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DISTRIBUTION OF ENDEMIC GOITER IN THE UNITED STATES AS SHOWN BY THYROID SURVEYS[1]

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In the first article on the distribution of endemic goiter in the United States, as shown by thyroid surveys, the hope was expressed that additional data of similar character might be presented upon a subsequent occasion. The desired information has been secured and it is possible, therefore, to add appreciably to the knowledge of the nation-wide distribution of endemic goiter.

Obviously a knowledge of the distribution of endemic goiter is essential both to an understanding of the causation of the malady and the intelligent application of prophylactic and curative measures. When accurately determined fluctuations in distribution are known, clues to remote etiological influences become available. Consequently it has been deemed expedient to gather together the results of thyroid surveys made in the United States. While due diligence has been exercised in compiling the data, the result is probably far from complete. The publication of such a list has a 3-fold object: it causes additional thyroid surveys to be undertaken; it stimulates the reporting of the results of these surveys; and it furnishes needed information to students of the problem.

Goiter among drafted men.—Prior to the World War no information concerning the nation-wide distribution of goiter was available, for relatively few surveys had been made. The draft examinations, particularly as they applied to goiter, were subject to certain unavoidable handicaps. To some extent these obstacles affected the accuracy of the observations that were made. In the first place the subjects of the examinations were men of military age, in whom endemic goiter is likely to be much less prevalent than among adolescent girls. Secondly, the examiners were physicians with varying degrees of skill and experience in diagnosing thyroid disorders. Consequently, the various findings were not strictly comparable.

[1] A revision of the article published in Pub. Health Rep., vol. 41, No. 48, pp. 2691-2703, Nov. 28, 1926. (Reprint No. 1125.)

Another difficulty with the draft figures, as customarily presented, is the failure to indicate variations in distribution of goiter within the individual States. Inasmuch as differences in goiter incidence within relatively small areas are common, it is desirable that the information derived from the draft examinations be supplemented. However, even with their manifest limitations the draft figures represent a fair index of nation-wide goiter incidence.

Table 1, in which is shown the incidence of endemic goiter among men examined for military service during the World War, is reproduced because of its continued interest. Generally speaking, the tabulation indicates a greater frequency of this malady in the Pacific Northwest and the Great Lakes Basin. The information is displayed graphically on the accompanying map. As this map is based upon a total of 2,510,701 examinations, it more accurately represents the distribution of simple goiter than do the usual calculations based upon the first million examinations.

TABLE 1.—*Number of instances of endemic goiter and ratio per 1,000 examinations among 2,510,701 men examined for military service in the United States during the World War (by States)* [1]

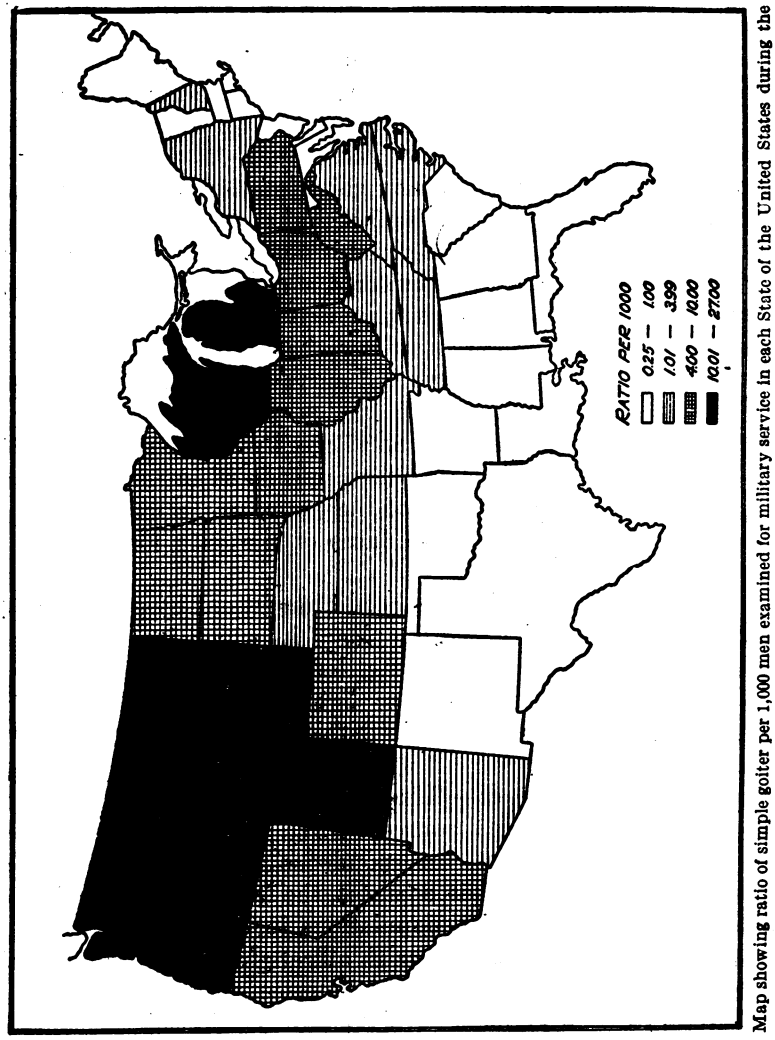
State	Number of cases	Ratio per 1,000	State	Number of cases	Ratio per 1,000
Idaho	336	26.91	Kentucky	90	1.41
Oregon	421	26.31	District of Columbia	16	1.39
Washington	832	23.40	Kansas	48	1.25
Montana	576	21.00	Arizona	10	1.21
Utah	185	15.72	New York	308	1.19
Wyoming	102	15.37	Maryland	35	.94
Wisconsin	886	14.02	South Carolina	37	.94
Alaska	16	13.14	Connecticut	32	.89
Michigan	1,131	11.43	New Mexico	9	.88
North Dakota	156	8.73	Oklahoma	44	.72
Minnesota	578	8.04	New Hampshire	6	.70
West Virginia	307	7.89	Maine	13	.66
Illinois	1,397	7.79	Mississippi	24	.64
Iowa	458	6.68	Louisiana	32	.62
Indiana	464	6.49	Delaware	3	.59
Nevada	21	6.38	Alabama	29	.56
Ohio	798	5.59	Rhode Island	8	.55
Colorado	119	5.29	Georgia	33	.52
California	359	4.45	New Jersey	33	.43
Pennsylvania	829	4.10	Arkansas	17	.40
South Dakota	85	4.09	Massachusetts	29	.32
Missouri	342	3.99	Texas	36	.30
Virginia	188	3.38	Florida	6	.25
Nebraska	63	2.14	State not specified	186	1.96
Vermont	18	2.14			
Tennessee	120	1.96	Total	11,971	4.35
North Carolina	100	1.81			

[1] Table 18, p. 111, of Defects Found in Drafted Men, by A. G. Love and C. B. Davenport. Prepared under the direction of the Surgeon General, M. H. Ireland, War Department, Washington, D. C., 1920.

When an analysis is made of the more detailed results of the draft examinations for the purpose of determining the occupations and racial status of the men having endemic goiter, some instructive conclusions are reached. Simple goiter was most frequent (13.0 per 1,000) among the men coming from sparsely settled districts, having a population of three or less inhabitants per square mile of territory; it was

next most frequent among men living in mountainous districts; and it was rarest among those from the agricultural and maritime sections of the country.

Another interesting fact brought out by a study of the draft figures was the liability of men of Finnish and Scandanavian extraction to



Map showing ratio of simple goiter per 1,000 men examined for military service in each State of the United States during the World War. The rates are based on a total of 2,510,701 examinations

have simple goiter. However, both of these races are found largely in the Pacific Northwest and around the Great Lakes, where environmental conditions tend to increase the amount of simple goiter. There was almost a complete parity of goiter incidence between the urban and rural districts, despite wide variations in individual sections of the country.

Independent thyroid surveys.—In addition to assembling again the findings of the draft examinations, there are presented in the present article the results of thyroid surveys made in various sections of the United States. The evidence adduced by these independently conducted surveys among individuals of elementary schools, high schools, and colleges is largely confirmatory of the results of the draft examinations. However, the results of independently made goiter surveys, like the draft examinations, can be accepted only after making due allowances for the conditions under which information was secured. The reluctance to accept findings of this character without reservation is due to several causes.

The chief difficulty in comparing goiter statistics in different sections of the country arises from the fact that the dividing line between the normal and enlarged thyroid gland is not definitely known. Consequently, a thyroid which is considered normal in a section having a considerable incidence of enlargements may be regarded, and often is recorded, as a definite enlargement in districts of slight prevalence.

Another obvious defect in thyroid surveys made by independent workers results from the failure to employ similar methods of examination, as well as a common means of classifying the several degrees of goiter detected. These facts, when considered in connection with the varying skill and experience of the examiners, militate to a considerable extent against the usefulness of the data for purposes of comparison.

An interesting point which has been brought out by goiter surveys is the finding of the affection in places in which its presence has hitherto been unsuspected. Many local variations in incidence would undoubtedly be brought to light by additional systematic surveys. By this means valuable data relating to goiter would be made available.

How the data were secured.—The material presented in Table 2 was obtained from two principal sources: First, by consulting the literature and, second, by direct correspondence with State, county, and city health officers in the United States, the last-named officials being located in communities with populations in excess of 10,000. Approximately 60 per cent of the health officers from whom information was requested by the Public Health Service submitted replies concerning the presence or absence of simple thyroid enlargement. In many instances valuable collateral comment was forthcoming at the same time. Beginning in 1924, questionnaires were sent out annually for five years.

In Table 2 the available information has been arranged to show the number of persons of each sex examined and also the percentage of thyroid enlargements recorded in each community. By consulting the original and more nearly complete sources from which these data

were obtained, a more accurate conception of goiter distribution will be gained. In some instances the information in the table is not complete; in others, only estimates are presented. However, most of these estimates were prepared by experienced health officers, being predicated upon the results of extensive routine physical examinations of school children. From many localities the information was elicited that no thyroid surveys had ever been made. Sufficient survey data are at hand to enable the formulation of rather definite opinions concerning the distribution of simple goiter in many sections of the United States.

In several places, among which may be mentioned Cincinnati and Lorain, Ohio; Rochester, N. Y.; and Aroostook County, Me., resurveys have been made. Provided such reexaminations are conducted by the same observers, under similar conditions, the resulting information serves to indicate changes or lack of changes which have either occurred naturally or followed the institution of prophylactic measures. Authentic facts of this character are valuable contributions to the epidemiology of goiter.

The need for uniformity in making surveys.—Particularly noteworthy in the tabulation of surveys is the irregularity of goiter distribution within many States. This condition may be due to actual variations in incidence, to changes wrought by prophylaxis, or to differences in the methods of examination employed by various investigators. Conceding the desirability of a more accurate knowledge concerning the distribution of endemic goiter in the United States, there would appear to be need for uniformity of diagnostic procedure, thereby insuring findings of comparable character. Particularly valuable in obtaining such results are personal study and practice, supplemented by instruction from persons familiar with normal and abnormal thyroid glands.

Instructions for making thyroid surveys are available from several sources.[2] However, for practical purposes a theoretical knowledge can not supplant the advantages accruing from actual experience. As diagnostic procedure becomes standardized, it is conceivable that vital information regarding the epidemiology of goiter will be forthcoming. Thyroid surveys are also useful in locating existing goiters and making available appropriate treatment for their alleviation. Furthermore, such data will be useful in encouraging the application of prophylactic measures where they are most needed.

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[2] Marine, Lenhart, Kimball, and Rogoff: The Prevention of Simple Goiter. Western Reserve University Bulletin, vol. 26, No. 7, July, 1923.

Olesen, Robert: Thyroid Survey of 47,493 Elementary School Children in Cincinnati. Pub. Health Rept., vol. 29, No. 30, pp. 1777-1802 (July 25, 1924). (Reprint No. 941.)

Olesen, Robert: Endemic Goiter in Colorado. Pub. Health Rept., vol. 40, No. 1, pp. 1-22 (Jan. 2, 1925). (Reprint No. 983.)

In this connection it should be pointed out that a thyroid survey is a time-consuming procedure, and is not to be undertaken to the exclusion and detriment of more important public health projects. Frequently a thyroid survey can be made as a collateral adjunct to general physical examinations. When this policy is pursued, time is conserved, and at the same time correlations between thyroid enlargements and other physical states are indicated.

SUMMARY

1. The distribution of goiter in the United States, as disclosed by numerous thyroid surveys, parallels, in general, the goiter findings among drafted men.

2. There are manifestly wide variations in the methods of determining thyroid enlargements. The classifications of various degrees and types of involvement also range within wide limits. Uniform procedure is a necessity if findings in different sections of the country are to be compared.

3. Based upon incidence, wholesale prophylaxis for endemic goiter is apparently not required in all States.

4. Individual thyroid surveys disclose foci of endemic goiter in localities not previously regarded as being located in goitrous territory.

5. Resurveys are desirable for the purpose of learning the extent and character of changes occurring either under natural conditions or after prophylaxis has been instituted.

(Table 2, giving thyroid data by States, follows)

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 43 States by different observers, according to age and sex of the individuals examined, and location of the places*

ALABAMA

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
Anniston								G. A. Cryer	Not a goiter area.
Bay Minette				4,000				G. C. Marlette	Only 1 enlargement.
Florence	15–18		158			18.3		W. D. Hubbard	
Monroeville				3,000			0.06	T. E. Tucker	
Montgomery								J. L. Bowman	Only 5 enlargements among school children.
Baldwin County				5,000			.08	G. C. Marlette	Very rare.
Calhoun County								G. A. Cryer	Not a problem.
Colbert County				36,000			.06	W. T. Burkett	Entire population.
Dallas County								L. T. Lee	Unknown.
Franklin County								L. J. Graves	Very little goiter.
Limestone County								L. R. Murphree	Not much goiter.
Mobile County								C. A. Mohr	No goiter problem.
Morgan County								H. C. McRee	Not many found, but increasing.
Talladega County				3,013				J. H. Hill	No goiter found.

ARIZONA

Cochise County				3,500			0.08	R. B. Durfee	Not a local problem.
Yuma County								H. A. Reese	No cases found among 847 school children.

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 43 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

CALIFORNIA

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
Berkeley				3,257			0.023	J. R. Scott	
Oakland								F. L. Kelly	Goiter not prevalent.
Riverside								W. B. Wells	No goiter problem.
Sacramento								W. W. Cress	Goiter very infrequent though more common in foothills above Sacramento.
San Francisco	10–14	2,795	6,379	9,174	4.2	17.4		W. R. P. Clark	
Santa Cruz	12–18		372			58.6		E. B. Philbrook	
Monterey County								R. C. Main	Very little goiter.
Orange County								V. G. Presson	Do.
San Joaquin County								J. J. Sippy	Goiter rare.
San Luis Obispo County								H. K. Sutherland	Not prevalent.
Do								A. T. Gillihan	No goiter.
San Francisco County								W. R. P. Clark	Does not exist in endemic form.
14 counties							(1)	State board of health	Circular letter.
University of California								Ruby Cunningham	Women students classed according to place of residence.
Volcanic regions			18			44.4			
Mountain counties			65			24.6			
Coast range counties			279			21.5			
Southern California counties			313			18.5			
Valley counties			295			9.1			
Bay counties			1,372			5.5			

CONNECTICUT

Stratford								De Ruyter Howland	Quite scarce.
28 localities	10–23	5,797	6,609		7.0	29.4		U. S. Public Health Service	Reprint No. 1102.

COLORADO

Colorado Springs		853	846		38.2	44.6		O. M. Gillette	
Denver			9,493			27.3		V. Van Meter	White girls.
Do			163			26.3		do	Colored girls.
39 localities	2-19	1,630	1,644		10.1	23.3		Colorado Health Conference	
8 localities		825	937		53.3	73.4		State board of health	
Do	2-21	1,495	1,214		26.5	37.9		U. S. Public Health Service	Reprint No. 983.

FLORIDA

Jacksonville								H. N. Parker	Not regarded as a goitrous area.
Do								N. A. Upchurch	Negligible.
Dade County								W. A. Claxton	Goiter not frequent.

GEORGIA

Athens				2,700				B. B. Bagby	Only 2 cases.
Atlanta								J. P. Kennedy	Not very prevalent.
Brunswick								H. L. Akridge	Goiter rare.
Waycross	10-15					1.0		George E. Atwood	All female school children.
Decatur County								M. A. Fort	Very rare.
Hall County	10-20			3,000			0.8	B. D. Blackwelder	
Laurens County	12-18					1.0		O. H. Cheek	
Lowndes County								G. T. Crozier	Not a problem.
Spalding County								W. C. Humphries	Very few cases.
State								E. G. Jones	Relatively rare.

ILLINOIS

Alton								D. F. Duggan	Quite a number of goiter cases—Ward school.
Chicago		171	255		19.1	40.7		Koch	
Do				145,565			6.2	Department of health	
Do								C. G. Buford	Frequent among children.
Do		193	606		6.7	17.8		E. T. Olsen	Men and women.
Do		709	663	1,372	25.8	43.3	34.3	Department of health	Scanlan School, 1923, kindergarten to eighth grade.
Do				1,866			26.4	do	Scanlan School, 1924-25.
Chicago Heights							3.5	E. H. Hay	School children.

[1] Present.

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 43 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

ILLINOIS—Continued

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
Decatur	5-12			5,000			75.3	Wm. S. Keister	
Do		4,854	4,828		46.3	60.1		State department of health	White children, grammar and high schools.
Do		155	218		54.8	48.6		do	Colored children, grammar and high schools.
East St. Louis								J. T. Connors	Very rare.
Galesburg								E. D. Wing	Not troubled with goiter.
LaSalle		562	513	1,075	14.2	28.8	21.5	Arlington Ailes	
Do				1,347			8.0	do	1927 survey.
Do				69			22.0	do	Matthiessen School, 1927.
Oak Park	12-15		731			28.3		F. S. Needham	
Do						34.7		W. J. Potts	High school, 1924.
Oglesby				618			12.0	Arlington Ailes	1927 survey.
Do				90			30.0	do	Columbus school.
Peru				795			5.0	do	1927.
Rockford						24.6		N. O. Gunderson	High school.
Do							9.7	do	Junior high school.
Rock Island								Harry Frey	Not very prevalent.
Cook County								H. L. Wright	Plenty of cases.
Morgan County				3,007			11.0	W. H. Newcomb	Rural schools.
Do								do	298 cases in county.
State		10,829	4,325		4.6	24.5		J. H. Beard	High school graduates.
Illinois State:									
Normal University		341	1,158		38.7	42.4		Robt. C. Cook	January, 1927.
Northwestern University			635			26.5		Geza deTakats and Dorothy Grey.	1926-27.
University of Illinois			609			45.3		R. P. Guilder	
Western Illinois—Teachers College	14-62		596			38.9		E. B. Ball	An outstanding defect.

INDIANA

Elwood								H. W. Fitzpatrick	Many cases.
Fort Wayne	10–18					62.0		D. R. Beminghoff	
Hammond								Wm. A. Buchanan	To a certain extent.
Do							76.0	H. S. Kuhn	Third grade and 1 high school.
Terre Haute	11–15		1,904			82.2		Geo. T. Johnson	
University of Indiana						32.8		F. H. Luck	

IOWA

Sioux City								W. D. Hayes	Very few goiters.

KANSAS

Cottonwood Falls		96	100	196	3.0	20.0	12.2	State board of health	First to eighth grades.
Fort Scott								C. L. Mosley	Goiter has increased 100 per cent in last 10 years.
Junction City				1,509			3.0	H. R. Ross	
Strong City		71	80	151	5.6	11.2	8.6	State board of health	First to eighth grades.
Topeka	5–18	3,345	3,706		30.9	49.7		E. G. Brown	
Butler County								R. J. Cabeen	Considerable goiter.
Ellis County				1,903			.6	Fred C. Cave	
Do								do	14 cases found in general examination of school children.
Jefferson County				3,260			19.2	D. M. Stevens	
Do								do	About 13 per cent of all children 1928.
McPherson County	5–18	780	720		38.0	56.0		L. S. Steadman	
Ottawa County				2,000			5.0	C. R. Hepler	Rural district of central Kansas.
Do							10.0	do	Survey of 1926.

