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DEPARTMENT OF THE INTERIOR,
U.S. CENSUS OFFICE. *11th census, 1890.*
ROBERT P. PORTER, Superintendent.

VITAL STATISTICS

OF THE

DISTRICT OF COLUMBIA AND BALTIMORE

COVERING A PERIOD OF

SIX YEARS ENDING MAY 31, 1890.

JOHN S. BILLINGS, M. D.,
EXPERT SPECIAL AGENT.

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1893.

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
CENSUS OFFICE,
WASHINGTON, D. C., September 1, 1893.

SIR.

I have the honor to transmit the following special report upon the Vital Statistics of the District of Columbia and of Baltimore, Maryland, by Dr. John S. Billings, United States army, expert special agent of the Census Office. The statistics and illustrations presented have been prepared by Mr. William A. King, chief of the division of vital statistics.

In dealing with this subject as one of the census inquiries it will be apparent that conclusions based upon the number of deaths occurring in but 1 year out of 10 may be erroneous, owing to peculiar conditions existing during the census year. To obviate this source of error and to add to the scientific value of the work it has been undertaken at the present census, for the first time, to present these statistics for some of the principal cities for a series of years ending May 31, 1890, the termination of the regular census year, and this report covers the record of deaths occurring in the District of Columbia and Baltimore during the 6 years ending on the date specified above.

The source of information in these localities was the registration records of the local boards of health containing the certificates of death furnished by the attending physicians under a compulsory system of registration, and is therefore much more accurate as to the number and more reliable as to the data than any report based upon returns of the census enumerators could be.

The labor of preparing these statistics, which even ordinarily is most extensive, owing to the amount of detail arising from the combinations of facts to be presented in relation to each other, has been greatly enhanced by the necessity of reducing population figures to represent the mean of the time covered by the deaths in order to obtain average annual death rates in relation to the living population, but the results more than justify the extraordinary labor involved.

This report will be followed by similar reports relating to New York and Brooklyn, and Boston and Philadelphia, as now contemplated.

Very respectfully,

JAMES H. WARDLE,
Acting Superintendent of Census.

The SECRETARY OF THE INTERIOR.

VITAL STATISTICS

OF THE

DISTRICT OF COLUMBIA AND BALTIMORE, MARYLAND.

COVERING A PERIOD OF SIX YEARS ENDING MAY 31, 1890.

The following constitutes a special report, with a series of tables and illustrations, relating to the vital statistics of the District of Columbia and the cities of Washington, District of Columbia, and Baltimore, Maryland, for the period of 6 years ending May 31, 1890. The tables have been prepared under the direction of Mr. William A. King, chief of the division of vital statistics of the Eleventh Census.

These two cities are reported together because the results of the comparison of their vital statistics are interesting, owing both to certain similarities and to certain differences in the circumstances which are likely to affect the health of their respective populations. Each is subject to nearly the same general climatic conditions, has a comparatively large colored population, presents considerable differences in surface levels in different districts, and has an abundant and good general water supply. On the other hand Washington is a sewered city and Baltimore is not, and there are considerable differences in the occupations of the majority of the inhabitants of the two places.

The following table gives certain data for comparison between the cities of Baltimore and Washington. The figures relate to June 1, 1890.

TABLE 1.

SUBJECT.	Baltimore.	Washington.	SUBJECT.	Baltimore.	Washington.
Population June 1, 1890	434,439	202,978	Sewers—Continued:		
Area in acres	18,807	6,550	Dimensions:		
Density of population to an acre of total area	23.03	30.99	Smallest, in inches.....		4
Dwellings:			Largest, in inches.....		264
Number	72,112	34,543	Number of house connections		34,000
To an acre of total area	3.82	5.27	Persons to each mile of		795.99
Persons to each.....	6.02	5.88	Parks:		
Streets:			Area of, in acres	866	538
Paved, miles of	459	163	Water (lakes and ponds).....	68	12
Cleaning, annual cost (10 years)	\$110,000	\$62,450	To 1,000 persons	1.99	2.65
Street lighting:			Per cent of city area embraced in	4.59	8.21
Number of lamps	7,772	5,904	Cemeteries:		
Gas	5,790	5,349	Area of, in acres	412	42
Electric	607	195	Per cent of city area embraced in	2.18	0.64
Vapor	1,375		Interments:		
Oil.....		360	Total to June 1, 1890	169,532	15,405
Persons to each lamp	55.90	34.38	Average annual (10 years).....	5,484	1,043
Water works:			Saloons:		
Capacity and supply, in gallons:			Number	1,900	α093
Total reservoir capacity	2,274,000,000	321,880,000	To 1,000 persons	4.37	α3.01
Daily capacity:			Police:		
Of supply.....	218,000,000	687,000,000	Number of.....	782	453
Of pumps.....	6,000,000	8,000,000	Annual arrests (10 years)	26,592	17,779
Daily consumption	40,000,000	36,000,000	Annual lodgers (10 years).....	19,361	4,000
To each person.....	92.07	177.36	Fire department:		
Miles of mains.....	407	209	Number of employes.....	264	130
Number of taps.....		26,990	Number of fires for year ending June 1, 1890.....	393	207
Sewers:			Aggregate loss from	\$482,916	\$112,161
Total length, in miles		255	Average loss to each person	\$1.11	\$0.55
Character:			Firemen injured in 1,000.....	102.27	38.46
Brick and stone, miles of		α62	Suburban travel:		
Pipe, miles of		α204	Number of daily trains	150	75
			Passengers carried annually (10 years) ..	2,803,303	893,787
			Commuters carried annually (10 years) ..	719,082	290,830

α In the whole of the District of Columbia.

It will be seen from this table that Washington is the more densely populated of the two cities, but that Baltimore has the greater average number of persons to a dwelling; that the amount of open space in the shape of streets and parks is proportionately greater in Washington, which has also a greater capacity of water supply, while Baltimore has relatively the greater proportion of saloons. A greater proportion of the business population of Baltimore lives outside the city limits than is the case for Washington.

It should be understood that it is impossible to give accurate and detailed mortality statistics covering a series of years and strictly comparable for the two cities, since the areas both of each city and of its smaller subdivisions did not remain unchanged from 1880 to 1890, and also because population details at each census were not available for every subdivision, so that the mean population for the period could not be accurately calculated in the desirable details. The method used for determining the population to be used in computing rates will be stated in a future report. The difficulties referred to, however, do not materially affect the value of the statistics for comparative purposes.

The returns of deaths from which these statistics have been made up were secured from the local registration records of the two cities based upon physicians' certificates of deaths, showing in most cases the locality (street and house number) where the death occurred, and in order to locate the deaths in the proper sanitary subdivision complete street schedules were prepared showing in which subdivision each house in the city was located. In this manner all deaths located by the physicians were located in the proper subdivisions without regard to changes in numbering or in ward lines. The number of deaths for which the locality could not be ascertained, otherwise the "Unlocated", were in the compilation of certain of the rate tables distributed among the sanitary subdivisions in proportion to those of which the proper locality was known. This distribution of the unlocated is included in most of the tables giving rates for each sanitary district.

Wherever practicable all unknown details concerning either population or deaths, such as unknown ages and unknown nativities, have been eliminated by distributing these factors among the other similar items proportionately in the preparation of rates. For this reason various details of population and deaths may appear not to agree with other statements of such details in which this distribution has not been made.

In both Baltimore and the District of Columbia there is a considerable area of suburban territory, and since the returns for this portion of Baltimore (wards 21 and 22) were not obtainable for the whole 6 years, average annual rates based upon mean population can only be stated for the first 20 wards of that city, which will, wherever possible, be designated as "Baltimore city". Being, then, under the necessity of excluding the suburban portion of Baltimore in certain cases, the same distinction will be maintained in the District of Columbia in certain of the tables by omitting sanitary districts 28 and 29, which correspond in general character to the omitted wards of Baltimore, and where this is done the figures will be given as for "Washington" (which includes Georgetown). Where the terms "Baltimore" and "District of Columbia" are used, these will be understood to cover the whole area in each case.

The population figures used in preparing these statistics are the results of two counts made in advance of the regular tabulation of population statistics. The figures stated for all details under 5 years of age are based on the first count and those for all details above 5 years on the second count. In some cases combinations of these two population counts have been necessary to give extended details of age.

There are some slight differences between these counts in the numbers of white and colored, and also in the totals of different sanitary districts, but these are unimportant, and the slight discrepancies which may appear to exist in figures presented in different details are not sufficient to affect the rates, and therefore no attempt has been made to reconcile them. This fact, and the statement made above as to the distribution of the "Unknown" items, both for population and deaths, should be borne in mind in making comparisons. Population figures for wards of Baltimore, as contained in the preliminary population bulletins of this office, relate to the present wards and not to those treated in this report.

The mean population of the District of Columbia for the 6 year period was 212,900 and that of Baltimore city was 375,034, both being computed by the usual geometrical progression formula from the population returns of the censuses of 1880 and 1890. Where wards 21 and 22 of Baltimore are mentioned the population figures represent the population on June 1, 1889, the rates being the average for 2 years.

During the period of 6 years in question the average annual death rate in the District of Columbia was 23.41 and in Baltimore city 22.39 per 1,000 of mean population, but the excess of mortality in the District of Columbia occurred entirely among the colored population, and the mortality of the whites was greater in Baltimore city than it was in the District of Columbia, the figures being for the District of Columbia: whites, 18.55; colored, 33.25, and for Baltimore city: whites, 20.41; colored, 32.60; not including stillbirths.

A comparison of these death rates with those of some other southern cities having a considerable proportion of colored population is shown in the table on the following page, which, however, gives the figures for the census year only and not for a period of 6 years, and includes stillbirths among the deaths.

Table 2 shows death rates in certain cities for the census year ending May 31, 1890, with distinction of color.

TABLE 2.

CITIES.	DEATH RATES, STILLBORN INCLUDED.		
	Aggregate.	White.	Colored.
Average.....	27.45	22.06	37.98
Atlanta, Ga.....	24.84	18.28	33.57
Augusta, Ga.....	27.42	18.03	37.03
Baltimore, Md.....	24.75	22.61	36.41
Birmingham, Ala.....	42.94	35.15	53.24
Charleston, S. C.....	41.23	24.75	53.04
Chattanooga, Tenn.....	27.87	21.30	36.42
District of Columbia.....	25.85	19.79	38.22
Galveston, Tex.....	24.58	24.37	25.28
Knoxville, Tenn.....	37.72	34.80	44.80
Lynchburg, Va.....	28.77	13.53	44.16
Memphis, Tenn.....	26.31	23.37	29.97
Mobile, Ala.....	33.82	20.05	43.75
Nashville, Tenn.....	18.07	14.30	23.92
New Orleans, La.....	28.40	25.41	36.61
Petersburg, Va.....	33.47	23.72	41.80
Raleigh, N. C.....	32.02	26.87	37.16
Richmond, Va.....	29.02	22.25	40.80
Savannah, Ga.....	35.66	29.04	41.47

This table shows that the death rate of the colored population is greater than that of the whites in southern cities, and that, therefore, in comparing the death rates of such cities with each other or with those of cities having a small colored population, it is desirable to state the mortality of the white and of the colored separately.

The aggregate death rate has, upon the whole, been diminishing in both Baltimore and the District of Columbia during recent years. In Baltimore during the 10 years from 1850 to 1859 the average annual death rate was 26.08 per thousand of population. For the next 10 years, 1860 to 1869, it was 22.79; from 1870 to 1879 it was 25.10, and for the period of 1880 to 1889 it was 22.86.

