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JESSE H. JONES
SECRETARY



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WILLIAM LANE AUSTIN
DIRECTOR

VITAL STATISTICS OF THE UNITED STATES 1938

PART I

NATALITY AND MORTALITY DATA FOR THE
UNITED STATES TABULATED BY PLACE OF OCCURRENCE
WITH SUPPLEMENTAL TABLES FOR HAWAII
PUERTO RICO, AND THE VIRGIN ISLANDS

PREPARED UNDER THE SUPERVISION OF

HALBERT L. DUNN, M. D.

Chief Statistician for Vital Statistics

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VITAL STATISTICS OF THE UNITED STATES

PART 1. GEOGRAPHIC CLASSIFICATION BY PLACE OF OCCURRENCE

Introduction

This volume—Vital Statistics of the United States, Part I—contains official statistical tabulations of natality and mortality data for the calendar year 1938. Tables are presented giving detailed statistics of live births, stillbirths, total deaths, and infant deaths in continental United States. Supplementary tabulations for Hawaii, Puerto Rico, and the Virgin Islands are also included. The natality data are classified by geographic area, race and sex of child, age and nativity of parents, month, order of birth, et cetera. Mortality data are classified by geographic area, sex, age, race, month, cause of death, et cetera. The geographic classification refers to the place of birth or death, irrespective of the usual place of residence of the mother of the child, or the usual place of residence of the decedent. The tabulations are derived from transcripts of original birth and death certificates that are received from registration officials of States, cities, and outlying possessions of the United States.

This volume was prepared under the direction of Dr. Halbert L. Dunn, Chief Statistician for Vital Statistics, and Dr. John Collinson, Assistant Chief Statistician for Vital Statistics. Tabulations and introductory material were prepared under the immediate supervision of Dr. Forrest E. Linder, Social Science Analyst.

REVISION OF ANNUAL VITAL STATISTICS VOLUMES

The present volume continues the new series of annual publications begun last year. Prior to 1937, vital-statistics data compiled by the Bureau of the Census were published annually in two volumes, "Birth, Stillbirth, and Infant Mortality Statistics" and "Mortality Statistics." The geographic classifications used in these volumes referred to place of birth or death. From the beginning, the principal compilations of birth and death statistics had been on a de facto geographic basis—that is, births and deaths were tabulated according to the place in which the birth or death occurred, without regard to the usual place of residence. The alternative is to tabulate on a de jure geographic basis, allocating each birth and death to the State, city, and county of residence, or usual place of abode.

The difference between these two methods of tabulation should be emphasized. Many births and deaths occur in cities or counties of which either the mother of the child or the decedent is not a usual resident. These births and deaths are nonresident—a result of temporary movements of the residents of one geographic area to another. This continuous shifting of the population occurs for a number of reasons, one of which is the desire for hospital facilities not available in the city or county of usual residence. Inasmuch as the population census is compiled according to the usual place of abode, the tabulation of vital statistics on a de facto basis has therefore seriously restricted the use of these data for certain purposes.

Important as it is to tabulate births and deaths by place of residence, it was not desirable to make a decided break that would destroy comparability with the series of statistics previously published. The national totals derived from the

two types of tabulations are identical, since an international exchange of nonresident births or deaths is neither feasible nor necessary. The differences for State totals are also, in most cases, negligible. Furthermore, tabulations by place of occurrence are required for certain administrative purposes. The natality and mortality data included in part I are therefore a continuation of the figures published for prior years in the annual volumes "Birth, Stillbirth, and Infant Mortality Statistics" and "Mortality Statistics." Data compiled on a de jure or residence basis are published in a second volume entitled "Vital Statistics of the United States, Part II."

The tables in the volumes for 1938 correspond, with a few exceptions, to those published for 1937. The tabulations presented in 1937 were extensively revised so that the data might be more relevant to modern social, medical, and public-health problems. The revisions were based on the results of a survey of the needs of many important social agencies and individual users of vital statistics. Many of the valuable suggestions and comments have been incorporated in the volumes for 1937 and 1938; others will contribute to future improvements and extensions of vital-statistics tabulations.

COMPARABILITY OF CLASSIFICATION

CHANGES IN THE REGISTRATION AREAS.—The first vital statistics published by the Federal Government related to 1850 and were for the entire United States. These statistics were based on information collected during the decennial census of that year. Similar decennial collections were made by census enumerators at each census up to and including the census of 1900. The interval between the occurrence of a birth or a death and the census enumeration resulted in inaccurate and incomplete reports on births and deaths. Since several States had developed efficient systems for the registration of vital statistics, the Bureau of the Census, in 1880, established a national "registration area" for deaths. This original area consisted of only two States—Massachusetts and New Jersey—the District of Columbia, and several large cities, but by 1900 eight other States had been admitted. For the years 1880, 1890, and 1900, mortality data were received from the States and cities included in this expanding area, and both birth and death figures for the entire country were compiled from the reports of census enumerators.

The annual collection of mortality statistics for the registration area began with the calendar year 1900. In 1902, the Bureau of the Census, which had previously functioned only in census years, was made a permanent agency by an act of Congress. This act authorized the Director of the Bureau of the Census to obtain, annually, copies of records filed in the vital-statistics offices of those States and cities having adequate death-registration systems. At that time, not all the States had enacted laws requiring the registration of births and deaths, and in many States the existing laws were poorly enforced. Important dates in the historical development of vital statistics in the various States and the year in which each State was admitted to the national registration areas, are given in table A.

VITAL STATISTICS OF THE UNITED STATES

TABLE A.—IMPORTANT DATES IN THE HISTORY OF BIRTH AND DEATH REGISTRATION: UNITED STATES

STATE	FIRST STATE REGISTRATION LAW ENACTED		Enactment of present law (model or conforming to model law) births and deaths	RECORDS ON FILE FOR ENTIRE STATE		ADMITTED TO REGISTRATION AREA	
	Deaths	Births		Deaths	Births	Deaths	Births
Alabama	1881	1881	1919	1908	1908	1925	1927
Arizona	1909	1909	1909	1909	1909	1926	1926
Arkansas	1881	1881	1913	1914	1914	1927	1927
California	1858	1877	1915	1905	1905	1906	1919
Colorado	1876	1876	1907	1907	1907	1906	1928
Connecticut	1852	1852	1905	1897	1897	1890	1915
Delaware	1861	1861	1913	1881	1881	1919	1921
District of Columbia	1874	1871	1907	1855	1871	1880	1915
Florida	1899	1899	1915	1877	1865	1919	1924
Georgia	1875	1823	1927	1919	1919	1928	1928
Idaho	1907	1907	1911	1911	1911	1922	1926
Illinois	1877	1877	1915	1916	1916	1918	1922
Indiana	1881	1907	1913	1900	1907	1900	1917
Iowa	1880	1880	1921	1880	1880	1923	1924
Kansas	1885	1885	1911	1911	1911	1914	1917
Kentucky	1851	1851	1911	1911	1911	1911	1917
Louisiana	1855	1855	1918	1889	1870	1918	1927
Maine	1821	1821	1892	1892	1900	1915	1915
Maryland	1880	1880	1912	1898	1898	1906	1916
Massachusetts	1840	1840	1903	1850	1850	1880	1915
Michigan	1867	1867	1925	1867	1867	1900	1915
Minnesota	1870	1870	1907	1900	1900	1910	1915
Mississippi	1878	1878	1912	1912	1912	1919	1921
Missouri	1891	1891	1908	1910	1910	1911	1927
Montana	1895	1895	1907	1907	1907	1910	1922
Nebraska	1905	1905	1927	1905	1905	1920	1920
Nevada	1911	1911	1929	1911	1911	1929	1929
New Hampshire	1850	1850	1891	1881	1881	1890	1915
New Jersey	1848	1848	1920	1848	1848	1880	1921
New Mexico	1907	1907	1929	1919	1919	1929	1929
New York	1847	1847	1913	1880	1880	1890	1915
North Carolina	1877	1877	1913	1914	1914	1916	1917
North Dakota	1899	1899	1907	1908	1908	1924	1924
Ohio	1867	1867	1908	1909	1909	1909	1917
Oklahoma	1907	1907	1917	1917	1917	1928	1928
Oregon	1903	1903	1915	1903	1903	1918	1919
Pennsylvania	1851	1851	1905	1906	1906	1906	1915
Rhode Island	1850	1850	1911	1852	1852	1890	1921
South Carolina	1878	1878	1914	1915	1915	1916	1928
South Dakota	1905	1905	1931	1905	1905	1930	1932
Tennessee	1881	1881	1913	1914	1914	1917	1927
Texas	1873	1873	1927	1903	1903	1933	1933
Utah	1898	1898	1905	1905	1905	1910	1917
Vermont	1856	1856	1906	1857	1857	1890	1915
Virginia	1853	1853	1912	1912	1912	1913	1917
Washington	1891	1891	1907	1907	1907	1908	1917
West Virginia	1866	1866	1921	1917	1917	1925	1925
Wisconsin	1852	1852	1907	1850	1840	1908	1917
Wyoming	1907	1907	1907	1909	1909	1922	1922

TABLE B.—GROWTH OF THE VITAL STATISTICS REGISTRATION AREAS: UNITED STATES

YEAR	Estimated midyear population of continental United States	DEATH-REGISTRATION AREA		BIRTH-REGISTRATION AREA	
		Number of States	Estimated midyear population	Number of States	Estimated midyear population
			Number		Number
			Per cent of total		Per cent of total
1938	130,215,000	48	130,215,000	48	130,215,000
1937	129,257,000	48	129,257,000	48	129,257,000
1936	128,429,000	48	128,429,000	48	128,429,000
1935	127,521,000	48	127,521,000	48	127,521,000
1934	126,626,000	48	126,626,000	48	126,626,000
1933	125,770,000	48	125,770,000	48	125,770,000
1932	124,974,000	47	120,291,000	47	119,027,000
1931	124,113,000	47	119,479,000	46	117,522,000
1930	123,091,000	47	118,472,000	46	116,556,000
1929	121,526,429	46	116,317,515	46	115,097,972
1928	119,861,607	44	114,258,516	44	113,050,663
1927	118,196,785	42	108,177,568	40	103,575,656
1926	116,531,963	41	104,938,301	35	89,682,479
1925	114,867,141	40	102,951,999	33	87,486,096
1924	113,202,319	39	100,082,062	33	86,256,025
1923	111,537,497	38	97,816,104	30	80,694,406
1922	109,872,675	37	93,866,240	30	79,415,841
1921	108,207,853	34	89,102,434	27	70,758,177
1920	106,543,031	34	87,632,592	23	63,740,689
1919	105,003,065	33	85,166,043	22	61,483,423
1918	103,587,955	30	81,333,675	20	55,513,241
1917	102,172,845	27	74,984,498	20	54,771,416
1916	100,757,735	26	71,349,162	11	32,788,670
1915	99,342,625	25	67,095,681	10	30,936,179
1914	97,927,516	25	65,813,315		
1913	96,512,407	24	63,200,625		
1912	95,097,298	23	60,359,974		
1911	93,682,189	23	59,183,071		
1910	92,267,080	21	53,831,742		
1909	90,691,354	18	50,870,518		
1908	89,073,360	17	46,789,913		
1907	87,455,366	15	43,016,990		
1906	85,837,372	15	41,983,419		
1905	84,219,378	10	34,052,201		
1904	82,601,384	10	33,345,163		
1903	80,983,390	10	32,701,083		
1902	79,365,396	10	32,029,815		
1901	77,747,402	10	31,370,952		
1900	76,129,407	10	30,765,618		
1890	62,947,714	8	19,659,440		
1880	50,155,783	2	8,538,566		

1/ Figures are for census year ending May 31.

NOTE.—For every year the District of Columbia was in both areas, but is not included in the "number of States"; previous to 1933, the death area also included a varying number of registration cities in nonregistration States.

The death-registration area for 1900 consisted of 10 States, the District of Columbia, and a number of qualified cities in nonregistration States. The gradual growth of this area by the addition of more States is shown in table B, which gives for each year the estimated midyear population of the whole United States and the number of States and the estimated population included in the registration area.

Inasmuch as it is more difficult to obtain accurate and complete registration of births than of deaths, the national birth-registration area was not established until 1915. For this reason no birth statistics were published by the Bureau of the Census from 1900 to 1914. The original birth-registration area of 1915 consisted of 10 States and the District of Columbia, but other States were gradually added in the years following. The growth of this area is indicated also in tables A and B.

In 1933, for the first time, both the birth- and death-registration areas included all States, and since that year the annual publications have included data for the entire United States.

The change in areas for which data have been collected and tabulated makes it impossible to obtain a national series of geographically comparable data prior to 1933. However, rates for the expanding registration areas are an approximation to complete national rates, and general comparisons over a long period of years can be made. More exact trends for parts of the United States can be secured by use of some constant area, such as the original registration areas or the registration areas of 1920. Crude birth, stillbirth, and death rates for the registration areas of each year are given in table I,

and crude rates for the individual States are shown in tables VII, VIII, IX, and X.

GEOGRAPHIC CLASSIFICATION.—The geographic code used in tabulating the data published in this report gives a separate identifying number to each city having a population of 10,000 or more in 1930, and to certain towns and townships each having a population of 10,000 or more and a population density of 1,000 or more per square mile. The code also gives a separate number to each county, exclusive of these cities. Although villages and cities having populations of less than 10,000 are not individually identified, each county is divided into two parts, one consisting of "incorporated places" of 2,500 to 10,000, and another consisting of the remainder of the county. In this report most of the tables containing classifications by size-of-population groups show cities of 10,000 or more, cities of 2,500 to 10,000, and rural. Certain tables give a more detailed five-group classification, namely, cities having populations of 100,000 or more; cities of 25,000 to 100,000; cities of 10,000 to 25,000; cities of 2,500 to 10,000; and rural. This finer classification is given where feasible in order to break the heterogeneity of large population groupings.

Prior to 1930 the annual vital-statistics data were tabulated in two general groups—urban and rural. In this classification the urban group included all cities of 10,000 inhabitants or more and a few densely populated towns and townships. The rural group included all remaining areas. These definitions were consistent with those used in the 1920 population census. The definitions used for the 1930 population census were changed so that "urban" included all cities with populations in excess of 2,500, and "rural" included the remaining

areas. To give annual vital-statistics data which could be related to the population census, it was necessary, therefore, to divide into two groups the group previously defined as rural in vital statistics. Thus, by combining the areas of 2,500 to 10,000 with the urban, figures could be obtained that were comparable with those of the 1930 census. Also, by combining the areas of 2,500 to 10,000 with the rural, figures could likewise be obtained that were comparable with the rural as given in the vital-statistics reports prior to 1930.

Most natality and mortality tables published since 1930 show the three-way population classification: Cities in excess of 10,000, cities of 2,500 to 10,000, and rural; but in some tables the simple classifications "urban" and "rural" are used. In these instances, where the dichotomous classification is shown, the rural includes all areas except the cities of 10,000 or more. In the present volume the ambiguous terms "urban" and "rural" are avoided, and the table headings indicate the composition of each population group.

