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## PHYSICAL IMPAIRMENTS OF MEMBERS OF LOW-INCOME FARM FAMILIES—11,490 PERSONS IN 2,477 FARM SECURITY ADMINISTRATION BORROWER FAMILIES, 1940<sup>1</sup>

### VI. EXTENT OF IMMUNIZATION AGAINST SMALLPOX, DIPHTHERIA, AND TYPHOID FEVER

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Immunizations against smallpox, diphtheria, and typhoid fever have been in use for a considerable period and have been practiced on a relatively large proportion of the population. Immunizations against scarlet fever and whooping cough are of more recent development, and their use is not so universally urged by health authorities. Collins (4) reports about 4 percent of all children 10 years of age to have had artificial immunization against scarlet fever (1930); no quantitative statement regarding whooping cough vaccine is available. Although immunization against typhoid fever is infrequent in northern States it has been used extensively in southern rural areas.

This study is a quantitative statement of the extent of immunization procedures against smallpox, diphtheria, and typhoid fever among low-income farm families in the United States. The data are cumulative at specific ages, that is, they relate to the entire time prior to examination and are not a record of current annual immunizations. It is possible, however, to subtract successive cumulated rates and so obtain an estimated average annual rate of immunization for specific age groups.

The examined population, described in the first report of this series (6), resided in rural sections of eastern, central, and southern States and consisted of families of farmers in selected areas who had been

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This is the sixth in a series of papers dealing with physical defects found on examination of members of low-income farm families residing in 19 localities in the United States. The physical findings of the examinations were coded and transferred to punchcards by the Farm Security Administration under the direct supervision of Mr. Jesse B. Yaukey. The data were subsequently made available to the U. S. Public Health Service. Acknowledgment is made to Dr. S. D. Collins for critical suggestions and advice throughout the preparation of the studies.

granted rehabilitation loans by the Farm Security Administration. During the course of a general physical examination each person was asked whether he or she had ever been immunized against smallpox, diphtheria, and typhoid fever. No inquiry was made concerning the number of times immunized or the number of years since the last immunization.

Earlier studies made by this office on the frequency of immunization procedures specific for size of city and family income provide data for comparison with the frequency of immunization in low-income farm families. These studies were made from two sources: (a) A record of illness and medical services obtained by the Committee on the Costs of Medical care (1, 2, 3) and (b) a health record secured by the Communicable Disease Survey in a 1-day canvass in large cities (5). The survey made by the Committee on the Costs of Medical Care was a record of illness, immunization, physical examination, and medical services received during an observed 12-month period, 1928-31. The family roster and certain past history items were obtained on the initial visit to each family. The observed population consisted of the members of 9,000 white families in 130 localities in 18 States representing every size of community. The records were obtained by visiting nurses through the cooperation of local health organizations. The Communicable Disease Survey was conducted in the spring of 1936 and was a house-to-house canvass of 213,931 families in 28 cities of 100,000 population or more located in 19 States. A single visit was made to each household and information on illness and medical services was obtained usually from the housewife.

#### IMMUNIZATION AND LOCALITY

Table 1 shows in each of 19 localities the percentage of white children under 15 years of age in Farm Security Administration borrower families that had been immunized at any time against smallpox, diphtheria, and typhoid fever. Thirty percent of all children had been vaccinated against smallpox, 46 percent had been immunized against diphtheria, and 24 percent against typhoid fever. There is a wide range in the percentage of children immunized in the separate localities; from 5 to 63 percent for smallpox, from 30 to 74 percent for diphtheria; and from practically zero to 75 percent for typhoid fever. In this connection, column 4 of table 1 shows health organization facilities in counties as of June 1941 (7); "full time" indicates that the county had a local health officer or the services of a State or local district unit. Among the six northern counties there is no apparent association between organization of a county health department and extent of immunization found on examination of these farm children. However, among southern counties there is probably some slight

association which can scarcely account for the total variability. In southern counties, with and without organized health services, 35 and 22 percent of white children had been immunized against smallpox at some time since birth, and 50 and 36 percent against diphtheria, respectively.

TABLE 1.—Percentage of white children under 15 years of age that had been immunized<sup>1</sup> against smallpox, diphtheria, and typhoid fever—members of Farm Security Administration borrower families in 19 localities, 1940.

Geographic area	State	County	Health department services <sup>2</sup>	Known as to immunization	With prior immunization against—		
					Smallpox	Diphtheria	Typhoid fever
				Number		Percent <sup>3</sup>	
Northeast	Maine	Aroostook	Full time	447	14.0	33.4	0.2
East North Central	Ohio	Champaign	Unorganized	176	19.9	37.5	.6
	Indiana	Montgomery	do	130	55.4	69.2	3.8
West North Central	Missouri	Callaway	Full time	281	10.7	42.7	6.8
	Nebraska	Howard	Unorganized	252	21.8	33.3	.8
Mountain	Colorado	Phillips	do	165	63.0	65.5	1.8
South Atlantic	Virginia	Spotsylvania	do	74	37.8	33.8	4.1
	North Carolina	Avery	Full time	99	43.4	48.5	34.3
	South Carolina	Kershaw	do	311	55.3	30.5	19.3
	Georgia	Worth	do	278	31.3	40.3	35.6
	Florida	Levy	do	205	17.6	63.9	29.3
East South Central	Tennessee	Henderson	do	240	10.0	40.0	75.8
	Mississippi	Carroll	Unorganized				
		Leflore	Full time	192	44.8	68.7	53.1
		Humphreys	do				
West South Central	Arkansas	Pope	do	324	43.8	32.4	30.6
	Oklahoma	Okfuskee	Unorganized	252	43.3	48.4	33.3
	Louisiana	Franklin	Full time	497	31.6	74.2	48.3
	Texas	Panola	Unorganized	117	5.1	31.6	9.4
	do	Williamson	do	146	10.3	29.5	3.4
	do	Runnels	do	123	13.0	38.2	5.7
19 localities				4,309	29.7	45.9	23.6

<sup>1</sup> Immunization at any time since birth.

<sup>2</sup> From Kratz (?). Health Department services as of June 1941.

<sup>3</sup> The range of the probable error of the percentage immunized against smallpox is from 1.1 to 3.8 percent; against diphtheria from 1.3 to 3.7 percent; against typhoid fever from 0.1 to 3.2 percent.

A slightly higher percentage of children in the South had been immunized than in the North;<sup>2</sup> the small differences in the percentage

<sup>2</sup> Rates based on the annual number of immunizations performed by State or county health departments and reported to the Public Health Service by State health departments are given in the following table. The rates do not represent the percentage of the population immunized; they are annual rates and, moreover, include immunizations done for the second time on the same individual and exclude all immunizations by private physicians.

*Immunizations administered by State Health Departments, 1939-41*

Immunization against—	United States	North	South	New England	Middle Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific
	Annual rate per 1,000 population											
Smallpox	10.3	5.7	18.1	2.1	4.7	5.7	8.5	17.2	21.9	16.3	16.7	6.0
Diphtheria	8.7	5.7	13.4	5.0	4.6	5.5	8.2	14.2	15.8	10.4	14.8	7.0
Typhoid fever	13.8	.9	36.6	.3	.2	.1	3.5	32.6	52.4	28.9	7.6	.6

immunized in North and South against both smallpox and diphtheria are statistically significant (table 2). The percentage of preschool children that had been immunized is higher in the North for smallpox and higher in the South for diphtheria. Immunization against typhoid fever is markedly higher in the South, particularly in areas where floods occur as in Tennessee (table 1).

TABLE 2.—Percentage of white children under 15 years of age that had been immunized<sup>1</sup> against smallpox, diphtheria, and typhoid fever in Northern and Southern localities<sup>2</sup>—members of Farm Security Administration borrower families, 1940

Age	Known as to immunization		With prior immunization against—					
			Smallpox		Diphtheria		Typhoid fever	
	North	South	North	South	North	South	North	South
	Number		Percent					
Under 15.....	1, 447	2, 862	24. 7	32. 2	42. 6	47. 7	2. 1	34. 5
Under 5.....	419	796	6. 9	1. 0	15. 3	32. 3	. 2	7. 9
5-9.....	495	980	25. 9	30. 0	46. 1	49. 3	1. 6	34. 5
10-14.....	533	1, 086	37. 7	57. 1	60. 8	57. 4	4. 1	54. 0

<sup>1</sup> Immunization at any time since birth.

<sup>2</sup> The localities included are:

North: Aroostook County, Maine; Champaign County, Ohio; Montgomery County, Ind.; Callaway County, Mo.; Howard County, Nebr.; and Phillips County, Colo.

South: Spotsylvania County, Va.; Avery County, N. C.; Kershaw County, S. C.; Worth County, Ga.; Levy County, Fla.; Henderson County, Tenn.; parts of Carroll, Leflore, and Humphreys Counties, Miss.; Pope County, Ark.; Okfuskee County, Okla.; Franklin Parish, La.; and Panola, Williamson, and Runnels Counties, Tex.

#### TREND IN IMMUNIZATION

A trend in the immunization rate is of necessity reflected in the frequency of immunization based on the prior history of persons examined. From a comparison of survey data Collins (5) concluded that there had been no marked change in the rate of vaccination against smallpox between 1929 and 1935; while "the proportion of children immunized against diphtheria appears to have increased rather markedly" although "diphtheria immunizations administered by State Health Departments do not indicate large increases since 1937."

The Annual Report of the Department of Health of New York State (9) gives an interesting tabulation of immunizations against diphtheria performed by the department. The immunization rate for all ages combined declines, from 1926 to 1940, from approximately 2.5 to 1.2 percent for the State exclusive of New York City; urban rates are slightly higher than rural, and both show approximately the same rate of decline. Specific for age, however, the annual rate at which immunizations were performed has been increasing at ages

under 5 years and decreasing over 5 years of age in both urban and rural areas. In other words, the percentage of total immunizations done under 5 years of age has increased; from approximately 20 to 70 percent in urban areas, and from 20 to 60 percent in rural areas, 1926 to 1940. This is in agreement with the recommendation of health organizations that immunization, particularly against diphtheria, be performed at early ages when the death rate is relatively high. In recent years the most conspicuous change in immunization against diphtheria has been this shift to younger ages, although some areas would probably still show an increase in the rates for all ages.

Mississippi State Health Department reports (8) also give the annual number of immunizations performed by the State and county health departments. The annual rate of immunization against diphtheria during the last decade was approximately 2 to 3 percent of the total population with about 70 percent of immunizations performed under 5 years of age in counties with organized health services. The rate of vaccination against smallpox shows an association with the establishment of local health departments. Approximately one-third of Mississippi counties have had the services of full-time health officers since 1930 or earlier; another one-third of the counties have had organized health departments since 1930; and the remaining one-third are unorganized counties. In unorganized counties the vaccination rate is approximately 1 percent or less except in epidemic years; while in counties with well-established health departments and in those with recently organized health services the vaccination rate is approximately 3 to 4 percent of the total population annually.

#### VACCINATION AGAINST SMALLPOX

Figure 1 shows the percentage of children of specific ages that had been vaccinated against smallpox as obtained in three comparable surveys; rates are plotted on semilogarithmic paper for the Farm Security Administration examinations, the Communicable Disease Survey (exclusive of the West) and the Committee on the Costs of Medical Care survey. For all three curves (fig. 1) the percentage vaccinated increases rapidly under 2 years of age, and continues to increase at a slightly less rapid rate until the age of school entrance, 6 to 7 years. The farm children examined by the Farm Security Administration differ from the children of the Committee on the Costs of Medical Care (urban and rural) and Communicable Disease (urban) surveys in having a relatively smaller percentage vaccinated under 1 year of age and an increasing percentage vaccinated during school ages, 7 to 15 years. At 15 years of age approximately 60 percent of Farm Security Administration children and 65 percent of children reported upon by the Committee on the Costs of Medical Care have been vaccinated against smallpox at some time since birth; the Communicable Disease

Survey of children in large cities shows approximately 90 percent had been vaccinated by the time they had reached 15 years of age.