We have no trustworthy data as to death rates in the District of Columbia prior to 1875. The following table and the diagram on page 4 show the variations in the death rates of the two places for the 15 years ending with 1890. It will be seen that the lowering of the death rate was more uniform and progressive in the District of Columbia than in Baltimore from 1875 to 1883, and this may be connected with the fact that there were during this period more improvements in drainage, sewerage, paving, etc., going on in the former than in the latter place. Since 1883 the death rate of the District of Columbia has been above that of Baltimore.

Table 3 shows for Baltimore and the District of Columbia the death rates per 1,000 of population for each year from 1875 to 1890, stillbirths being excluded.

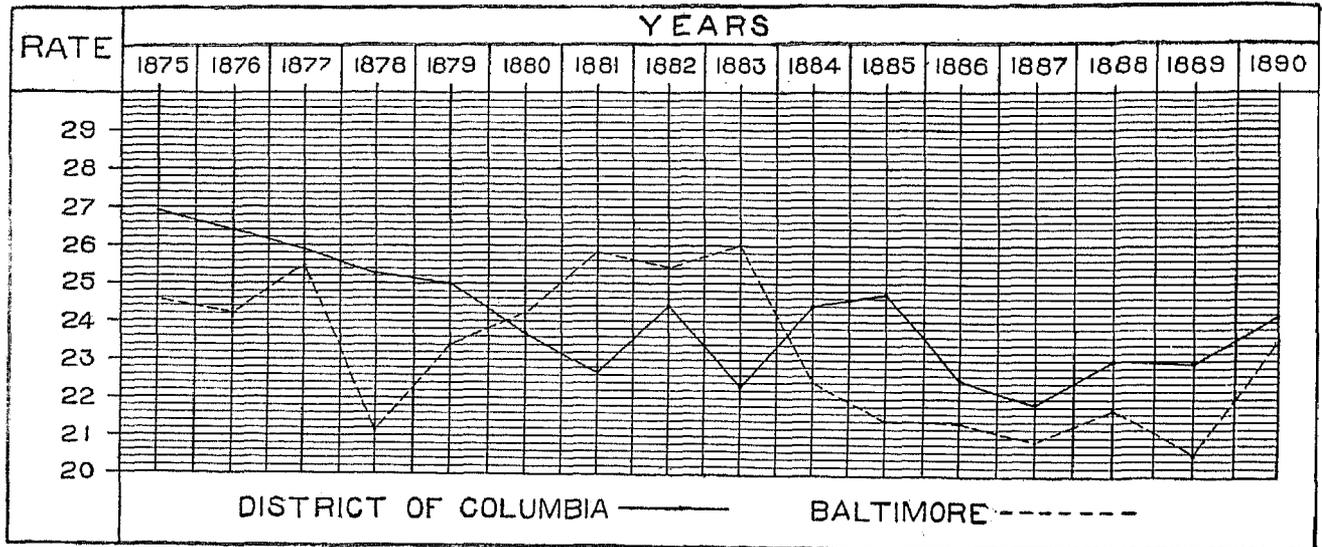
TABLE 3.

YEARS.	DEATH RATES PER 1,000.	
	Baltimore.	District of Columbia.
1875.....	24.55	26.00
1876.....	24.23	26.40
1877.....	25.40	25.91
1878.....	21.16	25.29
1879.....	23.43	25.00
1880.....	24.20	23.68
1881.....	25.83	22.09
1882.....	25.45	24.43
1883.....	26.05	22.32
1884.....	22.42	24.42
1885.....	21.46	24.71
1886.....	21.37	22.51
1887.....	20.88	21.89
1888.....	21.70	23.04
1889.....	20.58	22.95
1890.....	23.47	24.15

VITAL STATISTICS.

The number of deaths in each year, upon which the preceding table and the following diagram are based, were taken from the annual reports of the boards of health. The mean population for each year was calculated by the geometrical progression formula from the figures of the censuses of 1870, 1880, and 1890.

DIAGRAM SHOWING THE COMPARATIVE DEATH RATE PER 1,000 OF POPULATION IN THE DISTRICT OF COLUMBIA AND BALTIMORE FROM 1875 TO 1890.



Mere gross death rates, however, give us little useful information; we wish to know the death rates for different ages and in different parts of a city, and their causes. On comparing the accompanying maps of the District of Columbia and of Baltimore, which maps show by depth of shading the relative mortality of the white and of the colored population in the different districts, it will be seen that there are marked differences not only in the death rates in different localities in the same map but in the same localities for the white and for the colored. This is also shown in the table on the following page.

DISTRICT OF COLUMBIA AND BALTIMORE.

Table 4 shows for different sanitary districts in Baltimore and the District of Columbia the average annual death rates during the 6 years ending May 31, 1890, with distinction of color, stillbirths included.

TABLE 4.

DISTRICT OF COLUMBIA.				BALTIMORE.					
Districts.	Death rates, stillborn included.			Wards and districts.	Death rates, stillborn included.				
	Aggregate.	White.	Colored.		Aggregate.	White.	Colored.		
Total	25.45	19.75	37.00	The city.....	24.26	21.98	35.99		
Washington	25.53	19.56	38.07	Ward 1—A	26.24	26.08	33.59		
1.....	26.80	22.85	42.60	B	26.52	25.44	400.00		
2.....	30.32	25.88	54.51	Ward 2—A	30.01	28.51	82.75		
3.....	20.61	15.71	41.67	B	52.04	50.94	1,277.78		
4.....	26.71	20.90	49.97	C	13.21	12.20	393.33		
5.....	34.48	17.24	42.21	Ward 3.....	28.22	25.54	46.45		
6.....	31.94	22.77	42.38	Ward 4—A	25.47	22.17	42.43		
7.....	45.56	39.30	48.32	B	32.66	29.94	77.19		
8.....	22.08	18.94	29.75	Ward 5—A	29.34	28.96	47.04		
9.....	24.80	17.90	32.47	B	23.49	21.07	34.21		
10.....	17.13	13.10	26.32	Ward 6—A	19.67	19.44	22.86		
11.....	27.52	19.38	37.78	B	22.10	19.13	41.17		
12.....	27.79	18.29	34.84	C	24.72	22.17	42.56		
13.....	29.14	20.75	55.56	D	26.66	22.96	35.43		
14.....	24.90	17.60	38.94	Ward 7—A	18.31	17.59	37.51		
15.....	26.87	19.09	40.04	B	26.95	26.54	24.95		
16.....	22.00	19.59	33.62	Ward 8—A	17.24	17.01	19.42		
17.....	21.02	18.50	39.73	B	22.20	21.47	32.20		
18.....	40.35	32.00	66.00	C	15.24	14.48	16.50		
19.....	26.70	21.30	45.45	D	34.07	36.41	25.00		
20.....	25.55	22.82	37.49	E	20.74	23.14	12.26		
21.....	30.54	22.82	39.76	Ward 9—A	32.16	28.35	43.93		
22.....	33.55	21.64	42.63	B	116.23	96.37	700.00		
23.....	24.74	20.81	40.00	C	32.78	30.40	99.50		
24.....	22.04	17.64	35.99	D	41.13	35.55	48.80		
25.....	26.97	14.94	33.08	E	21.04	21.28	20.15		
26.....	25.86	22.04	39.31	Ward 10.....	25.67	21.72	36.45		
27.....	21.32	16.95	34.97	Ward 11—A	28.35	21.52	34.46		
Suburban:				B	10.87	9.85	18.52		
28.....	19.35	15.47	25.52	C	21.57	20.73	23.61		
29.....	19.26	10.61	33.09	Ward 12—A	18.34	18.13	20.55		
				B	14.16	14.11	14.34		
				C	30.25	31.07	27.11		
				Ward 13—A	23.81	20.90	39.31		
				B	28.29	21.44	46.22		
				C	27.13	22.03	45.93		
				D	23.88	28.99	15.15		
				Ward 14—A	25.17	22.43	35.42		
				B	24.05	22.07	74.23		
				Ward 15—A	44.20	31.29	115.63		
				B	28.88	24.25	67.36		
				C	37.63	24.93	49.14		
				Ward 16—A	28.83	25.15	43.44		
				B	28.68	21.07	36.05		
				Ward 17.....	23.72	22.31	67.93		
				Ward 18—A	23.52	22.83	30.36		
				B	18.47	18.08	27.26		
				C	22.97	20.19	31.16		
				Ward 19.....	21.65	17.61	37.29		
				Ward 20.....	21.15	17.46	35.82		
				Suburban:					
				Ward 21 (a)	19.58	19.07	28.09		
				Ward 22 (a)	18.29	18.04	20.64		

^a Wards 21 and 22 for 2 years ending May 31, 1890.

It is a matter of great interest to the residents in these districts, to the health authorities of the city, to the owners of real estate, and to the life insurance companies and business men generally that the causes of these great differences in death rates should be determined as far as possible, in order that wise action may be taken to reduce the number of those deaths which are due to preventable causes.

VITAL STATISTICS.

To determine the causes of differences in the death rates of two cities, or of different parts of the same city, is a difficult matter, for these causes may be many and various. The statistical method of research for this purpose is an imperfect one, partly because the data are imperfect and more or less inaccurate, partly because it can not take into account temporary and local conditions. It should be clearly understood, therefore, that the differences in death rates of different wards and districts shown in this report do not prove that those districts having the highest death rates were necessarily the most unhealthy, nor do they furnish satisfactory indications as to the causes of the differences; they merely indicate the localities where it is probable that special causes of sickness and death existed, and may thus furnish the foundation for a special investigation of such localities by persons familiar with their topography and peculiarities; in short, they should be considered as statements of problems rather than as answers to them. Among the remote or predisposing causes of sickness and death which should be taken into account in attempting to ascertain whether a particular locality is healthy or unhealthy may be named race, age, sex, and occupation; and the variations in death rates connected with these circumstances may be to a considerable extent ascertained by statistics and serve as a basis for special inquiries into the more immediate causes, such as the poverty and ignorance of the people, the dampness or pollution of the soil, the water supply, house drainage and sewage disposal, and the presence of collections of filth or other special dangers to health and life, all of which are matters to be ascertained by the local authorities.

Taking first the influence of race, the question arises, are the marked differences in the mortality of the white and colored, indicated in the preceding table, due to differences in the physical structure of the two races, giving rise to special liability to, or special mortality from, certain forms of disease, or are they due to differences in the character and place of residence, the food, occupations, or habits and modes of life?

As the death rates of infants and young children and of old people are much higher than those of persons between 15 and 45 years of age, a comparatively high death rate in a city or any particular district may be due mainly or entirely to the fact that that city or district contains a relatively large proportion of children or of old persons; hence it is important to study the death rates by groups of ages.

Table 5 gives the data for a comparison of the death rates of Baltimore and the District of Columbia for the year ending May 31, 1890, with broad distinctions of ages.

TABLE 5.

AGE AND COLOR.	NUMBER OF POPULATION OF CERTAIN AGE GROUPS PER 1,000 OF POPULATION OF ALL AGES.		DEATH RATES, STILL-BORN EXCLUDED.	
	Baltimore.	District of Columbia.	Baltimore.	District of Columbia.
Under 5 years, aggregate	106.07	88.12	92.97	97.77
White	108.10	85.98	80.27	65.04
Colored	94.98	92.51	171.78	159.93
Under 15 years, aggregate	306.20	280.73	35.44	35.61
White	311.80	270.22	30.71	23.90
Colored	278.96	302.20	64.24	57.00
15 to 45 years, aggregate	512.41	521.11	9.99	11.94
White	502.87	512.87	8.99	9.29
Colored	564.42	537.95	14.88	17.09
45 years and over, aggregate	181.30	198.16	38.14	37.52
White	185.82	216.91	37.49	33.88
Colored	156.62	159.85	42.31	47.00

It will be seen from this table that there are differences between the death rates of the two cities which do not depend upon the different proportions of age groups in the population, and that these differences are more marked among the colored than among the whites. For example, the death rate of the colored population from 15 to 45 years of age was 2.21 per 1,000 greater in the District of Columbia than it was in Baltimore, while for whites of the same ages it was only 0.30 per 1,000 greater in the District.