CLASSIFICATION BY RACE.—The detailed racial classification given in this volume shows births and deaths classified by white, Negro, Indian, Chinese, Japanese, and a residual group of numerically minor races. In most tables such an extended classification is not justified and the racial divisions are "white," "Negro," and "other races"; in tables where the main purpose is to isolate the major group, the classifications are simply "white" and "all other." In any case where the racial designation on the birth or death certificate is Mexican, the birth or death is tabulated with "white." This allocation of Mexican births and deaths is consistent with that used prior to 1930 and for the years after 1934. In the annual reports for the years 1930 to 1934, the Mexicans were not classified with the "white" but were tabulated with "other races."

INTERNATIONAL LIST OF CAUSES OF DEATH.—The data in the mortality reports published by the Bureau of the Census are tabulated according to the numbers and titles of the detailed International List of Causes of Death. Complete titles of this list, with the official numbers and subdivisions, are given in the stub of table XI. In some tables it is necessary, on account of space limitations, to abbreviate cause-of-death titles or to indicate the composition of groups of causes by giving the list numbers. In such cases, reference may be made to table XI or to the Manual of the International List of Causes of Death for the complete titles. The manual indicates, also, the main diseases included in each title.

The International List is revised decennially in order that the terminology by which deaths are classified may be consistent with advances in medical science and changes in diagnostic practice. The list used in this volume was adopted by the International Commission on the International List of Causes of Death, which met in Paris in 1929.

Special attention is directed to one feature of the 1929 list as used in these tables. Since the official list did not include titles for certain kinds of accidents, such as accidents in mines and quarries or motor vehicle accidents, a supplemental list of 14 important classes of accidents was adopted. Deaths tabulated in this supplemental classification are also included under the proper official list titles. For example, if there was an accident in which an automobile was driven from the road into a river and the driver was drowned, the death would be classified under International List number 183, which signifies drowning. In the supplemental tabulation this same death would be reclassified under symbol 210 (automobile accident).

NATIVITY CLASSIFICATION.—Early mortality reports published by the Bureau of the Census contained extensive tables showing parent nativity as well as nativity of the decedent. Tables classifying deaths by the birthplace of the decedent and the nativity of parents were discontinued in 1933.

In preceding reports more emphasis has been placed upon country of birth of parents in the birth statistics. Detailed tables showing specific country of birth of mother and specific country of birth of father, as well as more abridged classifications, have been published for each year through 1936. The historical importance of these data in tracing the changing composition of the population of the United States must be recognized. However, in recent years the number of births to foreign-born parents has become a relatively small proportion

of the total. Accordingly, tables showing parent nativity for births have been eliminated or revised in the reports for 1937 and 1938. A continued decrease in the proportion of births to foreign-born parents will justify decreased emphasis on this classification in future volumes.

Table C gives the total number of births of white children in the increasing birth-registration area for each year beginning with 1915, and the percent of these having one or both parents of foreign birth. The same data are given for the 10 original birth-registration States. For this original registration area, white births of foreign or mixed parentage were 53.0 percent of all births in 1915, whereas in 1938 this group comprised only 19.2 percent of the total. For the whole United States, in 1938, births of foreign or mixed parentage were only 11.0 percent of the total.

TABLE C.—WHITE LIVE BIRTHS OF FOREIGN PARENTAGE: EXPANDING AND ORIGINAL BIRTH-REGISTRATION AREAS, UNITED STATES

YEAR	EXPANDING BIRTH-REGISTRATION AREA			ORIGINAL BIRTH-REGISTRATION AREA 1/		
	Total white live births	One or both parents foreign-born		Total white live births	One or both parents foreign-born	
		Number	Percent of total		Number	Percent of total
1938	2,005,955	220,286	11.0	611,915	117,413	19.2
1937	1,928,437	230,381	11.9	595,225	124,447	20.9
1936	1,881,833	241,647	12.8	587,359	131,589	22.4
1935	1,888,012	259,615	13.8	589,409	141,957	24.1
1934	1,866,231	255,645	13.7	587,024	152,717	26.0
1933	1,794,946	267,426	14.9	578,841	161,375	27.9
1932	1,805,155	296,124	16.4	616,299	183,344	29.7
1931	1,848,293	330,772	17.9	641,635	204,288	31.8
1930	1,946,841	384,982	19.8	678,387	229,482	33.8
1929	1,924,475	407,022	21.1	678,482	241,070	35.5
1928	1,982,246	434,789	21.9	705,001	260,067	36.9
1927	1,925,585	458,088	23.8	725,931	277,949	38.2
1926	1,707,034	465,746	27.3	723,449	285,047	39.4
1925	1,731,689	487,707	28.2	746,083	305,025	40.6
1924	1,762,872	514,452	29.2	768,364	321,777	41.9
1923	1,644,034	501,124	30.5	752,860	323,070	42.9
1922	1,629,387	510,167	31.3	750,806	329,573	43.9
1921	1,565,446	496,815	31.7	789,173	352,443	44.7
1920	1,395,523	440,585	31.6	755,866	340,806	45.1
1919	1,269,363	429,135	34.6	714,815	346,200	48.4
1918	1,288,711	461,277	35.8	784,495	384,607	49.0
1917	1,280,288	482,211	37.7	788,214	403,616	51.2
1916	799,817	407,966	51.0	772,512	402,888	52.2
1915	763,899	405,014	53.0	765,899	405,014	53.0

1/ Exclusive of Rhode Island.

QUALIFYING FACTORS IN INTERPRETATION AND USE OF DATA

While the data in this volume are available for a variety of administrative and scientific purposes, they cannot be correctly interpreted unless cognizance is taken of various qualifying factors. Obviously the factors to be considered depend upon the specific purposes for which the data are to be used. It is not feasible to catalog all of the pertinent factors in the use of vital-statistics tabulations, but a few of the more important should be mentioned.

Most of the factors limiting the use of vital-statistics data arise from imperfections in the original material or from the impracticability of tabulating or using these data in very detailed categories. These defects should not be ignored, yet their existence does not destroy the value of the tables for most general purposes. Analysis of small differences or exact evaluation and interpretation of vital statistics may require careful study of many related elements. However, the trend of crude birth and death rates, the increase or decrease in the number of deaths from selected causes, and the major differences in rates among States, are all facts that will not be materially changed by finer analysis.

AGE, SEX, RACE.—If crude death rates are used as an index of the health conditions of a community, comparisons of rates for different States or cities are not strictly valid unless the age, sex, and racial composition of the population of each area is considered. It is obvious that, if the population in one State is generally older than that in another, the crude death rate will be higher, even though there is no essential difference in the age-specific death rates.

Similar considerations apply also to crude birth rates. For example, comparison of birth rates of one area having a certain proportion of women of child-bearing age with the rates of another community of a different population composition is erroneous if the rates are used as a measure of fertility.

Various methods have been devised to compensate for differences in the population composition of the areas to be compared. A necessary element of all such methods is the computation of specific birth or death rates for each of the factors to be considered. While the natality and mortality tables in this volume are sufficiently detailed for the most important of these computations, it is also essential to have population figures for each separate age, sex, and racial group. Since detailed population data for 1938 are not yet available, it is not possible, at this time, to present these specific rates. The crude rates given in the summary and rate tables are therefore subject to some limitations when used to compare health or fertility conditions in different areas.

POPULATION ESTIMATES.—Since birth and death rates are ratios of the number of births and deaths to population figures, accurate rates are partially dependent upon accurate population figures. Tabulations showing the number and composition of the population for various areas are available only for the years when regular decennial population censuses are taken. For intervening years population estimates must be used.

Recent estimates for the population of the United States as a whole are based on the number of births and deaths that have occurred since the last census date and on the net immigration and emigration. Certain corrections have been made in the birth and death data for underregistration. The allowances for underregistration of births are based, in part, on recent tests conducted by the Bureau of the Census and on ratios computed from the 1930 census returns in comparison with the number of births registered during the year preceding the census. The net immigration figure represents, as nearly as it is possible to ascertain, the difference between the total number of persons, both citizens and aliens, who arrived in continental United States either from foreign countries or from outlying possessions and the number of persons who left the United States for foreign countries or outlying possessions.

Inasmuch as there is no record of the movement of population from one State or city to another, it is not possible to employ for these smaller areas the method used in estimating the population of the United States. Population estimates for individual cities or counties, population groups, separate races, or for specific age groups, have not been made by the Bureau of the Census since 1933, because it is believed that unavoidable errors in these estimates would be so great as to introduce serious errors into rates computed from them. Population estimates for States and the District of Columbia given in table IV are based on growth trends indicated by former censuses, as well as on local census data, school enrollment figures, directory counts, and other sources of information.

PLACE OF RESIDENCE.—Official national vital statistics and those published by most State and city agencies have, for the most part, been compiled according to the place of birth or death. Under this system of tabulation, the data are tabulated by the city, county, or State in which the birth or death occurred, irrespective of the usual place of residence of the mother of the child, or the usual place of residence of the decedent.

The significance of this method of tabulation can be seen by considering the effect of population movement on death rates. For example, the hospital facilities in a city may attract patients from surrounding areas and, as a result, many of the deaths occurring in this city will not be deaths of residents of this city. The enumerated population of the city does not, under such conditions, represent the number of persons exposed to the risk of death; and the death rate does not accurately describe the mortality of this particular city. A more correct figure is obtained by reallocating all deaths to the place of residence. Since there are many causes contributing to the movement of patients to some area other than their usual place of residence, it cannot be assumed that the direction of the movement is always from rural to urban areas.

Similar nonresident factors affect the interpretation of birth statistics based upon place of occurrence. In order to determine the direction or the magnitude of the differences between rates compiled according to place of occurrence and those compiled according to place of residence, it is necessary to examine tabulations compiled on both bases.

Since the data given in this volume are compiled according to place of occurrence, figures for individual cities and counties or for population groups do not always give an accurate indication of relative health and fertility conditions. Tabulations for States as a whole compiled on either basis are essentially the same. Detailed tabulations by place of residence are given in "Vital Statistics of the United States, Part II."

COMPLETENESS OF REGISTRATION.—Although every State has adopted a vital-statistics law requiring the registration of all births and deaths, these laws are not uniformly enforced. In most States where the registration organization is well established and where the persons responsible for filing certificates appreciate the value of registration to the individual as well as its value for statistical purposes, practically all births and deaths are registered. In other States, however, the underregistration is enough to affect the use of the tabulated data for certain purposes.

Accurate information on the completeness of registration in each State is not available. One condition required for admission to the national registration areas was that there exist a demonstrated completeness of registration of at least 90 percent. Using this as a criterion, all of the States were admitted to the registration areas by 1933, and although registration has become more complete in most States, it is likely that there has been regression in some States. Estimates of the completeness of registration in States, based on the comparison of vital-statistics reports and enumerated census data, have been published by several writers.

There is considerable evidence to show that birth registration is more incomplete than death registration. Especially incomplete is the registration of Negro births in isolated rural areas.

INTERPRETATION OF CAUSE-OF-DEATH TABLES

Cause-of-death data given in this volume are classified by the fourth revision of the International List of Causes of Death. The use of this list in the tabulation of data by all States, and by various countries, results in similar cause-of-death titles for the various tables. Unfortunately, this use of a standard classification list, although essential for regional comparisons, does not assure strict comparability of the tabulated figures. At the present time, the type of statement given for the cause of death varies widely according to the care and consideration given to the certification of cause. A high degree of comparability could be attained only if the data on cause of death were reported with equal completeness and accuracy for every area. Table D gives, for 1938, the frequency distribution of States (including the District of Columbia) showing the percent of deaths coded International List numbers 199 and 200, namely, ill-defined causes of death. The variation in the accuracy of reporting throughout the country in 1938 is indicated by the fact that in 29 States less than 1 percent of all deaths were classified in this ill-defined group, while in 6 States over 5 percent, and in 2 States over 10 percent were so classified. Obviously, if a high proportion of deaths are included in this poorly defined cause-of-death class, it means that there is an unknown deficiency in the number of deaths classified in the more precisely defined groups.

The interpretation of data on cause of death is further qualified by the fact that, although in many instances the death is the result of a combination or sequence of causes, it is practicable to tabulate the death under one rubric only. This necessitates a choice of the primary cause from those given on the certificate. This selection of a primary cause is made according to rules given in the Manual of Joint Causes of Death. It is evident, however, that the effect of any such rules on the classification of deaths for specific causes will vary according to the completeness with which all the factors

contributory to the death are reported. If a death is the result of several causes but only a single cause of death is given on the certificate, the Manual of Joint Causes of Death cannot, of course, be used. For this reason the omission of pertinent complicating factors or conditions adding to the risk of death may result in an incorrect assignment of cause. Table E gives the frequency distribution of States (including the District of Columbia) showing the percent of death certificates on which only a single cause of death was stated in 1936, the latest year for which such data are available.

In 12 States more than 50 percent of all certificates had only a single cause of death. In contrast, it can be noted from table E, there were 5 States with less than 30 percent of the certificates reporting only a single cause. This wide variation in the amount of information given on the death certificates must have an appreciable effect on the exact meaning of death rates for specific causes.

Table D.—Frequency distribution of States showing the percent of deaths coded International List numbers 199 and 200: 1938

Percent coded 199 and 200	Number of States
0.0 - 0.9	29
1.0 - 1.9	9
2.0 - 2.9	3
3.0 - 3.9	1
4.0 - 4.9	1
5.0 - 5.9	2
6.0 - 6.9	1
7.0 - 7.9	0
8.0 - 8.9	1
9.0 - 9.9	0
10.0 +	2

Table E.—Frequency distribution of States showing percent of all death certificates having a single cause of death: 1936

Percent having single cause	Number of States
25.0 - 29.9	5
30.0 - 34.9	8
35.0 - 39.9	12
40.0 - 44.9	7
45.0 - 49.9	5
50.0 - 54.9	4
55.0 - 59.9	5
60.0 - 64.9	3

Apart from the question of comparability between areas, there is the additional problem of comparability for a given area from year to year. To a certain extent, time-trend studies would be facilitated if the International List were maintained without change over a long period of years. However, if the list were rigidly fixed it would soon be inconsistent with current medical terminology. To obtain the advantages of frequent revision, and yet to retain a fixed list for a number of years, revisions of the list are made at an international conference every 10 years. In the process of revision, some causes of death included under one title may be transferred to other titles. Since it is difficult to evaluate the numerical importance of all such rearrangements, definite discontinuities are introduced into the time trends of death rates for specific causes of death.

Improvement of diagnostic procedure and development of medical knowledge and facilities are other important factors not to be overlooked in the study of changes in death rates for certain causes. For example, additional diagnostic cancer clinics located throughout the country may correctly diagnose many cancer deaths which might otherwise be classified in an unknown or ill-defined cause-group. Another example might be found in the case of syphilitic deaths. Deaths from syphilis are not always correctly reported, but the recent campaign to promote the treatment of this disease may influence the accuracy of the reporting of syphilis on the death certificates.

NATALITY STATISTICS

Detailed tabulations of the live births registered in the United States in 1938 are given in general natality tables, numbers 1 to 7, inclusive. In these tables the reported births are classified by place of birth, sex and race of child, age and nativity of parents, order of birth, and other subjects. Additional information on birth statistics is included in the section containing summary and rate tables. The following paragraphs point out some of the more important facts for 1938 and give comparable figures for past years.

