74.9	63.3	67.4	69.1
Indiana	25.5	22.5	31.1	44.0	35.0	89.2	85.9	69.1	90.6	86.2
Iowa	21.4	17.9	33.3	35.8	25.7	77.6	77.0	74.1	78.9	66.8
Kansas	30.6	19.2	45.9	41.6	30.0	78.0	58.1	53.4	53.5	51.5
Louisiana	23.5	20.1	32.4	52.4	42.1	84.8	72.6	64.1	75.5	81.4
Maryland	14.3	8.7	17.4	20.1	20.6	97.4	96.5	93.6	103.0	126.3
Michigan	13.9	10.5	17.0	22.2	16.5	73.8	67.8	54.4	63.3	57.6
Minnesota	15.9	14.6	24.5	30.8	21.8	76.9	81.3	58.9	68.8	69.1
Mississippi	41.5	24.9	34.8	40.5	37.5	61.8	63.9	49.6	48.3	56.3
Montana	41.5	26.4	35.8	41.6	32.7	121.4	81.6	63.3	63.6	70.3
Nebraska	22.2	17.4	34.5	36.9	21.8	76.3	73.2	70.0	62.0	54.3
New Jersey	9.2	7.3	12.3	14.0	13.6	63.4	66.2	71.3	61.3	78.0
New York	6.7	6.7	12.9	13.0	13.4	83.6	83.9	91.4	96.7	105.6
North Carolina	29.0	21.6	28.8	20.5	33.4	92.7	102.1	64.9	80.7	87.1
Pennsylvania	18.5	15.1	25.1	29.3	28.1	81.4	79.9	69.7	81.5	97.2
Rhode Island	8.0	7.5	17.4	11.3	13.9	74.9	70.6	76.1	93.8	98.8
South Carolina	46.4	42.8	37.5	50.8	65.9	91.7	96.6	87.4	99.0	104.8
South Dakota	31.0	29.1	45.1	28.9	26.0	94.1	83.5	61.0	46.6	55.4
Tennessee	41.9	35.6	39.7	54.1	37.0	100.2	96.2	77.4	87.1	84.5
Virginia	37.9	27.0	37.1	37.3	47.2	84.7	79.1	66.6	71.5	80.6
Washington	16.4	13.8				57.3	54.7			
Wisconsin	18.5	11.6	25.6	28.5	18.1	63.1	67.6	51.4	66.5	65.4
Hawaii	13.1	14.6	7.4	11.3	11.0	69.2	117.1	97.8	100.1	102.3
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over	14.6	11.4	20.3	19.1	21.1	66.1	65.0	62.5	65.4	73.7

State	Tuberculosis, all forms (23–32)					Cancer (45–53)				
	1935	1934	1933	1932	1931	1935	1934	1933	1932	1931
Total (26 States)	52.5	54.5	56.5	60.2	64.5	110.8	108.6	104.7	102.3	99.9
California	72.0	74.9	76.4	81.0	88.9	134.5	129.4	127.0	120.2	124.2
Connecticut	41.8	42.5	47.2	49.0	53.6	126.0	128.0	121.4	121.5	114.0
District of Columbia	121.6	122.5	124.6	121.5	120.2	155.9	152.5	149.5	146.7	135.2
Georgia	58.1	59.2	59.9	65.5	72.9	57.1	58.7	55.0	52.2	52.7
Idaho	26.3	28.8	31.0	28.6	29.8	71.4	75.4	82.6	76.6	66.4
Illinois	51.3	52.1	53.4	54.1	59.1	126.5	122.4	117.7	114.4	112.7
Indiana	47.7	54.2	56.9	59.9	61.1	113.5	114.8	109.7	110.8	106.1
Iowa	26.1	24.9	25.7	28.2	28.5	128.6	125.9	123.0	116.5	112.9
Kansas	28.3	26.9	30.3	32.5	37.0	109.3	113.0	108.1	104.2	97.0
Louisiana	70.2	74.5	73.0	72.7	81.5	78.1	71.6	71.8	67.1	68.2
Maryland	78.4	78.1	81.5	90.4	95.7	126.1	124.3	117.5	116.0	111.6
Michigan	39.7	43.1	46.5	48.2	53.3	100.7	101.0	96.9	93.3	90.6
Minnesota	34.9	34.9	37.9	39.2	40.0	131.9	130.7	131.1	124.2	121.3
Mississippi	49.7	54.2	59.9	62.6	72.1	53.8	50.6	49.5	50.2	48.7
Montana	46.4	49.2	50.3	55.0	61.3	96.3	87.5	91.4	92.9	74.5
Nebraska	21.9	21.7	21.6	20.3	24.6	105.9	109.0	101.4	100.6	98.5
New Jersey	50.2	52.8	56.7	60.6	65.1	124.2	123.2	119.6	112.9	113.4
New York	56.1	56.1	59.1	61.3	66.4	140.2	130.6	128.1	124.1	123.8
North Carolina	58.1	63.4	64.3	65.5	69.4	51.9	51.1	50.0	46.2	48.2
Pennsylvania	45.3	47.2	48.4	52.5	56.4	109.1	106.8	102.8	102.1	98.9
Rhode Island	48.1	43.6	49.5	52.4	61.9	139.1	129.5	134.3	140.7	132.6
South Carolina	54.6					50.0	53.5	48.2	41.6	45.3
South Dakota	38.5	33.8	38.3	45.1	43.7	87.8	84.3	82.4	80.7	82.7
Tennessee	88.5	88.4	93.8	101.4	107.2	67.8	64.2	60.0	56.8	57.1
Virginia	74.3	72.9	77.3	81.0	87.0	77.5	74.5	72.3	67.9	64.3
Washington	52.0	47.8				133.4	129.6			
Wisconsin	35.1	37.1	40.7	44.9	48.1	123.9	122.1	116.4	116.4	115.8
Hawaii	68.3	81.6	99.6	94.3	98.2	62.0	60.6	68.6	71.5	57.2
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over	55.6	59.4	64.7	69.8	76.2	95.5	96.1	94.6	91.1	84.1

TABLE 4.—*Death rates for various causes per 100,000 population*—Continued

State	Diabetes mellitus (59)					Cerebral hemorrhage, apoplexy (82, a, b)				
	1935	1934	1933	1932	1931	1935	1934	1933	1932	1931
Total [1]	23.3	23.2	21.9	22.2	20.6	85.1	84.1	83.1	84.3	83.7
California	23.9	21.5	22.6	20.8	19.2	81.0	77.4	82.6	77.8	78.6
Connecticut	29.7	25.9	24.6	25.1	21.9					
District of Columbia	31.1	37.8	29.5	28.2	25.1	118.4	107.6	115.2	107.5	105.7
Georgia	12.8	13.0	11.7	11.6	10.9	79.9	76.6	72.6	80.0	84.8
Idaho	12.9	13.2	10.7	12.7	12.5	70.8	71.9	74.8	79.9	95.3
Illinois	24.9	27.7	26.1	26.3	25.6	71.8	71.1	72.4	73.0	73.0
Indiana	16.0	18.7	14.6	15.5	16.4	125.8	127.2	110.8	114.1	111.2
Iowa	21.9	24.9	19.5	16.0	19.8	107.6	110.4	112.1	109.0	111.2
Kansas	21.9	23.6	23.3	22.1	21.9	97.2	96.8	99.8	101.2	94.8
Louisiana	15.4	13.8	14.0	13.7	12.8	64.8	56.0	60.6	60.2	57.5
Maryland	26.0	23.3	23.6	25.7	23.0	108.7	102.1	103.0	112.6	108.6
Michigan	23.9	21.7	21.9	21.9	19.1	81.8	84.1	81.4	84.1	87.7
Minnesota	22.3	22.7	20.7	22.2	19.5	83.2	82.4	80.2	77.8	75.4
Mississippi	10.6	8.4	7.6	7.6	7.8	59.8	64.0	65.8	61.9	64.3
Montana	19.6	19.7	15.6	15.8	15.4	92.6	75.4	69.6	70.1	68.0
Nebraska	20.0	19.9	16.3	22.8	21.2	96.9	95.8	95.0	93.0	84.4
New Jersey	28.7	27.4	29.0	26.0	23.9	76.2	80.9	82.3	77.3	79.4
New York	32.0	31.7	30.4	29.9	28.2	75.6				
North Carolina	10.4	11.4	10.7	10.7	10.6					
Pennsylvania	27.7	26.8	25.7	25.7	24.7	83.5	84.3	84.9	85.7	87.0
Rhode Island	31.4	32.0	34.0	32.0	29.4	91.8	88.5	96.9	104.9	98.0
South Carolina	12.3	11.9	8.3	11.1	10.3	100.3				
South Dakota	19.2	22.1	19.6	17.3	20.6	77.2	72.8	78.2	67.0	64.1
Tennessee	12.1	11.0	10.6	10.1	10.6	81.3	78.3	66.7	65.6	60.0
Virginia	16.4	17.2	14.8	15.8	14.9	102.3	96.0	96.6	91.0	97.7
Washington	23.5	11.3				99.6	95.7			
Wisconsin	24.8	24.0	23.6	22.4	22.4	85.1	85.2	85.0	87.3	85.9
Hawaii	15.0	16.6	15.8	9.5	12.3	39.7	38.9	49.7	51.8	50.7
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over	24.2	24.4	24.1	23.0	21.1	61.2	63.2	63.8	62.1	60.4