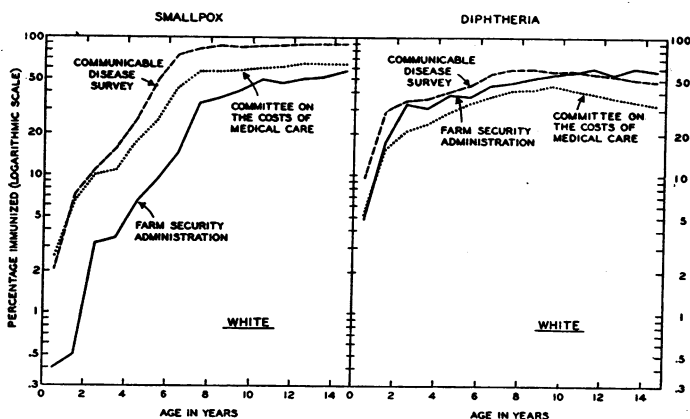


FIGURE 1.—Percentage of children of specific ages that had been immunized against smallpox and diphtheria at any time prior to examination. Farm Security Administration physical examinations, 1940, and comparable data (1, 2, 5). (The Communicable Disease Survey data are exclusive of the West.)

The frequency of vaccination against smallpox varies markedly with size of city and slightly with income and section of the country (1). In

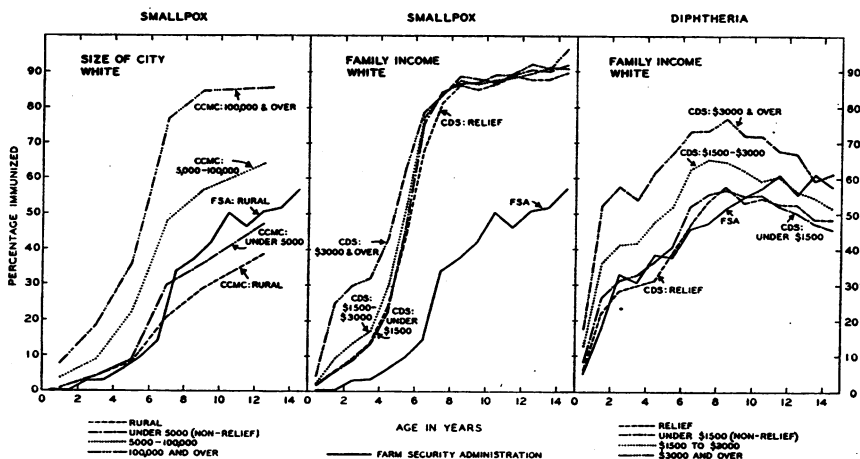


FIGURE 2a.—Percentage of children of specific ages in urban and rural areas that had been vaccinated against smallpox at any time prior to examination. Farm Security Administration physical examinations, 1940, and Committee on the Costs of Medical Care (1).

FIGURE 2b.—Percentage of urban children of specific ages by family income and of rural children of rehabilitation borrower families that had been immunized against smallpox at any time prior to examination. Farm Security Administration physical examinations, 1940, and Communicable Disease Survey (5), exclusive of the West.

FIGURE 2c.—Percentage of urban children of specific ages by family income and of rural children of rehabilitation borrower families that had been immunized against diphtheria at any time prior to examination. Farm Security Administration physical examinations, 1940, and Communicable Disease Survey (5), exclusive of the West.

the Costs of Medical Care study smallpox vaccination is approximately twice as frequent in large cities as in rural areas, 84 and 42 percent,

respectively, at 15 years of age. Figure 2 shows the percentage of children in specific age groups that had been vaccinated against smallpox for children of Farm Security Administration borrower families compared with children of the Committee on the Costs of Medical Care Survey in rural areas and three size-of-city groups. Smallpox vaccination is obviously less frequent among the Farm Security Administration farm families than among canvassed families living in cities of 5,000 or more population; and is about the same as among canvassed families in small towns and rural areas. The somewhat higher percentage vaccinated for Farm Security Administration farm children than for the Committee on the Costs of Medical Care rural children may be largely accounted for by the greater representation of

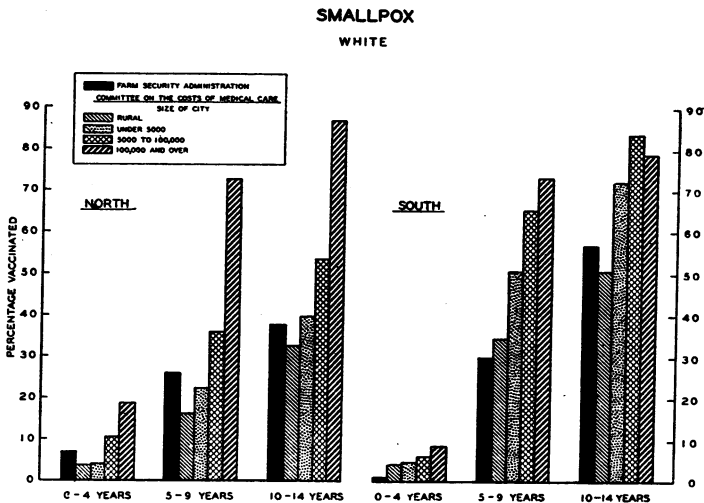


FIGURE 3.—Percentage of children of specific ages in urban and rural areas of North and South that had been vaccinated against smallpox at any time prior to examination. Farm Security Administration physical examinations, 1940, and Committee on the Costs of Medical Care (1).

the South among the rural rehabilitation families, where the percentage vaccinated is slightly higher (table 2 and fig. 3).

Figure 2 also shows the percentage of children in specific age groups that had been vaccinated against smallpox for children of Farm Security Administration families compared with children in families of 4 income groups in cities of 100,000 or more population. The only significant difference among the city curves is the higher percentage of children vaccinated under 5 years of age in families of \$3,000 or more family income. Children of rural farm families have a lower percentage vaccinated than children of families of any income level among city populations.

Except for cities of 100,000 and over in population the South shows a higher percentage vaccinated than the North (1) (fig. 3). For each of three age groups the frequency of vaccination among children of

Farm Security Administration borrower families in the North is about equivalent to that of children in rural areas or small towns as recorded in the Committee on the Costs of Medical Care Survey for the North and about equal to that in rural areas for the South (fig. 3).

Boys and girls (table 3) show practically identical age-specific percentages vaccinated against smallpox. Under 6 years of age, the

TABLE 3.—Percentage of white children at specific ages that had been immunized <sup>1</sup> against smallpox, diphtheria, and typhoid fever—members of Farm Security Administration borrower families in a total of 19 localities, <sup>2</sup> 1940

Age	Known as to immunization			With prior immunization against—								
				Smallpox			Diphtheria			Typhoid fever		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
	Number			Percent								
Under 15.....	4,309	2,194	2,115	29.7	30.1	29.2	45.8	46.6	45.0	23.6	24.9	22.3
Under 1.....	224	100	124	.4	-----	.8	4.9	3.0	6.5	.9	1.0	.8
Do.....	202	93	109	.5	-----	.9	17.8	16.1	19.3	.5	-----	.9
Under 2.....	253	127	126	3.2	2.4	4.0	33.2	34.6	31.7	4.0	3.9	4.0
Under 3.....	260	130	130	3.5	2.3	4.6	30.8	31.5	30.0	4.2	4.6	3.8
Under 4.....	276	138	138	6.5	6.5	6.5	38.8	43.5	34.1	14.5	14.5	14.5
Under 5.....	277	141	136	9.7	10.6	8.8	37.9	32.6	43.4	13.0	10.6	15.4
Under 6.....	285	154	131	14.4	14.9	13.7	46.0	46.8	45.0	17.9	16.9	19.1
Under 7.....	313	178	135	33.9	33.7	34.1	47.6	48.9	45.9	25.6	27.5	23.0
Under 8.....	303	144	159	37.3	40.3	34.6	52.1	57.6	47.2	27.7	25.7	29.6
Under 9.....	297	150	147	42.1	44.0	40.1	54.9	56.7	53.1	31.6	31.3	32.0
Under 10.....	328	153	175	50.3	50.3	50.3	57.6	58.2	57.1	34.1	34.6	33.7
Under 11.....	326	151	175	46.6	49.0	44.6	61.0	62.9	59.4	34.4	43.7	26.3
Under 12.....	325	188	137	50.8	48.4	54.0	55.7	54.8	56.9	41.5	41.5	41.6
Under 13.....	319	171	148	51.7	50.3	53.4	61.4	60.2	62.8	36.7	40.9	31.8
Under 14.....	321	176	145	57.0	54.5	60.0	57.9	55.1	61.4	41.1	41.5	40.7

<sup>1</sup> Immunization at any time since birth.

<sup>2</sup> The 19 localities are listed in table 1.

percentages of Negro and white children that have been vaccinated are the same; at 6 years of age and over, however, there are approximately 35 percent more white children who have been vaccinated than Negro (table 4 and fig. 4).

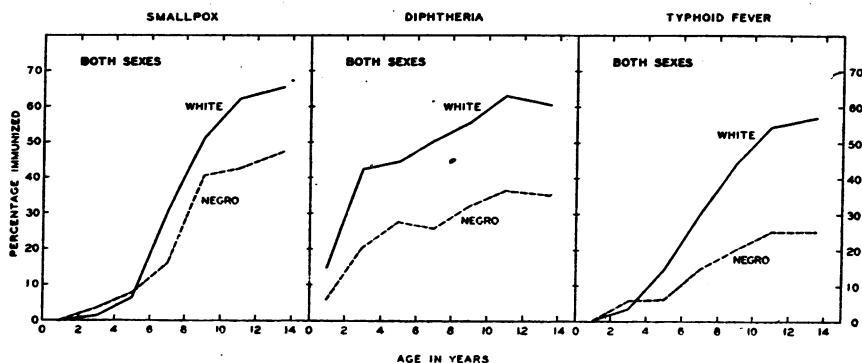


FIGURE 4.—Percentage of Negro and white children of specific ages that had been immunized against smallpox, diphtheria, and typhoid fever at any time prior to examination. Farm Security Administration physical examinations, 1940, in southern localities where both Negroes and whites were examined.