BIRTH-RATE TREND.—In 1938 there were 2,286,962 registered live births in the United States. With an estimated population of 130,215,000, the crude birth rate is 17.6 per 1,000 estimated population. The number of births reported for the

United States birth-registration area and the crude birth rates for each year since 1915 are given in table F. This table also gives the estimated midyear population of the United States and the estimated midyear population and percent of total included in the increasing birth-registration area.

An inspection of table F shows a rapid downward trend in the crude birth rate for more than 20 years. The rate for 1938, as in 1937, is higher than the rates for 1936 and 1935, and is the highest since 1931, but the increase is so slight that it cannot be taken as an assurance that the direction of the trend has materially changed.

TABLE F.—CRUDE BIRTH RATES: BIRTH REGISTRATION AREA, UNITED STATES

YEAR	Estimated midyear population of continental United States	BIRTH-REGISTRATION AREA			
		Estimated midyear population	Percent of total	Live births	Rate per 1,000 population
		Number		Number	
1938	130,215,000	130,215,000	100.0	2,286,962	17.6
1937	129,257,000	129,257,000	100.0	2,203,337	17.0
1936	128,429,000	128,429,000	100.0	2,144,790	16.7
1935	127,521,000	127,521,000	100.0	2,155,105	16.9
1934	126,626,000	126,626,000	100.0	2,167,636	17.1
1933	125,770,000	125,770,000	100.0	2,081,232	16.5
1932	124,974,000	119,027,000	95.2	2,074,042	17.4
1931	124,113,000	117,522,000	94.7	2,112,760	18.0
1930	123,091,000	116,556,000	94.7	2,203,958	18.9
1929	121,526,429	115,097,972	94.7	2,169,920	18.9
1928	119,861,607	113,050,663	94.3	2,233,149	19.8
1927	118,196,785	103,575,656	87.6	2,137,836	20.6
1926	116,531,963	89,682,479	77.0	1,856,068	20.7
1925	114,867,141	87,488,096	76.2	1,876,680	21.5
1924	113,202,319	86,256,025	76.2	1,930,614	22.4
1923	111,537,497	80,694,406	72.3	1,792,646	22.2
1922	109,872,675	79,415,841	72.3	1,774,911	22.3
1921	108,207,853	70,738,177	65.4	1,714,261	24.2
1920	106,543,031	63,740,689	59.8	1,508,674	23.7
1919	105,003,065	61,483,423	58.6	1,375,438	22.3
1918	103,587,955	55,615,241	53.6	1,565,649	24.6
1917	102,172,845	54,771,416	53.6	1,555,792	24.7
1916	100,757,735	52,788,670	52.5	1,618,983	25.0
1915	99,342,625	50,936,179	51.1	776,304	25.1

The trend of the birth rate, as shown in table F, is affected somewhat by the fact that the registration area included additional States from year to year, and the more recently added States have, in general, higher birth rates than the original States. The additions to the area in various years are shown in table G. The effect of these newly added States on the rate for the area can be seen by comparing the trend of the rate for the original birth-registration area with the trend of the rate for the increasing area. The data for the original birth-registration area are given in table H. For this original area the rate decreased from 25.1 in 1915 to 16.1 in 1938, a decline of 35.9 percent. In the same period the rate for the whole area decreased from 25.1 to 17.6, a decline of 29.9 percent. The time trend of the rate for individual States is given in table VII in the section containing summary and rate tables.

TABLE G.—YEAR IN WHICH EACH STATE WAS ADMITTED TO THE BIRTH-REGISTRATION AREA

YEAR	STATE	YEAR	STATE	YEAR	STATE
1915	Connecticut	1917	Virginia	1925	West Virginia
	Maine		Washington	1926	Arizona
	Massachusetts		Wisconsin		Idaho
	Michigan	1919	California	1927	Alabama
	Minnesota		Oregon		Arkansas
	New Hampshire		South Carolina 2/		Louisiana
	New York	1920	Nebraska		Missouri
	Pennsylvania	1921	Delaware		Tennessee
	Rhode Island 1/		Mississippi	1928	Colorado
	Vermont		New Jersey		Georgia
	Dist. of Columbia 2/	1922	Illinois		Oklahoma
1916	Maryland		Montana	1929	Nevada
1917	Indiana		Wyoming		New Mexico
	Kansas	1924	Florida	1932	South Dakota
	Kentucky		Iowa	1933	Texas
	North Carolina		North Dakota		
	Ohio				
	Utah				

1/ Dropped from the birth-registration area in 1919; readmitted in 1921.

2/ Included in States.

3/ Dropped from the birth-registration area in 1925; readmitted in 1928.

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TABLE H.—CRUDE BIRTH AND DEATH RATES: ORIGINAL BIRTH-REGISTRATION AREA, 1/ UNITED STATES

YEAR	Estimated midyear population	Live births	Total deaths 2/	RATE PER 1,000 POPULATION	
				Live births	Deaths 2/
1938	39,160,000	629,900	427,902	16.1	10.9
1937	39,160,000	612,423	450,939	15.6	11.5
1936	39,008,000	602,931	451,391	15.5	11.6
1935	38,725,000	605,062	433,026	15.6	11.2
1934	38,438,000	602,101	434,205	15.7	11.3
1933	38,252,000	594,117	426,747	15.5	11.2
1932	38,078,000	631,467	428,360	16.6	11.2
1931	37,895,000	657,074	450,069	17.3	11.3
1930	37,666,000	694,433	452,479	18.4	11.5
1929	37,211,173	693,545	453,976	18.6	12.2
1928	36,704,193	719,569	450,564	19.6	12.3
1927	36,197,212	741,102	422,679	20.5	11.7
1926	35,690,232	735,708	453,366	20.6	12.7
1925	35,183,251	757,082	432,008	21.5	12.3
1924	34,676,271	778,525	420,300	22.5	12.1
1923	34,169,292	760,130	437,157	22.2	12.6
1922	33,662,313	755,808	414,938	22.5	12.3
1921	33,155,334	794,229	399,176	24.0	12.0
1920	32,648,354	773,648	445,780	23.7	13.7
1919	32,148,814	730,752	428,782	22.7	13.3
1918	31,716,715	783,997	607,605	24.7	19.2
1917	31,264,615	786,890	461,847	25.2	14.8
1916	30,812,521	770,718	454,669	25.0	14.8
1915	30,360,423	762,399	427,671	25.1	14.1

1/ Exclusive of Rhode Island. 2/ Exclusive of stillbirths. 3/ Population estimated for 1937; no estimate made for 1938.

In spite of the declining birth rate as indicated in table F, there was still an excess of more than 905,000 births over deaths in the United States in 1938. Even in the original birth-registration area, where the death rate is higher and the birth rate is lower than for the whole United States, there are 629,900 births compared with 427,902 deaths. Data on deaths in the original birth-registration area are included in table H in order to facilitate the comparison of rate trends. As indicated in table J, each State also has a higher birth rate than death rate in 1938.

TABLE J.—CRUDE BIRTH AND DEATH RATES: UNITED STATES AND EACH STATE, 1938

AREA	RATE PER 1,000 ESTIMATED MIDYEAR POPULATION 1/		AREA	RATE PER 1,000 ESTIMATED MIDYEAR POPULATION 1/	
	Live births	Deaths 2/		Live births	Deaths 2/
United States	17.6	10.6	Missouri	14.7	10.7
Alabama	21.4	10.2	Montana	19.8	10.5
Arizona	26.4	14.6	Nebraska	16.4	8.8
Arkansas	18.2	8.3	Nevada	18.7	12.6
California	16.5	12.4	New Hampshire	15.4	12.5
Colorado	19.2	11.8	New Jersey	12.9	10.1
Connecticut	13.7	10.1	New Mexico	33.9	14.1
Delaware	17.0	12.3	New York	14.6	11.4
District of Columbia	20.6	12.7	North Carolina	22.9	9.6
Florida	18.6	12.6	North Dakota	18.5	7.4
Georgia	21.0	11.0	Ohio	16.7	11.1
Idaho	22.9	9.2	Oklahoma	17.3	7.8
Illinois	15.6	10.8	Oregon	15.8	11.5
Indiana	17.3	11.1	Pennsylvania	16.3	10.5
Iowa	16.9	10.0	Rhode Island	15.5	12.2
Kansas	15.9	10.0	South Carolina	21.9	11.0
Kentucky	21.2	10.0	South Dakota	17.1	7.9
Louisiana	22.9	11.6	Tennessee	18.5	10.1
Maine	17.8	12.3	Texas	19.6	9.8
Maryland	17.3	12.4	Utah	25.5	9.4
Massachusetts	15.8	11.2	Vermont	16.5	12.0
Michigan	20.1	10.5	Virginia	19.8	10.9
Minnesota	18.9	9.9	Washington	16.1	11.2
Mississippi	26.5	11.3	West Virginia	22.8	9.5
			Wisconsin	18.8	10.5
			Wyoming	21.0	9.5

1/ Rates for United States based on 1938 estimated population. Rates for States based on 1937 estimated population; no estimates made for 1938.

2/ Exclusive of stillbirths.

CRUDE BIRTH RATES BY STATE.—Table J gives the 1938 crude birth and death rates for each State. The reported rates range from 12.9 for New Jersey to 33.9 for New Mexico. With a few exceptions, the crude birth rate is highest in the Southern, Southwestern, and Rocky Mountain States and lowest in the New England, Middle Atlantic, Midwestern, and far Western States. Variations in the age, racial, and marital composition

of the population, as well as in other conditions affecting fertility, contribute to these differences in the crude birth rates.

AGE OF PARENTS.—Careful analysis of the trend of birth rates or the comparison of rates between areas necessarily involves the consideration of age-specific birth rates. Such rates are not included in this volume, since accurate estimates of population by age, sex, and marital condition are not available for recent years. Certain detailed tabulations of births by age of father or age of mother are given in tables 3, 4, and 5.

Proportionate distributions of live births by age of mother for the years 1934 to 1938 are given in table K, and similar distributions by age of father are given in table L. Table M gives, for 1938, the proportionate distributions by age of father for each age-of-mother group. It is evident from each of these tables that there is an increasing tendency for a greater proportion of births to occur to parents in younger-age groups. Such changes could arise from differences in the rate of change of age-specific birth rates, from gradual changes in the age distribution of the population in the reproductive period of life, or from changes in the gross marriage rate of the distribution of age at marriage.

It is unfortunate that there are no national statistics on marriage and divorce to which birth statistics could be related.

PLURAL BIRTHS.—The great majority of births registered each year are single births. Of the total of 2,286,962 live births in 1938, there were 2,236,863 single births. In addition to these there were 25,644 cases of twins, 262 cases of triplets, and 1 case of quadruplets, in each of which there was at least one live birth.

The proportion of plural-birth cases to the total number of cases of birth remains fairly constant from year to year. In 1938 there were 11.4 cases of plural births per 1,000 total cases. The highest proportion of plural births was recorded in 1919 when the ratio was 12.2 cases per 1,000. Since 1920 the ratio has fluctuated between 11.2 and 11.9.

The total number of cases of live births; the cases of single births; and the cases of twins, triplets, and quadruplets, are given for the birth-registration area in table N. An authentic case of quintuplets in the United States has never been reported during the time that the Bureau of the Census has been compiling annual birth data.

TABLE K.—DISTRIBUTION OF LIVE BIRTHS, PER 1,000, BY AGE OF MOTHER: UNITED STATES

AGE OF MOTHER	1938	1937	1936	1935	1934
All ages	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
10 to 14 years	1.4	1.4	1.4	1.5	1.3
15 to 19 years	130.4	129.4	125.5	125.4	122.8
20 to 24 years	315.0	314.2	311.0	306.4	302.9
25 to 29 years	267.2	264.9	263.8	261.9	260.6
30 to 34 years	165.0	164.4	165.0	165.9	170.2
35 to 39 years	86.6	91.4	96.1	99.4	99.4
40 to 44 years	28.9	29.6	31.9	33.8	35.2
45 to 49 years	2.7	2.9	3.1	5.3	3.4
50 to 54 years	0.1	0.1	0.1	0.1	0.1
55 years and over	1/	1/	1/		
Not stated	1.5	1.7	2.2	2.4	4.2

1/ Less than one-tenth of 1 per 1,000 live births.

TABLE L.—DISTRIBUTION OF LIVE BIRTHS, PER 1,000, BY AGE OF FATHER: UNITED STATES

AGE OF FATHER	1938	1937	1936	1935	1934
All ages	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
10 to 14 years	1/	1/	1/	1/	
15 to 19 years	15.9	15.0	14.4	14.8	14.6
20 to 24 years	194.6	193.6	190.1	188.6	184.9
25 to 29 years	282.4	279.4	276.6	271.0	266.6
30 to 34 years	216.2	212.2	209.9	207.9	213.5
35 to 39 years	135.7	138.2	142.8	146.3	144.4
40 to 44 years	72.3	76.6	80.3	82.4	85.1
45 to 49 years	33.4	35.0	36.3	38.2	39.2
50 to 54 years	12.4	12.5	13.1	13.9	14.5
55 years and over	7.3	7.4	7.8	8.0	7.9
Not stated	29.9	30.2	28.8	28.8	29.4

1/ Less than one-tenth of 1 per 1,000 live births.

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TABLE M.—DISTRIBUTION OF LIVE BIRTHS, PER 1,000, BY AGE OF FATHER FOR EACH AGE-OF-MOTHER GROUP: UNITED STATES, 1938

AGE OF FATHER	AGE OF MOTHER									
	10 to 14 years	15 to 19 years	20 to 24 years	25 to 29 years	30 to 34 years	35 to 39 years	40 to 44 years	45 to 49 years	50 years and over	Not stated
All ages-----	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
10 to 14 years-----	2.1	1/	1/	0.6	0.2	0.1	0.1	---	---	0.3
15 to 19 years-----	195.9	100.0	7.5	0.6	0.2	0.1	0.1	---	---	7.6
20 to 24 years-----	214.8	545.7	349.1	44.1	6.5	1.9	0.8	2.1	17.0	100.4
25 to 29 years-----	66.0	191.0	428.9	404.4	74.7	13.6	5.8	2.9	22.7	142.4
30 to 34 years-----	16.1	41.5	129.7	359.8	400.0	80.1	16.0	9.4	90.9	105.6
35 to 39 years-----	11.3	15.0	36.9	122.2	326.5	374.8	87.0	28.7	108.0	82.6
40 to 44 years-----	7.3	4.3	11.4	34.7	119.0	317.2	383.5	107.1	102.3	43.2
45 to 49 years-----	5.3	1.9	4.4	13.1	39.4	131.4	316.2	425.7	56.8	26.3
50 to 54 years-----	2.1	0.9	1.9	4.8	14.6	42.9	123.1	270.8	346.6	10.8
55 years and over-----	4.0	0.9	1.4	5.6	8.9	25.8	57.7	136.3	227.3	10.2
Not stated-----	477.0	100.8	27.8	12.8	10.2	12.3	11.7	16.9	28.4	470.7

1/ Less than one-tenth of 1 per 1,000 live births.