KENTUCKY

Covington								J. P. Riffe	Goiter not prevalent.
Louisville				5,083			13.3	W. O. Johnson	
Prestonsburg								M. Ransdell	Very little goiter.
Fayette County				2,500			.48	J. S. Chambers	

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 43 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

LOUISIANA

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
Lafourche Parish				553			21.7	H. S. Smith	"River" parish.
Natchitoches Parish				4,000			.05	W. W. Knipmeyer	
Do	17-21		278			4.3		do	State Normal College, 1927.
Do								do	No cases among 428 school children, 1927
St. Charles Parish	6-18	583	583		35.7	67.6		L. C. Scott	"River" parish.
St. James Parish	6-18	839	809		55.7	71.9		do	Do.
Washington and St. Tammany Parishes.	6-18	1,158	1,227		47.5	58.2		do	"Forest" parishes.
Webster Parish				8,000			.05	E. B. Godfrey	Almost totally absent.
Do				700			.3	do	1928.

MAINE

Aroostook County		690	979		7.2	44.3		C. F. Kendall	1923.
Do		833	1,039		8.9	38.8		do	1925.

MARYLAND

Rockville				3,786			0.65	W. T. Pratt	
Allegany County		1,183	2,925	4,108	29.9	50.1	44.3	J. S. Fulton	1924.
Anne Arundel County				1,116			.9	do	1924.
Do			332			5.1		Wm. Burdick	1924–25, high schools.
Baltimore County		163	193	356	0	0	0	J. S. Fulton	1924.
Do			917			9.0		Wm. Burdick	1924–25, high schools.
Calvert County				98			0	J. S. Fulton	1924.
Do			62			8.1		Wm. Burdick	1924–25, high schools.
Caroline County		450	467	917	0	2.6	1.3	J. S. Fulton	1924.
Do			299			11.1		Wm. Burdick	1924–25, high schools.
Carroll County		2,983	2,835	5,818	0	.9	.5	J. S. Fulton	1924.
Carroll and Howard Counties								W. C. Stone	Many adolescent girls with some enlargement.

Cecil County			278			24.0		Wm. Burdick	1924–25, high schools.
Charles County			87			40.2		do	Do.
Dorchester County			321			6.5		do	Do.
Frederick County			671			2.7		do	Do.
Garrett County			253			48.6		do	Do.
Harford County			375			15.0		do	Do.
Howard County			173			14.0		do	Do.
Kent County			137			16.9		do	Do.
Montgomery County			344			11.0		do	Do.
Do		1,204	1,134	2,338	0	.09	.04	J. S. Fulton	1924.
Prince Georges County			408			45.0		Wm. Burdick	1924–25, high schools.
Queen Annes County			227			14.6		do	Do.
St. Marys County			27			33.0		do	Do.
Somerset County			259			7.6		do	Do.
Talbot County			247			13.9		do	Do.
Washington County				2,927			3.7	J. S. Fulton	1924.
Wicomico County			484			13.9		Wm. Burdick	1924–25, high schools.
Worcester County			319			4.3		do	Do.

MASSACHUSETTS

Athol								M. B. Sibley	Not prevalent.
Berkshire towns around Pittsfield					4.0	17.0		Geo. H. Bigelow	
Boston					0	7.0		do	
Greenfield				600			1.6	Geo. P. Moore	
Lynn								Wm. T. Hopkins	Relatively small amount of goiter.
Newburyport								W. Thurston	No cases of goiter for a number of years.
Pepperell and Townsend					0	5.0		Geo. H. Bigelow	
Wellesley College						16.0		Canavan	From all parts of the country.
57 localities	13–20	7,140	10,057		8.7	22.0		U. S. Public Health Service	1925. Reprint No. 1148.

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 43 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

MICHIGAN

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
Adrian				9,000			0.3	G. Dock	1895.
Alma	4-21	161	193		44.0	56.0		C. F. DuBois	College.
Do		678	722		41.0	59.0		do	Public school.
Cadillac								J. F. Gruber	65 per cent decrease since 1924.
Calumet				14,000			.3	G. Dock	1895.
Central mine				2,000			.5	do	1895 (a few miles from Calumet).
Detroit				105,732			5.2	H. F. Vaughan	Elementary and high school children.
Gaylord							25.0	G. Dock	1895.
Grand Rapids		12,631	13,584		32.0	67.0		T. Reed and H. T. Clay	
Iron Mountain							54.0	State department of health	
Port Huron								L. R. Gaddis	Considerable goiter.
Saginaw				12,742			23.4	W. DeKleine and S. Yntema	
Houghton County	5-18	6,860	6,865		58.1	70.5		R. M. Olin	
Macomb County	5-18			3,292			35.7	E. F. Eldridge	North of Berea sandstone.
Do	5-18			6,246			20.2	do	South of Berea sandstone.
Midland County	5-18	5,152	1,811		24.4	41.1		R. M. Olin	
Olmstead County	9-14						4.4	D. C. Mebaue	City schools.
Do	9-14						8.0	do	Rural schools.
Wexford County	5-18	1,963	2,021		47.6	63.4		Department of health	
4 counties (Houghton, Wexford, Midland, Macomb).	5-18			31,612			47.2	do	
Torch Lake and Schoolcraft Townships.	1-61	790	993		44.9	79.6		S. Levin	
State				583			30.3	do	Registrants.

MINNESOTA

Austin							9.5	C. C. Leck	816 enlargements in first, fifth, and ninth grades.
Do				1,006			.04	do	1927—first, fifth, and ninth grades.
Duluth	5-14	6,284	5,974		59.0	65.0		J. M. Robinson	
Minneapolis	0-18	843	1,063		59.2	73.8		Chester A. Stewart	
Virginia							45.0	R. P. Pearsall	1925.
Nicollet County		134	201		12.0	45.3		T. Clark and J. N. Gehlen	
St. Louis and Cook Counties		639	678		49.1	70.1		A. R. Blakey	
Winona County							40.0	W. V. Lindsay	
13 localities	10-19	1,770	2,291		40.9	71.0		U. S. Public Health Service	Reprint No. 963.

MISSISSIPPI

Bay St. Louis								C. M. Shipp	6 cases in population of 11,000.
Biloxi								G. F. Carroll	Very few cases.
Meridian								T. J. Houston	Very few goiters.
Pascagoula								R. G. Lander	Rare.
Harrison County				50,000			0.07	D. J. Williams	Estimate.
Jones County								J. M. Kittrell	Light incidence.
Leflore County	10–17			3,028			.7	C. P. Google	
Pearl River County								J. W. Shackelford	Practically none.
State							.16	H. A. Gamble	

MISSOURI

Craig	6–18		50			46.0		R. R. Miller	
Springfield								Lon Sharp	Not prevalent.
St. Louis							3.0	B. Lloyd	
Cape Girardeau County							5.0–12.0	E. E. Huber	In swamp section; very little goiter.
New Madrid County								W. N. O'Bannon	25 cases in school children in county.
Scott County								U. P. Haw	Quite common.

MONTANA

Anaconda								G. R. Soper	A great many goiters.
Billings				1,100	30.0	70.0		A. E. Stripp	6th grade through high school, 1926.
Missoula County	5–14			3,001			20.4	F. O. Penk	
7 counties	6–20	4,631	4,600		13.4	32.0		Fred T. Foard	U. S. Public Health Service. Reprint No. 955.
University of Montana					14.0	43.0		F. O. Penk	

NEBRASKA

State								W. H. Wilson	Comparatively free.

NEW HAMPSHIRE

Manchester				5,745			0.2	H. A. Streeter	

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 43 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

NEW JERSEY

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
Bayonne								W. W. Brooke	Not very prevalent.
Irvington	6-17	982	1,168	2,150	3.5	14.7		H. S. Reichle	

NEW MEXICO

Dona Ana County							0.1	C. W. Gerber	

NEW YORK

Albany								J. W. Wiltse	Goiter incidence small.
Cohoes								E. M. Bell	20 females, 5 males with goiter.
Hillburn	7-15			110			23.6	E. C. Boddy	Colored school.
Do				140			.7	do	White school.
Ithaca					25.0	50.0		Health department	
Johnstown				2,684			2.0	G. V. Wilson	Children up to 17.
New York City				11,084			20.3	I. H. Goldberger and A. K. Aldinger.	
Do	8-21	783	11,084		5.4	15.9		Frances Cohen	
Do			3,000			3.0-4.0		City department of health	Washington Irving High School, 1917.
Do	14-16			5,000			1.6	do	20 girls, 64 boys in mercantile office, 1922.
Do	20-30		7,500			3.0		J. C. Horan	Employees of Metropolitan Life Insurance Co.
Rochester						25.0		Department of health	High school and college.
Do								do	3,844 cases among school children before iodizing water; 1,766 after.
Do								do	Incidence per year: 1923—3,844; 1924—1,926; 1925—2,010.
Do				56,528			3.5	G. W. Goler	1925.
Do				58,257			2.9	do	1926.
Do				59,776			2.2	do	1927.

Saratoga Springs								C. B. Small	Very infrequent.
Syracuse				23,303			15.0	City department of health	Grammar schools.
Do							20.0	do	High schools.
Do				7,149	26.6	73.4		do	Parochial schools.
Do				25,875			16.0	do	Public schools.
Do				18,333			10.4	J. G. Palmer	November and December, 1927.
Tonawanda				2,636			41.8	J. E. Mabee	1924-25.
Do				2,116			22.2	do	1925-26.
Cattaraugus County	5-17			15,000			8.0	S. A. Douglass	
State				595,206			2.6	I. H. Goldberger and A. K. Aldinger.	Urban and rural.

NORTH CAROLINA

Asheville								D. E. Sevier	Very little goiter.
Winston-Salem								R. L. Carlton	Goiter not a problem.
Brunswick County								R. E. Broadway	Very few goiters.
Hyde County								Clyde Ruff	No goiter.
State		49,350			0.2			State department of health	Drafted men.

NORTH DAKOTA

Fort Berthold				1,310			9.2	A. A. Whittemore	1924-25.
Fort Totten				948			1.3	do	Do.
Standing Rock				3,610			1.4	do	Do.

OHIO

Akron	9-18		3,872			56.4		O. P. Kimball	
Do			9,679			48.64		Marine and Kimball	
Barberton	11-14					24.0		W. A. Mansfield	
Cincinnati	6-17	23,710	23,783		26.6	39.8		U. S. Public Health Service	1923-24. Reprint No. 941.
Do	6-19	12,177	12,087		22.1	38.4		do	Resurvey of 1927 (white) reprint No. 1204.
Do	6-19	545	731		29.5	52.2		do	Resurvey of 1927 (colored).
Cleveland			406			37.7		Marine and Kimball	
East Cleveland			348			21.5		G. W. Stober	
Glendale				363			29.2	O. P. Kimball	5 schools and kindergarten.
Hamilton				4,251			39.0	A. L. Smedley	
Lorain	6-16			3,455			17.9	W. S. Baldwin	1921-22.
Do	6-12			2,938			14.6	do	1922-23.
Do	6-12			3,447			19.4	do	1924-25.
Do	16-18	1,191	931		13.0	30.0		do	Examinations for work permits.

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 43 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

OHIO—Continued

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
Lorain and counties of Lorain, Ashtabula, Marion, and Union.				17,586			36.7	O. P. Kimball	October, 1926.
Marion		1,525	1,697		20.0	41.0		W. J. Weiser	1926.
Norwood				4,701			40.3	H. Wittenberg	
Oberlin		858	805		36.1	50.7		C. D. Barrett	1926.
Do	10-18	885	797		25.5	31.6		do	1927.
Springfield							24.0	O. M. Craven	Ratio of girls to boys, 4 to 1.
Do				9,000			27.0	do	1925.
Do				8,374			17.5	do	1926.
Do							12.5	do	1927.
Warren			925				24.43	Marine and Kimball	
Allen County							7.0	J. J. Sutter	
Do			3,813				5.2	John J. Smith	Grade and high school.
Ashtabula County								W. S. Weiss	Incidence of goiter same as for all of northern Ohio.
Belmont County	5-10	908	831		22.0	36.0		F. R. Dew	
Butler County				500	20.0	40.0		C. J. Baldridge	
Clinton County								W. K. Ruble	Incidence less than in 1921 when many cases were found.
Coshocton County				1,850			36.2	D. M. Criswell	
Crawford County	6-16			1,603			56.0	G. T. Wasson	
Do				3,537			35.0	do	1926, county schools.
Do				1,603			56.0	do	1925.
Delaware County				3,048			29.3	A. J. Pounds	1926.
Do				2,102			25.9	do	1928.
Geauga County	5-14			2,500	20.0	40.0		G. L. Lyne	
Mahoning County					35.0	45.0		J. F. Edder	
Ross County								G. E. Robbins	Quite prevalent.
Washington County		2,194	2,043		24.5	35.7		A. G. Sturgiss	
Wayne County	5-14						40.0	C. D. Barrett	

OKLAHOMA

Oklahoma City				1,496			10.9	G. F. Mathews	2 counties.
Kay County							20.0	D. M. Cowgill	Among school children.
LeFlore County							.33	W. F. Lunsford	

OREGON

Medford		844	832	1,676	16.2	45.0	30.5	L. D. Inskeep	Grade and high schools.
Newport		620	1,647		10.8	26.1		W. C. Belt	Men and women (1916).
Portland		407	2,279		27.0	56.2		City Club's public health section.	
Do					30.0	60.0		J. Earl Else and B. Peden	
Do				4,698			42.2	H. A. Cary	1925.
Do		3,338	4,463		26.8	26.4		do	1928.
Douglas County				1,253			7.6	W. C. Belt	1925.
Do				1,583			8.6	do	1925.
Do				1,933			13.7	do	1926, south end of county.
Jackson County				2,395			24.0	L. D. Inskeep	
32 localities	8.20	8,181	9,427	17,608	22.3	38.3	30.9	U. S. Public Health Service	1927, Reprint No. 1189.

PENNSYLVANIA

Bradford								C. L. Peterson	Prevalent in a small way.
Do			280			9.3		do	High school.
Do			563			6.0		do	Fourth to ninth grades, taking iodine tablets.
Erie		11,401	11,702		2.4	9.8		H. R. Steadman	
Do						25.0		do	High school.
Do		11,019	11,372		1.6	10.3		do	1926-27 survey.
New Castle								W. L. Steen	Quite prevalent.
Pittsburgh	4.21	43,555	54,218		33.16	50.92		H. J. Benz	
State							2.0-3.0	Goldberger and Aldinger	

RHODE ISLAND

Newport								Edw. Murphy	Not common.
Providence								S. D. Gage	Very few cases.
Do		678	939	1,617	0.29	1.3	0.86	S. I. Morse	
Westerly								S. C. Webster	Not common.

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 43 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
SOUTH CAROLINA									
Florence								P. H. Brigham	No appreciable number of goiters.
SOUTH DAKOTA									
Brown County								P. McCarthy	A rarity among school children.
TENNESSEE									
Dyer County								O. F. Agee	An occasional goiter among adolescent females.
Gibson County							3.0	F. L. Roberts	Practically no goiter.
Obion County				10,000			0.1	J. W. Dennis	
Rutherford County				1,869			3.8	H. S. Mustard	White children.
Do				983			4.9	do	Colored children.
Do				2,270			7.9	do	1928, white children.
Do				465			11.6	do	Colored children.
Do	6–16	1,240	1,385		3.6	11.7		H. S. Mustard and J. I. Waring	White children, 1927 survey.
Do	6–16	692	717		8.9	17.0		do	Colored children.
40 localities	10–18	9,073	11,120		9.5	23.5		U. S. Public Health Service	1928, white children, Reprint No. 1276.
33 localities	10–18	1,759	3,196		15.1	35.5		do	1928, colored children.
State								E. L. Bishop	Percentage low.
TEXAS									
Austin								L. E. Edens	Very little goiter.
Denison								Alex W. Acheson	Extremely rare.
El Paso								George Turner	No cases.
Hidalgo County								J. R. Mahone	Goiter rare.

Alpine							57.0	J. F. McClendon	
Brigham City							20.0	do	
Farmington							54.5	do	
Fort Duchesne							71.7	do	
Goshen							15.0	do	
Huntsville							41.1	do	
Kansas							46.4	do	
Kaysville							49.1	do	
Lakeview							6.0	do	
Levan							73.4	do	
Logan City							40.5	do	
Milford							23.0	do	
Millcreek							42.5	do	
Mount Pleasant							58.6	do	
Murray							34.4	do	
Nephi							64.3	do	
Oak City							82.2	do	
Ogden							53.0	do	
Park City							42.2	do	
Parowan							69.1	do	
Payson							6.0	Curtis	
Salt Lake City							41.6	J. F. McClendon	
Santaquin							45.0	do	
Do							67.0	Curtis	
Syracuse							23.1	J. F. McClendon	
Vernal							40.8	do	
Virgin Valley						75.0		G. W. Middleton	Women.
West Warren							7.1	J. F. McClendon	
State	5-9			38,012	27.2	41.5		State board of health	1924-25.
Do	10-14			47,600	37.3	60.0		do	Do.
Do	15-19			21,966	29.1	65.3		do	Do.
Do	20 and over			2,508	28.6	58.6		do	Do.
Iron County							44.0	M. J. McFarlane	
Kane County	9-18	153	170		61.0	70.0		H. J. Sears	
Millard County	9-18	541	604		43.8	57.5		do	
Washington County	9-18	526	621		32.0	62.0		do	
10 counties				69,256		30.0	54.3	State board of health	
State				95,488			42.7	do	
Do	10-14			30,413	36.4	59.9		do	
Butler School							67.3	J. F. McClendon	
University of Utah				1,945	31.2	56.6		Porter	

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 43 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

VIRGINIA

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
Lynchburg	5–19	2,380	2,967		6.0	15.9		M. G. Perrow	
Do	14–19	460	678		6.3	24.7		do	
Newport News								G. C. Tyler	Very little.
Smithfield				912			0.22	J. B. Woods	
Albemarle County								G. B. Young	Very little goiter.
Arlington County				4,000			4.5	P. M. Chichester	
Do				462			18.4	do	1927, results obtained from clinic of Dr. Robert Moran.
Augusta County								H. M. Wallace	A lot of simple goiter.
Fairfax County								W. P. Caton	Very little goiter.
9 counties				6,432			12.7	Clark and Pierce	U. S. Public Health Service, Reprint No. 184.
52 counties							(2)	E. G. Williams	Circular letter of State board of Health.
24 counties							(3)	do	Do.
83 counties							(4)	do	Do.

WASHINGTON

Montesano	11–18			159			27.04	D. C. Hall	
Do	5–14			466			23.42	do	
Seattle	5–14				42.0	48.0		do	
Do	14–18	575	521		38.3	65.6		do	
Do				33,389			25.0	Ira C. Brown	1915 medical inspection of school children.
Do				33,555			19.07	do	1916
Do				32,602			10.38	do	1917
Do				33,905			9.81	do	1918
Do				36,897			8.37	do	1919
Do				39,715			9.49	do	1920
Do				41,496			8.83	do	1921 Prophylaxis carried out persistently.
Do				41,893			9.18	do	1922
Do				45,578			7.97	do	1923
Do				45,285			5.72	do	1924
Do				47,182			6.83	do	1925
Do				49,360			4.05	do	1926

Tacoma	8–20			310			10.6	W. J. Kerr	Indians.
Chelan County	5–14			2,000			46.5	P. T. West	
King County	6–15	1,654	1,506	3,160	35.5	43.4	39.3	D. C. Hall, C. M. Hofrichter, and C. J. Mohr.	
Yakima County							46.0	H. H. Smith	Circular letters.
State	12–18				65.0	75.0		J. Tate Mason	Estimate.
Camp Lewis		21,182			21.0			W. J. Kerr	
University of Washington				13,000	26.37	33.2		D. C. Hall	1914.