State	Heart diseases (90–95)					Nephritis (130–132)				
	1935	1934	1933	1932	1931	1935	1934	1933	1932	1931
Total [2]	254.9	249.6	230.8	223.9	216.7	82.2	84.6	81.8	85.3	85.0
California	306.4	283.3	274.6	252.2	253.4	79.0	76.0	78.7	80.6	80.9
Connecticut	221.0	219.5	209.7	205.1	203.0	86.5	87.9	85.3	87.8	88.3
District of Columbia	393.6	391.3	342.2	330.6	300.2	119.8	126.2	128.9	140.4	146.2
Georgia	170.6	167.3	134.0	139.9	132.8	105.1	109.1	105.0	109.6	107.4
Idaho	170.1	158.3	161.8	161.2	159.7	37.3	36.2	35.3	43.3	38.7
Illinois	272.6	267.1	254.5	231.6	232.1	95.4	103.6	102.6	108.8	107.2
Indiana	262.5	271.2	185.8	183.2	176.8	66.8	77.4	76.1	73.2	74.8
Iowa	229.9	209.8	196.3	198.3	200.7	63.5	66.7	65.5	65.4	64.4
Kansas	213.3	203.6	194.0	178.0	153.9	90.8	94.7	93.9	100.0	95.3
Louisiana	178.6	182.5	188.0	182.5	178.0	105.1	107.9	95.9	102.5	108.6
Maryland	264.6	263.7	256.5	256.5	251.0	132.9	137.5	144.5	138.4	139.2
Michigan	241.3	230.6	226.8	217.9	204.4	57.7	60.7	59.6	57.8	58.8
Minnesota	215.2	214.2	198.3	193.6	177.9	48.7	52.0	54.8	54.7	50.8
Mississippi	106.0	95.9	97.0	84.2	94.3	88.5	83.4	69.6	76.3	95.4
Montana	203.2	177.3	178.8	158.7	139.6	77.8	70.2	68.7	71.4	66.7
Nebraska	185.1	180.5	175.9	171.4	159.1	50.3	59.3	57.3	72.0	67.9
New Jersey	286.0	285.8	269.0	231.0	234.3	79.3	82.9	86.0	91.0	96.3
New York	311.6	318.2	289.9	294.2	288.0	78.6	80.8	76.7	74.8	73.4
Pennsylvania	277.0	262.9	244.8	238.4	233.5	84.7	89.6	92.6	93.0	92.7
Rhode Island	310.0	294.3	276.8	264.7	245.8	98.2	105.8	111.9	117.2	112.5
South Carolina	189.4					97.1	108.8			
South Dakota	136.6	143.3	145.1	150.3	127.4	59.8	61.8	50.1	41.7	39.1
Tennessee	149.7	146.8	136.3	133.6	128.1	66.3	63.2	62.4	67.2	69.6
Virginia	223.7	219.1	192.5	198.3	188.3	92.8	93.0	89.2	119.5	101.5
Washington	266.9	246.5				79.9	75.8			
Wisconsin	246.9	232.1	223.7	217.4	203.1	67.5	67.6	65.7	66.5	67.7
Hawaii	100.2	98.5	115.9	100.1	105.7	67.1	65.5	77.0	60.2	68.4
Industrial policyholders,[3] Metropolitan Life Insurance Co., ages 1 and over [3]	157.4	162.9	161.5	155.5	147.9	59.9	64.9	67.1	68.7	67.0

[1] Diabetes mellitus includes 26 States; cerebral hemorrhage, apoplexy, 22 States.
[2] Heart disease includes 24 States; nephritis, 25 States.
[3] Heart diseases in data for industrial policyholders exclude pericarditis, acute endocarditis, acute myocarditis, and angina pectoris; nephritis data for industrial policyholders include only chronic nephritis.

THE SIGNIFICANCE OF INFANT MORTALITY RATES[1]

By MAYHEW DERRYBERRY, *Consultant in Health Education Techniques, United States Public Health Service,* and EDGAR VAN BUSKIRK, *Statistical Assistant, American Child Health Association*

It has been stated that infant mortality is the most sensitive index we possess of a city's health. It is to the worker in the field of health what the clinical thermometer is to the physician.[2] Since that statement was made, Holland and Palmer have shown that social and economic conditions within a city determine to some degree whether that city will have a high or low infant mortality rate.[3] Hence, condemnation or praise of the healthfulness of a city on the basis of its infant mortality rate, or any other mortality rate, without taking the environmental conditions into account, is decidedly unfair. The purpose of this paper is to investigate another limitation of the infant mortality rate as an index of a city's health.

The American Child Health Association has published annually, since 1919, a Statistical Report on Infant Mortality. This report has included all the cities of over 10,000 population from which data were available, both within and without the birth registration area. Comparisons of the infant mortality rates from year to year for the several cities have shown that the rates for smaller cities were often very erratic; one year the rate might be extremely high and the next year extremely low. Cairo, Ill., is an example of this. In the years 1928 through 1932, rates of 98, 153, 56, 127, and 62 were quoted. Over the same period the number of births reported was 276, 176, 198, 150, and 161. Where the number of births on which the rates are based is so small, one or two deaths (which may occur in any given year by chance) very materially affect the infant mortality rate. In Cairo, reporting only 161 births in 1932, one more death would have caused the rate to jump 6 points, from 62 to 68. Some of the smaller cities report considerably less than 100 births; in such cases one additional death would change the rate from a fairly low to a relatively high rate.[4] Certainly an annual index that can be made to fluctuate as much as 10 points or more by the death of one child is not a very reliable measure of a city's healthfulness.[5] Too much

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[1] From the Office of Child Hygiene Investigations, U. S. Public Health Service.

[2] Local government board. Report on infant and child mortality, by the medical officer of the board, Arthur Newsholme, M. D., 1910, pp. 74-83.

[3] Improving the value of the infant mortality rate as an index of public health effort. Dorothy E. Holland, Ph. D., staff associate, and George T. Palmer, Dr. P. H., director, Division of Research, American Child Health Association. *Am. Jour. Dis. of Children* (Chicago) 36: 1237-49 (December 1928).

[4] Winnetka, Ill., reported 2 births and 1 death in 1930 and 1931, making a rate of 500. Such a rate is, of course, absurd.

[5] Naturally the degree of fluctuation for a particular city is relative to the variability of the rates for the several cities. In this case the standard deviation of the rates for all the cities is about 20 points.

depends on the particular year that may be chosen to represent the city.

Contrasted with these extreme fluctuations in rate for a small city, the rates for Chicago during the same period were 64, 60, 54, 57, and 49. The numbers of births were 59,017, 58,799, 58,083, 52,993, and 49,258. An additional death in 1932 would have raised the rate for that year only 0.02 of a point, a difference so insignificant that it may be disregarded. The rates for large cities are, therefore, much more stable [6] than the rates for small cities and, as such, may be considered as reflecting general characteristics of the cities. Such rates may serve as one index of the healthfulness of the cities, if they are interpreted in terms of the different social and economic conditions existing in the several cities.

In view of the extreme fluctuations in the rates for the small cities and the relatively stable character of rates for large cities, the question naturally arises, "How large must a city be to have an infant mortality rate of sufficient stability to be significant?" Since the rates are based not on the total population but on the number of live births, the question may be restated as, "What must be the size of the annual birth registration of a city in order to form an adequate base for a relatively stable infant mortality rate?" It is this problem of the critical number of births with which this paper deals.

The solution is based on the fundamental assumption that the health conditions of any given city are normally subject to very little variation from year to year, and that there are real distinctions between cities which tend to persist from one year to the next. If, for cities with small birth registration, the differences between the cities are not revealed in the infant mortality rates for successive years, then it is assumed that the rates for these cities are not sufficiently stable to be used as health indices. By classifying the cities according to the annual number of births and then determining the degree to which the rates for one year distinguish the cities in the same way as the rates for a succeeding year, we may form a judgment relative to the stability of the rates and the dependence of this stability upon the number of births occurring in the respective cities.

Following the above assumptions, the cities for which complete infant mortality data were reported to the American Child Health Association for the years 1926 through 1932 were classified according to the annual number of births. The cities were classified in accordance with a 4-year average of the number of births, 1926–29, inclusive. The number of cities in each classification is given in table 1.