TABLE N.—CASES OF LIVE BIRTHS: BIRTH-REGISTRATION AREA, UNITED STATES

YEAR	Total cases	Cases of single births	CASES 1/ OF PLURAL BIRTHS				Cases 1/ of plural births per 1,000 total cases
			Total	Twins	Triplets	Quadruplets	
1938-----	2,262,770	2,235,863	25,907	25,644	262	1	11.4
1937-----	2,179,823	2,154,719	25,104	24,881	219	4	11.5
1936-----	2,121,519	2,096,667	24,852	24,569	277	6	11.7
1935-----	2,132,302	2,107,903	24,399	24,167	232	---	11.4
1934-----	2,144,111	2,118,997	25,114	24,866	248	6	11.7
1933-----	2,058,686	2,034,466	24,220	23,995	225	5	11.8
1932-----	2,051,396	2,027,134	24,262	24,020	236	6	11.8
1931-----	2,090,086	2,065,803	24,283	24,049	232	2	11.6
1930-----	2,180,312	2,155,094	25,218	24,963	249	6	11.6
1929-----	2,146,016	2,120,415	25,601	25,358	240	3	11.9
1928-----	2,208,784	2,182,879	25,905	25,619	285	1	11.7
1927-----	2,114,405	2,089,508	24,897	24,658	233	6	11.8
1926-----	1,836,188	1,815,108	21,080	20,885	192	3	11.5
1925-----	1,859,174	1,836,296	20,878	20,645	230	3	11.2
1924-----	1,809,869	1,887,776	22,093	21,864	226	3	11.6
1923-----	1,773,106	1,752,331	20,775	20,594	179	2	11.7
1922-----	1,755,561	1,735,074	20,487	20,284	199	4	11.7
1921-----	1,695,127	1,674,875	20,252	20,021	230	1	11.9
1920-----	1,492,532	1,475,113	17,419	17,229	184	6	11.7
1919-----	1,357,737	1,341,234	16,503	16,316	186	1	12.2
1918-----	1,349,015	1,333,526	15,489	15,342	147	---	11.5
1917-----	1,339,975	1,322,426	14,549	14,394	155	---	10.9
1916-----	811,119	802,692	8,227	8,139	86	2	10.1
1915-----	768,887	761,150	7,737	7,673	64	---	10.1

1/ Includes only those cases in which at least one was a live birth.

AVERAGE NUMBER OF CHILDREN.—Table O is a tabulation of the average number of children ever born to women who bore children, in each specified year. These averages are given for the years 1929 to 1938. In 1929 the average number of children ever born was 3.2. This figure has gradually declined to 2.8 in 1937 and 1938. The decrease in the average number of children is probably an indication of declining fertility. This interpretation is strengthened by the fact that there is a decrease in the average number of children for almost every age-of-mother group. The figures given cannot be directly interpreted as the average size of family in the whole population, inasmuch as only those mothers who gave birth during the current year are included. Moreover, the average for all ages is affected by changes in the marriage rate or in the average age at marriage, as well as by other factors. Thus, if a rapid increase in the marriage rate increased the proportion of first births, the average number of children would be decreased. This decrease would then be occurring at the same time that the reproductive rate of certain age groups would be increasing.

BIRTH RATES BY MONTH.—The fluctuations of the crude birth rate from month to month are shown in table P for the years 1934 to 1938. In 1938 the highest rate, 18.6, occurred in August and the lowest, 16.5, in December.

ILLEGITIMATE BIRTHS.—The number of illegitimate live births and the rate per 1,000 total live births are given in table Q. In 1938, there were 74,462 births in the United States (exclusive of California, Massachusetts, New York, and Texas) reported as illegitimate, and the rate was 41.1 per 1,000 live

births. This rate is one of the highest illegitimacy rates recorded for the registration area since these data were first available in 1917. In that first year the rate was 20.2, and there was a steady increase in the years following. The trend of this rate is somewhat influenced by the changing character of the registration area from year to year. The rate for races other than white is very high, and the addition to the registration area of States with a high proportion of Negroes has accelerated the upward trend of the total rate. However, for the white group alone, there has been a marked increase in the proportion of recorded illegitimate births. In 1917 the rate for the white group in the registration area was 13.0, and in 1938 the rate was 20.5.

TABLE O.—AVERAGE NUMBER OF CHILDREN EVER BORN TO WOMEN WHO BORE CHILDREN IN SPECIFIED YEARS: BIRTH-REGISTRATION AREA, 1/ UNITED STATES

AGE OF MOTHER	AVERAGE NUMBER OF CHILDREN IN—									
	1938	1937	1936	1935	1934	1933	1932	1931	1930	1929
All ages-----	2.8	2.8	2.9	3.0	3.1	3.1	3.1	3.1	3.1	3.2
Under 20 years-----	1.2	1.3	1.3	1.2	1.2	1.3	1.3	1.3	1.3	1.3
20 to 24 years-----	1.8	1.9	1.9	1.9	1.9	2.0	1.9	1.9	1.9	2.0
25 to 29 years-----	2.6	2.7	2.8	2.8	2.9	2.9	2.9	2.9	2.9	3.0
30 to 34 years-----	3.8	3.9	3.9	4.0	4.1	4.2	4.2	4.2	4.2	4.2
35 to 39 years-----	5.5	5.6	5.6	5.7	5.7	5.8	5.8	5.8	5.8	5.8
40 to 44 years-----	7.2	7.3	7.4	7.4	7.5	7.4	7.4	7.4	7.5	7.5
45 to 49 years-----	8.9	8.9	8.9	8.9	9.0	9.0	9.0	9.0	9.0	8.9
50 to 54 years-----	7.6	7.2	7.1	7.7	9.4	8.0	7.4	7.3	7.5	7.5
55 years and over-----	9.0	9.0	7.7	---	---	---	---	---	---	---
Not stated-----	3.3	3.3	3.3	3.3	2.8	2.6	2.4	2.6	2.5	2.8

1/ Exclusive of Colorado, Maine, Massachusetts, New Hampshire, and Rhode Island from 1929 to 1932; exclusive of Colorado, Massachusetts, and New Hampshire in 1933; exclusive of Massachusetts and New Hampshire from 1934 to 1938.

TABLE P.—ANNUAL CRUDE BIRTH RATES 1/ PER 1,000 ESTIMATED MIDYEAR POPULATION, BY MONTH: UNITED STATES

MONTH	1938	1937	1936	1935	1934
Total-----	17.6	17.0	16.7	16.9	17.1
January-----	17.6	16.6	16.7	17.2	17.0
February-----	18.0	17.2	17.3	17.4	17.1
March-----	17.7	17.3	17.3	17.2	16.7
April-----	17.2	16.6	16.2	16.5	16.3
May-----	17.0	16.5	15.7	16.2	16.7
June-----	17.2	16.8	16.8	17.1	16.9
July-----	18.4	17.8	17.5	17.8	17.5
August-----	18.6	18.4	17.5	17.8	18.2
September-----	18.4	18.2	17.5	17.7	18.5
October-----	17.4	16.8	16.4	16.5	17.5
November-----	16.8	16.3	15.8	16.0	16.9
December-----	16.5	16.5	15.6	15.9	16.6

1/ Exclusive of stillbirths.

Data on illegitimate live births for 1936, 1937, and 1938 for individual States are given in table R. This table gives the number of illegitimate births and the rate for each State, for "white" and "all other races." California, Massachusetts, and New York are not included for any year, and Texas has also

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been excluded for 1938. The birth certificates for these States do not require a statement concerning legitimacy. It must be recognized that the reporting of the fact of illegitimacy in other States is probably incomplete and inaccurate.

TABLE Q.—ILLEGITIMATE LIVE BIRTHS BY RACE: BIRTH-REGISTRATION AREA, 1/ UNITED STATES

YEAR	ILLEGITIMATE LIVE BIRTHS					
	Number			Rate per 1,000 total live births		
	Total	White	All other races	Total	White	All other races
1938	74,462	32,043	42,419	41.1	20.5	169.1
1937	74,938	32,231	42,707	40.2	20.1	163.9
1936	72,338	31,850	40,488	39.8	20.3	162.4
1935	75,141	33,685	41,456	41.1	21.4	163.6
1934	75,352	32,682	42,670	41.0	20.9	164.0
1933	73,389	31,742	41,647	41.8	21.3	158.9
1932	70,811	31,607	39,204	41.0	21.3	160.9
1931	65,952	30,137	35,815	37.5	19.8	150.5
1930	63,567	29,490	34,077	34.7	18.6	141.1
1929	60,921	27,780	33,141	33.9	17.7	143.5
1928	60,661	27,745	32,916	32.8	17.2	139.5
1927	52,022	26,124	25,898	29.0	16.9	131.6
1926	37,976	21,316	16,660	25.6	16.0	121.5
1925	21,414	12,564	8,850	25.3	16.0	120.6
1924	39,332	20,523	18,809	25.9	15.0	123.5
1923	35,040	18,139	16,901	25.2	14.4	126.2
1922	35,605	18,471	17,134	25.8	14.8	130.0
1921	34,824	17,440	17,384	26.6	14.8	128.5
1920	27,749	15,170	12,579	24.9	15.0	125.0
1919	23,660	12,360	11,300	23.6	13.6	121.9
1918	19,906	12,000	7,906	19.4	12.5	113.6
1917	20,464	12,238	8,226	20.2	13.0	120.1

1/ Exclusive of California, Massachusetts, and New York for each year, and Texas for 1938. These States do not require a statement concerning legitimacy of child.

NOTE.—Data not available for the years 1915 and 1916.

TABLE R.—ILLEGITIMATE LIVE BIRTHS BY RACE: UNITED STATES 1/ AND EACH STATE

AREA AND RACE	ILLEGITIMATE LIVE BIRTHS					
	Number			Per 1,000 total live births		
	1938	1937	1936	1938	1937	1936
United States 1/	74,462	74,938	72,338	41.1	40.2	39.8
White	32,043	32,231	31,850	20.5	20.1	20.3
All other races	42,419	42,707	40,488	169.1	163.9	162.4
ALABAMA	5,176	5,015	5,012	85.5	81.4	83.4
White	702	649	593	18.1	17.0	16.1
All other races	4,476	4,366	4,419	192.8	186.6	189.1
ARIZONA	255	274	270	23.4	26.1	28.3
White	183	197	198	19.1	20.4	22.5
All other races	72	77	72	55.2	66.6	66.5
ARKANSAS	1,476	1,533	1,554	39.7	44.1	46.4
White	442	430	369	15.8	16.2	14.5
All other races	1,027	1,103	1,185	118.0	130.5	145.5
COLORADO	535	498	414	26.0	25.4	22.6
White	514	476	397	25.3	24.6	22.0
All other races	21	22	17	70.0	76.9	70.8
CONNECTICUT	479	409	425	80.1	18.0	19.1
White	423	367	368	18.3	16.1	17.0
All other races	56	52	57	90.5	84.3	95.8
DELAWARE	369	307	260	85.3	70.5	66.5
White	137	95	81	37.2	26.0	24.9
All other races	232	212	179	310.2	305.7	264.0
DISTRICT OF COLUMBIA	1,105	1,060	975	85.4	85.1	85.1
White	178	192	179	20.2	23.2	22.7
All other races	927	868	794	224.5	210.9	206.7
FLORIDA	2,119	2,056	1,895	68.1	69.7	67.4
White	392	319	355	18.0	15.5	18.0
All other races	1,727	1,737	1,540	184.9	194.2	184.6
GEORGIA	4,893	4,865	4,822	75.7	75.9	78.2
White	609	542	597	15.7	14.2	16.1
All other races	4,284	4,323	4,225	166.5	167.1	167.4
IDaho	150	114	119	13.3	11.0	11.6
White	140	108	115	12.5	10.5	11.4
All other races	10	6	4	100.0	69.0	39.6

See footnotes at end of table.

TABLE R.—ILLEGITIMATE LIVE BIRTHS BY RACE: UNITED STATES 1/ AND EACH STATE—Continued

AREA AND RACE	ILLEGITIMATE LIVE BIRTHS					
	Number			Per 1,000 total live births		
	1938	1937	1936	1938	1937	1936
ILLINOIS	5,270	2,856	2,675	26.7	24.8	23.8
White	2,241	2,094	2,005	19.3	19.1	18.8
All other races	1,029	762	670	163.4	150.0	119.8
INDIANA	1,069	984	1,043	17.8	17.5	19.3
White	863	772	834	14.8	14.2	15.9
All other races	206	212	209	109.3	116.3	127.9
IOWA	794	805	787	18.4	19.1	18.0
White	767	769	739	17.9	18.4	17.4
All other races	27	36	28	94.4	118.4	107.7
KANSAS	481	507	463	16.5	17.5	16.1
White	376	381	376	13.1	13.4	12.9
All other races	105	126	107	112.2	126.6	116.1
KENTUCKY	1,642	1,414	1,501	26.5	25.2	26.9
White	1,125	980	1,047	19.2	18.5	19.8
All other races	517	434	454	161.9	139.5	151.2
LOUISIANA	4,066	3,928	3,699	83.2	85.4	84.4
White	497	468	468	18.4	18.7	18.4
All other races	3,537	3,431	3,231	175.2	176.2	176.1
MAINE	510	510	487	33.5	33.5	31.8
White	505	507	484	33.2	33.5	31.7
All other races	5	3	3	172.4	76.9	69.8
MARYLAND	2,228	2,180	1,978	75.8	73.6	74.4
White	546	537	540	24.0	24.7	25.7
All other races	1,682	1,643	1,438	267.0	274.8	256.4
MICHIGAN	2,329	2,206	2,144	24.0	24.1	24.2
White	1,902	1,821	1,907	20.4	20.6	21.2
All other races	427	385	337	119.4	115.5	107.5
MINNESOTA	1,158	1,084	1,048	23.1	22.6	22.0
White	1,065	1,010	985	21.6	21.3	20.6
All other races	93	74	63	162.2	121.3	133.4
MISSISSIPPI	4,397	4,281	4,221	81.9	82.2	85.4
White	263	264	246	10.9	12.2	11.0
All other races	4,134	3,997	3,975	139.7	138.6	146.5
MISSOURI	1,952	1,818	1,762	33.3	31.9	31.5
White	1,337	1,223	1,221	24.4	22.9	23.3
All other races	615	595	541	165.7	168.4	153.6
MONTANA	213	197	204	20.0	19.2	19.6
White	140	151	150	14.0	15.7	15.4
All other races	73	46	54	115.0	70.8	84.6
NEBRASKA	210	223	305	9.4	10.0	12.8
White	200	213	289	9.1	9.7	12.5
All other races	10	10	16	31.3	54.4	57.5
NEVADA	35	25	17	18.5	13.2	12.0
White	19	14	11	10.9	8.9	8.3
All other races	16	9	6	115.1	52.9	67.4
NEW HAMPSHIRE	183	168	164	23.4	22.0	21.4
White	181	167	161	25.1	21.9	21.0
All other races	2	1	3	250.0	200.0	500.0
NEW JERSEY	1,419	1,300	1,245	25.5	25.8	23.1
White	836	791	775	16.2	15.7	15.5
All other races	583	509	470	133.6	119.5	111.9
NEW MEXICO	566	535	504	39.6	38.7	39.0
White	499	467	455	36.5	35.4	36.8
All other races	67	68	51	105.5	108.5	85.1
NORTH CAROLINA	6,090	6,189	5,748	76.2	78.5	77.5
White	1,445	1,502	1,562	26.5	28.0	26.1
All other races	4,645	4,687	4,186	182.5	184.4	185.3
NORTH DAKOTA	294	293	272	22.5	23.2	20.0
White	247	242	238	19.6	19.9	17.6
All other races	47	51	40	105.9	108.1	95.2
OHIO	2,628	2,537	2,443	23.5	23.5	23.6
White	1,878	1,823	1,813	17.6	18.2	18.4
All other races	750	714	630	125.6	122.6	119.1
OKLAHOMA	1,238	1,129	1,006	28.0	27.2	24.0
White	533	619	618	16.5	16.5	16.0
All other races	585	510	388	138.8	132.8	115.0
OREGON	227	239	198	14.0	15.5	14.2
White	212	229	195	15.2	15.0	14.1
All other races	15	10	3	68.2	51.8	19.5
PENNSYLVANIA	5,619	5,485	5,253	33.9	34.0	33.0
White	4,092	4,081	4,049	26.0	26.7	26.7
All other races	1,527	1,404	1,204	173.0	162.2	154.0
RHODE ISLAND	296	276	288	28.1	27.0	28.5
White	266	256	255	25.9	25.7	25.7
All other races	30	40	33	120.5	139.9	156.2