Table 6 shows for the District of Columbia and for Baltimore the average annual death rates during the 6 year period in the different districts, with distinction of color and of children under 5 years of age, the still-births being excluded.

DISTRICT OF COLUMBIA AND BALTIMORE.

TABLE 6.

DISTRICT OF COLUMBIA.					BALTIMORE.				
Districts.	Death rates, stillborn excluded.				Wards and districts.	Death rates, stillborn excluded.			
	White.		Colored.			White.		Colored.	
	Total.	Under 5 years.	Total.	Under 5 years.		Total.	Under 5 years.	Total.	Under 5 years.
Total	18.55	61.04	33.25	150.53	The city	20.41	73.94	32.60	163.41
Washington	18.25	69.78	33.84	158.70	Ward 1—A	24.09	89.02	28.13	136.64
1	20.87	61.79	37.99	117.06	B	23.33	61.87	400.00	.....
2	24.32	84.80	47.81	326.39	Ward 2—A	25.38	101.10	08.18	444.44
3	14.77	44.09	38.25	188.89	B	47.48	182.47	1,222.22	.....
4	19.54	61.97	44.81	143.59	C	10.91	39.08	238.10	.....
5	16.64	53.92	38.82	162.16	Ward 3	23.67	90.27	40.88	172.10
6	21.10	54.35	38.40	157.49	Ward 4—A	20.53	65.59	36.05	152.93
7	37.63	127.85	44.87	266.52	B	27.70	101.73	74.56	416.67
8	18.02	60.67	36.52	109.27	Ward 5—A	21.02	74.23	43.20	238.89
9	15.91	62.25	28.27	133.45	B	19.79	70.93	31.12	129.74
10	12.43	39.24	23.79	134.65	Ward 6—A	18.14	60.54	10.91	75.52
11	17.89	68.35	31.83	147.78	B	17.57	63.22	36.49	140.07
12	17.26	66.87	31.80	165.96	C	20.10	61.79	38.50	153.66
13	18.81	63.99	41.46	197.44	D	20.81	64.61	31.46	137.85
14	16.26	51.45	34.71	165.46	Ward 7—A	16.46	57.31	33.76	200.52
15	17.86	60.63	35.39	179.35	B	24.89	90.14	21.14	79.71
16	18.51	69.44	30.30	236.43	Ward 8—A	15.92	55.97	17.65	125.68
17	17.46	80.37	35.27	226.78	B	19.94	60.75	29.52	122.45
18	28.14	112.45	56.03	326.67	C	13.85	42.88	14.56	94.09
19	20.09	67.61	40.87 ^a	239.45	D	32.63	173.91	19.71	100.00
20	21.73	78.67	33.80	122.67	E	21.84	93.18	11.83	152.78
21	21.38	80.91	35.84	155.42	Ward 9—A	26.61	95.98	39.88	283.56
22	20.52	76.92	37.60	147.60	B	91.84	222.22	700.00	.....
23	19.16	65.11	35.27	143.26	C	27.38	90.72	87.06	1,333.33
24	16.50	55.50	32.31	155.17	D	32.78	205.88	44.90	190.48
25	12.69	55.56	29.59	158.58	E	18.01	79.80	16.48	95.24
26	20.08	72.69	33.69	139.29	Ward 10	20.24	77.00	33.08	160.17
27	15.63	47.41	29.81	138.32	Ward 11—A	19.92	77.85	32.00	157.87
Suburban:					B	9.63	.....	18.52	.....
28	15.03	48.70	24.53	99.27	C	19.55	70.92	20.80	111.69
29	9.91	49.56	32.04	127.50	Ward 12—A	17.30	61.73	18.51	104.36
					B	12.74	51.34	12.43	53.46
					C	29.40	59.32	25.10	137.25
					Ward 13—A	19.46	66.63	36.26	203.13
					B	20.10	71.90	41.32	333.33
					C	20.97	94.20	43.31	227.27
					D	26.88	111.78	15.15	83.33
					Ward 14—A	21.14	78.44	33.05	167.45
					B	20.74	88.39	67.03	275.00
					Ward 15—A	23.55	101.25	109.25	518.52
					B	22.63	81.50	59.47	263.42
					C	23.11	91.07	45.39	192.25
					Ward 16—A	23.62	84.99	80.20	214.62
					B	19.19	63.17	31.95	157.03
					Ward 17	20.68	75.67	62.95	329.17
					Ward 18—A	21.22	66.67	27.03	122.42
					B	16.33	63.94	25.47	115.38
					C	18.86	64.44	23.01	119.77
					Ward 19	16.40	54.82	34.07	179.23
					Ward 20	16.47	56.76	33.30	170.40
					Suburban:				
					Ward 21 (a)	18.00	71.39	25.28	129.87
					Ward 22 (a)	17.18	66.93	20.41	132.43

^a Wards 21 and 22 for 2 years ending May 31, 1890.

This table compared with Table 4 shows the difference in the total death rate for each race due to the number of stillborn, and compared with the following table shows the difference in the rate under 5 years of age for each race, due to the same cause. The rates given for 5 years of age and over are not affected by the exclusion of the stillbirths.

VITAL STATISTICS.

Table 7 shows for Baltimore and for the District of Columbia the average annual death rates, inclusive of stillborn, for the 6 year period in the different districts, with distinction of color; of children under 5 years of age, and of persons 5 years of age and upward.

TABLE 7.

DISTRICT OF COLUMBIA.					BALTIMORE.				
Districts.	Death rates, stillborn included.				Wards and districts.	Death rates, stillborn included.			
	White.		Colored.			White.		Colored.	
	Under 5 years.	5 years and over.	Under 5 years.	5 years and over.		Under 5 years.	5 years and over.	Under 5 years.	5 years and over.
Total	74.92	14.12	187.20	19.88	The city	88.22	13.78	197.62	18.20
Washington	78.19	13.71	201.21	20.02	Ward 1—A	103.79	13.98	198.20	16.07
1	79.93	15.85	154.76	26.60	B	74.14	15.31	.....	333.33
2	98.08	16.69	430.56	28.65	Ward 2—A	125.00	13.93	642.86	38.36
3	55.56	12.15	229.63	24.44	B	206.19	24.48	.....	1,222.22
4	74.07	14.14	184.62	30.60	C	50.00	6.95	.....	100.48
5	58.82	11.39	199.70	26.50	Ward 3	108.35	16.01	230.07	26.04
6	66.43	15.80	189.60	21.59	Ward 4—A	80.40	14.94	219.78	23.70
7	141.55	25.08	240.34	26.50	B	119.89	17.86	447.02	43.10
8	73.16	14.61	143.85	18.00	Ward 5—A	91.85	15.09	287.50	26.43
9	80.82	10.38	173.54	15.96	B	85.07	14.71	158.68	19.33
10	48.52	10.32	108.55	14.86	Ward 6—A	60.09	10.51	96.35	10.74
11	91.76	14.44	212.64	20.10	B	73.56	9.47	177.30	21.63
12	80.34	13.18	200.72	19.23	C	76.90	13.52	186.76	22.74
13	79.47	12.36	328.21	22.61	D	83.94	15.33	175.93	16.31
14	67.63	13.08	209.85	20.93	Ward 7—A	67.32	11.25	242.19	17.26
15	76.27	14.19	227.66	20.65	B	102.38	14.77	106.28	11.33
16	96.15	16.38	298.45	18.64	Ward 8—A	65.87	11.01	144.81	6.67
17	106.02	14.79	308.74	24.24	B	80.65	14.14	153.06	20.59
18	162.65	21.11	466.67	35.28	C	51.78	11.68	120.97	8.09
19	86.48	16.83	295.86	23.15	D	231.88	22.95	150.00	10.64
20	88.87	14.89	158.67	23.64	E	106.96	14.36	166.67	7.24
21	93.47	13.67	189.70	20.40	Ward 9—A	128.74	22.72	342.04	19.48
22	85.47	11.97	186.57	21.28	B	296.30	83.33	.....	633.33
23	78.72	12.82	182.83	20.80	C	123.93	17.06	1,750.00	48.72
24	68.17	12.63	193.49	19.29	D	264.71	24.22	226.10	27.66
25	77.52	7.80	190.92	13.99	E	107.44	13.19	142.80	9.92
26	87.43	15.42	181.96	17.69	Ward 10	94.64	15.02	105.24	19.56
27	58.00	11.12	186.22	16.70	Ward 11—A	99.78	15.38	184.25	19.06
Suburban:					B	27.78	9.31	.....	12.35
28	52.77	10.77	107.62	14.50	C	96.63	17.07	152.17	14.25
29	50.58	5.57	131.25	19.69	Ward 12—A	72.31	13.52	126.44	9.77
					B	65.61	8.64	70.23	7.15
					C	76.27	26.42	156.86	12.30
					Ward 13—A	83.13	14.98	236.46	19.48
					B	88.24	15.47	416.07	23.07
					C	115.94	17.19	257.58	25.86
					D	128.74	14.64	83.33	.....
					Ward 14—A	91.11	14.64	189.25	16.64
					B	101.55	13.10	325.00	31.78
					Ward 15—A	130.84	21.13	502.59	70.68
					B	96.37	15.46	343.86	35.06
					C	112.64	16.38	226.83	27.48
					Ward 16—A	99.18	16.18	253.93	18.41
					B	78.39	12.99	200.39	18.90
					Ward 17	87.80	12.10	375.00	30.40
					Ward 18—A	77.30	13.07	147.49	12.42
					B	77.27	9.14	132.48	14.07
					C	73.78	11.32	148.24	16.58
					Ward 19	68.34	12.62	206.91	14.67
					Ward 20	67.66	12.15	193.14	16.14
					Suburban:				
					Ward 21 (a)	80.56	10.92	162.34	15.38
					Ward 22 (a)	74.70	10.94	135.14	9.80

a Wards 21 and 22 for 2 years ending May 31, 1890.

An examination of this table and of the appended maps, which show for the two cities by depth of shade the relative mortality of the white and of the colored children under 5 years of age, will reveal some important facts. In the first place, it is evident that the higher mortality of the colored race is mainly due to the excessively high death rate among the young children of that race. In the District of Columbia the average annual death rate among the colored children under 5 years of age was 187.20 and in Baltimore city it was 197.62, while among the whites in the District of Columbia it was 74.92 and in Baltimore city 88.22.

Among the whites there is also a perceptible relation between mortality and race differences. Thus in the native born whites of native born parents in the District of Columbia the average annual death rate during the 6 years was 16.48, while in those having one or both parents of foreign birth it was 18.39 per thousand. In children under 5 years it was, for those of native born parents, 72.53, and for those having one or both parents foreign born, 86.23. In Baltimore the system of registration of deaths does not require the statement of the birthplace of the parents but merely the birthplace of the person, which is a matter of much less importance from the point of view of vital statistics.

During the census year the death rates of children under 5 years of age were: in Charleston, South Carolina, for whites, 92.34, for colored, 227.79; in Richmond, Virginia, for whites, 75.27, for colored, 222.58; in Savannah, Georgia, for whites, 83.93, for colored, 166.20; in Mobile, Alabama, for whites, 73.75, for colored, 190.58.