[6] Throughout this paper "stable" and "stability" are used in the sense of distinguishing cities in the same way from year to year irrespective of the persistent downward trend of infant mortality.

TABLE 1.—*Classification of cities by annual number of births occurring during the period 1926–29* [1]

Annual number of births	Number of cities in each classification
5,000 and over	24
1,000 to 5,000	123
750 to 1,000	63
500 to 750	82
250 to 500	213
200 to 250	45
Less than 200	53
Total	603

[1] Only cities for which complete infant mortality rates for each of the 7 years, 1926–32, were available were included.

The degree to which the same distinctions between cities are made by the infant mortality rates for succeeding years is best revealed through the correlation of the rates of 1 year with those of the next. Such correlations for each classification of cities (table 1) have been determined for the years 1926 to 1932 (table 2).

TABLE 2.—*Correlations of the annual infant-mortality rates for successive years* [1] *(603 cities of over 10,000 population, classified according to the mean annual birth registration, 1926–29, inclusive)*

Annual birth registration	Correlation coefficient of rates for—						
	1926 with 1927	1927 with 1928	1928 with 1929	1929 with 1930	1930 with 1931	1931 with 1932	Mean
5,000 and over	.77	.82	.81	.75	.83	.75	.79
1,000 to 5,000	.72	.80	.77	.80	.67	.65	.74
750 to 1,000	.72	.77	.67	.79	.72	.73	.73
500 to 750	.63	.73	.74	.66	.76	.73	.71
250 to 500	.50	.51	.51	.54	.45	.39	.48
Less than 250	.45	.33	.29	.33	.28	.21	.31

[1] All data in this report are derived from material in Births, Stillbirths, and Infant Mortality Statistics for Birth Registration Area of the United States, 1928–29, published annually by the U. S. Department of Commerce, Bureau of the Census; and from Statistical Report of Infant Mortality, 1926–32, published annually by the American Child Health Association, New York, N. Y.

It is apparent from table 2 that cities registering over 500 births have much more stable rates than cities with smaller birth registration. The average correlation for each group of these cities with large birth registration is above .70. Among cities with less than 500 births the relationships are considerably lower, being .48 for cities in which there are 250–500 births and .31 for cities in which there are less than 250 births. Certainly in these last two groups of cities the correlations are too small to justify the use of their annual infant mortality rates as indices of the healthfulness of the cities.

Although the relationship between the rates for successive years in the cities with 250–500 births is low, it was thought that the division of this group into subgroups and the determination of the correlations

for the subgroups might reveal higher correlations among those groups with the larger birth registration. The correlations for the subgroups are presented in table 3.

TABLE 3.—*Correlations of the infant mortality rates of cities for successive years (cities with a birth registration of 500 or less, classified according to mean birth registration)*

Annual birth registration	Number of cities	Correlation coefficient of rates for—						
		1926 with 1927	1927 with 1928	1928 with 1929	1929 with 1930	1930 with 1931	1931 with 1932	Mean r
450 to 500	35	.70	.63	.72	.67	.62	.40	.62
400 to 450	36	.49	.64	.40	.61	.64	.46	.54
350 to 400	43	.48	.52	.57	.53	.48	.57	.52
300 to 350	49	.55	.62	.67	.54	.31	.27	.49
250 to 300	50	.36	.17	.29	.48	.33	.34	.33
200 to 250	45	.57	.28	.43	.52	.56	.36	.45
Less than 200 [1]	53	.29	.38	.24	.19	.02	.15	.21

[1] Since there were only 53 cities in this group, no further subdivision was attempted.

The average correlation for the group with 450–500 births is not nearly as low as the average for the entire group. It is, however, much lower than .71, the relationship that exists in the 500–750 group. It would seem, therefore, that the annual infant mortality rates for cities that have an annual birth registration of less than 500 births fluctuate too much to be useful as an index of a city's healthfulness. With proper limitations the rates for cities that have from 450–500 births annually may be used, but with less than 450 births the annual rates are too erratic to have any real value or significance.

These conclusions were checked by comparing the actual variability of the rates for the cities within any classification group with the theoretical variability that would exist if the differences in the cities' rates were due only to chance factors of sampling. The theoretical variability in proportions due to random sampling errors is given by the formula $\sqrt{pq/n}$ where p is the rate, q is $(1-p)$, and n is the base upon which the rate was computed.[7] In computing the theoretical variability for the several groupings, the average rate for the 7-year period was used as the rate and the average registration for the group was used as the base. A comparable measure of the actual variability in the rates is the standard deviation computed for the cities in each group. (The average standard deviation for the 7-year period was used.) The relative size of these two variabilities may be judged by their ratios (table 4).

[7] The limitations in the use of this formula with vital statistics data are recognized. The method is merely used here as a check on the previous conclusions.

TABLE 4.—*Comparison of theoretical and actual variability in infant mortality rates for cities classified by average annual number of births*

Annual birth registration	Average infant mortality rate, 1926–32 (M)[1]	Theoretical variability due to sampling errors (σ_p)[2]	Actual variability of the rates (σ_{dis})[3]	Ratio $\frac{\sigma_p}{\sigma_{dis}}$
5,000 and over	63.89	2.00	9.10	0.22
1,000 to 5,000	65.19	4.51	15.75	.29
750 to 1,000	67.21	8.46	20.35	.42
500 to 750	65.47	9.89	19.90	.50
250 to 500	63.50	12.59	19.25	.65
Less than 250	67.66	20.51	25.58	.80
450 to 500	62.78	11.13	18.17	.61
400 to 450	63.31	11.81	19.04	.62
350 to 400	65.34	12.76	19.46	.66
300 to 350	62.95	13.47	19.63	.69
250 to 300	63.10	14.66	18.90	.78
200 to 250	68.81	16.88	24.67	.68
Less than 200	66.69	20.37	25.86	.79

[1] M=Average infant mortality score for all cities in the group for all years included in the investigation

[2] $\sigma_p = \sqrt{\frac{M \times (1000 - M)}{\text{Average number of births in each classification}}}$

[3] $\sigma_{dis} = \frac{\sum_{1926}^{1932} \sqrt{\frac{\Sigma(\text{rates})^2}{N} - (M\text{ rate})^2}}{7}$

The conclusions drawn from tables 2 and 3 are completely verified by these data. Among the cities with less than 500 births, the variability due to chance accounts for two-thirds or more of the actual difference between the rates, whereas in the other groups less than half of the variability may be ascribed to chance. Hence annual rates for these smaller cities do not reveal reliably the distinctions between cities.

The fact that annual rates for cities with less than 500 births are too fluctuating to be indicative of differences between the cities does not preclude the use of infant mortality data for these cities. There is no real reason, other than that of custom, why the time basis for computing these rates should be restricted to a year. The value of this time unit in the matter of convenience cannot be denied; but a period of 1 year is not of sufficient duration to produce stable rates for the small cities. Accordingly, the degree to which rates tend to become stable when based on 2-year periods was investigated. The method already described was used and the correlations are presented in table 5.

TABLE 5.—*Correlations of the biennial infant mortality rates for successive 2-year periods (311 cities with annual birth registration of 500 or less)*

Annual birth registration	Correlation coefficients of rates for—				
	1926–27 with 1928–29	1927–28 with 1929–30	1928–29 with 1930–31	1929–30 with 1931–32	Mean r
250–500	.70	.65	.63	.62	.65
200–250	.58	.70	.65	.65	.64
Less than 200	.50	.32	.22	.26	.33

A comparison of the average correlations between annual rates (tables 2 and 3) and the average correlations between biennial rates for the same groups of cities (table 5) shows that the extension of the time period does increase the stability of the rates. The average correlation between the 2-year rates for cities with birth registrations of 250–500 is raised from .48 to .65, and for cities with birth registrations of 200 to 250, the increase is from .45 to .64. Although these correlations are not quite as high as those obtained between annual rates for cities with 500–750 birth registrations, they may be used, if their tendency to fluctuate is recognized.

The increase in correlation from .21 to .33 for the cities with less than 200 registered births is not sufficient to justify attaching any significance to the rates for these cities. Therefore correlations of rates based on 3-year data for these cities were studied. The correlation between rates based on data for 1926, 1927, and 1928 for these cities and rates based on data for 1929, 1930, and 1931 was .40, and the correlation between rates on 1927, 1928, and 1929 data and rates on 1930, 1931, and 1932 data was .30. The average is only .35. Even rates based on 3-year data do not give sufficiently stable rates to reveal whatever distinctions there may be between these smaller cities. The use of 3-year rates instead of 1- or 2-year rates increased the correlation to such a small degree, further combinations of data hardly seemed worth while. The infant mortality rates for these cities are therefore of doubtful significance.