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TABLE R.—ILLEGITIMATE LIVE BIRTHS BY RACE: UNITED STATES 1/
AND EACH STATE—Continued

AREA AND RACE	ILLEGITIMATE LIVE BIRTHS					
	Number			Per 1,000 total live births		
	1938	1937	1936	1938	1937	1936
SOUTH CAROLINA-----	4,527	4,358	3,992	110.1	107.2	101.6
White-----	504	476	408	24.8	24.1	21.1
All other races-----	4,023	3,882	3,584	193.7	185.8	179.8
SOUTH DAKOTA-----	206	206	230	17.4	17.3	17.9
White-----	161	167	186	14.5	14.8	15.3
All other races-----	45	39	44	60.5	66.1	64.1
TENNESSEE-----	2,361	2,125	2,166	44.0	40.9	42.8
White-----	928	839	928	20.3	19.1	21.7
All other races-----	1,433	1,286	1,238	178.0	159.2	158.9
TEXAS-----	2/	3,147	3,269	2/	27.1	29.3
White-----	2/	1,521	1,595	2/	14.9	16.3
All other races-----	2/	1,626	1,674	2/	116.7	121.5
UTAH-----	128	140	140	9.7	11.0	11.2
White-----	121	130	131	9.2	10.4	10.5
All other races-----	7	10	9	61.4	68.5	70.3
VERMONT-----	198	194	209	31.4	30.7	32.4
White-----	198	193	209	31.4	30.5	32.4
All other races-----		1			333.3	
VIRGINIA-----	3,997	3,923	3,711	74.7	75.5	72.4
White-----	1,072	995	997	27.9	27.0	27.3
All other races-----	2,925	2,928	2,714	194.6	193.7	184.5
WASHINGTON-----	532	517	462	19.9	20.7	19.8
White-----	466	453	422	17.9	18.6	18.6
All other races-----	66	64	40	98.5	96.1	63.4
WEST VIRGINIA-----	1,888	1,807	1,785	44.5	42.8	43.7
White-----	1,600	1,529	1,545	39.9	38.3	39.9
All other races-----	288	278	240	124.9	121.1	114.8
WISCONSIN-----	1,080	1,131	1,117	19.6	21.1	21.2
White-----	1,024	1,067	1,057	18.8	20.1	20.3
All other races-----	56	64	60	93.0	119.4	106.4
WYOMING-----	72	84	61	14.6	18.5	12.8
White-----	55	67	50	11.5	15.2	10.8
All other races-----	17	17	11	114.1	149.1	85.9

1/ Exclusive of California, Massachusetts, and New York for each year, and Texas for 1938. These States do not require a statement concerning legitimacy of child.
2/ Texas did not require a statement in 1938 concerning legitimacy of child.

REPORTING OF STILLBIRTHS.—Information on stillbirths was first collected by the Bureau of the Census in 1918. No data were collected or published for the years 1919 to 1921, inclusive, but since 1922 stillbirth tables have been compiled annually for the birth-registration area.

In some States stillbirths are reported on a single stillbirth certificate, whereas in others, State laws require the physician or attendant at a stillbirth to file both a birth and a death certificate. Such basic differences in reporting procedure introduce some variation in the completeness of registration and in the information reported. More important, from a statistical standpoint, are differences in the legal definitions of a stillbirth used in the States. Variations in the definition make it impossible to compile strictly comparable data for all States, and confuse the interpretation of consolidated national figures. A list showing the various definitions used in reporting stillbirths has been published each year before 1937 in the volume entitled "Birth, Stillbirth, and Infant Mortality Statistics." More recent data on stillbirth definitions for the States are given in Vital Statistics—Special Reports, vol. 3, No. 2, table 13. Neither of these sources of definitions can be considered up-to-date since changes may occasionally be made in State procedures. It is expected that the adoption of a standard stillbirth certificate in 1940 will make these data more complete and uniform.

Detailed tables classifying stillbirths by area, race, age of mother, nativity of parents, and other subjects, are given in tables 8, 9, and 10 in the section containing general natality tables.

The total number of stillbirths and the ratio of stillbirths to each 1,000 live births are given in table S for the birth-registration area for a series of years.

The ratio of stillbirths to live births for the first year that these data are available (1918) is 40.1. For the years

1922 to 1930 the ratio varied around 38, 39, and 40, without demonstrating any appreciable trend. However, since 1930 the ratio has been consistently decreasing; for 1938 it is 32.1, which is 18.1 percent below the ratio for 1930. This decrease in recent years must be due to factors other than changes in the registration area because the area has included the whole United States since 1933.

TABLE S.—RATIO OF STILLBIRTHS TO LIVE BIRTHS: BIRTH-REGISTRATION AREA, UNITED STATES¹

YEAR	Live births	STILLBIRTHS		YEAR	Live births	STILLBIRTHS	
		Number	Rate per 1,000 live births			Number	Rate per 1,000 live births
1938-----	2,286,962	75,467	32.1	1929-----	2,169,920	85,678	39.5
1937-----	2,203,337	73,609	33.4	1928-----	2,233,149	89,765	40.2
1936-----	2,144,790	73,735	34.4	1927-----	2,137,836	82,931	38.8
1935-----	2,155,105	77,119	35.8	1926-----	1,856,068	70,716	38.1
1934-----	2,167,636	78,503	36.2	1925-----	1,878,880	71,519	38.1
1933-----	2,081,232	77,059	37.0	1924-----	1,930,614	75,817	39.3
1932-----	2,074,042	78,351	37.8	1923-----	1,792,646	69,757	38.9
1931-----	2,112,760	80,616	38.2	1922-----	1,774,911	70,010	39.4
1930-----	2,203,958	86,466	39.2	1918-----	1,211,685	48,634	40.1

1/ Exclusive of Massachusetts, Rhode Island, Washington, and Baltimore, Maryland. No transcripts of stillbirths were received from these areas.

NOTE.—Data relating to stillbirths were not collected for the years 1919 to 1921, inclusive.

ILLEGITIMATE STILLBIRTHS.—The number of stillbirths reported as legitimate or illegitimate is shown in table T. As may be expected, the stillbirth rate for illegitimate births, 70.6, is higher than the stillbirth rate for legitimate births, 30.6. Data in table T are for the years 1933 to 1938 for "white" and "all other races." California, Massachusetts, and New York are not included in this table for any year, and Texas has also been excluded in 1938.

TABLE T.—STILLBIRTHS BY LEGITIMACY AND RACE: UNITED STATES 1/

YEAR AND RACE	STILLBIRTHS					
	Number			Rate per 1,000 live births		
	Total	Legitimate	Illegitimate	Total	Legitimate	Illegitimate
1938-----						
Total-----	58,397	53,127	5,260	32.2	30.6	70.6
White-----	43,089	41,434	1,655	27.6	27.1	51.6
All other races-----	15,298	11,693	3,605	61.0	56.1	85.0
1937-----						
Total-----	62,705	57,357	5,348	33.7	32.1	71.4
White-----	46,164	44,481	1,683	28.8	28.3	52.2
All other races-----	16,541	12,876	3,665	63.5	59.1	85.8
1936-----						
Total-----	62,694	57,330	5,364	34.5	32.9	74.2
White-----	45,964	44,527	1,437	29.3	28.9	51.4
All other races-----	16,730	12,803	3,927	67.1	62.3	92.1
1935-----						
Total-----	65,936	60,182	5,754	36.1	34.3	76.6
White-----	48,401	46,601	1,800	30.7	30.3	53.4
All other races-----	17,535	13,581	3,954	69.2	64.1	95.4
1934-----						
Total-----	66,996	60,896	6,100	36.4	34.5	81.0
White-----	2/	2/	2/	2/	2/	2/
All other races-----	2/	2/	2/	2/	2/	2/
1933-----						
Total-----	64,913	59,052	5,861	37.0	35.1	79.9
White-----	46,755	44,901	1,854	31.3	30.7	58.4
All other races-----	18,158	14,151	4,007	69.3	64.2	96.2

1/ Exclusive of California, Massachusetts, and New York for each year, and Texas for 1938. These States do not require a statement concerning legitimacy of child.
2/ Data not available.

MORTALITY STATISTICS

Detailed tables classifying deaths in the United States for 1938, by place of death, age, race, sex, cause of death, and other subjects, are given in the section containing general mortality statistics, tables 11 to 21, inclusive. In addition to these detailed tables, selected data for deaths are included

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in the summary and rate tables. Special tables for deaths of infants are given in the section containing general infant-mortality tables.

DEATH-RATE TREND.—In 1938 there were 1,381,391 registered deaths in the United States. Using an estimated midyear population of 130,215,000, the crude death rate is 10.6 per 1,000. This rate is 5.4 percent lower than the rate of 11.2 for 1937 and is the lowest rate recorded for the United States death-registration area since 1900. In 1900, the first year for which annual mortality statistics were compiled, the crude death rate was 17.6. The trend of the rate since that year has been generally downward, although 1918 was a year of high mortality and other years have shown small increases.

Table U, giving the number of deaths and the death rate for each year, shows also the estimated population of the United States and the proportion of it that is included in the death-registration area. The States which were added in various years are indicated in table W. Even though the succession of rates in table U does not refer to a strictly comparable geographic area, the consistent downward trend of the rate is not misleading. Essentially the same trend is evident in table H for a constant geographic area. Although there is considerable variation in the level of the rate, similar trends for individual States are shown in table IX.

TABLE U.—CRUDE DEATH RATES: DEATH-REGISTRATION AREA, UNITED STATES

YEAR	Estimated midyear population of continental United States	DEATH-REGISTRATION AREA			
		Estimated midyear population		Total deaths ^{1/}	
		Number	Per cent of total	Number	Rate per 1,000 population
1938	130,215,000	130,215,000	100.0	1,381,391	10.6
1937	129,257,000	129,257,000	100.0	1,450,427	11.2
1936	128,429,000	128,429,000	100.0	1,479,228	11.5
1935	127,521,000	127,521,000	100.0	1,392,752	10.9
1934	126,626,000	126,626,000	100.0	1,396,903	11.0
1933	125,770,000	125,770,000	100.0	1,342,106	10.7
1932	124,974,000	124,974,000	96.3	1,308,529	10.9
1931	124,113,000	119,479,000	96.3	1,322,537	11.1
1930	123,091,000	118,472,000	96.2	1,343,356	11.3
1929	121,526,429	116,317,515	95.7	1,386,363	11.9
1928	119,861,607	114,258,516	95.3	1,378,675	12.1
1927	118,196,785	108,177,568	91.5	1,236,949	11.4
1926	116,531,963	104,928,301	90.1	1,285,927	12.3
1925	114,867,141	102,951,999	89.6	1,219,019	11.8
1924	113,202,319	100,082,062	88.4	1,173,990	11.7
1923	111,537,497	97,816,104	87.7	1,193,017	12.2
1922	109,872,675	95,866,240	85.4	1,101,863	11.7
1921	108,207,853	89,102,454	82.3	1,032,009	11.6
1920	106,543,031	87,632,592	82.3	1,142,558	12.0
1919	105,003,065	85,166,043	81.1	1,096,475	12.9
1918	103,587,955	81,333,675	78.5	1,471,367	18.1
1917	102,172,845	74,984,498	73.4	1,068,932	14.3
1916	100,757,735	71,349,162	70.8	1,001,921	14.0
1915	99,342,625	67,095,681	67.5	909,155	13.6
1914	97,927,516	65,813,315	67.2	898,059	13.6
1913	96,512,407	63,200,625	65.5	890,848	14.1
1912	95,097,298	60,359,974	63.5	838,251	13.9
1911	93,638,189	59,183,071	63.2	839,284	14.2
1910	92,267,080	58,831,742	63.8	805,412	15.0
1909	90,691,354	50,870,518	56.1	732,538	14.4
1908	89,073,360	46,789,913	52.5	691,574	14.8
1907	87,455,366	43,016,990	49.2	687,034	16.0
1906	85,837,372	41,983,413	48.9	658,105	15.7
1905	84,219,378	34,052,201	40.4	545,533	16.0
1904	82,601,384	33,345,163	40.4	551,354	16.5
1903	80,983,390	32,701,083	40.4	524,415	16.0
1902	79,365,396	32,029,815	40.4	508,640	15.9
1901	77,747,402	31,870,952	40.3	518,207	16.5
1900	76,994,575	30,765,618	40.5	539,939	17.6

^{1/} Exclusive of stillbirths.

^{2/} Population enumerated for census year ending May 31.

CRUDE DEATH RATES BY STATE.—The crude death rate for each State is given in table J. The reported rates range from 7.4 for North Dakota to 14.6 for Arizona. This variation results in part from differences in age, sex, and race composition of the population, and from variation in public-health and medical facilities.

TABLE W.—YEAR IN WHICH EACH STATE WAS ADMITTED TO THE DEATH-REGISTRATION AREA

YEAR	STATE	YEAR	STATE	YEAR	STATE
1890	Massachusetts New Jersey Dist. of Columbia ^{1/}	1909	Ohio	1920	Nebraska
1890	Connecticut Delaware ^{2/} New Hampshire New York Rhode Island Vermont	1910	Minnesota Montana North Carolina ^{4/} Utah	1922	Georgia ^{5/} Idaho Wyoming
1900	Maine Michigan Indiana	1911	Kentucky Missouri	1923	Iowa
1906	California Colorado Maryland Pennsylvania South Dakota ^{3/}	1913	Virginia	1924	North Dakota
1908	Washington Wisconsin	1914	Kansas	1925	Alabama West Virginia
		1916	South Carolina	1926	Arizona
		1917	Tennessee	1927	Arkansas
		1918	Illinois Louisiana Oregon	1928	Oklahoma
		1919	Florida Mississippi	1929	Nevada New Mexico
		1933	Texas		

^{1/} Included in States.

^{2/} Dropped from the registration area in 1900; readmitted in 1919.

^{3/} Dropped from the registration area in 1910; readmitted in 1930.

^{4/} Included only municipalities with populations of 1,000 or more in 1900 (about 16 percent of the total population); the remainder of the State was added to the area in 1916.

^{5/} Dropped from the registration area in 1925; readmitted in 1928.