TABLE 4.—Percentage of Negro and white children in specific age groups that had been immunized<sup>1</sup> against smallpox, diphtheria, and typhoid fever—members of Farm Security Administration borrower families in a total of 9 localities,<sup>2</sup> 1940

Age	Known as to immunization			With prior immunization against—								
				Smallpox			Diphtheria			Typhoid fever		
	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female	Both sexes	Male	Female
	Number			Percent								
	Negro											
Under 15.....	795	397	398	26.5	27.2	25.9	28.2	24.2	32.2	15.7	16.6	14.8
0-1.....	69	39	30	-----	-----	-----	5.8	10.3	-----	5.4	2.9	6.8
2-3.....	93	34	59	3.2	2.9	3.4	20.4	11.8	25.4	5.4	4.0	7.7
4-5.....	102	50	52	7.8	6.0	9.6	27.5	18.0	36.5	5.9	4.0	7.7
6-7.....	124	61	63	16.1	14.8	17.5	25.8	26.2	25.4	14.5	18.0	11.1
8-9.....	106	52	54	40.6	38.5	42.6	32.1	25.0	38.9	19.8	25.0	14.8
10-11.....	113	62	51	42.5	43.5	41.2	36.3	29.0	45.1	24.8	19.4	31.4
12-14.....	188	99	89	47.3	48.5	46.1	35.1	32.3	38.2	25.0	27.3	22.5
	White											
Under 15.....	2,250	1,143	1,107	36.6	37.1	36.0	50.1	50.6	49.7	33.7	35.1	32.2
0-1.....	217	97	120	-----	-----	-----	14.7	12.4	16.7	-----	-----	-----
2-3.....	258	121	137	1.2	-----	2.2	42.6	45.5	40.1	3.5	3.3	3.6
4-5.....	296	154	142	6.1	6.5	5.6	44.6	40.9	48.6	14.2	11.7	16.9
6-7.....	323	181	142	30.7	29.8	31.7	50.2	49.2	51.4	29.7	30.9	28.2
8-9.....	304	144	160	51.3	56.9	46.3	55.6	59.0	52.5	44.1	42.4	45.6
10-11.....	319	149	170	62.1	61.7	62.4	63.0	63.8	62.4	54.2	59.1	50.0
12-14.....	533	297	236	65.5	62.6	69.1	60.4	60.3	60.6	57.0	58.6	55.1

<sup>1</sup> Immunization at any time since birth.

<sup>2</sup> The 9 localities are: Spotsylvania County, Va.; Kershaw County, S. C.; Worth County, Ga.; Levy County, Fla.; parts of Carroll, Leflore, and Humphreys Counties, Miss.; Pope County, Ark.; Okfuskee County, Okla.; Franklin Parish, La.; and Panola County, Tex.

#### IMMUNIZATION AGAINST DIPHTHERIA

Figure 1 shows the frequency of diphtheria immunization for specific ages under 15 years as obtained in three comparable surveys, plotted on semilogarithmic paper. The rate of increase in the percentage immunized is most rapid under 2 years of age; after 2 years of age it continues to increase at a less rapid and practically constant rate until 15 years of age. In both the Committee on the Costs of Medical Care and Communicable Disease Surveys the percentage immunized against diphtheria declines somewhat after approximately 9 or 10 years of age, while in the Farm Security Administration data the percentage immunized continues to increase. The decline in the rate in the two former surveys is probably due partly to the fact that practically all of the children were reported upon and frequently not by their parents, whereas the children examined by the Farm Security Administration either reported upon themselves or were reported upon by their parents. The percentage of children ever immunized also reflects a changing immunization rate; that is, 10-year-old children,

particularly in cities, may have lived their first years at a time when immunization was performed less frequently than 5 years later, for example.

The frequency of immunization against diphtheria has been shown to vary somewhat with section of the country but to be the same in rural and urban areas (2). For ages under 15 years the frequency of immunization against diphtheria shows a definite relationship with income (2, 5). Figure 2 gives the percentage of children of low-income farm families that had been immunized compared with the percentages of children immunized in four income groups as obtained by the Communicable Disease Survey in large cities. The West

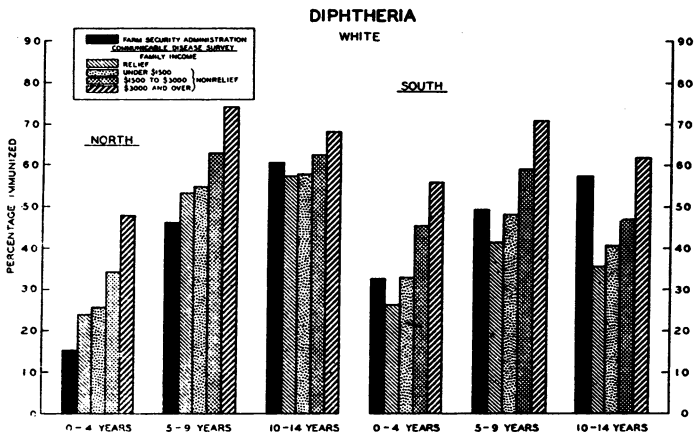


FIGURE 5.—Percentage of urban children of specific ages by family income in North and South and of rural children of rehabilitation borrower families in North and South that had been immunized against diphtheria at any time prior to examination. Farm Security Administration physical examinations, 1940, and Communicable Disease Survey (6). Data by section and income are unpublished.

section has been omitted from the urban survey since western States are not represented in the Farm Security Administration examinations. The frequency of immunization among children of the Farm Security Administration borrower families is about equal to that in the two lower income groups (relief, and nonrelief under \$1,500) in large cities. At 9 years of age, or prior to the decline in the urban percentages, 55 percent of children of rural borrower families had been immunized against diphtheria; while 53 and 55 percent of the children in low-income levels (relief, and nonrelief under \$1,500) in large cities had been immunized. In northern areas (fig. 5) children of Farm Security Administration borrower families show a somewhat lower percentage immunized against diphtheria in the age groups 0-4 and 5-9 years than urban children in low-income groups; in southern areas (fig. 5) they show a slightly higher percentage immunized in all three age groups under 15 years.

Tables 3 and 4 and figure 4 give the percentages of boys and girls and of Negro and white children that had been immunized against diphtheria. Boys and girls show the same percentage immunized in specific age groups; white children show a higher percentage immunized than Negro children for the nine southern localities in which Negroes were examined. Under 4 years of age more than twice as many white as Negro children have been immunized against diphtheria; while from 4 to 15 years of age approximately 70 percent more white than Negro children have been immunized at some time.

#### IMMUNIZATION AGAINST TYPHOID FEVER

Typhoid fever immunization has been performed, on the whole, in areas where the typhoid problem is the greatest, that is, in small

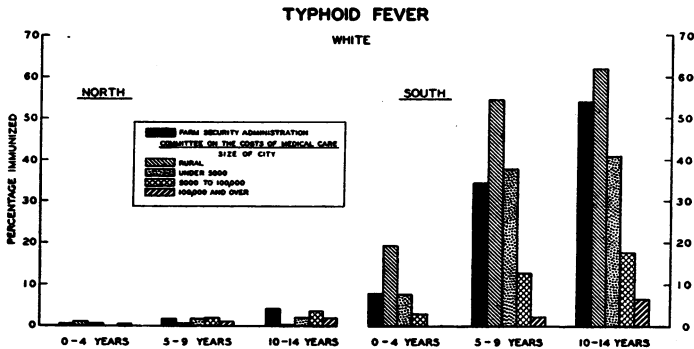


FIGURE 6.—Percentage of children of specific ages in urban and rural areas of North and South that had been immunized against typhoid fever at any time prior to examination. Farm Security Administration physical examinations, 1940, and Committee on the Costs of Medical Care (3).

towns and rural areas of the South (3). The Committee on the Costs of Medical Care survey shows that "the South, with the highest percentage of persons with a history of typhoid fever, has resorted to immunization far more than any other section. In cities over 100,000, immunizations are not much more frequent in the South than elsewhere; the excess for the South is particularly large for small towns and rural areas." At 10-14 years of age approximately 50 percent of children in southern localities have been immunized against typhoid fever among both the rural Farm Security Administration families and families in small towns and rural areas surveyed by the Committee on the Costs of Medical Care (fig. 6). The Communicable Disease Survey in large cities (4) shows a direct relationship between immunization for typhoid fever and size of family income; at 10-14 years, however, slightly less than 6 percent of urban children had been immunized in the \$3,000 and over income group.

Table 3 shows an equal percentage of boys and girls immunized against typhoid fever at specific ages. Among Negroes and whites,

however (table 4 and fig. 4), twice as many white children have been immunized as Negro, or 25 and 57 percent immunized, respectively, at 12-14 years of age in localities where Negroes were examined.

#### SUMMARY

The frequency of immunization at any time since birth against smallpox, diphtheria, and typhoid fever for children of Farm Security Administration borrower families residing in 19 localities was obtained during the course of general physical examination of rehabilitation farm families. There is marked variability in the percentage of children immunized in the several localities which, in the South at least, may be associated to some extent with the organization of local health departments.

Smallpox vaccination varies slightly with income and section of the country and markedly with size of city, vaccination rates being higher in large cities. At 10-14 years of age 57 percent of children of Farm Security Administration rural borrower families in southern areas had been vaccinated against smallpox, which agrees roughly with the percentage vaccinated in rural areas as reported in the Committee on the Costs of Medical Care survey, namely, 51 percent in rural areas, 72 percent in small towns, 84 percent in towns of 5,000 to 100,000 population, and 79 percent in towns of 100,000 or more population, in surveyed southern areas.

Immunization against diphtheria is not associated with size of city, but varies slightly with geographic section and markedly with size of family income. At 5-9 years of age 49 percent of children of rural borrower families in southern areas had been immunized as compared with 41, 48, 59, and 71 percent of children in families on relief and with incomes under \$1,500, \$1,500-\$3,000, and \$3,000 and over, respectively, in large cities of the South canvassed by the Communicable Disease Survey.

Typhoid fever immunization has been performed mainly in areas where typhoid fever is a real problem, that is, in small towns and rural areas of the South. At 10-14 years of age approximately 50 percent of children in southern localities have been immunized against typhoid fever among both rural Farm Security Administration borrower families and families in small towns and rural areas surveyed by the Committee on the Costs of Medical Care.

The three immunization procedures considered were performed as frequently on boys as girls in these data. The percentage of Negro children immunized is less than the white. At 12-14 years of age approximately 40, 70, and 125 percent more white than Negro children had been immunized at some time since birth against smallpox, diphtheria, and typhoid fever, respectively.

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## PREVALENCE OF COMMUNICABLE DISEASES IN THE UNITED STATES

December 2-29, 1945

The accompanying table 1 summarizes the prevalence of nine important communicable diseases, based on weekly telegraphic reports from State health departments. The reports from each State for each week are published in the PUBLIC HEALTH REPORTS under the section "Prevalence of disease." The table gives the number of cases of these diseases for the 4 weeks ended December 29, 1945, the number reported for the corresponding period in 1944, and the median number for the years 1940-44.

### DISEASES ABOVE MEDIAN PREVALENCE

*Influenza.*—For the 4 weeks ended December 29 there was a total of 319,576 cases reported in the 46 States, the District of Columbia, and New York City reporting influenza to the Public Health Service. A comparison of this figure with prior years indicates that it is far above the corresponding period of 1942 and 1944 but roughly the same as in December of 1943 when the last preceding epidemic occurred. Influenza virus B has been identified in a number of laboratories during and preceding the present epidemic.