SUMMARY

Infant mortality rates for cities with small birth registrations fluctuate to such an extent from year to year that they are of little value as an index of the relative health conditions within the several cities. This paper reports an investigation of the number of births that must be registered in order that the infant mortality rate may be sufficiently stable to be indicative of the real differences in the healthfulness of cities.

As a basis for solution, it is assumed that differences between cities affecting the infant mortality rate tend to persist from year to year. Then, if the relative sizes of the infant mortality rates do not consistently distinguish the cities in the same way from one year to the next, the infant mortality rate is not useful as an index of the differences between the cities. The degree to which the differences in the infant mortality rates of cities tend to persist through successive years was investigated for cities of different numbers of registered births.

CONCLUSIONS

1. Annual infant mortality rates for cities with less than 450 registered births fluctuate too much from one year to the next to be of

any real significance as an index of conditions within a city. Annual rates for cities having 450–500 registered births may be used, but they, too, are somewhat unreliable.

2. Rates computed on the basis of 2-year data for cities with an annual registration of 200 to 450 births, though not as reliable as annual rates for the larger cities, are sufficiently stable to be used with proper recognition of their limitations.

3. Infant mortality rates for cities with an annual birth registration of less than 200 births fluctuate too much from year to year to be of any value as indices of the differences between the several cities.

4. A methodology is suggested which may be useful in the study of the reliability of other vital statistics rates that have a small number of cases as their base.

CHOICE OF RAT POISON IN ANTIPLAGUE WORK [1]

Rat Poisons Used by the National Antiplague Services of Ecuador, Peru, Chile, and the Argentine Republic

By J. D. Long, *Medical Director, United States Public Health Service, Traveling Representative, Pan American Sanitary Bureau*

In 1929, when the intensification of the antiplague measures began in Guayaquil, Ecuador, it was decided that the prime requisite to be considered in the use of rat poison was that the poison should be slow in its action. This allows the animals to leave the houses in which the poison has been eaten and die outside or in their hiding places, taking their fleas with them, thus avoiding the production of human cases, so far as might be possible, by preventing the release of large numbers of presumably infected fleas within the houses or other inhabited premises within easy reach of the inhabitants.

With this end in view, commercial arsenic was chosen as the active ingredient of the poison. Commercial arsenic, 99 percent pure, in very fine powder and of a pure white color, which facilitates its mixing with other materials, such as corn meal, wheat flour, and barley flour, can be purchased at a very reasonable price when bought in large quantities.

Rats that have been poisoned with arsenic usually die from 24 to 72 hours after ingesting the poison. The majority die within 24 hours. Owing to the fact that rats are cannibals in their instincts and readily kill and eat each other, as soon as a rat feels sick he hides himself in as inaccessible place as he can find. Experience has shown that the place usually selected not only serves to conceal the sick rat from other rats, but is as well removed from contact with human

[1] See editorial note at end of article.

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beings as the immediate local conditions will permit. He evidently seeks complete concealment and freedom from annoyances.

The experience of the last 6 years has demonstrated that arsenic is probably the most satisfactory of the various poisons, as it is cheap and is always well taken by the rats, if care is used to make the poison vehicle as attractive as possible. Experiences with other types of poisons have demonstrated them to be too rapid in their action, too expensive to use on a wholesale scale, lacking in keeping qualities, or are not well and consistently taken by the rats.[1]

The formulas of the poisons used are as follows:

1. *Poison packets.*—

	Percent
Coarsely ground corn meal	35
The cheapest grade of wheat flour to be had	35
Grated cheese, ground dried fish, dried blood, finely ground dried meat, either beef or pork, or finely ground peanuts	15
Commercial arsenic	15

The ingredients are mixed in a large trough with a shovel until uniformly distributed and are then put up in small torpedo-shaped paper packets, each of which holds one teaspoonful of the poison mixture.

In the antiplague work done in Guayaquil in 1929–30, the first poisoning was done with barium carbonate mixed and put up as described; but as the barium was expensive, arsenic was substituted for it in the succeeding poisonings. Plague, both human and rodent, disappeared after seven successive poisoning operations in the city.

In 1935, the first rat poisoning in the city was done with the poison packets, and the rat indices were reduced from a maximum of 6.7 rats per 100 traps in daily service to 4.8—a reduction of 28.3 percent in 1 month. The second poisoning, a partial one only, was also done with the packets and reduced the rat indices to 4.1 per 100 traps—a total reduction in 2 months of 38.8 percent.

2. *Fish poison.*—In order to obtain more rapid results through varying the poison, it was decided to try a poison made from the meat of fresh fish mixed with arsenic. I had seen this poison used on a small scale in the ports of Rosario and Santa Fe, Argentine Republic, by Dr. Albornoz, of the Argentine National Department of Hygiene, where good results were obtained. The formula is as follows:

	Percent
Meat of fresh fish, any cheap variety, without bones	85
Commercial arsenic	15

The meat of the fish is passed through a meat grinder and finely ground. The arsenic is then mixed with it and the whole mass is thoroughly kneaded (rubber gloves being worn) until the mixture is complete and the arsenic is thoroughly distributed. If the fish is not too oily, the poison product will be a thick paste which may be

[1] See editorial at end of article.

spread on bread, pieces of banana leaf, pieces of paper, or on shavings, and then placed in or near rat holes or rat runs. If the fish is very oily, ground dried salted fish may be mixed with it to make a thick paste, or cheap barley flour or other flour may be used until the final mass is about the consistency of thin dough.

The fish poison is very attractive to rats; they eat it, in the first two or three poisonings, in great quantities. Later, it is, at times, desirable to vary the composition by adding fresh blood (obtained from the city slaughterhouse) that has been boiled down in a large vessel to the consistency of a thick jelly. The blood may be added in varying quantities, depending upon the resulting consistency.

3. *Fresh blood poison.*—

	Percent
Fresh blood obtained from the slaughterhouse and boiled down to a jellylike consistency	60
Barley flour or meal, wheat flour, finely ground corn meal, or ground salt fish, to give consistency	25
Commercial arsenic	15

This poison may also be spread on bread, banana leaf, paper or wood shavings, as described for the fish poison.

This poison is also very attractive to rats and makes a good variant for use after several poisonings with other types of poison.

For the first two poisonings of an infected city either one of the poisons described here may be used, and very good results will be obtained, provided that the poison has been generously used and has been carefully placed and well distributed. Subsequent poisonings should be done with some of the other poisons described, or with similar poisons, the main object being to have a variety of poisons, which are changed from time to time, so that the rats will not become accustomed to any one type of poison and refuse to eat it.

In the antiplague work in Peru over 350 tons of poison packets (over 100,000,000 poisoned baits) have been used since the work began in 1930. Plague has been reduced in about 90 percent of the cases and the number of infected foci has been reduced in about 95 percent. Fish poison is now used.

Since August 27, 1935, in Guayaquil, Ecuador, 17,691 pounds of poison packets have been used, and over 40,000 pounds of fish poison. Owing to the scarcity of fish at times, some fresh blood was mixed with the fish poison so as to make the amount of fish available go further. Poison made of fresh blood has been used principally in the towns of Duran and Daule, where it has given good results.

Taking into consideration the enormous amounts of poison used, surprisingly few accidents have occurred. The use of the poison packets has caused the death of chickens, some domestic animals, such as cats and dogs, and occasionally a burro, where the poison had been gathered up by the householder and thrown out where the burros

could have access to it. One child was poisoned. Using a piece of wire, this child fished the packets out of the holes and rat burrows and eat them, in spite of the fact that warning had been given that poisoning was to be done. Ten packets in all were eaten. The dead child's brother, who had accompanied him and had eaten six packets, did not die. The amount of arsenic in a single packet is just about sufficient to kill an animal the size and weight of a rat. It takes from four to six packets to kill a dog of medium size.

The poison made of fish and fresh blood that has been boiled down does not seem to be so attractive to animals as the poison packets. There has been no complaint of domestic animals being killed, and no accidents to human beings have occurred. The people generally prefer the poisons made of fish and fresh blood to the poison packets, as experience has shown them that there is less danger to animals, and they are not so fearful of the safety of their children.

Ratproofing has been used so far as possible, especially in the cities; but in the rural districts, where the large majority of the houses are built of adobe, bamboo, and mud wattle (or worse), ratproofing has been out of the question.

Data are not available as to the amounts of poison used in Chile and the Argentine, but the amounts are very large and the results have been good.

EDITORIAL NOTE.—The exclusive use of poison for the destruction of rats in the control of plague is a more or less temporary expedient unless continually repeated; as an urban antiplague measure, it presents a method of control which is quickly applicable and which should be used pending the realization of ratproofing and other antiplague measures of more permanent value. It is expedient to utilize repeated poisoning in impoverished communities where the more costly and permanent antiplague measures cannot be employed for economic reasons, and also in combating rural plague in sparsely settled regions or in maintaining rodent-free rural zones cirumscribing and localizing a focus of plague infection. Detailed descriptions of the preparation of poisoned baits for use in rat poisoning may be found in the Public Health Reports for September 12, 1930, pages 2166–2169, and Public Health Bulletin No. 213, pages 63–68.