But this excessively high death rate among the colored children does not seem to be a necessary thing; it is not due simply to the fact that they are colored, because it varies greatly in different localities, ranging in Washington from 466.67 in district 18 to 143.85 in district 8, and in Baltimore from 642.86 in district A of ward 2 to 70.23 in district B of ward 12.

So also during the census year the death rates of colored children under 5 years of age were: in Atlanta, Georgia, 163.50; in Chattanooga, Tennessee, 164.83; in Galveston, Texas, 104.23; in Memphis, Tennessee, 116.44; in Montgomery, Alabama, 57.44; in Nashville, Tennessee, 103.07; in New Orleans, Louisiana, 118.17; in Raleigh, North Carolina, 109.35, which rates may be compared with those given for Charleston, Richmond, Savannah, and Mobile.

Before proceeding further in this discussion it may be well to caution those who are not familiar with statistical methods and statistical fallacies that all the death rates or other ratios given must be considered in connection with the actual numbers from which they are derived, because in many cases it will be found that extraordinary and unusual ratios are due merely to the smallness of the data from which they have been calculated.

For example, in the preceding table in district B of ward 2 in Baltimore the death rate of the colored population over 5 years of age is given as 1,222.22 per 1,000; that is, as being greater than the mean population of this class; but this mean population was only 3 and the total number of deaths of this class during the 6 years was 22, a large proportion of the deaths in this district being due to drowning; hence this ratio is a defective one, and it is quoted as a striking example of the fallacy referred to.

It is also to be noted that the death rates for children under 5 years of age are probably given as greater than they really were, owing to the fact that the population under 5 years of age is probably stated as less than it really was, partly because all the infants were not counted, partly because some of those between 4 and 5 years old were reported as 5 years old. The errors thus arising appear to be about the same in character and amount in the population data for the two cities, and hence the death rates are comparable, although not absolutely correct.

It is also to be remembered that if each death is accredited to the locality in which it occurred, those districts containing hospitals will be credited with more than their fair share of deaths and the others with correspondingly less. To avoid this source of fallacy as far as possible, all deaths occurring in hospitals have been credited to the district from which the person was sent to the hospital, where this could be ascertained, and those deaths which could not be thus referred to a particular district have been distributed proportionately among the different districts.

The districts here referred to are certain divisions of the area of each city made for the purpose of this report, each district presenting some peculiarity in location, altitude, density, or character of population. The political divisions of the cities, such as police districts or wards, were found to be of little use as units of area for comparisons of death rates of different localities.

The area of the District of Columbia was divided into 29 such districts, without any reference to wards or police districts, but in Baltimore the ward areas were used as a basis and the districts were made within the wards, being lettered A, B, etc., the total number of districts being 52.

The boundaries of these districts are shown on the maps appended, and brief descriptions of the peculiarities of each district as to topography, population, and mortality are also given hereafter.

It will be seen that there are great differences in the death rates of these districts; that in each city the mortality has been two or three times greater in some localities than in others; that the greatest variations in the death rates occur among the children under 5 years of age, and that these variations correspond in the main with the variations in aggregate death rates. It appears also that, as a rule, the death rate has been highest in the low lying districts, those nearest the streams or harbor and having the highest level of subsoil water.

VITAL STATISTICS.

ALTITUDE.

The following tables show the relations between altitude and death rates.

Table 8 shows for the District of Columbia the average altitude of the different districts and their average annual death rates, exclusive of stillborn, during the 6 year period per 1,000 of mean population, with distinction of color and of those under 5 years of age; also the average annual death rates per 100,000 of mean population due to certain specified causes.

TABLE 8.

DISTRICTS.	Average altitude (in feet) June 1, 1890.	AVERAGE ANNUAL DEATH RATE FOR SIX YEARS, STILLBORN EXCLUDED.							
		Aggregate.	Per 1,000 of mean population.				Per 100,000 of mean population.		
			White.		Colored.		Due to—		
			Total.	Under 5 years.	Total.	Under 5 years.	Malarial fever.	Consumption.	Djarrheal diseases.
Total	133	23.41	18.55	61.94	33.25	150.53	44.70	387.11	244.87
Washington	55	23.23	18.25	63.78	33.84	158.70	44.44	390.45	245.13
18.....	10	34.99	23.14	112.45	56.03	326.07	46.05	443.20	256.59
22.....	12	30.21	20.52	76.92	37.60	147.00	121.57	322.15	346.46
21.....	17	27.97	21.38	80.91	35.84	155.42	44.41	424.25	311.81
19.....	19	24.79	20.09	67.61	40.87	239.45	29.30	335.05	177.74
20.....	25	23.97	21.73	78.67	33.80	122.07	71.17	312.64	210.05
7.....	26	42.65	37.63	127.85	44.87	206.52	256.41	444.44	427.35
26.....	31	23.56	20.68	72.69	33.60	139.29	37.51	382.91	204.92
17.....	36	19.57	17.46	80.37	35.27	226.78	15.90	247.28	120.11
6.....	36	20.19	21.10	54.35	38.40	157.40	44.23	504.25	300.78
23.....	37	22.46	19.16	65.11	35.27	143.26	83.39	255.63	231.03
4.....	40	24.58	19.54	61.97	44.81	143.59	12.87	360.36	360.36
8.....	51	20.48	18.02	60.67	26.52	109.27	31.83	277.12	146.05
27.....	52	19.67	15.63	47.41	29.81	138.32	53.09	236.49	198.14
2.....	54	27.06	24.32	84.80	47.81	326.39	6.92	422.20	339.15
12.....	58	25.60	17.26	66.87	31.80	163.36	32.33	391.17	263.47
25.....	64	23.90	12.69	55.56	29.59	158.58	57.85	298.18	275.02
16.....	65	20.54	18.51	69.44	30.30	236.43	28.59	200.31	131.94
15.....	68	24.37	17.86	60.63	35.39	179.35	31.31	305.13	205.12
24.....	71	20.29	16.50	55.50	32.31	155.17	38.51	314.65	160.43
5.....	76	31.95	16.64	53.92	38.82	162.16	18.74	543.38	290.43
14.....	81	22.57	16.26	51.45	34.71	165.46	32.93	352.06	218.62
11.....	83	24.05	17.89	63.35	31.83	147.78	36.70	280.22	240.10
13.....	86	24.28	18.81	63.99	41.46	197.44	13.34	300.79	233.43
10.....	89	15.89	12.43	39.24	23.70	134.65	19.25	226.70	134.74
9.....	102	21.76	15.91	62.25	28.27	133.45	34.08	295.39	278.35
29 (a).....	118	19.02	9.91	49.56	32.64	127.50	100.29	497.45	318.93
3.....	124	19.20	14.77	44.09	38.25	188.89	5.87	281.89	158.56
1.....	160	24.28	20.87	61.79	37.89	117.06	9.91	380.44	203.13
28 (b).....	165	18.69	15.03	48.79	24.53	99.27	20.50	206.75	205.97

RECAPITULATION BY GROUPS OF ALTITUDES IN WASHINGTON.

Districts under 25 feet in altitude	27.61	21.26	78.85	37.48	167.60	47.24	391.08	274.64
Districts 25 to 50 feet in altitude	23.61	19.83	71.41	37.06	155.21	60.33	302.43	220.72
Districts 50 to 75 feet in altitude	22.15	17.24	57.59	31.87	159.57	37.33	323.09	200.91
Districts 75 to 100 feet in altitude	21.77	15.67	52.30	32.55	157.89	27.48	315.14	205.80
Districts 100 feet and over in altitude	21.86	17.24	57.87	31.23	136.11	20.71	317.59	220.22

^a Rates per 1,000 exclusive and per 100,000 inclusive of deaths in Government Insane Asylum.

^b Rates per 1,000 exclusive and per 100,000 inclusive of deaths in United States Soldiers' Home.

DISTRICT OF COLUMBIA AND BALTIMORE.

Table 9 shows for Baltimore the average altitude of the different districts and their average annual death rates, exclusive of stillborn, during the 6 year period per 1,000 of mean population, with distinction of color and of those under 5 years of age; also the average annual death rates per 100,000 of mean population due to certain specified causes.

TABLE 9.

WARDS AND DISTRICTS.	Average altitude (in feet) June 1, 1890.	AVERAGE ANNUAL DEATH RATES FOR SIX YEARS, STILLBORN EXCLUDED.							
		Aggregate.	Per 1,000 of mean population.				Per 100,000 of mean population.		
			White.		Colored.		Due to—		
			Total.	Under 5 years.	Total.	Under 5 years.	Malarial fever.	Consumption.	Diarrheal diseases.
The city	67	22.39	20.41	73.94	32.60	163.41	41.51	317.35	266.38
1-B	10	24.41	23.33	61.87	400.00	-----	28.72	181.89	325.48
2-B	10	48.54	47.48	182.47	1,222.22	-----	170.96	259.95	904.82
9-B	10	111.84	91.84	222.22	700.00	-----	-----	877.19	219.30
9-C	10	29.44	27.38	99.72	87.06	1,333.33	42.91	317.54	429.11
9-D	10	37.93	32.78	205.88	44.99	190.48	160.26	534.19	320.51
18-C	10	21.18	18.86	64.44	28.01	119.77	70.61	303.63	277.74
2-A	15	26.57	25.38	101.19	68.18	444.44	79.19	265.04	450.89
2-C	15	11.59	10.91	30.08	238.10	-----	-----	98.91	84.78
15-A	18	40.90	28.55	101.25	109.25	518.52	36.63	476.19	476.19
4-B	20	30.49	27.70	101.73	74.56	416.67	45.58	389.95	379.82
11-B	20	10.14	9.03	-----	18.52	-----	-----	289.86	144.93
15-C	20	34.79	23.11	91.67	45.39	192.25	86.68	677.70	425.53
16-B	20	25.67	19.19	63.17	31.95	157.03	60.14	416.32	323.80
17	24	21.98	20.68	75.67	62.05	320.17	66.78	242.79	350.61
4-A	30	23.06	20.53	65.59	36.05	152.93	28.52	322.30	219.62
5-A	30	26.89	21.92	74.23	43.20	238.89	40.93	483.50	314.66
9-E	30	18.41	18.91	79.89	16.48	95.24	37.58	310.03	216.08
16-A	30	26.76	23.62	84.00	30.26	214.62	50.40	340.46	299.06
15-B	32	26.59	22.63	81.50	59.47	268.42	53.30	434.34	351.42
8-E	40	19.02	21.84	93.18	11.83	152.78	29.07	329.46	164.73
18-B	40	16.72	16.33	63.94	25.47	115.38	38.09	101.89	236.07
9-A	41	29.86	26.61	95.98	39.88	288.56	29.97	391.04	269.75
6-B	42	20.12	17.57	63.22	36.49	140.07	32.09	212.94	269.93
1-A	44	24.18	24.09	89.02	28.13	139.64	70.73	277.74	313.10
18-A	46	21.75	21.22	66.67	27.93	122.42	50.16	259.77	318.89
13-D	50	26.76	26.80	111.78	15.15	83.33	37.34	311.18	336.07
3	53	25.88	23.07	90.27	40.88	172.10	41.22	374.28	232.81
6-D	55	23.97	20.81	64.01	31.46	137.35	37.75	393.34	212.34
8-D	55	30.00	32.68	173.91	13.71	100.00	74.07	222.22	370.37
7-B	60	24.46	24.89	90.14	21.14	79.71	44.39	318.81	286.52
13-B	60	25.97	20.10	71.90	41.32	333.33	19.38	310.08	426.36
13-C	60	25.73	20.97	64.20	43.31	227.27	-----	393.53	83.89
5-B	61	21.88	19.79	70.93	31.12	129.74	23.57	312.24	178.70
13-A	63	22.12	19.40	66.63	36.29	203.13	15.07	308.95	227.57
8-B	70	20.59	19.94	66.75	29.52	122.45	34.06	342.55	195.74
8-C	80	14.11	13.85	42.88	14.56	94.09	21.99	186.90	113.60
10	80	23.68	20.24	77.09	33.08	160.17	27.87	357.88	228.55
11-C	82	19.93	19.55	70.92	20.86	111.50	11.52	233.28	176.68
6-A	90	18.26	18.14	60.54	19.91	75.52	35.40	166.80	230.11
14-A	91	23.05	21.14	78.44	33.05	167.45	21.43	353.66	292.57
14-B	91	22.49	20.74	88.39	97.03	275.00	29.81	298.07	220.11
7-A	92	17.08	16.40	57.31	33.76	200.52	29.62	218.82	135.32
8-A	98	16.09	15.92	55.97	17.05	125.08	24.45	163.83	180.95
6-C	100	22.41	20.10	61.70	38.56	153.06	39.29	314.80	230.37
12-C	100	28.58	29.49	59.32	25.10	137.25	83.44	458.91	229.45
11-A	110	26.30	19.92	77.85	32.00	157.87	28.22	408.20	246.43
12-A	141	17.65	17.30	61.73	18.51	104.36	26.12	241.57	170.57
19	158	20.03	16.40	54.82	34.07	179.28	32.28	289.23	209.47
20	173	19.85	16.47	56.76	33.30	170.40	39.32	310.79	227.41
12-B	180	12.66	12.74	51.94	12.43	53.46	14.72	200.24	167.84
Suburban:									
21 (a)	196	18.41	18.00	71.39	25.28	129.87	9.51	247.13	278.82
22 (a)	261	17.48	17.18	66.93	20.41	132.43	13.08	226.69	211.43