TABLE 1.—Number of reported cases of 9 communicable diseases in the United States during the 4-week period December 2–29, 1945, the number for the corresponding period in 1944, and the median number of cases reported for the corresponding period, 1940–44

Division	Current period	1944	5-year median	Current period	1944	5-year median	Current period	1944	5-year median
	Diphtheria			Influenza <sup>1</sup>			Measles <sup>2</sup>		
United States.....	1,819	1,517	1,369	319,576	11,556	11,556	10,381	3,092	18,868
New England.....	50	33	33	498	102	50	765	320	1,919
Middle Atlantic.....	95	111	131	729	32	115	2,930	349	5,849
East North Central.....	232	181	181	7,122	135	341	1,969	295	1,665
West North Central.....	146	214	94	33,804	84	157	435	253	1,409
South Atlantic.....	416	206	243	49,653	2,588	3,755	563	216	922
East South Central.....	205	166	146	124,382	389	662	666	131	603
West South Central.....	415	332	304	59,697	7,444	7,444	316	253	458
Mountain.....	147	51	51	42,055	632	1,016	686	111	1,300
Pacific.....	63	23	116	1,526	150	418	2,052	1,164	1,164
	Meningococcus meningitis			Pollomyelitis			Scarlet fever		
United States.....	498	761	490	458	382	260	10,391	14,749	11,821
New England.....	20	39	39	23	12	12	744	1,601	1,250
Middle Atlantic.....	115	195	109	52	153	33	1,902	2,641	2,387
East North Central.....	99	159	54	100	50	32	2,893	3,704	3,351
West North Central.....	34	46	21	45	41	19	898	1,386	1,352
South Atlantic.....	56	87	87	43	29	26	1,089	1,550	1,148
East South Central.....	54	55	19	23	11	11	504	677	677
West South Central.....	43	69	23	34	15	20	713	664	388
Mountain.....	13	25	25	21	11	11	530	837	640
Pacific.....	64	86	71	117	60	39	1,128	1,689	650
	Smallpox			Typhoid and paratyphoid fever			Whooping cough <sup>2</sup>		
United States.....	23	28	70	207	217	324	7,297	7,000	12,019
New England.....	0	0	0	11	17	16	1,109	1,068	1,326
Middle Atlantic.....	0	0	0	29	36	36	2,024	1,820	3,266
East North Central.....	4	10	18	30	23	30	1,671	1,218	3,076
West North Central.....	5	9	10	4	8	14	189	306	541
South Atlantic.....	0	1	1	32	49	49	825	932	1,126
East South Central.....	5	2	3	20	14	32	187	148	401
West South Central.....	4	4	13	57	36	48	529	691	691
Mountain.....	4	2	2	12	13	14	225	251	331
Pacific.....	1	0	0	12	21	21	538	566	892

<sup>1</sup> Mississippi and New York excluded; New York City included. In a number of States the reports seem to represent estimates or the results of artificial stimulation to obtain more complete reports during the epidemic.

<sup>2</sup> Mississippi excluded.

Influenza is so incompletely reported that many States send to the Public Health Service estimates based on various types of supplementary information, rather than actual cases reported by attending physicians. Other States send letters to physicians or by published appeals stimulate the reporting of cases. Thus in one week roughly two-thirds of all reported cases were reported by one State and this one report has an overwhelming influence on locating the peak week for the country as a whole. To avoid such situations, table 2 of reported cases by weeks is based on 37 States, the District of Columbia, and New York City in which reporting has been reasonably consistent in the various weeks before and during the epidemic. It will be noted that totals are far below those quoted above; the table is shown solely for judging the progress of the epidemic in different geographic sections.

Table 2 indicates that for the country as a whole the rise began around the middle of November with a peak for the week ending December 22, the two succeeding weeks being definitely below the peak.

The peak of reported cases comes rather definitely in the week ending December 22 in nearly all geographic sections except the East South Central and the Pacific in which the cases are almost the same in the week ending December 29 as in the preceding week. So few cases have been reported in the New England States that the indicated peak in the week of December 15 is not reliable.

TABLE 2.—*Influenza cases reported by geographic sections by weeks in 1945-46 and in corresponding weeks of preceding years—including only States reporting consistently before and during the epidemic*

Geographic section	Week ended—									
	1945									1946
	Nov. 3	Nov. 10	Nov. 17	Nov. 24	Dec. 1	Dec. 8	Dec. 15	Dec. 22	Dec. 29	Jan. 5
37 States, <sup>1</sup> District of Columbia, and New York City:										
1945-46	2,611	2,720	4,022	4,957	11,329	22,650	29,332	42,828	33,460	33,893
1944-45	1,608	1,290	1,829	1,748	2,117	2,423	2,893	2,689	3,439	4,545
1943-44	1,414	1,537	1,700	2,441	4,395	11,321	38,982	55,015	84,701	86,784
1942-43	1,549	1,567	1,742	1,822	1,890	2,552	2,382	2,182	3,325	3,709
New England:										
1945-46	9	0	5	4	1	3	37	24	24	560
1944-45	21	33	14	24	28	26	24	20	21	58
1943-44	3	1	3	32	54	121	342	929	830	457
1942-43	3	15	4	3	9	3	4	3	11	36
Middle Atlantic:										
1945-46	6	10	11	10	45	45	164	264	256	252
1944-45	10	5	7	3	4	7	9	7	9	8
1943-44	14	7	24	11	36	133	564	889	526	225
1942-43	22	37	20	25	31	31	23	25	42	51
East North Central:										
1945-46	50	54	279	384	1,309	1,418	1,045	2,601	1,564	1,675
1944-45	12	29	19	15	36	35	15	25	35	36
1943-44	30	159	33	29	121	926	2,995	3,250	3,095	3,594
1942-43	52	45	65	50	41	52	105	48	94	107
West North Central:										
1945-46	9	12	21	29	142	623	159	561	200	850
1944-45	1	16	19	1	8	5	21	11	13	14
1943-44	1	8	8	422	382	533	708	206	480	312
1942-43	4	8	8	3	12	23	36	9	2	68
South Atlantic:										
1945-46	711	678	1,393	1,623	3,953	10,147	12,264	15,142	12,110	11,194
1944-45	505	444	551	594	514	578	646	622	742	1,216
1943-44	428	446	507	649	1,227	4,035	15,920	16,425	35,978	32,635
1942-43	539	637	674	811	559	1,042	798	691	1,224	1,561
East South Central:										
1945-46	48	47	323	246	477	661	853	1,599	1,661	3,178
1944-45	28	40	34	31	82	78	80	102	118	430
1943-44	91	67	85	110	425	591	1,277	2,555	8,775	6,160
1942-43	59	49	81	42	87	120	80	199	212	195
West South Central:										
1945-46	1,672	1,760	1,777	2,178	4,551	8,297	12,587	17,687	13,760	14,191
1944-45	908	604	1,064	945	1,280	1,541	1,896	1,668	2,318	2,544
1943-44	666	694	800	970	1,511	3,549	8,971	15,504	21,550	33,226
1942-43	655	623	671	628	902	1,004	993	958	1,455	1,410
Mountain:										
1945-46	92	137	196	453	802	1,361	2,076	4,258	3,293	1,288
1944-45	97	97	82	101	132	107	162	198	154	190
1943-44	142	137	218	179	578	1,337	4,770	6,188	6,007	5,139
1942-43	168	101	156	197	198	206	275	202	234	230
Pacific:										
1945-46	14	13	17	30	49	95	147	692	592	705
1944-45	25	22	39	34	33	46	40	35	29	49
1943-44	39	18	22	39	61	96	3,435	9,069	7,460	5,036
1942-43	47	52	63	63	51	71	68	47	51	51

<sup>1</sup> States excluded are those reporting such unusually large numbers of cases as to indicate estimates or large sudden changes in the completeness of reporting.

Reported cases indicate that the incidence started to rise during the second or third week of November in Indiana, South Carolina, and

Texas; the two latter States commonly report many more cases than other States but the rise mentioned refers to cases in excess of the usual level of reporting. If the epidemic did start in the middle sections of the country and almost simultaneously in several States, its rapid spread to other sections would be expected, so the single peak in nearly all regions is not unreasonable. The 1920 epidemic started in the Great Lakes region and very quickly spread to all parts of the country. During the week ended January 5, the latest data available, there were 33,893 cases reported.

Thus far there has been very little mortality. Data are not available on deaths credited to influenza and pneumonia, but deaths from all causes in 93 large cities as released by the United States Bureau of the Census indicates an excess over the average for the same period in 1942 and 1944 of 9.9 percent during the 4 weeks ending December 29, and 13.6 percent during the 2 weeks ending December 29, 1945. There is nearly always some excess mortality during an influenza epidemic, no matter how mild the cases. In December of 1943 influenza was epidemic and the number of deaths was greater than in the current 4-week period.

*Diphtheria*.—For the 4 weeks ended December 29 there were 1,819 cases of diphtheria reported, as compared with 1,517 in 1944 and a 5-year median of 1,369 cases. For the country as a whole the current incidence was the highest for this period since 1941 when 1,830 cases were reported. Each section of the country except the Middle Atlantic and Pacific reported excesses over the normal (median) seasonal expectancy, the increases ranging from 1.4 times the median in the East South Central section to 2.9 times the median in the Mountain section.

*Meningococcus meningitis*.—The number of cases of meningococcus meningitis rose from 397 during the preceding 4 weeks to 498 for the 4 weeks ended December 29. The number of cases was, however, only about 65 percent of the 1944 figure for these weeks and was about the same as the 1940–44 median (490 cases). Each section of the country reported a decline from the 1944 figures, but only  $\frac{1}{2}$  of the 9 sections showed a decline from the preceding 5-year median.

*Poliomyelitis*.—The number of cases of poliomyelitis dropped from 932 during the 4 weeks ended December 1 to 458 during the current 4-week period. The incidence was, however, 20 percent above the 1944 figure and about 80 percent above the 1940–44 median. Each section of the country contributed to the relatively high incidence of this disease, the largest excesses over the normal seasonal incidence occurring in the East North Central and Pacific sections.

#### DISEASES BELOW MEDIAN PREVALENCE

*Measles*.—For the 4 weeks ended December 29 there were 10,381 cases of measles reported, as compared with 3,092 for the corresponding



period in 1944 and a 5-year median of 18,868 cases. The incidence was higher in all sections of the country than in 1944, but only 3 sections, the East North Central, East South Central, and Pacific, reported excesses over the preceding 5-year medians. The greatest declines from the normal seasonal incidence were reported from the North Atlantic and West North Central sections, and the greatest increase over the median was reported from the Pacific section.

*Scarlet fever.*—The incidence of this disease was the lowest on record for this period. The number of cases (10,391) was about 70 percent of the number reported in 1944, and less than 90 percent of the 1940–44 median. The West South Central and Pacific sections reported increases over the normal seasonal expectancy, but in all other sections the incidence was relatively low.

*Smallpox.*—The smallpox incidence was also the lowest on record for this period. The 23 cases reported for the current 4 weeks was below even the low level of 1944 and was less than 35 percent of the preceding 5-year median. Significant decreases in the incidence were reported from areas normally reporting a high incidence.

*Typhoid and paratyphoid fever.*—The number of cases (207) of typhoid fever was slightly below the 1944 figure for this period, but it was only about 65 percent of the 1940–44 median. In the West South Central section the number of cases (57) was higher than the normal seasonal expectancy and in the East North Central and Mountain sections the incidence was about normal but in all other sections the disease was less prevalent than in preceding years.

*Whooping cough.*—For the 4 weeks ended December 29 there were 7,297 cases of whooping cough reported as compared with a seasonal expectancy of approximately 12,000 cases. The North Atlantic, East North Central, and East South Central sections reported more cases than occurred during the corresponding period in 1944, but none of the 9 geographic sections reported any excess over the 1940–44 median. The greatest declines from the seasonal expectancy were reported from the Middle Atlantic and East North Central sections.

#### MORTALITY, ALL CAUSES

For the 4 weeks ended December 29 there were 41,896 deaths from all causes reported to the Bureau of the Census by 93 large cities. In the years 1944, 1943, and 1942 the deaths for the corresponding period totaled 37,947, 49,108, and 38,280, respectively. The current number of deaths represented an increase of about 10 percent over the number reported for this period in 1944, but it was only about 0.2 percent above the 1942–44 average, which includes the 1943 influenza epidemic. A further discussion of mortality in large cities is found under the subject of influenza.