DEATHS DURING WEEK ENDED APRIL 11, 1936

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

	Week ended Apr. 11, 1936	Corresponding week, 1935
Data from 86 large cities of the United States:		
Total deaths	9,206	8,448
Deaths per 1,000 population, annual basis	12.9	11.8
Deaths under 1 year of age	586	580
Deaths under 1 year of age per 1,000 estimated live births	53	53
Deaths per 1,000 population, annual basis, first 15 weeks of year	13.7	12.7
Data from industrial insurance companies:		
Policies in force	68,350,305	67,734,319
Number of death claims	12,909	13,248
Death claims per 1,000 policies in force, annual rate	9.9	10.2
Death claims per 1,000 policies, first 15 weeks of year, annual rate	10.9	10.8

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 Apr. 18, 1936, and Apr. 20, 1935

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Apr. 18, 1936, and Apr. 20, 1935

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935
New England States:								
Maine	2	-------	13	8	117	109	0	0
New Hampshire	-------	-------	1	-------	15	2	0	0
Vermont	3	2	-------	-------	593	46	0	0
Massachusetts	6	3	-------	-------	1,216	453	4	3
Rhode Island	1	2	-------	-------	78	343	1	1
Connecticut	2	2	6	6	104	1,065	0	1
Middle Atlantic States:								
New York	43	33	[1] 13	[1] 9	2,653	3,156	21	24
New Jersey	11	12	53	15	311	1,244	6	3
Pennsylvania	48	35	-------	-------	1,509	3,044	12	6
East North Central States:								
Ohio	21	49	173	19	360	1,549	52	11
Indiana	10	20	83	22	24	365	8	4
Illinois	35	29	54	46	31	3,197	19	23
Michigan	9	5	14	2	68	6,488	4	5
Wisconsin	1	1	71	6	94	1,555	2	1
West North Central States:								
Minnesota	-------	6	1	3	520	615	2	1
Iowa	4	8	8	3	8	537	4	4
Missouri	25	44	532	103	19	776	6	8
North Dakota	8	5	7	13	2	31	0	0
South Dakota	-------	6	-------	1	15	68	1	0
Nebraska	6	5	-------	-------	93	365	0	0
Kansas	8	-------	43	8	22	1,372	4	2
South Atlantic States:								
Delaware	-------	1	-------	-------	6	13	0	0
Maryland [2]	2	5	12	7	255	49	22	6
District of Columbia	13	15	1	2	96	92	5	5
Virginia	30	11	334	-------	104	735	8	7
West Virginia	8	17	124	37	99	317	14	1
North Carolina [3]	12	11	18	10	57	226	6	1
South Carolina	1	6	299	157	35	39	8	1
Georgia [4]	4	4	180	-------	-------	-------	1	0
Florida	5	2	51	2	13	81	8	0
East South Central States:								
Kentucky	7	16	262	20	54	514	33	4
Tennessee	5	5	427	40	63	19	8	6
Alabama [4]	9	12	421	73	60	214	2	2
Mississippi [3]	2	1	-------	-------	-------	-------	2	2

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Apr. 18, 1936, and Apr. 20, 1935—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935
West South Central States:								
Arkansas	6	4	1,040	18	6	70	0	1
Louisiana	13	19	258	4	41	35	5	0
Oklahoma [4]	10	11	538	58	16	91	7	4
Texas [4]	34	36	592	301	418	185	7	6
Mountain States:								
Montana [3]	2	2	33	27	6	609	1	0
Idaho		1	7	3	19	4	2	0
Wyoming		2			7	120	0	0
Colorado	5	5			19	233	0	1
New Mexico	3	3	8	6	49	27	3	0
Arizona	6		119	9	144	23	0	2
Utah [3]		3			31	10	1	0
Pacific States:								
Washington		1	6		451	342	3	3
Oregon	1	7	106	33	305	205	2	1
California	24	30	564	62	2,692	1,413	6	4
Total	445	497	6,472	1,133	12,898	32,046	300	154
First 16 weeks of year	9,317	10,985	122,290	96,179	141,594	420,741	3,809	2,138

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935
New England States:								
Maine	0	0	22	6	0	0	0	1
New Hampshire	0	0	4	9	0	0	0	0
Vermont	0	0	11	7	0	0	0	0
Massachusetts	0	0	253	237	0	0	0	5
Rhode Island	0	0	24	7	0	0	0	0
Connecticut	0	0	63	110	0	0	2	0
Middle Atlantic States:								
New York	1	0	965	1,241	0	0	7	10
New Jersey	0	2	427	173	0	0	0	0
Pennsylvania	1	0	746	548	0	0	2	3
East North Central States:								
Ohio	1	1	473	773	2	3	22	5
Indiana	0	0	294	168	7	0	1	2
Illinois	0	0	705	1,251	4	0	4	18
Michigan	2	0	320	352	1	0	1	2
Wisconsin	0	0	490	410	9	14	3	2
West North Central States:								
Minnesota	0	0	377	339	10	0	1	0
Iowa	0	0	220	81	26	18	1	0
Missouri	0	0	231	69	9	2	1	4
North Dakota	0	0	41	66	15	0	0	0
South Dakota	0	0	62	8	22	5	0	0
Nebraska	0	0	137	57	11	33	0	1
Kansas	0	2	386	70	24	17	0	2
South Atlantic States:								
Delaware	0	0	5	7	0	0	0	0
Maryland [3]	0	0	71	108	0	0	0	7
District of Columbia	0	0	16	90	0	0	0	0
Virginia	0	0	42	26	2	0	3	11
West Virginia	0	0	47	57	0	0	6	3
North Carolina [3]	1	0	10	14	0	2	1	7
South Carolina	0	0	3	6	1	0	3	1
Georgia [4]	1	0	24	5	0	1	6	11
Florida	0	0	8	3	0	0	6	8
East South Central States:								
Kentucky	0	0	79	28	1	0	6	8
Tennessee	0	0	24	25	0	0	1	5
Alabama [4]	0	0	7	8	0	0	1	1
Mississippi [3]	0	0	3	5	1	0	0	1

See footnotes at end of table.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended Apr. 18, 1936, and Apr. 20, 1935—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935	Week ended Apr. 18, 1936	Week ended Apr. 20, 1935
West South Central States:								
Arkansas	0	0	12	4	0	1	1	1
Louisiana	0	0	8	4	0	0	2	18
Oklahoma [5]	0	0	53	11	0	1	2	6
Texas [4]	0	0	59	50	0	11	6	6
Mountain States:								
Montana [3]	0	0	76	5	15	5	1	0
Idaho	0	0	33	4	1	1	0	0
Wyoming	0	0	54	21	8	15	0	0
Colorado	0	0	94	215	2	0	0	0
New Mexico	0	1	88	14	0	1	0	5
Arizona	0	0	16	55	0	0	1	1
Utah [2]	0	0	64	135	2	0	1	0
Pacific States:								
Washington	0	0	80	48	3	15	1	1
Oregon	0	0	56	58	22	2	1	1
California	4	2	263	205	6	3	12	6
Total	11	8	7,546	7,193	204	150	106	163
First 16 weeks of year	295	386	124,257	115,048	3,663	3,068	1,767	2,103

[1] New York City only.
[2] Week ended earlier than Saturday.
[3] Rocky Mountain spotted fever, week ended Apr. 18, 1936, 2 cases, as follows: North Carolina, 1; Montana, 1.
[4] Typhus fever, week ended Apr. 18, 1936, 4 cases, as follows: Georgia, 1; Alabama, 1; Texas, 2.
[5] Exclusive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of cases reported monthly by States is published weekly and covers only those States from which reports are received during the current week;

State	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
January 1936										
Puerto Rico	-------	80	20	1,478	15	1	0	-------	0	36
March 1936										
Florida	18	27	220	16	38	-------	1	35	0	8
Maryland	68	21	220	1	872	1	1	379	0	11
Michigan	16	37	52	3	369	1	3	1,653	6	11
Minnesota	13	19	2	-----	1,538	-------	1	1,924	24	3
New Jersey	26	63	160	2	1,064	-------	-------	2,707	0	8
Ohio	57	120	461	1	1,440	-------	1	1,867	1	148
Pennsylvania	58	167	-------	1	4,428	1	4	2,443	0	37
South Carolina	-------	116	3,096	235	112	49	2	12	6	2
Tennessee	77	53	2,011	46	396	12	1	183	3	8
West Virginia	31	45	778	-------	117	-------	0	226	0	14