DEATHS BY AGE.—Age distributions by sex, race, and cause of death, are included in several of the general mortality tables. A brief summary of these distributions is given in table Y, which shows the total number of deaths in the United States in 1938, classified by age and sex. This table includes also the proportionate age distribution of deaths by sex. Similar distributions for total deaths are given in table Z for the years 1934 to 1938. It can be observed that a smaller proportion of deaths are occurring at younger ages. In each of the age groups under 45 years there was a smaller proportion of the total deaths in 1938 than in 1934, whereas in most of the groups over 45, the proportion increased. While, to a certain extent, this is an indication of changing age-specific death rates, such as the decrease in infant mortality, it is primarily a result of the gradual ageing of the population exposed to the risk of death. Inasmuch as accurate population estimates by age are not available, age-specific death rates have not been computed.

TABLE Y.—DISTRIBUTION OF DEATHS, ^{1/} PER 1,000, BY AGE AND SEX: UNITED STATES, 1938

AGE	DEATHS ^{1/}					
	Number			Distribution per 1,000		
	Total	Male	Female	Total	Male	Female
All ages	1,381,391	764,902	616,489	1,000.0	1,000.0	1,000.0
Under 1 year	116,702	66,462	50,240	84.5	86.9	81.5
1 year	15,303	8,166	7,137	11.1	10.7	11.6
2 years	7,487	4,043	3,444	5.4	5.3	5.6
3 years	5,134	2,880	2,314	3.7	3.7	3.8
4 years	3,896	2,114	1,782	2.8	2.8	2.9
Under 5 years	148,522	83,605	64,917	107.5	109.3	105.3
5 to 9 years	14,474	8,091	6,383	10.5	10.6	10.4
10 to 14 years	13,542	7,759	5,783	9.8	10.1	9.4
15 to 19 years	23,580	13,000	10,580	17.1	17.0	17.2
20 to 24 years	30,588	16,338	14,250	22.1	21.4	23.1
25 to 29 years	33,694	17,779	15,915	24.4	23.2	25.8
30 to 34 years	36,359	19,679	16,680	26.3	25.7	27.1
35 to 39 years	45,031	24,840	20,191	32.6	32.5	32.8
40 to 44 years	56,307	32,469	23,838	40.8	42.4	38.7
45 to 49 years	72,526	43,022	29,504	52.5	56.2	47.9
50 to 54 years	90,780	54,629	36,091	65.7	71.4	58.5
55 to 59 years	102,560	61,285	41,275	74.2	80.1	67.0
60 to 64 years	120,356	70,250	50,106	87.1	91.8	81.3
65 to 69 years	141,664	80,322	61,342	102.6	105.0	99.5
70 to 74 years	141,901	77,614	64,287	102.7	101.5	104.3
75 to 79 years	136,252	71,395	64,857	98.6	95.3	105.2
80 to 84 years	97,890	48,781	49,109	70.9	63.8	79.7
85 to 89 years	51,702	24,002	27,700	37.4	31.4	44.9
90 to 94 years	17,488	7,374	10,114	12.7	9.6	16.4
95 to 99 years	4,063	1,594	2,469	2.9	2.1	4.0
100 years and over	1,134	409	725	0.8	0.5	1.2
Not stated	1,023	665	353	0.7	0.9	0.6

^{1/} Exclusive of stillbirths.

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TABLE Z.—DISTRIBUTION OF DEATHS, 1/ PER 1,000, BY AGE: UNITED STATES

AGE	1938	1937	1936	1935	1934
All ages-----	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0
Under 1 year-----	84.5	82.7	82.8	85.3	93.2
1 year-----	11.1	11.2	11.6	12.0	14.6
2 years-----	5.4	5.7	5.7	6.1	7.3
3 years-----	3.7	3.8	4.0	4.5	5.1
4 years-----	2.8	3.0	3.3	3.8	3.9
5 to 9 years-----	10.5	11.3	12.3	13.9	14.3
10 to 14 years-----	9.8	10.6	11.4	12.4	12.2
15 to 19 years-----	17.1	18.4	18.9	19.3	19.2
20 to 24 years-----	22.1	24.4	25.3	26.2	26.6
25 to 29 years-----	24.4	26.4	27.5	28.3	28.0
30 to 34 years-----	26.3	28.5	29.9	29.7	29.9
35 to 39 years-----	32.6	34.8	35.9	36.7	36.0
40 to 44 years-----	40.8	43.1	43.7	43.8	43.7
45 to 49 years-----	52.5	54.0	53.7	54.2	53.6
50 to 54 years-----	65.7	65.8	64.6	64.5	64.6
55 to 59 years-----	74.2	73.8	72.5	72.6	70.9
60 to 64 years-----	87.1	86.4	85.1	84.5	84.6
65 to 69 years-----	102.6	99.2	97.1	95.2	91.1
70 to 74 years-----	102.7	98.1	97.8	97.6	98.1
75 to 79 years-----	98.6	96.4	95.6	91.8	88.7
80 to 84 years-----	70.9	68.5	67.5	64.2	63.4
85 to 89 years-----	37.4	36.6	36.8	35.1	33.7
90 to 94 years-----	12.7	12.7	13.1	12.5	12.3
95 to 99 years-----	2.9	3.0	3.1	2.8	2.8
100 years and over-----	0.8	0.8	0.9	0.9	0.9
Not stated-----	0.7	0.8	0.9	0.9	1.2

1/ Exclusive of stillbirths.

Table AA gives the total number of deaths in the United States and the proportionate age distribution of deaths by race for 1938. It is apparent that the proportion of deaths that occur at early ages is much higher for Negroes and other races than for the white race. Part of this difference is due to the relatively high proportion of the nonwhite population in the younger age groups, but it also reflects the higher age-specific mortality rates among nonwhite races.

TABLE AA.—DISTRIBUTION OF DEATHS, 1/ PER 1,000, BY AGE AND RACE: UNITED STATES, 1938

AGE	DEATHS 1/							
	Number				Distribution per 1,000			
	Total	White	Negro	Other races	Total	White	Negro	Other races
All ages-----	1,381,391	1,195,431	178,573	7,387	1,000.0	1,000.0	1,000.0	1,000.0
Under 1 year-----	116,702	94,485	20,855	1,362	84.5	79.0	116.8	184.4
1 year-----	15,303	11,934	3,059	310	11.1	10.0	17.1	42.0
2 years-----	7,487	6,032	1,322	133	5.4	5.0	7.4	18.0
3 years-----	5,134	4,122	856	96	3.7	3.5	4.8	13.0
4 years-----	3,896	3,144	692	60	2.8	2.6	3.9	8.1
5 to 9 years-----	148,522	119,777	26,784	1,961	107.5	100.2	150.0	255.5
10 to 14 years-----	14,474	12,088	2,209	177	10.5	10.1	12.4	24.0
15 to 19 years-----	13,542	10,890	2,485	167	9.8	9.1	13.9	22.6
20 to 24 years-----	23,580	17,419	5,891	270	17.1	14.6	35.0	56.6
25 to 29 years-----	30,588	21,973	8,271	344	22.1	18.4	46.3	46.6
30 to 34 years-----	35,694	24,006	9,349	339	24.4	20.1	52.4	45.9
35 to 39 years-----	36,359	26,903	9,149	307	26.3	22.5	51.2	41.6
40 to 44 years-----	45,031	33,216	11,508	307	32.6	27.8	64.4	41.6
45 to 49 years-----	56,307	43,538	12,444	325	40.8	36.4	69.7	44.0
50 to 54 years-----	72,526	58,670	13,522	334	52.5	49.1	75.7	45.2
55 to 59 years-----	90,720	75,124	15,214	382	65.7	62.8	85.2	51.7
60 to 64 years-----	102,560	89,006	13,103	451	74.2	74.5	73.4	61.1
65 to 69 years-----	120,356	108,236	11,648	472	87.1	90.5	65.2	63.9
70 to 74 years-----	141,664	129,274	11,959	431	102.6	108.1	67.0	58.3
75 to 79 years-----	141,901	132,176	9,374	351	102.7	110.6	52.5	47.5
80 to 84 years-----	136,262	129,979	5,985	298	98.6	108.7	33.5	40.3
85 to 89 years-----	97,890	93,625	4,053	212	70.9	78.3	22.7	28.7
90 to 94 years-----	51,702	48,957	2,613	132	37.4	41.0	14.6	17.9
95 to 99 years-----	17,488	16,108	1,327	53	12.7	13.5	7.4	7.2
100 years and over-----	4,063	3,348	675	40	2.9	2.8	3.8	5.4
Not stated-----	1,134	528	533	23	0.8	0.4	3.3	3.1
	1,028	590	427	11	0.7	0.5	2.4	1.5

1/ Exclusive of stillbirths.

DEATH RATES BY MONTH.—Table AB gives the crude death rates by month for the United States for the years 1934 to 1938. Death rates are consistently low in the months of August and September, whereas the highest rates are for the first 3 months of the year. For 1938, the highest rate occurred in January, when the rate was 11.9. This high rate, as well as the generally

high rates for the winter months, results for the most part from an increase in the number of deaths from respiratory causes. A tabulation of deaths from selected causes, by month, is given in table 21.

TABLE AB.—ANNUAL CRUDE DEATH RATES 1/ PER 1,000 ESTIMATED MIDYEAR POPULATION, BY MONTH: UNITED STATES

MONTH	1938	1937	1936	1935	1934	MONTH	1938	1937	1936	1935	1934
Total-----	10.6	11.2	11.5	10.9	11.0	June-----	10.0	10.2	10.7	10.3	10.6
January-----	11.9	13.6	12.6	12.6	11.9	July-----	9.8	10.3	11.6	9.9	10.8
February-----	11.6	13.8	13.5	12.4	12.5	August-----	9.6	9.7	9.8	9.5	9.6
March-----	11.4	12.6	12.9	11.9	12.3	September-----	9.6	9.7	9.6	9.7	9.8
April-----	11.0	11.7	12.5	11.5	11.6	October-----	10.2	10.4	10.6	10.2	10.1
May-----	10.5	10.9	11.0	11.0	11.1	November-----	10.5	10.6	11.2	10.5	10.8
						December-----	11.4	11.5	12.2	11.9	11.7

1/ Exclusive of stillbirths.

DEATHS BY RACE.—Table AC is a classification of deaths by race and sex. Out of the total of 1,381,391 deaths in 1938, 1,195,431 or 86.5 percent were classified as white. Negro deaths numbered 178,573 or 12.9 percent. The number of deaths reported for Indian, Chinese, Japanese, and other numerically minor races, totaled 7,387 or less than 1 percent of all deaths.

TABLE AC.—DISTRIBUTION OF DEATHS, 1/ PER 1,000, BY RACE AND SEX: UNITED STATES, 1938

RACE	DEATHS 1/					
	Number			Distribution per 1,000		
	Total	Male	Female	Total	Male	Female
All races-----	1,381,391	764,902	616,489	1,000.0	1,000.0	1,000.0
White-----	1,195,431	665,559	529,872	865.4	870.1	859.5
Negro-----	178,573	94,659	83,914	129.3	123.8	136.1
Indian-----	5,078	2,722	2,356	3.7	3.6	3.8
Chinese-----	1,119	1,009	110	0.8	1.3	0.2
Japanese-----	618	614	204	0.6	0.8	0.3
All other races-----	372	339	33	0.3	0.4	0.1

1/ Exclusive of stillbirths.

DEATH RATES FOR SELECTED CAUSES OF DEATH.—Tabulations of deaths by cause and other classifications are given in general mortality tables, numbers 14 and 17 to 21, inclusive. The number of deaths in the United States in 1938 and the crude death rate for each International List title and subdivision are given in table XI. Death rates for selected causes are tabulated in table XII for each State.

The trend in death rates for specific causes, over the past 20 or 30 years, may be characterized by two general statements. In the first place, there has been a great reduction in the death rates for infectious and preventable diseases; in the second place, there has been an increase in the rates for certain diseases characteristic of older ages. Greatest proportional rate decreases have taken place for such diseases as typhoid and paratyphoid fever, which has declined from a rate of 21.0 in 1911 to 1.9 in 1938; and diphtheria, which declined from a rate of 18.9 in 1911 to 2.0 in 1938. These rates, and those following, are for the changing death-registration area and are the number of deaths per 100,000 estimated midyear population. Greater absolute reductions, though smaller proportionate reductions, have been made for other important causes. The death rate for tuberculosis of the respiratory system has shown a remarkable decrease from 132.7 in 1911 to 44.6 in 1938, and that for diarrhea and enteritis has been reduced from 91.2 in 1911 to 14.2 in 1938. The trend of the rate for influenza and pneumonia is more irregular. The rate for this cause was 149.6 per 100,000 estimated population in 1911. In the following 4 years this rate decreased somewhat, but during the influenza epidemic of 1918, it increased to the extremely high rate of 587.0. In that year more than 1 out of every 200 persons died from influenza and pneumonia. Since 1930 the rate has in general been lower than during the decade 1920 to 1929, declining to 80.2 in 1938, the lowest rate since the death-registration area was established in 1900.