**DEATHS DURING WEEK ENDED DECEMBER 29, 1945**

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

	Week ended Dec. 29, 1945	Correspond- ing week, 1944
<b>Data for 93 large cities of the United States:</b>		
Total deaths.....	11,384	9,934
Average for 3 prior years.....	11,549	-----
Total deaths, 52 weeks of year.....	471,714	468,773
Deaths under 1 year of age.....	602	608
Average for 3 prior years.....	687	-----
Deaths under 1 year of age, 52 weeks of year.....	31,573	32,113
<b>Data from industrial insurance companies:</b>		
Policies in force.....	67,190,360	66,891,064
Number of death claims.....	7,789	10,500
Death claims per 1,000 policies in force, annual rate.....	6.0	8.2
Death claims per 1,000 policies, 52 weeks of year, annual rate.....	9.9	10.0

# 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

### REPORTS FROM STATES FOR WEEK ENDED JANUARY 5, 1946

#### Summary

A total of 48,041 cases of influenza was reported, as compared with 52,947 last week, 4,587 and 126,610 for the corresponding weeks, respectively, of 1945 and 1944. Increases occurred in the New England, North Central, West South Central, and Pacific areas. States showing the largest increases are Alabama (1,279), Kansas (1,119), Texas (850), Utah (745), Nebraska (675), and Connecticut (545). Current reports for Nebraska, Texas, and Utah, however, are less than for the week ended December 22. Decreases occurred in 5 of the 12 States reporting currently more than 1,000 cases each, as follows (last week's figures in parentheses): *Increases*—Wisconsin 1,494 (1,034), Kansas 3,705 (2,586), West Virginia 2,356 (2,302), Alabama 2,497 (1,218), Oklahoma 2,245 (1,176), Texas 11,510 (10,660), Utah 1,114 (369); *decreases*—Virginia 5,323 (5,907), South Carolina 3,017 (3,243), Kentucky 1,953 (8,071), Arkansas 1,204 (1,924), Louisiana 6,314 (7,225).

Since September 29 a total of 401,982 cases has been reported, as compared with 29,985 and 461,940, respectively, for the corresponding periods ended with the first weeks of January 1945 and 1944.

Of the total of 189 cases of meningococcus meningitis reported, as compared with 162 last week and 238 for the corresponding week last year, 73 occurred in 5 States, as follows (last week's figures in parentheses): New York 14 (13), New Jersey 15 (10), Ohio 10 (8), Texas 13 (13), California 21 (14).

Deaths registered in 93 large cities of the United States during the week totaled 11,928, as compared with 11,399 for the preceding week, 9,786 for the corresponding week last year, and a 3-year (1943-45) average of 11,353.

*Telegraphic morbidity reports from State health officers for the week ended January 5, 1946, and comparison with corresponding week of 1945 and 5-year median*

In these tables a zero indicates a definite report, while leaders imply that, although none was reported, cases may have occurred.

Division and State	Diphtheria			Influenza			Measles			Meningitis, meningococcus		
	Week ended—		Med- ian 1941- 45	Week ended—		Med- ian 1941- 45	Week ended—		Med- ian 1941- 45	Week ended—		Med- ian 1941- 45
	Jan. 5, 1946	Jan. 6, 1945		Jan. 5, 1946	Jan. 6, 1945		Jan. 5, 1946	Jan. 6, 1945		Jan. 5, 1946	Jan. 6, 1945	
NEW ENGLAND												
Maine.....	0	0	0	2	1	1	12	6	37	0	2	2
New Hampshire.....	1	0	0	3	—	—	—	1	11	0	1	0
Vermont.....	1	0	0	32	1	24	3	18	18	0	1	0
Massachusetts.....	4	7	5	—	—	—	236	61	384	5	8	8
Rhode Island.....	0	0	0	—	55	25	—	5	7	0	0	0
Connecticut.....	3	4	0	558	2	10	21	14	32	2	5	2
MIDDLE ATLANTIC												
New York.....	15	9	15	178	(1)	17	316	57	670	14	22	22
New Jersey.....	6	1	3	155	5	20	26	12	346	15	19	11
Pennsylvania.....	10	16	16	19	3	3	—	47	1121	7	10	10
EAST NORTH CENTRAL												
Ohio.....	48	11	11	175	7	26	23	12	95	10	11	8
Indiana.....	13	7	13	124	4	49	38	5	42	4	4	2
Illinois.....	17	4	16	49	4	18	327	34	169	9	25	6
Michigan <sup>1</sup> .....	2	3	3	8	—	6	52	6	83	0	1	1
Wisconsin.....	7	0	1	1,494	28	62	45	33	303	2	5	2
WEST NORTH CENTRAL												
Minnesota.....	4	13	2	8	—	1	4	4	6	1	3	0
Iowa.....	9	5	5	59	—	2	16	21	50	5	2	2
Missouri.....	3	9	3	23	3	10	41	2	27	5	11	7
North Dakota.....	2	10	8	25	8	49	1	1	10	0	2	1
South Dakota.....	0	1	3	—	—	—	10	9	9	0	1	0
Nebraska.....	2	10	4	819	11	11	14	11	11	0	1	1
Kansas.....	10	10	4	3,705	2	9	93	16	64	1	1	2
SOUTH ATLANTIC												
Delaware.....	0	0	1	—	—	—	2	2	6	2	0	0
Maryland <sup>1</sup> .....	13	1	5	69	6	11	10	5	13	6	5	5
District of Columbia.....	0	0	0	10	1	6	2	5	5	2	1	1
Virginia.....	19	2	13	5,323	398	659	85	8	146	9	4	4
West Virginia.....	3	3	7	2,356	59	59	4	61	61	6	2	2
North Carolina.....	37	13	13	—	—	12	53	8	69	8	8	3
South Carolina.....	7	7	7	3,017	688	688	61	11	33	3	4	4
Georgia.....	13	9	9	411	62	181	19	2	8	2	2	2
Florida.....	6	12	7	8	2	15	19	3	8	5	2	1
EAST SOUTH CENTRAL												
Kentucky.....	4	2	4	1,953	2	2	119	5	66	4	4	2
Tennessee.....	10	10	4	681	17	89	22	39	39	4	6	6
Alabama.....	8	13	7	2,497	413	413	9	6	23	4	9	4
Mississippi <sup>1</sup> .....	14	13	5	—	—	—	—	—	—	1	5	2
WEST SOUTH CENTRAL												
Arkansas.....	13	6	7	1,204	123	192	12	8	39	0	4	0
Louisiana.....	16	8	9	6,314	21	21	6	12	11	0	1	1
Oklahoma.....	8	7	5	2,245	171	187	31	15	7	3	2	2
Texas.....	67	66	46	11,510	2,250	2,250	91	90	90	13	9	3
MOUNTAIN												
Montana.....	1	1	1	350	31	31	2	2	38	0	0	0
Idaho.....	3	2	0	79	2	2	100	2	2	1	1	1
Wyoming.....	3	0	0	6	—	54	3	—	10	0	0	0
Colorado.....	4	4	6	195	25	62	59	8	92	5	2	1
New Mexico.....	3	13	1	1	—	6	—	2	10	2	1	0
Arizona.....	7	3	1	657	132	195	6	3	20	1	0	2
Utah <sup>1</sup> .....	0	0	0	1,114	1	32	72	14	14	0	0	1
Nevada.....	0	0	0	—	—	—	15	4	4	0	1	0
PACIFIC												
Washington.....	3	10	7	—	1	2	241	25	25	0	2	2
Oregon.....	9	2	2	269	22	22	34	54	55	7	6	6
California.....	30	34	17	436	26	108	414	210	210	21	22	13
Total.....	458	361	361	48,041	4,587	4,587	2,769	979	7,892	189	238	238

<sup>1</sup> New York City only.

<sup>2</sup> Period ended earlier than Saturday.

Telegraphic morbidity reports from State health officers for the week ended January 5, 1946, and comparison with corresponding week of 1945 and 5-year median—Con.

Division and State	Pollomyelitis			Scarlet fever			Smallpox			Typhoid and paratyphoid fever <sup>2</sup>		
	Week ended—		Median 1941-45	Week ended—		Median 1941-45	Week ended—		Median 1941-45	Week ended—		Median 1941-45
	Jan. 5, 1946	Jan. 6, 1945		Jan. 5, 1946	Jan. 6, 1945		Jan. 5, 1946	Jan. 6, 1945		Jan. 5, 1946	Jan. 6, 1945	
NEW ENGLAND												
Maine.....	0	3	0	35	35	14	0	0	0	0	0	0
New Hampshire.....	1	0	0	2	19	6	0	0	0	0	0	0
Vermont.....	1	0	0	4	5	8	0	0	0	0	0	0
Massachusetts.....	1	0	0	163	261	262	0	0	0	0	0	1
Rhode Island.....	0	0	0	12	19	13	0	0	0	0	0	0
Connecticut.....	0	1	0	31	49	49	0	0	0	1	1	1
MIDDLE ATLANTIC												
New York.....	6	9	2	263	408	367	0	0	0	4	1	2
New Jersey.....	1	1	0	56	120	120	0	0	0	1	1	0
Pennsylvania.....	0	0	0	146	250	250	0	0	0	3	3	5
EAST NORTH CENTRAL												
Ohio.....	3	5	1	216	317	290	0	0	0	2	1	3
Indiana.....	1	4	1	56	115	103	1	4	2	0	0	1
Illinois.....	0	0	0	139	269	219	0	1	0	3	2	2
Michigan <sup>2</sup> .....	0	0	0	39	35	72	0	0	0	0	0	0
Wisconsin.....	10	0	0	84	145	145	0	0	0	0	0	0
WEST NORTH CENTRAL												
Minnesota.....	0	0	0	22	53	66	0	0	0	0	0	0
Iowa.....	0	0	1	39	55	53	0	0	0	0	0	1
Missouri.....	1	2	0	38	82	52	0	0	0	1	0	0
North Dakota.....	0	0	0	5	11	16	0	0	0	0	0	0
South Dakota.....	0	0	1	11	39	39	0	0	0	0	0	0
Nebraska.....	0	0	0	48	15	33	0	1	0	0	0	0
Kansas.....	0	0	0	80	125	80	0	0	0	0	2	0
SOUTH ATLANTIC												
Delaware.....	0	0	0	6	9	12	0	0	0	0	0	0
Maryland <sup>2</sup> .....	0	0	0	55	105	43	0	0	0	0	1	1
District of Columbia.....	0	0	0	5	42	15	0	0	0	3	1	0
Virginia.....	0	4	1	55	97	46	0	0	0	2	0	1
West Virginia.....	0	1	1	38	69	49	0	0	0	1	0	0
North Carolina.....	0	0	0	51	94	81	1	0	0	0	1	1
South Carolina.....	0	0	0	6	11	13	0	0	0	2	1	1
Georgia.....	1	1	0	12	32	23	0	0	0	0	0	3
Florida.....	0	1	1	6	13	8	0	0	0	0	0	0
EAST SOUTH CENTRAL												
Kentucky.....	0	1	1	40	38	48	0	1	0	0	0	1
Tennessee.....	2	0	0	49	59	49	0	0	0	5	1	1
Alabama.....	1	0	0	22	29	29	0	1	1	0	1	2
Mississippi <sup>2</sup> .....	3	3	0	15	21	13	0	0	0	0	0	0
WEST SOUTH CENTRAL												
Arkansas.....	1	0	0	9	11	7	0	1	0	1	1	1
Louisiana.....	1	1	0	16	13	9	0	0	0	2	0	2
Oklahoma.....	1	1	1	46	55	18	1	1	0	0	0	1
Texas.....	5	2	2	87	131	54	0	0	1	7	4	5
MOUNTAIN												
Montana.....	0	1	1	13	9	26	0	0	0	0	0	0
Idaho.....	0	0	0	7	63	8	0	2	1	0	0	0
Wyoming.....	0	0	0	1	8	7	0	0	0	0	0	0
Colorado.....	0	1	0	29	113	30	0	0	1	0	2	1
New Mexico.....	0	2	0	13	17	6	0	0	0	0	4	3
Arizona.....	1	1	0	13	22	7	0	0	0	1	0	0
Utah <sup>2</sup> .....	1	0	0	32	43	43	0	0	0	0	0	0
Nevada.....	0	0	0	0	0	0	0	0	0	0	3	0
PACIFIC												
Washington.....	4	3	2	45	75	52	0	0	0	1	0	0
Oregon.....	0	0	0	20	39	14	0	0	0	0	0	0
California.....	1	4	4	203	277	150	1	0	0	0	1	2
Total.....	47	52	34	2,383	3,922	3,457	4	12	12	40	32	58

<sup>2</sup> Period ended earlier than Saturday.

