

PUBLIC HEALTH REPORTS

VOL. 44

MAY 3, 1929

NO. 18

PHYSICAL MEASUREMENTS OF BOYS AND GIRLS OF NATIVE WHITE RACE STOCK (THIRD GENERATION NATIVE BORN) IN THE UNITED STATES¹

PHYSICAL MEASUREMENT STUDIES NO. 1

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DATA FOR THE STUDIES

Many studies have been made of the height and weight of school children in the United States. Almost without exception, however, the children included have been unselected so far as race is concerned, school children in the localities considered being measured and tabulated without regard to the nativity or race stock of the parents. Relatively few studies have considered any measurements other than height and weight. It seems, therefore, that there is a place for a study of the physical measurements of children of specific race stocks. The present study, which will be presented in a series of papers, is concerned with the physical measurements of children of native white race stock, that is, native white children with both parents and all four grandparents born in the United States. In other words, these studies deal with what has been designated by Dr. Aleš Hrdlička, as "old American" stock.

Some of the questions which it is intended to study are (a) the mean physical measurements of girls and boys of different ages in the United States, (b) the physical measurements of children of native white race stock in different geographical sections of the country, (c) the physical measurements of children of native white race stock with certain physical defects as compared with those with no physical defects, (d) the variability of physical measurements, and (e) various other relationships between the different physical measurements.

The data for these studies consist of physical measurements of nearly 30,000 children of native white race stock from 6 to 15 years of age. These children were all attending school and, therefore, children so ill as to be kept out of school are not included. Furthermore, grossly defective or seriously crippled children are not included; but aside from these, there was little selection on the basis of physical

¹ From *Field Investigations in Child Hygiene* in cooperation with the Office of Statistical Investigations, United States Public Health Service.

condition. About one-half of the children, however, have no significant physical defects; the measurements of this group as compared with those with defects will be considered in a separate paper.

Geographically, the children measured may be classified into four fairly distinct groups. About 9,000 of them are from the Northeastern States, that is, New England, New York, New Jersey, and Pennsylvania. The measurements in this section were all made by one physician. Nearly 9,000 are from the North Central States, including Indiana, Illinois, Michigan, Wisconsin, and Minnesota. About an equal number are from the South Central States, including Missouri, Kentucky, Arkansas, Tennessee, Louisiana, and Texas. The measurements in these two sections were all made by another physician. About 2,000 children were measured in Utah and Nevada by a third physician. All three of these physicians were medical officers of the United States Public Health Service.

In all cases except a few in the western group the children are from fairly large cities. Table 1 shows the number of children measured in each city and the population of the city according to the 1920 census.

TABLE 1.—*Geographic distribution of the children measured*

(Children of native white parents and grandparents)

Locality	Population 1920	Number of children 6-15 years of age who were measured		
		Both sexes	Boys	Girls
All sections, total		28,674	14,318	14,356
Northeast, total		9,377	4,630	4,747
Portland, Me.....	69,272	1,422	695	727
Manchester, N. H.....	78,384	534	299	275
Burlington, Vt.....	22,779	532	269	263
Fall River, Mass.....	120,485	321	149	172
Hartford, Conn.....	138,036	992	490	502
Syracuse, N. Y.....	171,717	1,751	863	868
Trenton, N. J.....	119,280	1,661	861	860
Philadelphia, Pa.....	1,823,779	2,164	1,084	1,060
North Central, total		8,676	4,420	4,155
Minneapolis, Minn.....	390,582	1,838	940	899
Milwaukee, Wis.....	457,147	1,153	617	536
Detroit, Mich.....	993,678	1,798	912	886
South Bend, Ind.....	70,983	1,599	967	932
Muncie, Ind.....	36,524	1,079	550	529
Quincy, Ill.....	35,978	808	425	383
South Central, total		8,779	4,305	4,474
Houston, Tex.....	138,276	1,690	821	859
New Orleans, La.....	387,219	1,718	847	871
Little Rock, Ark.....	65,142	1,285	619	646
Nashville, Tenn.....	118,342	1,062	501	561
Louisville, Ky.....	234,861	1,770	869	901
St. Louis, Mo.....	772,897	1,284	648	686
Western, total		1,943	963	980
Provo, Utah.....	10,308	855	418	437
Salt Lake City, Utah.....	118,110	211	100	102
Bountiful, Utah.....	2,063	257	138	119
Kaysville, Utah.....	809	44	26	18
Las Vegas, Nev.....	2,304	93	30	54
Elko, Nev.....	2,173	133	62	71
Carson City, Nev.....	1,685	100	44	56
Unincorporated places in Nevada.....		250	127	123

In some of the cities the physicians who made the physical measurements also examined the children for physical defects. In the larger number of the cities, however, the children had been examined shortly before by the local school medical officers, and the physical defects as noted by these examiners were accepted and recorded as the physical defects that were present at the time when the physical measurements were made. The thoroughness of the examination must have varied considerably in the different cities, and therefore the data are of doubtful value in so far as an index to the real prevalence of physical defects is concerned. However, it would seem reasonable to classify the children according to the presence or absence of certain physical defects and consider the physical measurements of the different groups. Although the group with no defects may contain a considerable number of children with slight or unimportant defects, they are no doubt relatively free from significant defects. This phase of the study, however, will be considered in a later paper.

METHODS OF MAKING MEASUREMENTS

The physical measurements which were made for each child include the following: Standing height, or stature; sitting height, or trunk length; weight; chest circumference (at rest); transverse diameter, or width of chest; anteroposterior diameter, or depth of chest; and vital capacity. The method of making these measurements was identical in all places, the measurements all being made by the three medical officers of the Public Health Service.

The standing height was taken in the usual way with the child standing with his back against a wall, in every case the shoes being removed. The measurement was recorded to the nearest quarter inch.

The sitting height, or trunk length, was taken according to the method described by Dreyer²—that is, with the child sitting on the floor with the knees flexed and the back against a wall. The measurement was recorded to the nearest quarter inch.

Each of the three physicians had scales for weighing, which were used throughout the geographic section to which he was assigned. Previous to leaving Washington, the scales had been tested by the Bureau of Standards. The children were weighed without shoes or outside coats or cloaks, the weight being recorded to the nearest quarter pound.

The chest circumference was measured with a steel tape. The measurement in the case of the boys was made at the level of the fourth intercostal space, in the nipple line; for girls it was made at the same level but under the breasts. The measurement was taken

² Georges Dreyer and George F. Hanson: *The Assessment of Physical Fitness*. Cassell & Co., Ltd., London, 1920.

at rest—that is, with the child breathing normally—and was recorded to the nearest quarter inch.

The transverse diameter, or width of the chest, was measured in the northeast and in the north and south central sections with the large spreading compasses devised by Dr. Aleš Hrdlička, but in the western section a Seaver rod was used. The Seaver rod is made of wood, but in other respects is similar to the spreading compasses of Hrdlička, and it is believed that the readings are comparable. The measurement was taken at the same level as that described for the chest circumference, and, likewise, was taken at rest and with the child breathing normally. The measurement was recorded to the nearest millimeter.

The antero-posterior diameter, or depth of the chest, was also measured with the large spreading compasses of Hrdlička, the measurement being made at the nipple level. The technique or method used in making these two physical measurements was in accordance with the description given by Doctor Hrdlička in his book on the anthropometry of the living.³

The vital capacity was taken with a Sanborn wet spirometer in the northeast, north central, and south central sections. Each physician had such a spirometer which was used throughout his section. In the western section the vital capacity was taken with a Narraganset wet spirometer, which is very similar to the Sanborn, the readings from the two spirometers being comparable. The spirometers were tested by the Bureau of Standards before they were sent out from Washington. The instrument measures the amount of air which can be expelled from the lungs at a single breath. The measurement was recorded to the nearest tenth liter, a liter being considered as 1,000 cubic centimeters—a little larger than a quart. Three to five successive observations were taken, the highest reading being recorded as the vital capacity. The working of the machine was explained to the child before the measurement was taken, and he was given time for a short rest after each trial.

PHYSICAL EXAMINATIONS

Information as to the place of birth of the child, both parents, and all four grandparents was secured by sending home a form to be filled out by the parents. With some exceptions the only children measured were white children whose parents and all four grandparents were born in the United States. In making the tabulations, the few of other race stock were excluded, and so the present group of nearly 30,000 children are, without exception, persons of native white parents

³ Aleš Hrdlička: *Anthropometry*. Wistar Institute of Anatomy and Biology, Philadelphia, 1929. Also in *American Journal of Physical Anthropology*, Vol. II, No. 3 (July-September, 1919), pp. 283-319.

and grandparents. On the same form on which the ancestry data were recorded, the year, month, and day of birth of the child were obtained.

Before making the measurements the physician looked the child over and classified him as excellent, good, fair, poor, or very poor in nutrition, the judgment being based on the child's general appearance, activity, condition of the skin, amount of subcutaneous fat, muscle tone, alertness, and vitality, without reference to any standards of height and weight. The examiner also indicated whether or not the child appeared to be in normal physical condition. As already noted, whatever physical defects had been found on the school examination were recorded on the card with the physical measurements; and in cases where no school examination had been made, the physician made an examination and recorded the physical defects that were found.

The posture, in terms of excellent, good, fair, poor, and very poor, and build in terms of slender, slender medium, medium, medium heavy, and heavy, were also set down by the examiner on the basis of his inspection of the child's general appearance. On the same basis, children were classified as prepubescent, pubescent, and post-pubescent, the classification in the case of girls being sometimes verified by questions asked by the nurse as to menstruation.

It should be noted that although the physical examinations were not in all cases made by the same person, the judgments as to nutrition, posture, build, and maturation were all made by the three physicians of similar training and experience who made the measurements, and therefore should be thoroughly comparable within their respective territories and roughly comparable throughout all sections.

MEAN MEASUREMENTS AT SPECIFIC AGES

The present paper, the first in the series on physical measurements, deals with the mean measurements of girls and boys at different ages and the annual increments in those measurements as indicated by the differences between the means at successive ages. Table 2 shows means for children of different ages for each of the seven measurements described above, as well as several indexes or relationships between measurements, and the number of children of each sex measured at each year of age.

In Figure 1 the mean measurements for boys and girls have been plotted on a semilogarithmic chart. On such a chart an equal vertical distance represents an equal percentage change. The various meas-

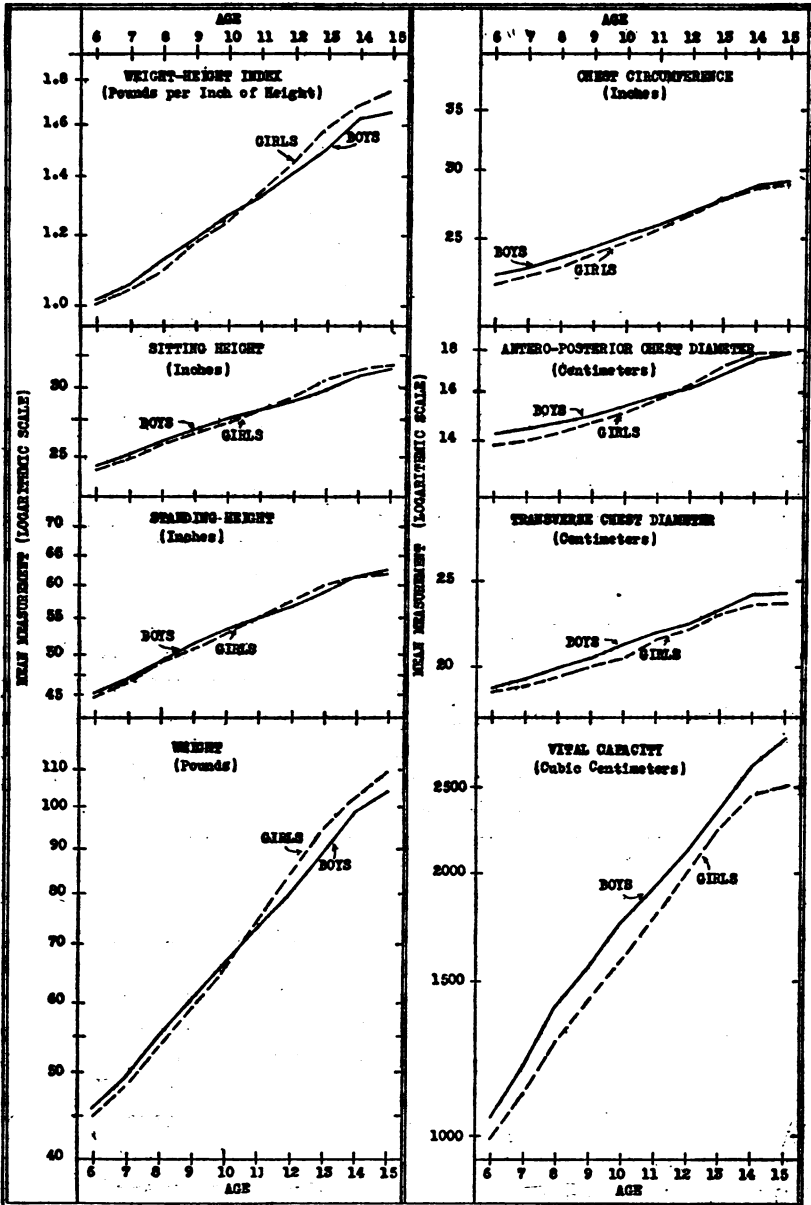


FIGURE 1.—Rate of increase in certain measurements of boys and girls from 6 to 15 years of age—children of native white parents and grandparents in various localities in the United States

urements are taken in different units, the majority being linear but the vital capacity and weight being volume and mass, respectively. In spite of this variation in the units used we can consider the relative,

or percentage, increase in one measurement as compared with that in another; and since the semilogarithmic chart is arranged to show just this thing, we may compare the slopes of the lines in Figure 1 and see which measurements increase most rapidly with age.

It may be seen in Figure 1 that the weight and vital capacity increase much more rapidly than the other measurements. The increase in the weight-height index (weight per inch of height) is more rapid than the increase in height, but less rapid than the increase in weight.

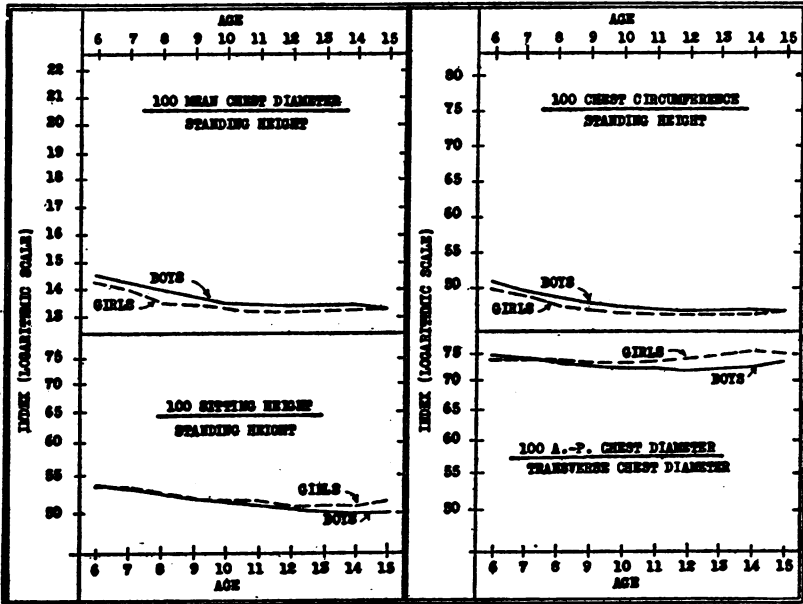


FIGURE 1 (continued).—Rate of change in certain indices of measurements of boys and girls from 6 to 15 years of age—children of native white parents and grandparents in various localities in the United States

MEAN ANNUAL INCREMENTS BETWEEN SPECIFIC AGES

If we could accurately estimate the slopes for these lines we could tell from Figure 1 at what ages the children were increasing most rapidly in a given measurement and at what ages the increase for boys exceeded that for the girls and vice versa. However, it is very hard to determine this from Figure 1 and therefore Table-3 has been prepared to show, for boys and girls, the actual and the percentage annual increment in each of the measurements. Figure 2 shows graphically the percentage annual increments in each measurement.

TABLE 2.—Mean measurements of boys and girls of specific ages
[Children of native white parents and grandparents in various localities in the United States]

Age nearest birthday	Weight (pounds)		Standing height (inches)		Sitting height ¹ (inches)		Chest circumference (inches)		Transverse chest diameter (centimeters)		Antero-posterior chest diameter (centimeters)		Vital capacity (cubic centimeters)	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
6	45.894	44.908	45.163	44.900	24.371	24.176	22.368	22.316	19.025	18.871	14.295	13.846	1,083	993
7	49.769	48.864	47.041	46.656	25.102	24.907	23.331	22.861	19.487	19.005	14.512	14.098	1,217	1,180
8	55.257	53.410	49.263	48.930	25.072	25.790	23.994	23.376	20.074	19.487	14.750	14.394	1,402	1,352
9	60.761	59.991	51.373	50.939	26.763	26.556	24.902	24.142	20.665	20.056	15.094	14.776	1,687	1,641
10	66.868	65.710	58.201	57.947	27.471	27.345	25.304	24.878	21.242	20.654	15.450	15.276	1,752	1,720
11	73.398	74.267	55.062	55.169	28.309	28.145	26.584	25.916	21.886	21.434	15.886	15.706	1,852	1,820
12	80.072	83.305	57.482	57.482	28.843	28.304	26.888	26.867	22.537	22.109	16.289	15.443	1,921	1,890
13	86.288	84.635	59.066	59.844	29.740	30.543	27.814	28.010	23.335	22.642	16.888	17.233	2,048	2,017
14	90.437	102.960	61.221	61.220	30.765	31.330	28.976	28.845	24.254	23.542	17.638	17.611	2,268	2,237
15	104.096	109.037	62.567	61.826	31.401	31.796	29.289	29.025	24.266	23.683	17.844	17.850	2,466	2,436

Age nearest birthday	Weight-height index ²		Chest diameter—standing height index of build ³		Chest index ⁴		Standing-sitting index ⁵		Number of children			
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls		
6	1.016	1.002	14.52	14.24	50.63	49.80	76.14	74.56	53.96	53.95	922	966
7	1.058	1.041	14.23	13.97	49.60	49.00	74.47	74.17	53.36	53.38	1,600	1,548
8	1.122	1.092	13.92	13.63	48.71	47.77	73.48	73.87	52.72	52.71	1,652	1,620
9	1.165	1.170	13.73	13.46	47.98	47.39	73.04	73.62	52.20	52.13	1,813	1,780
10	1.267	1.241	13.58	13.34	47.56	46.99	72.75	73.72	51.64	51.65	1,908	1,872
11	1.333	1.346	13.50	13.28	47.31	46.98	72.69	73.70	51.10	51.31	1,735	1,718
12	1.409	1.449	13.45	13.20	47.21	46.80	72.26	74.36	50.75	50.98	1,714	1,726
13	1.512	1.581	13.41	13.21	47.09	46.80	72.28	75.12	50.35	51.03	1,646	1,657
14	1.624	1.682	13.47	13.30	47.32	47.12	72.72	75.62	50.20	51.18	1,317	1,364
15	1.664	1.704	13.25	13.22	46.81	46.95	73.54	75.37	50.19	51.43	1,194	1,153

¹ Trunk length by the Dreyer method.

² Pounds per inch of height, or $\frac{\text{mean weight in pounds}}{\text{mean height in inches}}$.

³ Percentage that the mean of the two chest diameters is of the standing height, or $\frac{100 (\text{mean chest diameter in centimeters})}{\text{mean standing height in centimeters}}$.

⁴ Percentage that the chest circumference is of the standing height, or $\frac{100 (\text{mean chest circumference in inches})}{\text{mean standing height in inches}}$.

⁵ Percentage that the antero-posterior diameter is of the transverse diameter of the chest, or $\frac{100 (\text{mean antero-posterior diameter in centimeters})}{\text{mean transverse diameter in centimeters}}$.

⁶ Percentage that the sitting height is of the standing height, or $\frac{100 (\text{mean sitting height in inches})}{\text{mean standing height in inches}}$.

TABLE 3.—*Mean annual increments in the measurements of boys and girls of specific ages*
 (Children of native white parents and grandparents in various localities in the United States)

Age interval	Weight (pounds)		Standing height (inches)		Sitting height ¹ (inches)		Chest circumference (inches)		Transverse chest diameter (centimeters)		Antero-posterior chest diameter (centimeters)		Vital capacity (cubic centimeters)		Weight-height index ²	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
	ACTUAL INCREMENT OR GROWTH PER YEAR ³															
7 to 8	3.945	3.656	1.875	1.847	0.731	0.731	0.463	0.545	0.462	0.434	0.217	0.249	154	127	0.043	0.039
8 to 9	5.458	4.846	2.222	2.074	0.870	0.863	0.608	0.715	0.587	0.452	0.233	0.299	185	162	0.044	0.031
9 to 10	6.107	6.119	1.828	2.008	0.791	0.796	0.702	0.793	0.691	0.569	0.344	0.388	165	149	0.033	0.075
10 to 11	6.530	6.557	1.851	2.008	0.674	0.684	0.754	1.038	0.644	0.588	0.356	0.451	183	159	0.072	0.071
11 to 12	6.674	6.638	1.757	2.313	0.685	0.645	0.776	0.951	0.651	0.780	0.438	0.669	183	192	0.076	0.196
12 to 13	9.216	11.330	2.227	2.372	0.897	1.229	0.950	1.143	0.798	0.833	0.599	0.790	242	247	0.108	0.132
13 to 14	10.149	8.358	2.165	1.366	1.055	0.787	1.162	0.835	0.919	0.611	0.750	0.578	295	211	0.112	0.101
14 to 15	4.661	6.047	1.336	1.606	1.606	0.466	0.313	0.180	0.012	0.130	0.206	0.039	208	58	0.040	0.062
PERCENTAGE INCREASE PER YEAR ⁴																
6 to 7	8.61	8.14	4.16	4.12	3.00	3.02	2.02	2.44	2.43	2.34	1.52	1.80	144.9	12.70	4.24	3.80
7 to 8	11.03	9.09	4.72	4.87	3.47	3.55	2.84	2.29	3.01	2.54	1.64	2.12	15.20	14.46	6.05	4.80
8 to 9	11.87	11.87	4.11	4.11	3.05	3.07	2.53	3.28	2.94	2.92	2.33	2.45	11.77	11.62	5.62	7.14
9 to 10	10.57	10.02	3.75	3.04	2.66	2.67	2.68	3.03	2.70	2.78	2.35	3.05	11.81	11.13	6.08	6.67
10 to 11	10.27	10.27	3.54	3.50	2.48	2.53	2.68	4.17	3.03	2.68	2.82	3.71	10.45	12.08	6.46	8.46
11 to 12	12.17	12.17	3.19	4.10	2.48	3.53	2.68	3.67	2.97	3.15	2.54	4.11	9.41	12.08	7.65	7.65
12 to 13	13.60	13.60	3.02	4.13	3.11	4.26	2.65	2.85	3.77	3.77	3.68	4.80	11.41	12.39	6.70	9.11
13 to 14	8.85	8.85	3.67	2.28	3.55	2.68	4.18	2.08	3.84	3.71	3.68	3.84	12.48	12.39	7.31	6.83
14 to 15	6.87	6.87	2.15	1.99	1.97	1.49	1.08	0.52	0.00	0.50	1.17	0.22	7.83	2.35	2.46	4.83

¹ Trunk length by the Droyer method.

² Pounds per inch of height.

³ As indicated by the difference between the mean measurement at one age and the next higher age.