January 1936

Puerto Rico:	Cases
Chicken pox	18
Dysentery	18
Filariasis	1
Leprosy	1
Mumps	76
Ophthalmia neonatorum	5
Puerperal septicemia	4
Tetanus	17
Tetanus, infantile	3
Whooping cough	3

March 1936

Anthrax:	Cases
New Jersey	1
Pennsylvania	2
West Virginia	1
Chicken pox:	
Florida	228
Maryland	343
Michigan	2,167
Minnesota	399
New Jersey	1,698
Ohio	1,968
Pennsylvania	3,935
South Carolina	96

March 1936—Continued

Chicken pox—Contd.	Cases
Tennessee	183
West Virginia	158
Diarrhea:	
Maryland	7
Ohio (under 2 years)	10
South Carolina	119
Dysentery:	
Florida	1
Maryland (bacillary)	2
Michigan (amoebic)	2
Minnesota (amoebic)	4

March 1936—Continued

Dysentery—Contd.	Cases
New Jersey	1
Ohio (amoebic)	1
Pennsylvania (bacillary)	1
South Carolina	1
Tennessee (amoebic)	2
Tennessee (unspecified)	2
Epidemic encephalitis:	
Minnesota	1
New Jersey	4
Pennsylvania	2
South Carolina	4
Tennessee	3
German measles:	
Maryland	233
Michigan	715
New Jersey	769
Ohio	188
Pennsylvania	2,406
South Carolina	44
Tennessee	13
Hookworm disease:	
South Carolina	32
Impetigo contagiosa:	
Maryland	11
Michigan	5
Tennessee	3
Lead poisoning:	
Michigan	4
Ohio	4
Mumps:	
Florida	293
Maryland	592
Michigan	1,805
New Jersey	1,591
Ohio	1,758
Pennsylvania	3,931
South Carolina	201
Tennessee	470
West Virginia	351

March 1936—Continued

Ophthalmia neonatorum:	Cases
Maryland	1
New Jersey	8
Ohio	77
Pennsylvania	6
South Carolina	9
Tennessee	1
Paratyphoid fever:	
New Jersey	2
Ohio	2
South Carolina	1
Puerperal septicemia:	
Ohio	1
Tennessee	2
Rabies in animals:	
Maryland	4
Michigan	1
New Jersey	49
South Carolina	51
West Virginia	1
Rabies in man:	
Pennsylvania	1
Rocky Mountain spotted fever:	
Ohio	1
Scabies:	
Maryland	2
Michigan	4
Tennessee	8
Septic sore throat:	
Maryland	21
Michigan	88
Minnesota	4
Ohio	188
Tennessee	3
Tetanus:	
Maryland	2
Ohio	3
Tennessee	2
Trachoma:	
Michigan	1
Minnesota	1

March 1936—Continued

Trachoma—Contd.	Cases
New Jersey	1
Ohio	2
Pennsylvania	1
Trichinosis:	
Michigan	32
Pennsylvania	1
Tennessee	1
Tularaemia:	
Maryland	1
Michigan	1
South Carolina	3
Tennessee	1
Typhus fever:	
Florida	2
Pennsylvania	1
South Carolina	3
Undulant fever:	
Florida	2
Maryland	2
Michigan	11
Minnesota	2
New Jersey	8
Ohio	6
Pennsylvania	4
Tennessee	1
Vincent's infection:	
Maryland	9
Michigan	31
South Carolina	3
Tennessee	42
Whooping cough:	
Florida	46
Maryland	188
Michigan	1,556
Minnesota	108
New Jersey	577
Ohio	857
Pennsylvania	1,218
South Carolina	68
Tennessee	31
West Virginia	60

CASES OF VENEREAL DISEASES REPORTED FOR FEBRUARY 1936

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

	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]				
Arizona	27	.59	113	2.47
Arkansas	200	1.07	121	.64
California	1,243	2.02	1,032	1.68
Colorado [2]				
Connecticut	204	1.23	114	.69
Delaware	86	3.55	33	1.36
District of Columbia	116	2.33	121	2.43
Florida	235	1.49	73	.46
Georgia	1,146	3.94	542	1.86
Idaho	0	0	0	0
Illinois	1,382	1.75	1,008	1.28
Indiana	171	.52	120	.36
Iowa [3]	128	.52	99	.40
Kansas	75	.39	56	.29
Kentucky	195	.73	202	.76
Louisiana	511	2.36	97	.45
Maine	23	.29	53	.66
Maryland	669	4.00	190	1.14
Massachusetts	426	.98	396	.91
Michigan	520	1.02	480	.94
Minnesota	247	.95	203	.78
Mississippi	1,144	5.56	1,660	8.07
Missouri	376	1.02	240	.65
Montana [3]	20	.37	16	.30

See footnotes at end of table.

Reports from States—Continued

	Syphilis		Gonorrhea	
	Cases reported during month	Monthly case rates per 10,000 population	Cases reported during month	Monthly case rates per 10,000 population
Nebraska	25	.18	53	.38
Nevada [2]				
New Hampshire	12	.26	13	.28
New Jersey [1]				
New Mexico	52	1.19	49	1.12
New York	6,520	4.99	1,122	.86
North Carolina	1,159	3.51	421	1.28
North Dakota	18	.26	29	.42
Ohio	537	.79	259	.38
Oklahoma [3]	191	.77	123	.50
Oregon	68	.69	125	1.26
Pennsylvania	208	.21	131	.13
Rhode Island	158	2.24	59	.84
South Carolina [3]	280	1.60	329	1.88
South Dakota	3	.04	19	.27
Tennessee	1,030	3.85	505	1.89
Texas	164	.27	99	.16
Utah [2]				
Vermont	12	.33	11	.30
Virginia	564	2.31	382	1.56
Washington	133	.83	147	.91
West Virginia	157	.88	85	.48
Wisconsin [4]	27	.09	133	.44
Wyoming [2]				
Total	20,462	1.74	11,063	.94

Reports from cities of 200,000 population or over

Akron, Ohio	29	1.07	2	0.07
Atlanta, Ga	142	4.95	122	4.25
Baltimore, Md	422	5.11	114	1.38
Birmingham, Ala	121	4.29	59	2.09
Boston, Mass	184	2.33	170	2.15
Buffalo, N. Y	177	2.99	44	.74
Chicago, Ill	723	2.03	640	1.79
Cincinnati, Ohio	47	1.01	36	.77
Cleveland, Ohio	152	1.63	55	.59
Columbus, Ohio	3	.10	9	.29
Dallas, Tex	84	2.90	16	.55
Dayton, Ohio	64	3.04	58	2.76
Denver, Colo	23	.78	11	.37
Detroit, Mich	185	1.07	266	1.54
Houston, Tex.[5]	201	6.00	56	1.67
Indianapolis, Ind	18	.48	38	1.01
Jersey City, N. J	1	.03	1	.03
Kansas City, Mo	58	1.38	4	.09
Los Angeles, Calif	426	2.98	328	2.29
Louisville, Ky	287	8.86	122	3.77
Memphis, Tenn	222	8.31	62	2.32
Milwaukee, Wis	5	.08	13	.21
Minneapolis, Minn	53	1.09	65	1.34
Newark, N. J	149	3.22	96	2.07
New Orleans, La.[1]				
New York, N. Y	4,978	6.82	677	.93
Oakland, Calif	25	.82	14	.46
Omaha, Nebr	8	.36	10	.45
Philadelphia, Pa	214	1.08	78	.39
Pittsburgh, Pa	49	.72	20	.29
Portland, Oreg	53	1.69	79	2.52
Providence, R. I	95	3.67	32	1.24
Rochester, N. Y	56	1.66	58	1.72
St. Louis, Mo	267	3.19	208	2.49
St. Paul, Minn	25	.89	39	1.38
San Antonio, Tex.[3]				
San Francisco, Calif	96	1.43	123	1.83
Seattle, Wash	101	2.66	97	2.55
Syracuse, N. Y	121	5.55	56	2.57
Toledo, Ohio	38	1.25	20	.66
Washington, D. C.[6]	116	2.33	121	2.43

[1] No report for current month.
[2] Not reporting.
[3] Incomplete.
[4] Only cases of syphilis in the infectious stage are reported.
[5] Reported by the Jefferson Davis Hospital; physicians are not required to report venereal disease.
[6] Reported by the Social Hygiene Clinic.