RECAPITULATION BY GROUPS OF ALTITUDES IN BALTIMORE CITY.

Districts under 25 feet in altitude	26.13	23.63	86.92	44.65	203.30	70.59	304.07	385.04
Districts 25 to 50 feet in altitude	23.69	21.84	76.96	36.51	194.03	46.69	314.88	283.33
Districts 50 to 75 feet in altitude	23.48	21.64	78.78	34.34	155.68	31.41	337.13	225.48
Districts 75 to 100 feet in altitude	19.79	18.31	66.16	28.03	143.39	26.45	260.49	205.37
Districts 100 feet and over in altitude	19.92	17.16	58.70	23.21	145.53	30.09	293.12	208.39

a Rates for wards 21 and 22 for 2 years ending May 31, 1890.

Table 10 shows for Baltimore city and for Washington the area and proportion of area at different altitudes, the number and proportion of the population at different altitudes, and the corresponding death rates for the census year, with distinction of color.

TABLE 10.

CHARACTERISTICS OF ALTITUDE.	Baltimore city.	Washington.	CHARACTERISTICS OF ALTITUDE.	Baltimore city.	Washington.
Average altitude (in feet).....	67	55	Altitude 50 to 75 feet—Continued.		
Total area (in acres).....	7,900	6,550	Population.....	56,457	79,754
Population, aggregate.....	395,047	202,978	Per cent of total population.....	14.29	30.29
White.....	330,627	137,925	White.....	48,230	53,171
Colored.....	64,420	65,053	Per cent of total white population.....	14.50	38.55
Death rates per 1,000 of population:			Colored.....	8,227	20,583
Aggregate.....	23.17	20.23	Per cent of total colored population.....	12.77	40.80
White.....	21.22	15.97	Death rates per 1,000 of population:		
Colored.....	33.20	29.27	Aggregate.....	23.82	10.37
Altitude under 25 feet:			White.....	22.04	15.00
Area (in acres).....	1,917	1,110	Colored.....	34.28	26.14
Per cent of total area.....	23.99	16.95	Altitude 75 to 100 feet:		
Population.....	67,608	32,803	Area (in acres).....	1,058	706
Per cent of total population.....	17.11	16.16	Per cent of total area.....	20.75	12.15
White.....	59,535	20,042	Population.....	78,099	32,186
Per cent of total white population.....	18.01	14.53	Per cent of total population.....	20.00	15.86
Colored.....	8,073	12,761	White.....	66,941	20,610
Per cent of total colored population.....	12.53	19.02	Per cent of total white population.....	20.25	14.94
Death rates per 1,000 of population:			Colored.....	12,058	11,570
Aggregate.....	26.11	23.50	Per cent of total colored population.....	18.72	17.70
White.....	24.51	17.46	Death rates per 1,000 of population:		
Colored.....	37.90	32.90	Aggregate.....	21.00	18.86
Altitude 25 to 50 feet:			White.....	20.14	13.15
Area (in acres).....	2,434	1,466	Colored.....	25.70	20.03
Per cent of total area.....	30.21	22.38	Altitude 100 feet and over:		
Population.....	96,818	45,181	Area (in acres).....	1,301	486
Per cent of total population.....	24.51	22.26	Per cent of total area.....	17.41	7.42
White.....	84,572	35,334	Population.....	95,105	13,051
Per cent of total white population.....	25.58	25.62	Per cent of total population.....	24.09	6.43
Colored.....	12,246	9,847	White.....	71,340	8,768
Per cent of total colored population.....	13.01	15.14	Per cent of total white population.....	21.58	6.36
Death rates per 1,000 of population:			Colored.....	23,816	4,280
Aggregate.....	23.70	20.52	Per cent of total colored population.....	36.97	6.50
White.....	21.12	16.61	Death rates per 1,000 population:		
Colored.....	41.56	34.53	Aggregate.....	21.97	10.09
Altitude 50 to 75 feet:			White.....	19.06	16.54
Area (in acres).....	610	2,692	Colored.....	30.69	26.13
Per cent of total area.....	7.63	41.10			

It will be seen from these tables, and especially from the recapitulations by groups of districts varying in altitude by successive steps of 25 feet, that while there are exceptions the rule is that the death rate diminishes as the altitude increases, and that this is true for both the white and the colored. Thus, in Baltimore city in those districts under 25 feet in altitude the average annual death rate was 26.13, in those between 25 and 50 feet in altitude it was 23.69, from 50 to 75 it was 23.48, from 75 to 100 it was 19.79, and 100 and over it was 19.92. In Washington the death rate was 27.61 in the localities under 25 feet in altitude and 21.86 in those 100 feet high and upward.

Tables 8 and 9 also show the relations of altitude to the three forms of disease which are usually connected with defective drainage, namely, malarial fever, consumption, and diarrheal diseases, the death rates from each of these being greater in the districts of lower altitude.

For example, in Baltimore in those localities below 25 feet in altitude the death rate per 100,000 of population was from diarrheal diseases 385.64, while in the districts 100 feet and upward in altitude the rates were: malarial fever, 30.09; consumption, 293.12, and diarrheal diseases, 208.39.

DENSITY OF POPULATION.

The effects of density of population upon the death rates in Baltimore and the District of Columbia are not manifest, being overridden by the effects of altitude and of character of population, as will be seen by the following tables.

Table 11 shows for the District of Columbia the area and population and the average annual death rates, with distinction of color, by sanitary districts and groups of sanitary districts according to density of population.

TABLE 11.

DISTRICTS.	JUNE 1, 1890.			AVERAGE ANNUAL DEATH RATES FOR 6 YEARS, EXCLUSIVE OF STILLBORN.				
	Total area (in acres).	Population.	Persons to the acre of total area.	Aggregate.	White.		Colored.	
					Total.	Under 5 years.	Total.	Under 5 years.
Total	30,500	230,392	6.31	23.41	18.55	61.94	33.25	150.53
Washington	6,550	202,078	30.99	23.28	18.25	63.78	33.84	158.70
15.....	242	16,715	69.07	24.37	17.86	60.63	35.39	170.35
13.....	40	2,701	67.53	24.28	18.81	63.99	41.46	197.44
21.....	305	19,038	62.42	27.97	21.38	80.91	35.84	155.42
14.....	251	13,704	54.60	22.57	16.26	51.45	34.71	165.46
10.....	156	8,451	54.17	15.89	12.43	39.24	23.79	134.65
4.....	53	2,800	52.83	24.58	19.54	61.07	44.81	143.50
17.....	196	10,274	52.42	19.57	17.40	80.37	35.27	226.78
6.....	40	2,091	50.78	20.19	21.10	54.35	38.40	157.40
16.....	104	5,087	48.91	20.54	18.51	69.44	30.30	236.43
26.....	159	7,696	48.40	23.56	20.68	72.69	33.69	180.20
20.....	140	7,099	47.64	23.97	21.73	78.07	33.80	122.67
12.....	243	11,151	45.89	25.00	17.26	60.87	31.80	165.36
9.....	148	6,337	42.82	21.76	15.01	62.25	28.27	133.45
24.....	539	16,412	30.45	20.29	16.50	55.50	32.31	155.17
8.....	336	9,649	28.72	20.48	18.02	60.67	26.52	109.27
2.....	97	2,609	26.90	27.96	24.32	84.80	47.81	326.39
3.....	127	3,079	24.24	19.20	14.77	44.09	38.25	188.89
27.....	599	14,092	23.53	19.07	15.63	47.41	29.81	138.82
18.....	68	1,550	22.79	34.99	28.14	112.45	56.03	326.07
11.....	246	5,410	21.99	24.05	17.89	68.35	31.83	147.78
19.....	458	9,263	20.22	24.79	20.00	67.61	40.87	239.45
23.....	689	13,179	19.13	22.46	19.16	65.11	35.27	143.26
5.....	103	1,920	18.64	31.95	16.64	53.92	38.82	162.16
1.....	211	3,638	17.24	24.28	20.87	61.79	37.89	117.06
7.....	180	2,102	11.68	42.65	37.63	127.85	44.87	206.52
22.....	279	2,952	10.58	30.21	20.52	76.92	37.60	147.00
25.....	532	4,039	7.59	23.00	12.60	55.56	29.59	158.58
Suburban:								
20.....	9,606	8,976	0.93	19.02	9.91	49.56	32.64	127.50
28.....	20,344	18,438	0.91	18.69	15.03	48.79	24.53	99.27

RECAPITULATION BY GROUPS OF DENSITY OF POPULATION IN WASHINGTON.

Under 25 persons to the acre.....	3,492	61,224	17.53	23.00	18.51	60.94	35.46	161.77
25 to 50 persons to the acre.....	1,775	66,040	37.21	22.46	18.54	66.31	31.19	148.49
50 persons and over to the acre.....	1,283	75,714	59.01	23.40	17.78	64.34	34.72	163.98

VITAL STATISTICS.

Table 12 shows for Baltimore the area and population and the average annual death rates, with distinction of color, by sanitary districts and groups of sanitary districts according to density of population.

TABLE 12.