⁴ Percentage that the difference between the mean measurements is of the mean measurement at the younger age.

Reference to Figure 1 will show that only at certain ages are the mean measurements of girls greater than those of boys, those ages usually being from about 11 to 14 years. In the case of vital capacity and transverse chest diameter, the mean measurements of the boys are at all ages included in this study definitely above those for the girls.

Turning to Figure 2 it may be seen that from as early as 8 or 9 to about 12 or 13 years of age the mean annual increments in the measurements of girls are greater than the increments in the measurements of boys. Even in the cases of transverse chest diameter and vital capacity, there is a period of 3 or 4 years during which the mean annual increment of girls is greater than that of the boys, although, as noted above, these two mean measurements for girls are uniformly below the means for boys. It should be noted that, in the case of nearly every measurement, the age of most rapid growth, that is, the age of the maximum percentage annual increment, is 1 or 2 years earlier for girls than for boys.

DIFFERENCES BETWEEN BOYS AND GIRLS OF SPECIFIC AGES

We may consider more directly the differences between the measurements for boys and girls by computing the difference between their mean measurements. Table 4 shows the actual and percentage differences between the mean measurements of boys and girls and also the actual and percentage differences between the mean annual increments in the measurements of boys and girls. In this table the differences have been obtained by subtracting the measurement or increment for girls from the corresponding measurement or increment for boys. The differences are therefore plus, or positive, when the measurement or increment of the boys exceeds that of the girls, but minus, or negative, when the measurement or increment of the girls exceeds that of the boys. The difference computed in this way is designated as the excess of boys over girls. A negative excess, or a deficiency, means as stated above, that the measurement is greater for girls than for boys.

Differences between the means.—The percentage excesses in the means have been plotted for each measurement in Figure 3. As already noted, transverse chest diameter and vital capacity are uniformly greater for boys than for girls, and the curves for these two measurements in Figure 3 are therefore always above zero. For every one of the other measurements, however, there is a period when the measurement for girls exceeds that for boys and, therefore, the curves all go below zero during that period. It may be seen that, in nearly every case, the minimum point in these curves comes at 13 years of age, this being true for vital capacity and transverse chest diameter as well as for the other measurements. This minimum represents the age when the mean measurements of girls either exceed

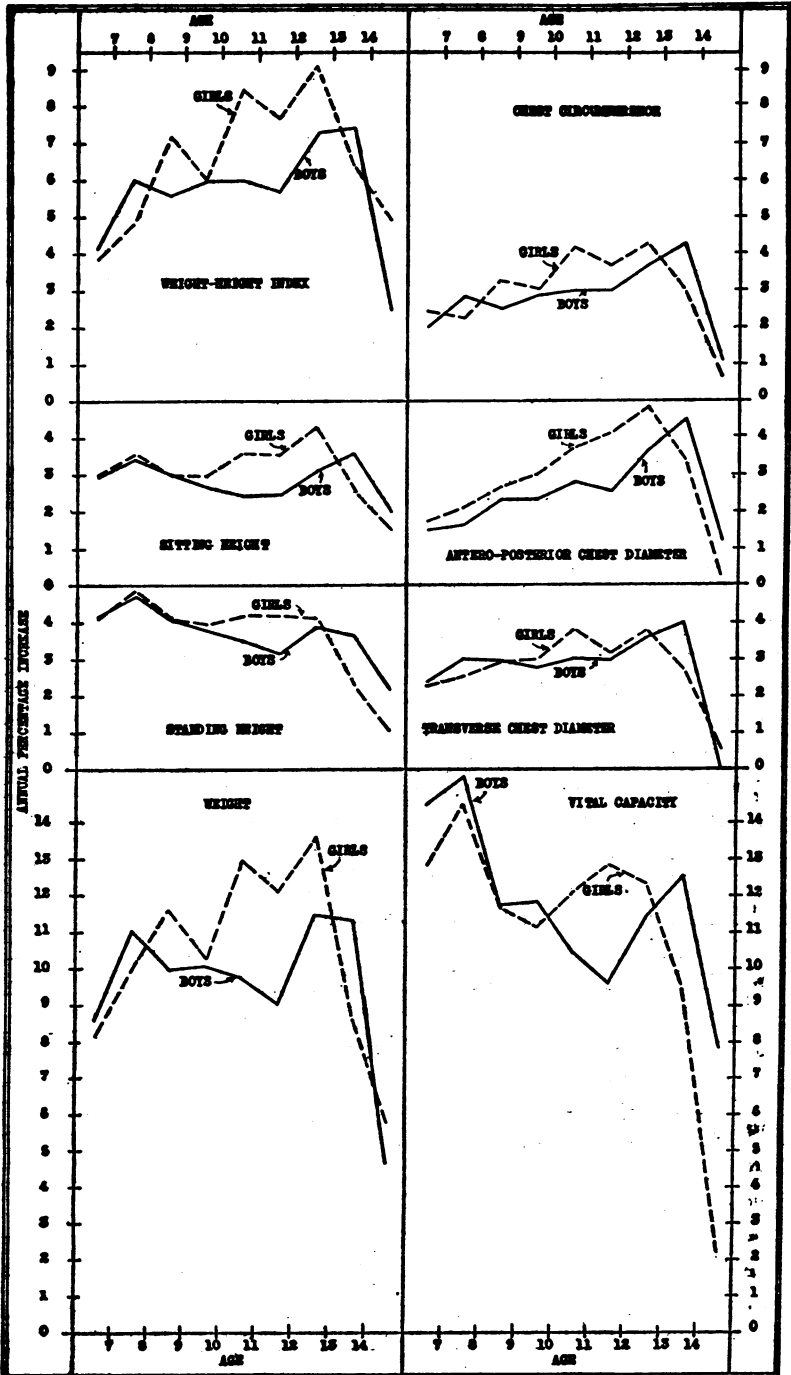


FIGURE 2.—Percentage annual increments in the mean measurements of boys and girls of specific ages—children of native white parents and grandparents in various localities in the United States

those of the boys by the greatest percentage, or, if they do not exceed them, as in the cases of transverse chest diameter and vital capacity, the measurements of the girls approach nearest to those of the boys. After this minimum at 13 years, all of the curves tend upward again, some of them crossing the zero line before the fifteenth year, but in other cases the measurements of girls still exceeding those of boys at 15 years of age. It appears quite probable that, if we had the measurements of children up to 18 years of age, the mean of boys would, in the case of every measurement included in this graph, exceed the mean of girls.

TABLE 4.—Actual and percentage excess¹ of boys over girls in the mean measurements and in the mean annual increments in the measurements

[Children of native white parents and grandparents in various localities in the United States]

Age	Weight (pounds)	Standing height (inches)	Sitting height ² (inches)	Chest circumference (inches)	Transverse chest diameter (centimeters)	Antero-posterior chest diameter (centimeters)	Vital capacity (cubic centimeters)	Weight-height index ³
ACTUAL EXCESS¹ IN MEAN MEASUREMENTS OF BOYS OVER THOSE OF GIRLS								
6.....	0.916	0.354	0.195	0.552	0.454	0.449	70	0.013
7.....	1.205	.385	.195	.470	.482	.417	97	.017
8.....	1.847	.333	.182	.618	.587	.356	120	.030
9.....	1.170	.334	.207	.460	.609	.318	136	.015
10.....	1.158	.254	.126	.426	.588	.223	162	.016
11.....	-.869	-.067	-.164	-.142	.452	-.090	153	-.013
12.....	-3.233	-.643	-.461	-.033	.428	-.156	111	-.040
13.....	-5.347	-.788	-.803	-.196	.393	-.347	106	-.069
14.....	-3.553	.011	-.535	-.131	.701	-.173	190	-.058
15.....	-4.939	.741	-.395	.264	.583	-.006	340	-.100
PERCENTAGE EXCESS¹ IN MEAN MEASUREMENTS OF BOYS OVER THOSE OF GIRLS								
6.....	2.04	0.79	0.81	2.47	2.44	3.24	7.05	1.30
7.....	2.48	.83	.78	2.06	2.54	2.96	8.66	1.63
8.....	3.46	.68	.71	2.64	3.01	2.47	9.36	2.75
9.....	1.96	.66	.78	1.91	3.04	2.15	9.50	1.28
10.....	1.76	.48	.46	1.71	2.85	1.46	10.19	1.29
11.....	-1.17	-.16	-.58	.55	2.11	.57	8.59	-.97
12.....	-3.88	-1.12	-1.57	-.12	1.94	-.95	5.52	-2.76
13.....	-5.65	-1.32	-2.63	-.70	1.71	-2.01	4.70	-4.36
14.....	-3.45	.02	-1.71	.45	2.96	-.97	7.70	-3.45
15.....	-4.53	1.20	-1.24	.91	2.46	-.03	13.46	-5.67
ACTUAL EXCESS¹ IN THE MEAN ANNUAL INCREMENTS OF BOYS OVER THOSE OF GIRLS								
6 to 7.....	0.289	0.031	0.000	-0.082	0.028	-0.032	27	0.004
7 to 8.....	.642	-.052	-.013	.148	.105	-.061	23	.013
8 to 9.....	-.677	.001	.025	-.158	.022	-.038	16	-.015
9 to 10.....	-.012	-.080	-.061	-.034	-.021	-.095	26	.001
10 to 11.....	-2.027	-.341	-.290	-.284	-.136	-.133	-9	-.029
11 to 12.....	-2.364	-.556	-.297	-.175	-.024	-.246	-42	-.027
12 to 13.....	-2.114	-.145	-.342	-.163	-.035	-.191	-5	-.029
13 to 14.....	1.794	.799	.268	.327	.308	-.174	84	.011
14 to 15.....	-1.210	.730	.140	.133	-.118	.167	150	-.042
PERCENTAGE EXCESS¹ IN THE MEAN ANNUAL INCREMENTS OF BOYS OVER THOSE OF GIRLS								
6 to 7.....	7.91	1.68	0.00	-15.05	6.45	-12.85	21.26	10.26
7 to 8.....	13.25	-2.29	-1.47	28.74	21.78	-20.40	14.20	26.49
8 to 9.....	-10.95	.05	3.26	-20.63	3.87	-9.95	10.74	-19.23
9 to 10.....	-.20	-3.98	-10.27	-4.62	-3.51	-21.06	16.35	1.41
10 to 11.....	-23.69	-15.35	-30.06	-27.36	-17.44	-23.37	-4.69	-27.62
11 to 12.....	-26.16	-24.04	-29.86	-18.40	-3.56	-37.91	-18.42	-26.21
12 to 13.....	-18.66	-6.11	-27.60	-14.26	-4.20	-24.18	-2.02	-21.97
13 to 14.....	21.47	58.49	34.05	39.16	50.41	30.21	39.81	10.89
14 to 15.....	-20.61	120.46	30.04	73.89	-90.77	428.21	258.62	-51.22

¹ Excess is positive (+) when the measurement or increment for boys is greater than the corresponding item for girls; excess is negative (-) when the reverse is true.

² Trunk length by the Dreyer method.

³ Pounds per inch of height.

The ages at which a mean measurement is greater for girls than for boys may be conveniently seen in Figure 3 as the ages when the line representing the measurement is below zero. The same thing may be seen in the first and second sections of Table 4 as the ages when the excess of boys over girls is preceded by a minus sign.

Differences between the increments.—In Figure 4 has been plotted in a similar way the percentage excess in the increment of boys over the increment of girls. Although the numbers of children considered are

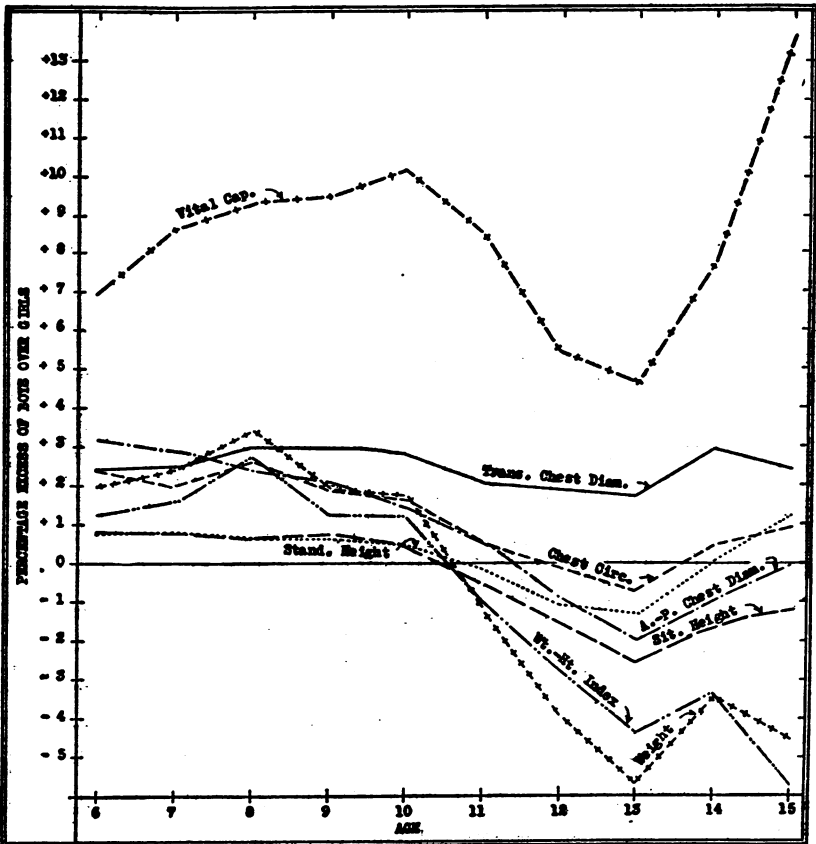


FIGURE 3.—Percentage excess in the mean measurements of boys over those of girls of corresponding ages—children of native white parents and grandparents in various localities in the United States.

large, in this figure we are considering percentage differences between the sexes in respect to rather small annual increments, and it is apparent that there is considerable chance variation in the data. Therefore, not every rise and fall of the curves in this figure can be interpreted as being significant. However, the general tendencies of the various curves are fairly easy to follow and their significance is indicated by the similarity of the curves for the different measurements.

In the early ages the increments of the boys are generally in excess of those of the girls; then follows a period when the growth of the girls definitely exceeds that of the boys, in this instance every measurement showing such a period. After the minimum has been reached (when excess in the growth of girls over that of boys is greatest), the curves rise again, every one becoming positive before the 14th year of age. In other words, the mean annual increment from 13 to 14

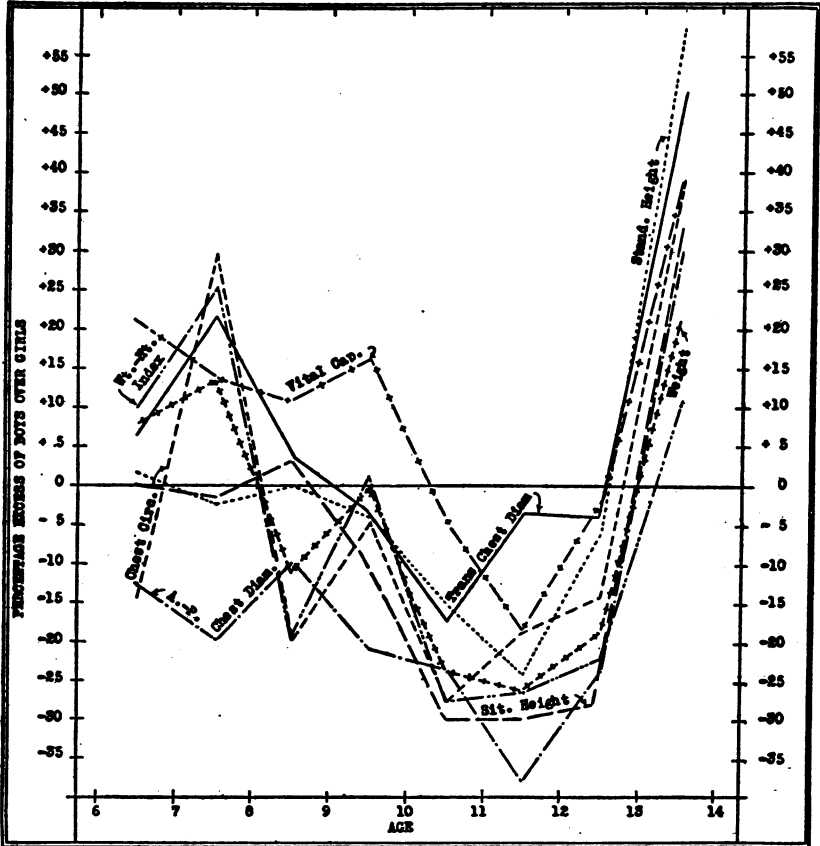


FIGURE 4.—Percentage excess in the mean annual increments of boys over those of girls of corresponding ages—children of native white parents and grandparents in various localities in the United States

years of age in the case of every one of these measurements is greater for boys than for girls.

The ages at which a mean annual increment in a particular measurement is greater for girls than for boys may be conveniently seen in Figure 4 as the ages when the line representing the measurement is below zero. The same thing may be seen in the third and fourth sections of Table 4 as the ages when the excess in the increment of boys over that of girls is preceded by a minus sign.

Comparing Figures 4 and 3 a general similarity may be seen. There are, however, important differences between the curves in the two figures, the most important, perhaps, being the age at which the minima occur. The mean annual increments of girls show the greatest excess over those of boys between 11 and 12 years of age or earlier, whereas the mean measurements of girls show the greatest excess over those of boys at the age of 13 years, a period of 1 to 2 years later.

Many data may be cited to show that the period of greatest growth during the ages considered in this study comes at about the age of puberty, and also that girls mature one to two years earlier than boys. Looking at the curves presented in the preceding figures with these facts in mind, the differences in the means and in the annual increments for boys and girls may be seen to be largely a function of the difference in the age of maturity of the two sexes. Since girls mature earlier than boys, the period of rapid growth that accompanies puberty begins correspondingly earlier in girls than in boys, that period beginning at a time when the mean measurements of boys are, for the most part, greater than the mean measurements of girls. A few years of rapid growth on the part of the girls brings their mean measurements up to or actually in excess of those of the boys before the later maturing boy has begun his period of rapid growth, which occurs at the age of puberty. After puberty, growth in both sexes rapidly falls off, the child having arrived at somewhere near adult size. Just at the time that the growth of girls is falling off, the growth of boys is becoming very rapid. In a few years, therefore, the rapid growth on the part of the boy has brought the majority of his measurements again in excess of those of the girl, where they presumably remain for some years.

EACH MEASUREMENT CONSIDERED SEPARATELY

Figures 5 to 12 show for boys and girls for each measurement the mean, the annual increment, the excess of the mean of boys over that of the girls, and the excess of the annual increment of boys over the annual increment of girls. Each figure has to do with one measurement, the idea being to bring together all the data about a single measurement.