WEST VIRGINIA

Bluefield								D. B. Lepper	Rather high incidence.
Charleston						75.0		H. C. Lonsberry	
Do						60.0		D. Littlejohn	
Grafton		949	949	1,898	8.6	24.5	16.5	C. C. Hedges	
Do						36.0	64.0	D. Littlejohn	
Do						29.0	56.0	W. T. Henshaw	
Ethel							59.0	D. Littlejohn	
Huntington							50.0	do	
Logan							63.0	do	
Martinsburg							14.35	do	Adults.
Montgomery							43.4	do	Colored.
Do							21.0	do	White.
Morgantown								H. H. Pierce	Found in many school children.
Three Forks							53.0	D. Littlejohn	
Brooke County								W. J. MacDonald	Goiter frequently observed in school children.
Gilmer County				720			97.0	H. C. Douglas	
Harrison County				6,704			25.1	V. A. Selby	
11 Counties				13,836			8.91	Clark and Pierce	U. S. Public Health Service, Reprint No. 184.

[3] Goiter reported prevalent by 194 physicians (393 physicians reporting).
[2] Goiter reported somewhat prevalent by 44 physicians (234 physicians reporting).
[4] Goiter reported not present by 285 physicians (605 physicians reporting).

TABLE 2.—*Number of examinations and percentage of thyroid enlargements reported in 43 States by different observers, according to age and sex of the individuals examined, and location of the places*—Continued

WISCONSIN

Place	Ages	Number examined			Percentage with goiter			Reported by—	Remarks
		Boys	Girls	Boys and girls	Boys	Girls	Boys and girls		
Altoona, Fairchild, and Augusta				531			31.0	L. W. Hutchcroft	
Ashland							90.0	Hertzman	
Barron City					35.0	47.0		V. A. Gudex	
Beloit				1,580			16.4	C. W. Andrews	
Do						60.0		L. M. Field	Junior high school.
Do						80.0		do	High school.
Drummond								L. W. Hutchcroft	17 students free from goiter.
Eau Claire	5-12	1,963	2,302		29.0	39.0		J. F. Farr	
Do				625			28.0	do	Ninth ward school, 1924.
Do				625			15.4	do	Ninth ward school, 1926.
Do				625			8.0	do	Ninth ward school, 1927.
Kenosha								G. Windesheim	Probably 50 per cent.
La Crosse	7-12	3,126	3,232		12.0	23.6		V. A. Gudex and A. M. Murphy	
Lake Nebegamon							100.0	L. W. Hutchcroft	
Long Lake							75.0	A. D. DeNeveu	
Marinette							44.46	L. W. Hutchcroft	
Marshfield							65.0	do	
Menominie	12				22.0	50.0		V. A. Gudex	
Mercer				120			97.5	A. V. DeNeveu	
Monroe							33.3	Anna Stuppi	
Neenah							45.0	Ada Garvey	
Oshkosh							50.0	do	
Do				3,804			25.5	E. J. Campbell	1926.
Do		498	646		32.0	72.0		A. H. Broche	1927, high school.
Rhinelander							75.0	A. V. DeNeveu	
Stevens Point							60.0	F. A. Southwick	
Do							8.0	do	Kindergarten.
Do						58.0		do	Above kindergarten.
Viroqua				26			69.2	G. W. Henika	Training school for teachers.
Wassau								L. F. Bugbee	500 children in city with goiter.
Do				4,476			9.4	M. L. Butler	Definitely defective; grade schools.
Eau Claire County							20.0	Mollie Smith	Rural schools.
La Crosse County							75.0	L. W. Hutchcroft	In some sections 95 per cent.
Pepin County	12+			767	46.0	70.0		V. A. Gudex	
Polk County	12+			2,975	29.0	52.0		Karstens	
Alton township							50.0	L. W. Hutchcroft	

University of Wisconsin				13,706			28.0	R. C. Blankinship	1921.
Milwaukee Downer College	12–22		1,435			7.37		J. G. Taylor	14 States represented.
Health districts Nos. 2 and 3	7				8.5	11.0		Gudex and Wiltrout	23,726 examinations.
Central portion of State	7–11				17.1	30.0			
Do	12+				25.0	48.0			
WYOMING									
Natrona County				6,000			15.0	H. Garst	
INDIANS									
25 localities							0.1–1.5	E. L. Munson	1895.

ACUTE RHEUMATISM IN CHILDHOOD AND ITS SEQUELAE[1]

By E. BLANCHE STERLING, *Acting Assistant Surgeon, United States Public Health Service*

The marked frequency of damaged hearts as sequelae of acute rheumatic fever in children has caused the two conditions to be inseparably associated in the medical mind. From the standpoint of prevention it is fortunate that the lay mind is becoming gradually awakened to the gravity of rheumatic manifestations in children and to their association with heart disease.

As a cause of death among children in the United States acute rheumatic fever does not take the toll of child life that can be ascribed to any one of the common infectious diseases of childhood. On the other hand, heart disease (not including angina pectoris, which is very rare in childhood), in the particular period considered, causes almost twice as many deaths as scarlet fever, four-fifths as many as measles, five-sevenths as many as whooping cough, and half as many as diphtheria. The accompanying table shows the relative importance of these causes of death in the 5-year period 1922–1926 and their relation to all causes of death in the same period.

Mortality among white children from birth to 14 years from specific causes, 1922–1926, in the registration States of 1920

Cause	Number of deaths	Per cent
All causes	1,033,099	100
Measles	25,558	2.47
Scarlet fever	11,225	1.08
Whooping cough	28,242	2.73
Diphtheria	41,162	3.98
Acute rheumatic fever	3,955	.38
Heart disease	20,979	2.03

It is not to be assumed that all the cases of heart disease occurring in children below 14 years of age are due to rheumatism, and the figures are given simply to indicate the importance of heart disease as a cause of child mortality in the United States. It is generally agreed, however, that acute rheumatism is the most important single cause of heart disease in early life. Since rheumatism so commonly results in a damaged heart, the importance of prevention and care in this condition is easily recognized. It has been estimated that 75 per cent or more of children under 10 years of age are likely to have an involvement of the heart in the course of an attack of acute rheumatism. Other rheumatic manifestations may also be accompanied by heart lesions.

[1] Prepared for the Office International d'Hygiene publiqua and presented by Senior Surg. Taliaferro Clark.

Though morbidity records of acute rheumatism in children of sufficient extent and accuracy are not available, considerable data have been collected as to the incidence of heart disease in childhood.

In 1922 (1) over 230,000 school children were examined in the city of Philadelphia, 0.718 per cent of whom had heart defects. In the same year (1) over 290,000 examined in New York City showed an incidence of heart defects equal to 1.344 per cent of the total number. Among 1,671 high-school entrants in New York (1), 6.798 per cent suffered from heart defects.

An examination of 1,061 preschool children in New York (2) brought to light the fact that 0.94 per cent had defective hearts. In Gary, Ind. (3), over 3,000 children from 2 to 7 years of age were examined, and 3.2 per cent were found to have defects of the heart.

Generally speaking, it may be said that in this country the groups of children examined indicate that there is an incidence of from 0.7 to 2 per cent of heart defects among children from birth to 14 years of age.

Studies in the epidemiology of rheumatic fever in this country have been made recently. Rosenau (4) states that rheumatism appears to be a communicable disease. While frank epidemics do not occur, we do have house outbreaks. He believes these incidents are more often due to carriers than to imperfect sanitation. Hiller and Graef (5) report an epidemic of rheumatism in a cardiac camp, where 10 cases of rheumatism, one of chorea, and one of acute tonsillitis occurred within a short space of time during a period of bad weather. The authors are inclined to believe that communicability and adverse weather were both factors in the outbreak.

Rheumatic fever is a seasonal disease, being most frequent in the spring in this country. It is more frequent in the North than in the South, but the colored race is more susceptible in localities where it is prevalent. The incidence is higher in cities than in the country.

It is generally believed that the bacteria most clearly identified with acute rheumatism are a group of streptococci. In the investigations of Birkhaug (6) a new species of nonmethemoglobin-forming, inulin-fermenting, bile-insoluble, and toxigenic gram-positive streptococcus was regularly isolated from the tonsillar crypts and abscesses, and irregularly from blood cultures, heart vegetations, feces, and urine of persons having rheumatic fever and its syndromes.

Kaiser (7) tested 800 children, from 1 week to 16 years of age, by the Birkhaug test—intradermal injections of 0.1 c. c. of a 1:100 dilution of the toxic filtrate from cultures of the streptococcus isolated by Birkhaug. Approximately 32 per cent of all the children tested reacted positively to the test. Among those with no history of rheumatic infection or of repeated attacks of sore throat, 20 per cent were positive; among those with a history of repeated attacks of sore

throat, 35 per cent were positive; and among those with a history of rheumatic infection, 72 per cent gave a positive reaction.

Studies of the modes of infection in acute rheumatic fever indicate the association of tonsillitis, pharyngitis, and the "common cold" with attacks of rheumatism. Zymotic diseases and pyogenic infections preceded more than 10 per cent of the attacks in one study. A more or less grudging belief in the rôle of contact infection in febrile attacks seems to be gaining ground.

Though sometimes questioned, the consensus of opinion as to the value of tonsillectomy appears to be favorable. It is felt by some investigators that the tonsillectomized child not previously infected has a better chance to escape rheumatic infection over the same period of time than has the child whose tonsils have not been removed. A careful analysis by Kaiser (8) of 478 cases of carditis showed that in 83 per cent the condition developed before tonsil removal, and in 17 per cent following tonsillectomy. Based on a control study of 20,000 tonsillectomized children, he concludes that the tonsil is a factor in the causation of rheumatism, scarlet fever, and chronic heart disease, and that the tonsillectomized child is assured greater protection against these infections than his companion whose tonsils have not been removed.

The general American program for the prevention of acute rheumatism in children includes the avoidance of infection, especially of the upper respiratory tract, removal of all foci of infection, frequent examinations of all children, careful hygiene, avoidance of the possibility of contact infection, and education of the general public as to the possible seriousness of any rheumatic manifestations.

If the child unfortunately contracts the disease, extraordinary care may avert the all too common cardiac complications. Prolonged rest in bed and a long period of convalescence are strongly advocated. Reinfection in children is the rule, and recurrent rheumatic infection was found by one investigator to be most prevalent in the first decade of life. To guard against reinfection and repeated damage to the heart, protect the patient from all infectious diseases and remove all foci of infection as soon as possible. Sanatorium treatment, hospital care, and convalescent homes have all been advocated in the treatment of rheumatic subjects. McCulloch and Irvine-Jones (9) obtained encouraging figures in the case of rheumatic children from a study of subjects who received intensive care directed toward the eradication of nasopharyngeal infection. The fewest recurrences occurred among the children who gave the highest degree of cooperation in the measures recommended. The following therapeutic principles are laid down by the authors mentioned.

THERAPY USED IN RHEUMATIC CHILDREN

1. General hygienic measures in the home, sunlight, ventilation, avoidance of overcrowding, suitable food, adequate rest, outdoor activity.

2. Regular attendance at clinic in winter and at long intervals during the summer.

3. Local measures—dental care; tonsillectomy in most cases. Nose and throat kept clear by antiseptic instillations and gargles.

4. Acute infections of the upper respiratory tract are regarded as serious and so treated.

5. The treatment of chronic infection in the nose and throat is not altogether satisfactory, but it is thought that general hygienic measures and local treatment are of assistance.

In order that the child with a damaged heart may not suffer the loss of an education, cardiac classes have been established in schools in various places and in some hospitals. The following program (First Report of the Association for the Prevention and Relief of Heart Disease. Reproduced by Wood and Rowell) (10) was inaugurated at Public School 64 in New York:

PROGRAM AT PUBLIC SCHOOL 64 IN NEW YORK

8.30 to 9: Arrival. Given cup of warm bouillon.
9 to 9.15: Rest in reclining chairs. Observation by nurse to determine pulse rate, temperature, and other physical conditions.
9.15 to 10.15: School program.
10.15 to 10.35: Recess.
10.35 to 12.15: School program.
12.15 to 12.45: Lunch period; warm lunch served.
12.45 to 1.45: Rest period for all children in reclining chairs.
1.45 to 3: School program, including specialized physical training exercises which are arranged in accordance with the recommendations of the cardiac specialist in charge of the child.
3 to 3.15: Rest in chairs. Observations of temperature and pulse rate.
3.15 to 4.15: After school recreation period. Out door in pleasant weather.
4.15 to 4.30: Hot drink, in cold weather, or cracker and milk in warm weather.
4.45 to 5: Dismissal. Walk home or transportation by bus. Dismissal earlier in winter.

When the organization of special classes is not possible, Wood and Rowell state that the New York City Board of Education issues special instructions to cover such cases.

Schools are instructed to—

1. Issue special passes to permit such pupils to use special entrances and exits.

2. Permit these children to enter or leave school directly before or after the regular time schedule for normal children.

3. Excuse children with cardiac defects from physical training, fire-drills, etc.

4. Lengthen the lunch hour to avoid haste in eating.

5. Revise the individual régime upon receipt of a report from the family physician.

Since acute rheumatic fever in childhood results so frequently in a damaged heart it is a distinct public health problem, irrespective of its own actual effect on the death rate. The child with heart disease is a handicapped child, and handicapped individuals are likely to become community problems. The establishment of "cardiac classes" in schools is one form of a community's partial solution of this problem. Any reduction in the incidence of acute rheumatic fever is an important contribution to the public health.

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CURRENT WORLD PREVALENCE OF COMMUNICABLE DISEASES[1]

The United States, April 7–June 1, 1929

The prevalence of certain important communicable diseases as indicated by weekly telegraphic reports from State health departments[2] to the Public Health Service is summarized below. This summary is prepared from the data published weekly in the PUBLIC HEALTH REPORTS under the section entitled "Prevalence of Disease."

Meningococcus meningitis.—The recent rates represent the highest points yet attained upon a wave of meningitis which apparently started upward in 1925 and has been climbing ever since, subject, of course, to the usual seasonal swings.

It has already been pointed out that the recent rates are the highest on record in the bureau.

The highest incidence was reported during the week ended March 30, when 320 cases were reported. Since that time, the number of cases has declined in most States. In Michigan, however, where the disease has been most prevalent, the number of cases again rose in May, the highest weekly number (101) in that State since the beginning of the outbreak being reported during the week ended May 18. Peaks were also attained during May in Illinois and North Carolina.

Influenza.—The influenza epidemic has subsided in all parts of the country. During April and May the reported number of cases (3,400) dropped to a lower level than that reached in any of the three preceding years. Moreover, these cases were well scattered over the various geographic regions.

Smallpox.—The smallpox incidence has recently been higher than the seasonal expectancy in a number of regions.

In Massachusetts, where smallpox now rarely appears, 55 cases were reported during April and May. Connecticut, also a State usually free from the disease, reported 28 cases. Smallpox still remained unusually prevalent in Vermont at the end of May, but by that time no more cases were being reported in Maine.

In Tennessee, the number of cases of smallpox rose from 20 to 120 during the 8-week period ended June 1. In the same period the number of cases rose in Wyoming from 23 to 100, and in North Dakota from 19 to 106.

For the reporting area as a whole the incidence (6,389 cases) was not far from the average of recent years, though about 1,100 cases below the relatively high level of last year.

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

[2] The numbers of States reporting for the various diseases are as follows: Typhoid fever, 41; poliomyelitis, 43; meningococcus meningitis, 42; smallpox, 42; measles, 38; diphtheria, 42; scarlet fever, 41; influenza, 31.

Diphtheria.—The diphtheria incidence, which had been at a relatively low level, rose during April and May. At the end of that period it stood at about the average of recent years.

Measles.—The incidence of measles during April and May was moderate in relation to the seasonal trend of recent years, however there were indications of a resistance to the usual seasonal decline, particularly in May. Approximately 100,000 cases were reported during the two months.

Typhoid fever.—The usual seasonal increase of typhoid fever continued through the months of April and May. The disease seemed to be most prevalent in the Southern States. Among those showing considerable increases were Alabama, Georgia, Louisiana, Mississippi, North Carolina, and Tennessee. The total number of cases (1,710) reported for the two months by 41 States indicated a slightly higher incidence of the disease than obtained during the corresponding period of last year, but it was nevertheless somewhat lower than the recent average.

Poliomyelitis.—The poliomyelitis incidence continued at about average level during the months of April and May. The 142 cases which occurred were widely scattered: 19 in Florida; 16 in New York; 15 in California; 8 in Illinois; and 7 each in Michigan, North Carolina, and Pennsylvania. The remaining cases varied from 1 to 6 in other States.

The disease was less prevalent than during the same months of 1928. In 1926, the lowest incidence of the year was reached during April and May, but each subsequent year has shown a marked increase in the number of cases. The highest incidence of this disease is usually reached during the summer and fall months.

Scarlet fever.—The incidence of scarlet fever followed the usual seasonal downward trend during April and May. The number of cases reported (32,937) was, however, slightly higher than that reported during the same months in 1928. The decline was more rapid than in 1927, but the number of cases in the current year was approximately 1,800 more than occurred in 1926 during these months.

Mortality, all causes.—The general death rate which had attained a peak weekly rate (annual basis) of 20.5 per thousand population toward the middle of January, due to the influenza epidemic, has since declined sharply, and at the end of May was below 13 per thousand, a rate approximately normal for this time of the year.

Foreign Countries[1]

Poliomyelitis.—The following abstract of the world prevalence of poliomyelitis in recent years is taken from the Monthly Epidemio-

[1] Data from the Monthly Epidemiological Report of the Health Section of the League of Nations' Secretariat, Feb. 15, 1929, supplemented by information published in the Public Health Reports.

logical Report for February 15, 1929, issued by the health section of the League of Nations.

While sporadic cases of poliomyelitis have occurred in most countries of the world for many years, its spread in epidemic form has been remarkably slow. Very few countries have so far suffered from a really severe outbreak of this disease.

The first reported serious epidemics of poliomyelitis occurred in Scandinavia in 1905 and in 1911–12. There were minor epidemics in the United States in 1911–12, but it was not until 1916 that an epidemic of a really serious nature appeared. Outbreaks of similar intensity did not occur again until 1925 in New England and 1927 in Rumania.

During 1927 the incidence was fairly high in many countries, but there was a sharp decline in most places in 1928. Thus, in the United States, only half as many cases were reported in 1928 as in 1927; in Germany about one-third as many; and in Rumania about one-fifth as many. A few countries showed increases in 1928, but these were relatively slight.

That there were marked differences in the incidence in various countries is shown by the accompanying table.

Death rates from poliomyelitis in various countries [1]

Country	Death rate per 100,000	Country	Death rate per 100,000
New Zealand	3.8	England and Wales	0.5
Sweden	1.6	Denmark	.5
Norway	1.5	Scotland	.4
United States	1.3	Irish Free State	.4
Canada	1.3	Germany	.3
Switzerland	.7	Netherlands	.2
Australia	.6		

[1] Data relate to 1924–1927 except in Norway (1924–1926), the United States and Switzerland (1924–25).

Although poliomyelitis is a disease which occurs especially during the warmest season of the year, it has been more prevalent in the countries of northern Europe than in those of southern Europe. In Italy, the incidence of the disease is considerably lower in the southern part of the country than in central and northern sections. In the United States, likewise, it is in the northern States that the most severe epidemics have occurred.

Little difference is shown in the mortality from poliomyelitis in the rural as against urban districts in European countries. In Italy, there seemed to be no marked difference between the rate in the urban and rural districts in the years 1925–1927. In Sweden, the rate for the years 1918 to 1925 was considerably higher in the rural districts than in the towns. In England and Wales, the rate

was higher in the rural districts for the period from 1921–1927. In the Netherlands, on the contrary, the urban mortality was higher. This distribution of rates, however, seems to be largely due to chance and is very unstable, as in other years the excesses have been the reverse in the various countries.