WARDS AND DISTRICTS.	JUNE 1, 1890.			AVERAGE ANNUAL DEATH RATES FOR 6 YEARS, EXCLUSIVE OF STILLBORN.				
	Total area (in acres).	Population.	Persons to the acre of total area.	Aggregate.	White.		Colored.	
					Total.	Under 5 years.	Total.	Under 5 years.
The city.....	7,990	395,047	40.44	22.39	20.41	73.94	32.60	163.41
15-C.....	26	4,461	171.58	34.70	23.11	91.07	45.30	192.25
7-B.....	30	4,346	144.87	24.46	24.89	90.14	21.14	70.71
10.....	109	15,760	144.59	23.08	20.24	77.09	33.08	100.17
6-D.....	27	3,721	137.81	23.97	20.81	64.01	31.40	137.36
16-A.....	87	10,451	120.13	26.76	23.02	84.99	30.26	214.62
11-A.....	79	9,350	118.35	26.30	19.92	77.35	32.00	157.87
5-B.....	77	8,944	116.16	21.88	19.79	70.93	31.12	129.74
14-B.....	66	7,633	115.95	22.49	20.74	88.39	37.03	275.00
6-C.....	86	9,822	114.21	22.41	20.10	61.79	38.56	153.00
15-B.....	82	8,891	108.43	26.59	22.63	81.50	59.47	268.43
5-A.....	64	6,365	107.27	26.89	21.92	74.23	43.20	238.80
4-A.....	118	12,312	104.34	23.06	20.53	65.59	36.05	152.03
3.....	154	15,762	102.35	25.88	23.67	90.27	40.88	172.10
2-C.....	25	2,484	99.36	11.59	10.91	39.08	238.10	.....
14-A.....	100	9,332	98.32	23.65	21.14	78.44	33.05	137.45
4-B.....	36	3,465	95.25	30.49	27.70	101.73	74.50	410.07
13-A.....	180	11,656	89.06	22.12	19.46	66.63	36.20	203.13
9-C.....	23	2,045	88.91	29.44	27.38	99.72	87.06	1,333.33
8-E.....	41	3,628	88.40	19.62	21.84	93.18	11.33	152.78
2-A.....	129	10,853	84.13	26.57	25.38	101.19	68.18	444.44
12-A.....	257	21,635	83.79	17.65	17.30	61.73	18.51	104.30
8-B.....	163	8,608	83.57	20.59	19.94	66.75	29.52	122.45
9-E.....	23	1,869	81.26	18.41	18.01	79.89	16.43	65.21
16-B.....	47	3,799	80.83	25.07	19.19	63.17	31.95	157.03
13-D.....	18	1,410	78.33	26.76	26.86	111.78	15.15	83.33
13-B.....	12	906	75.50	25.97	20.10	71.90	41.32	333.33
18-C.....	100	7,457	74.57	21.18	18.56	64.44	23.01	110.77
20.....	330	23,168	70.21	19.85	16.47	56.76	33.30	170.40
7-A.....	296	20,737	70.06	17.08	16.46	57.81	33.70	200.52
18-B.....	134	9,203	68.72	16.72	16.33	63.94	25.47	115.38
8-C.....	79	4,800	60.76	14.11	13.85	42.88	14.50	94.09
12-B.....	113	5,964	52.78	12.06	12.74	51.34	12.43	63.46
11-C.....	117	6,197	52.20	19.93	19.55	70.92	20.86	111.59
19.....	480	24,484	51.01	20.03	16.40	54.82	34.07	179.28
13-C.....	13	629	48.38	25.73	20.97	94.20	43.31	227.27
1-A.....	529	20,333	38.44	24.18	24.09	89.02	28.13	130.61
2-B.....	96	3,506	36.52	48.54	47.48	182.47	1,222.22	.....
9-A.....	219	7,628	34.83	20.86	26.61	95.98	39.88	288.50
9-D.....	19	658	34.63	37.93	32.73	205.88	44.99	190.48
8-A.....	211	7,177	34.01	16.09	15.92	55.97	17.65	126.08
1-E.....	66	1,829	27.71	24.41	23.33	61.87	400.00	.....
6-B.....	231	5,846	25.31	20.12	17.57	63.22	36.40	140.07
15-A.....	65	1,439	22.14	40.90	28.55	101.25	109.25	518.52
17.....	1,224	25,209	20.60	21.98	20.68	75.67	62.95	329.17
12-C.....	46	842	18.30	28.58	29.49	59.32	25.10	137.25
11-B.....	15	243	16.20	10.14	9.03	.....	18.52	.....
18-A.....	886	9,787	11.05	21.75	21.22	66.67	27.03	122.42
8-D.....	46	475	10.33	30.00	32.68	173.91	19.71	100.00
6-A.....	680	6,933	10.20	18.26	18.14	60.54	19.91	75.52
22 (a).....	3,904	23,338	5.98	17.48	17.16	66.93	20.41	132.43
9-B.....	46	160	3.48	111.84	91.84	222.22	700.00	.....
21 (a).....	6,973	16,054	2.30	18.41	18.00	71.39	25.28	126.87

RECAPITULATION BY GROUPS OF DENSITY OF POPULATION IN BALTIMORE CITY.

Under 50 persons to the acre.....	4,392	92,694	21.11	23.94	22.73	80.11	39.13	196.40
50 to 100 persons to the acre.....	2,570	182,146	70.87	20.00	18.34	66.91	27.74	149.34
100 persons and over to the acre.....	1,028	120,207	116.93	24.83	21.58	77.87	36.98	171.65

a Rates for wards 21 and 22 for 2 years only.

INFANTILE MORTALITY.

The infantile mortality in the District of Columbia and Baltimore demands special consideration. Table 13 shows the death rates for the years ending May 31, 1880 and 1890, of the children under 1 year of age in each locality, and also for the same periods the number of deaths during each year in 1,000 born during the year, with distinction of color and sex, the stillborn being excluded.

TABLE 13.

CHARACTER OF RATES.	Color.	Sex.	BALTIMORE.		DISTRICT OF COLUMBIA.	
			1890	1880	1890	1880
Number of deaths of children under 1 year of age per 1,000 of corresponding population.	White ..	Total	258.60	208.86	207.83	104.75
		Male	277.80	225.13	233.95	200.41
		Female	238.52	192.84	181.94	188.78
	Colored ..	Total	542.03	440.19	491.80	407.20
		Male	619.34	451.44	525.77	452.81
		Female	472.30	428.96	459.26	362.84
Number of deaths during the census year per 1,000 children born within the year.	White ..	Total	225.70	177.54	186.44	173.30
		Male	238.43	185.05	206.20	177.26
		Female	211.93	169.04	166.15	169.08
	Colored ..	Total	400.96	305.79	376.09	321.52
		Male	438.03	307.55	393.82	352.89
		Female	363.93	303.97	300.12	290.21
Number of deaths under 1 year of age per 1,000 deaths at all ages.	White ..	Total	274.36	251.44	210.58	262.68
		Male	295.64	261.99	212.94	264.60
		Female	251.38	240.32	207.65	260.50
	Colored ..	Total	338.75	353.85	302.80	349.67
		Male	375.46	364.64	318.75	397.44
		Female	303.11	343.17	287.04	305.15

From this table it appears that the infantile mortality was greater in both years in Baltimore than it was in the District of Columbia, and that in both places it was higher in 1890 than it was in 1880. Was this due to a really greater proportionate number of deaths among infants during the last census year or to a more defective enumeration of the population under 1 year of age in the last census? Examination of the population figures shows that the proportion of children under 1 year of age and under 5 years of age reported as living at the end of the census year was less in 1890 than in 1880.

Table 14 shows the number and Table 15 shows the proportion of the population at these ages in 100,000 of all ages for Baltimore and for the District of Columbia according to the censuses of 1890 and 1880, with distinction of color and sex.

TABLE 14.

COLOR AND SEX.	Years.	BALTIMORE.		DISTRICT OF COLUMBIA.	
		Under 1 year.	Under 5 years.	Under 1 year.	Under 5 years.
Aggregate.....	1890	9,582	46,157	4,497	20,445
	1880	8,554	38,344	4,624	20,635
White males.....	1890	4,190	20,130	1,449	6,709
	1880	3,518	16,320	1,447	6,570
White females.....	1890	4,008	19,605	1,462	6,582
	1880	3,573	16,195	1,372	6,386
Colored males.....	1890	662	3,108	776	3,482
	1880	731	2,884	890	3,815
Colored females.....	1890	722	3,314	810	3,682
	1880	732	2,975	915	3,864

VITAL STATISTICS.

TABLE 15.

COLOR AND SEX.	Years.	BALTIMORE.		DISTRICT OF COLUMBIA.	
		Under 1 year.	Under 5 years.	Under 1 year.	Under 5 years.
		Aggregate	1890	2,206	10,624	1,952	8,874
	1880	2,574	11,539	2,003	11,617
White males.....	1890	2,368	11,370	1,913	8,975
	1880	2,617	12,130	2,524	11,462
White females.....	1890	2,107	10,308	1,852	8,338
	1880	2,479	11,215	2,261	10,523
Colored males	1890	2,270	10,657	2,294	10,145
	1880	3,186	12,568	3,389	14,529
Colored females.....	1890	1,893	8,691	1,935	8,075
	1880	2,378	9,605	2,743	11,583

It will be seen from Table 15 that in Baltimore the number of children under 1 year of age was 3.68 less per 1,000 of total population in 1890 than it was in 1880, and that in the District of Columbia it was 6.51 less per 1,000 of total population in 1890 than it was in 1880. In the District of Columbia the total population increased 52,768 in the 10 years, while the number of infants under 1 year of age actually diminished 127 during the same period.

This decrease in the District of Columbia was wholly among the colored, and in Baltimore the actual decrease in the number of infants was also wholly among the colored.

This decrease may have been due to a diminished birth rate or to a greater death rate among the infants in 1890 than in 1880, or to a combination of these causes. There is some reason to think that the birth rate was less in 1890 than it was in 1880, but this question will be discussed in a future report, when the data from other parts of the country are available.

In both the censuses of 1880 and 1890 there were errors in the count of infants under 1 year old, as there were in previous censuses, owing in part to actual omissions and in part to the fact that children 10 and 11 months old are often reported as 1 year old, just as children 4 years and 9, 10, or 11 months old are often reported as 5 years old. The censuses of 1880 and 1890 were taken in the same manner, and the probabilities would be that the proportion of error in this direction would be about the same in each. Is the high infantile death rate in 1890 sufficient to warrant the setting aside of these probabilities? If the proportion of infants had been the same in the District of Columbia in 1890 that it was in 1880, the number of deaths remaining as reported, the infantile death rate for 1890 would have been 230.95 per 1,000 of population under 1 instead of 307.98, while it was 277.68 in 1880. Making the same supposition for Baltimore the infantile death rate would have been 256.75 instead of 299.62.

Table 16 shows for Baltimore and for the District of Columbia for each year from 1879 to 1890 the number of deaths of those under 1 year and under 5 years of age per 1,000 of total deaths, the figures being obtained from the annual reports of the boards of health.

TABLE 16.

YEARS.	BALTIMORE.		DISTRICT OF COLUMBIA.	
	Under 1 year.	Under 5 years.	Under 1 year.	Under 5 years.
1879.....	271.20	444.34	279.88	468.79
1880.....	289.57	447.84	310.20	465.41
1881.....	268.15	444.58	251.69	405.71
1882.....	248.33	420.82	270.62	400.76
1883.....	250.64	438.05	251.75	389.41
1884.....	283.85	439.20	250.31	422.52
1885.....	269.35	395.93	260.30	391.56
1886.....	286.96	427.51	248.18	364.36
1887.....	289.06	415.31	274.38	383.92
1888.....	293.64	434.31	268.85	383.93
1889.....	296.22	402.73	284.94	405.47
1890.....	268.68	403.71	256.47	371.50

The proportion of deaths of those under 1 year and under 5 years to the total number of deaths was therefore less in 1890 than it was in 1880 both in Baltimore and in the District of Columbia, which indicates that there was either a smaller number of infants in proportion to the population or else that the death rate of infants had diminished in the latter year; but the proportion of deaths from infantile diseases per 1,000 of deaths from all causes was greater in 1890 than in 1880 in Baltimore and less in the District of Columbia, as is shown by the table on the following page.