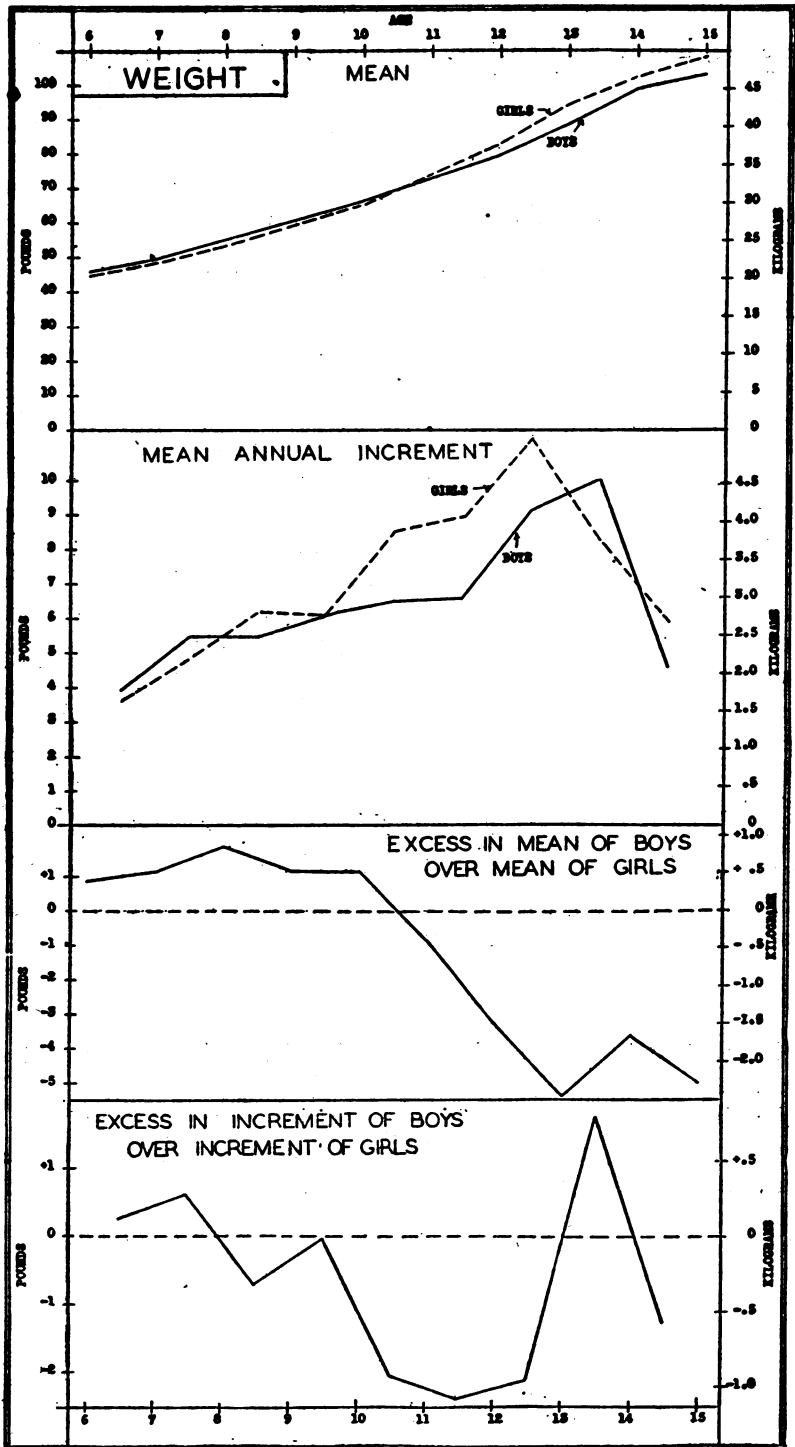


FIGURE 5

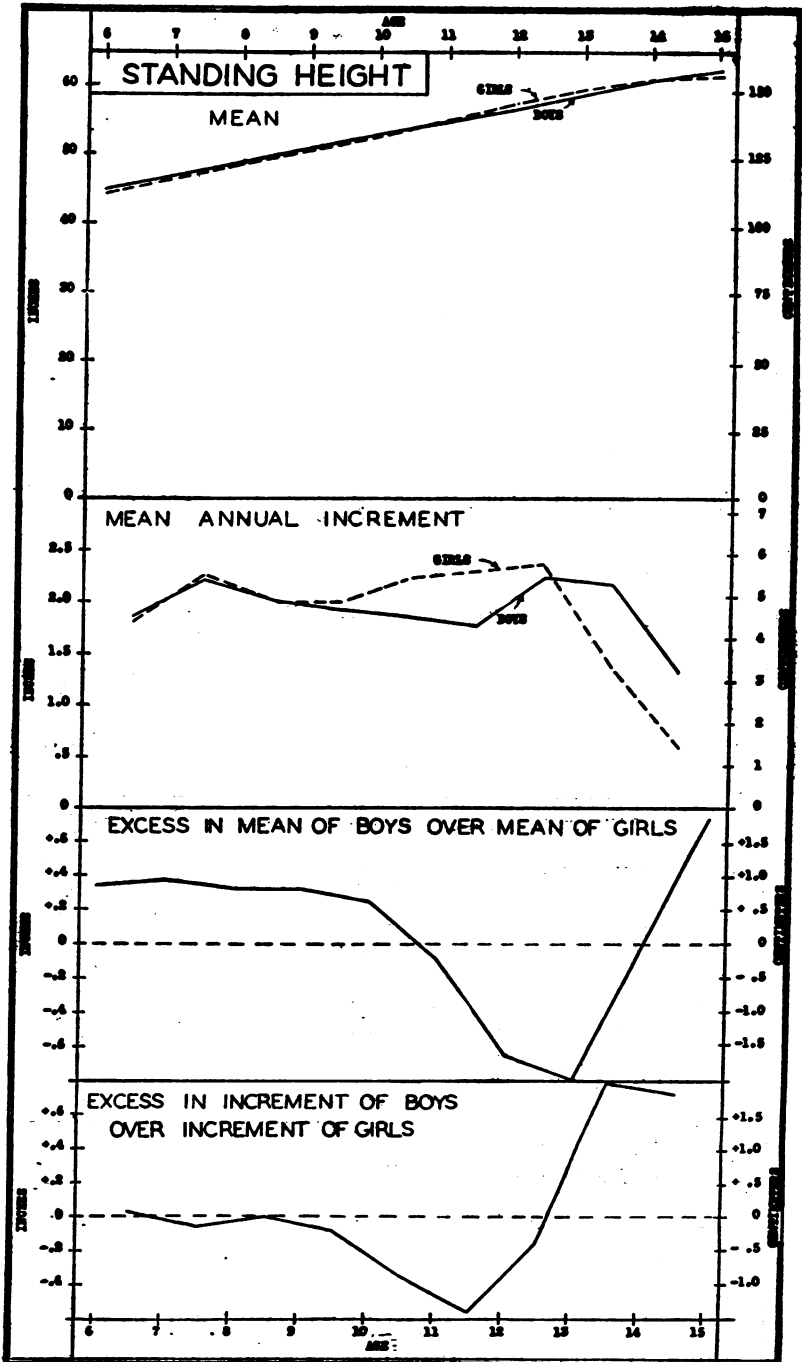


FIGURE 6

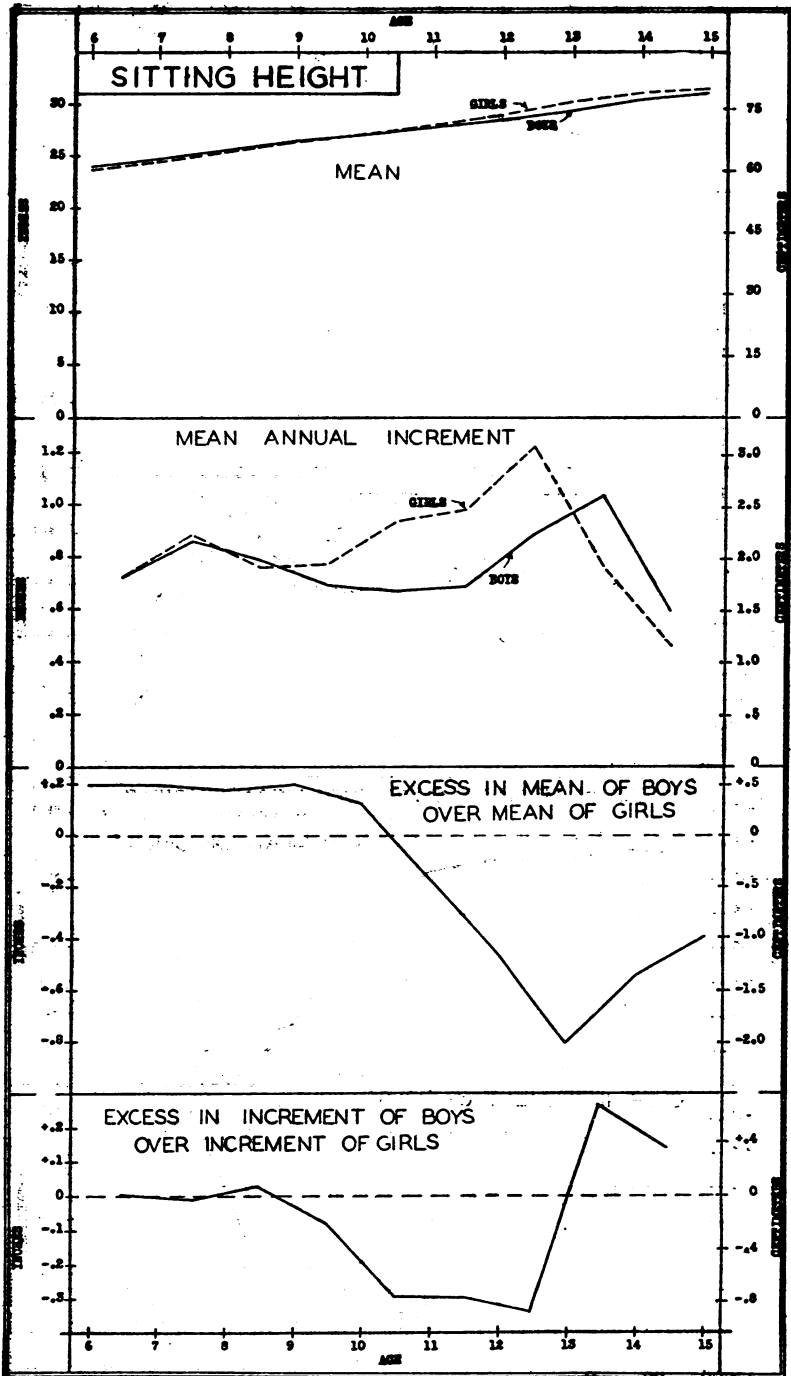


FIGURE 7

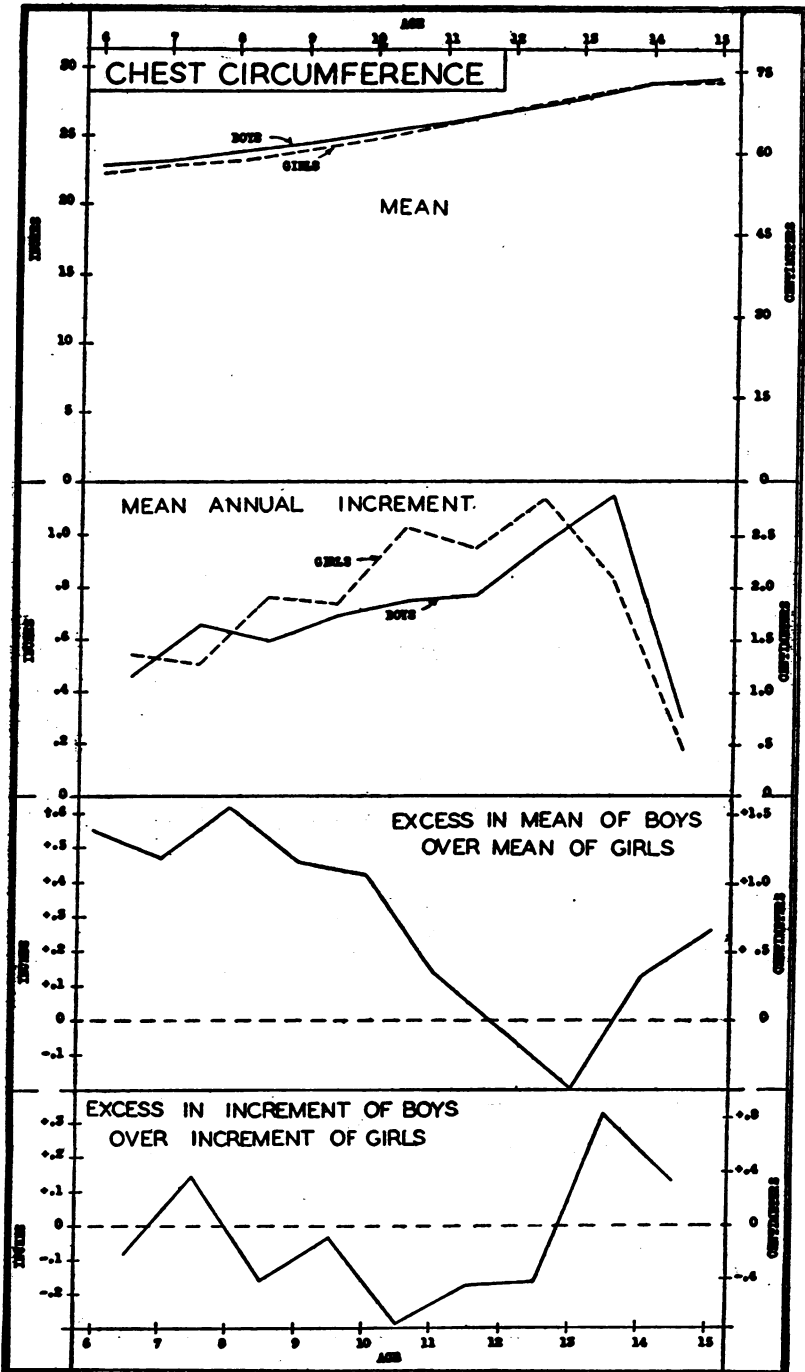


FIGURE 8

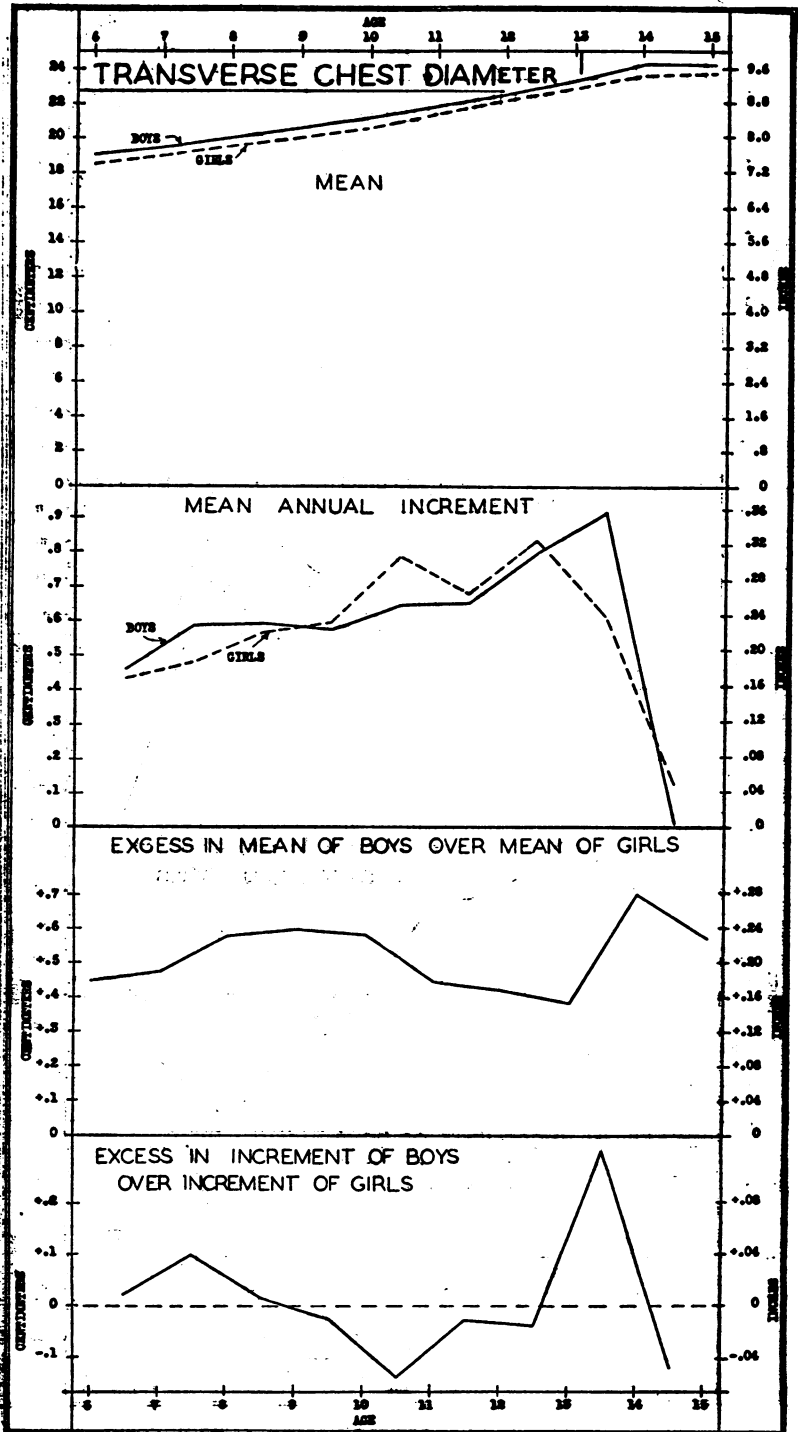


FIGURE 9

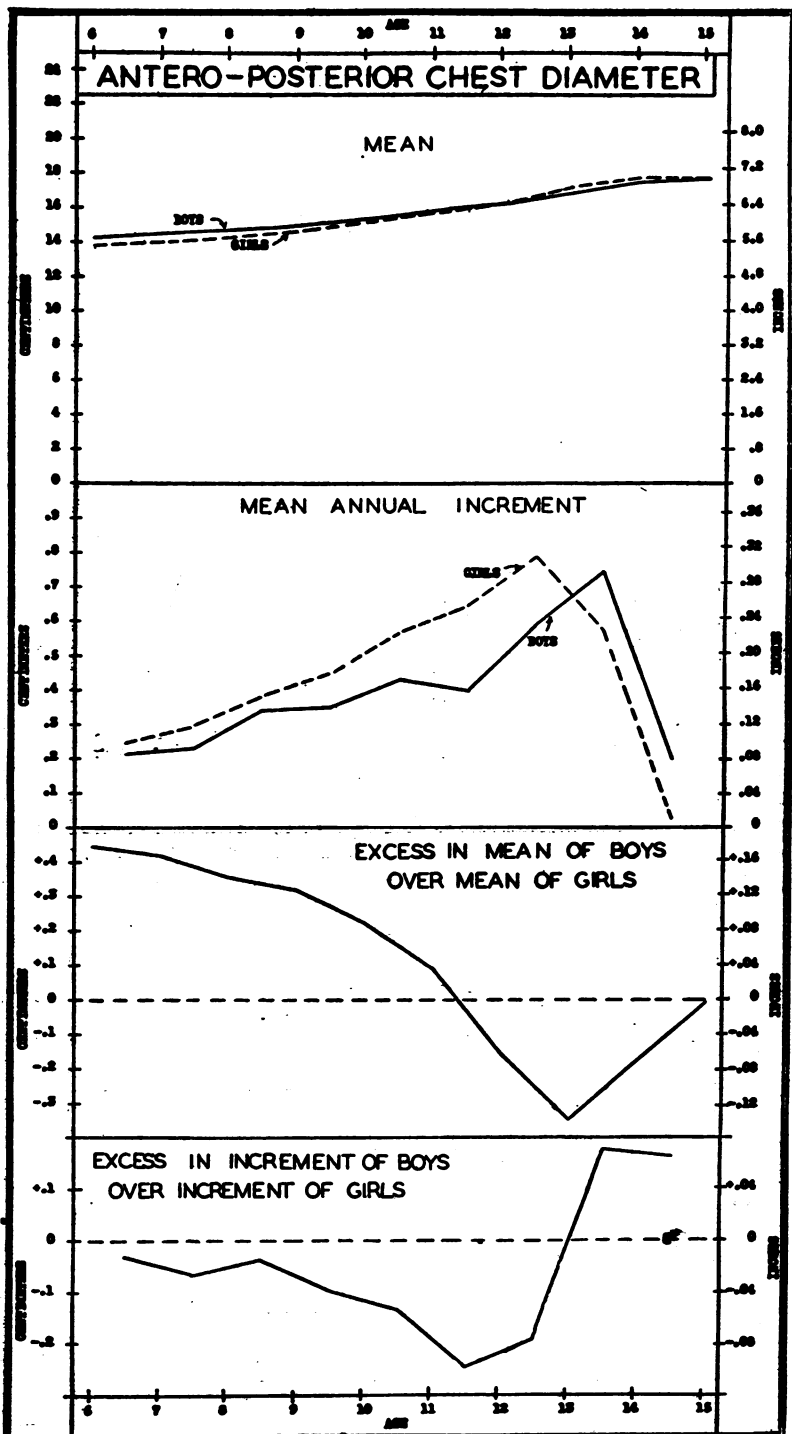


FIGURE 10

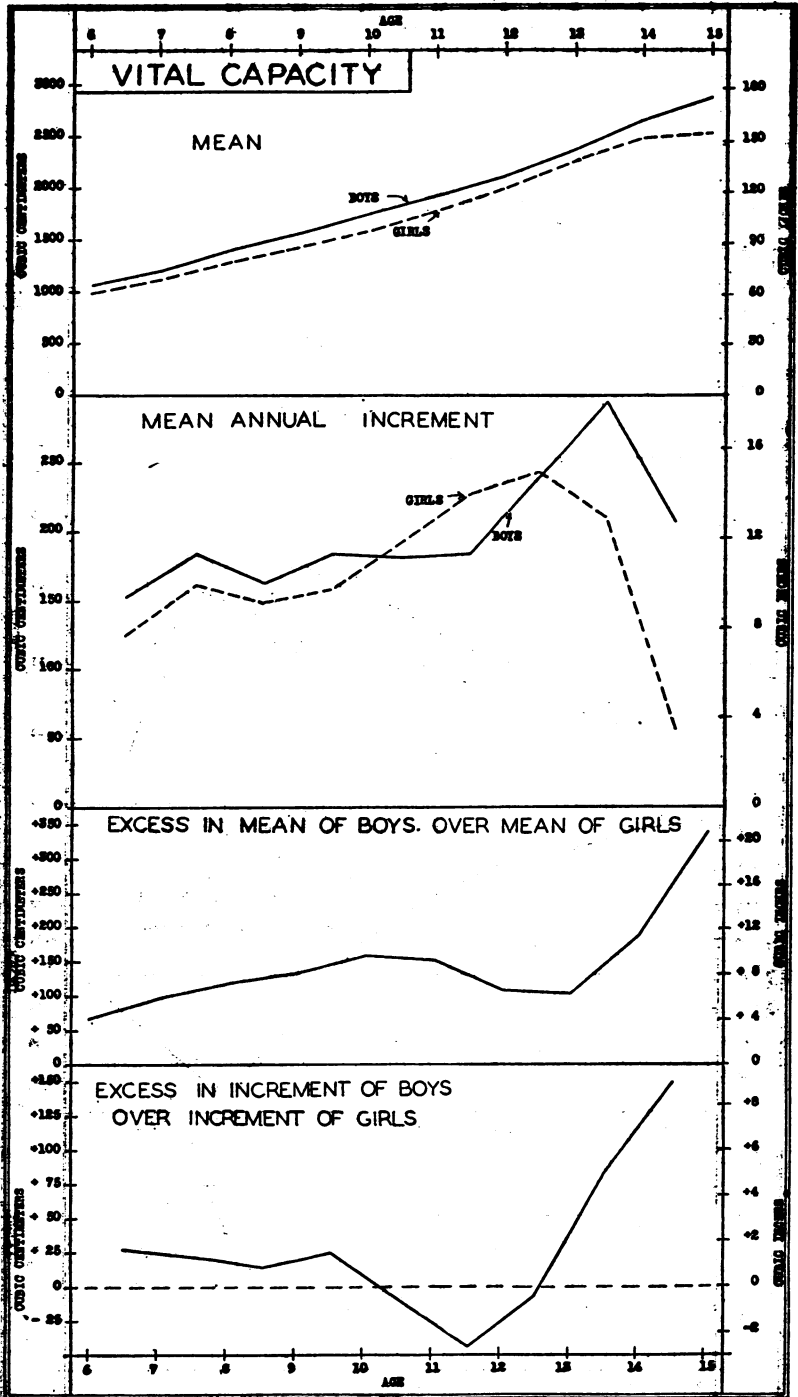


FIGURE 11

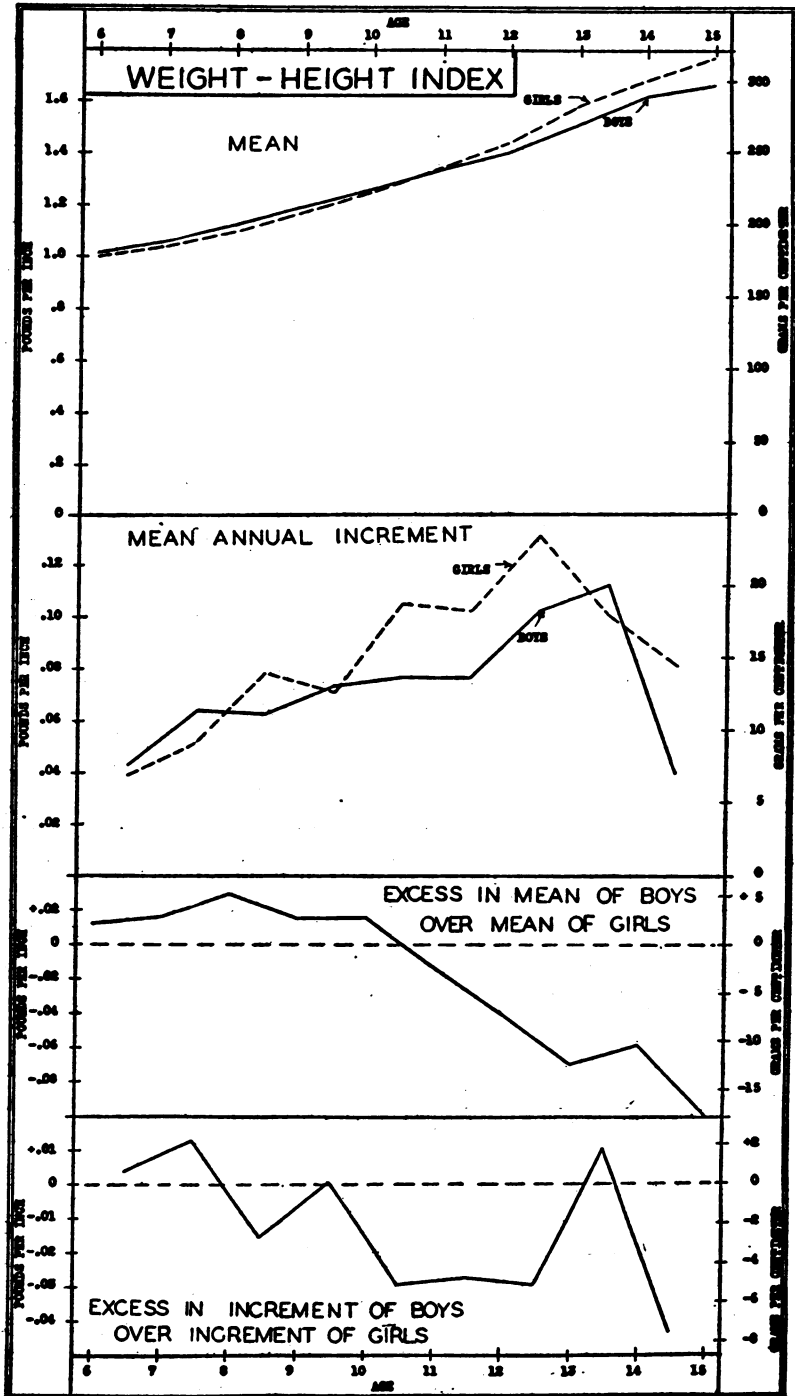


FIGURE 12

SUMMARY

Physical measurements were made of nearly 30,000 school children of native white parents and grandparents in the United States. The measurements made were standing height, or stature, sitting height, or trunk length, weight, chest circumference (at rest), transverse chest diameter, or width of the chest, antero-posterior diameter, or depth of the chest, and vital capacity. The method of making the measurements was identical in all places, the measurements all being made by three medical officers of the Public Health Service. The children were, roughly, from four geographic sections of the United States—Northeast, North Central, South Central, and Western States.