Cholera.—In India, cholera was somewhat more prevalent during the year 1928 than in the two preceding years. Provisional figures indicate that 90 per cent of the deaths from cholrea were reported from the Provinces of Bihar and Orissa, Bengal, Madras, and the United Provinces. In the first three of these Provinces epidemics of cholera occur annually and are more severe than elsewhere in the country.

In a disease such as cholera, in which the severity of annual outbreaks is subject to wide variation, a single year's figures give little indication of the epidemic trend. While the disease was more prevalent in some parts of India during 1928, the following table furnishes a striking confirmation of the fact that everywhere in India there has been a noteworthy decrease in the prevalence of the disease in the last 10 years.

Cholera mortality in eight Indian Provinces in 1928 and in the 5-year periods 1918–1922 and 1923–1927

Province	1928		1923–1927		1918–1922	
	Number of deaths [1]	Rate per 1,000 inhabitants [1]	Mean annual deaths	Rate per 1,000 inhabitants	Mean annual deaths	Rate per 1,000 inhabitants
Bihar and Orissa	50,494	1.49	31,453	0.92	90,829	2.67
Bengal	41,693	.90	38,056	.81	78,757	1.69
United Provinces	31,000	.68	19,365	.42	72,012	1.58
Madras	40,455	.99	28,957	.70	71,046	1.73
Central Provinces	2,610	.19	6,067	.43	25,465	1.83
Bombay	6,397	.33	8,115	.42	13,745	.71
Burma	6,060	.44	3,994	.36	5,652	.55
Punjab	1,910	.09	2,360	.11	5,860	.28

[1] Provisional.

At the beginning of the year 1929 cholera was reported present in several large cities of India. Calcutta reported 95 deaths in January and 84 in February. In the city of Madras the cholera situation had improved; 10 cases were reported in January and only 1 in February. In Rangoon and Bombay, 10 and 5 deaths, respectively, were reported in January. In Tuticorin there were 62 deaths in January, but the number decreased in February.

The island of Ceylon was practically free from cholera during the first 11 months of 1928. During the last week of the year an outbreak started in Uva Province, which is in the southeastern part of

the island, but the number of cases was small. The entire island has reported only 21 cases in the last five months.

In the Dutch East Indies only one case of cholera was reported during the year 1928. The continued absence of cholera in the Dutch East Indies is an epidemiological fact of much interest. Up to 1919 epidemics of cholera occurred annually in Java; since then the disease has been extremely rare. The marked improvement has been due to cholera vaccination.

In French Indo-China there was a considerable increase in cholera in Cochin-China in the early part of the year, and a later outbreak of the disease occurred near the end of the year. Cambodia reported cholera present each month of the year, but not in epidemic form at any time.

Cholera was present in Canton, China, during several months of the year 1928, but was not at any time epidemic. Cases were also reported at Swatow, Shanghai, Dairen, Tientsin, and Singapore during the year.

In Siam, cholera was somewhat more widespread than usual during 1928. One or more cases were reported weekly through the year. The highest weekly total was recorded for the week ended April 14, when 120 cases and 84 deaths occurred.

Only one case of cholera was reported in Japan (Osaka) during the year 1928. Iraq, where a severe epidemic had occurred in 1927, was completely free from the disease; and reports from the Straits Settlements, Philippine Islands, and other countries indicated a very favorable cholera situation during the past year.

DEATH RATES IN A GROUP OF INSURED PERSONS

Rates for Principal Causes of Death for April, 1929

The accompanying table, taken from the Statistical Bulletin for May, 1929, issued by the Metropolitan Life Insurance Co., presents the mortality record of the industrial insurance department of the company for April and the cumulative death rates for January to April, inclusive, for the principal causes of death. The rates for 1929 are based on a strength of approximately 19,000,000 insured persons in the United States and Canada.

The death rate for this group for April, 1929, was 9.9 per 1,000, as compared with 9.8 for March and 10 for April of last year. The cumulative mortality for January–April (annual basis) was 11.1 per 1,000, as compared with 9.8 for the corresponding period of 1928. The peak of the influenza epidemic of last winter came in January, and brought the mortality for that month to 42.6 per cent in excess of that for the same month of last year. By the end of April, how-

ever, the excess mortality in this group of persons had been reduced to 13.3 per cent. The higher cumulative death rate as compared with 1928 seems to apply more or less to all geographic sections of the United States and to Canada.

All four of the principal epidemic diseases of children recorded lower death rates in April than in the same month last year. Declines were also shown for influenza, pneumonia, other respiratory diseases, diarrheal complaints, and puerperal conditions. On the other hand, slightly higher mortality rates were recorded for typhoid fever, tuberculosis, cancer, and cerebral hemorrhage, and still larger increases for diabetes, heart diseases, suicides, homicides, and automobile fatalities.

Death rates (annual basis) per 100,000 for principal causes of death

[Industrial department, Metropolitan Life Insurance Co.]

Cause of death	Death rate per 100,000 lives exposed [1]				
	April, 1929	March, 1929	April, 1928	Cumulative January to April	
				1929	1928
Total, all causes	994.4	980.5	996.9	1,113.7	984.6
Typhoid fever	1.5	1.7	1.4	1.5	1.5
Measles	5.4	3.5	10.2	4.2	6.7
Scarlet fever	4.1	2.8	4.4	3.6	4.0
Whooping cough	5.7	5.1	6.1	6.9	5.4
Diphtheria	9.2	8.7	9.3	10.3	12.2
Influenza	33.1	53.1	35.4	99.8	31.8
Tuberculosis (all forms)	95.5	92.0	94.8	94.4	93.5
Tuberculosis of respiratory system	85.9	80.9	83.8	84.3	82.3
Cancer	76.0	72.3	75.0	76.3	75.7
Diabetes mellitus	19.4	20.6	18.0	22.7	19.2
Cerebral hemorrhage	60.5	57.3	59.5	64.0	60.5
Organic diseases of heart	161.7	154.2	151.8	176.1	154.2
Pneumonia (all forms)	111.2	128.7	140.6	151.2	127.2
Other respiratory diseases	13.3	20.3	19.3	16.0	16.1
Diarrhea and enteritis	12.1	12.8	15.8	13.3	14.7
Bright's disease (chronic nephritis)	74.5	72.0	74.5	78.1	78.5
Puerperal state	14.0	14.0	15.2	14.7	14.4
Suicides	9.7	8.5	8.2	8.7	8.0
Homicides	6.5	5.4	5.6	6.4	6.1
Other external causes (excluding suicides and homicides)	57.9	50.8	53.4	56.8	55.4
Traumatism by automobiles	17.2	13.3	15.3	15.6	14.6
All other causes	222.9	193.6	198.4	209.7	199.5

[1] All figures include infants insured under 1 year of age.

COURT DECISION RELATING TO PUBLIC HEALTH

Exaction by city of fee for inspection of animals in slaughtering establishments not receiving free Federal inspection upheld.—(Ohio Supreme Court; City of Dayton et al. *v.* Jacobs, 165 N. E. 844; decided February 6, 1929; on rehearing April 17, 1929.) The division of health of the city of Dayton, acting under a city ordinance, assessed certain fees for the inspection of animals slaughtered in establishments which were not entitled to and did not receive free

inspection service from the Federal Government. Those slaughtering establishments which were entitled to and did receive free Federal inspection did not receive inspection service from the municipality and were not assessed inspection fees by the city. An action was brought by one who was required to pay inspection fees to the city, it being claimed that the exaction of a fee from those slaughtering establishments which did not receive free Federal inspection was a discrimination against such establishments. The supreme court, in interpreting the provisions of the meat-inspection ordinance, held that the division of health was not authorized by the ordinance to inspect meat that had been inspected and approved by the Federal Government or by some other authority whose standard of inspection and wholesomeness was equal to that provided by the ordinance. The court also held that the city could exact a fee for the inspection service rendered to those slaughtering establishments which were not entitled to and did not receive free Federal inspection, it being stated that the fee was an incident of the police regulation of an occupation which, because of its effect upon and relation to the public health, required a reasonable inspection. Regarding this phase of the matter, the court said:

* * * The inspection is a service to the person engaged in the occupation and a discharge of duty owing to the public by the municipality. But for the service, the fee, as such, could not be lawfully exacted; and since a reinspection of an animal and carcass inspected and approved by the Federal Government would be neither a service to the person engaged in the occupation requiring inspection nor the performance of a duty to the public, the municipality could not lawfully impose such reinspection upon the establishments slaughtering and offering for sale Federal inspected and approved meat, and could not charge a fee, as such, for a service not rendered or intended to be rendered.

* * * The right to such free inspection by the Federal Government is not foreclosed to the defendant in error and those similarly situated. The advantage of the three establishments doing an interstate business over the defendant in error and those similarly situated is an advantage that inures to them by reason of the fact that they voluntarily bring themselves within the class entitled to receive such service from the Federal Government; and the fee exacted of the defendant in error, and those similarly situated, is exacted, not as a tax or a penalty, but in payment for a service which they have not seen fit to qualify themselves to obtain from the Federal Government, and which the city, in the exercise of its police powers, has determined is necessary for the preservation of the public health as a prerequisite to the sale of their meat within the city. * * *

On rehearing, the supreme court, on motion of the defendant in error, remanded the cause to the court of appeals for the purpose of a hearing and determination by such court of the question whether or not the fees charged under the meat inspection ordinance were out of proportion to the expense of such inspection and, for that reason, unlawful.

DEATHS DURING WEEK ENDED JUNE 8, 1929

Summary of information received by telegraph from industrial insurance companies for the week ended June 8, 1929, and corresponding week of 1928. (From the Weekly Health Index, June 12, 1929, issued by the Bureau of the Census, Department of Commerce)

	Week ended June 8, 1929	Corresponding week, 1928
Policies in force	74, 308, 445	71, 349, 157
Number of death claims	14, 333	14, 477
Death claims per 1,000 policies in force, annual rate	10. 1	10. 6

Deaths from all causes in certain large cities of the United States during the week ended June 8, 1929, infant mortality, annual death rate, and comparison with corresponding week of 1928. (From the Weekly Health Index, June 12, 1929, issued by the Bureau of the Census, Department of Commerce)

City	Week ended June 8, 1929		Annual death rate per 1,000 corresponding week, 1928	Deaths under 1 year		Infant mortality rate, week ended June 8, 1929 [2]
	Total deaths	Death rate [1]		Week ended June 8, 1929	Corresponding week, 1928	
Total (64 cities)	6, 850	12. 0	12. 9	660	751	[3] 58
Akron	51			5	4	52
Albany [4]	33	14. 3	12. 6	3	1	59
Atlanta	77	15. 8	19. 5	10	6	104
White	33			4	4	
Colored	44	(5)	(5)	6	2	
Baltimore [4]	176	11. 1	14. 2	20	19	64
White	127			15	8	60
Colored	49	(5)	(5)	5	11	79
Birmingham	75	17. 6	18. 1	11	9	100
White	33			3	3	45
Colored	42	(5)	(5)	8	6	183
Boston	213	13. 9	16. 1	27	36	75
Bridgeport	29			4	0	69
Buffalo	153	14. 4	15. 5	21	28	90
Cambridge	29	12. 1	14. 1	2	3	36
Camden	33	12. 7	13. 1	6	3	104
Canton	15	6. 7	9. 8	3	1	71
Chicago [4]	758	12. 6	11. 7	83	63	74
Cincinnati	107			6	11	35
Cleveland	223	11. 5	11. 0	16	19	47
Columbus	62	10. 8	11. 5	7	6	66
Dallas	49	11. 8	9. 4	0	4	
White	35			0	2	
Colored	14	(5)	(5)	0	2	
Dayton	45	12. 8	12. 5	3	2	48
Denver	61	10. 8	12. 8	3	8	29
Des Moines	36	12. 4	11. 0	8	1	144
Detroit	335	12. 7	10. 7	46	49	74
Duluth	13	5. 8	10. 3	0	2	0
Erie	33			2	2	41
Fall River [4]	26	10. 1	10. 1	4	5	75
Flint	28	9. 8	10. 2	5	7	61
Fort Worth	30	9. 2	11. 6	6	3	
White	23			4	2	
Colored	7	(5)	(5)	2	1	
Grand Rapids	36	11. 5	9. 9	2	2	30
Houston	82			12	7	
White	51			8	6	
Colored	31	(5)	(5)	4	1	
Indianapolis	93	12. 7	14. 4	5	10	40
White	77			5	8	46
Colored	16	(5)	(5)	0	2	0
Jersey City	72	11. 6	12. 6	5	13	39
Kansas City, Kans	24	10. 6	13. 3	2	1	44
White	16			1	1	25
Colored	8	(5)	(5)	1	0	179
Kansas City, Mo	90	12. 0	13. 9	7	7	59
Knoxville	23	11. 4	15. 4	3	2	66
White	18			1	2	24
Colored	5	(5)	(5)	2	0	4

(Footnotes at end of table.)

Deaths from all causes in certain large cities of the United States during the week ended June 8, 1929, infant mortality, annual death rate, and comparison with corresponding week of 1928. (From the Weekly Health Index, June 12, 1929, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended June 8, 1929		Annual death rate per 1,000 corresponding week, 1928	Deaths under 1 year		Infant mortality rate, week ended June 8, 1929 [2]
	Total deaths	Death rate [1]		Week ended June 8, 1929	Corresponding week, 1928	
Los Angeles	256			22	17	422
Louisville	60	9.5	14.4	2	4	16
White	47			2	4	19
Colored	13	[3]	[3]	0	0	0
Lowell	22			4	1	91
Lynn	17	8.4	12.9	2	2	55
Memphis	59	16.2	17.3	3	6	35
White	32			2	4	38
Colored	27	[3]	[3]	1	2	31
Milwaukee	106	10.2	12.8	11	23	48
Minneapolis	81	9.3	9.3	4	4	25
Nashville	39	14.6	18.0	8	1	129
White	26			4	1	87
Colored	13	[3]	[3]	4	0	235
New Bedford	26			8	4	172
New Haven	35	9.7	13.6	4	5	31
New Orleans	118	14.4	16.4	17	13	44
White	62			7	5	49
Colored	56	[3]	[3]	10	8	168
New York	1,407	12.2	13.3	130	170	53
Bronx borough	206	11.3	11.0	17	18	70
Brooklyn borough	453	10.3	11.6	46	69	47
Manhattan borough	557	16.6	18.9	56	69	68
Queens borough	156	9.5	9.3	7	12	29
Richmond borough	35	12.1	14.2	4	2	79
Newark, N. J	91	10.0	11.8	7	7	37
Oakland	54	10.3	12.8	2	5	22
Oklahoma City	42			7	3	140
Omaha	36	8.4	7.0	3	7	35
Paterson	48	17.3	12.3	3	5	53
Philadelphia	474	12.0	12.6	38	48	54
Pittsburgh	164	12.7	14.0	17	16	58
Portland, Oreg	72			4	5	46
Providence	67	12.2	11.9	7	8	62
Richmond	42	11.3	15.1	7	7	98
White	17			1	4	21
Colored	25	[3]	[3]	6	3	246
Rochester	63	10.0	12.3	9	7	76
St. Louis	190	11.7	14.7	3	23	10
St. Paul	51			1	2	10
Salt Lake City [4]	41	15.5	13.6	4	2	62
San Antonio	61	14.6	16.1	12	15	
San Diego	25	10.9	19.7	0	1	0
San Francisco	175	15.6	14.7	5	5	52
Schenectady	13	7.3	13.4	2	2	64
Seattle	66	9.0	8.1	0	1	0
Somerville	15	7.6	13.7	1	3	36
Spokane	29	13.9	15.3	3	3	78
Springfield, Mass	29	10.1	9.8	5	3	83
Syracuse	59	15.5	13.4	3	6	36
Toledo	79	13.2	11.4	11	6	103
Trenton	41	15.4	13.5	2	4	36
Utica	23	11.5	10.0	2	0	51
Washington, D. C	115	10.9	13.8	12	13	70
White	80			4	8	34
Colored	35	[3]	[3]	8	5	152
Waterbury	18			1	1	25
Wilmington, Del	18	7.3	10.2	1	3	26
Worcester	44	11.6	11.6	3	4	38
Yonkers	25	10.8	10.8	4	5	93
Youngstown	33	9.9	12.3	5	4	72

[1] Annual rate per 1,000 population.
[2] Deaths under 1 year per 1,000 births. Cities left blank are not in the registration area for births.
[3] Data for 72 cities.
[4] Deaths for week ended Friday.
[5] In the cities for which deaths are shown by color, the colored population in 1920 constituted the following percentages of the total population: Atlanta, 31; Baltimore, 15; Birmingham, 39; Dallas, 15; Fort Worth, 14; Houston, 25; Indianapolis, 11; Kansas City, Kans., 14; Knoxville, 15; Louisville, 17; Memphis, 38; Nashville, 30; New Orleans, 26; Richmond, 32; and Washington, D. C., 25.

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 June 8, 1929, and June 9, 1928

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended June 8, 1929, and June 9, 1928

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended June 8, 1929	Week ended June 9, 1928	Week ended June 8, 1929	Week ended June 9, 1928	Week ended June 8, 1929	Week ended June 9, 1928	Week ended June 8, 1929	Week ended June 9, 1928
New England States:								
Maine		2	5	41	61	40	0	0
New Hampshire	5				73	26	0	0
Vermont						49	0	0
Massachusetts	59	66	4	51	625	767	3	3
Rhode Island	9	6		2	68	196	0	0
Connecticut	24	11	5	2	197	340	1	0
Middle Atlantic States:								
New York	256	362	[1] 12	[1] 52	1,048	3,833	12	37
New Jersey	99	152	3	70	282	1,646	6	2
Pennsylvania	101	141			1,230	2,002	21	19
East North Central States:								
Ohio	22	54	12	38	1,182	785	6	3
Indiana	12	17		17	466	331	2	0
Illinois	147	112	11	68	2,092	195	22	6
Michigan	91	90	4	10	929	1,007	93	9
Wisconsin	27	16	12	126	1,203	116	4	6
West North Central States:								
Minnesota	17	18	1	3	444	87	1	2
Iowa	4	11			62		0	2
Missouri	42	25		5	139	291	17	5
North Dakota	14	3		127	86	20	4	0
South Dakota			1		45	66	0	0
Nebraska	10	11		1	306	43	0	0
Kansas	6	7	1	3	628	76	0	2
South Atlantic States:								
Delaware	1				6	10	0	0
Maryland [2]	20	36	12	10	43	318	2	0
District of Columbia	12	18		1	27	192	0	0
West Virginia	6	11	17	115	192	51	1	1
North Carolina	12	19			14	576	2	0
South Carolina	7	14	176	287	7	133	0	0
Georgia	3	8	6	32	30	75	1	2
Florida	8	3	3	24	61	79	0	0

[1] New York City only. [2] Week ended Friday.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended June 8, 1929, and June 9, 1928—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended June 8, 1929	Week ended June 9, 1928	Week ended June 8, 1929	Week ended June 9, 1928	Week ended June 8, 1929	Week ended June 9, 1928	Week ended June 8, 1929	Week ended June 9, 1928
East South Central States:								
Kentucky	3	7	-------	2	22	96	2	3
Tennessee	8	4	4	77	11	86	0	1
Alabama	11	8	20	110	40	219	0	0
Mississippi	4	1	-------	-------	-------	-------	0	1
West South Central States:								
Arkansas	1	8	21	120	9	181	0	0
Louisiana	10	15	17	61	25	146	3	3
Oklahoma [2]	6	7	4	51	49	180	2	1
Texas	20	26	12	10	140	237	0	0
Mountain States:								
Montana	-------	4	-------	-------	64	13	2	2
Idaho	1	-------	-------	-------	46	-------	0	1
Wyoming	-------	-------	-------	6	35	5	0	0
Colorado	3	6	-------	-------	9	67	2	1
New Mexico	3	-------	1	-------	8	13	0	0
Arizona	8	2	4	28	19	14	2	1
Utah [2]	4	1	2	2	5	2	1	1
Pacific States:								
Washington	9	15	-------	-------	168	62	6	2
Oregon	4	5	8	3	156	24	0	0
California	42	76	24	34	112	71	11	3

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended June 8, 1929	Week ended June 9, 1928	Week ended June 8, 1929	Week ended June 9, 1928	Week ended June 8, 1929	Week ended June 9, 1928	Week ended June 8, 1929	Week ended June 9, 1928
New England States:								
Maine	0	0	22	17	0	0	3	2
New Hampshire	0	0	12	2	0	0	0	0
Vermont	0	0	2	4	1	0	0	0
Massachusetts	0	2	180	201	2	0	6	1
Rhode Island	0	0	9	24	0	0	1	0
Connecticut	0	0	57	39	0	3	0	2
Middle Atlantic States:								
New York	3	2	309	420	2	2	17	9
New Jersey	2	3	120	149	0	0	2	0
Pennsylvania	2	1	256	225	0 [4]	1	14	24
East North Central States:								
Ohio	1	1	66	186	39	21	10	6
Indiana	0	0	166	47	88	76	0	3
Illinois	1	2	266	239	69	22	14	9
Michigan	3	2	402	303	65	97	4	2
Wisconsin	0	1	166	168	12	2	8	16
West North Central States:								
Minnesota	0	0	94	81	4	0	3	5
Iowa	2	0	58	44	30	54	3	0
Missouri	0	0	40	50	35	29	8	1
North Dakota	1	0	4	24	4	2	0	0
South Dakota	0	0	5	15	43	1	0	3
Nebraska	0	0	51	50	50	33	0	0
Kansas	0	0	64	52	63	45	4	3
South Atlantic States:								
Delaware	0	1	3	0	1	0	0	2
Maryland [3]	0	1	157	38	0	0	4	6
District of Columbia	1	0	14	44	0	1	0	0
West Virginia	1	1	12	15	21	5	3	4
North Carolina	1	1	13	23	7	57	12	11
South Carolina	3	2	5	5	8	14	127	36
Georgia	0	0	6	9	0	0	14	8
Florida	2	1	2	1	0	2	2	5

[1] Week ended Friday.
[2] Figures for 1929 are exclusive of Oklahoma City and Tulsa.