WEEKLY REPORTS FROM CITIES

City reports for week ended Apr. 11, 1936

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								
Maine:											
Portland	0	------	0	0	6	2	0	0	0	0	24
New Hampshire:											
Concord	0	------	0	0	0	1	0	0	0	0	10
Manchester	0	------	1	0	2	0	0	0	0	0	24
Vermont:											
Barre	------	------	------	------	------	------	------	------	------	------	------
Burlington	0	------	0	36	0	0	0	0	0	2	7
Rutland	0	------	0	144	0	1	0	0	0	0	4
Massachusetts:											
Boston	2	------	0	439	4	80	0	7	0	18	207
Fall River	1	------	0	2	2	16	0	1	0	0	31
Springfield	0	------	0	1	2	2	0	1	0	5	42
Worcester	0	------	0	4	11	15	0	2	0	9	55
Rhode Island:											
Pawtucket	0	------	0	0	0	1	0	0	0	0	25
Providence	1	------	0	13	3	17	0	2	0	8	58
Connecticut:											
Bridgeport	2	------	0	5	5	3	0	0	0	0	40
Hartford	0	------	0	0	8	1	0	0	0	1	43
New Haven	0	1	3	0	2	0	0	2	0	63	54
New York:											
Buffalo	0	------	0	41	8	70	0	13	0	11	164
New York	40	14	4	1,893	148	464	0	98	2	85	1,559
Rochester	0	------	0	3	8	10	0	2	0	0	67
Syracuse	0	------	0	54	5	12	0	0	0	10	54
New Jersey:											
Camden	1	------	2	3	3	8	0	1	0	2	25
Newark	0	4	0	5	4	169	0	4	0	14	78
Trenton	0	------	0	0	3	4	0	2	0	3	38
Pennsylvania:											
Philadelphia	4	14	15	440	50	86	0	20	2	56	486
Pittsburgh	6	2	1	15	29	96	0	3	0	25	164
Reading	0	------	0	3	5	1	0	1	0	1	28
Scranton	0	------	------	0	------	4	0	------	0	0	------
Ohio:											
Cincinnati	3	------	1	17	15	15	0	10	0	3	133
Cleveland	4	62	6	54	22	78	0	8	0	71	221
Columbus	0	5	5	2	10	11	0	7	0	10	104
Toledo	0	1	1	61	6	7	0	4	0	18	50
Indiana:											
Anderson	0	------	0	1	3	6	0	0	0	2	11
Fort Wayne	0	------	1	0	7	6	0	0	0	0	42
Indianapolis	0	------	0	2	18	47	0	3	0	8	107
Muncie	0	------	0	0	3	6	0	0	0	0	12
South Bend	0	------	0	0	2	5	0	0	0	1	17
Terre Haute	0	------	0	0	2	6	0	1	0	0	23
Illinois:											
Alton	0	------	0	1	0	0	0	0	0	0	8
Chicago	14	14	13	14	88	231	0	50	1	172	847
Elgin	0	------	0	0	1	1	0	0	0	2	10
Moline	0	2	0	0	1	6	0	0	0	0	16
Springfield	0	------	0	0	4	14	0	0	0	0	21
Michigan:											
Detroit	5	14	7	29	40	125	0	20	0	142	314
Flint	1	------	0	2	11	16	0	1	0	17	36
Grand Rapids	0	------	0	3	2	9	0	2	0	2	34
Wisconsin:											
Kenosha	0	------	0	2	0	12	0	3	0	1	12
Madison	0	------	0	1	2	9	0	0	0	10	31
Milwaukee	0	2	2	2	3	82	0	1	0	68	92
Racine	0	------	0	2	3	18	0	0	0	0	13
Superior	0	------	0	0	2	14	0	0	0	0	11
Minnesota:											
Duluth	0	------	0	1	2	2	0	1	0	13	18
Minneapolis	0	------	2	102	4	123	0	3	0	6	95
St. Paul	1	------	0	83	7	42	0	2	0	4	68

City reports for week ended Apr. 11, 1936

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								
Iowa:											
Cedar Rapids	0	------	--------	0	-------	3	0	-------	0	4	--------
Davenport	0	------	--------	0	-------	19	0	-------	0	0	--------
Des Moines	0	------	--------	1	-------	12	2	-------	0	0	34
Sioux City	0	------	--------	1	-------	15	14	-------	0	0	--------
Waterloo	1	------	--------	0	-------	3	0	-------	0	0	--------
Missouri:											
Kansas City	4	------	3	1	16	79	0	11	0	4	137
St. Joseph	-------	------	--------	-------	-------	-------	-------	-------	-------	-------	-------
St. Louis	4	------	9	2	32	56	1	21	0	7	297
North Dakota:											
Fargo	0	------	0	0	1	0	1	0	0	4	6
Grand Forks	1	------	--------	0	-------	0	0	-------	0	0	--------
Minot	0	------	0	0	0	3	0	0	1	0	6
South Dakota:											
Aberdeen	0	------	--------	0	-------	1	0	-------	0	0	--------
Sioux Falls	0	------	0	0	0	11	11	0	0	0	6
Nebraska:											
Omaha	1	------	1	10	12	85	3	1	0	0	68
Kansas:											
Lawrence	0	6	0	1	1	1	0	0	0	0	5
Topeka	-------	------	--------	-------	-------	-------	-------	-------	-------	-------	-------
Wichita	0	------	0	1	10	28	0	1	0	3	38
Delaware:											
Wilmington	0	------	0	1	4	2	0	1	0	4	29
Maryland:											
Baltimore	1	3	1	125	31	35	0	13	0	55	220
Cumberland	0	------	0	0	4	1	0	2	1	0	19
Frederick	1	------	0	0	0	0	0	0	0	0	4
District of Columbia:											
Washington	0	1	1	68	26	18	0	7	1	20	197
Virginia:											
Lynchburg	0	------	0	1	0	1	0	1	0	12	18
Norfolk	1	1	0	0	6	0	0	1	0	0	24
Richmond	1	------	1	0	5	20	0	4	0	0	65
Roanoke	0	------	0	0	3	1	0	0	0	0	22
West Virginia:											
Charleston	1	4	1	0	13	1	0	1	0	0	48
Huntington	1	0	--------	0	-------	1	0	-------	0	0	--------
Wheeling	0	------	2	11	2	1	0	1	2	3	16
North Carolina:											
Gastonia	0	------	0	0	0	0	0	0	0	0	6
Raleigh	0	------	0	2	2	0	0	3	0	0	12
Wilmington	0	------	0	0	3	0	0	0	0	0	11
Winston-Salem	0	------	0	49	4	0	0	0	0	0	14
South Carolina:											
Charleston	1	8	1	0	2	0	0	2	0	8	18
Columbia	0	------	0	0	3	0	0	0	0	0	13
Florence	0	------	0	0	1	0	0	0	0	1	5
Greenville	1	------	0	6	2	0	0	0	0	0	8
Georgia:											
Atlanta	3	7	1	1	11	15	0	11	0	2	96
Brunswick	0	------	0	0	1	0	0	0	0	0	3
Savannah	0	5	2	1	3	0	0	1	1	0	37
Florida:											
Miami	1	6	2	4	2	1	0	2	1	15	39
Tampa	0	3	3	8	2	2	0	1	1	0	18
Kentucky:											
Ashland	0	------	--------	0	-------	0	0	-------	0	3	--------
Covington	2	------	0	1	1	0	0	1	0	0	18
Lexington	0	------	0	5	3	0	0	1	0	2	24
Tennessee:											
Knoxville	0	------	4	26	2	0	0	2	0	0	33
Memphis	1	------	7	2	13	4	0	2	0	14	103
Nashville	1	------	0	1	10	5	0	0	0	0	--------
Alabama:											
Birmingham	1	21	3	0	10	1	0	1	0	2	68
Mobile	0	5	1	0	4	1	0	1	0	0	29
Montgomery	0	11	--------	0	-------	0	0	-------	0	0	--------
Arkansas:											
Fort Smith	1	------	--------	0	-------	2	0	-------	0	0	--------
Little Rock	0	131	0	0	8	3	0	4	0	0	13