As age increases, weight and vital capacity increase more rapidly than any of the other measurements taken.

In all the measurements except vital capacity and transverse chest diameter there is a period of from 2 to 5 years between 11 and 15 years of age, inclusive, during which the mean measurement for girls exceeds the mean for boys of a corresponding age. In general, the largest excesses of girls over boys occur at about 13 years of age.

By computing the difference between the mean measurements at successive ages we may approximate the mean annual increments of growth in these measurements. The age of greatest growth varies somewhat for the different measurements, but there is a tendency for a maximum percentage increment about the age of puberty, the maxima for girls coming 1 or 2 years earlier than the maxima for boys.

For every measurement considered in this study there is a period of three or more years between 6 and 13 years of age during which the mean annual increment for girls exceeds the increment for boys of a corresponding age. In general, the largest excesses in the increments of girls over those of boys occur from 11 to 12 years of age. The increment from 13 to 14 years of age is for every measurement larger for boys than for girls.

The mean annual increments of girls exceed those of boys at considerably earlier ages than in the case of the mean measurements themselves.

ACKNOWLEDGMENTS

The data used in this study were collected in the different geographic sections by the following medical officers of the United States Public Health Service: Northeast—Dr. E. Blanche Sterling, with the assistance of Miss Elizabeth Bell. North Central and South Central—Dr. Milton V. Veldee, with the assistance of Miss Eugenia Kleinfelter. Western—Dr. Viola Russell Anderson. These physicians made the measurements and set down their judgment of the child's nutrition, posture, build, and state of maturation. In

some localities they also made physical examinations; but as a rule physical examinations previously made by the local school medical officers were accepted as indicating what physical defects were present.

The school officials and teachers in the various cities cooperated with and assisted in every possible way the medical officers who collected the data.

MORTALITY IN CERTAIN STATES, 1923-1928¹

For some months the United States Public Health Service has secured from State health departments current mortality statistics and has published each month death rates from certain important causes from as many States as could furnish the data to the Service. The data so collected for monthly publication are, of course, available for an annual summary also, and the tables here presented have been compiled to give a preliminary summary of mortality during 1928. In the case of Alabama, Maryland, Nevada, and New York the figures are taken from annual summaries prepared by the respective States registrars and may be considered as revisions of the monthly figures previously submitted to the Public Health Service. The Alabama annual summary, however, did not include rates by color, so the rates for white and colored in that State are summarized from the monthly figures and may be considered as somewhat more provisional than those for the State as a whole. Although the data from the various States are not always absolutely comparable, because of slight differences in the procedure of classifying deaths according to cause, they are sufficiently so for practical purposes. Until the tabulations for States in the birth and death registration areas are completed by the Bureau of the Census, these rates may be regarded as fairly accurate provisional rates for a considerable sample of our population. The tables include only those States from which reports had been received up to the time they were completed.

In Table 1 the death rates from all causes and from certain specific causes for groups of States have been brought together. The number of States included varies with the cause; reference to Tables 2, 3, and 4 will show what States are included in the group the records of which are summarized for each cause of death, and also the death rates from that cause in each of the States for each year from 1923 to 1928, inclusive. The death rates for the groups are repeated in those tables, but it seemed worth while to bring together in Table 1 the rates for the different causes and years in as large a group of States as possible. In every case all States for which data were available for the whole period 1923-1928 were used in making the summary. In addition,

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

the detailed tables (Tables 2, 3, and 4) show rates for 1928 and such other years as could be secured for States for which data were not available for the whole period.

TABLE 1.—Summary of mortality from certain causes in a group of States, 1923-1928

Diseases (numbers in parentheses are from the International List of the Causes of Death, third revision, Paris, 1920)	1928	1927	1926	1925	1924	1923	Number of States included	Estimated population as of July 1, 1928
Rate per 1,000 population								
All causes (1-205).....	12.3	11.8	12.7	12.5	12.4	12.9	11	37,607,000
Deaths under 1 year per 1,000 live births								
Total infant mortality.....	70	67	75	77	75	82	8	30,987,000
Malformation and early infancy.....	34	34	35	36	34	38	6	26,144,000
Rate per 100,000 population								
Typhoid fever (1).....	3.0	3.7	4.8	6.4	5.3	5.3	12	40,560,000
Measles (7).....	3.9	2.3	7.8	2.7	6.3	11.2	12	40,560,000
Scarlet fever (8).....	1.8	2.0	2.3	2.7	3.4	4.0	12	40,560,000
Whooping cough (9).....	5.2	5.3	7.9	6.9	7.2	9.2	12	40,560,000
Diphtheria (10).....	6.7	6.8	6.8	7.8	9.7	12.6	12	40,560,000
Influenza (11).....	37.5	19.7	35.9	25.9	17.6	36.4	11	38,610,000
Acute anterior poliomyelitis (22).....	1.2	1.7	.8	1.9	.9	.8	9	31,213,000
Meningococcus meningitis (24).....	1.3	1.0	1.0	.8	.8	1.0	6	32,082,000
Tuberculosis (all forms) (31-37).....	76.9	80.4	87.4	90.4	92.8	96.6	12	39,954,000
Cancer (43-49).....	104.8	102.2	101.5	100.3	98.0	95.5	12	40,560,000
Diabetes mellitus (57).....	21.2	19.0	19.5	18.3	17.9	18.5	5	19,715,000
Cerebral hemorrhage, apoplexy (74).....	96.8	92.3	98.0	101.3	102.9	99.2	6	14,987,000
Heart diseases (87-90).....	228.4	210.6	215.6	203.3	191.7	119.5	7	24,841,000
Pneumonia (all forms) (100,101).....	100.5	80.9	104.3	102.6	104.5	117.3	12	40,560,000
Diarrhea and enteritis (under 2 years) (118).....	18.5	20.4	28.6	33.2	30.2	35.1	11	27,828,000
Nephritis (all forms) (128,129).....	106.4	102.5	108.7	103.2	100.2	101.3	9	33,218,000

¹ See Tables 2, 3, and 4 for names of States included.

The following comments regarding the trend of the mortality from certain causes in the various groups of States may serve to summarize what has occurred in these States, including from fifteen to forty million population:

Both the gross mortality and the infant mortality rates in 1928 were slightly above the corresponding rates for 1927, but slightly less than in any of the other four years, 1923 to 1926. The slight rise in the gross mortality rate in 1928 over 1927 was true in 10 of the 11 States for which data are available for both years, and in the other State, California, the rate was the same for the two years. In general, it is also true that the 1928 rate represents a reduction as compared with years prior to 1927, but it is not true of every State. Death rates for industrial policyholders of the Metropolitan Life Insurance Co. also show a rise in 1928 over 1927. The year 1927 appears to have had an unusually low death rate, representing a decline from the rates of preceding years that could hardly be expected to continue.

Not every cause of death, however, showed an increase over 1927. Typhoid fever and diarrhea decreased somewhat as compared with 1927 and materially as compared to 1923-1926. Likewise diphtheria, scarlet fever, and whooping cough showed slight decreases as compared with 1927, but rather material decreases as compared with several of the earlier years shown in the table. Poliomyelitis showed a slight decrease from the rate for 1927, but an increase over 1923, 1924, and 1926. Of course, these and the other communicable diseases of childhood tend to occur in cycles and the rate in a single year is, therefore, more or less meaningless so far as trend is concerned.

Tuberculosis continued an uninterrupted decline which has lasted throughout the six years.

On the other hand, the death rate from heart diseases was higher than in any of the five preceding years, 1927 being the only interruption to the steady increase in mortality from this cause. The cancer death rate has increased every year throughout the period 1923-1928. Cerebral hemorrhage and apoplexy increased in 1928 over 1927, but decreased somewhat as compared with each of the years 1923 to 1926. The same is true of pneumonia, but influenza showed a higher rate than in any of the five preceding years. At that, it will be remembered that the recent outbreak of influenza was by no means finished by the end of 1928. Diabetes and meningococcus meningitis both showed higher rates than in any of the five preceding years, and nephritis than in any year except 1926.

Tables 2, 3, and 4 show data for each State individually and also for a group of industrial policyholders of the Metropolitan Life Insurance Co. The experience of the several States is not always uniform, but in general they bear out the above comments regarding the mortality in the groups of States as a whole.

TABLE 2.—Mortality from all causes in certain States and in a group of insured wage earners, 1923-1928

State	Death rate per 1,000 population (all causes, 1-206)					
	1923	1927	1926	1925	1924	1923
States with complete data:						
Total (11 States).....	12.3	11.8	12.7	12.5	12.4	12.9
Alabama (total).....	12.3	10.6	11.7	11.6	11.7	11.1
White.....	9.6	8.6	9.6			
Colored.....	16.8	14.1	15.9			
California.....	14.5	14.5	14.2	14.1	14.5	14.3
Connecticut.....	10.7	10.6	11.8	11.6	11.3	12.0
Indiana.....	12.2	11.5	13.2	12.7	12.3	13.2
Louisiana.....	12.8	12.2	12.6	13.2	13.3	12.0
Maryland.....	13.4	13.2	14.7	14.1	13.9	14.9
Minnesota.....	9.4	9.2	9.7	9.7	9.5	10.0
Nevada.....	16.6	14.4	12.3	12.7	12.7	11.9
New Jersey.....	11.6	11.3	12.3	11.8	11.7	12.3
New York (exclusive of New York City).....	13.1	12.8	14.0	13.3	13.3	14.8
Pennsylvania.....	12.0	11.4	12.5	12.2	12.3	13.3
Other States:						
North Carolina.....	12.2					
South Dakota.....	8.7					
Tennessee.....	12.4					
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	8.6	8.4	8.9	8.5	8.5	9.0

TABLE 3.—*Infant mortality in certain States, 1923-1928*

State	Deaths under 1 year per 1,000 live births					
	1923	1927	1926	1925	1924	1923
TOTAL INFANT MORTALITY						
States with complete data:						
Total (8 States).....	70	67	75	77	75	82
Alabama (total).....	74	65	68	73	79	77
White.....	63	56	62			
Colored.....	98	84	89			
California.....	63	63	63	69	67	72
Connecticut.....	62	59	72	73	69	76
Indiana.....	64	59	72	68	66	71
Louisiana.....	81	77	74	89	94	82
Maryland.....	79	81	87	90	87	94
New York (exclusive of New York City).....	65	63	74	71	71	79
Pennsylvania.....	72	70	82	82	78	88
Other States:						
South Dakota.....	59					
Wisconsin.....	61					

MALFORMATIONS AND DISEASES OF EARLY INFANCY

States with complete data:						
Total (6 States).....	34	34	35	36	34	38
Alabama (total).....	30	28	29	32	35	39
White.....	30	28	29			
Colored.....	32	29	29			
California.....	29	31	32	33	32	34
Louisiana.....	30	31	29	37	39	36
Maryland.....	37	38	38	42	41	40
New York (exclusive of New York City).....	38	38	40	38	39	42
Pennsylvania.....	34	35	36	36	36	37

TABLE 4.—*Mortality from certain causes in several States and in a group of insured wage earners, 1923-1928*

State	Rate per 100,000 population					
	1923	1927	1926	1925	1924	1923
TYPHOID FEVER (1)						
States with complete data:						
Total (12 States).....	3.0	3.7	4.8	6.4	5.3	5.3
Alabama (total).....	9.5	12.5	15.1	16.8	14.4	14.9
White.....	6.3	8.0	12.5			
Colored.....	14.6	20.2	18.9			
California.....	2.4	2.4	2.7	2.8	5.7	3.9
Connecticut.....	.6	1.1	1.8	2.5	2.5	2.6
Indiana.....	4.4	4.8	6.7	8.1	7.1	7.0
Louisiana.....	12.9	14.6	17.3	34.0	21.9	14.3
Maryland.....	5.2	5.9	7.6	7.4	6.4	6.5
Minnesota.....	.5	1.0	1.0	1.8	1.4	2.4
Nevada.....	2.6	6.5	2.6	5.2		10.4
New Jersey.....	1.7	1.4	2.6	3.1	2.7	3.1
New York (exclusive of New York City).....	2.1	2.1	3.4	3.4	3.5	3.6
Pennsylvania.....	1.9	2.7	3.7	4.8	3.9	4.9
Wisconsin.....	.8	1.4	1.4	2.0	1.0	2.2
Other States:						
North Carolina.....	6.3					
South Carolina.....	18.1	22.2	26.3	24.8		
South Dakota.....	2.8					
Tennessee.....	13.4					
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	2.7	4.7	4.2	4.6	4.4	5.2

TABLE 4.—Mortality from certain causes in several States and in a group of insured wage earners, 1923-1928—Continued

State	Rate per 100,000 population					
	1928	1927	1926	1925	1924	1923
MEASLES (7)						
States with complete data:						
Total (12 States).....	3.9	3.3	7.8	2.7	6.3	11.2
Alabama (total).....	8.7	4.5	5.0	.8	16.3	12.5
White.....	9.7	4.8	6.3			
Colored.....	5.4	3.0	2.1			
California.....	.6	7.0	2.3	.7	7.7	7.7
Connecticut.....	3.7	1.3	12.5	2.5	3.1	10.8
Indiana.....	2.0	1.7	12.4	1.9	5.8	8.8
Louisiana.....	9.0	13.0	.4	.4	23.8	6.3
Maryland.....	6.5	1.3	13.9	1.5	3.2	9.7
Minnesota.....	.4	2.2	6.7	.6	5.4	11.2
Nevada.....	1.3	2.6			2.6	1.3
New Jersey.....	6.3	.6	11.1	3.3	5.3	10.3
New York (exclusive of New York City).....	3.5	2.6	4.6	3.0	4.5	8.5
Pennsylvania.....	4.8	2.5	11.0	5.3	3.2	17.8
Wisconsin.....	.4	3.3	5.0	2.2	2.6	7.1
Other States:						
North Carolina.....	17.4					
South Carolina.....	14.8	3.6	.3	.1		
South Dakota.....	1.6					
Tennessee.....	8.0					
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	4.1	3.4	8.0	2.5	5.7	8.4
SCARLET FEVER (8)						
States with complete data:						
Total (12 States).....	1.8	2.0	2.3	2.7	3.4	4.0
Alabama (total).....	.4	.9	.6	.8	.6	.8
White.....	.4	1.2	.9			
Colored.....	.1	.2				
California.....	1.2	1.4	1.1	1.5	2.5	3.0
Connecticut.....	1.3	1.4	2.2	2.9	3.9	3.6
Indiana.....	1.8	2.8	3.2	3.4	2.3	2.9
Louisiana.....	.5	.6	.6	.5	.4	.3
Maryland.....	.8	1.1	1.3	1.1	2.7	3.3
Minnesota.....	2.3	3.4	5.8	6.0	8.1	9.3
Nevada.....		1.3		2.6	1.3	
New Jersey.....	1.6	2.5	2.2	1.8	1.8	2.7
New York (exclusive of New York City).....	2.1	1.9	2.1	2.1	3.3	3.4
Pennsylvania.....	2.5	2.6	2.8	3.6	3.8	4.4
Wisconsin.....	2.4	2.1	2.6	3.7	7.3	8.7
Other States:						
North Carolina.....	1.3					
South Carolina.....	.5	.2	.2	.3		
South Dakota.....	2.7					
Tennessee.....	1.6					
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	2.6	3.0	3.4	3.4	4.3	4.4
WHOOPING COUGH (9)						
States with complete data:						
Total (12 States).....	5.2	5.3	7.9	6.9	7.2	9.2
Alabama (total).....	7.8	13.6	11.8	9.0	16.1	13.4
White.....	4.4	11.8	11.4			
Colored.....	12.4	15.5	13.3			
California.....	7.4	4.4	3.8	11.2	4.1	8.3
Connecticut.....	6.3	2.5	6.1	7.5	5.2	9.0
Indiana.....	4.3	5.6	12.8	5.6	9.8	8.9
Louisiana.....	9.2	11.0	9.3	10.7	7.3	14.6
Maryland.....	7.3	12.0	11.6	11.2	9.1	17.1
Minnesota.....	2.8	2.8	6.6	3.7	5.2	6.1
Nevada.....	6.5		1.3	1.3		2.6
New Jersey.....	4.8	4.7	4.6	6.8	7.3	6.5
New York (exclusive of New York City).....	3.9	3.7	7.2	3.4	5.7	6.4
Pennsylvania.....	5.3	4.5	9.6	6.8	7.4	10.8
Wisconsin.....	2.2	2.5	5.5	4.0	4.6	5.9
Other States:						
North Carolina.....	6.5					
South Carolina.....	9.7	12.8	4.9	7.3		
South Dakota.....	4.8					
Tennessee.....	5.2					
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	2.7	3.1	5.0	3.6	3.5	4.8

TABLE 4.—Mortality from certain causes in several States and in a group of insured wage earners, 1923-1928—Continued

State	Rate per 100,000 population					
	1928	1927	1926	1925	1924	1923
DIPHTHERIA (10)						
States with complete data:						
Total (12 States).....	6.7	6.8	6.8	7.8	9.7	12.6
Alabama (total).....	9.2	9.8	8.2	6.8	6.1	8.5
White.....	11.1	12.7	9.7			
Colored.....	4.1	3.8	5.4			
California.....	6.0	6.9	6.7	6.4	17.2	16.5
Connecticut.....	5.2	5.9	5.3	8.2	11.2	12.7
Indiana.....	5.7	7.0	5.9	5.6	8.1	14.3
Louisiana.....	7.3	10.0	7.5	6.8	6.2	8.1
Maryland.....	6.5	7.4	6.2	5.6	7.6	10.0
Minnesota.....	2.6	3.1	5.8	8.9	8.5	8.4
Nevada.....	2.6	2.6	2.6	1.3	1.3	2.6
New Jersey.....	12.0	10.9	8.6	9.1	9.6	13.9
New York (exclusive of New York City).....	4.0	4.8	4.6	6.4	7.1	9.4
Pennsylvania.....	8.5	8.6	8.3	10.3	11.5	15.4
Wisconsin.....	3.3	4.4	5.4	6.1	7.3	13.0
Other States:						
North Carolina.....	11.1					
South Carolina.....	9.4	8.2				
South Dakota.....	2.1					
Tennessee.....	7.8					
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	9.4	10.2	9.5	10.2	12.7	15.5
INFLUENZA (11)						
States with complete data:						
Total (11 States).....	37.5	19.7	35.9	25.9	17.6	36.4
Alabama.....	71.6	30.4	66.8	46.1	26.7	49.6
California.....	46.6	15.7	26.4	17.5	12.2	22.1
Connecticut.....	21.2	18.8	35.9	26.6	19.2	38.1
Indiana.....	59.6	25.4	51.5	44.6	23.1	62.9
Maryland.....	18.9	21.5	33.1	20.4	14.3	34.5
Minnesota.....	39.7	17.9	20.2	22.9	8.6	24.1
Nevada.....	66.2	18.2	14.3	18.2	6.5	13.0
New Jersey.....	15.9	20.2	19.7	11.2	9.9	22.0
New York (exclusive of New York City).....	18.3	13.9	29.9	14.7	11.0	20.7
Pennsylvania.....	41.7	24.5	44.0	20.2	25.8	44.3
Wisconsin.....	43.2	20.4	35.6	31.8	15.1	39.0
Other States:						
Louisiana.....	65.0	30.8	67.1	(1)	(1)	42.0
North Carolina.....	47.1					
South Carolina.....	70.8	15.0	8.3	6.4		
South Dakota.....	53.6					
Tennessee.....	66.9					
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	21.9	15.7	27.4	19.4	14.2	30.1
ACUTE ANTERIOR POLIOMYELITIS (22)						
States with complete data:						
Total (9 States).....	1.2	1.7	0.8	1.9	0.9	0.8
California.....	1.8	5.1	.7	3.5	.8	.8
Connecticut.....	.8	1.0	.4	1.2	1.5	.7
Indiana.....	.2	1.4	.6	.9	.5	.8
Louisiana.....	1.0	2.0	.7	.8	.6	.5
Maryland.....	1.6	.4	.8	.9	1.2	.5
Minnesota.....	2.2	1.3	.6	5.5	1.2	.6
Nevada.....	1.3	5.2		10.4	5.2	
New York (exclusive of New York City).....	1.7	.9	2.0	2.0	1.8	1.2
Pennsylvania.....	.8	1.0	.5	.7	.4	.6
Other States:						
Alabama (total).....	.8	.9	1.0	.9		
White.....	.8					
Colored.....	.9					
North Carolina.....	.6					
South Carolina.....	.9	1.3	.8	2.1		
South Dakota.....	2.4					
Tennessee.....	1.6					
Wisconsin.....	.5					
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	1.2	2.0	.7	1.4	1.0	.7

¹Not available.