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended June 8, 1929, and June 9, 1928—Continued

Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended June 8, 1929	Week ended June 9, 1928	Week ended June 8, 1929	Week ended June 9, 1928	Week ended June 8, 1929	Week ended June 9, 1928	Week ended June 8, 1929	Week ended June 9, 1928
East South Central States:								
Kentucky	0	0	71	37	0	10	7	2
Tennessee	0	0	13	18	15	8	19	11
Alabama	1	0	6	2	0	7	26	14
Mississippi	0	1	5	3	0	1	25	13
West South Central States:								
Arkansas	0	0	11	7	0	1	5	5
Louisiana	0	0	13	8	2	10	23	28
Oklahoma [3]	0	1	22	42	79	83	7	5
Texas	0	0	55	84	165	53	24	29
Mountain States:								
Montana	0	0	7	11	9	16	1	15
Idaho	0	0	3	1	8	2	0	0
Wyoming	0	0	0	11	13	1	2	15
Colorado	0	0	14	18	17	3	3	0
New Mexico	1	0	8	11	1	1	2	1
Arizona	0	0	15	8	12	0	17	7
Utah [2]	0	0	6	7	3	7	0	0
Pacific States:								
Washington	1	2	21	29	29	13	2	4
Oregon	0	0	15	9	21	22	1	1
California	3	6	437	126	27	9	8	13

[2] Week ended Friday.
[3] Figures for 1929 are exc usive of Oklahoma City and Tulsa.

SUMMARY OF MONTHLY REPORTS FROM STATES

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week:

State	Meningococcus meningitis	Diphtheria	Influenza	Malaria	Measles	Pellagra	Poliomyelitis	Scarlet fever	Smallpox	Typhoid fever
September, 1928										
Colorado	21	33	6	1	19	----	16	39	10	27
October, 1928										
Colorado	8	62	5	----	12	----	18	65	30	52
November, 1928										
Indiana	2	269	47	----	139	----	10	385	61	30
December, 1928										
Indiana	8	199	7,502	----	609	----	3	469	209	21
April, 1929										
Colorado	45	34	12	----	121	----	0	194	74	6
Kansas	15	42	16	1	2,088	----	2	603	240	12
May, 1929										
Arizona	17	9	----	----	64	----	0	23	31	23
Arkansas	16	12	113	488	60	142	1	50	8	28
Connecticut	5	85	40	2	1,397	----	0	248	23	7
District of Columbia	2	36	6	----	141	----	0	66	0	1
Nebraska	8	61	4	----	1,281	----	0	551	0	15
North Dakota	5	47	1	----	455	----	2	109	39	6
Tennessee	8	23	137	211	276	45	0	150	80	48
Wyoming	4	8	1	----	257	----	1	28	61	3

Summary of Monthly Reports from States—Continued

September, 1928

Colorado:	Cases
Chicken pox	34
German measles	4
Mumps	37
Paratyphoid fever	1
Puerperal fever	1
Rocky Mountain spotted or tick fever	1
Septic sore throat	1
Vincent's angina	1
Whooping cough	76

October, 1928

Colorado:	
Chicken pox	340
German measles	22
Impetigo contagiosa	1
Lethargic encephalitis	1
Mumps	76
Paratyphoid fever	1
Ophthalmia neonatorum	1
Whooping cough	64

November, 1928

Indiana:	
Chicken pox	638
Mumps	7
Trachoma	1
Whooping cough	99

December, 1928

Indiana:	
Anthrax	2
Chicken pox	884
Mumps	32
Ophthalmia neonatorum	1
Rabies in man	2
Trachoma	1
Tularaemia	1
Whooping cough	168

April, 1929

Chicken pox:	
Colorado	581
Kansas	386
Dysentery:	
Colorado	1
German measles:	
Colorado	16
Kansas	542
Impetigo contagiosa:	
Colorado	2
Mumps:	
Colorado	249
Kansas	640
Paratyphoid fever:	
Colorado	1
Pink eye:	
Kansas	1
Rocky Mountain spotted or tick fever:	
Colorado	1
Scabies:	
Colorado	6

April, 1929—Continued

Septic sore throat:	Cases
Colorado	13
Kansas	1
Tetanus:	
Colorado	1
Trachoma:	
Kansas	1
Undulant fever:	
Colorado	1
Kansas	3
Vincent's angina:	
Colorado	1
Whooping cough:	
Colorado	82
Kansas	300

May, 1929

Chicken pox:	
Arizona	15
Arkansas	63
Connecticut	321
District of Columbia	103
Nebraska	154
North Dakota	55
Tennessee	129
Wyoming	54
Dengue:	
Arkansas	1
Dysentery:	
Tennessee	4
German measles:	
Connecticut	480
Nebraska	30
Tennessee	2
Hookworm disease:	
Arkansas	2
Lethargic encephalitis:	
Connecticut	1
North Dakota	3
Tennessee	6
Mumps:	
Arizona	7
Arkansas	107
Connecticut	344
Nebraska	172
North Dakota	14
Tennessee	142
Wyoming	65
Ophthalmia neonatorum:	
Arkansas	2
Paratyphoid fever:	
Arkansas	1
Tennessee	2
Rabies in animals:	
Connecticut	3
Rocky Mountain spotted or tick fever:	
Wyoming	19
Septic sore throat:	
Connecticut	6
Nebraska	11
Tennessee	6

Summary of Monthly Reports from States—Continued

May, 1929—Continued

	Cases
Tetanus:	
Tennessee	1
Trachoma:	
Arizona	12
Arkansas	7
North Dakota	1
Tennessee	6
Tularaemia:	
Arizona	173
Tennessee	1
Undulant fever:	
Connecticut	2
North Dakota	1
Vincent's angina:	
North Dakota	14
Whooping cough:	
Arizona	18
Arkansas	44
Connecticut	127
District of Columbia	110
Nebraska	137
North Dakota	21
Tennessee	142
Wyoming	5

PATIENTS IN INSTITUTIONS FOR THE CARE OF EPILEPTICS, JULY TO SEPTEMBER, 1928

Reports for the third quarter of the year 1928 have been received by the Public Health Service from 10 institutions for the care and treatment of epileptics, located in 10 States. The total number of patients in these institutions on September 30, 1928, including those on parole or otherwise absent but still on the books, was 6,652.

The first admissions were as follows:

Month	Male	Female	Total
July	37	22	59
August	46	32	78
September	49	47	96
Total	132	101	233

Of the new admissions during the three months, 56.7 per cent were males and 43.3 per cent were females, giving a ratio of 131 males per 100 females. During the three months 192 patients were discharged, 116 males and 76 females. Fifty-two male patients and 40 female patients died. The annual death rates for the quarter, based on the estimated number of patients on the books the middle of August were—males, 59.4 per 1,000; females, 50.7 per 1,000; persons, 55.3 per 1,000.

The following table is a continuation of the table published on page 3216 of the PUBLIC HEALTH REPORTS of November 30, 1928. It shows, for 11 institutions located in 11 States, the numbers of patients in hospitals for epileptics at the end of each of the three months.

From the first of the year through July the percentage of the total patients who were on parole increased steadily, but at the end of August there were fewer patients on parole, and during September the percentage on parole decreased still more.

Epileptics in 11 hospitals and on parole from these hospitals, July to September, 1928

	July 31, 1928	Aug. 31, 1928	Sept. 30, 1928
Patients in hospitals:			
Male	3,650	3,678	3,709
Female	3,351	3,378	3,405
Total	7,013	7,056	7,111
Patients on parole:			
Male	384	320	294
Female	219	176	169
Total	603	496	463
Total patients on books:			
Male	4,043	3,998	4,000
Female	3,573	3,554	3,574
Total	7,616	7,552	7,574
Per cent of total patients on parole:			
Male	9.5	8.0	7.3
Female	6.1	5.0	4.7
Total	7.9	6.6	6.1

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 96 cities reporting cases used in the following table are situated in all parts of the country and have an estimated aggregate population of about 31,450,000. The estimated population of the 89 cities reporting deaths is more than 29,875,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended June 1, 1929, and June 2, 1928

	1929	1928	Estimated expectancy
Cases reported			
Diphtheria:			
46 States	1,290	1,314	.....
96 cities	754	738	783
Measles:			
45 States	14,279	17,342	.....
96 cities	3,907	7,202	.....
Meningococcus meningitis:			
46 States	258	107	.....
96 cities	140	66	.....
Poliomyelitis:			
46 States	18	34	.....
Scarlet fever:			
46 States	3,706	3,115	.....
96 cities	1,636	1,234	1,039
Smallpox:			
46 States	921	893	.....
96 cities	54	73	73
Typhoid fever:			
46 States	274	286	.....
96 cities	41	71	41
Deaths reported			
Influenza and pneumonia:			
89 cities	645	944	.....
Smallpox:			
89 cities	0	0	.....

City reports for week ended June 1, 1929

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence the number of cases of the disease under consideration that may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding weeks of the preceding years. When the reports include several epidemics, or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during non-epidemic years.

If the reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1920 is included. In obtaining the estimated expectancy the figures are smoothed when necessary to avoid abrupt deviation from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1928, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
NEW ENGLAND									
Maine:									
Portland	78,600	0	1	0		0	10	3	0
New Hampshire:									
Concord	(1)	0	0	0		0	22	0	0
Manchester	85,700	0	0	0		0	0	0	0
Vermont:									
Barre	(1)	0	0	0		0	0	0	0
Massachusetts:									
Boston	799,200	60	42	18		1	54	39	24
Fall River	134,300	0	3	1		0	1	0	1
Springfield	149,800	8	2	3		0	1	0	1
Worcester	197,600	6	3	0		0	11	0	1
Rhode Island:									
Pawtucket	73,100		0						
Providence	286,300	5	6	7		0	27	0	5
Connecticut:									
Bridgeport	(1)	3	5	4	2	2	7	1	4
Hartford	172,300	3	5	5	1	0	12	10	6
New Haven	187,900	26	1	1		0	13	0	4
MIDDLE ATLANTIC									
New York:									
Buffalo	555,800	28	11	4		0	63	1	15
New York	6,017,500	0	241	260	10	6	128	271	141
Rochester	328,200	5	9	1		0	18	7	5
Syracuse	199,300	59	6	0		0	4	7	2
New Jersey:									
Camden	135,400	11	6	5		0	8	2	2
Newark	473,600	54	12	46	2	0	4	49	12
Trenton	139,000	1	3	0		0	14	0	3
Pennsylvania:									
Philadelphia	2,064,200	131	60	23	1	3	70	11	28
Pittsburgh	673,800	64	17	10		0	66	10	27
Reading	115,400	4	2	0		0	4	1	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	413,700	6	6	3		0	0	0	7
Cleveland	1,010,300	87	22	16	3	0	398	7	15
Columbus	299,000	14	3	0		0	43	0	4
Toledo	313,200	19	4	0	3	3	61	6	6
Indiana:									
Fort Wayne	105,300	5	2	0		0	38	0	1
Indianapolis	382,100	24	3	3		1	225	6	10
South Bend	86,100	1	1	0		0	11	0	2
Terre Haute	73,500	0	0	1		0	12	0	0
Illinois:									
Chicago	3,157,400	105	66	151	6	9	908	21	69
Springfield	67,200	1	0	0		0	13	0	2
Michigan:									
Detroit	1,378,900	102	42	55	4	4	207	54	38
Flint	148,800	24	3	0		0	16	0	2
Grand Rapids	164,200	4	1	0		0	34	1	1
Wisconsin:									
Kenosha	56,500	21	0	0		0	74	6	0
Milwaukee	544,200	112	12	14		0	510	23	11
Racine	74,400	19	1	0		0	7	0	1
Superior	(1)	6	0	0		0	6	5	1

[1] No estimate of population made.

City reports for week ended June 1, 1929—Continued

Division, State, and city	Population July 1, 1928, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
WEST NORTH CENTRAL									
Minnesota:									
Duluth	116,800	6	0	0		1	6	18	2
Minneapolis	455,900	30	15	0		0	113	75	6
St. Paul	(1)	9	8	4		0	95	19	8
Iowa:									
Davenport	(1)	14	1	0			0	0	
Des Moines	151,900	2	1	0			2	1	
Sioux City	80,000	32	0	0			4	1	
Waterloo	37,100	9	0	0			3	22	
Missouri:									
Kansas City	391,000	18	3	4		0	23	0	11
St. Joseph	78,500	0	0	1		0	31	0	3
St. Louis	848,100	16	36	45			33	5	
North Dakota:									
Fargo	(1)	10	0	0		0	12	0	0
Grand Forks	(1)	1	0	0			1	0	
South Dakota:									
Aberdeen	(1)	1	0	1			1	3	
Sioux Falls	(1)	0	0	0			0	0	
Nebraska:									
Omaha	222,800	2	2	3		0	79	0	5
Kansas:									
Topeka	62,800	7	0	0		0		5	0
Wichita	99,300	3	1	0		0	134	13	2
SOUTH ATLANTIC									
Delaware:									
Wilmington	128,500	1	1	0		0	9	0	1
Maryland:									
Baltimore	830,400	63	19	6	4	0	6	164	32
Cumberland	(1)	1	0	0		0	0	0	0
Frederick	(1)	0	0	0		0	0	0	0
District of Columbia:									
Washington	552,000	19	9	11		0	28	0	9
Virginia:									
Lynchburg	38,600	11	0	0		0	0	3	1
Norfolk	184,200	7	0	0		0	9	65	7
Richmond	194,400	4	0	0		0	25	0	1
Roanoke	64,600	8	1	0		0	0	1	0
West Virginia:									
Charleston	55,200	2	0	0		1	20	0	0
Wheeling	(1)	10	0	1		0	55	0	1
North Carolina:									
Raleigh	(1)	6	0	0		0	1	0	0
Wilmington	39,100	10	0	0		0	0	0	2
Winston-Salem	80,000	4	0	1		0	0	1	2
South Carolina:									
Charleston	75,900	0	0	0	15	0	0	0	3
Columbia	50,600	11	0	0		0	0	3	2
Greenville	(1)	3	0	1		1	0	4	0
Georgia:									
Atlanta	255,100	1	1	1	4	1	6	1	3
Brunswick	(1)	0	0	0		0	0	0	1
Savannah	99,900	2	0	1	1	0	0	0	1
Florida:									
Miami	156,700	0	3	0		0	44	0	2
St. Petersburg	53,300		0			0			0
Tampa	113,400	0	0	1		1	9	0	1
EAST SOUTH CENTRAL									
Kentucky:									
Covington	59,000	1	0	0		0	0	0	1
Tennessee:									
Memphis	190,200	10	1	0		0	3	0	5
Nashville	139,600	1	0	1		0	0	0	1
Alabama:									
Birmingham	222,400	4	1	0	2	0	2	5	7
Mobile	69,600	0	0	0		0	3	0	1
Montgomery	63,100	6	0	0			0	0	

[1] No estimate of population made.

City reports for week ended June 1, 1929—Continued

Division, State, and city	Population, July 1, 1928, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith	(1)	0	0	0			1	1	
Little Rock	79,200	1	0	0		0	0	0	1
Louisiana:									
New Orleans	429,400	2	5	4	1	2	8	0	10
Shreveport	81,300	0	0	0		0	0	0	0
Oklahoma:									
Oklahoma City	(1)	0	0	1		2	0	0	1
Tulsa	170,500	13	0	1			14	1	
Texas:									
Dallas	217,800	0	3	4	1	0	52	0	0
Fort Worth	170,600	0	1	0		1	0	0	0
Galveston	50,600	0	0	1		0	0	0	0
Houston	(1)	2	2	3		0	1	0	0
San Antonio	218,100	0	1	3		1	0	0	6
MOUNTAIN									
Montana:									
Billings	(1)	7	0	0		0	0	0	0
Great Falls	(1)	2	0	0		0	3	3	2
Helena	(1)	0	0	1		0	0	0	0
Missoula	(1)	0	0	0		0	0	0	2
Idaho:									
Boise	(1)	0	0	0		0	20	0	0
Colorado:									
Denver	294,200	51	9	2		2	1	24	8
Pueblo	44,200		1						
New Mexico:									
Albuquerque	(1)	2	0	0		1	0	0	1
Utah:									
Salt Lake City	138,000	14	3	1		0	3	83	1
Nevada:									
Reno	(1)	0	0	0		0	0	0	0
PACIFIC									
Washington:									
Seattle	383,200	35	4	0			6	27	
Spokane	109,100	6	3	1			105	0	
Tacoma	110,500	18	1	1		0	6	1	1
Oregon:									
Portland	(1)	4	6	6	1	2	76	6	8
Salem	(1)	2	0	0		1	3	0	1
California:									
Los Angeles	(1)	79	38	14	8	3	32	29	14
Sacramento	75,700	21	3	3		0	12	2	3
San Francisco	585,300	9	16	5	2	2	4	30	2

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND											
Maine:											
Portland	2	8	0	0	0	0	1	0	0	2	10
New Hampshire:											
Concord	0	6	0	0	0	1	0	0	0	0	8
Manchester	1	1	0	0	0	0	0	0	0	0	6
Vermont:											
Barre	1	1	0	0	0	0	0	0	0	2	2
Massachusetts:											
Boston	58	61	0	0	0	15	2	0	0	39	237
Fall River	3	5	0	0	0	3	0	0	0	13	22
Springfield	6	11	0	0	0	1	0	0	0	1	37
Worcester	8	3	0	0	0	1	0	0	0	14	41

[1] No estimate of population made.