<sup>3</sup> Including paratyphoid fever reported separately as follows: Connecticut 1; New Jersey 1; South Carolina 2; Tennessee 3; Texas 1.

*Telegraphic morbidity reports from State health officers for the week ended January 5, 1946, and comparison with corresponding week of 1945 and 5-year median—Con.*

Division and State	Whooping cough			Week ended Jan. 5, 1946							
	Week ended—		Median 1941-45	Dysentery			Encephalitis, infectious	Rocky Mt. spotted fever	Tularemia	Typhus fever, endemic	Undulant fever
	Jan. 5, 1946	Jan. 6, 1945		Ame- bic	Bacil- lary	Un- spec- ified					
NEW ENGLAND											
Maine.....	19	37	37								
New Hampshire.....	5	1	1								
Vermont.....	16	50	33								
Massachusetts.....	129	74	247		2		1				1
Rhode Island.....	19	6	11								
Connecticut.....	31	73	73	1	1						
MIDDLE ATLANTIC											
New York.....	179	167	375	4	4					1	2
New Jersey.....	91	85	103			1					1
Pennsylvania.....	94	141	283				2				1
EAST NORTH CENTRAL											
Ohio.....	71	118	144						3		1
Indiana.....	12	13	19	3		2					
Illinois.....	47	72	145								2
Michigan <sup>1</sup> .....	18	17	97		2						
Wisconsin.....	48	73	98								4
WEST NORTH CENTRAL											
Minnesota.....	8	30	34	1							1
Iowa.....	6	2	11								3
Missouri.....	7	13	17						3		
North Dakota.....		1	6								
South Dakota.....		8	8								
Nebraska.....	5	2	8								
Kansas.....	17	31	46								1
SOUTH ATLANTIC											
Delaware.....		8	8								
Maryland <sup>1</sup> .....	20	72	59			3			3		
District of Columbia.....	10	3	13								
Virginia.....	44	45	61			21			6	1	
West Virginia.....	3	18	28								
North Carolina.....	26	71	115							2	
South Carolina.....	63	78	55		69					2	
Georgia.....	6	6	18	2	1				2	11	5
Florida.....	1	4	15							4	
EAST SOUTH CENTRAL											
Kentucky.....	5	13	22				1				
Tennessee.....	11	12	20						3	1	
Alabama.....	4	17	17	1						7	9
Mississippi <sup>1</sup> .....										3	1
WEST SOUTH CENTRAL											
Arkansas.....	3	22	10							1	
Louisiana.....	2	2	2	2						3	
Oklahoma.....	5	5	5								
Texas.....	107	200	200	18	368	29				30	9
MOUNTAIN											
Montana.....	6	15	15								
Idaho.....	7		2								
Wyoming.....		8	8								
Colorado.....	23	34	23								
New Mexico.....	2		9	1							
Arizona.....	10	5	21			45					1
Utah <sup>1</sup> .....	12	8	20								1
Nevada.....	1		3								
PACIFIC											
Washington.....	69	21	43								1
Oregon.....	13	15	13								
California.....	98	149	154	4	3		1			1	3
Total.....	1,373	1,845	3,449	37	450	101	5	0	20	67	47
Same week, 1945.....	1,845			9	954	314	5	0	39	85	55
Average, 1943-45.....	2,344			15	461	131	6	40	33	66	34

<sup>1</sup> Period ended earlier than Saturday.

<sup>2</sup> 5-year median 1941-45.

## WEEKLY REPORTS FROM CITIES

City reports for week ended December 29, 1945

This table lists the reports from 87 cities of more than 10,000 population distributed throughout the United States, and represents a cross section of the current urban incidence of the diseases included in the table.

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Pollomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
NEW ENGLAND												
Maine:												
Portland.....	0	0	1	0	-----	0	4	1	5	0	1	1
New Hampshire:												
Concord.....	0	0	-----	0	-----	0	3	0	0	0	0	-----
Vermont:												
Barre.....	0	0	-----	0	-----	0	0	0	1	0	0	-----
Massachusetts:												
Boston.....	3	1	-----	1	13	2	16	0	34	0	0	18
Fall River.....	0	0	-----	0	-----	0	4	0	1	0	0	5
Springfield.....	0	0	-----	0	1	1	2	0	5	0	0	11
Worcester.....	0	0	-----	0	8	0	11	0	7	0	0	13
Rhode Island:												
Providence.....	1	0	1	1	-----	0	4	0	2	0	0	15
Connecticut:												
Bridgeport.....	0	0	4	0	1	0	5	0	2	0	0	1
Hartford.....	0	0	-----	0	1	0	0	0	6	0	0	1
New Haven.....	0	0	-----	0	-----	0	2	0	0	0	0	5
MIDDLE ATLANTIC												
New York:												
Buffalo.....	1	0	3	2	10	1	8	0	3	0	0	19
New York.....	6	1	71	8	38	7	154	0	82	0	1	47
Rochester.....	0	0	-----	0	1	0	5	0	5	0	1	1
Syracuse.....	0	0	-----	0	193	1	4	0	12	0	0	5
New Jersey:												
Camden.....	0	0	1	2	1	0	7	0	1	0	0	1
Newark.....	0	0	28	4	4	2	7	0	11	0	0	17
Trenton.....	0	0	3	1	-----	0	1	0	2	0	0	-----
Pennsylvania:												
Philadelphia.....	2	0	21	5	109	1	28	0	34	0	2	26
Pittsburgh.....	1	0	7	8	-----	5	23	0	14	0	0	3
Reading.....	0	0	1	1	2	0	3	0	1	0	0	14
EAST NORTH CENTRAL												
Ohio:												
Cincinnati.....	2	0	-----	7	1	2	24	0	18	0	0	6
Cleveland.....	1	0	22	4	2	3	18	0	17	0	0	7
Columbus.....	4	0	1	1	-----	0	3	1	6	0	0	-----
Indiana:												
Fort Wayne.....	0	0	-----	0	-----	0	8	0	0	0	0	-----
Indianapolis.....	2	0	-----	2	3	0	12	0	1	0	0	2
South Bend.....	0	0	-----	0	2	0	0	0	1	0	0	-----
Terre Haute.....	0	0	-----	1	-----	0	8	0	0	0	0	-----
Illinois:												
Chicago.....	3	0	16	4	294	5	59	1	49	0	0	37
Springfield.....	1	0	-----	0	-----	0	5	0	1	0	0	-----
Michigan:												
Detroit.....	3	0	10	4	80	2	30	0	34	0	0	39
Flint.....	5	0	-----	0	44	0	0	0	7	0	0	-----
Grand Rapids.....	0	0	-----	0	1	0	2	0	3	0	0	1
Wisconsin:												
Kenosha.....	0	0	-----	0	-----	0	0	0	1	0	0	-----
Milwaukee.....	0	0	-----	0	4	0	0	0	17	0	0	9
Racine.....	0	0	-----	0	-----	0	0	0	1	0	0	-----
Superior.....	0	0	-----	0	-----	0	0	0	0	0	0	1
WEST NORTH CENTRAL												
Minnesota:												
Duluth.....	0	0	-----	1	-----	0	2	0	3	0	0	-----
Minneapolis.....	3	0	-----	0	1	0	3	0	13	0	0	-----
Missouri:												
Kansas City.....	2	0	8	5	35	0	12	0	10	0	0	-----
St. Joseph.....	0	0	-----	0	11	0	0	0	0	0	0	-----
St. Louis.....	3	1	42	6	8	1	24	1	13	0	0	3

## City reports for week ended December 29, 1945—Continued

	Diphtheria cases	Etiophthalmis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Polymyellitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
WEST NORTH CENTRAL—continued												
Nebraska:												
Omaha	2	0	---	1	1	0	10	0	3	0	0	---
Kansas:												
Topeka	1	0	---	0	5	0	0	0	0	0	0	---
Wichita	0	0	2	0	1	0	5	0	7	0	0	1
SOUTH ATLANTIC												
Delaware:												
Wilmington	0	0	---	0	2	0	7	0	0	0	0	1
Maryland:												
Baltimore	10	0	64	4	4	0	26	0	6	0	0	5
Cumberland	0	0	---	0	---	0	1	0	0	0	0	---
Frederick	0	0	---	0	---	0	0	0	0	0	0	---
District of Columbia:												
Washington	0	1	44	1	---	3	18	0	9	0	2	15
Virginia:												
Lynchburg	0	0	---	0	---	0	1	0	4	0	0	4
Richmond	0	0	2	2	---	0	9	0	7	0	0	---
Roanoke	0	0	---	0	---	0	0	0	1	0	0	---
West Virginia:												
Wheeling	0	0	---	2	---	0	3	0	1	0	0	---
North Carolina:												
Raleigh	0	0	---	0	---	0	3	0	2	0	0	3
Wilmington	0	0	---	0	---	0	2	0	5	0	0	2
Winston-Salem	0	0	---	0	---	0	1	0	3	0	0	2
South Carolina:												
Charleston	1	0	368	0	---	0	1	1	1	0	0	---
Georgia:												
Atlanta	1	0	77	5	2	1	13	0	0	0	0	---
Brunswick	0	0	---	0	---	1	0	0	0	0	0	---
Savannah	0	0	14	0	---	0	0	0	3	0	0	---
Florida:												
Tampa	1	0	1	0	12	1	4	0	1	0	0	---
EAST SOUTH CENTRAL												
Tennessee:												
Memphis	0	0	28	3	7	1	16	0	3	0	1	1
Nashville	1	0	---	1	2	1	6	0	1	0	0	---
Alabama:												
Birmingham	2	0	50	1	---	1	8	0	3	0	0	---
Mobile	2	0	15	3	1	0	1	0	1	0	0	---
WEST SOUTH CENTRAL												
Arkansas:												
Little Rock	0	0	13	1	2	0	2	0	0	0	0	---
Louisiana:												
New Orleans	2	0	4	2	1	1	8	0	7	0	1	---
Shreveport	2	0	---	3	---	0	8	0	2	0	0	---
Texas:												
Dallas	4	0	4	1	---	0	7	0	3	0	1	---
Galveston	0	0	---	0	---	0	0	0	1	0	0	---
Houston	2	0	---	0	---	7	6	0	3	0	2	---
San Antonio	5	0	8	1	1	0	16	0	2	0	0	2
MOUNTAIN												
Montana:												
Billings	0	0	---	0	---	0	2	0	1	0	0	---
Great Falls	0	0	---	1	---	0	1	0	1	0	0	---
Helena	0	0	---	0	---	0	0	0	0	0	0	---
Missoula	0	0	104	0	---	0	1	0	1	0	0	---
Idaho:												
Boise	0	0	---	0	---	0	3	0	0	0	0	---
Colorado:												
Denver	2	0	23	2	1	0	7	0	15	0	0	8
Pueblo	0	0	---	0	1	0	2	0	2	0	0	---
Utah:												
Salt Lake City	0	0	---	0	3	0	3	1	2	0	0	1



## City reports for week ended December 29, 1945—Continued

	Diphtheria cases	Encephalitis, infectious, cases	Influenza		Measles cases	Meningitis, meningococcus, cases	Pneumonia deaths	Pollomyelitis cases	Scarlet fever cases	Smallpox cases	Typhoid and paratyphoid fever cases	Whooping cough cases
			Cases	Deaths								
PACIFIC												
Washington:												
Seattle.....	0	0	0	0	43	0	6	2	4	0	0	6
Spokane.....	0	0	1	0	12	0	2	0	0	0	0	3
Tacoma.....	0	0	5	0	21	0	1	0	0	0	0	2
California:												
Los Angeles.....	3	0	128	6	8	6	7	1	37	0	0	4
Sacramento.....	0	0	1	1	2	0	1	0	0	0	0	4
San Francisco.....	2	0	2	1	41	1	15	1	3	0	0	-----
Total.....	86	4	1,203	110	1,041	57	734	10	568	0	12	372
Corresponding week, 1944.....	57	-----	101	39	301	-----	476	-----	1,081	0	5	391
Average, 1940-44.....	73	-----	2,756	134	1,728	-----	1,706	-----	996	2	12	814

<sup>1</sup> 3-year average, 1942-44.<sup>2</sup> 5-year median, 1940-44.