TABLE 4.—Mortality from certain causes in several States and in a group of insured wage earners, 1925-1928—Continued

State	Rate per 100,000 population					
	1928	1927	1926	1925	1924	1923
MENINGOCOCCUS MENINGITIS (24)						
States with complete data:						
Total (6 States).....	1.3	1.0	1.0	0.8	0.8	1.0
California.....	2.5	2.3	2.4	.9	1.0	1.2
Connecticut.....	1.2	.6	.6	.8	1.5	3.1
Indiana.....	.2	.3	.3	.5	.4	.4
Minnesota.....	1.6	2.2	.6	.7	.5	.3
Nevada.....	11.6	-----	1.3	2.6	3.9	1.3
Pennsylvania.....	1.0	.5	.9	.8	.7	.8
Other States:						
Alabama (total).....	.1	-----	-----	-----	-----	-----
White.....	.1	-----	-----	-----	-----	-----
Colored.....	.1	-----	-----	-----	-----	-----
North Carolina.....	.03	-----	-----	-----	-----	-----
South Carolina.....	1.5	1.6	2.1	1.8	-----	-----
South Dakota.....	.6	-----	-----	-----	-----	-----
Tennessee.....	.9	-----	-----	-----	-----	-----
TUBERCULOSIS, ALL FORMS (31-37)						
States with complete data:						
Total (12 States).....	76.9	80.4	87.4	90.4	92.8	96.6
Alabama.....	90.4	87.0	94.1	99.6	97.4	96.6
California.....	133.3	134.4	134.2	141.1	148.8	147.3
Connecticut.....	67.4	66.8	78.2	75.3	81.5	89.3
Indiana.....	70.0	70.4	84.0	82.2	84.0	94.7
Louisiana.....	92.0	88.4	98.1	102.1	103.3	107.1
Maryland.....	104.4	101.7	113.9	120.8	119.9	124.0
Minnesota.....	52.1	58.3	63.6	61.0	66.4	73.5
Nevada.....	181.8	113.0	93.5	107.8	74.0	93.5
New Jersey.....	74.0	75.3	84.0	83.1	86.6	92.0
New York (exclusive of New York City).....	76.0	77.5	84.8	88.7	91.4	100.9
Pennsylvania.....	67.3	69.9	77.0	76.9	81.9	85.1
Wisconsin.....	55.1	59.3	64.8	61.0	62.9	65.8
Other States:						
North Carolina.....	81.5	-----	-----	-----	-----	-----
South Carolina.....	85.2	83.0	88.8	89.3	-----	-----
South Dakota.....	63.9	-----	-----	-----	-----	-----
Tennessee.....	127.6	-----	-----	-----	-----	-----
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	90.0	93.8	99.5	98.2	104.4	110.5
CANCER (43-49)						
States with complete data:						
Total (12 States).....	104.8	102.2	101.5	100.5	98.0	95.5
Alabama.....	50.8	50.6	46.1	44.7	45.9	42.6
California.....	140.6	138.7	130.6	126.3	126.3	121.0
Connecticut.....	108.4	106.9	106.7	107.6	104.1	98.2
Indiana.....	100.4	102.0	106.3	100.3	97.6	99.4
Louisiana.....	67.9	67.9	65.2	63.3	62.1	59.2
Maryland.....	114.2	100.1	107.5	103.9	102.8	108.0
Minnesota.....	106.3	101.9	99.7	104.3	99.5	98.8
Nevada.....	94.8	79.2	70.1	53.3	58.5	52.0
New Jersey.....	106.7	105.2	103.6	103.7	97.7	92.9
New York (exclusive of New York City).....	123.5	125.1	122.0	121.2	119.9	123.6
Pennsylvania.....	98.6	96.3	96.4	91.8	91.5	89.9
Wisconsin.....	105.0	101.0	106.4	103.4	98.9	91.6
Other States:						
South Carolina.....	41.3	39.0	38.0	38.8	-----	-----
South Dakota.....	69.5	-----	-----	-----	-----	-----
Tennessee.....	58.8	-----	-----	-----	-----	-----
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	76.4	75.6	75.1	71.8	71.5	72.7

TABLE 4.—Mortality from certain causes in several States and in a group of insured wage earners, 1925-1928—Continued

State	Rate per 100,000 population					
	1928	1927	1926	1925	1924	1923
DIABETES MELLITUS (57)						
States with complete data:						
Total (5 States).....	21.2	19.0	19.5	18.3	17.9	18.5
Alabama (total).....	9.7	8.2	7.8	6.7	5.6	5.5
White.....	9.2	8.8	8.0	.....	.....	.....
Colored.....	10.1	5.9	7.0	.....	.....	.....
Maryland.....	22.9	18.7	23.0	18.1	20.2	20.2
New York (exclusive of New York City).....	25.1	24.4	23.8	22.6	21.4	24.5
Nevada.....	15.6	9.1	18.2	5.2	.....	5.2
Pennsylvania.....	21.7	19.0	19.6	18.2	18.6	18.8
Other States:						
California.....	21.9	.....	.....	.....	.....	.....
Louisiana.....	12.4	(1)	(1)	8.7	8.3	9.1
Minnesota.....	18.8	.....	.....	.....	.....	.....
South Carolina.....	8.3	6.7	7.0	5.9	.....	.....
South Dakota.....	17.6	.....	.....	.....	.....	.....
Tennessee.....	9.6	.....	.....	.....	.....	.....
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	17.8	17.1	17.0	15.5	15.1	16.2
CEREBRAL HEMORRHAGE, APOPLEXY (74)						
States with complete data:						
Total (6 States).....	96.8	92.3	98.0	101.3	102.9	90.2
Alabama (total).....	58.2	50.8	52.9	52.3	48.1	43.5
White.....	48.9	46.4	46.2	.....	.....	.....
Colored.....	75.7	60.9	64.7	.....	.....	.....
Indiana.....	110.8	102.4	109.3	105.5	106.0	104.3
Louisiana.....	68.1	69.0	63.6	68.3	62.6	54.5
Maryland.....	100.1	99.5	112.8	123.2	120.2	120.7
Nevada.....	94.8	81.8	63.6	81.8	70.1	64.9
New York (exclusive of New York City).....	115.6	112.1	121.2	119.6	130.6	135.2
Other States:						
California.....	90.9	.....	.....	.....	.....	.....
South Dakota.....	53.4	.....	.....	.....	.....	.....
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	57.2	56.0	56.5	54.4	61.1	61.9
HEART DISEASES (87-90)						
States with complete data:						
Total (7 States).....	228.4	210.6	215.6	203.3	191.7	119.5
Alabama.....	134.4	103.3	108.5	101.3	95.3	79.0
Indiana.....	189.6	171.0	168.8	159.9	156.3	158.7
Louisiana.....	192.7	177.8	179.4	191.6	189.5	189.1
Maryland.....	234.4	226.9	230.6	207.9	193.1	202.9
Nevada.....	198.7	184.4	162.4	171.4	180.5	131.2
New York (exclusive of New York City).....	308.6	296.7	302.8	273.4	261.3	266.7
Pennsylvania.....	227.1	214.0	216.0	198.0	186.0	186.3
Other States:						
California.....	280.6	.....	.....	.....	.....	.....
Connecticut.....	174.0	.....	.....	.....	.....	.....
Minnesota.....	150.7	.....	.....	.....	.....	.....
South Dakota.....	117.6	.....	.....	.....	.....	.....
Tennessee.....	127.1	.....	.....	.....	.....	.....
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	143.4	134.7	136.4	128.7	125.2	128.7

¹ Not available.

TABLE 4.—Mortality from certain causes in several States and in a group of insured wage earners, 1923-1928—Continued

State	Rate per 100,000 population					
	1926	1927	1926	1925	1924	1923
PNEUMONIA, ALL FORMS (100, 101)						
States with complete data:						
Total (12 States).....	100.5	80.9	104.3	102.6	105.5	117.3
Alabama (total).....	100.0	68.4	96.4	106.0	120.4	91.1
White.....	86.4	58.7	84.0	.....	.....	.....
Colored.....	132.0	90.8	134.3	.....	.....	.....
California.....	98.0	85.4	84.0	86.7	96.2	97.5
Connecticut.....	100.3	84.8	108.6	109.3	101.8	127.3
Indiana.....	103.9	78.9	112.5	100.8	100.7	120.1
Louisiana.....	100.6	45.7	61.6	108.3	113.2	97.0
Maryland.....	130.1	128.7	147.7	137.4	142.4	168.8
Minnesota.....	69.1	68.1	70.2	70.7	69.4	76.1
Nevada.....	170.1	126.0	120.8	118.2	146.8	120.8
New Jersey.....	82.3	55.4	79.5	69.0	63.5	74.2
New York (exclusive of New York City).....	98.1	86.3	113.9	97.7	91.9	121.3
Pennsylvania.....	115.8	98.1	133.0	126.0	137.0	155.4
Wisconsin.....	86.6	64.8	82.5	88.7	89.4	106.3
Other States:						
North Carolina.....	97.6	.....	.....	.....	.....	.....
South Carolina.....	104.5	98.3	125.5	108.2	.....	.....
South Dakota.....	68.3	.....	.....	.....	.....	.....
Tennessee.....	97.1	.....	.....	.....	.....	.....
Industrial policyholders Metropolitan Life Insurance Co., ages 1 and over.....	72.3	63.0	78.2	69.0	70.2	77.6
DIARRHEA AND ENTERITIS UNDER 2 YEARS (113)						
States with complete data:						
Total (11 States).....	18.5	20.4	25.6	33.2	30.2	35.1
Alabama.....	35.4	30.2	36.2	31.4	34.1	35.0
California.....	18.1	22.0	22.9	27.5	31.4	36.2
Connecticut.....	6.5	11.2	16.0	18.6	19.8	21.3
Indiana.....	17.7	17.0	27.2	31.3	26.0	20.0
Louisiana.....	26.1	38.3	33.9	56.5	51.8	33.3
Maryland.....	29.2	28.9	35.0	48.4	42.9	50.9
Nevada.....	7.8	16.9	10.4	27.3	18.2	18.2
New Jersey.....	14.9	16.6	20.4	26.1	26.2	30.1
New York (exclusive of New York City).....	12.2	13.9	18.5	24.7	21.0	29.1
Pennsylvania.....	21.4	22.7	31.5	42.0	36.1	47.6
Wisconsin.....	10.6	13.8	15.1	20.1	14.6	18.6
Other States:						
North Carolina.....	40.8	.....	.....	.....	.....	.....
South Dakota.....	8.9	.....	.....	.....	.....	.....
Tennessee.....	32.7	.....	.....	.....	.....	.....
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	8.6	9.1	10.5	12.3	11.3	11.1
NEPHRITIS (128,129)						
States with complete data:						
Total (9 States).....	106.4	102.5	108.7	103.2	100.2	101.3
Alabama (total).....	86.0	76.2	83.4	82.6	72.6	77.7
White.....	71.5	65.1	70.5	.....	.....	.....
Colored.....	115.9	100.0	106.4	.....	.....	.....
California.....	113.1	110.4	107.3	91.8	95.2	96.6
Indiana.....	81.7	80.3	85.6	89.6	83.2	92.7
Louisiana.....	118.1	97.5	107.2	95.2	81.5	75.0
Maryland.....	138.2	149.8	157.0	148.8	140.3	138.8
Nevada.....	70.0	48.1	46.8	42.9	42.9	50.6
New Jersey.....	104.9	97.4	102.2	97.6	105.1	104.2
New York (exclusive of New York City).....	110.2	113.7	123.8	118.2	111.8	117.3
Pennsylvania.....	107.7	102.0	107.0	104.0	99.0	103.5
Other States:						
Minnesota.....	53.8	.....	.....	.....	.....	.....
South Carolina.....	104.5	93.4	97.1	98.2	.....	.....
South Dakota.....	38.9	.....	.....	.....	.....	.....
Industrial policyholders, Metropolitan Life Insurance Co., ages 1 and over.....	71.3	70.8	74.9	71.2	66.5	69.6

COURT DECISIONS RELATING TO PUBLIC HEALTH

Provision of city ordinance fixing closing hours of barber shops held void.—(Wyoming Supreme Court; State ex rel. Newman v. City of Laramie et al., 275 P. 106; decided March 5, 1929.) A State statute provided that "power and authority is hereby granted to each incorporated city or town within the State to license, regulate, and control barber shops." The city of Laramie passed "An ordinance for licensing, regulating, and controlling barber shops," one section of which contained the provision that "No barber shop shall open for business earlier than 8 o'clock a. m., nor * * * close later than 6 o'clock p. m. * * * excepting on Saturdays and days preceding" certain named holidays, "when they shall close not later than 9 o'clock p. m." In an action for a writ of prohibition, the relator, the owner of a barber shop, asserted that the city had no power to require that his shop be closed from 6 p. m. until 8 a. m. The defendants contended that the questioned provision should be upheld as a reasonable regulation enacted for the purpose of facilitating inspection. The supreme court took the view that the provision complained of was not a reasonable exercise of the power to license, regulate, and control barber shops and was, therefore, unauthorized and void. Following are portions of the opinion:

We think the point in issue here can be disposed of by deciding whether the grant of power to "license, regulate, and control barber shops" ought to be construed to include the power to order that barber shops be closed from 6 in the evening until 8 in the morning. The grant of power to license and regulate implies that the business is to be allowed to continue under such reasonable regulations as the local authorities may adopt. [Case cited.] We must, then, apply to the challenged provisions of the ordinance the test of reasonableness. * * *

Laws regulating barber shops are upheld as proper measures for the protection of the public health. The right to regulate is based on the fact that disease may be spread by unclean and insanitary practices. The purpose of the laws is to prevent this by regulations that will require that shops be operated in a clean and sanitary manner, by clean and competent barbers. * * *

Unless the closing regulation in question in the case at bar bears a real and substantial relation to the purpose of protecting the public from the spread of disease, it stands on the same footing as any similar restriction on the right of a citizen to engage in a harmless and useful occupation. * * *

Counsel for defendants insist that * * * the questioned provision of the ordinance in the case at bar should be upheld as a reasonable regulation enacted for the purpose of facilitating inspection.

* * * In the case at bar the city's power to fix closing hours * * * must exist, if at all, as an incident to the power to regulate. The power has been exercised by prescribing sanitary regulations and by providing for inspections to see that those regulations are followed. Such provisions are conceded to be reasonable. There is nothing in the statute to show that the legislature thought the municipal corporation would need to close the shops in order more readily to inspect them, nor is there anything on the face of the ordinance to

show that the closing of shops at 6 o'clock in the evening was necessary, or even thought by the municipal authorities to be necessary, to facilitate inspection. There is nothing in the agreed facts to show when or how inspections are usually made. So far as we know, a barber shop in operation after 6 o'clock can be as readily and adequately inspected as one in operation before that hour.

The possible suggested difficulty is that inspectors can not be on duty at all hours of the night without placing too great a burden on the municipality. Perhaps, to those who are familiar with the times and methods of inspecting barber shops, this reason would seem absurd. If, for instance, in the administration of such an ordinance an inspection is made of each shop once a month, once a week, or even once each day, there would seem to be no substantial reason for the claim that the closing of the shops at 6 in the evening was at all necessary to facilitate inspection. * * *

* * * It will readily be seen that a principle that would permit the closing of barber shops as a reasonable exercise of the power to inspect would permit a like restriction in regard to many of the other businesses which are regulated under the police power.

We are not willing to suppose that the absence of closing regulations might render effective inspection impossible. We may grant that it might render it more inconvenient and perhaps more expensive. If that be so, a weighing of the conflicting interests—that of the barber to pursue a useful occupation so long as he complies with the sanitary regulations, and that of the public to have the shop inspected—makes it reasonable to suppose that the legislature, in granting the power to license and regulate, without mention of the power to close the shops, intended that the inconvenience and expense of inspection, if not covered by the license fees, should be borne by the public, instead of intending that the city authorities should fix an arbitrary closing hour.

Construction of statute concerning disposal of dead animals.—(Iowa Supreme Court; *State v. Redlinger*, 224 N. W. 83; decided March 12, 1929.) Section 2761, Code 1924, provided as follows:

No person caring for or owning any animal that has died shall allow the carcass to lie about his premises. Such carcass shall be disposed of within 24 hours after death * * *

By section 2762 a violation of the above section was made punishable by fine or imprisonment.

In a prosecution under the statute the defendant argued that the indictment charged more than one offense. In passing on this claim the supreme court had the following to say regarding its interpretation of the enactment:

* * * Plainly the law is violated when the person caring for "any animal that has died" allows "the carcass to lie about his premises" for 24 hours without disposing of it as required. Thereby such person subjects himself to the penalty prescribed by section 2762. At the end of 24 hours the offense is complete.

* * * It was not intended to inflict a penalty for permitting a dead animal to remain uncared for for an hour or 10 hours but for 24 hours. * * *

DEATHS DURING WEEK ENDED APRIL 20, 1929

Summary of information received by telegraph from industrial insurance companies for the week ended April 20, 1929, and corresponding week of 1928. (From the Weekly Health Index, April 24, 1929, issued by the Bureau of the Census, Department of Commerce)

	Week ended Apr. 20, 1929	Corresponding week, 1928
Policies in force.....	73, 325, 983	70, 998, 155
Number of death claims.....	15, 206	15, 838
Death claims per 1,000 policies in force, annual rate.....	10. 8	11. 7

Deaths from all causes in certain large cities of the United States during the week ended April 20, 1929, infant mortality, annual death rate, and comparison with corresponding week of 1928. (From the Weekly Health Index, April 24, 1929, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Apr. 20, 1929		Annual death rate per 1,000 corresponding week, 1928	Deaths under 1 year		Infant mortality rate week ended Apr. 20, 1929 ¹
	Total deaths	Death rate ¹		Week ended Apr. 20, 1929	Corresponding week, 1928	
Total (64 cities).....	7, 273	12. 8	14. 9	718	896	65
Akron.....	48			9	6	93
Albany ¹	39	16. 9	18. 2	6	1	119
Atlanta.....	74	15. 2	17. 0	9	15	93
White.....	25			3	5	
Colored.....	49	(9)	(9)	6	10	
Baltimore ¹	206	13. 1	16. 2	15	27	48
White.....	149			10	17	40
Colored.....	59	(9)	(9)	5	10	79
Birmingham.....	85	20. 0	16. 2	13	4	118
White.....	37			4	2	69
Colored.....	48	(9)	(9)	9	2	208
Boston.....	225	14. 6	16. 9	26	49	72
Bridgeport.....	27			2	2	35
Buffalo.....	150	14. 1	13. 5	18	17	78
Cambridge.....	22	9. 1	10. 0	2	4	36
Camden.....	34	13. 1	9. 3	4	0	69
Canton.....	23	10. 3	9. 8	2	1	47
Chicago ¹	758	12. 6	14. 1	77	53	69
Cincinnati.....	142			13	15	76
Cleveland.....	205	10. 6	11. 1	24	29	71
Columbus.....	75	13. 1	14. 5	8	6	75
Dallas.....	58	13. 9	12. 2	2	4	
White.....	45			2	2	
Colored.....	13	(9)	(9)	0	2	
Denver.....	72	12. 8	14. 8	7	7	68
Des Moines.....	33	11. 4	15. 5	4	3	72
Detroit.....	323	12. 2	14. 1	44	67	71
Duluth.....	18	8. 1	12. 1	0	2	0
El Paso.....	31	13. 8	24. 4	8	13	
Erie.....	24			4	1	82
Fall River ¹	34	13. 2	9. 3	3	6	56
Flint.....	25	8. 8	9. 5	4	7	49
Fort Worth.....	25	7. 7	11. 6	3	6	
White.....	16			2	5	
Colored.....	9	(9)	(9)	1	1	
Grand Rapids.....	33	10. 5	15. 9	2	5	30
Houston.....	73			6	9	
White.....	52			3	7	
Colored.....	21	(9)	(9)	3	2	
Indianapolis.....	125	17. 1	12. 9	13	5	104
White.....	104			10	5	93
Colored.....	21	(9)	(9)	3	0	179
Jersey City.....	59	9. 5	14. 2	7	11	54
Kansas City, Kans.....	37	16. 4	11. 9	6	0	133
White.....	24			2	0	50
Colored.....	13	(9)	(9)	4	0	717
Kansas City, Mo.....	103	13. 8	15. 1	8	9	67

Footnotes at end of table.

Deaths from all causes in certain large cities of the United States during the week ended April 20, 1929, infant mortality, annual death rate, and comparison with corresponding week of 1928.—Continued

City	Week ended Apr. 20, 1929		Annual death rate per 1,000 corresponding week, 1928	Deaths under 1 year		Infant mortality rate week ended Apr. 20, 1929 ²
	Total deaths	Death rate ¹		Week ended Apr. 20, 1929	Corresponding week, 1928	
Knoxville	13	6.4	12.4	0	1	0
White	9			0	1	0
Colored	4	(³)	(¹)	0	0	0
Los Angeles	305			33	27	97
Louisville	59	9.4	13.3	5	6	41
White	45			3	3	28
Colored	14	(³)	(¹)	2	3	128
Lowell	36			6	4	136
Lynn	21	10.4	14.4	2	4	55
Memphis	38	10.4	25.0	2	6	24
White	17			2	4	38
Colored	21	(³)	(¹)	0	2	0
Milwaukee	141	13.5	14.2	33	17	145
Minneapolis	109	12.5	15.1	6	14	37
Nashville	49	18.4	28.1	2	6	32
White	34			1	4	22
Colored	15	(³)	(¹)	1	2	63
New Bedford	26			3	7	64
New Haven	38	10.6	20.3	2	9	31
New Orleans	151	18.4	19.7	18	11	89
White	85			8	5	56
Colored	66	(³)	(¹)	10	6	168
New York	1,464	12.7	16.1	128	196	52
Bronx Borough	182	10.0	12.0	14	18	41
Brooklyn Borough	518	11.7	13.9	60	72	61
Manhattan Borough	596	17.8	23.7	41	88	50
Queens Borough	124	7.6	10.9	12	13	49
Richmond Borough	42	14.6	18.0	1	5	18
Newark, N. J.	106	11.7	14.8	13	13	69
Oakland	49	9.3	11.3	2	6	22
Oklahoma City	35			4	5	80
Omaha	62	14.5	14.8	5	9	58
Paterson	34	12.3	12.3	3	5	53
Philadelphia	479	12.1	15.4	31	50	44
Pittsburgh	164	12.7	16.5	24	27	83
Portland, Oreg.	84			4	4	46
Providence	92	16.8	14.2	14	8	123
Richmond	43	11.6	15.9	6	3	84
White	27			3	0	64
Colored	16	(³)	(¹)	3	3	123
Rochester	58	9.2	15.8	7	6	59
St. Louis	229	14.1	14.4	26	23	88
St. Paul	77			11	8	113
Salt Lake City ⁴	32	12.1	14.8	0	6	0
San Antonio	66	15.8	19.2	14	19	19
San Diego	36	15.7	15.3	1	1	70
San Francisco	204	18.2	13.5	11	6	32
Schenectady	26	14.6	11.2	1	2	53
Seattle	96	13.1	11.1	5	4	72
Somerville	21	10.7	14.3	2	6	78
Spokane	34	16.3	11.5	3	1	99
Springfield, Mass.	31	10.8	13.3	6	4	12
Syracuse	48	12.6	19.2	1	3	26
Tacoma	21	9.9	12.3	1	5	84
Toledo	80	13.4	11.9	9	7	72
Trenton	41	15.4	11.3	4	6	41
Washington, D. C.	127	12.0	14.6	7	3	25
White	75			3	3	76
Colored	52	(³)	(¹)	4	3	76
Waterbury	25			3	0	26
Wilmington, Del.	37	15.1	11.4	1	2	25
Worcester	56	14.8	20.1	2	4	23
Yonkers	17	7.3	13.4	1	2	72
Youngstown	29	8.7	14.1	5	6	

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 71 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 April 20, 1929, and April 21, 1928

Cases of certain communicable diseases reported by telegraph by State health officers for weeks ended April 20, 1929, and April 21, 1928

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928
New England States:								
Maine.....	4		5	6	131	22	0	0
New Hampshire.....		3			56	107	0	0
Vermont.....		2			4	30	0	0
Massachusetts.....	86	75	14	11	301	1,324	2	1
Rhode Island.....	11	5	1		82	290	0	0
Connecticut.....	29	24	18	5	570	363	3	0
Middle Atlantic States:								
New York.....	320	349	120	104	1,002	3,197	20	37
New Jersey.....	108	103	3	21	280	1,574	8	3
Pennsylvania.....	119	183			1,800	2,337	11	4
East North Central States:								
Ohio.....	32	65	10	54	1,168	915	9	3
Indiana.....	21	23		29	309	313	0	0
Illinois.....	130	140	19	124	1,774	284	13	10
Michigan.....	68	51	1	5	958	1,486	64	9
Wisconsin.....	15	21	17	1,146	1,229	125	10	7
West North Central States:								
Minnesota.....	24	18	5	33	811	90	2	2
Iowa.....	4	7			57	31	0	0
Missouri.....	47	35	2	46	226	468	23	8
North Dakota.....	4	3		16	77	12	4	7
South Dakota.....		1		20	48	36	0	0
Nebraska.....	19	6	4	42	149	131	1	1
Kansas.....	11	10	12	5	488	84	5	2
South Atlantic States:								
Delaware.....			1		29	14	0	0
Maryland ¹	31	26	12	22	25	1,014	1	1
District of Columbia.....	7	11		3	19		0	0
Virginia.....								
West Virginia.....	7	21	14	11	379	168	0	2
North Carolina.....	16	26			26	1,525	0	1
South Carolina.....	9	9	351	613	18	578	0	0
Georgia.....	7	10	31	82	22	114	6	0
Florida.....	16	7	3	6	56	82	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 April 20, 1929, and April 21, 1928—Continued