City reports for week ended June 1, 1929—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
NEW ENGLAND—continued											
Rhode Island:											
Pawtucket	2	-------	0	-------	-------	-------	0	-------	-------	-------	-------
Providence	8	11	0	0	0	6	0	1	0	5	64
Connecticut:											
Bridgeport	9	4	0	0	0	1	0	0	0	1	34
Hartford	4	7	0	0	0	1	0	0	0	3	37
New Haven	5	1	0	0	0	1	1	0	0	1	49
MIDDLE ATLANTIC											
New York:											
Buffalo	20	37	0	0	0	10	0	0	0	0	139
New York	223	220	0	0	0	112	9	5	2	63	1,446
Rochester	12	5	0	0	0	4	0	0	0	17	65
Syracuse	8	10	0	0	0	3	0	0	0	25	48
New Jersey:											
Camden	5	7	0	0	0	0	0	0	0	7	25
Newark	22	23	0	0	0	12	0	0	0	32	115
Trenton	2	2	0	0	0	3	1	0	0	0	37
Pennsylvania:											
Philadelphia	82	44	0	0	0	39	3	1	0	70	426
Pittsburgh	28	42	0	0	0	16	1	0	0	31	179
Reading	3	11	0	0	0	0	0	0	0	2	23
EAST NORTH CENTRAL											
Ohio:											
Cincinnati	11	47	2	3	0	12	1	0	0	12	141
Cleveland	30	38	0	0	0	15	1	1	1	50	201
Columbus	8	4	1	1	0	1	0	0	0	22	80
Toledo	9	5	1	1	0	5	0	1	0	55	66
Indiana:											
Fort Wayne	3	3	2	9	0	0	0	1	0	0	22
Indianapolis	11	58	12	1	0	6	0	0	0	15	116
South Bend	2	3	0	0	0	0	0	0	1	0	15
Terre Haute	2	1	1	0	0	1	0	0	0	0	18
Illinois:											
Chicago	102	220	2	0	0	54	3	0	0	34	807
Springfield	3	3	0	1	0	0	1	1	0	3	29
Michigan:											
Detroit	81	241	1	0	0	34	2	0	0	63	335
Flint	6	44	1	7	0	1	0	0	0	0	36
Grand Rapids	5	8	0	1	0	2	0	0	0	28	41
Wisconsin:											
Kenosha	1	2	0	0	0	1	0	1	0	6	5
Milwaukee	20	28	0	0	0	7	0	0	0	65	122
Racine	4	0	1	0	0	3	0	0	0	4	15
Superior	2	0	1	0	0	1	0	0	0	6	11
WEST NORTH CENTRAL											
Minnesota:											
Duluth	7	3	1	0	0	4	0	0	0	3	31
Minneapolis	31	17	1	0	0	5	1	0	0	25	104
St. Paul	19	19	0	0	0	4	0	0	0	43	51
Iowa:											
Davenport	1	0	1	3	-------	-------	0	0	-------	2	-------
Des Moines	4	32	2	1	-------	-------	0	0	-------	2	30
Sioux City	1	0	1	0	-------	-------	0	0	-------	7	-------
Waterloo	2	5	0	4	-------	-------	0	1	-------	3	-------
Missouri:											
Kansas City	8	13	1	0	0	5	0	3	0	18	91
St. Joseph	1	0	0	3	0	1	0	0	1	5	27
St. Louis	25	17	2	0	0	11	2	5	0	60	218
North Dakota:											
Fargo	1	0	0	0	0	0	0	0	0	1	11
Grand Forks	1	0	0	0	-------	-------	0	0	-------	0	-------
South Dakota:											
Aberdeen	1	1	0	0	-------	-------	1	0	-------	3	-------
Sioux Falls	1	15	0	0	-------	-------	0	0	-------	0	7
Nebraska:											
Omaha	3	5	5	0	0	6	0	0	0	0	66
Kansas:											
Topeka	2	7	0	0	0	0	0	0	0	4	12
Wichita	2	7	0	1	0	0	0	0	0	3	33

City reports for week ended June 1, 1929—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
SOUTH ATLANTIC											
Delaware:											
Wilmington	4	2	0	0	0	1	0	1	0	2	30
Maryland:											
Baltimore	25	119	0	0	0	14	2	4	1	110	224
Cumberland	0	1	0	0	0	0	0	0	0	0	8
Frederick	1	0	0	0	0	1	0	0	0	0	3
District of Columbia:											
Washington	18	15	1	0	0	14	1	1	0	17	139
Virginia:											
Lynchburg	1	0	0	0	0	1	0	0	0	19	9
Norfolk	1	0	1	0	0	0	0	0	0	14	----
Richmond	2	2	0	0	0	5	0	2	1	2	52
Roanoke	0	0	0	0	0	1	0	0	0	1	7
West Virginia:											
Charleston	0	0	0	0	0	0	0	0	0	0	9
Wheeling	2	0	0	0	0	1	0	0	0	4	15
North Carolina:											
Raleigh	0	0	0	0	0	1	0	0	0	4	11
Wilmington	0	1	0	0	0	0	0	0	0	1	8
Winston-Salem	0	1	1	0	0	0	1	0	1	36	18
South Carolina:											
Charleston	0	1	0	0	0	3	0	0	0	1	26
Columbia	0	0	0	0	0	0	1	0	0	0	33
Greenville	0	1	1	0	0	1	0	0	0	1	10
Georgia:											
Atlanta	4	4	4	0	0	9	1	0	0	19	78
Brunswick	0	0	0	0	0	0	0	2	1	0	7
Savannah	0	0	0	0	0	0	1	0	0	2	16
Florida:											
Miami	0	0	0	0	0	1	1	0	0	4	23
St. Petersburg	0	----	0	----	0	1	0	----	0	----	4
Tampa	0	0	0	0	0	3	0	0	0	7	32
EAST SOUTH CENTRAL											
Kentucky:											
Covington	1	4	0	0	0	2	0	0	0	0	18
Tennessee:											
Memphis	3	9	2	0	0	10	2	3	1	16	82
Nashville	1	3	1	0	0	3	1	2	1	1	34
Alabama:											
Birmingham	1	0	5	1	0	4	2	0	0	8	57
Mobile	0	0	0	0	0	0	1	0	0	0	24
Montgomery	0	2	0	0	----	----	0	0	----	0	----
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith	0	0	0	0	----	----	1	0	----	0	----
Little Rock	0	2	0	0	0	2	1	0	0	0	----
Louisiana:											
New Orleans	3	29	0	0	0	17	2	0	0	0	158
Shreveport	0	1	1	0	0	0	0	0	0	2	12
Oklahoma:											
Oklahoma City	1	12	2	6	0	0	0	0	0	3	21
Tulsa	1	2	1	8	----	----	0	0	----	6	----
Texas:											
Dallas	2	6	2	3	0	6	1	1	0	11	37
Fort Worth	1	0	3	0	0	3	1	0	0	0	36
Galveston	0	1	0	0	0	0	0	0	0	0	14
Houston	2	1	1	1	0	7	0	3	1	0	57
San Antonio	1	2	0	1	0	6	1	1	0	0	67
MOUNTAIN											
Montana:											
Billings	1	0	0	0	0	0	0	0	0	0	3
Great Falls	1	1	0	0	0	0	0	0	0	1	15
Helena	0	0	0	0	0	0	0	0	0	0	2
Missoula	0	2	0	2	0	0	0	0	0	0	4

City reports for week ended June 1, 1929—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuberculosis, deaths reported	Typhoid fever			Whooping cough, cases reported	Deaths, all causes
	Cases, estimated expectancy	Cases reported	Cases, estimated expectancy	Cases reported	Deaths reported		Cases, estimated expectancy	Cases reported	Deaths reported		
MOUNTAIN—con.											
Idaho:											
Boise	0	1	0	0	0	1	0	0	0	0	6
Colorado:											
Denver	8	6	0	0	0	6	0	8	0	9	69
Pueblo	1		0				0				
New Mexico:											
Albuquerque	0	0	0	0	0	4	0	0	0	2	12
Utah:											
Salt Lake City	2	0	1	4	0	2	0	0	0	9	33
Nevada:											
Reno	0	1	0	0	0	0	0	0	0	0	6
PACIFIC											
Washington:											
Seattle	8	3	2	0			0	0		40	
Spokane	4	3	4	0			0	0		0	
Tacoma	2	3	3	7	0	1	0	0	0	5	21
Oregon:											
Portland	4	2	9	7	0	2	0	1	0	0	78
Salem	0	0	0	0	0	0	0	0	0	0	
California:											
Los Angeles	23	53	7	2	0	23	2	1	0	29	248
Sacramento	1	9	2	1	0	3	1	0	0	5	29
San Francisco	15	31	1	1	0	10	1	0	0	20	152

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
NEW ENGLAND									
Massachusetts:									
Boston	0	0	0	0	1	0	0	0	0
Worcester	2	0	0	0	0	0	0	0	0
Rhode Island:									
Providence	0	1	0	0	0	0	0	0	0
Connecticut:									
Hartford	0	0	0	1	0	0	0	0	0
MIDDLE ATLANTIC									
New York:									
Buffalo	1	0	0	0	0	0	0	0	0
New York	26	11	3	2	0	0	1	0	0
Syracuse	1	0	0	0	0	0	0	0	0
New Jersey:									
Newark	2	0	0	0	0	0	0	0	0
Pennsylvania:									
Philadelphia	4	2	0	0	0	1	0	0	0
Pittsburgh	0	0	0	1	0	0	1	0	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati	2	0	0	0	0	0	0	0	0
Cleveland	4	1	0	0	0	1	0	0	0
Columbus	1	1	0	0	0	0	0	0	0
Toledo	3	3	1	1	0	0	0	0	0
Indiana:									
Indianapolis	2	2	0	0	0	0	0	0	0
Illinois:									
Chicago [1]	13	10	1	0	1	1	0	0	0
Michigan:									
Detroit	46	15	0	0	0	0	0	1	1
Flint	5	2	0	0	0	0	0	0	0
Grand Rapids	1	1	0	0	0	0	0	0	0

[1] Rabies (in man): 1 case and 1 death at Chicago, Ill.

City reports for week ended June 1, 1929—Continued

Division, State, and city	Meningococcus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths
WEST NORTH CENTRAL									
Wisconsin:									
Milwaukee	0	1	0	0	0	0	0	1	0
Missouri:									
Kansas City	6	3	0	0	0	0	0	0	0
St. Louis	7	3	0	0	0	0	0	0	0
North Dakota:									
Fargo	0	1	0	0	0	0	0	0	0
SOUTH ATLANTIC									
Maryland:									
Baltimore	1	2	1	0	0	0	0	0	0
District of Columbia:									
Washington [1]	2	2	0	0	0	0	0	0	0
North Carolina:									
Raleigh	0	0	0	0	0	1	0	0	0
South Carolina:									
Charleston [2]	0	0	0	0	5	0	0	0	0
Columbia	0	0	0	0	0	2	0	0	0
Georgia:									
Atlanta	0	2	0	0	0	0	0	0	0
Florida: [2]									
Miami	0	0	0	0	0	1	0	0	0
EAST SOUTH CENTRAL									
Tennessee:									
Memphis	1	2	0	0	2	1	0	1	0
Alabama:									
Birmingham	0	0	1	0	2	0	0	0	0
Mobile	0	0	0	0	0	1	0	0	0
WEST SOUTH CENTRAL									
Louisiana:									
New Orleans	0	0	0	0	4	2	1	0	0
Oklahoma:									
Oklahoma City	1	0	0	0	0	0	0	0	0
Texas:									
Dallas	0	0	0	0	1	0	0	0	0
Fort Worth	0	0	0	0	0	2	0	0	0
Galveston	0	0	0	0	0	1	0	0	0
Houston	0	0	0	0	0	1	0	0	0
San Antonio	0	0	0	0	0	2	0	0	0
MOUNTAIN									
Montana:									
Billings	0	2	0	0	0	0	0	0	0
Colorado:									
Denver	1	0	0	0	0	0	0	0	0
Utah:									
Salt Lake City	4	1	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle	2	0	0	0	0	0	0	0	0
Spokane	1	0	0	0	0	0	0	0	0
Oregon:									
Portland	1	1	0	0	0	0	0	0	0
California:									
Los Angeles	4	4	0	0	0	0	0	2	0
San Francisco	1	4	0	1	0	0	1	0	0

[1] Typhus fever: 1 case and 1 death at Washington, D. C., and 1 case at Tampa, Fla.
[2] Dengue: 1 case at Charleston, S. C.

The following table gives the rates per 100,000 population for 98 cities for the 5-week period ended June 1, 1929, compared with those for a like period ended June 2, 1928. The population figures used in computing the rates are approximate estimates, authoritative figures for many of the cities not being available. The 98 cities reporting cases have estimated aggregate populations of more than 31,000,000. The 91 cities reporting deaths have nearly 30,000,000 estimated population. The number of cities included in each group and the estimated aggregate populations are shown in a separate table below.

Summary of weekly reports from cities, April 28 to June 1, 1929—Annual rates per 100,000 population, compared with rates for the corresponding period of 1928 [1]

DIPHTHERIA CASE RATES

	Week ended—									
	May 4, 1929	May 5, 1928	May 11, 1929	May 12, 1928	May 18, 1929	May 19, 1928	May 25, 1929	May 26, 1928	June 1, 1929	June 2, 1928
98 cities	136	125	139	123	[2] 124	139	136	131	[2] 125	124
New England	81	133	118	113	95	110	109	64	[4] 91	99
Middle Atlantic	190	171	206	178	159	205	188	213	168	178
East North Central	159	107	145	109	143	114	165	102	155	105
West North Central	77	78	104	55	[2] 124	96	100	72	110	84
South Atlantic	69	96	64	90	62	111	49	117	41	101
East South Central	20	35	27	42	27	21	14	42	7	63
West South Central	103	81	91	93	115	65	47	28	59	57
Mountain	61	80	52	71	26	97	61	71	[3] 38	71
Pacific	75	125	40	102	57	120	62	92	60	107

MEASLES CASE RATES

98 cities	931	1,421	897	1,379	[2] 889	1,351	906	1,309	[2] 663	1,218
New England	500	1,322	484	1,120	434	1,159	556	1,290	[4] 369	1,129
Middle Atlantic	165	2,273	186	2,561	196	2,281	194	2,192	183	2,170
East North Central	2,319	793	2,191	787	2,135	680	2,283	772	1,595	660
West North Central	1,775	892	1,548	941	[2] 1,714	1,121	1,440	943	1,032	735
South Atlantic	435	2,235	521	1,781	474	1,536	242	1,320	298	1,112
East South Central	129	610	41	814	68	968	27	743	54	596
West South Central	356	397	379	340	344	272	447	263	245	178
Mountain	444	753	296	1,143	183	1,152	313	833	[3] 254	982
Pacific	297	266	436	328	439	264	546	304	412	217

SCARLET FEVER CASE RATES

98 cities	300	255	291	254	[2] 291	253	269	233	[2] 271	209
New England	280	345	262	347	249	292	283	306	[4] 276	248
Middle Atlantic	245	303	209	285	219	279	196	268	196	201
East North Central	467	254	453	265	472	272	448	254	446	227
West North Central	261	219	277	243	[2] 284	280	208	207	179	233
South Atlantic	114	186	244	172	210	207	159	176	274	191
East South Central	224	147	120	126	102	77	136	84	122	365
West South Central	285	150	320	186	186	219	123	207	166	146
Mountain	78	275	52	115	104	133	113	18	[3] 103	71
Pacific	357	154	292	203	307	143	347	130	254	148

[1] The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1929 and 1928, respectively.
[2] Fargo, N. Dak., not included.
[3] Pawtucket, R. I., and Pueblo, Colo., not included.
[4] Pawtucket, R. I., not included.
[5] Pueblo, Colo., not included.

Summary of weekly reports from cities, April 28 to June 1, 1929—Annual rates per 100,000 population, compared with rates for the corresponding period of 1928—Continued

SMALLPOX CASE RATES

	Week ended—									
	May 4, 1929	May 5, 1928	May 11, 1929	May 12, 1928	May 18, 1929	May 19, 1928	May 25, 1929	May 26, 1928	June 1, 1929	June 2, 1928
98 cities	12	14	11	18	[3] 11	24	14	17	[3] 9	12
New England	0	0	2	0	0	0	7	9	[4] 0	0
Middle Atlantic	0	0	0	0	0	0	0	0	0	0
East North Central	15	15	17	20	14	22	20	16	15	10
West North Central	13	31	27	43	[3] 16	65	15	27	15	29
South Atlantic	0	15	0	17	2	33	4	29	0	10
East South Central	20	14	27	63	14	42	27	63	7	56
West South Central	43	36	8	8	51	61	16	24	20	24
Mountain	122	106	26	159	148	159	35	133	[5] 56	53
Pacific	40	31	40	36	15	54	77	38	27	49

TYPHOID FEVER CASE RATES

98 cities	8	6	11	8	[2] 9	6	8	8	[3] 7	12
New England	7	2	11	5	9	7	7	11	[4] 2	57
Middle Atlantic	5	4	3	2	6	4	5	6	3	1
East North Central	3	3	6	3	3	2	3	5	3	3
West North Central	10	2	31	8	[2] 6	2	8	4	17	4
South Atlantic	11	15	15	21	17	6	15	6	19	17
East South Central	27	0	27	28	0	28	75	14	34	91
West South Central	32	28	55	16	67	4	12	12	20	32
Mountain	9	0	0	18	0	0	17	0	[5] 0	0
Pacific	10	15	7	31	7	23	10	36	2	18

INFLUENZA DEATH RATES

91 cities	8	33	10	34	[2] 8	30	10	26	[3] 7	21
New England	2	21	2	16	2	41	7	18	[4] 7	16
Middle Atlantic	6	28	8	31	8	28	8	21	4	24
East North Central	5	36	7	42	7	36	8	33	9	21
West North Central	18	80	3	64	[2] 0	28	15	18	3	21
South Atlantic	11	23	17	10	7	17	6	11	6	10
East South Central	30	115	37	107	30	84	44	130	0	38
West South Central	8	25	38	37	4	17	28	33	12	25
Mountain	17	35	26	27	17	27	9	53	[5] 19	44
Pacific	16	7	13	17	23	10	7	7	16	7

PNEUMONIA DEATH RATES

91 cities	124	213	110	219	[2] 106	196	116	181	[3] 106	147
New England	106	189	90	258	88	207	122	253	[4] 108	172
Middle Atlantic	136	265	123	268	114	219	129	212	113	183
East North Central	125	211	101	232	115	222	118	174	101	129
West North Central	126	193	105	181	[2] 73	132	123	126	120	89
South Atlantic	109	189	109	86	120	155	94	119	112	136
East South Central	170	230	148	245	89	261	104	253	111	153
West South Central	93	92	97	166	114	125	69	146	69	129
Mountain	165	159	87	133	113	97	139	124	[5] 122	106
Pacific	75	74	98	98	49	104	85	91	66	71

[2] Fargo, N. Dak., not included.
[3] Pawtucket, R. I., and Pueblo, Colo., not included.
[4] Pawtucket, R. I., not included.
[5] Pueblo, Colo., not included.