Dysentery, amebic.—Cases: Buffalo 2; New York 4.

Dysentery, bacillary.—Cases: New York 2; St. Louis 1; Charleston, S. C. 1.

Dysentery, unspecified.—Cases: San Antonio 11.

Typhoid fever.—Cases: Baltimore 1; Nashville 2.

Typhus fever, endemic.—Cases: Charleston, S. C. 1; Atlanta 1; Nashville 1; Mobile 4; New Orleans 1; Houston 3; Los Angeles 1.

## Rates (annual basis) per 100,000 population, by geographic groups, for the 87 cities in the preceding table (estimated population, 1943, 34,010,100)

	Diphtheria case rates	Encephalitis, infectious, case rates	Influenza		Measles case rates	Meningitis, meningococcus, case rates	Pneumonia death rates	Pollomyelitis case rates	Scarlet fever case rates	Smallpox case rates	Typhoid and paratyphoid fever case rates	Whooping cough case rates
			Case rates	Death rates								
New England.....	10.5	2.6	15.7	5.2	63	7.8	133.3	2.6	165	0.0	2.6	183
Middle Atlantic.....	4.6	0.5	62.5	14.3	166	7.9	111.1	0.0	76	0.0	1.9	62
East North Central.....	12.8	0.0	29.8	14.0	262	7.3	102.8	1.2	95	0.0	0.0	62
West North Central.....	24.8	2.3	117.2	29.3	140	2.3	126.2	2.3	110	0.0	0.0	9
South Atlantic.....	21.8	1.7	954.5	23.4	33	10.0	149.0	1.7	72	0.0	3.3	54
East South Central.....	29.5	0.0	548.9	47.2	59	17.7	183.0	0.0	47	0.0	5.9	6
West South Central.....	43.0	0.0	83.2	23.0	11	23.0	134.9	0.0	52	0.0	11.5	6
Mountain.....	15.9	0.0	1,048.4	23.8	40	0.0	150.9	7.9	175	0.0	0.0	71
Pacific.....	7.9	0.0	216.7	12.7	201	11.1	50.6	6.3	70	0.0	0.0	30
Total.....	13.2	0.6	184.9	16.9	160	8.8	112.8	1.5	87	0.0	1.8	57

## TERRITORIES AND POSSESSIONS

## Panama Canal Zone

*Notifiable diseases—October 1945.*—During the month of October 1945, certain notifiable diseases were reported in the Panama Canal Zone and terminal cities as follows:

Disease	Panama		Colon		Canal Zone		Outside the zone and terminal cities		Total	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Chickenpox.....	6		1						7	
Diphtheria.....	13	2	2		1		2		18	2
Dysentery:										
Amebic.....	2				1		3		6	
Bacillary.....	1				3				4	
Malaria <sup>1</sup> .....	5		6		36		76	3	123	3
Meningitis, meningococcus.....	1								1	
Mumps.....							1		1	
Paratyphoid fever.....				1						1
Pneumonia.....		7		1	39	1		5	<sup>1</sup> 39	14
Poliomyelitis.....			1		2	1	2		5	1
Scarlet fever.....	1				1		1		3	
Tuberculosis.....		16		7	1	4		6	<sup>1</sup> 1	33
Typhoid fever.....	1						2		3	
Typhus fever.....	1						1		2	
Whooping cough.....					1				<sup>1</sup> 1	

<sup>1</sup> 21 recurrent cases.

<sup>2</sup> Reported in the Canal Zone only

# FOREIGN REPORTS

## ANGOLA

*Notifiable diseases—July–September 1945.*—During the months of July, August, and September 1945, certain notifiable diseases were reported in Angola as follows:

Disease	July		August		September	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Beriberi.....	11	-----	12	2	9	-----
Bilharziasis.....	297	-----	207	1	268	-----
Cerebrospinal meningitis.....	80	7	149	7	187	10
Chickenpox.....	66	-----	6	-----	171	-----
Diphtheria.....	2	1	2	-----	-----	-----
Erysipelas.....	-----	-----	2	-----	-----	-----
Dysentery:	-----	-----	-----	-----	-----	-----
Amebic.....	132	3	98	5	154	1
Bacillary.....	11	3	11	1	2	-----
Gonorrhea.....	213	-----	259	-----	254	1
Hookworm disease.....	552	10	724	6	760	6
Influenza.....	792	12	1,489	18	1,006	7
Leprosy.....	15	-----	15	-----	14	-----
Measles.....	209	1	354	1	375	1
Mumps.....	14	-----	44	-----	-----	-----
Pneumonia (all forms).....	345	30	433	41	351	36
Polioomyelitis.....	-----	-----	-----	-----	5	-----
Relapsing fever.....	50	-----	34	-----	25	-----
Scarlet fever.....	-----	-----	2	-----	-----	-----
Septicemia.....	7	6	3	1	3	2
Smallpox.....	6	-----	118	-----	16	-----
Syphilis.....	413	1	459	2	459	1
Tetanus.....	6	5	5	3	5	2
Trachoma.....	1	-----	-----	-----	24	-----
Tuberculosis (respiratory).....	60	6	53	10	66	11
Trypanosomiasis.....	133	16	264	9	220	22
Typhoid and paratyphoid fever.....	2	-----	4	1	10	1
Yaws.....	1,039	-----	1,196	1	1,077	-----
Whooping cough.....	46	-----	42	1	60	-----

## CANADA

*Provinces—Communicable diseases—Week ended December 8, 1945.*—During the week ended December 8, 1945, cases of certain communicable diseases were reported by the Dominion Bureau of Statistics of Canada as follows:

Disease	Prince Edward Island	Nova Scotia	New Brunsw- wick	Que- bec	On- tario	Mani- toba	Sas- katch- ewan	Al- berta	British Colum- bia	Total
Chickenpox.....	-----	7	-----	222	381	74	88	76	185	1,033
Diphtheria.....	-----	3	7	57	12	8	-----	-----	2	89
Dysentery, bacillary.....	-----	-----	-----	3	-----	-----	-----	-----	-----	3
German measles.....	-----	-----	11	-----	22	-----	2	6	12	53
Influenza.....	-----	2	-----	43	-----	-----	-----	-----	2	47
Measles.....	-----	3	-----	162	415	4	21	19	65	689
Meningitis, meningo- coccus.....	-----	-----	-----	-----	2	-----	-----	1	-----	3
Mumps.....	-----	-----	4	112	80	13	12	142	77	440
Polioomyelitis.....	-----	1	-----	-----	1	-----	-----	2	-----	4
Scarlet fever.....	1	15	34	86	91	17	5	19	28	296
Tuberculosis (all forms).....	-----	1	9	91	83	20	13	20	66	303
Typhoid and para- typhoid fever.....	-----	-----	-----	21	2	-----	-----	-----	-----	23
Undulant fever.....	-----	-----	-----	-----	2	-----	-----	-----	1	3
Veneral diseases:	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Gonorrhea.....	-----	25	18	58	143	59	43	51	81	478
Syphilis.....	-----	31	8	101	120	28	16	19	34	357
Whooping cough.....	-----	15	19	125	42	17	1	3	-----	222

## NORWAY

*Notifiable diseases—June–August 1945.*—During the months of June, July, and August 1945, cases of certain notifiable diseases were reported in Norway as follows:

Disease	June	July	August
Cerebrospinal meningitis.....	10	24	10
Diphtheria.....	486	573	533
Dysentery, unspecified.....	141	57	190
Encephalitis, epidemic.....	1	4	6
Erysipelas.....	429	402	446
Gastroenteritis.....	5,613	6,671	10,436
Gonorrhea.....	417	472	641
Hepatitis, epidemic.....	1,002	629	780
Impetigo contagiosa.....	3,179	3,378	4,947
Influenza.....	1,296	761	1,020
Laryngitis.....	9,256	5,709	5,580
Lymphogranuloma inguinale.....	1	1	1
Malaria.....	1	1	1
Measles.....	6,035	4,088	2,953
Mumps.....	113	60	95
Paratyphoid fever.....	3	12	22
Pneumonia (all forms).....	1,619	901	751
Poliomylitis.....	19	59	142
Rheumatism.....	185	166	153
Scabies.....	3,998	3,580	4,556
Scarlet fever.....	410	336	318
Syphilis.....	87	87	97
Tuberculosis (all forms).....	401	368	360
Typhoid fever.....	8	5	3
Weil's disease.....	1	3	3
Whooping cough.....	1,421	1,600	2,434

Population, estimated, 1940—2,937,000.

## WORLD DISTRIBUTION OF CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

From medical officers of the Public Health Service, American consuls, International Office of Public Health, Pan American Sanitary Bureau, health section of the League of Nations, and other sources. The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

### CHOLERA

[C indicates cases; P, present]

NOTE.—Since many of the figures in the following tables are from weekly reports, the accumulated totals are for approximate dates.

Place	January— October 1945	Novem- ber 1945	December 1945—week ended—				
			1	8	15	22	29
ASIA							
Ceylon: Trincomalee District.....	C	16	1			2	
China: <sup>1</sup>							
Hupeh Province.....	C	60					
Kwangsi Province.....	C	12					
Kwangtung Province.....	C	105					
Kweichow Province.....	C	640					
Shensi Province.....	C	10					
Sikong Province.....	C	9					
Szechwan Province.....	C	13,360					
Chungking.....	C	8,000					
Yunnan Province.....	C	23					
India.....	C	214,144					
Bombay.....	C	98					
Calcutta.....	C	5,120	71				
Cawnpore.....	C	202	3				
Chittagong.....	C	19					
Delhi.....	C	318					
Madras.....	C	52					
Vizagapatam.....	C	31					
Indochina: Cochinchina.....	C	P	P				

<sup>1</sup> Cholera was also reported present during August in the following Provinces of China: Chekiang, Honan, Hunan, and Kansu.