Division and State	Diphtheria		Influenza		Measles		Meningococcus meningitis	
	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928
East South Central States:								
Kentucky.....	5	7	•	107	41	314	1	0
Tennessee.....	1	7	28	242	33	322	6	0
Alabama.....	8	18	26	278	130	393	7	6
Mississippi.....	12	8						
West South Central States:								
Arkansas.....	6	4	17	259	69	247	8	0
Louisiana.....	20	22	15	91	58	200	2	1
Oklahoma ¹	6	19	44	640	53	394	1	1
Texas.....	29	29	32	65	100	282	0	0
Mountain States:								
Montana.....	6	5			66	5	4	5
Idaho.....					4		2	0
Wyoming.....			8	4	25	14	2	4
Colorado.....	7	10	7	2	18	102	4	5
New Mexico.....	2	7	1	3	5	238	0	0
Arizona.....	2	9	1		2	56	4	0
Utah ¹	3	6	2	4	7	1	12	2
Pacific States:								
Washington.....	3	8	3		170	119	19	2
Oregon.....	6	16	64	44	215	107	2	2
California.....	52	97	58	36	109	159	20	5
Division and State	Poliomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928
New England States:								
Maine.....	0	0	16	26	8	0	9	1
New Hampshire.....	2	0	12	15	1	0	0	2
Vermont.....	0	0	6	2	5	0	0	9
Massachusetts.....	0	1	331	244	0	0	2	3
Rhode Island.....	0	0	8	42	0	0	0	0
Connecticut.....	0	0	57	47	1	0	0	1
Middle Atlantic States:								
New York.....	4	1	527	621	0	6	14	14
New Jersey.....	1	1	168	239	0	20	0	4
Pennsylvania.....	0	2	416	439	0	8	15	8
East North Central States:								
Ohio.....	0	1	211	233	50	55	9	4
Indiana.....	0	0	186	94	41	128	1	1
Illinois.....	0	0	416	339	108	23	8	4
Michigan.....	0	1	409	248	69	24	1	3
Wisconsin.....	0	1	137	162	3	11	1	3
West North Central States:								
Minnesota.....	0	0	143	155	6	0	4	2
Iowa.....	1	0	137	56	32	32	11	2
Missouri.....	0	0	69	86	15	52	14	5
North Dakota.....	0	0	43	44	9	0	2	0
South Dakota.....	0	0	8	27	104	4	0	0
Nebraska.....	0	0	120	96	31	42	3	0
Kansas.....	0	1	122	198	89	71	6	0
South Atlantic States:								
Delaware.....	0	0	2	9	0	0	0	0
Maryland ¹	0	0	46	66	0	0	7	6
District of Columbia.....	0	0	18	30	0	0	1	1
Virginia.....						1		
West Virginia.....	0	0	17	67	19	79	9	8
North Carolina.....	1	2	14	22	23	96	5	6
South Carolina.....	0	0	6	15	5	9	5	11
Georgia.....	0	0	13	16	0	0	3	3
Florida.....	4	0	6	16	3	4	5	10
East South Central States:								
Kentucky.....	0	0	76	73	0	26	0	12
Tennessee.....	0	0	23	11	6	23	5	4
Alabama.....	0	2	8	10	2	5	2	5
Mississippi.....	0	0	3	6	2	2	11	10

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 April 20, 1929, and April 21, 1928—Continued

Division and State	Pollomyelitis		Scarlet fever		Smallpox		Typhoid fever	
	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928	Week ended Apr. 20, 1929	Week ended Apr. 21, 1928
West South Central States:								
Arkansas.....	0	0	19	21	0	4	5	4
Louisiana.....	0	0	48	6	2	29	19	17
Oklahoma ¹	0	2	44	67	86	161	7	7
Texas.....	0	0	45	52	87	53	4	2
Mountain States:								
Montana.....	0	1	19	14	9	18	1	1
Idaho.....	0	0	6	8	8	5	0	0
Wyoming.....	0	0	17	36	7	0	0	1
Colorado.....	0	0	31	85	11	8	2	1
New Mexico.....	0	0	18	21	1	2	3	1
Arizona.....	0	0	8	9	9	6	1	0
Utah ¹	0	0	8	5	7	10	0	0
Pacific States:								
Washington.....	0	2	42	37	47	56	10	1
Oregon.....	1	1	26	12	30	56	1	3
California.....	1	1	444	130	77	20	4	5

¹ Week ended Friday.

² Figures for 1929 are exclusive 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	Men-ningo-coccus meningitis	Diph-theria	Infl-u-enza	Ma-laria	Mea-sles	Pel-lagra	Polio-my-e-litis	Scarlet fever	Small-pox	Ty-phoid fever
<i>December, 1928</i>										
Georgia.....	3	111	17,612	968	232	30	3	161	23	30
<i>February, 1929</i>										
Delaware.....			12		63		1	11	0	0
<i>March, 1929</i>										
Alabama.....	13	77	817	84	643	24	3	70	42	29
California.....	113	200	468	2	261	3	11	1,967	273	41
Illinois.....	61	620	877	3	6,168		3	2,118	515	27
Indiana.....	2	142	147		2,337		2	1,456	380	26
Iowa.....	9	42	2		167		1	865	191	10
Louisiana.....	14	84	228	39	435	35	0	238	27	25
Maryland.....	2	84	554		515		0	324	1	17
Massachusetts.....	15	344	387		1,542	2	2	1,375	7	18
Michigan.....	211	418	76	1	2,314	1	4	1,961	249	22
Minnesota.....	6	112	5		2,629		0	619	9	14
Missouri.....	151	318	357	24	2,327	2	3	574	229	23
New York.....	146	1,281		4	4,926		3	2,652	19	58
North Carolina.....	8	114			346		2	152	114	17
Ohio.....	23	306	298		7,648		5	1,439	210	35
Rhode Island.....	0	51	32	1	349		0	136	0	4
Wisconsin.....	43	75	206		3,386		1	533	24	7
Wyoming.....	2	8	9		135		1	56	11	0

December, 1923

Georgia:	Cases
Chicken pox.....	33
Dengue.....	6
Dysentery.....	8
Hookworm disease.....	4
Mumps.....	11
Paratyphoid fever.....	9
Septic sore throat.....	51
Typhus fever.....	1
Undulant fever.....	2
Whooping cough.....	41

February, 1924

Delaware:	Cases
Chicken pox.....	5
Mumps.....	12
Puerperal septicemia.....	1
Tetanus.....	1
Whooping cough.....	14

March, 1924

Actinomycosis:	
Massachusetts.....	1
Anthrax:	
Massachusetts.....	3
New York.....	3
Botulism:	
California.....	4
Chicken pox:	
Alabama.....	268
California.....	2,512
Illinois.....	1,279
Indiana.....	470
Iowa.....	165
Louisiana.....	79
Maryland.....	379
Massachusetts.....	761
Michigan.....	1,086
Minnesota.....	582
Missouri.....	426
New York.....	2,905
North Carolina.....	872
Ohio.....	1,313
Rhode Island.....	51
Wisconsin.....	1,097
Wyoming.....	54
Dysentery:	
California (amebic).....	3
Illinois.....	16
Louisiana.....	1
Maryland.....	3
Massachusetts.....	2
Minnesota (amebic).....	3
New York.....	1
Ohio.....	1
German measles:	
California.....	174
Illinois.....	164
Maryland.....	39
Massachusetts.....	173
New York.....	510
North Carolina.....	533
Ohio.....	76
Rhode Island.....	23
Wisconsin.....	60
Wyoming.....	1

Granuloma, coccidoidal:	Cases
California.....	1
Hookworm disease:	
Louisiana.....	7
Lead Poisoning:	
Illinois.....	23
Massachusetts.....	10
Ohio.....	18
Leprosy:	
California.....	3
Louisiana.....	1
Lethargic encephalitis:	
Alabama.....	5
California.....	9
Illinois.....	14
Louisiana.....	2
Maryland.....	1
Massachusetts.....	3
Michigan.....	5
Minnesota.....	5
New York.....	23
Ohio.....	18
Wisconsin.....	4
Milk sickness:	
Illinois.....	1
Mumps:	
Alabama.....	41
California.....	2,113
Illinois.....	495
Indiana.....	53
Iowa.....	531
Maryland.....	819
Massachusetts.....	440
Michigan.....	722
Missouri.....	293
New York.....	2,096
Ohio.....	395
Rhode Island.....	11
Wisconsin.....	505
Wyoming.....	126
Ophthalmia neonatorum:	
California.....	2
Illinois.....	35
Maryland.....	3
Massachusetts.....	121
Missouri.....	4
New York.....	6
North Carolina.....	2
Ohio.....	110
Rhode Island.....	2
Wisconsin.....	2
Paratyphoid fever:	
California.....	1
Illinois.....	1
New York.....	2
Ohio.....	1
Puerperal septicemia:	
Illinois.....	11
New York.....	7
Ohio.....	7
Rabies in animals:	
California.....	75
Illinois.....	12
Indiana.....	3
Maryland.....	6
Missouri.....	2
New York.....	20
Rhode Island.....	14

	Cases		Cases
Rabies in man:		Typhus fever:	
California.....	1	Alabama.....	4
Illinois.....	1	New York.....	1
Louisiana.....	1	Undulant fever:	
Michigan.....	1	California.....	4
Septic sore throat:		Illinois.....	2
Illinois.....	23	Iowa.....	13
Iowa.....	1	Maryland.....	2
Maryland.....	10	Michigan.....	1
Massachusetts.....	19	Minnesota.....	5
Michigan.....	38	New York.....	2
Missouri.....	22	Ohio.....	2
New York.....	185	Wisconsin.....	1
North Carolina.....	11	Vincent's angina:	
Ohio.....	85	Iowa.....	1
Rhode Island.....	7	Maryland.....	7
Tetanus:		New York.....	53
California.....	5	Wyoming.....	1
Illinois.....	4	Whooping cough:	
Louisiana.....	2	Alabama.....	90
New York.....	3	California.....	973
Trachoma:		Illinois.....	650
California.....	15	Indiana.....	481
Illinois.....	10	Iowa.....	155
Louisiana.....	1	Louisiana.....	93
Massachusetts.....	11	Maryland.....	628
Missouri.....	5	Massachusetts.....	699
New York.....	2	Michigan.....	1,068
Ohio.....	9	Minnesota.....	559
Wisconsin.....	5	Missouri.....	401
Trichinosis:		New York.....	1,463
California.....	1	North Carolina.....	1,128
Massachusetts.....	6	Ohio.....	1,913
Tularaemia:		Rhode Island.....	20
Louisiana.....	1	Wisconsin.....	837
		Wyoming.....	6

Number of Cases of Certain Communicable Diseases Reported for the Month of January, 1929, by State Health Officers

State	Chick- en pox	Diph- theria	Mea- sles	Mumps	Scarlet fever	Small- pox	Tuber- culosis	Ty- phoid fever	Whoop- ing cough
Maine.....	221	18	1,049	138	105	1	33	3	74
New Hampshire.....		6			93	0		0	
Vermont.....	82	11	121	281	43	10	17	0	116
Massachusetts.....	1,696	490	2,700	461	1,233	14	459	9	649
Rhode Island.....	59	63	428	40	199	0	32	6	43
Connecticut.....	567	144	1,545	446	242	0	142	0	149
New York.....	3,069	1,196	3,795	1,331	2,109	2	1,858	69	1,337
New Jersey.....	1,306	601	722		642	1	499	7	704
Pennsylvania.....	2,827	859	6,104	1,587	2,002	0	472	34	1,573
Ohio.....	1,451	312	2,389	262	1,098	158	615	27	1,537
Indiana.....	331	162	577	43	535	243	182	5	248
Illinois.....	1,465	609	1,621	461	1,578	472	1,068	47	553
Michigan.....	1,020	435	530	374	1,247	106	361	16	629
Wisconsin.....	1,327	79	903	315	604	64	142	10	488
Minnesota.....	1,011	111	634		551	7	146	5	269
Iowa.....	167	47	39	292	544	113	20	0	120
Missouri.....	359	246	1,000	78	353	160	185	14	256
North Dakota.....	75	31	76	4	144	8	19	2	52
South Dakota.....	75	7	183	30	195	183	3	3	19
Nebraska.....	204	91	113	39	418	209	118	7	46
Kansas.....	515	69	170	278	486	174	83	8	232
Delaware.....	22	5	84	3	10	0	15	1	26
Maryland.....	625	125	287	398	315	7	206	7	420
District of Columbia.....	164	52	9		79	0	92	2	100

¹ Pulmonary.

Number of Cases of Certain Communicable Diseases Reported for the Month of January, 1929, by State Health Officers—Continued

State	Chick- en pox	Diph- theria	Meas- les	Mumps	Scarlet fever	Small- pox	Tuber- culosis	Ty- phoid fever	Whoop- ing cough
Virginia.....	639	173	446	-----	233	6	166	14	568
West Virginia ¹	-----	-----	-----	-----	-----	-----	-----	-----	-----
North Carolina.....	560	186	114	-----	231	96	-----	2	352
South Carolina.....	204	303	17	20	58	11	119	17	185
Georgia ²	-----	-----	-----	-----	-----	-----	-----	-----	-----
Florida.....	67	49	26	13	49	7	26	8	65
Kentucky ³	-----	-----	-----	-----	-----	-----	-----	-----	-----
Tennessee.....	249	103	117	30	164	6	127	15	58
Alabama.....	169	179	319	61	126	56	235	14	152
Mississippi.....	881	83	1,888	391	70	6	238	23	985
Arkansas.....	307	59	111	92	97	6	140	16	20
Louisiana.....	65	73	152	5	102	31	157	33	22
Oklahoma ⁴	92	146	33	35	142	169	48	9	32
Texas ⁵	-----	-----	-----	-----	-----	-----	-----	-----	-----
Montana.....	97	6	541	11	154	63	8	1	55
Idaho.....	45	19	25	15	88	201	12	22	3
Wyoming.....	47	6	9	26	54	18	-----	0	3
Colorado.....	195	16	55	116	92	99	106	0	39
New Mexico ¹	-----	-----	-----	-----	-----	-----	-----	-----	-----
Arizona.....	73	34	18	4	31	32	78	0	16
Utah ²	-----	-----	-----	-----	-----	-----	-----	-----	-----
Nevada ³	-----	-----	-----	-----	-----	-----	-----	-----	-----
Washington.....	466	55	222	241	141	260	119	8	141
Oregon.....	128	71	255	104	112	205	35	2	5
California.....	1,462	345	192	1,152	1,581	228	1,156	28	972

¹ Pulmonary.² Report not received at time of going to press.³ Reports received weekly.⁴ Exclusive of Oklahoma City and Tulsa.⁵ Reports received annually.

Case Rates per 1,000 Population (Annual Basis) for the Month of January, 1929

State	Chick- en pox	Diph- theria	Meas- les	Mumps	Scarlet fever	Small- pox	Tuber- culosis	Ty- phoid fever	Whoop- ing cough
Maine.....	3.26	0.27	15.50	2.04	1.55	0.01	0.49	0.04	1.09
New Hampshire.....	-----	.15	-----	-----	2.40	.00	-----	.00	-----
Vermont.....	2.74	.37	4.04	9.39	1.44	.33	.57	.00	3.88
Massachusetts.....	4.60	1.33	7.33	1.25	3.35	.04	1.25	.02	1.76
Rhode Island.....	.95	1.02	6.92	.65	3.22	.00	.52	.10	.70
Connecticut.....	3.93	1.00	10.71	3.09	1.68	.00	.98	.00	1.03
New York.....	3.09	1.21	3.83	1.34	2.13	.00	1.87	.07	1.35
New Jersey.....	3.95	1.82	2.18	-----	1.94	.00	1.51	.02	2.13
Pennsylvania.....	3.34	1.01	7.20	1.87	2.36	.06	.56	.04	1.86
Ohio.....	2.46	.53	4.05	.44	1.86	.27	1.04	.05	2.61
Indiana.....	1.22	.60	2.12	.16	1.97	.89	.67	.02	.91
Illinois.....	2.39	.96	2.55	.72	2.48	.74	1.71	.07	.87
Michigan.....	2.56	1.09	1.33	.94	3.13	.27	.91	.04	1.58
Wisconsin.....	5.23	.28	3.56	1.24	2.38	.25	.56	.04	1.92
Minnesota.....	4.32	.47	2.71	-----	2.35	.03	.62	.02	1.15
Iowa.....	.81	.23	.19	1.41	2.63	.55	.10	.00	.58
Missouri.....	1.20	.82	3.33	.26	1.18	.53	.62	.05	.85
North Dakota.....	1.38	.57	1.40	.07	2.64	.15	.35	.04	.95
South Dakota.....	1.24	.12	3.03	.50	3.22	3.03	.05	.05	.31
Nebraska.....	1.69	.75	.94	.32	3.47	1.73	1.15	.05	.38
Kansas.....	3.29	.44	1.09	1.78	3.11	1.11	.53	.05	1.48
Delaware.....	1.06	.24	4.04	.14	.48	.00	1.24	.05	1.25
Maryland.....	4.50	.90	2.07	2.87	2.27	.05	1.50	.05	3.02
District of Columbia.....	3.42	1.09	.19	-----	1.65	.00	1.92	.04	2.09
Virginia.....	2.89	.78	2.02	-----	1.05	.03	1.75	.06	2.57
West Virginia ¹	-----	-----	-----	-----	-----	-----	-----	-----	-----
North Carolina.....	2.17	.74	.45	-----	.91	.38	-----	.01	1.39
South Carolina.....	1.28	1.89	.11	.13	.36	.07	.74	.11	1.16
Georgia ²	-----	-----	-----	-----	-----	-----	-----	-----	-----
Florida.....	.54	.40	.21	.10	.40	.06	.21	.06	.52

¹ Pulmonary.² Report not received at time of going to press.

**Case Rates per 1,000 Population (Annual Basis) for the Month of January, 1929—
Continued**

State	Chick- en pox	Diph- theria	Meas- les	Mumps	Scarlet fever	Small- pox	Tuber- culosis	Ty- phoid fever	Whoop- ing cough
Kentucky ¹	-----	-----	-----	-----	-----	-----	-----	-----	-----
Tennessee.....	1.16	.48	.55	.14	.77	.03	.59	.07	.27
Alabama.....	.77	.81	1.45	.28	.57	.25	1.07	.96	.09
Mississippi.....	5.79	.55	12.41	2.57	.46	.04	1.56	.15	6.48
Arkansas.....	1.84	.35	.67	.55	.58	.04	1.24	.10	.23
Louisiana.....	.39	.44	.91	.03	.61	.19	1.94	.20	.13
Oklahoma ⁴.....	.50	.79	.18	.19	.77	.92	.26	.05	.17
Texas ¹	-----	-----	-----	-----	-----	-----	-----	-----	-----
Montana.....	2.08	.13	11.60	.24	3.30	1.35	.17	.02	1.18
Idaho.....	.95	.40	.53	.32	1.86	4.24	1.04	.46	.06
Wyoming.....	2.19	.28	.42	1.21	2.51	.84	-----	.00	.14
Colorado.....	2.08	.17	.59	1.23	.98	1.05	1.13	.00	.42
New Mexico ²	-----	-----	-----	-----	-----	-----	-----	-----	-----
Arizona.....	1.76	.82	.43	.10	.75	.77	1.88	.00	.39
Utah ¹	-----	-----	-----	-----	-----	-----	-----	-----	-----
Nevada ¹	-----	-----	-----	-----	-----	-----	-----	-----	-----
Washington.....	3.40	.40	1.62	1.76	1.03	1.90	.87	.06	1.03
Oregon.....	1.65	.91	3.28	1.34	1.44	2.64	.45	.03	.06
California.....	3.68	.87	.48	2.90	3.98	.57	2.91	.07	2.45

¹ Pulmonary.
² Reports received weekly.

⁴ Exclusive of Oklahoma City and Tulsa.
³ Reports received annually.

RECIPROCAL NOTIFICATIONS

Notifications regarding communicable diseases sent during the month of March, 1929, by departments of health of certain States to other State health departments

State	Diph- theria	Dysen- tery, amebic	Gonor- rhea	Scarlet fever	Small- pox	Syph- ilis	Tuber- culosis	Ty- phoid fever
California.....	-----	-----	-----	-----	-----	-----	1	2
Connecticut.....	1	-----	-----	-----	2	-----	-----	-----
Illinois.....	-----	-----	-----	-----	1	-----	-----	-----
Kansas.....	-----	-----	-----	-----	-----	21	-----	-----
Massachusetts.....	-----	-----	-----	-----	3	-----	-----	-----
Minnesota.....	-----	2	6	-----	-----	4	24	2
New York.....	-----	-----	-----	1	1	-----	-----	-----
Texas.....	-----	-----	-----	-----	-----	1	-----	-----
Washington.....	-----	-----	-----	-----	-----	-----	1	-----

GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

The 98 cities reporting cases used in the following table are situated in all parts of the country and have an estimated aggregate population of more than 31,565,000. The estimated population of the 91 cities reporting deaths is more than 29,995,000. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

Weeks ended April 13, 1929, and April 14, 1928

	1929	1928	Estimated expectancy
<i>Cases reported</i>			
Diphtheria:			
48 States.....	1,417	1,583	
98 cities.....	751	869	823
Measles:			
44 States.....	15,864	18,702	
98 cities.....	5,008	7,936	
Meningococcus meningitis:			
45 States.....	333	119	
98 cities.....	137	79	
Poliomyelitis:			
48 States.....	23	25	
Scarlet fever:			
48 States.....	5,073	4,448	
98 cities.....	1,641	1,326	1,396
Smallpox:			
46 States.....	909	1,111	
98 cities.....	72	121	85
Typhoid fever:			
48 States.....	220	178	
98 cities.....	74	32	31
<i>Deaths reported</i>			
Influenza and pneumonia:			
91 cities.....	888	1,381	
Smallpox:			
91 cities.....	0	0	

City reports for week ended April 13, 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	6	1	1		0	55	0	2
New Hampshire:									
Concord.....	(¹)	0	0	0		0	1	0	2
Manchester.....	85,700	0	0	0		1	0	0	2
Nashua.....	(¹)	0	0	0		0	0	0	1
Vermont:									
Barre.....	(¹)	0	0	0		0	0	1	0
Massachusetts:									
Boston.....	799,200	57	34	27	9	0	12	32	27
Fall River.....	134,300	1	2	3	1	1	5	1	2
Springfield.....	149,800	7	2	3		0	6	0	1
Worcester.....	197,600	5	4	1		0	24	1	2
Rhode Island:									
Pawtucket.....	73,100	2	1	0		0	13	0	1
Providence.....	286,300	0	8	9		0	84	0	10

¹ No estimate of population made.