Number of cities included in summary of weekly reports and aggregate population of cities of each group, approximated as of July 1, 1929 and 1928, respectively

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases		Aggregate population of cities reporting deaths	
			1929	1928	1929	1928
Total	98	91	31,568,400	31,052,700	29,995,100	29,498,600
New England	12	12	2,305,100	2,273,900	2,305,100	2,273,900
Middle Atlantic	10	10	10,809,700	10,702,200	10,809,700	10,702,200
East North Central	16	16	8,181,900	8,001,300	8,181,900	8,001,300
West North Central	12	9	2,712,100	2,673,300	1,736,900	1,708,100
South Atlantic	19	19	2,783,200	2,732,900	2,783,200	2,732,900
East South Central	6	5	767,900	745,500	704,200	682,400
West South Central	8	7	1,319,100	1,289,900	1,285,000	1,256,400
Mountain	9	9	598,800	590,200	598,800	590,200
Pacific	6	4	2,090,600	2,043,500	1,590,300	1,551,200

FOREIGN AND INSULAR

CANADA

Provinces—Communicable diseases—Week ended June 1, 1929.—The Department of Pensions and National Health reports cases of certain communicable diseases from seven provinces of Canada for the week ended June 1, 1929, as follows:

Disease	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal meningitis						2	1	3
Influenza		4	11					15
Poliomyelitis						1	2	3
Smallpox		3	3	4	7		2	19
Typhoid fever	3	7	1	2		2	1	16

Ontario—Communicable diseases (comparative)—Four weeks ended May 25, 1929.—The following table shows the number of cases of certain communicable diseases, with deaths from these diseases, reported in the Province of Ontario, Canada, for the four weeks ended May 25, 1929, as compared with the corresponding period of 1928:

Four Weeks Ended May 25, 1929, and May 26, 1928

Disease	1929		1928	
	Cases	Deaths	Cases	Deaths
Cerebrospinal meningitis	10	2	7	5
Chicken pox	576		547	
Conjunctivitis		2	2	
Diphtheria	129	9	208	11
Erysipelas			3	
German measles	33		22	
Goiter			1	
Gonorrhea	156		113	
Influenza	26	3	47	15
Lethargic encephalitis			4	1
Measles	1,889	1	2,003	2
Mumps	526		1,195	
Paratyphoid fever	1	1		
Pneumonia		132		158
Poliomyelitis			1	1
Puerperal septicemia		1	1	1
Scarlet fever	378	1	375	7
Septic sore throat	6		1	
Smallpox	86		41	
Syphilis	145		72	3
Tuberculosis	72	50	163	68
Typhoid fever	35	1	41	2
Undulant fever			1	
Whooping cough	432	1	292	5

Quebec Province—Communicable diseases—Week ended June 1, 1929.—The Bureau of Health of the Province of Quebec reports cases of certain communicable diseases for the week ended June 1, 1929, as follows:

Disease	Cases	Disease	Cases
Chicken pox	56	Scarlet fever	144
Diphtheria	40	Smallpox	3
German measles	103	Tuberculosis	80
Measles	33	Typhoid fever	7
Mumps	52	Whooping cough	21

BERMUDA

Vital statistics (comparative)—Year 1928.—According to the Medical Report on the Health and Sanitary Conditions of Bermuda for the year 1928, births and deaths were reported for 1928, as compared with 1927, as follows:

	1927	1928
Population	29,936	30,316
Number of births	744	738
Birth rate per 1,000 population	24.85	24.34
Number of deaths	329	358
Death rate per 1,000 population	10.99	11.81
Deaths under 1 year (excluding stillbirths)	65	76
Infant mortality rate per 1,000 live births	87.37	102.85

The following table shows the number of cases of certain communicable diseases reported in Bermuda for the year 1928, as compared with the preceding four years:

Disease	1924	1925	1926	1927	1928
Cerebrospinal meningitis		1	1		
Chicken pox	50	20	103	35	67
Croup (membranous)					1
Diphtheria	29	17	42	19	32
Dysentery				2	
Erysipelas		3			1
Leprosy	1	1	1	5	1
Measles	33	3	18	2	9
German measles					2
Mumps			3	6	329
Ophthalmia neonatorum		1	1	6	4
Paratyphoid fever		1	1	2	
Pneumonia		2	7	3	1
Puerperal fever			1	2	2
Scarlet fever	65	2	1	1	1
Tuberculosis (pulmonary)		3	19	12	10
Typhoid fever	33	28	10	14	3
Whooping cough			1	3	287

CHINA

Meningitis.—During the week ended May 25, 1929, 1 death from meningitis was reported at Hong Kong, China. During the same week 28 cases of meningitis, with 24 deaths occurred at Canton.

During the week ended June 1, 1929, 18 cases of meningitis, with 17 deaths, were reported at Canton.

CUBA

Habana—Communicable diseases—May, 1929.—During the month of May, 1929, certain communicable diseases were reported in Habana, Cuba, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Chicken pox	14		Measles	65	2
Diphtheria	12	1	Scarlet fever	5	
Leprosy	1		Typhoid fever	25	4
Malaria	6				

GREAT BRITAIN

Scotland—Vital statistics—Quarter ended March 31, 1929.—The Registrar General of Scotland has published the following statistics for the first quarter of the year 1929:

Population, estimated	4,896,600	Deaths from—	
Births	23,449	Influenza	3,035
Birth rate per 1,000 population	19.4	Lethargic encephalitis	31
Marriages	6,733	Malaria	1
Deaths	26,386	Measles	14
Death rate per 1,000 population	21.9	Nephritis, acute	75
Deaths under 1 year	3,011	Nephritis, chronic	509
Infant mortality rate per 1,000 live births	128	Paratyphoid fever	6
Deaths from—		Pneumonia	1,559
Bronchitis	2,798	Poliomyelitis	4
Bronchopneumonia	2,189	Puerperal septicemia	66
Cancer	1,732	Scarlet fever	35
Cerebrospinal meningitis	96	Syphilis	39
Diabetes	186	Tetanus	3
Diarrhea and enteritis under 2 years	143	Tuberculosis, pulmonary	1,066
Diphtheria	157	Tuberculosis, all other forms	331
Dysentery	2	Typhoid fever	5
Heart disease	2,816	Whooping cough	477

ITALY

Communicable diseases—Four weeks ended April 7, 1929.—During the four weeks ended April 7, 1929, communicable diseases were reported in the Kingdom of Italy as follows:

Disease	Mar. 11–17		Mar. 18–24		Mar. 25–31		Apr. 1–7	
	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected	Cases	Communes affected
Anthrax	14	11	10	10	12	12	10	8
Cerebrospinal meningitis	21	14	60	16	17	8	17	15
Chicken pox	166	68	174	62	91	47	137	49
Diphtheria	403	219	439	255	374	205	419	232
Dysentery			5	4	2	2	3	3
Lethargic encephalitis	11	11	8	7	11	10	13	12
Measles	1,401	200	1,763	259	1,283	177	1,457	225
Poliomyelitis	2	2	4	4	4	4	4	4
Rabies					1	1		
Scarlet fever	260	87	242	106	191	86	246	88
Typhoid fever	131	92	113	78	122	70	220	105

MEXICO

Tampico—Communicable diseases—May, 1929.—During the month of May, 1929, communicable diseases were reported in Tampico, Mexico, as follows:

Disease	Cases	Deaths	Disease	Cases	Deaths
Diphtheria	1	1	Measles	1	2
Enteritis (various)		80	Tuberculosis	49	29
Influenza	3		Typhoid fever	3	5
Malaria	28	5	Whooping cough	18	2

PHILIPPINE ISLANDS

Meningitis.—One death from meningitis occurred at the Manila hospital during the week ended June 10, 1929. The case originated in a Province near Manila.

TRINIDAD

Port of Spain—Vital statistics (comparative)—April, 1929.—The following statistics for the month of April, 1929, with figures for April of the years 1925 to 1928, are taken from a report issued by the Public Health Department of Port of Spain, Trinidad:

	1925	1926	1927	1928	1929
Number of births	181	178	132	157	150
Births per 1,000 population	34.4	33.6	24.7	29.2	27.5
Number of deaths	85	123	114	118	106
Deaths per 1,000 population	16.2	23.2	21.3	21.9	19.6
Deaths under 1 year	6	21	15	23	16
Deaths under 1 year per 1,000 births	33.1	117.9	113.6	146.5	106.7

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

From medical officers of the Public Health Service, American consuls, health section of the League of Nations, and other sources. The reports contained in the following table 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; D, deaths; P, present]

Place		Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Jan. 13–Feb. 9, 1929	Week ended— February, 1929		March, 1929					April, 1929				May, 1929			
					16	23	2	9	16	23	30	6	13	20	27	4	11	18	25
Ceylon	C	-------	7	-------	-------	-------	2	2	-------	-------	-------	-------	-------	-------	-------	-------	2	1	-------
	D	-------	4	-------	-------	-------	2	2	-------	-------	-------	-------	-------	-------	-------	-------	2	1	-------
Colombo	C	-------	3	2	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	1	-------	-------	-------
	D	-------	1	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	1	-------	-------
China: Canton	C	-------	3	-------	-------	-------	-------	-------	1	1	1	-------	1	-------	1	1	1	-------	-------
	D	-------	1	-------	-------	-------	-------	-------	-------	-------	-------	-------	1	-------	1	1	1	-------	-------
India	C	23, 528	17, 038	12, 566	2, 193	1, 881	1, 766	1, 787	1, 905	2, 130	2, 036	2, 975	3, 110	4, 231	-------	-------	-------	-------	-------
	D	14, 950	10, 507	7, 912	1, 280	1, 092	1, 007	1, 046	993	1, 165	1, 135	1, 704	1, 886	2, 362	-------	-------	-------	-------	-------
Bassein	D	1	-------	6	2	1	1	2	1	3	12	29	26	47	23	22	23	13	-------
Bombay	C	4	-------	1	-------	-------	-------	-------	1	-------	4	1	-------	2	1	-------	-------	-------	-------
	D	4	-------	-------	-------	-------	-------	1	-------	-------	1	1	-------	-------	-------	-------	1	-------	-------
Calcutta	C	247	103	129	43	56	72	90	108	155	154	135	154	184	172	278	-------	-------	-------
	D	155	61	85	30	31	40	43	56	83	79	89	96	97	109	159	175	156	171
Madras	C	102	16	4	2	3	1	3	-------	-------	-------	-------	-------	-------	-------	-------	1	-------	-------
	D	42	17	5	1	-------	3	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
Madras Presidency	C	1	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
	D	1	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
Moulmein	D	1	-------	-------	-------	-------	-------	1	4	1	1	1	-------	4	1	1	-------	6	11
Negapatam	C	1	6	18	1	1	1	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
	D	1	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
Rangoon	C	5	6	15	1	4	5	3	3	6	5	1	5	1	-------	-------	-------	-------	-------
	D	3	5	9	-------	1	4	1	2	6	28	1	4	2	2	2	2	3	1
Tuticorin	C	2	115	85	5	1	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
	D	-------	61	52	2	2	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
India (French):																			
Chandernagor	C	25	4	-------	-------	-------	-------	-------	1	1	1	-------	1	-------	2	-------	1	-------	1
	D	10	4	-------	-------	-------	-------	-------	1	1	1	-------	1	-------	-------	-------	1	-------	1
Karikal	C	7	54	150	28	10	28	22	14	6	-------	-------	3	-------	-------	-------	-------	-------	-------
	D	4	41	128	21	8	21	21	12	3	-------	-------	3	-------	-------	-------	-------	-------	-------
Pondicherry Province	C	37	92	139	29	18	29	10	30	12	4	-------	-------	-------	-------	-------	-------	-------	-------
	D	30	55	104	24	18	24	8	24	10	4	-------	-------	-------	-------	-------	-------	-------	-------

Indo-China (see also table below):																			
Pnompenh	C	1	6	2	7	22	12	1		2	3	1	3	8	3	1	5	3	
	D	1	1	1	5	20	10	1		1	3	1	1	5	2	1	5	1	
Saigon	C		6	6					2	5	5		3	3	3	4	17	15	20
	D		4	3						1		1	2	1	3	2	15	9	9
Kwangchow-Wan (see table below).																			
Siam	C	104	224	195	39	43	41	42	50	74	117	156	175	85	114	245	310	196	
	D	68	150	138	26	32	22	37	33	59	73	104	119	61	86	138	193	136	
Anthoang	C		4	1	3														
	D		1	1	2														
Ayudhaya	C	2	16	4			4				1		2		3	24	2		
	D	2	14	4			4				1		2	1	3	13			
Bangkok	C	18	22	50	17	19	12	13	10	14	3	11	15	16	41	39	66	36	20
	D	12	6	43	12	7	5	12	7	9	1	4	10	13	31	20	34	22	17
Chaxoengsao	C			9		1												1	
	D			9		1												1	
Dhannapuri	C	6	16	3	1	1	1						2			15			
	D	5	10	2		1							1			6			
Lobpuri	C		74		2			1					1						
	D		61		1								1						
Nagara Pathom	C							2								36		13	
	D							2								20		10	
Nondpuri	C	1	4																
	D	1	2																
Pradhumdham	C			1															
	D			1															
Singhapuri	C		17	6	1														
	D		12	7	1														
Smud Prakar	C	37	30	10	1														
	D	28	10	8															
Smud Sagara	C	34																	
	D	16																	
On vessel:																			
S. S. Ekma, at Penang from Singapore	C							P											
S. S. Media, at Colombo from Calcutta	C															1			
S. S. Tilawa, at Penang from Singapore	C								P										
S. S. Elephanta, at Penang from Calcutta	C									P									

Place		November, 1928	December, 1928	January, 1929	February, 1929			March, 1929			April, 1929			May, 1929	
					1-10	11-20	21-28	1-10	11-20	21-31	1-10	11-20	21-30	1-10	11-20
Indo-China (French) (see also table above):															
Annam	C	5							3	3		13	7	15	5
Cambodia	C	21	25	79	29	40			26	3		40	44	27	188
Cochin-China	C	156	697	660	107	115			13	170		51	37	81	42
Kwangchow-Wan	C	1													

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

PLAGUE

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

Place		Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Week ended— March, 1929 16	23	30	April, 1929 6	13	20	27	May, 1929 4	11	18	25	June 1, 1929
Argentina: [1]																	
Buenos Aires [2]	C							1	1				1				
	D							1	1								
Catamarca Province—Recreo	C	9															
Cordoba Province—Laborde	C		1														
Jujuy Province—Perico	C		1	3													
Rosario	C		2	1			[3] 20	11			3		2				
Tucuman Province—El Mollar	C	5															
Azores: St. Michaels Island	C		2	1			1										
Belgian Congo:																	
Djugu	C			1	4												
	D			1	1												
Lenza	C	1	1														
Brazil:																	
Para	C			1													
Porto Alegre	C											1					
Santos	C	2															
British East Africa (see also table below):																	
Uganda	C	124	155	152	112	18	20	34	58	59							
	D	121	152	149	108	17	19	31	57	57							
Canary Islands:																	
Teneriffe	C	1															
Laguna	C			1													
Ceylon:																	
Colombo	C	4	8	6	4		2	2		2	2	1		2	1	1	
	D	4	8	5	3				1	1	2	1		2	1	1	
Plague-infected rats		5		2	2	2				1							
China:																	
Hainan	C			P	1												
Suyuan Province	C			P	1												
Dutch East Indies:																	
Celebes—Makassar	D		1														
Plague-infected rats				1													

Java—																	
Batavia and West Java	C	43	54	74	70	21	17	13	13	14	20	14				5	
	D	42	53	73	69	21	16	14	14	14	20	14					
Plague-infected rats		1			4		2		3	5	3						
East Java and Madura	C					1	1		1								
	D					1	1		1								
Surabaya	C	1		6													
	D			6													
Kediri Residency	C			P													
Ecuador (see table below).																	
Egypt:																	
Alexandria	C			3										1			
	D			1													
Beni-Suef	C	4	9	3	4	2				1	5		1				
	D	1	2	3	1	1	1				1		1				
Daqahliya	C														3	4	3
Girga	C	1															
Kena Province	C	4															
Port Said	C											1	1	1		1	1
Suez	C				1		1	1					1	1		1	
Greece (see also table below):																	
Corfu	C	1															
India	C	7,767	7,841	12,600	16,570	4,259	3,682	3,833	4,237	2,434	2,069						
	D	4,863	5,234	9,815	12,004	3,021	3,247	2,835	3,489	1,915	1,646						
Bassein	D		1	4	3	1	2	2	1		2		1		2		
Bombay	C	4		2	4	1	3	2	2	3	2						
	D	6		4	4	1	3	1	1	3	1		1			1	
Plague-infected rats		32	35	38	38	9	17	18	13	18	20	26	17		23	9	
Cochin	D		10														
Madras Presidency	C	686	500	434	333	50	43	32	7	13	8						
	D	307	231	235	189	32	27	18	3	3	2						
Rangoon	C	1	1	4	4		3	5	4	5	4						
	D	1	2	5	4		3	3	3	6	4		3				
Plague-infected rats				5	11	2	2	6	5	3	1	2	4		2	2	
Indo-China (see also table below):																	
Pnompenh	C	4	8	10	5	3	2	4	1		3	5		1	4		
	D	4	6	9	3	3	2	4	1		3	5		1	2		
Saigon	C				1												
Tourane	C				5												
Iraq:																	
Baghdad	C	10	9	6	10	4	5	2		1	1	2	4	5	4	1	4
	D	5	8	3	3		2	1		1	1	2	3	2	3		
Plague-infected rats				6	22	3	2	2	7	2							
Diyalah Liwa	C									5	2						
	D									4	3						
Naudham	C			2													
	D			1													
Plague-infected rats				1													

[1] During the period from Nov. 10 to Dec. 11, 1928, 13 cases of plague were reported at El Mollar, Tucuman Province, Argentina. During the same period 1 case of plague was reported at Chipion and 1 at Ucacha, both in Cordoba Province, Argentina.

[2] 18 plague-infected rats were reported at Buenos Aires, Argentina, from July 1 to Dec. 31, 1928.

[3] Unofficial report.

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

PLAGUE—Continued

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

Place		Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Week ended— March, 1929 16	23	30	April, 1929 6	13	20	27	May, 1929 4	11	18	25	June 1, 1929
Japan: Osaka—Plague-infected rats															2		
Madagascar (see also table below): Tamatave	C		2	1													
	D	1			2												
Morocco	C						22	59	25		19		12	4	6	29	
	D						14	43	16		12		4	1	3		
Nigeria:																	
Lagos	C	43	12	14	11	1	1	1	1	4	1	1	2		2		
	D	41	11	12	11	1	1	1	1	4	1	1	2		2		
Plague-infected rats		30	28	48	50	13		3	2			1					
Peru (see table below).																	
Senegal (see table below).																	
Siam	C	9	4	45	9		2	4	1	5	2	1	2		1		
	D	8	3	17	9		2	4		3	3	1	1				
Bangkok	C		4	1	1									1			
	D		1	2	1									1			
Nagara Pathom	C				3			4		1		1		3			
	D				2			4		1		1		2			
Panknampo	C	8															
Straits Settlements: Singapore	C				1							1					
	D				1							1					
Union of South Africa:																	
Cape Province	C	1	4					1		1							
Orange Free State	C		1	6	2	P	1	2		3	1						
	D			1				2			1						
Transvaal	C		3				5	3									
	D						5	3									
Uruguay:																	
Montevideo	C							4									
Rivera	C		1														
On vessel:																	
S. S. Bangkok, at Rotterdam, from Buenos Aires via Dakar (press report)	C															1	
S. S. Chenonceaux, at Singapore, from Colombo	C						1										
	D						1										
S. S. Ganzanmaru, at Osaka, from Haipong	C													1			

S. S. Halydan, at Bangkok, from Singapore	C			1																			
S. S. Seiyomaru, at Osaka, from Bombay—Plague-infected rats																				1			
S. S. Soudades, at Hamburg, from Rosario, Argentina—Plague-infected rats													2							1			
S. S. Sjomand, at Alexandria, from Batoum	C				1																		
S. S. Sumatra, at Osaka, from Bombay	C													1						1			

Place		December, 1928	January, 1929	February, 1929	March, 1929	April, 1929	May, 1929
British East Africa (see also table above):							
Kenya	C	15	7	4	10	1	------
Uganda	C	------	------	------	121	------	------
	D	------	------	------	113	------	------
Ecuador: Guayaquil	C	20	25	54	26	19	------
	D	7	12	22	4	5	------
Plague-infected rats		75	29	27	14	13	------
Greece (see also table above)	C	2	3	1	------	1	------
	D	1	1	------	------	------	------
Indo-China (see also table above)	C	------	11	------	3	13	------
Madagascar (see also table above)	C	282	233	348	196	------	------
	D	263	224	335	194	------	------
Ambositra Province	C	79	169	164	------	------	------
	D	74	159	164	------	------	------
Antisirabe Province	C	4	15	21	------	------	------
	D	4	15	21	------	------	------
Itasy Province	C	11	3	10	------	------	------
	D	11	3	10	------	------	------
Moramanga Province	C	28	22	7	------	------	------
	D	27	21	4	------	------	------

Place		December, 1928	January, 1929	February, 1929	March, 1929	April, 1929	May, 1929
Madagascar—Continued.							
Tamatava	C	2	4	------	------	------	------
	D	2	4	------	------	------	------
Tananarive Province	C	158	208	146	------	------	------
	D	144	192	136	------	------	------
Peru	C	26	37	------	35	------	------
	D	6	9	------	13	------	------
Senegal:							
Baol [1]	C	4	------	------	6	1	21
	D	2	------	------	3	1	6
Cayor [1]	C	14	------	------	------	------	------
	D	10	------	------	------	------	------
Dakar [1]	C	------	------	------	------	5	17
	D	------	------	------	------	4	11
Thies [1]	C	------	------	8	4	20	6
	D	------	------	7	3	20	3
Tivaouane [1]	C	------	------	12	------	------	22
	D	------	------	2	------	------	10

[1] Reports incomplete.