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TABLE AD.—DEATH RATES ¹/_{PER 100,000} ESTIMATED MIDYEAR POPULATION FOR SELECTED CAUSES: DEATH-REGISTRATION AREA, UNITED STATES

(Numbers after causes of death are those of the 1929 revision of the detailed International List)

CAUSE OF DEATH	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
All causes-----	1,418.1	1,388.8	1,409.6	1,364.6	1,355.0	1,404.3	1,425.5	1,809.1	1,287.4	1,303.8	1,158.2	1,173.9	1,219.7	1,173.0
Typhoid and paratyphoid fever-----1,2	21.0	16.5	17.9	15.5	12.4	13.3	13.5	12.6	9.2	7.8	9.0	7.4	6.8	6.7
Smallpox-----6	0.2	0.3	0.2	0.3	0.3	0.2	0.3	0.4	0.4	0.6	0.7	0.7	0.1	0.9
Measles-----7	10.0	7.0	12.8	6.8	5.4	11.1	14.3	10.8	3.9	8.8	4.3	4.3	10.7	8.5
Scarlet fever-----8	8.9	6.7	8.7	6.6	3.6	3.3	4.2	3.0	2.8	4.6	5.3	3.5	3.5	3.1
Whooping-cough-----9	11.3	9.3	10.0	10.4	8.1	10.2	10.5	16.9	5.6	12.5	9.1	5.6	9.7	8.2
Diphtheria-----10	18.9	18.2	18.9	17.9	15.7	14.5	16.6	13.9	14.7	15.3	17.6	14.6	12.0	9.3
Influenza and pneumonia (all forms)-----11,107-109	149.6	142.7	144.8	136.4	149.1	164.3	167.8	587.0	222.3	208.0	99.3	132.6	152.4	116.7
Influenza-----11	15.7	10.3	12.2	9.1	16.0	26.5	17.3	300.8	98.8	70.9	11.4	31.2	44.3	19.4
Bronchopneumonia ² / ₋₋₋₋₋₁₀₇	44.5	47.1	49.2	48.9	49.9	49.2	50.6	70.0	47.8	54.5	39.1	44.9	47.3	40.6
Lobar pneumonia-----108	48.2	49.7	51.6	56.1	65.8	76.7	87.3	187.6	66.2	73.0	42.5	50.1	53.7	50.6
Pneumonia, unspecified-----109	41.1	35.6	31.8	22.4	17.4	12.0	12.6	28.6	9.5	9.5	6.2	6.4	7.1	6.1
Erysipelas-----15	4.2	3.8	4.0	3.8	3.5	3.8	3.8	3.2	2.6	3.1	2.8	2.5	2.7	2.5
Epidemic cerebrospinal meningitis-----18	0.9	2.4	1.9	1.7	1.4	2.2	3.9	3.4	1.8	1.6	1.5	1.0	1.0	1.0
Tuberculosis of the respiratory system-----23	132.7	125.0	123.0	123.5	123.5	119.9	124.6	128.6	107.5	97.0	85.6	84.3	81.3	78.0
Tuberculosis (other forms)-----24-32	26.5	24.7	24.8	23.7	22.8	22.2	22.5	21.4	18.1	17.0	13.3	12.1	11.5	11.7
Malaria-----38	3.0	3.1	2.5	2.2	2.3	3.0	3.2	3.1	3.8	3.6	3.6	3.6	2.8	2.4
Cancers and other malignant tumors-----45-53	74.4	77.1	79.0	79.6	81.4	82.1	82.0	80.3	80.5	83.2	85.6	86.2	88.7	91.1
Diabetes mellitus-----59	14.9	15.0	15.3	16.2	17.5	17.1	17.0	15.9	14.9	16.0	16.8	18.3	17.7	16.4
Cerebral hemorrhage and softening-----82a,c	76.5	77.5	76.5	79.6	81.2	82.9	84.5	81.2	78.6	81.7	80.6	82.9	86.9	88.9
Diseases of the heart ³ / ₋₋₋₋₋₉₀₋₉₅	187.1	159.9	155.8	159.7	165.7	168.7	171.7	170.1	146.7	159.1	156.3	164.6	173.8	176.5
Bronchitis-----106	19.6	19.2	18.0	17.4	17.4	16.2	16.4	15.7	12.8	13.2	9.0	9.3	9.0	7.2
Diarrhea and enteritis ⁴ / _{-----119,120}	91.2	84.1	90.3	79.6	72.1	79.5	79.3	72.7	55.2	54.3	51.4	59.3	59.6	54.5
Appendicitis-----121	11.7	11.6	12.1	12.3	12.5	12.8	12.6	12.2	11.8	13.4	14.4	14.1	14.7	14.8
Hernia, intestinal obstruction ⁵ / ₋₋₋₋₋₁₂₂	11.9	11.9	11.6	11.7	11.3	11.3	11.6	11.5	10.4	10.6	10.7	10.5	10.4	10.5
Cirrhosis of the liver-----124	14.0	13.5	13.4	13.0	12.6	12.3	11.4	9.6	7.9	7.1	7.4	7.4	7.2	7.3
Nephritis-----130-132	97.7	103.2	103.0	102.6	105.1	105.6	107.9	97.6	88.1	89.2	85.0	87.9	89.3	88.8
Puerperal septicemia-----140,142a,145	7.4	6.5	7.2	7.1	6.3	6.7	6.9	6.5	5.8	6.6	6.8	5.7	5.8	5.7
Other puerperal causes-----141,142b-144,146-150	2.6	2.5	2.6	2.9	9.0	9.6	9.8	15.8	11.2	12.5	10.1	9.9	9.7	9.6
Congenital malformations and diseases of early infancy-----157-161	93.2	95.4	98.5	95.5	92.1	94.0	91.9	92.3	79.9	84.7	83.9	77.7	77.3	77.6
Suicide-----163-171	16.3	16.0	15.8	16.6	16.7	14.2	13.4	12.2	11.4	10.2	12.5	11.8	11.5	12.1
Homicide-----172-175	6.6	6.6	7.2	7.4	7.0	7.1	7.7	6.8	7.5	7.1	8.5	8.3	8.1	8.4
Automobile accidents (primary)-----210	2.2	2.9	3.9	4.3	5.9	7.3	9.0	9.3	9.4	10.4	11.4	12.4	14.7	15.5
Railroad and automobile collisions-----206	5/	5/	5/	5/	5/	5/	5/	5/	5/	5/	5/	5/	5/	1.0
Street car and automobile collisions-----208	5/	5/	5/	5/	5/	5/	5/	5/	5/	5/	5/	5/	5/	0.4
Other external causes ⁷ / _{-----176-198,201-214}	82.4	79.5	81.6	74.4	70.7	76.9	79.2	73.0	62.5	60.9	56.9	57.1	61.1	58.8
Unknown and ill-defined diseases-----199,200	12.2	11.5	14.1	12.1	11.4	15.2	18.2	19.2	18.3	17.7	15.9	17.6	17.0	17.5
	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
All causes-----	1,184.1	1,225.4	1,143.4	1,206.6	1,191.9	1,133.9	1,107.0	1,087.8	1,067.1	1,103.2	1,092.2	1,151.8	1,122.1	1,060.9
Typhoid and paratyphoid fever-----1,2	8.0	6.5	5.5	4.9	4.2	4.8	4.5	3.7	3.6	3.3	2.8	2.5	2.1	1.9
Smallpox-----6	0.7	0.4	0.1	0.1	0.1	0.1	0.1	5/	5/	5/	5/	5/	5/	5/
Measles-----7	2.3	2.2	4.1	5.4	2.5	3.2	3.0	1.6	2.2	5.5	3.1	1.0	1.2	0.5
Scarlet fever-----8	2.7	2.5	2.3	2.0	2.1	1.9	2.2	2.1	2.0	2.0	2.1	1.9	1.4	0.9
Whooping-cough-----9	6.7	8.9	6.9	5.5	6.3	4.8	3.9	4.5	3.5	5.9	3.7	2.1	3.9	3.7
Diphtheria-----10	7.8	7.5	7.8	7.2	6.6	4.9	4.8	4.5	3.9	3.3	3.1	2.4	2.0	2.0
Influenza and pneumonia (all forms)-----11,107-109	123.4	143.5	103.2	143.5	147.2	102.7	107.7	107.7	95.5	96.7	104.0	119.3	114.5	80.2
Influenza-----11	29.7	40.8	22.6	45.3	55.5	19.5	26.5	30.8	26.4	17.3	22.1	26.3	29.4	12.7
Bronchopneumonia ² / ₋₋₋₋₋₁₀₇	38.7	44.0	33.8	39.6	37.6	34.3	33.6	32.6	29.6	33.1	33.4	36.8	35.4	30.4
Lobar pneumonia-----108	49.9	54.0	43.2	53.4	49.5	45.4	44.4	41.2	36.4	43.3	45.2	52.8	46.6	34.2
Pneumonia, unspecified-----109	5.1	4.7	3.7	5.1	4.6	3.5	3.2	3.1	3.2	3.0	3.2	3.4	3.1	2.9
Erysipelas-----15	2.4	2.6	2.4	2.4	2.5	2.1	1.9	1.6	1.6	1.5	1.7	1.6	1.0	0.5
Epidemic cerebrospinal meningitis-----18	1.1	1.3	1.6	2.6	4.5	3.6	2.4	1.4	1.2	1.0	2.1	2.4	1.7	0.8
Tuberculosis of the respiratory system-----23	75.9	76.6	71.4	70.3	67.6	63.4	60.7	56.4	53.6	51.1	49.8	50.6	49.0	44.6
Tuberculosis (other forms)-----24-32	10.8	10.7	9.5	9.0	8.4	8.1	7.4	6.4	5.9	5.5	5.2	5.0	4.6	4.4
Malaria-----38	2.1	1.9	2.7	3.6	3.5	2.9	2.1	2.1	3.7	3.6	3.6	3.1	2.1	1.8
Cancers and other malignant tumors-----45-53	92.8	95.1	95.7	96.1	95.9	97.3	98.9	102.0	102.2	106.2	107.9	111.0	112.0	114.6
Diabetes mellitus-----59	16.9	18.0	17.5	19.0	18.8	19.0	20.4	21.9	21.3	22.1	22.2	23.7	23.7	23.8
Cerebral hemorrhage-----82a,c	81.0	82.8	80.4	83.4	82.1	81.0	79.0	79.3	78.8	77.3	76.6	81.2	77.0	76.2
Diseases of the heart ³ / ₋₋₋₋₋₉₀₋₉₅	186.7	199.5	196.0	208.2	210.8	205.7	201.8	208.9	205.8	212.9	213.1	227.9	222.3	216.9
Bronchitis-----106	6.5	6.6	5.4	5.2	4.7	4.2	3.8	3.6	3.2	3.3	3.1	3.4	3.1	2.8
Diarrhea and enteritis ⁴ / _{-----119,120}	59.4	33.6	37.6	26.9	23.5	26.3	20.7	16.3	17.2	18.3	14.1	16.3	14.6	14.2
Appendicitis-----121	15.2	15.0	15.0	15.3	15.2	15.3	15.2	14.2	14.1	14.3	12.7	12.8	11.9	11.0
Hernia, intestinal obstruction ⁵ / ₋₋₋₋₋₁₂₂	10.8	11.8	10.5	10.5	10.6	10.3	10.5	10.8	10.0	10.3	10.3	10.5	10.1	9.7
Cirrhosis of the liver-----124	7.3	7.3	7.5	7.6	7.2	7.2	7.4	7.2	7.4	7.7	7.9	8.2	8.5	8.3
Nephritis-----130-132	96.5	98.5	92.6	95.2	91.8	90.8	87.1	87.1	82.9	84.2	81.2	83.2	79.6	77.2
Puerperal septicemia-----140,142a,145	5.5	5.3	5.3	5.0	5.0	4.7	4.6	4.1	3.9	4.0	4.1	3.6	2.9	2.6
Other puerperal causes-----141,142b-144,146-150	9.3	9.1	8.5	8.8	8.8	8.1	7.4	6.9	6.4	6.1	5.8	5.9	5.4	5.1
Congenital malformations and diseases of early infancy-----157-161	74.0	71.7	67.8	65.8	62.4	61.0	56.4	55.1	50.5	52.9	49.4	49.7	49.0	48.5
Suicide-----163-171	12.1	12.8	13.3	13.5	14.0	15.7	16.8	17.4	15.9	14.9	14.3	14.2	14.9	15.2
Homicide-----172-175	8.6	8.8	8.8	8.8	8.5	9.0	9.3	9.2	9.6	9.5	8.3	8.0	7.6	6.8
Automobile accidents (primary)-----210	17.1	18.0	19.6	20.8	23.3	24.5	25.1	21.9	23.3	26.8	26.8	27.8	28.8	23.5
Railroad and automobile collisions-----206	1.2	1.5	1.5	1.8	1.7	1.5	1.4	1.2	1.1	1.2	1.2	1.3	1.4	1.1
Street car and automobile collisions-----208	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1
Other external causes ⁷ / _{-----176-198,201-214}	59.7	52.9	57.0	55.3	53.5	54.8	51.5	48.0	47.7	51.6	50.1	56.5	51.0	47.4
Unknown and ill-defined diseases-----199,200	17.4	17.8	17.6	20.6	20.9	21.0	18.8	17.5	17.5	16.5	16.1	16.4	15.9	15.1

¹/ Exclusive of stillbirths.²/ Including capillary bronchitis.³/ Excluding diseases of coronary arteries.⁴/ Including ulcer of the duodenum from 1911 to 1920.⁵/ Excluding adhesions of intestines from 1911 to 1920.⁶/ Not separately tabulated.⁷/ Exclusive of accidents associated with automobiles (206,208,210).⁸/ Less than one-tenth of 1 per 100,000 population.

For certain diseases characteristic of older ages, the most notable increase is in the rate for cancers and other malignant tumors. The crude death rate for cancer, for the registration area in 1911, was 74.4 per 100,000 estimated population. This rate has gradually increased to 114.6 in 1938. Even this change in rate does not fully indicate the large increase in deaths reported from cancer. The addition to the registration area of States with younger populations has tended to minimize the increase that would be observed in a geographically constant area. For example, while the cancer death rate for the growing registration area increased from 74.4 in 1911 to 114.6 in 1938, the rate for the registration States of 1900 increased from 83.9 to 143.0 in the same interval.

A large increase in rate is also noticeable for diseases of the heart. The rate of 157.1 in 1911 increased to 216.9 in 1938. Here again the full significance of this increase is not evident when only data for the changing registration area are considered.

The rate reductions for infectious and preventable diseases can be largely attributed to the development of modern public-health practice. The increases from such causes as cancer and heart diseases are doubtless due to several reasons. The decrease in deaths from diseases of infancy and childhood, along with the decline in the birth rate, is producing in the United States a population with a higher proportion of persons in the older-age groups. This fact in itself tends to increase the total death rates for diseases associated primarily with advanced age. Also, there is little doubt but that improved diagnostic facilities and increasing hospitalization have increased the number of deaths charged to cancer, as well as to certain other types of disease. An accurate determination of the change in mortality for these causes requires a careful study in which the age composition of the population and other pertinent factors are considered.

As shown in table AD, diseases of the heart led all other causes of death in 1938 with a rate of 216.9 for the United States. Cancers and other malignant tumors ranked second with a death rate of 114.6. Influenza and pneumonia, and tuberculosis (all forms), which ranked first and second, respectively, as causes of death in 1900, were third and sixth, respectively, in 1938.

INFANT MORTALITY STATISTICS

Detailed tables for infant mortality are given in the section containing general infant-mortality tables. Rates for individual States for a series of years are given in rate table X; and the number of infant deaths and death rates for each city and county are included in table XIII.

TREND OF INFANT MORTALITY.—In 1938 there were 116,702 infant deaths registered in the United States. This is the smallest number of infant deaths reported since the birth-registration area was completed in 1933. This reduced number of deaths, taken with an increased number of births in 1938, results in an infant death rate of 51.0 (number of deaths under 1 year of age per 1,000 live births) which is the lowest infant death rate ever recorded for the registration area. Rates for each year, together with the number of infant deaths and the number of live births, are given in table AE. These data are presented for the birth-registration area, inasmuch as the infant mortality rate is computed on the number of live births. The number of infant deaths for the death-registration area can be found in general mortality tables in which the data are classified by age.

The infant mortality rate was 99.9 in 1915, and twice thereafter (in 1916 and 1918) the rate exceeded 100.0. Since 1918 there has been a steady and a rapid decrease in infant mortality. The rate of 51.0 for 1938 is only 51.1 percent of the rate for 1915.

The reduction in infant mortality has occurred in both the "white" and "Negro" races as shown in table AF. Although the rate for Negroes is considerably higher than that for the "white," the proportionate reduction over the last 19 years has been approximately the same for both groups. The data in table AF for "other races" is based on relatively few deaths and the rate is therefore quite variable.