City reports for week ended April 13, 1920—Continued

Division, State, and city	Population, July 1, 1920, 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—contd.									
Connecticut:									
Bridgeport.....	(1)	0	5	5	1	1	13	3	2
Hartford.....	172,300	8	6	3	0	0	67	13	2
New Haven.....	187,900	10	2	0	0	1	4	0	5
MIDDLE ATLANTIC									
New York:									
Buffalo.....	555,800	13	10	10	0	0	57	1	22
New York.....	6,017,500	335	251	246	23	14	85	293	192
Rochester.....	328,200	12	9	0	1	1	14	17	7
Syracuse.....	199,300	34	6	1	0	0	2	19	6
New Jersey:									
Camden.....	135,400	10	7	7	1	1	10	0	1
Newark.....	473,600	59	14	44	5	0	4	79	18
Trenton.....	139,000	0	3	3	0	1	5	0	2
Pennsylvania:									
Philadelphia.....	2,064,200	130	66	23	9	9	100	17	64
Pittsburgh.....	673,900	44	16	8	2	2	42	4	18
Reading.....	115,400	4	2	2	0	0	13	0	4
EAST NORTH CENTRAL									
Ohio:									
Cincinnati.....	413,700	12	8	13	0	4	2	0	10
Cleveland.....	1,010,300	95	26	16	7	0	544	10	28
Columbus.....	290,000	6	3	0	3	2	27	5	3
Toledo.....	313,200	4	3	2	3	3	65	8	5
Indiana:									
Fort Wayne.....	105,300	4	2	0	0	0	55	0	2
Indianapolis.....	382,100	51	4	0	0	1	172	5	8
South Bend.....	86,100	0	1	1	0	0	22	0	1
Terre Haute.....	78,600	3	1	1	0	0	12	0	3
Illinois:									
Chicago.....	3,157,400	139	70	113	19	8	1,035	10	71
Springfield.....	67,200	13	0	0	4	2	6	0	2
Michigan:									
Detroit.....	1,378,900	70	45	42	6	7	38	28	40
Flint.....	148,800	18	3	3	0	0	10	0	2
Grand Rapids.....	164,200	4	3	1	0	0	109	3	4
Wisconsin:									
Kenosha.....	56,500	4	0	0	0	0	24	1	2
Milwaukee.....	544,200	81	13	7	1	0	933	36	17
Racine.....	74,400	17	3	0	0	0	60	0	3
Superior.....	(1)	3	0	0	0	0	0	0	1
WEST NORTH CENTRAL									
Minnesota:									
Duluth.....	116,800	9	0	0	0	1	1	73	1
Minneapolis.....	455,900	31	14	8	0	0	214	82	9
St. Paul.....	(1)	4	10	3	0	0	259	55	9
Iowa:									
Davenport.....	(1)	3	1	0	0	0	3	0	0
Des Moines.....	151,900	0	1	0	0	0	0	0	0
Sioux City.....	80,000	3	1	0	0	0	5	3	0
Waterloo.....	37,100	2	0	0	0	0	6	25	0
Missouri:									
Kansas City.....	391,000	17	5	1	1	1	221	11	2
St. Joseph.....	78,500	0	1	0	0	0	21	0	3
St. Louis.....	848,100	24	40	23	0	0	15	9	0
North Dakota:									
Fargo.....	(1)	0	0	0	0	0	54	1	0
Grand Forks.....	(1)	0	0	0	0	0	0	0	0
South Dakota:									
Aberdeen.....	(1)	8	0	0	0	0	2	10	0
Sioux Falls.....	(1)	0	0	2	0	0	7	0	0
Nebraska:									
Omaha.....	222,800	9	2	7	0	0	30	1	4
Kansas:									
Topeka.....	62,800	13	1	1	1	0	0	0	2
Wichita.....	98,300	9	1	0	0	0	35	30	8

1 No estimate of population made.

City reports for week ended April 13, 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			
SOUTH ATLANTIC									
Delaware:									
Wilmington.....	128, 500	2	2	1	0	12	0	6	
Maryland:									
Baltimore.....	830, 400	65	27	15	8	0	226	32	
Cumberland.....	(¹)	1	0	0	0	1	2	6	
Frederick.....	(¹)	2	0	0	0	0	1	0	
District of Columbia:									
Washington.....	552, 000	32	11	8	1	0	24	8	
Virginia:									
Lynchburg.....	38, 600	7	0	1	0	2	95	3	
Norfolk.....	184, 200	35	1	0	0	1	70	5	
Richmond.....	194, 400	1	2	1	0	4	3	3	
Roanoke.....	64, 600	2	0	1	2	0	1	0	
West Virginia:									
Charleston.....	55, 200	6	0	4	3	2	93	2	
Wheeling.....	(¹)	1	1	0	1	101	0	0	
North Carolina:									
Raleigh.....	(¹)	3	0	0	0	0	0	3	
Wilmington.....	39, 100	32	0	0	1	0	0	2	
Winston-Salem.....	80, 000	3	0	0	0	0	1	4	
South Carolina:									
Charleston.....	75, 900	5	0	1	5	0	0	2	
Columbia.....	50, 600	4	0	1	0	0	2	4	
Georgia:									
Atlanta.....	255, 100	3	2	1	8	2	8	8	
Brunswick.....	(¹)	0	0	0	1	0	0	1	
Savannah.....	99, 900	1	0	3	0	0	0	3	
Florida:									
Miami.....	156, 700	0	2	0	0	52	0	0	
St. Petersburg.....	53, 300	0	0	0	0	0	0	0	
Tampa.....	113, 400	4	1	0	1	1	0	1	
EAST SOUTH CENTRAL									
Kentucky:									
Covington.....	59, 000	0	1	1	0	0	0	2	
Tennessee:									
Memphis.....	190, 200	18	3	4	1	0	0	9	
Nashville.....	139, 600	2	0	1	3	0	0	3	
Alabama:									
Birmingham.....	222, 400	6	1	5	7	0	1	5	
Mobile.....	69, 600	1	1	0	0	14	1	3	
Montgomery.....	63, 100	3	0	0	0	2	0	0	
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith.....	(¹)	0	0	1	0	0	1	0	
Little Rock.....	79, 200	2	0	0	0	6	7	1	
Louisiana:									
New Orleans.....	429, 400	2	7	15	2	18	0	13	
Shreveport.....	81, 300	3	1	0	0	0	0	1	
Oklahoma:									
Oklahoma City.....	(¹)	1	1	2	3	0	0	3	
Texas:									
Dallas.....	217, 800	7	4	8	0	23	1	2	
Fort Worth.....	170, 600	7	2	0	1	15	0	5	
Galveston.....	50, 600	0	0	0	0	2	0	1	
Houston.....	(¹)	4	2	4	0	11	0	2	
San Antonio.....	218, 100	2	1	4	1	6	0	3	
MOUNTAIN									
Montana:									
Billings.....	(¹)	6	0	0	0	0	0	0	
Great Falls.....	(¹)	10	1	0	0	0	1	0	
Helena.....	(¹)	0	0	0	0	0	0	0	
Missoula.....	(¹)	0	0	0	0	1	0	0	
Idaho:									
Boise.....	(¹)	0	1	0	0	0	0	0	

¹ No estimate of population made.

City reports for week ended April 13, 1929—Continued

Division, State, and city	Population July 1, 1928, estimated	Chick-en pox, cases re-ported	Diphtheria		Influenza		Mea-sles, cases re-ported	Mumps, cases re-ported	Pneu-monia, deaths re-ported
			Cases, esti-mated expect-ancy	Cases re-ported	Cases re-ported	Deaths re-ported			
MOUNTAIN—continued									
Colorado:									
Denver.....	294, 200	62	10	5	1	1	9	38	7
Pueblo.....	44, 200	36	1	0	0	0	4	4	3
New Mexico:									
Albuquerque.....	(1)	6	0	0	0	0	0	0	5
Utah:									
Salt Lake City.....	138, 000	11	3	2	0	1	8	187	3
Nevada:									
Reno.....	(1)	0	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle.....	383, 200	30	4	2	0	0	1	25	0
Spokane.....	109, 100	14	1	3	11	0	113	0	0
Tacoma.....	110, 500	14	1	0	0	1	1	6	4
Oregon:									
Portland.....	(1)	11	8	6	0	1	81	9	2
Salem.....	(1)	0	0	0	0	0	1	3	0
California:									
Los Angeles.....	(1)	132	42	9	34	2	14	46	20
Sacramento.....	75, 700	16	2	0	0	0	0	9	3
San Francisco.....	585, 300	22	20	13	4	4	3	25	3

Division, State, and city	Scarlet fever		Smallpox			Tuber-culo-sis, deaths re-ported	Typhoid fever			Whoop-ing cough, cases re-ported	Deaths, all causes
	Cases, esti-mated expect-ancy	Cases re-ported	Cases, esti-mated expect-ancy	Cases re-ported	Deaths re-ported		Cases, esti-mated expect-ancy	Cases re-ported	Deaths re-ported		
NEW ENGLAND											
Maine:											
Portland.....	2	11	0	0	0	1	0	1	0	4	0
New Hampshire:											
Concord.....	2	0	0	0	0	0	0	0	0	2	8
Manchester.....	3	1	0	0	0	0	0	0	0	0	20
Nashua.....	1	0	0	0	0	0	0	0	0	0	10
Vermont:											
Barre.....	0	0	0	0	0	0	0	0	0	8	1
Massachusetts:											
Boston.....	72	64	0	1	0	16	1	2	0	43	0
Fall River.....	4	6	0	0	0	3	1	0	0	2	29
Springfield.....	7	22	0	0	0	1	0	0	0	0	37
Worcester.....	10	10	0	0	0	7	0	0	0	11	60
Rhode Island:											
Pawtucket.....	1	0	0	0	0	0	0	0	0	0	16
Providence.....	11	19	0	0	0	7	0	1	0	1	66
Connecticut:											
Bridgeport.....	12	3	0	0	0	2	0	0	0	0	24
Hartford.....	5	5	0	0	0	1	0	0	0	7	20
New Haven.....	11	1	0	0	0	1	0	0	0	5	38
MIDDLE ATLANTIC											
New York:											
Buffalo.....	26	37	0	0	0	7	0	0	0	22	130
New York.....	331	281	0	0	0	97	9	9	2	60	1, 562
Rochester.....	15	6	0	0	0	2	0	0	0	18	76
Syracuse.....	12	10	0	0	0	0	0	0	0	35	49
New Jersey:											
Camden.....	6	6	0	0	0	1	0	0	0	8	40
Newark.....	33	17	0	0	0	11	1	0	0	19	129
Trenton.....	4	4	0	0	0	3	1	0	0	1	34
Pennsylvania:											
Philadelphia.....	103	87	0	0	0	40	2	6	0	65	571
Pittsburgh.....	29	11	0	0	0	7	1	0	0	27	145
Reading.....	4	6	0	0	0	0	0	0	0	6	39

1 No estimate of population made.

City reports for week ended April 13, 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		
EAST NORTH CENTRAL											
Ohio:											
Cincinnati.....	20	60	1	2	0	7	1	1	0	30	137
Cleveland.....	35	30	0	0	0	18	1	1	0	62	222
Columbus.....	10	2	1	0	0	3	0	0	0	69	63
Toledo.....	13	12	1	0	0	7	0	0	0	119	81
Indiana:											
Fort Wayne.....	6	1	2	0	0	2	0	8	0	1	22
Indianapolis.....	9	52	9	0	0	8	0	3	0	50	99
South Bend.....	4	3	1	0	0	0	0	0	0	0	30
Terre Haute.....	2	0	1	0	0	1	0	0	0	0	19
Illinois:											
Chicago.....	122	162	2	3	0	48	2	4	0	37	780
Springfield.....	4	9	0	2	0	0	1	1	1	6	26
Michigan:											
Detroit.....	93	195	1	0	0	44	1	0	0	90	359
Flint.....	8	37	1	21	0	6	0	0	0	8	37
Grand Rapids.....	7	10	0	3	0	1	0	0	0	23	31
Wisconsin:											
Kenosha.....	2	0	0	0	0	0	0	0	0	5	5
Milwaukee.....	29	22	0	0	0	9	0	0	0	132	133
Racine.....	4	0	1	0	0	0	0	0	0	1	18
Superior.....	3	0	0	0	0	0	0	0	0	7	8
WEST NORTH CENTRAL											
Minnesota:											
Duluth.....	8	6	0	0	0	1	0	0	0	4	27
Minneapolis.....	49	17	3	1	0	4	0	0	0	122	107
St. Paul.....	29	8	0	0	0	4	0	0	0	35	72
Iowa:											
Davenport.....	2	0	1	1	-----	-----	0	0	-----	1	-----
Des Moines.....	6	27	3	0	-----	-----	0	0	-----	0	46
Sioux City.....	2	0	1	0	-----	-----	0	0	-----	2	-----
Waterloo.....	2	21	0	0	-----	-----	0	10	1	3	-----
Missouri:											
Kansas City.....	17	0	3	1	0	11	0	0	0	10	89
St. Joseph.....	3	3	1	0	0	0	0	0	0	1	30
St. Louis.....	39	16	3	0	0	11	1	3	0	50	228
North Dakota:											
Fargo.....	2	2	0	0	0	0	0	0	0	2	-----
Grand Forks.....	1	0	0	0	-----	-----	0	0	-----	0	-----
South Dakota:											
Aberdeen.....	1	1	0	1	-----	-----	0	0	-----	0	-----
Sioux Falls.....	2	0	0	3	-----	-----	0	0	-----	0	9
Nebraska:											
Omaha.....	3	6	5	0	0	6	0	0	0	8	59
Kansas:											
Topeka.....	4	5	1	0	0	1	0	0	0	13	19
Wichita.....	4	42	1	2	0	0	0	0	0	2	50
SOUTH ATLANTIC											
Delaware:											
Wilmington.....	5	1	0	0	0	0	0	0	0	1	26
Maryland:											
Baltimore.....	33	31	0	0	0	18	2	1	1	168	223
Cumberland.....	0	0	0	0	0	2	0	0	0	0	15
Frederick.....	3	1	0	0	0	0	0	0	0	0	3
District of Columbia:											
Washington.....	25	12	1	0	0	13	0	0	0	38	150
Virginia:											
Lynchburg.....	0	1	0	0	0	0	0	0	0	2	21
Norfolk.....	2	0	0	0	0	5	0	0	0	29	-----
Richmond.....	2	6	0	0	0	2	0	0	0	5	48
Roanoke.....	1	0	0	0	0	0	0	0	0	0	21
West Virginia:											
Charleston.....	1	1	1	0	0	0	0	12	0	2	23
Wheeling.....	2	0	0	0	0	0	0	0	0	3	17
North Carolina:											
Raleigh.....	0	0	0	0	0	0	0	0	0	11	15
Wilmington.....	0	2	0	0	0	1	0	0	0	1	12
Winston-Salem.....	0	0	1	0	0	0	0	0	0	56	16

¹ Nonresident.

City reports for week ended April 13, 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—continued											
South Carolina:											
Charleston.....	0	1	0	2	0	3	0	0	0	2	19
Columbia.....	0	1	0	0	0	0	0	1	0	4	16
Georgia:											
Atlanta.....	4	6	2	0	0	8	0	0	0	6	77
Brunswick.....	0	0	0	0	0	0	0	0	0	0	4
Savannah.....	0	1	1	0	0	2	0	2	0	4	21
Florida:											
Miami.....	1	0	1	0	0	2	1	0	0	5	20
St. Petersburg.....	0	0	0	0	0	1	0	0	0	9	21
Tampa.....	0	1	0	0	0	0	0	1	0	12	21
EAST SOUTH CENTRAL											
Kentucky:											
Covington.....	2	0	0	1	0	1	0	0	0	0	21
Tennessee:											
Memphis.....	6	10	4	0	0	3	0	1	0	2	83
Nashville.....	2	7	1	0	0	4	1	0	0	0	51
Alabama:											
Birmingham.....	2	4	8	0	0	2	0	0	0	8	61
Mobile.....	0	3	1	0	0	2	0	1	0	0	22
Montgomery.....	0	3	0	0	0	0	0	1	0	0	0
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith.....	0	0	0	0	0	0	0	0	0	0	0
Little Rock.....	1	1	0	0	0	1	0	0	0	1	0
Louisiana:											
New Orleans.....	6	43	0	0	0	14	2	6	1	1	135
Shreveport.....	1	0	0	1	0	3	0	0	1	0	26
Oklahoma:											
Oklahoma City.....	2	4	3	2	0	1	0	1	0	0	30
Texas:											
Dallas.....	3	8	2	18	0	5	0	2	0	7	54
Fort Worth.....	2	4	4	15	0	1	0	0	0	0	28
Galveston.....	0	0	0	0	0	0	0	0	0	0	8
Houston.....	1	8	2	1	0	3	0	2	0	0	55
San Antonio.....	1	0	0	0	0	14	0	1	0	0	78
MOUNTAIN											
Montana:											
Billings.....	0	0	0	0	0	1	0	0	0	0	7
Great Falls.....	1	2	1	0	0	1	0	0	0	0	14
Helena.....	0	0	1	0	0	0	0	0	0	0	1
Missoula.....	1	0	0	2	0	0	0	0	0	0	1
Idaho:											
Boise.....	1	1	0	0	0	0	0	0	0	0	5
Colorado:											
Denver.....	12	8	2	0	0	3	0	0	0	15	83
Pueblo.....	2	0	0	0	0	0	0	0	0	0	10
New Mexico:											
Albuquerque.....	0	0	0	0	0	5	0	0	0	22	17
Utah:											
Salt Lake City.....	2	8	2	7	0	0	0	0	0	5	34
Nevada:											
Reno.....	0	0	0	0	0	0	0	0	0	0	1
PACIFIC											
Washington:											
Seattle.....	8	4	2	3	0	0	1	0	0	82	0
Spokane.....	5	8	6	0	0	0	0	0	0	5	0
Tacoma.....	2	2	3	1	0	1	0	0	0	2	39
Oregon:											
Portland.....	4	5	6	23	0	4	0	0	0	0	62
Salem.....	0	1	1	0	0	0	0	0	0	0	0
California:											
Los Angeles.....	23	47	4	0	0	29	1	1	0	34	232
Sacramento.....	1	23	2	0	0	0	0	0	0	16	33
San Francisco.....	17	71	0	0	0	12	2	1	0	41	179

City reports for week ended April 13, 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
NEW ENGLAND									
Massachusetts:									
Boston.....	1	1	1	0	0	0	0	0	0
Fall River.....	1	0	0	0	0	0	0	0	0
Springfield.....	1	0	0	0	0	0	0	0	0
MIDDLE ATLANTIC									
New York:									
Buffalo.....	0	1	0	0	0	0	0	0	0
New York.....	26	9	4	2	0	0	1	1	0
Syracuse.....	2	0	0	0	0	0	0	0	0
New Jersey:									
Newark.....	1	0	1	0	0	0	0	0	0
Pennsylvania:									
Philadelphia.....	1	0	2	1	0	0	0	0	0
Pittsburgh.....	2	2	0	0	0	0	0	0	0
Reading.....	3	2	0	0	0	0	0	0	0
EAST NORTH CENTRAL									
Ohio:									
Cincinnati.....	0	0	0	1	0	0	0	0	0
Cleveland.....	3	0	2	2	0	0	0	0	0
Columbus.....	0	0	1	1	0	0	0	0	0
Illinois:									
Chicago.....	14	11	0	0	0	0	0	0	0
Michigan:									
Detroit.....	18	16	0	1	0	0	0	0	0
Flint.....	6	1	0	0	0	0	0	0	0
Wisconsin:									
Milwaukee.....	3	1	0	0	0	0	0	0	0
WEST NORTH CENTRAL									
Minnesota:									
Minneapolis.....	1	0	0	0	0	0	0	0	0
St. Paul.....	1	1	1	1	0	0	0	0	0
Missouri:									
Kansas City.....	3	2	0	0	0	0	0	0	1
St. Louis.....	8	3	0	0	0	0	0	0	0
SOUTH ATLANTIC									
Maryland:									
Baltimore.....	1	0	0	0	0	0	0	0	0
District of Columbia:									
Washington.....	0	0	0	0	0	1	0	0	0
Virginia:									
Richmond.....	1	0	0	0	0	1	0	0	0
North Carolina:									
Winston-Salem.....	0	0	0	0	1	0	0	0	0
South Carolina:									
Columbia.....	0	0	0	0	0	1	0	0	0
Georgia:									
Atlanta.....	2	4	0	0	0	0	0	0	0
Savannah.....	0	0	0	0	1	0	0	0	0
EAST SOUTH CENTRAL									
Tennessee:									
Memphis.....	4	2	0	0	0	0	0	0	0
Nashville.....	1	1	0	0	0	1	0	0	0
Alabama:									
Birmingham.....	0	0	1	1	2	1	0	0	0
Mobile.....	0	0	0	0	1	1	0	0	0
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith.....	1	0	0	0	0	0	0	0	0
Louisiana:									
New Orleans.....	0	1	1	0	5	1	0	0	0
Oklahoma:									
Oklahoma City.....	0	1	0	0	1	2	0	0	0

City reports for week ended April 13, 1929—Continued

Division, State, and city	Meningococ- cus meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infan- tile paralysis)		
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, esti- mated expect- ancy	Cases	Deaths
MOUNTAIN									
Montana:									
Great Falls.....	2	1	0	0	0	0	0	0	0
Colorado:									
Denver.....	2	2	0	0	0	0	0	0	0
Pueblo.....	2	0	0	0	0	0	0	0	0
Utah:									
Salt Lake City.....	7	4	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle.....	8	0	0	0	0	0	0	0	0
Oregon:									
Portland.....	1	0	0	1	0	0	0	0	0
California:									
Los Angeles.....	4	2	0	0	2	1	0	0	0
Sacramento.....	4	1	0	0	0	0	0	0	0
San Francisco.....	3	2	0	0	0	0	0	0	0

The following table gives the rates per 100,000 population for 98 cities for the 5-week period ended April 13, 1929, compared with those for a like period ended April 14, 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, March 10 to April 13, 1929—Annual rates per 100,000 population compared with rates for the corresponding period of 1928¹

DIPHTHERIA CASE RATES

	Week ended—									
	Mar. 16, 1929	Mar. 17, 1928	Mar. 23, 1929	Mar. 24, 1928	Mar. 30, 1929	Mar. 31, 1928	Apr. 6, 1929	Apr. 7, 1928	Apr. 13, 1929	Apr. 14, 1928
98 cities.....	127	160	135	161	129	140	² 132	135	124	146
New England.....	136	136	120	124	102	110	³ 140	126	118	168
Middle Atlantic.....	159	213	180	223	187	181	190	189	166	210
East North Central.....	120	135	142	148	119	146	125	121	126	116
West North Central.....	152	115	131	133	138	84	75	102	83	102
South Atlantic.....	84	151	60	122	66	128	82	96	71	90
East South Central.....	54	119	41	56	41	70	27	35	75	42
West South Central.....	99	138	123	118	123	109	⁴ 122	134	126	162
Mountain.....	44	106	35	80	44	115	44	44	61	133
Pacific.....	67	125	70	105	30	74	60	77	67	74

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 Pawtucket, R. I., and Fort Smith, Ark., not included.

³ Pawtucket, R. I., not included.

⁴ Fort Smith, Ark., not included.