Table 17 shows for Baltimore and for the District of Columbia the comparative number of deaths from infantile diseases in 1,000 total deaths from all causes, stillborn excluded, during the census years 1890 and 1880.

TABLE 17.

CAUSES.	BALTIMORE.		DISTRICT OF COLUMBIA.	
	1890	1880	1890	1880
Infantile diseases.....	264.18	290.82	224.81	270.04
Measles.....	6.74	0.05	0.55	0.48
Diarrheal diseases.....	35.20	16.00	33.58	38.41
Cholera infantum.....	48.67	50.97	33.95	44.61
Inanition.....	24.24	24.77	17.07	22.42
Whooping cough.....	2.51	5.32	2.75	11.21
Premature birth.....	21.62	18.08	18.72	19.56
Malformation.....	2.51	0.21	1.47	1.10
Debility and atrophy.....	31.78	25.16	34.13	27.43
Anæmia.....	0.70	0.13		
Hydrocephalus.....	3.62	5.10	3.67	3.34
Scrofula and tabes.....	1.51	2.59	1.84	3.58
Meningitis and diseases of the brain.....	9.96	9.73	10.83	13.12
Trismus nascentium.....	3.42	3.89	8.99	10.02
Convulsions.....	25.05	35.00	15.97	26.06
Croup and angina.....	1.51	1.95	1.28	3.34
Bronchitis.....	11.67	11.28	12.66	10.02
Pneumonia.....	18.00	13.10	15.05	17.18
Dentition.....	8.65	9.34	6.06	8.83
Others of class digestive.....	3.02	1.60	2.57	2.30
Exposure and neglect.....	1.41	0.13	1.10	2.30
Suffocation.....	1.51	1.82	2.57	3.58

Taking all these figures into consideration it seems probable that the number of children under 1 year of age was actually less in proportion to the total population on June 1, 1890, than on June 1, 1880, in both Baltimore and the District of Columbia. How much of this was due to a greater mortality and how much to a diminished birth rate during the year 1890 will be discussed in a future report when more extended data are available.

Table 19 shows for the District of Columbia, by months, the proportion of deaths from certain specified causes in 1,000 deaths from all causes for the 6 years ending May 31, 1890, with distinction of color.

TABLE 19.

MONTH AND COLOR.	DEATH RATES DUE TO—															
	Meas-les.	Scarlet fever.	Diph-theria.	Whoop-ing cough.	Cere-bral fever.	Ty-phoid fever.	Diarrheal dis-eases.	Mala-rial fever.	Inan-ition, de-bility and atro-phy, and old age.	Con-sump-tion.	Dis-eases of nerv-ous system.	Dis-eases of respira-tory system.	Affec-tions con-nected with preg-nancy.	Acci-dents and in-juries.	Suicide.	Sun-stroke.
January	0.62	0.86	1.29	0.83	0.25	1.41	1.78	0.77	6.80	13.66	9.78	19.41	0.71	2.64	0.15	
White	0.41	1.36	1.95	0.41	0.30	1.78	2.07	0.77	6.22	12.79	11.60	17.23	0.77	2.66	0.30	
Colored	0.83	0.32	0.58	1.28	0.19	1.02	1.47	0.77	7.43	14.59	7.81	21.76	0.64	2.62		
February	1.01	0.65	0.86	0.52	0.09	0.95	1.85	0.71	6.21	13.44	8.55	16.70	0.62	2.83	0.40	
White	1.30	1.12	1.12	0.66	0.06	1.30	1.93	0.59	5.98	13.08	8.45	14.50	0.53	3.08	0.77	
Colored	0.70	0.13	0.58	1.02	0.13	0.51	1.73	0.83	6.79	13.83	8.77	19.08	0.70	2.56		
March	1.51	1.01	0.65	0.86	0.18	1.85	2.28	0.77	7.47	15.04	10.03	17.22	0.92	3.04	0.40	
White	1.72	1.72	1.01	0.59	0.24	1.54	3.31	0.95	8.69	13.97	10.77	16.04	0.65	3.61	0.71	
Colored	0.70	0.26	0.20	1.15	0.13	2.18	1.15	0.58	6.25	16.20	9.22	18.50	0.90	2.43	0.66	
April	0.43	0.95	0.80	0.71	0.28	1.20	1.81	1.20	7.07	14.36	9.90	13.56	0.83	2.40	0.18	0.03
White	0.53	1.06	1.30	0.41	0.18	1.07	1.89	0.77	5.74	12.37	10.95	11.84	0.77	2.19	0.56	0.03
Colored	0.32	0.19	0.38	1.02	0.38	1.34	1.73	1.66	8.51	16.52	8.77	15.43	0.90	2.62		0.03
May	0.68	0.58	0.71	0.52	0.22	0.74	3.23	0.95	7.01	12.21	10.12	8.27	0.83	2.55	0.22	
White	0.95	0.89	0.83	0.41	0.24	1.12	2.72	0.89	5.21	10.30	10.18	7.04	0.83	2.55	0.36	
Colored	0.38	0.26	0.58	0.64	0.19	0.32	3.78	1.02	8.96	14.27	10.05	9.60	0.83	2.56	0.06	
June	0.49	1.17	0.95	0.02	0.37	1.57	20.97	1.20	8.61	11.81	11.44	4.71	0.80	3.17	0.15	0.22
White	0.53	1.54	1.12	0.77	0.36	1.66	22.08	0.89	7.46	9.18	12.08	4.06	0.53	3.49	0.24	0.30
Colored	0.45	0.77	0.45	0.45	0.38	1.47	19.78	1.54	9.60	14.66	10.75	5.38	1.09	2.82	0.06	0.13
July	0.28	0.08	0.71	1.38	0.25	2.98	24.76	1.20	9.66	12.09	9.60	3.32	0.58	4.77	0.25	1.26
White	0.24	0.89	0.89	1.86	0.30	3.73	25.10	1.12	8.94	10.54	10.24	2.96	0.65	5.51	0.41	1.84
Colored	0.32	0.51	0.51	1.41	0.19	2.18	24.39	1.28	10.43	13.76	9.03	3.71	0.51	3.97	0.06	0.64
August	0.03	0.49	1.60	1.69	0.22	3.81	19.19	2.03	8.67	11.59	9.50	3.23	0.46	2.61	0.15	0.25
White	0.06	0.65	1.48	1.66	0.24	4.79	19.65	2.19	7.28	10.18	9.18	2.96	0.53	3.02	0.30	0.30
Colored		0.32	1.73	1.73	0.19	2.75	18.69	1.86	10.18	13.12	9.86	3.52	0.38	2.18		0.19
September	0.06	0.46	2.58	1.48	0.31	4.09	10.33	3.60	8.64	12.06	9.20	4.71	0.52	2.86	0.25	0.06
White		0.71	3.02	1.01	0.24	4.79	10.36	3.73	7.87	10.71	10.30	4.74	0.65	2.43	0.36	0.06
Colored	0.13	0.19	2.11	1.98	0.38	3.33	10.31	3.46	9.47	13.51	8.00	4.67	0.38	3.33	0.13	0.06
October		0.37	2.06	1.11	0.25	4.00	5.20	2.86	7.32	11.69	8.86	7.10	0.40	2.08	0.28	
White		0.36	2.72	0.59	0.24	4.68	5.56	2.60	6.90	11.60	9.23	6.63	0.47	3.31	0.47	
Colored		0.38	1.34	1.66	0.26	3.26	4.80	3.14	7.68	11.78	8.45	7.62	0.45	1.98	0.06	
November		0.43	1.85	0.58	0.22	2.80	2.68	1.51	5.90	11.07	8.46	8.67	0.55	2.86	0.12	
White		0.77	2.25	0.36	0.06	2.78	3.02	1.54	4.91	10.06	9.59	8.11	0.53	2.90	0.24	
Colored		0.09	1.41	0.53	0.38	2.82	2.30	1.47	6.98	12.16	7.23	9.28	0.58	2.75		
December	0.28	0.77	1.72	0.71	0.18	3.04	2.12	0.77	6.00	13.07	8.61	11.56	0.68	3.01	0.37	
White	0.66	1.07	2.55	0.47	0.18	3.67	2.37	0.65	5.15	12.85	8.52	10.71	0.71	2.96	0.71	
Colored	0.51	0.45	0.83	0.96	0.19	2.37	1.86	0.90	6.91	13.31	8.71	12.48	0.64	3.07		
Unknown												0.03				
White												0.06				
Colored																

These tables present many interesting points for comparison and study. It will be seen, for example, that in both cities diphtheria especially prevails from August to February, enteric or typhoid fever from August to December, malarial fevers in September and October, diarrheal diseases in June, July, August, and September. Suicides were most frequent in the District of Columbia in February, March, and December; in Baltimore in March, August, and December, while accidents and injuries caused the greater number of deaths in July and August in Baltimore and in June and July in the District of Columbia. Sunstroke was more fatal in Washington than in Baltimore.

The higher death rate in the summer months is due entirely to the higher infantile death rate; the minor increase of death rates in the colder months is due mainly to increase of the death rate among those 60 years of age and upward. The greatest variation in monthly death rates occurred among the colored in Baltimore city, ranging from 2.49 in November to 4.32 in July per 1,000 of population.

The effects of season in producing variations in the proportion of deaths due to certain causes are shown in Table 65.

The following diagrams give a graphic representation of the death rates due to diphtheria, diarrheal diseases, and typhoid fever in the District of Columbia and Baltimore during the 6 years, by months, per 1,000 deaths from all causes in each month.

VITAL STATISTICS.

DIAGRAM SHOWING PROPORTION OF DEATHS DUE TO DIPHTHERIA PER 1,000 DEATHS FROM ALL CAUSES BY MONTHS IN THE DISTRICT OF COLUMBIA FOR 6 YEARS ENDING MAY 31, 1890.

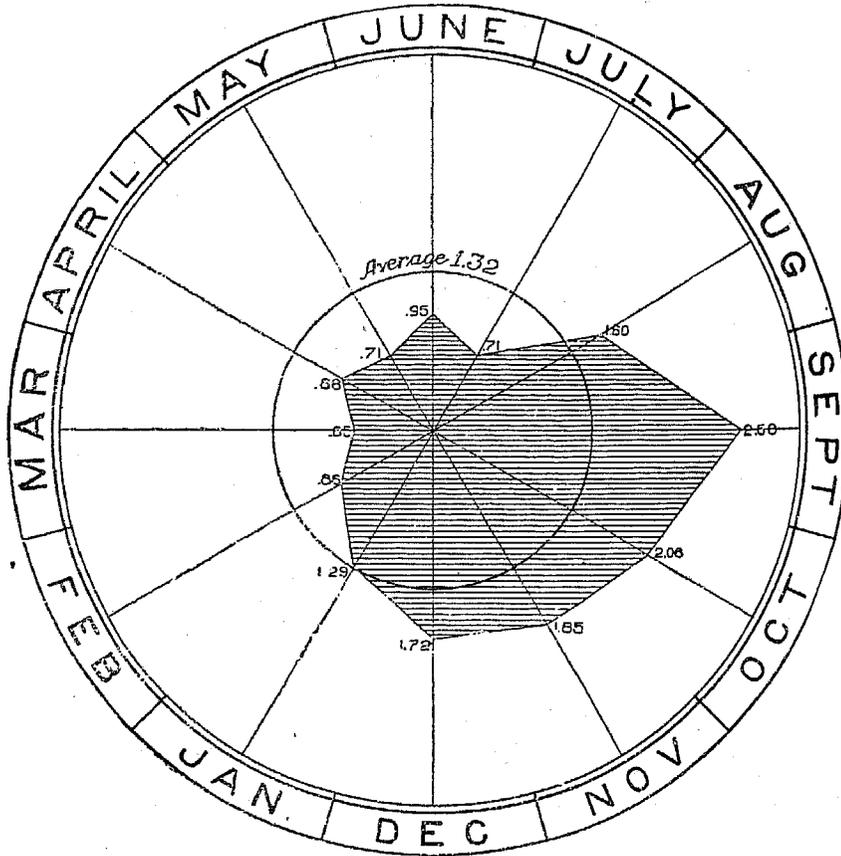


DIAGRAM SHOWING PROPORTION OF DEATHS DUE TO DIPHTHERIA PER 1,000 DEATHS FROM ALL CAUSES BY MONTHS IN BALTIMORE FOR 6 YEARS ENDING MAY 31, 1890.