TABLE AE.—INFANT MORTALITY: BIRTH-REGISTRATION AREA, UNITED STATES

YEAR	Live births	DEATHS UNDER 1 YEAR 1/		YEAR	Live births	DEATHS UNDER 1 YEAR 1/	
		Number	Rate per 1,000 live births			Number	Rate per 1,000 live births
1938-----	2,286,962	116,702	51.0	1926-----	1,856,068	136,118	73.3
1937-----	2,203,337	119,931	54.4	1925-----	1,878,880	134,652	71.7
1936-----	2,144,790	122,535	57.1	1924-----	1,930,614	136,750	70.8
1935-----	2,155,105	120,138	55.7	1923-----	1,792,646	138,259	77.1
1934-----	2,187,656	130,185	60.1	1922-----	1,774,911	135,228	76.2
1933-----	2,081,232	120,887	58.1	1921-----	1,714,261	129,558	75.6
1932-----	2,074,042	119,431	57.6	1920-----	1,508,874	129,531	85.8
1931-----	2,112,760	130,134	61.6	1919-----	1,373,458	119,000	86.6
1930-----	2,203,958	142,413	64.6	1918-----	1,363,649	137,647	100.9
1929-----	2,169,920	146,661	67.6	1917-----	1,353,792	126,950	93.8
1928-----	2,238,149	153,492	68.7	1916-----	818,983	82,734	101.0
1927-----	2,137,836	138,017	64.6	1915-----	776,304	77,572	99.9

1/ Exclusive of stillbirths.

TABLE AF.—INFANT MORTALITY RATES (DEATHS 1/ UNDER 1 YEAR PER 1,000 LIVE BIRTHS) BY RACE: BIRTH-REGISTRATION AREA, UNITED STATES

YEAR	Total	White	Negro	Other races	YEAR	Total	White	Negro	Other races
1938-----	51.0	47.1	77.9	102.4	1926-----	73.3	70.0	112.1	108.9
1937-----	54.4	50.3	82.0	108.9	1925-----	71.7	68.3	112.0	95.6
1936-----	57.1	52.9	86.1	120.0	1924-----	70.8	66.8	114.1	95.0
1935-----	55.7	51.9	81.9	110.8	1923-----	77.1	73.5	119.9	85.8
1934-----	60.1	54.5	91.0	114.5	1922-----	76.2	73.2	111.7	89.9
1933-----	58.1	52.8	85.4	127.5	1921-----	75.6	72.5	110.7	78.8
1932-----	57.6	53.3	84.1	103.5	1920-----	85.8	82.1	135.6	89.6
1931-----	61.6	56.7	92.7	117.8	1919-----	86.6	83.0	134.3	88.2
1930-----	64.6	59.6	99.5	141.1	1918-----	100.9	97.4	162.5	126.4
1929-----	67.6	63.2	101.5	119.5	1917-----	93.8	90.6	148.6	142.5
1928-----	68.7	64.0	105.9	111.8	1916-----	101.0	99.0	184.3	204.8
1927-----	64.6	60.6	99.9	103.4	1915-----	99.9	98.6	180.6	196.2

1/ Exclusive of stillbirths.

INFANT MORTALITY BY STATE.—A comparison of the infant death rates of the various States is given in table AG. The lowest rate, 36.3, was reported for Connecticut; and the highest rate, 108.7, for New Mexico. With a few exceptions the rate is highest in the southern and southwestern parts of the country. The comparability of infant death rates between States is affected by incomplete birth and death registration in some States. However, the indicated differences in infant mortality are much too large to be explained by this factor.

TABLE AG.—INFANT MORTALITY RATES: UNITED STATES AND EACH STATE, 1938

AREA	Deaths/under 1 year per 1,000 live births	AREA	Deaths/under 1 year per 1,000 live births
United States-----	51.0	Missouri-----	51.5
Alabama-----	60.8	Montana-----	45.5
Arizona-----	98.8	Nebraska-----	36.4
Arkansas-----	51.4	Nevada-----	47.7
California-----	43.7	New Hampshire-----	47.6
Colorado-----	60.2	New Jersey-----	39.5
Connecticut-----	36.3	New Mexico-----	108.7
Delaware-----	52.8	New York-----	40.6
District of Columbia-----	48.1	North Carolina-----	68.6
Florida-----	57.9	North Dakota-----	49.8
Georgia-----	67.7	Ohio-----	43.3
Idaho-----	44.6	Oklahoma-----	49.0
Illinois-----	40.9	Oregon-----	39.2
Indiana-----	42.5	Pennsylvania-----	45.9
Iowa-----	40.5	Rhode Island-----	43.8
Kansas-----	43.0	South Carolina-----	80.3
Kentucky-----	61.3	South Dakota-----	43.8
Louisiana-----	67.1	Tennessee-----	63.5
Maine-----	56.2	Texas-----	65.1
Maryland-----	55.7	Utah-----	46.8
Massachusetts-----	39.9	Vermont-----	48.4
Michigan-----	44.6	Virginia-----	66.2
Minnesota-----	38.8	Washington-----	38.7
Mississippi-----	56.7	West Virginia-----	62.3
		Wisconsin-----	41.8
		Wyoming-----	51.8

1/ Exclusive of stillbirths.

INFANT DEATH RATES BY AGE.—Death rates for infants at various ages during the first year of life are given in table AH. These data are given for the birth-registration area for each year beginning with 1925. The most notable feature of this

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table is that, although reductions in rate have been made for almost every age group, little reduction has been made in the rate for deaths under 1 day. Since 1932, the rate for deaths under 1 day has been approximately 15.0 per 1,000 live births until 1938, when it declined to 14.1. While this rate has decreased very little, the total infant death rate has decreased from 71.7 in 1925 to 51.0 in 1938, and the rate for infant deaths over 1 month has decreased from 33.8 to 21.4 in the same period.

TABLE AH.—INFANT MORTALITY RATES (DEATHS 1/ UNDER 1 YEAR PER 1,000 LIVE BIRTHS) BY AGE: BIRTH-REGISTRATION AREA, UNITED STATES

AGE	1938	1937	1936	1935	1934	1933	1932
Under 1 year	51.0	54.4	57.1	55.7	60.1	58.1	57.6
Under 1 day	14.1	14.7	15.1	15.0	15.4	15.1	14.9
1 day	3.6	3.7	3.9	3.7	3.9	3.8	3.8
2 days	2.3	2.3	2.5	2.4	2.6	2.7	2.6
3 to 6 days	3.7	4.0	4.3	4.4	4.6	4.7	4.7
1 week	2.6	2.9	3.0	3.1	3.4	3.5	3.4
2 weeks	1.8	1.9	2.0	2.0	2.3	2.2	2.2
3 weeks	1.5	1.7	1.8	1.8	1.9	1.9	1.8
Under 1 month	29.6	31.3	32.6	32.4	34.1	34.0	33.5
1 month	3.9	4.3	4.4	4.4	4.8	4.5	4.7
2 months	3.2	3.5	3.6	3.5	3.8	3.5	3.6
3 to 5 months	6.7	7.2	7.7	7.1	7.8	7.2	7.2
6 to 8 months	4.4	4.8	5.1	4.8	5.4	5.0	4.9
9 to 11 months	3.2	3.4	3.6	3.5	4.2	3.9	3.8
Under 1 year	51.0	54.4	57.1	55.7	60.1	58.1	57.6
Under 1 day	15.0	15.0	15.3	15.3	15.1	15.2	15.0
1 day	4.0	4.2	4.4	4.4	4.1	4.2	4.2
2 days	2.7	2.9	3.0	3.1	3.0	3.2	3.2
3 to 6 days	4.7	5.1	5.3	5.4	5.3	5.7	5.8
1 week	3.6	3.9	3.9	4.1	3.9	4.3	4.4
2 weeks	2.4	2.5	2.6	2.6	2.6	3.0	2.9
3 weeks	2.0	2.1	2.3	2.3	2.2	2.4	2.3
Under 1 month	34.6	35.7	36.9	37.2	36.1	37.9	37.8
1 month	5.0	5.3	5.6	5.5	5.1	5.0	5.8
2 months	4.0	4.2	4.3	4.4	4.0	4.7	4.6
3 to 5 months	8.0	8.8	9.2	9.3	8.6	10.4	10.3
6 to 8 months	5.7	6.2	6.5	6.9	6.1	7.9	7.4
9 to 11 months	4.3	4.6	5.1	5.4	4.7	6.5	5.8

1/ Exclusive of stillbirths.

Infant death rates at various ages during the first year of life, by race, are shown in table AI for 1938. The difference between "white" and "Negro" infant mortality is proportionately greater during later infancy than during the first days of life. The rate for the "white" under 1 day is 13.9, or 86.9 percent of the rate of 16.0 for Negroes, while the rate for the "white" under 1 year is 47.1, only 60.5 percent as high as the rate of 77.9 for Negroes.

TABLE AI.—INFANT MORTALITY RATES (DEATHS 1/ UNDER 1 YEAR PER 1,000 LIVE BIRTHS) BY AGE AND RACE: UNITED STATES, 1938

AGE	Total	White	Negro	Other races
Under 1 year	51.0	47.1	77.9	102.4
Under 1 day	14.1	13.9	16.0	12.6
1 day	3.6	3.5	4.6	3.0
2 days	2.3	2.2	3.2	3.2
3 to 6 days	3.7	3.4	5.6	6.6
1 week	2.6	2.3	4.6	5.6
2 weeks	1.8	1.6	2.8	2.6
3 weeks	1.5	1.4	2.4	2.1
Under 1 month	29.6	28.3	39.2	35.8
1 month	3.9	3.5	6.8	9.8
2 months	3.2	2.9	5.4	7.7
3 months	2.6	2.3	4.6	8.6
4 months	2.2	1.9	4.0	6.9
5 months	1.8	1.6	3.5	5.2
6 months	1.7	1.4	3.5	5.6
7 months	1.4	1.2	2.7	4.7
8 months	1.3	1.2	2.4	4.3
9 months	1.2	1.0	2.2	4.5
10 months	1.0	0.9	1.8	5.1
11 months	1.0	0.9	1.8	4.1

1/ Exclusive of stillbirths.

INFANT MORTALITY BY MONTH.—Table AJ shows the infant death rates of the United States, by month, for each year from 1934 to 1938. The rate for each month has declined during this period. The decline from 1937 to 1938 was much greater for January, February, and March than for the other months. The indicated decrease of the rate for the winter months seems to have been due partly to fewer deaths from influenza and pneumonia.

TABLE AJ.—INFANT MORTALITY RATES (DEATHS 1/ UNDER 1 YEAR PER 1,000 LIVE BIRTHS) BY MONTH: UNITED STATES

MONTH	1938	1937	1936	1935	1934
Total	51.0	54.4	57.1	55.7	60.1
January	54.3	69.1	60.8	66.7	60.6
February	53.2	63.4	62.0	65.0	66.5
March	51.9	57.1	56.7	62.3	67.7
April	52.0	53.9	59.4	58.6	64.9
May	53.7	51.6	55.5	57.3	60.8
June	53.0	54.3	52.8	53.4	60.2
July	47.9	52.2	52.7	49.2	58.3
August	47.1	47.8	48.6	47.7	52.2
September	46.1	47.0	51.7	46.3	51.6
October	48.0	51.1	59.4	51.0	57.0
November	50.8	52.0	59.2	53.9	59.3
December	55.6	55.3	68.6	58.7	63.8

1/ Exclusive of stillbirths.

INFANT DEATH RATES BY CAUSE OF DEATH.—Table AK is a tabulation of infant death rates for selected causes. Rates are given for the United States for the years 1934 to 1938. Outstanding causes of infant deaths are premature birth, pneumonia, diarrhea and enteritis, congenital malformations, and injury at birth.

TABLE AK.—INFANT MORTALITY RATES (DEATHS 1/ UNDER 1 YEAR PER 1,000 LIVE BIRTHS) FOR SELECTED CAUSES: UNITED STATES

CAUSE OF DEATH	1938	1937	1936	1935	1934
All causes	51.0	54.4	57.1	55.7	60.1
Measles	0.3	0.2	0.1	0.4	0.7
Scarlet fever	2/	2/	2/	0.1	2/
Whooping-cough	1.4	1.4	0.8	1.4	2.1
Diphtheria	0.1	0.1	0.1	0.1	0.2
Influenza	0.9	1.7	1.6	1.5	1.2
Dysentery	0.5	0.5	0.5	0.4	0.4
Erysipelas	0.1	0.1	0.2	0.3	0.2
Encephalitis (lethargic, epidemic)	2/	2/	2/	2/	2/
Meningitis (epidemic cerebrospinal)	0.1	0.1	0.1	0.1	0.1
Tetanus	0.1	0.1	0.1	0.1	0.1
Tuberculosis of respiratory system	0.1	0.1	0.1	0.1	0.1
Tuberculosis of meninges, central nervous system	0.1	0.1	0.1	0.1	0.1
Tuberculosis (other forms)	0.1	0.1	0.1	0.1	0.1
Syphilis	0.6	0.7	0.7	0.7	0.7
Purulent infection, septicemia	0.1	2/	0.1	0.1	2/
Malaria	0.1	0.1	0.1	0.2	0.2
Other infectious and parasitic diseases	1-6,12,14,16,19-21,33,35,37,39-44	0.1	0.1	0.1	0.2
Rickets	0.1	0.1	0.1	0.1	0.1
Diseases of thymus gland	0.5	0.5	0.5	0.5	0.5
Hemorrhagic conditions	0.1	0.1	0.1	0.2	0.2
Anemias	0.1	0.1	0.1	0.1	0.1
Encephalitis (non-epidemic)	2/	2/	2/	2/	2/
Meningitis (simple, non-epidemic cerebrospinal)	0.2	0.3	0.3	0.3	0.2
Cerebral hemorrhage, embolism, thrombosis	0.1	0.1	0.1	0.1	0.1
Convulsions	0.2	0.2	0.3	0.3	0.3
Diseases of ear, mastoid process	0.2	0.3	0.3	0.3	0.3
Other diseases of nervous system, organs of special sense	80,81,83-85,87,88	0.1	0.1	0.1	0.1
Diseases of circulatory system	90-103	0.2	0.2	0.3	0.3
Pneumonia (all forms)	107-109	7.0	7.5	8.3	7.7
Other diseases of respiratory system	104-106,110-114	0.6	0.6	0.7	0.6
Diseases of buccal cavity and annexe, pharynx and tonsils	115	0.1	0.1	0.1	0.1
Diseases of stomach	117,118	0.2	0.2	0.2	0.3
Diarrhea and enteritis	119	5.0	5.3	5.7	4.9
Hernia	122a	0.1	0.1	0.1	2/
Intestinal obstruction	122b	0.4	0.4	0.5	0.4
Peritonitis (cause not specified)	129	0.1	0.1	0.1	0.1
Other diseases of digestive system	116,121,123-128	0.1	0.1	0.1	0.1
Diseases of genitourinary system	130,131,133-139	0.2	0.2	0.2	0.2
Diseases of skin, cellular tissue	151-153	0.1	0.1	0.1	0.2
Congenital malformations	157	4.5	4.6	4.9	4.8
Congenital debility	158	1.4	1.6	1.8	1.7
Premature birth	159	14.3	15.3	15.7	15.4
Injury at birth	160	4.4	4.4	4.5	4.5
Other diseases of early infancy	161	2.3	2.2	2.2	2.4
External causes	172-195,201-214	1.0	1.1	1.2	1.0
Unknown and ill-defined diseases	199,200	2.8	3.0	3.3	3.4
All other causes	3/	0.2	0.3	0.3	0.3

1/ Exclusive of stillbirths.

2/ Less than one-tenth of 1 per 1,000 live births.

3/ Refer to complete International List titles, table XI.