Summary of weekly reports from cities, March 10 to April 13, 1929—Annual rates per 100,000 population compared with rates for the corresponding period of 1928—Continued

MEASLES CASE RATES

	Week ended—									
	Mar. 16, 1929	Mar. 17, 1928	Mar. 23, 1929	Mar. 24, 1928	Mar. 30, 1929	Mar. 31, 1928	Apr. 6, 1929	Apr. 7, 1928	Apr. 13, 1929	Apr. 14, 1928
	98 cities.....	681	1,356	760	1,325	719	1,375	845	1,275	827	1,336
New England.....	622	2,267	568	1,536	471	2,014	542	1,874	642	1,727
Middle Atlantic.....	135	1,216	179	1,397	154	1,495	174	1,508	160	1,744
East North Central.....	1,385	1,061	1,593	1,008	1,590	1,021	1,834	1,033	1,943	997
West North Central.....	1,965	593	1,880	728	1,782	751	1,961	765	1,655	864
South Atlantic.....	380	3,105	452	3,021	414	3,008	650	2,386	465	2,173
East South Central.....	41	1,824	136	1,361	88	1,354	88	596	129	814
West South Central.....	146	1,346	198	1,135	99	847	264	442	241	434
Mountain.....	636	346	766	505	409	753	618	709	192	744
Pacific.....	137	832	247	809	239	581	282	448	329	525

SCARLET FEVER CASE RATES

98 cities.....	326	301	346	309	319	303	291	276	271	223
New England.....	371	402	366	412	394	405	348	331	319	301
Middle Atlantic.....	266	353	308	375	264	399	244	367	224	274
East North Central.....	417	296	495	305	452	266	426	252	372	193
West North Central.....	367	272	292	293	310	258	275	264	242	278
South Atlantic.....	146	216	159	226	167	230	94	186	122	161
East South Central.....	231	63	306	154	265	77	210	91	183	42
West South Central.....	379	211	281	126	285	146	284	150	237	130
Mountain.....	157	248	113	177	78	186	104	239	165	239
Pacific.....	459	217	379	202	322	207	324	133	387	123

SMALLPOX CASE RATES

98 cities.....	12	21	11	25	16	25	11	18	12	20
New England.....	5	0	7	0	11	0	2	0	2	0
Middle Atlantic.....	0	0	0	0	0	0	0	0	0	0
East North Central.....	20	26	12	18	17	24	15	24	20	24
West North Central.....	31	65	12	125	25	65	17	84	8	49
South Atlantic.....	6	36	0	25	13	75	4	15	4	11
East South Central.....	7	21	7	35	41	35	7	14	7	28
West South Central.....	43	45	103	36	95	36	81	4	79	16
Mountain.....	17	53	44	62	44	142	26	106	78	151
Pacific.....	22	38	15	61	22	23	17	18	10	74

TYPHOID FEVER CASE RATES

98 cities.....	5	5	7	5	10	6	5	5	12	5
New England.....	2	7	7	9	5	5	5	2	9	9
Middle Atlantic.....	4	2	6	4	5	4	2	1	7	5
East North Central.....	2	3	4	3	17	2	7	3	11	1
West North Central.....	2	4	6	0	8	2	4	6	25	8
South Atlantic.....	7	11	6	11	13	23	4	13	13	4
East South Central.....	7	14	27	7	27	14	7	21	20	21
West South Central.....	12	12	8	8	20	12	8	16	43	20
Mountain.....	26	0	9	0	0	0	0	0	0	0
Pacific.....	10	5	20	5	0	3	7	8	7	3

¹ Pawtucket, R. I., and Fort Smith, Ark., not included.

² Pawtucket, R. I., not included.

⁴ Fort Smith, Ark., not included.

Summary of weekly reports from cities, March 10 to April 13, 1929—Annual rates per 100,000 population compared with rates for the corresponding period of 1928—Continued

INFLUENZA DEATH RATES

	Week ended—									
	Mar. 16, 1929	Mar. 17, 1928	Mar. 23, 1929	Mar. 24, 1928	Mar. 30, 1929	Mar. 31, 1928	Apr. 6, 1929	Apr. 7, 1928	Apr. 13, 1929	Apr. 14, 1928
91 cities.....	33	26	27	33	18	30	20	35	15	31
New England.....	25	7	5	9	5	11	12	16	7	9
Middle Atlantic.....	31	26	23	22	12	29	16	31	14	27
East North Central.....	23	12	20	35	16	24	18	40	15	27
West North Central.....	27	24	30	24	18	28	27	24	6	37
South Atlantic.....	37	21	30	42	22	23	17	21	17	33
East South Central.....	118	123	89	100	89	115	74	92	30	123
West South Central.....	106	117	77	100	37	87	49	108	32	92
Mountain.....	35	80	78	133	52	53	44	80	17	53
Pacific.....	16	10	33	7	16	13	20	7	23	13

PNEUMONIA DEATH RATES

91 cities.....	185	227	169	218	158	225	150	218	139	213
New England.....	201	239	188	182	172	225	103	179	127	177
Middle Atlantic.....	197	259	190	245	180	265	178	244	161	243
East North Central.....	155	197	141	211	132	206	134	240	126	199
West North Central.....	180	208	189	178	150	196	147	184	114	263
South Atlantic.....	199	216	185	239	169	239	144	187	165	212
East South Central.....	200	268	170	222	170	161	141	283	163	176
West South Central.....	239	266	81	279	130	246	142	187	93	241
Mountain.....	263	204	165	168	131	106	122	97	113	186
Pacific.....	141	125	170	101	157	118	131	104	98	88

1 Pawtucket, R. I., 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	1,786,900	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 April 6, 1929.—The Department of Pensions and National Health reports cases of certain communicable diseases from eight Provinces of Canada for the week ended April 6, 1929, as follows:

Disease	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
Cerebrospinal fever.....				3			2		5
Influenza.....	5		7	103				8	123
Poliomyelitis.....					1				1
Smallpox.....		3	5	10		10	10	7	45
Typhoid fever.....		1	11	46	4		2	1	65

Ontario—Communicable diseases—Comparative—Five weeks ended March 30, 1929.—The following table shows the number of certain communicable diseases reported in the Province of Ontario, Canada, for the five weeks ended March 30, 1929, as compared with the corresponding period of 1928:

Disease	1929		1928	
	Cases	Deaths	Cases	Deaths
Cerebrospinal meningitis.....	11	2	2	3
Chancroid.....	3	2		
Chicken pox.....	775	1	1,026	
Conjunctivitis.....	3			
Diphtheria.....	261	25	235	17
Dysentery.....			1	1
Erysipelas.....			8	
German measles.....	22		42	
Goiter.....			1	
Gonorrhoea.....	197		331	
Influenza.....	154	34	37	18
Lethargic encephalitis.....	3			4
Measles.....	4,554	10	2,299	1
Mumps.....	708		5,467	2
Paratyphoid fever.....	1			
Pneumonia.....		261		244
Poliomyelitis.....		1	2	1
Puerperal septicemia.....	1	4		
Scarlet fever.....	646	7	667	1
Septic sore throat.....	8		23	
Smallpox.....	69		130	
Syphilis.....	216	2	243	1
Tetanus.....			1	1
Tuberculosis.....	127	44	157	72
Typhoid fever.....	30	4	40	1
Undulant fever.....	1			
Whooping cough.....	466	1	422	

Quebec Province—Communicable diseases—Week ended April 13, 1929.—The Bureau of Health of the Province of Quebec reports cases of certain communicable diseases for the week ended April 13, 1929, as follows:

Disease	Cases	Disease	Cases
Chicken pox.....	58	Scarlet fever.....	122
Diphtheria.....	56	Smallpox.....	11
German measles.....	10	Tuberculosis.....	75
Influenza.....	6	Typhoid fever.....	23
Measles.....	107	Whooping cough.....	43
Mumps.....	24		

CHINA

Meningitis.—Information dispatched April 12, 1929, stated that during the preceding 10 days 100 cases of meningitis, with 18 deaths, had been reported to the Municipal Council of Shanghai, China. During the week ended April 20, 78 cases of meningitis were admitted to the hospital; 41 deaths occurred. The severity of the epidemic remained unchanged.

During the week ended April 6, 3 cases and 2 deaths from meningitis were reported at Hong Kong.

At Canton, China, there were 5 cases and 5 deaths from meningitis reported during the week ended April 6, and 9 cases and 9 deaths during the week ended April 13.

ITALY

Communicable diseases—Four weeks ended September 23, 1928.—During the four weeks ended September 23, 1928, communicable diseases were reported in the Kingdom of Italy, as follows:

Disease	Aug. 27—Sept. 2		Sept. 3-9		Sept. 10-16		Sept. 17-23	
	Cases	Com-munes affected	Cases	Com-munes affected	Cases	Com-munes affected	Cases	Com-munes affected
Anthrax.....	83	57	61	46	106	73	67	51
Cerebrospinal meningitis.....	9	9	2	2	8	7	9	9
Chicken pox.....	34	26	36	24	40	22	21	20
Diphtheria.....	275	175	250	150	288	172	288	190
Dysentery.....	85	46	68	39	73	36	47	20
Lethargic encephalitis.....	1	1	3	3	6	5	1	1
Measles.....	537	159	465	147	458	146	490	120
Poliomyelitis.....	14	14	23	16	11	8	25	22
Rabies.....							1	1
Scarlet fever.....	294	121	303	121	300	120	264	113
Smallpox.....							1	1
Typhoid fever.....	1,685	663	1,544	661	1,689	718	1,433	651

JAMAICA

Communicable diseases—Four weeks ended March 30, 1929.—During the four weeks ended March 30, 1929, cases of communicable diseases were reported from Kingston, Jamaica, and from the island of Jamaica outside of Kingston, as follows:

Disease	Kingston	Other localities	Disease	Kingston	Other localities
Cerebrospinal meningitis.....		1	Poliomyelitis.....		1
Chicken pox.....	7	18	Puerperal fever.....		5
Dysentery.....	4	16	Tuberculosis (pulmonary).....	30	68
Erysipelas.....		1	Typhoid fever.....	9	98

MEXICO

Vera Cruz—Communicable diseases—Six weeks ended April 6, 1929.—During the six weeks ended April 6, 1929, deaths from certain diseases were reported at Vera Cruz, Mexico, as follows:

Disease	Week ended—					
	Mar. 2	Mar. 9	Mar. 16	Mar. 23	Mar. 30	Apr. 6
Bronchitis.....		1	1	1	1	
Cancer.....	3	2	2	2	4	3
Diphtheria.....	2					
Dysentery.....		1			1	
Gastro-intestinal disorders.....	12	10	13	7	5	5
Hook worm disease.....					1	1
Influenza.....	4	3	2			
Malaria.....	1			2	2	
Pleurisy.....					1	
Pneumonia.....	2	1	5		3	2
Smallpox.....				2		
Tetanus.....			1	1		
Tuberculosis.....	8	10	10	7	7	6
Typhoid fever.....	3	1	1	1	1	

PORTO RICO

San Juan—Communicable diseases—Five weeks ended April 6, 1929.—During the five weeks ended April 6, 1929, cases of communicable diseases were reported in San Juan, Porto Rico, as follows:

Disease	Week ended—				
	Mar. 9	Mar. 16	Mar. 23	Mar. 30	Apr. 6
Diphtheria.....	1	2	2	2	1
Dysentery.....	1	2	2		
Malaria.....	7	8	6	2	1
Measles.....	145	58	86	123	27
Tetanus.....			4		1
Tuberculosis.....	17	16	11	11	5
Typhoid fever.....	3				

Ceylon:																						
Colombo.....	C	2	1	4	8																	
Plague-infected rats.....	D	1	1	4	8																	
Jaffna.....	D	1	1	5																		
China:																						
Hainan.....	C																					
Moengolie.....	C																					
Chien Chia Tien.....	C	P																				
Tunglooc.....	C	173	19																			
Shansi.....	C	P																				
Pengchow.....	C																					
Suyuan Province.....	C																					
Dutch East Indies:																						
Celebes.....	C	1	1																			
Makassar.....	D	4	2																			
Java--																						
Plague-infected rats.....																						
Batavia and West Java.....	C	29	23	43	54	13	12	22	27	16	16											
Plague-infected rats.....	D	29	22	42	53	13	12	22	26	16	10											
East Java and Madura.....	C	16																				
Plague-infected rats.....	D	16																				
Surebaya.....	D	1	2	1			1	3	1													
Kediri Residency.....	D	1	2																			
Ecuador (see table below).																						
Egypt:																						
Alexandria.....	C																					
Amrîah District.....	C	1					2	1														
Assiout Province.....	D	1					1															
Behaira Province.....	D	1																				
Beut-Suef.....	C	1	3	4	9	1	2	2	2	2	2	4	2	1	1	1	1	1	1	1	5	1
Plague-infected rats.....	D	1	2	1	2		3					1	1	1	1	1	1	1	1	1	1	1
Pierout.....	D																					
Girga.....	C																					
Kena Province.....	C																					
Menoufien Province.....	C																					
Suez.....	C																					
Tanta.....	C																					
Greece (see also table below):																						
Athens and Piræus.....	C	5	5																			
Corfu.....	C	6,209	8,710	7,767	7,841	2,592	3,117	3,224	3,667	3,767	87											
India.....		3,225	4,428	4,963	5,234	1,834	2,166	2,227	2,588	2,896	52											
Basseln.....	D	2			1	1		3		2	1											

¹ During the period from Nov. 10 to Dec. 11, 1923, 13 cases of plague were reported at El Mollar, Tucuman Province, Argentina. During the same period 1 case of plague was reported at Chipiron and 1 at Ucaccha, both in Cordoba Province, Argentina.

² 118 plague-infected rats were reported at Buenos Aires, Argentina, from July 1 to Dec. 31, 1923.

³ Unofficial report.

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

PLAGUE—Continued

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

Place	Week ended—													
	January, 1929			February, 1929				March, 1929				April, 1929		
	19	26	2	9	16	23	2	9	16	23	30	6	13	20
Sept. 28- 20, 1928	Oct. 21- 17, 1928	Nov. 18- 15, 1928	Dec. 16, 12, 1928	Nov. 18- 15, 1928	Dec. 16, 12, 1928	Jan. 1929	Jan. 1929	Feb. 9, 16, 23, 30, 6, 13, 20,	Feb. 9, 16, 23, 30, 6, 13,	Mar. 9, 16, 23, 30, 6,	Mar. 9, 16, 23, 30, 6,	Apr. 6, 13, 20,		
India—Continued.														
Bombay.....	O 4 D 6 D 7	O 5 D 2 D 7	O 4 D 6 D 82	O 10 D 35	O 1 D 11 D 10	O 2 D 11 D 6	O 1 D 6 D 10	O 1 D 11 D 18	O 1 D 18 D 17	O 1 D 9 D 17	O 1 D 18 D 18			
Plague-infected rats.....														
Cochin.....	O 196	O 539	O 686	O 600	O 120	O 107	O 180	O 77	O 103	O 90				
Madras Presidency.....	O 97	O 235	O 307	O 231	O 65	O 60	O 66	O 44	O 49	O 58				
Rangoon.....	O 7	O 2	O 1	O 1	O 1	O 1	O 2	O 1	O 1	O 1	O 1	O 1	O 1	
Plague-infected rats.....	O 5 D 6	O 3 D 4	O 1 D 1	O 2 D 1	O 1 D 2	O 1 D 2	O 2 D 1	O 1 D 2	O 1 D 1	O 1 D 1	O 3 D 2	O 3 D 2	O 3 D 2	
Indo-China (see also table below):														
French-Indochina.....	O 1 D 1	O 1 D 1	O 4 D 4	O 8 D 6	O 2 D 4	O 4 D 2	O 1 D 1	O 3 D 2	O 2 D 1	O 2 D 1	O 1 D 3	O 2 D 4	O 1 D 1	
Siagon.....	O 1	O 1	O 4	O 6	O 2	O 4	O 1	O 2	O 1	O 1	O 3	O 2	O 1	
Tourane.....	O 1	O 1	O 4	O 6	O 2	O 4	O 1	O 2	O 1	O 1	O 3	O 2	O 1	
Iraq:														
Baghdad.....	O 9 D 5 D 6	O 10 D 5 D 8	O 9 D 5 D 8	O 9 D 8	O 2 D 1	O 1	O 3 D 2	O 2	O 1	O 1	O 3 D 3	O 4 D 2	O 5 D 2	
Plague-infected rats.....														
Nandham.....	O 2	O 1	O 2	O 2	O 1	O 1	O 1	O 5	O 6	O 6	O 5	O 3	O 2	
Madagascar (see also table below):														
Tamatave.....	O 13 D 10 D 3	O 7 D 3	O 1	O 2	O 1	O 1	O 1	O 1	O 1	O 1	O 1	O 1	O 1	
Morocco.....														
Nigeria:														
Lagos.....	O 88 D 88 D 91	O 83 D 77 D 146	O 43 D 41 D 80	O 12 D 11 D 28	O 1 D 1 D 14	O 4 D 3 D 14	O 2 D 1 D 12	O 7 D 7 D 22	O 2 D 2 D 10	O 4 D 4 D 16	O 1 D 1 D 5	O 1 D 1 D 15	O 1 D 1 D 16	
Paraguay: Asuncion.....	O 3	O 3	O 30	O 28	O 1	O 1	O 1	O 5	O 4	O 10	O 1	O 1	O 1	

Pernu (see table below).																				
Senegal (see table below).																				
Siam.....	O	1	9	4	2	11	6	26	3	4	1	1								
Bangkok.....	D	1	8	3	2	6	6	3	2	5	1	1								
Negara Pathom.....	D	1		4	1		1			1										
Panknampo.....	D			1						2	1	1								
Straits Settlements:																				
Penang.....	O		8																	
Singapore.....	O	1																		
Syria (see table below).	D																			
Turkey:																				
Adalia.....	O	1																		
Constantinople.....	O	1																		
Union of Socialist Soviet Republics:																				
Kalmouks District.....	O	10																		
Kassaka.....	O	7																		
Urul Government.....	O	7																		
Union of South Africa:																				
Cape Province.....	O	2	1	4	1		2	3	1											
Orange Free State.....	O	P		1	1			1		1										
Transvaal.....	O			3																
Uruguay:																				
Montevideo.....	O			1																4
Rivers.....	O																			
On vessel.....																				
S. S. Antonedon, at Penang, Straits Settlements.....	C	P																		1
S. S. Chebouceaur, at Singapore, from Colombo.....	O																			1
S. S. Ealydan, at Bangkok, from Singapore.....	O			1																1
S. S. Sjomand, at Alexandria, from Batoum.....	O					1														1

Pernu (see table below).
Senegal (see table below).

Siam.....

Bangkok.....

Negara Pathom.....

Panknampo.....

Straits Settlements:

Penang.....

Singapore.....

Syria (see table below).

Turkey:

Adalia.....

Constantinople.....

Union of Socialist Soviet Republics:

Kalmouks District.....

Kassaka.....

Urul Government.....

Union of South Africa:

Cape Province.....

Orange Free State.....

Transvaal.....

Uruguay:

Montevideo.....

Rivers.....

On vessel.....

S. S. Antonedon, at Penang, Straits Settlements.....

S. S. Chebouceaur, at Singapore, from Colombo.....

S. S. Ealydan, at Bangkok, from Singapore.....

S. S. Sjomand, at Alexandria, from Batoum.....

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

PLAGUE—Continued

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

Place	Octo-ber, 1928	No-ven-ber, 1928	De-cem-ber, 1928	Janu-ary, 1929	Feb-ru-ary, 1929	March, 1929	Places	Octo-ber, 1928	No-ven-ber, 1928	De-cem-ber, 1928	Janu-ary, 1929	Feb-ru-ary, 1929	March, 1929
British East Africa (see also table above):													
Kenya.....	37	16	15	7	4								
Uganda.....	134	108											
Ecuador: Guayaquil.....	3	21	20	25	54								
Plague-infected rats.....	8	7	12	22	27								
Greece (see also table above).....	21	29	75	29									
Indo-China (see also table above).....		1	1	1									
Madagascar (see also table above):													
Ambositra Province.....	88		262	233									
Antsifanobe Province.....	84		263	224									
Itasy Province.....	8	14	79	169									
Moramanga Province.....	8	14	74	199									
Tamatave.....	2	6	4	18									
Tananarive Province.....	5	6	11	3									
Tamatave.....	88	32	28	22									
Tamatave.....	35	32	27	21									
Tamatave.....	7	2	2	4									
Madagascar—Continued.													
Tananarive Province.....	O												
Peru.....	D												
Senegal: Bsoi.....	O												
Cayor.....	O												
Fatick.....	D												
Louga.....	D												
Rufisque.....	D												
Thies.....	D												
Tivisouane.....	D												
Syria: Beirut.....	D												

ⁱ Reports incomplete.

SMALLPOX

Place	Sept. 23- Oct. 20, 1928	Oct. 21- Nov. 17, 1928	Nov. 18- Dec. 15, 1928	Dec. 16, 1928- Jan. 12, 1929	Week ended—														
					January, 1929				February, 1929				March, 1929				April, 1929		
					19	26	2	9	16	23	2	9	16	23	30	6	13	20	
Algeria:																			
Algiers.....	4	2	1																
Chechel.....																			
Oran.....	21	7	1																
Arabia: Aden.....		1	1																
Brazil (see table below).																			
British East Africa (see also table below): Kenya—																			
Mombasa.....	195	342	67	173															
British South Africa:	7	14	8	23															
Northern Rhodesia.....	9	1	5																
Southern Rhodesia.....																			
Tanganyika.....																			
Canada:																			
Alberta:	4	4	21	3															
Calgary.....																			
Edmonton.....																			
British Columbia—Vancouver	16	21	25	51															
Manitoba.....	1	14	29	23															
Winnipeg and vicinity			17	2															
New Brunswick																			
Nova Scotia.....																			
Ontario:	15	12	15	36															
Kingston.....																			
Niagara Falls.....		1																	
North Bay.....																			
Ottawa.....	2	6	2																
Sarnia.....																			
Toronto.....		1																	
Prince Edward Island.....																			
Quebec:	75	118	125	37															
Montreal.....	4	10	3	8															
Quebec.....	12	12	6	4															
Riviere du Loup.....																			
Saskatchewan:	1	10	52	14															
Moose Jaw.....		2	1																
Regina.....		2	2	1															
Saskatoon.....																			

	2	1	3	4	1	3	1	3	1	3	2
Lithuania (see table below).											
Mexico (see also table below):											
Aguaqueles	D	9	15	2	1	1	1	1	1	1	2
Chihuahua	D	1	2	1	1	1	1	1	1	1	2
Mexico City, including municipalities in Federal District:	D	11	16	4	1	3	1	3	1	3	3
San Luis Potosí	D	1	1	1	1	2	1	2	1	2	1
Morocco	D	1	1	1	1	1	1	1	1	1	1
Palestine	C	11	16	4	1	7	5	6	10	7	6
Peru (see table below).	C	31	81	117	203	33	76	72	41	47	51
Portugal: Oporto	D	4	10	11	16	5	3	4	3	6	6
Rumania	C	11	17	42	167	56	40	47	30	42	32
Tunisia	D	1	1	1	11	5	7	7	4	3	7
Menzel	C	4	4	1	1	2	2	2	3	3	3
Sfax	C	11	11	1	1	1	1	1	1	1	1
Turkey (see table below).											
Union of South Africa:											
Cape Province	C	P	P	P	P	P	P	P	P	P	P
East London	D	1	1	1	1	1	1	1	1	1	1
Natal	D	1	1	1	1	1	1	1	1	1	1
Orange Free State	C	P	P	P	P	P	P	P	P	P	P
Transvaal	C	P	P	P	P	P	P	P	P	P	P
Yugoslavia (see table below).	C	1	1	1	1	1	1	1	1	1	1

Place	Octo-ber, 1928	No-vem-ber, 1928	De-cem-ber, 1928	Janu-ary, 1929	Feb-ru-ary, 1929	March, 1929
Chosen:						
Chernulpo	1	1				
Seoul	3	3		4		
Greece: Athens	1	4	1	13		
Lithuania	D	4	11	32	74	62
	D			3	3	1
Mexico: Sonora (see also table above)	D					
Peru	C	3				
Turkey	C	4				
Yugoslavia	D	1	7	15	13	2

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

YELLOW FEVER

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

Place	Week ended—													
	January, 1929		February, 1929				March, 1929				April, 1929			
	19	26	2	9	16	23	2	9	16	23	30	6	13	20
Brazil:														
Bahia.....														
Guaratingueta.....											1			
Para.....														
Rio de Janeiro.....	6		2	2	2	2	7	19	13	11	21	47	59	61
	4		1		2		4	13	9	6	18	27	30	38
Sao Paulo.....														
Dahomey: Ouidah Military Camp.....														
Gambia: Bathurst.....														
Liberia: Monrovia.....														
On vessel:														
S. S. Bernini, at Santos, Brazil.....	4													
S. S. Victoria, at Manaus, from Para, Brazil.....	1													

1 29 cases of yellow fever with 14 deaths were reported at Rio de Janeiro during January, 1929, mostly suburban.
 : Imported.
 : Suspected cases.