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

SMALLPOX

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

Place		Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Week ended— March, 1929 16	23	30	April, 1929 6	13	20	27	May, 1929 4	11	18	25	June 1, 1929
Algeria:																	
Algiers	C	1							3		4		1	4			
Cherchell	C				21	11	19	12		1							
Oran	C	7			1		1			1	1				5		
Arabia: Aden	C	1	1	2		1	11	9	9	28	17	19	5	3	10	20	
	D						1	4	3	6	4	6	4	3	1	9	
Brazil (see table below).																	
British East Africa (see also table below), Kenya—Mombasa	C		3														
British South Africa:																	
Northern Rhodesia	C	67	173														
	D	8	23														
Southern Rhodesia	C	5		1	17		68	1			13						
Tanganyika	C			13	3							1					
Canada:																	
Alberta	C	21	3	3	5			7			5		3				
Calgary	C				1								2				
Edmonton	C		14	2	2	2			10		4		1				
British Columbia—Vancouver	C	25	51	66	70	22	17	18	7	12	19	8	7		6	7	2
Manitoba	C	29	23	21	15			3				1	1		2		
Winnipeg and vicinity	C	17	2														4
New Brunswick	C							3									
Nova Scotia	C		5	2						1							
Ontario	C	15	36	83	83	12	21	14	10	15	37	21	40		30	7	
Niagara Falls	C						1										3
North Bay	C	1			4							2	1	1		7	
Ottawa	C	2			1												
Toronto	C			1			1		1	1							
Windsor	C											3		3			
Prince Edward Island	C			2	2												
Quebec	C	125	37	24	28	4	3	2	5	11	8	11	4	3	3	3	3
Montreal	C	3	8	10	16	3		1				3	1			1	
Quebec	C	6	4	8			1		2	1					1		
Riviere du Loup	C									1							

Saskatchewan	C	52	14	35	70	------	13	------	------	------	9	3	1	------	7	------	7
Moose Jaw	C	1	------	------	------	------	1	------	------	------	------	------	------	------	------	------	------
Regina	C	2	1	6	------	------	------	------	------	------	------	------	------	------	------	------	------
Saskatoon	C	------	------	4	------	------	1	------	------	------	------	------	------	------	------	------	------
China:																	
Amoy	C	2	5	P	5	1	1	1	------	------	------	2	------	------	------	------	------
Canton	C	14	18	87	86	22	42	38	33	29	21	19	16	25	------	13	------
	D	------	2	2	15	3	4	4	4	2	3	5	2	2	------	1	------
Chefoo	C	P	------	------	------	------	------	------	------	------	P	------	------	------	------	------	------
Foochow	C	P	P	P	P	P	P	------	P	------	------	------	------	------	------	------	------
Hong Kong	C	202	319	307	189	26	31	22	13	21	16	11	5	8	10	5	6
	D	78	152	286	246	51	47	29	10	39	36	15	7	6	8	4	7
Manchuria—																	
Changshun	C	------	------	3	2	------	------	------	------	1	------	------	------	------	------	------	------
Fushun	C	------	------	5	------	------	------	------	------	------	------	------	------	------	------	------	------
Harbin	C	4	2	5	------	------	------	------	1	1	2	1	------	------	------	------	------
Kwantung—Dairen	C	5	------	2	9	------	------	------	1	6	2	2	------	8	4	4	5
	D	------	------	2	3	------	------	------	------	3	------	1	------	------	1	3	4
Mukden	C	------	1	3	------	------	------	------	1	------	------	------	------	------	------	------	------
	D	------	------	1	------	------	------	------	------	------	------	------	------	------	------	------	------
Shanghai—																	
Foreigners only	C	6	23	23	11	1	1	1	1	1	------	------	------	------	------	------	------
Including natives	D	32	64	60	41	3	8	5	9	7	2	5	2	8	6	------	------
Swatow	C	------	------	------	9	12	7	6	8	22	32	20	19	23	14	------	------
Tientsin	C	2	6	3	2	2	------	2	4	2	1	2	1	------	------	------	------
Tsingtao	C	------	------	------	P	P	------	P	P	P	P	P	P	P	------	------	------
Yunnanfu	C	------	------	------	------	P	P	P	P	P	------	------	------	------	------	------	------
Colombia: Cartagena	D	7	------	------	7	------	------	------	------	------	------	------	------	------	------	------	------
Curacao (alastrim)	C	------	------	------	------	------	------	------	------	------	1	------	------	------	------	------	------
Dominican Republic	C	------	------	1	------	------	------	------	------	------	------	------	------	------	------	------	------
Dutch East Indies:																	
Balikpapan	C	------	------	------	1	1	4	------	------	------	------	3	------	------	1	2	------
Belawan Deli	C	6	7	26	9	2	2	2	1	1	------	3	------	------	------	------	------
	D	2	3	6	6	------	1	1	------	------	------	------	------	------	------	------	------
Borneo	C	------	------	30	26	------	------	------	------	------	------	------	------	------	------	------	------
Samarinda	C	27	11	4	47	1	------	------	1	------	1	------	------	------	------	------	------
	D	4	3	------	4	------	3	------	------	------	------	------	------	------	------	------	------
Celebes—Makassar	C	1	------	------	------	------	------	4	2	6	9	10	14	16	11	9	------
	D	------	------	------	------	------	------	------	2	5	4	7	9	9	10	8	------
Java—																	
Batavia and West Java	C	1	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Surabaya	C	2	------	------	------	------	------	------	------	------	------	------	------	------	------	------	------
Sumatra—																	
Baros	C	------	96	106	36	------	9	------	7	------	------	------	------	------	------	------	------
	D	------	30	26	5	------	------	------	2	------	------	------	------	------	------	------	------
Medan	C	3	9	11	9	2	2	2	1	1	------	------	1	------	------	------	------
	D	1	5	5	6	1	1	1	------	------	------	------	------	------	------	------	------
Palembang	C	------	------	------	9	------	------	------	------	------	------	------	------	------	------	------	------
		------	------	------	2	------	------	------	------	------	------	------	------	------	------	------	------

Ecuador (see table below).

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

SMALLPOX—Continued

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

Place		Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Week ended— March, 1929 16	23	30	April, 1929 6	13	20	27	May, 1929 4	11	18	25	June 1, 1929
Egypt:																	
Gharbieh	C				1												
Port Said	C			1							1						
Suez	C	1									1	4					
France (see table below).																	
Great Britain:																	
England and Wales	C	719	733	890	1,083	272	288	323	273	339	374	354	356	277	362		
Birmingham	C										1					1	
Bradford	C	1		1	2		3				1				2		
Bristol	C			1													
Cardiff	C	1		4					1	1							
Castleford	C	8	16	48	85	13	17	17	9	5	14	5	7		5		
Hull	C	1		2													
Leeds	C	2	1	3	6	1	3	3	1	1	1	1					
Liverpool	C			1					1								
London	C	14	36	40	54	11	13	19	15	29	49	56	67	50	52		
London and Great Towns	C			433	425	123	131	193	151	206	250	203	229	159	198		
	D		1			2			1	1	2	2	1	1	1		
Newcastle-on-Tyne	C	3		6	6	2			14	1			2	1	10		
Nottingham	C	3	3	1		2											
Stoke-on-Trent	C	11	4	14	18	4	28	20	20	42	30	27	34	12	41		
Scotland—																	
Aberdeen	C										1	1					
Dundee	C	1															
Glasgow	C								1	12	6	1		1			
Greece (see table below).																	
Hedjaz	C		48	153	108		24	30	30	23	22	13	9	23		7	10
	D		15	56	40		10	21	21	16	14	10	12	13		4	7
Honduras: Puerto Castilla	C														1		
India	C	5,902	7,877	12,531	14,890	4,205	4,310	5,174	5,431	5,694	5,169						
	D	1,602	2,143	3,045	3,285	873	990	955	1,165	1,291	1,106						
Bombay	C	11	34	158	397	142	119	94	86	104	57	85	69	54	70	34	
	D	4	21	78	188	58	52	51	45	46	30	48	51	30	46	22	
Calcutta	C	13	10	32	104	35	32	22	28	34	24	25	18	5	16		
	D	7	8	16	29	24	21	18	19	26	16	16	16	5	16		

Karachi	C		6	5	147	43	57	58	48	29	57	33	25	23	22	17	
	D			223	14	14	13	10	33	8	22	17	12	15	11	12	
Madras	C	58	94	35	260	88	96	104	104	107	87	70	63	60	53	37	
	D	16	25	6	61	11	23	23	26	20	26	22	16	14	23	11	
Moulmein	C	5	3	2	14	5	3	5	5		1	3	3		3	2	
	D	1	1		4	2		1	1		1	3	2		2	2	
Negapatam	C	33	8	26	5	4	3		2	1		3	3		1		
	D	5		6	4				1								
Rangoon	C	1	1	8	17	3	2	4	4	3	2	1	1				
	D			1	6	1	2		3	1		1	1		1		
Tuticorin	C			2	1							1					
Vizagapatam	C		2	8	52	8	3	15		9	4	11	4		1		
	D				9	1	2	2		1	4		3				
India (French):																	
Karikal	C					1			1			1	1	2			
	D					1			1			1	1	2			
Pondicherry Province	C	48	75	59	79	6	21	23	20	21	11	12	16	15	8		
	D	46	62	51	61	6	17	18	19	19	8	11	13	13	6		
Indo-China (see also table below):																	
Pnompenh	C	44	38	77	62	13	19	27	9	9	19	9	3	6	8	7	
	D	20	21	42	36	5	10	14	4	5	13	4	2	4	4	4	
Saigon	C		12	5	2		1		1	1			1		1		
	D		6	1											1		
Iraq:																	
Baghdad	C	46	20	17	7	2	3		1	2	1	1	2			1	2
	D	45	29	3	5		1										
Basra	C	35	11	18	7	2	1	1	5	2	1	3	2	2	1	3	2
	D	26	7	10	5			1	1		1	3	2	1		4	
Diyalah Liwa	C													48			
	D													13			
Hillah Liwa	C		54	20													
	D		14	9													
Kirkuk Liwa	C	173	86		18												
	D	38	17		4												
Mossoul	C	294	55	30	28												
	D	110	39	17	4												
Sinjar	C		53	61													
	D		5	15													
Italy:																	
Palermo	C	3	3														
Rome and vicinity	C		1	2													
Turin	C				1												
Ivory Coast (see table below).																	
Jamaica (outside Kingston) (alastrim)	C		1								1			1			
Kingston (alastrim)	C	1															
Japan:																	
Kobe	C				1												
Nagasaki	C			3													
	D			2													
Osaka	C				1										1		
Shimane Province	C							16			3						
Tokyo	C													1			

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

SMALLPOX—Continued

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

Place		Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Week ended— March, 1929 16	23	30	April, 1929 6	13	20	27	May, 1929 4	11	18	25	June 1, 1929
Macao	D		9	24	75	6	3	14	9	9	6	3	2	2	2		
Mexico:																	
Acapulco	C												1		1		
	D												1		1		
Aguascallentes	D	2	1	3	3		2		5	1	6		2		2	1	3
Chiapas Province	C							P									
Chihuahua	D			1													
Jalisco (State): Guadalajara	D	4	1	8	8		2	4	7	3	1	5	3	3	3	3	6
Juarez	D		5	1	1	3											
Mexico City and surrounding territory	C		7	2	2	1											
Oaxaca—Zacatepec	C										P						
Palomas	C				1												
Tampico	C				1		2										
Vera Cruz	D						2				A						
Morocco (see table below).																	
Nicaragua: Managua	C									P							
Nigeria:																	
Lagos	C					1					1						
Southern Provinces	C			162													
	D			31													
Norway: Stavanger	C									2							
Panama Canal Zone	C							P									
Poland	C	3	1	41						2		4			1		
	D			3													
Portugal:																	
Lisbon	C		2	4		3				2		2					
Oporto	C							1			1		1				
Senegal (see table below).																	
Siam	C	8	19	2	4						1	7	47				
	D		2									2	6				
Bangkok	C	1															
Spain: Valencia	C				2		4	1									
Straits Settlements: Singapore	C		1	5	3			1									
Sudan (Anglo-Egyptian)	C	220	491	265	188	30	22	37	156	127	138	12	100	162	264	309	835
	D	42	57	34	54	6	2	6	15	17	3	3	3	5	48	28	51

Sudan (French) (see table below).																	
Sweden: Stockholm	C	1															
Syria (see table below).																	
Tunisia: Tunis	C	2	14		5						2						
Union of South Africa:																	
Cape Province	C	P									P	P					
Natal	C		1														
Transvaal	C								P	P	P	P					
Upper Volta	C			3	4			3	1	7		8		2			
On vessel:																	
S. S. Assyria, at Suez, from Bombay	C													1			
S. S. City of Venice, at Suez, from Calcutta	C														1		
S. S. Fern, at Port Said, from Abadan	C															P	
S. S. Le Panto, at Suez, Egypt	C												4				
S. S. Lopez-Lopez, at Suez	C									1							
S. S. Malwa, at Suez	C										1						
S. S. Mancar, at Suez, from Calcutta	C									1							
Tantalus (motor ship), at Amsterdam	C				3												
S. S. Tuscania, at Glasgow, from Bombay	C								P								

Place		November, 1928	December, 1928	January, 1929	February, 1929			March, 1929			April, 1929			May, 1929	
					1-10	11-20	21-28	1-10	11-20	21-31	1-10	11-20	21-30	1-10	11-20
Indo-China (see also table above)	C	144	243	311	128	236			200	361	500	100	155	343	67
Ivory Coast	C									4					
Senegal	C				80			17	8	45	50	7			1
	D				8			1	3	7	15				
Sudan (French)	C		2						26		10	9	64	2	
	D								3						
Syria: Beirut	C	2	1	1	21	24	3		10	2	2	16		4	

Place		November, 1928	December, 1928	January, 1929	February, 1929	March, 1929	April, 1929
Angola	C			1			
Brazil: Porto Alegre	C	3					
British East Africa (see also table above):							
Kenya	C	37	31			23	1
Chosen: Chinampo	C				1		
Ecuador: Guayaquil	C	6	13	12	4	2	2
	D	1	1	1	1		

Place		November, 1928	December, 1928	January, 1929	February, 1929	March, 1929	April, 1929
France	C		18	9	3	5	
Greece	C	6	6	8	5	2	4
	D			1	1		
Morocco	C	2		7	11	8	12
Persia	D		119	68	23	8	
Turkey	C			16	7		1
	D			6			

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

TYPHUS FEVER

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

Place		Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Week ended— March, 1929 16	23	30	April, 1929 6	13	20	27	May, 1929 4	11	18
Algeria:															
Algiers	C					3	1		2	4	2	3	2	1	
Constantine Department	C			2	13	P	2								
Oran	C			5	2						2	1	5		12
Bulgaria	C	9	5	7	39	7	18	10	5	5	16	7		10	7
	D				2	1	3		1	1	1			1	
Sofia	C			1											
Chile: Valparaiso	C	1													
China:															
Canton	C			2											
	D			2											
Hong Kong	C			1											
Manchuria—															
Harbin	C	2					1								
Kwantung	C				1										
Chosen (see table below).															
Czechoslovakia (see table below).															
Egypt:															
Alexandria	C					1						1			
	D													1	
Assouan Province	C				2										
	D				2										
Beheira Province	C				13				67	50				23	84
	D								9	9					18
Daqahliya Province	C	15	11			34									
	D	1	2												
Gharbieh	C			1	2										
	D				1										
Menoufieh Province	C										35				
Port Said	C														1
Greece (see table below).															
Ireland (Irish Free State):															
Cavan County—Carrickmacross	C													1	
Cork County	C				1										
Donegal County—Inishower	C												1		
Dublin	C			1											
	D			1											

Kerry County—															
Dingle	C					2						1	1		
Killarney	C				1						2				
Lithuania (see table below).															
Mexico (see also table below):															
Aguascalientes	D	2				3		2							
Chihuahua	D		1												
Mexico City, including municipalities in Federal District	C	12	9	11	7	1	1	2		3			1		
	D	1	2	3	2					1					
San Luis Potosi	D		1												
Morocco	C	16	4	20	17	7		6	6		8	8	12		1
	D												4		
Norway: Oslo	C													2	
Palestine	C	12	2	3				2		1					2
Peru (see table below).															
Poland	C	117	203	222	202	91	55	69	80	67	79	88	80	85	80
	D	11	16	15	18	5	3	7	5	2	3	7	13	7	8
Portugal: Oporto	C	1													
Rumania	C	42	167	173	211	62	60	49	49		27	52	56		
	D	1	11	23	28	7	5	9	9		3	2	11		
Tunisia	C	6		2	3	9		9	2	7	2	8	2	1	13
Turkey (see table below).															
Union of South Africa:															
Cape Province	C	P	P	P	P	P	P	P	P	P	P	P			
Natal	C	P	2		2	P	P		P		P	P			
Orange Free State	C	P	P	P	P						P	P			P
Transvaal	C		P	1					P	P	P				
Yugoslavia (see table below).															

Place		November, 1928	December, 1928	January, 1929	February, 1929	March, 1929	April, 1929
Chosen:							
Chemulpo	C	1					
Seoul	C		3	4		3	
Czechoslovakia	C			6	7	41	
	D				1	1	
Greece: Athens	C	4	1	13	4	4	
	D			5			
Indo-China: Tonkin	C						2

Place		November, 1928	December, 1928	January, 1929	February, 1929	March, 1929	April, 1929
Lithuania	C	4	11	32	24	62	101
	D			3	3	1	7
Mexico: Sonora (see also table above)	D			1			
Peru	C	3					
Turkey	C		19	1	3	11	3
	D				1		
Yugoslavia	C	17	7	15	13	7	
	D				2		

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

YELLOW FEVER

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

Place		Nov. 18–Dec. 15, 1928	Dec. 16, 1928–Jan. 12, 1929	Jan. 13–Feb. 9, 1929	Feb. 10–Mar. 9, 1929	Week ended—												
						March, 1929			April, 1929				May, 1929				June, 1929	
						16	23	30	6	13	20	27	4	11	18	25	1	8
Belgian Congo: Tumba	C											1						
Brazil:																		
Bahia	C		2					1										
	D		1					1										
Guaratingueta	C				[1] 1													
	D				[1] 1													
Para	D		2	1					5									
Pernambuco	C								4									
Porto Alegre	D													[1] 1				
Rio de Janeiro [2]	C	2	2	16	92	66	59	61	66	57	51	39	33	24	22	17	7	8
	D		2	17	67	32	30	38	32	34	23	20	17	18	11	6	3	3
Sao Paulo	C			1														
	D			1														
Dahomey: Ouidah Military Camp	C	1																
Gambia: Bathurst	C	3																
	D	2																
Liberia: Monrovia	C			3	7	1	3	3	3	2								
	D			2	4	1		2	1									
On vessel:																		
S. S. Skogland, at Porto Alegre, from Rio de Janeiro	C													1				
S. S. Victoria, at Manaos, from Para, Brazil	C		1															
	D		1															

[1] Imported.

[2] 29 cases of yellow fever with 14 deaths were reported at Rio de Janeiro during January, 1929, mostly suburban.