## PLAGUE

[C indicates cases; D, deaths]

Place		January- October 1945	Novem- ber 1945	December 1945—week ended—						
				1	8	15	22	29		
AFRICA										
Algeria.....	C	13			1					
Basutoland.....	C	4								
Bechuanaland.....	C	7								
Belgian Congo.....	C	24	4							
British East Africa:										
Kenya.....	C	88	5							
Uganda.....	C	6								
Egypt.....	C	220	1		1		1			
Ismailiya.....	C	83								
Port Said.....	C	83			1					
Suez.....	C	23					1			
French West Africa.....	C	5								
Dakar.....	C	1								
Madagascar.....	C	134	15							
Morocco (French).....	C	811								
Senegal.....	C	54								
Tunisia.....	C	3								
Union of South Africa.....	C	8	3							
ASIA										
China:										
Foochow.....	C	30								
Kwangtung Province.....	C	17								
Kiangsi Province.....	C	1								
Yunnan Province <sup>1</sup> .....	C	38								
India.....	C	22,917								
Iraq.....	C	34								
Palestine.....	C	26	17	3	3					
Plague-infected rats.....		42								
EUROPE										
France: Corsica—Ajaccio.....	C	8								
Great Britain: Malta.....	C	62	10		1					
Italy.....	C	25	2			1				
Portugal: Azores.....	C	50	3							
Spain: Canary Islands.....	C	1								
NORTH AMERICA										
Canada: Alberta Province: <sup>2</sup>										
'Plague-infected squirrels.....		2								
SOUTH AMERICA										
Argentina:										
Buenos Aires Province—Plague-infected rats.....	C	2								
Santiago del Estero Province.....	C	2								
Tucuman Province.....	C	1								
Bolivia: Santa Cruz Department.....	C	79								
Brazil:										
Ceara State.....	C	5								
Pernambuco State.....	C	51								
Ecuador:										
Canar Province.....	C	9								
Chimborazo Province.....	C	6								
Loja Province.....	C	20								
Peru:										
Ancash Department.....	C	7								
Ica Department.....	C	14								
Lambayeque Department.....	C	13								
Libertad Department.....	C	11								
Lima Department.....	C	15								
Otuzco Department.....	C	3								
Piura Department.....	C	5								
Tumbes Province.....	C		19							

<sup>1</sup> Includes 4 suspected cases.<sup>2</sup> Includes 7 suspected cases.<sup>3</sup> Includes 5 suspected cases.<sup>4</sup> Information dated July 5, 1945, stated that from April 1944 to May 1945, 85 deaths from plague had occurred in the mountainous region south of Kunming, China.<sup>5</sup> During the month of June 1945, plague infection in fleas was reported in Alberta Province. For the week ended July 28, 1945, plague infection was also reported in 6 pools of fleas in Alberta Province. For the week ended Aug. 11, 1945, 2 pools of plague-infected fleas were reported in Alberta Province, Canada.<sup>6</sup> Includes 6 suspected cases.<sup>7</sup> Includes 1 suspected case.

**PLAGUE—Continued**  
[C indicates cases; D, deaths]

Place	January— October 1945	Novem- ber 1945	December 1945—week ended—				
			1	8	15	22	29
OCEANIA							
Hawaii Territory..... D	# 1						
Plague-infected rats <sup>a</sup> .....	13						
New Caledonia: Loyalty Islands—Mare Island. C	10 60						

<sup>1</sup> Previously reported as a case, death occurring on June 2, 1945.

<sup>2</sup> Plague infection was also proved positive in a pool of 5 mice on Jan. 4, in a pool of fleas on Feb. 14, and in a pool of 40 fleas on Mar. 14, 1945.

<sup>3</sup> Pneumonic plague.

**SMALLPOX**

[C indicates cases; P, present]

<b>AFRICA</b>							
Algeria..... C	209						
Angola..... C	224						
Basutoland..... C	352	8					
Belgian Congo..... C	16,456	1219	30	22			
British East Africa:							
Kenya..... C	643	96	8	16			
Nyasaland..... C	120	38		8			
Tanganyika..... C	5,627	97					
Uganda..... C	1,043	29					
Cameroon (French)..... C	817	10					
Dahomey..... C	264	28					
Egypt..... C	1,070	5	1				
French Equatorial Africa..... C	1,606	91					
French Guinea..... C	1,592	62					
French West Africa: Dakar District..... C	401						
Gambia..... C	82						
Gold Coast..... C	677	46	35	31		44	
Ivory Coast..... C	529	20					
Libya..... C	8	10	5				
Mauritania..... C	83						
Morocco (French)..... C	1,776	466				277	
Mozambique..... C	4,205						
Nigeria..... C	529	69					
Niger Territory..... C							
Rhodesia:							
Northern..... C	4,735	534					
Southern..... C	10						
Senegal..... C	498						
Sierra Leone..... C	84	21	1				
Somaliland, British..... C	1						
Sudan (Anglo-Egyptian)..... C	3						
Sudan (French)..... C	2,210	322					
Togo (British)..... C	36	18					
Togo (French)..... C	507	18					
Tunisia..... C	15	125					
Union of South Africa <sup>4</sup> ..... C	1,947	P	P				
<b>ASIA</b>							
Arabia..... C	29						
Ceylon..... C	661	67	20		6	5	112
China..... C	1,272						
India..... C	225,835						
Iran..... C	400						
Iraq..... C	41						
Syria and Lebanon..... C	12	1			1		
Trans-Jordan..... C	2						
Turkey (see Turkey in Europe).							
<b>EUROPE</b>							
Belgium..... C	1						
France..... C	27						
Germany..... C	2						
Great Britain: Scotland..... C	2						
Italy..... C	2,186						
Sicily..... C	9						
Portugal..... C	28						
Spain..... C	31						
Canary Islands..... C	1						
Turkey..... C	295			2			

<sup>1</sup> Includes cases of alastrim.

<sup>2</sup> for the period Dec. 1-20, 1945.

<sup>3</sup> Imported.

<sup>4</sup> For the week ended June 30, 1945, cases of virulent smallpox were reported in the Union of South Africa.

<sup>5</sup> Includes some cases of chickenpox.

**SMALLPOX—Continued**  
[C indicates cases; P, present]

Place	January— October 1945	November 1945	December 1945—week ended—				
			1	8	15	22	29
NORTH AMERICA							
Canada.....	C	6					
Guatemala.....	C	4					
Honduras.....	C	8					
Mexico.....	C	1,426					
Nicaragua.....	C	141					
SOUTH AMERICA							
Argentina.....	C	6					
Bolivia.....	C	1,495	151				
Brazil.....	C	726					
Colombia.....	C	1,006					
Ecuador.....	C	39					
Paraguay.....	C	1					
Peru.....	C	160					
Uruguay.....	C	81					
Venezuela.....	C	1843	173	32			

<sup>1</sup> Includes cases of alastrim.

**TYPHUS FEVER\***

[C indicates cases; P, present]

<b>AFRICA</b>							
Algeria.....	C	1,024					
Basutoland.....	C	118					
Belgian Congo <sup>1</sup> .....	C	302	337	107	38		
British East Africa: Kenya.....	C	39					
Egypt.....	C	15,476	16	39			
Eritrea.....	C	39	8	6		5	
French West Africa: Dakar <sup>1</sup> .....	C	20					
Gold Coast.....	C	1					
Libya: Tripolitania.....	C	21	2				
Madagascar.....	C	1					
Morocco (French).....	C	7,565	250			167	
Morocco (Spanish).....	C	7	1				
Nigeria.....	C	89					
Rhodesia, Northern.....	C	31					
Sierra Leone <sup>1</sup> .....	C	8	3				
Tunisia.....	C	385	5				
Union of South Africa.....	C	776	P	P			
<b>ASIA</b>							
China.....	C	1,874					
India.....	C	23					
Iran.....	C	826					
Iraq <sup>1</sup> .....	C	248	18	5	2		
Palestine <sup>1</sup> .....	C	166					
Syria and Lebanon.....	C	12			2		
Trans-Jordan.....	C	45	1		1		
Turkey (see Turkey in Europe).							
<b>EUROPE</b>							
Albania.....	C	100					
Austria.....	C	46	5				
Belgium.....	C	158					
Bulgaria.....	C	934	33	3			
Czechoslovakia.....	C	398	130				
Denmark.....	C	146					
France.....	C	267	36				
Germany.....	C	7,803	43	3	6		
Gibraltar <sup>1</sup> .....	C	6	3				
Great Britain.....	C	21	4				
Malta and Gozo <sup>1</sup> .....	C	15					
Greece.....	C	601				29	
Hungary <sup>1</sup> .....	C						
Italy.....	C	192				1	
Netherlands.....	C	54	12				
Poland.....	C	13,740	71				
Portugal.....	C	51	1				
Rumania.....	C	7,831	413				
Spain.....	C	25			1		
Sweden.....	C	226					
Switzerland.....	C	6					
Turkey.....	C	2,511	87	38	36	38	50
Yugoslavia.....	C	2,285					

See footnotes at end of table.

## TYPHUS FEVER—Continued

[C indicates cases; P present]

Place		January- October 1945	November 1945	December 1945—week ended—						
				1	8	15	22	29		
NORTH AMERICA										
Canada <sup>1</sup> .....	C	1								
Costa Rica <sup>1</sup> .....	C	7	5							
Cuba <sup>1</sup> .....	C	13								
Guatemala.....	C	2,343								
Jamaica <sup>1</sup> .....	C	43								
Martinique <sup>1</sup> .....	C	1								
Mexico.....	C	1,542								
Panama (Republic).....	C	4								
Puerto Rico <sup>1</sup> .....	C	172	5	3						
Virgin Islands <sup>1</sup> .....	C	8								
SOUTH AMERICA										
Argentina.....	C	9								
Bolivia.....	C	641	76							
Brazil.....	C	5								
Chile <sup>1</sup> .....	C	544								
Colombia.....	C	422								
Curacao.....	C	3								
Ecuador.....	C	516								
Peru.....	C	568								
Venezuela <sup>1</sup> .....	C	130	6							
OCEANIA										
Australia <sup>1</sup> .....	C	108	8							
Hawaii Territory <sup>1</sup> .....	C	85	5							

\* Reports from some areas are probably murine type, while others probably include both murine and louse-borne types.

<sup>1</sup> Reports cases as murine type.

<sup>2</sup> For the period Dec. 1-20, 1945.

<sup>3</sup> Includes imported cases.

<sup>4</sup> For the period Jan. 1 to Sept. 1, 1945, between 8,000 and 10,000 cases of typhus fever were reported in Hungary.

<sup>5</sup> For the period Jan. 1-20, 1945.

## YELLOW FEVER

[C indicates cases; D, deaths]

<b>AFRICA</b>								
Gold Coast.....	C	1 <sup>1</sup>						
Nsawam.....	C	3 <sup>1</sup>						
Takoradi.....	C	1						
Tamale.....	C	1 <sup>1</sup>						
Winneba.....	C	4 <sup>4</sup>						
Ivory Coast:								
Gaoua.....	C	1						
Guiglo.....	C	1						
Sierra Leone: Moyamba.....	C	2						
Sudan (French): Bamako.....	C	1 <sup>1</sup>						
<b>SOUTH AMERICA</b>								
Bolivia:								
Beni Department.....	C	1						
La Paz Department.....	C	2						
Brazil:								
Goiás State.....	D	76						
Minas Geraes State.....	D	25						
Para State.....	D	1						
British Guiana: Kwakwani.....	C	1						
Colombia:								
Magdalena Department.....	D	3						
Santander de Norte Department.....	D	19						
Peru:								
Cuzco Department.....	C	3						
Junín Department.....	C	3						
Loreto Department.....	C	1						
Venezuela:								
Bolívar State.....	C	1						
Mérida State.....	C	3						
Táchira State.....	D	20						
Zulia State.....	C	8						

<sup>1</sup> Includes 4 suspected cases. <sup>2</sup> Includes 2 suspected cases. <sup>3</sup> Suspected. <sup>4</sup> Includes 1 suspected case.