City reports for week ended Apr. 11, 1936

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:											
Lake Charles	0	------	0	1	1	0	0	0	0	0	5
New Orleans	1	46	18	8	29	9	0	10	2	26	181
Shreveport	1	------	0	25	9	3	0	1	0	0	37
Oklahoma:											
Oklahoma City	1	30	5	0	15	4	0	0	0	0	48
Tulsa	0	------	--------	0	-------	5	0	-------	0	0	--------
Texas:											
Dallas	4	4	3	19	10	6	0	0	0	6	83
Fort Worth	0	------	1	0	8	4	0	2	1	0	44
Galveston	2	------	0	0	3	0	0	1	0	0	16
Houston	5	------	3	1	13	7	0	4	1	0	75
San Antonio	3	------	5	5	10	1	0	7	0	0	71
Montana:											
Billings	0	------	0	0	1	6	0	0	0	1	8
Great Falls	0	------	0	0	3	3	0	0	0	2	16
Helena	0	------	0	0	1	1	0	0	0	0	6
Missoula	0	------	0	0	0	4	0	0	0	0	3
Idaho:											
Boise	0	------	0	10	1	2	0	0	0	0	5
Colorado:											
Colorado Springs	1	------	0	1	3	3	0	0	0	4	11
Denver	2	------	1	7	8	15	1	2	0	24	81
Pueblo	0	------	0	0	1	17	0	0	0	4	7
New Mexico:											
Albuquerque	0	------	0	0	1	10	0	2	0	0	11
Utah:											
Salt Lake City	0	------	3	7	6	41	0	0	0	2	44
Nevada:											
Reno	-------	------	--------	-------	-------	-------	-------	-------	-------	--------	--------
Washington:											
Seattle	-------	------	--------	-------	-------	-------	-------	-------	-------	--------	--------
Spokane	0	------	0	3	5	26	0	0	0	4	28
Tacoma	-------	------	--------	-------	-------	-------	-------	-------	-------	--------	--------
Oregon:											
Portland	0	4	1	61	10	14	0	2	2	5	91
Salem	0	6	--------	9	-------	1	0	-------	0	1	--------
California:											
Los Angeles	5	19	2	538	20	52	0	24	0	21	335
Sacramento	4	------	0	4	1	8	0	1	1	7	19
San Francisco	0	0	3	357	9	85	0	14	0	27	197

City reports for week ended Apr. 11, 1936—Continued

State and city	Meningococcus meningitis		Poliomyelitis cases
	Cases	Deaths	
Massachusetts:			
Boston	5	4	0
Springfield	0	1	0
Rhode Island:			
Providence	2	0	0
New York:			
New York	15	4	0
New Jersey:			
Newark	2	3	0
Pennsylvania:			
Philadelphia	3	0	1
Ohio:			
Cincinnati	11	5	0
Columbus	1	1	0
Indiana:			
Indianapolis	0	1	0
Illinois:			
Chicago	8	1	0
Springfield	1	1	0
Michigan:			
Detroit	4	0	1
Minnesota:			
Minneapolis	0	1	0
Missouri:			
Kansas City	1	0	0
Nebraska:			
Omaha	1	1	0
Maryland:			
Baltimore	18	5	0
District of Columbia:			
Washington	3	2	0
Virginia:			
Lynchburg	0	1	0
Norfolk	2	1	0
Richmond	1	1	0
West Virginia:			
Huntington	2	0	0
North Carolina:			
Wilmington	0	1	0
South Carolina:			
Charleston	1	0	0
Georgia:			
Atlanta	2	1	0
Florida:			
Tampa	2	0	0
Kentucky:			
Lexington	1	0	0
Tennessee:			
Knoxville	1	0	0
Alabama:			
Birmingham	0	1	0
Louisiana:			
New Orleans	2	0	0
Shreveport	0	1	0
Oklahoma:			
Oklahoma City	2	0	0
Texas:			
Dallas	1	1	0
Galveston	0	1	0
Houston	3	3	0
New Mexico:			
Albuquerque	1	0	0
California:			
Los Angeles	3	0	0
San Francisco	0	1	0

Pellagra.—Cases: Charleston, S. C., 1; Savannah, 1; Miami, 1; Dallas, 3.
Rabies-in-man.—Deaths: Memphis, 1.
Typhus fever.—Deaths: New York, 1.

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—2 weeks ended April 4, 1936.—During the 2 weeks ended April 4, 1936, cases of certain communicable diseases were reported by the Department of Pensions and National Health of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis				1	3					4
Chicken pox		27	2	147	408	32	37	19	79	751
Diphtheria		9	8	26	10	4	10	5		72
Dysentery				2						2
Erysipelas				13	7	9	6	1	8	44
Influenza		29			106	2	18		207	362
Measles		53	12	2,916	6,571	944	1,415	157	2,003	14,071
Mumps		13			1,019	75	152	38	367	1,664
Pneumonia		21			37		12		20	90
Poliomyelitis								1		1
Scarlet fever		25	4	184	521	85	64	85	44	1,012
Smallpox					1			6		7
Trachoma							4		3	7
Tuberculosis	3	8	13	145	79	14	7	2	47	318
Typhoid fever	2	2	1	51	6	7	2	12	2	85
Undulant fever					4					4
Whooping cough		47	23	188	341	6	16	10	40	671

CUBA

Habana—Communicable diseases—4 weeks ended April 11, 1936.—During the 4 weeks ended April 11, 1936, certain communicable diseases were reported in Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Cerebrospinal meningitis	1		Poliomyelitis	[1] 6	
Diphtheria	20		Tuberculosis	29	
Leprosy	1	1	Typhoid fever	[1] 32	
Malaria	[1] 20				

[1] Includes imported cases.

Provinces—Notifiable diseases—4 weeks ended April 4, 1936.—During the 4 weeks ended April 4, 1936, 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		1		2	2		5
Chicken pox		49	3	6		32	90
Diphtheria		1		3		1	5
Leprosy		1			1		2
Malaria	67	19	14	79	179	974	1,332
Measles		1	1	15	5	10	32
Poliomyelitis		1		2		2	5
Tuberculosis	12	13	12	32	16	45	130
Typhoid fever	11	48	9	10	2	25	105

CZECHOSLOVAKIA

Communicable diseases—January 1936.—During the month of January 1936 certain communicable diseases were reported in Czechoslovakia as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Anthrax	5		Paratyphoid fever	3	1
Cerebrospinal meningitis	6	4	Poliomyelitis	17	2
Chicken pox	379		Puerperal fever	35	16
Diphtheria	2,767	167	Scarlet fever	2,872	54
Dysentery	7	2	Trachoma	89	
Influenza	206	22	Typhoid fever	433	32
Lethargic encephalitis	3	3	Typhus fever	14	
Malaria	3				

IRISH FREE STATE

Vital statistics—Fourth quarter, ended December 31, 1935.—The following statistics for the Irish Free State for the quarter ended December 31, 1935, are taken from the Quarterly Return of Marriages, Births, and Deaths, issued by the Registrar General, and are provisional:

	Number	Rates per 1,000 population
Population	3,033,000	
Marriages	3,245	4.3
Births	13,948	18.4
Total deaths	10,384	13.7
Deaths under 1 year of age	873	(1)
Deaths from:		
Cancer	864	1.14
Diarrhea and enteritis (under 2 years)	155	
Diphtheria	97	
Dysentery	1	
Influenza	142	.20
Measles	37	
Puerperal sepsis	23	(2) 1.65
Scarlet fever	40	
Tuberculosis (all forms)	814	1.07
Typhoid fever	18	
Typhus fever	1	
Whooping cough	17	

(1) Deaths under 1 year per 1,000 births, 63.
(2) Per 1,000 births.

VIRGIN ISLANDS

Notifiable diseases—January–March 1936.—During the months of January, February, and March 1936 cases of certain notifiable diseases were reported in the Virgin Islands as follows:

Disease	January	February	March	Disease	January	February	March
Chicken pox			3	Pellagra	3	1	2
Dengue		8	3	Syphilis	3	3	7
Filariasis		4	5	Tetanus			1
Gonorrhea	10	5	4	Tuberculosis	1	2	1
Hookworm disease	4		7	Typhoid fever			1
Malaria			1				

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 April 24, 1936, pages 522–534. A similar cumulative table will appear in the PUBLIC HEALTH REPORTS to be issued May 29, 1936, and thereafter, at least for the time being, in the issue published on the last Friday of each month.

Cholera

India.—During the week ended April 11, 1936, cholera was reported in India as follows: Cholera was present in Punjab and 4 cases of cholera were reported in Rangoon.

Plague

Hawaii Territory—Hawaii Island—Hamakua District—Pohakea sector.—A rat found April 10, 1936, in Pohakea sector, Hamakua District, Hawaii Island, Hawaii Territory, has been proved plague infected.

Peru—Callao.—During the month of March 1936, 4 cases of plague with 1 death were reported at Callao, Peru. Plague rats were confirmed for Callao on March 10, 18, 19, 21, 22, and 23, 1936.

Smallpox

India—Sind State.—During the week ended April 11, 1936, 21 cases of smallpox were reported in Sind State, India.

Yellow Fever

Brazil.—Yellow fever has been reported in Brazil as follows: Matto Grosso State, Aquidahuana, 1 case, 1 death, March 1, 1936; Minas Geraes State, Passos, 1 case, 1 death, March 3, 1936; Santa Cruz Areias, 1 case, 1 death, February 27, 1936; Uberaba, 3 cases, 3 deaths, March 11–18, 1936; Parana State, Jaguariahyva, 2 cases, 2 deaths, March 17–19, 1936; Sao Paulo State, Aracatuba, 1 case, 1 death, March 9, 1936; Araraquara, 2 cases, 2 deaths, March 15–16, 1936.

Gold Coast—Koforidua.—On April 15, 1936, 1 case of yellow fever was reported at Koforidua, Gold Coast.

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