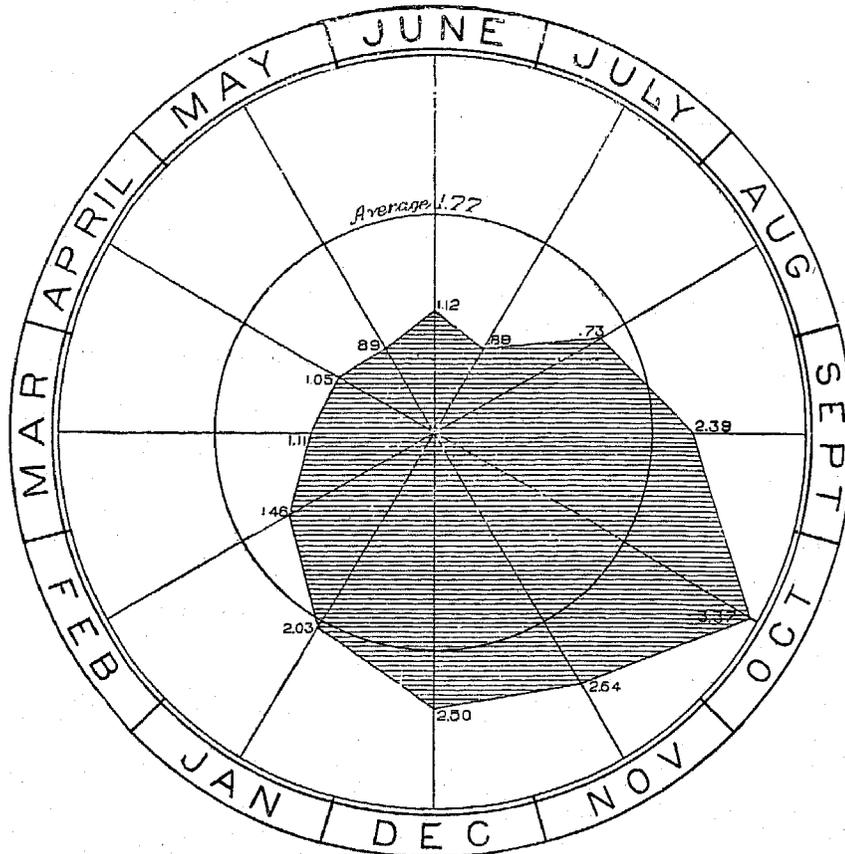


DIAGRAM SHOWING PROPORTION OF DEATHS DUE TO DIARRHEAL DISEASES PER 1,000 DEATHS FROM ALL CAUSES BY MONTHS IN THE DISTRICT OF COLUMBIA FOR 6 YEARS ENDING MAY 31, 1890.

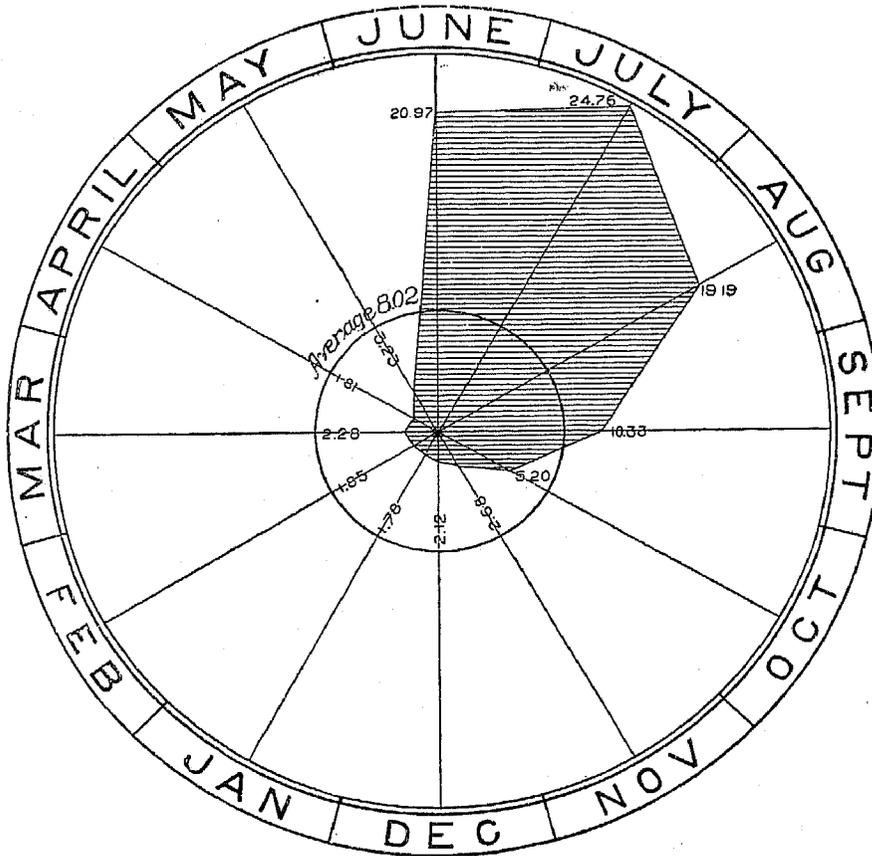
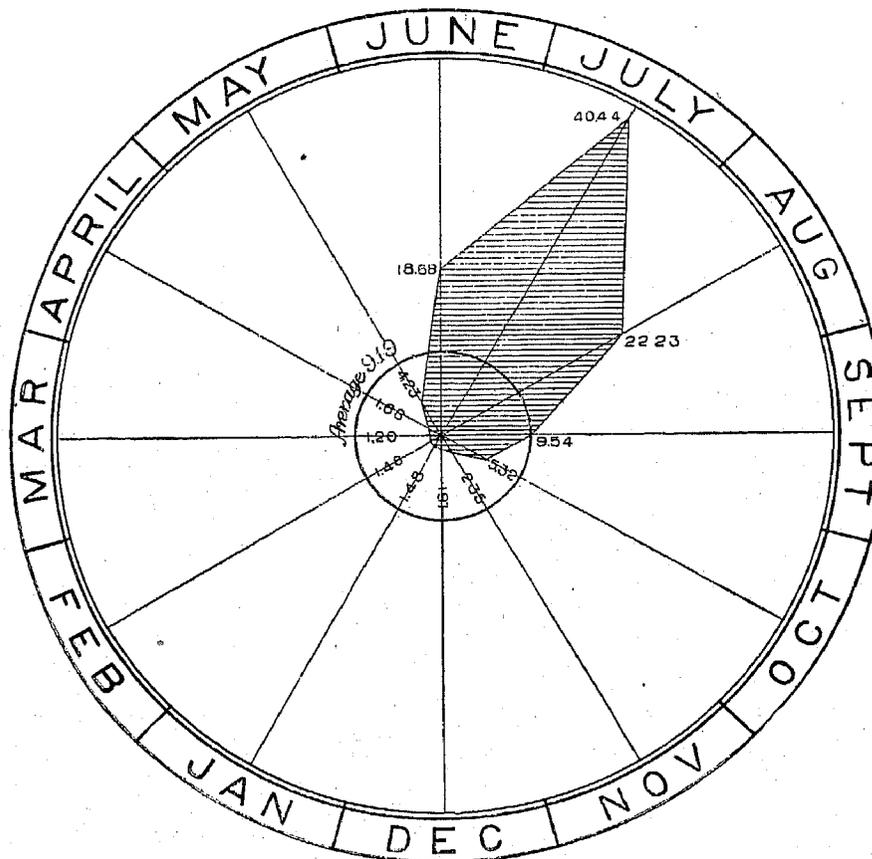


DIAGRAM SHOWING PROPORTION OF DEATHS DUE TO DIARRHEAL DISEASES PER 1,000 DEATHS FROM ALL CAUSES BY MONTHS IN BALTIMORE FOR 6 YEARS ENDING MAY 31, 1890.



VITAL STATISTICS.

DIAGRAM SHOWING PROPORTION OF DEATHS DUE TO TYPHOID FEVER PER 1,000 DEATHS FROM ALL CAUSES BY MONTHS IN THE DISTRICT OF COLUMBIA FOR 6 YEARS ENDING MAY 31, 1890.

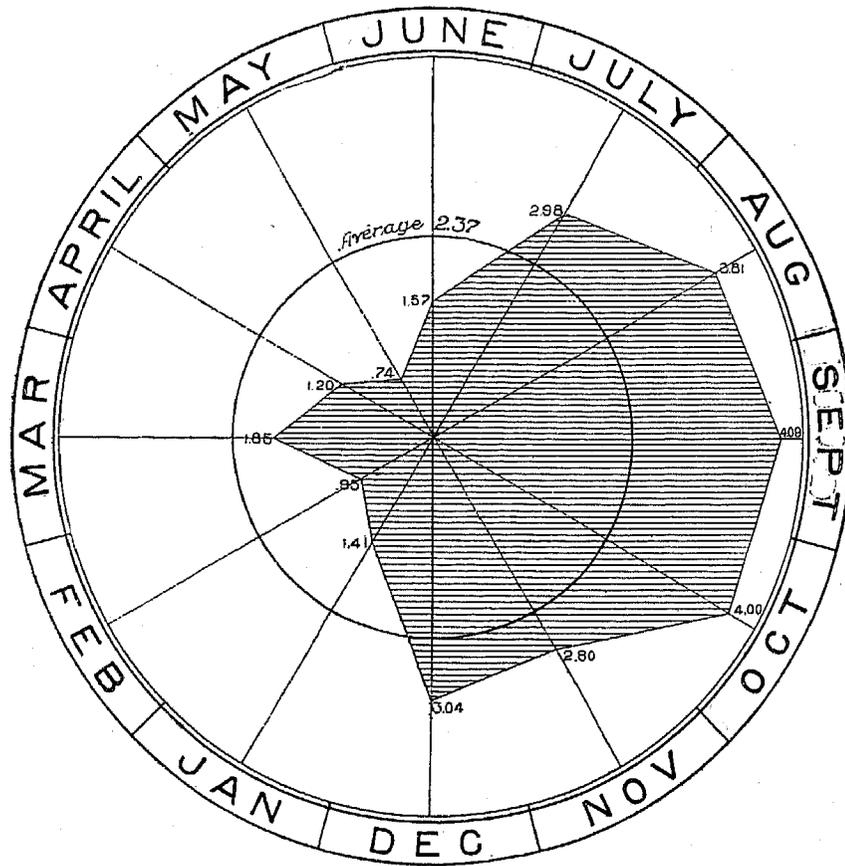
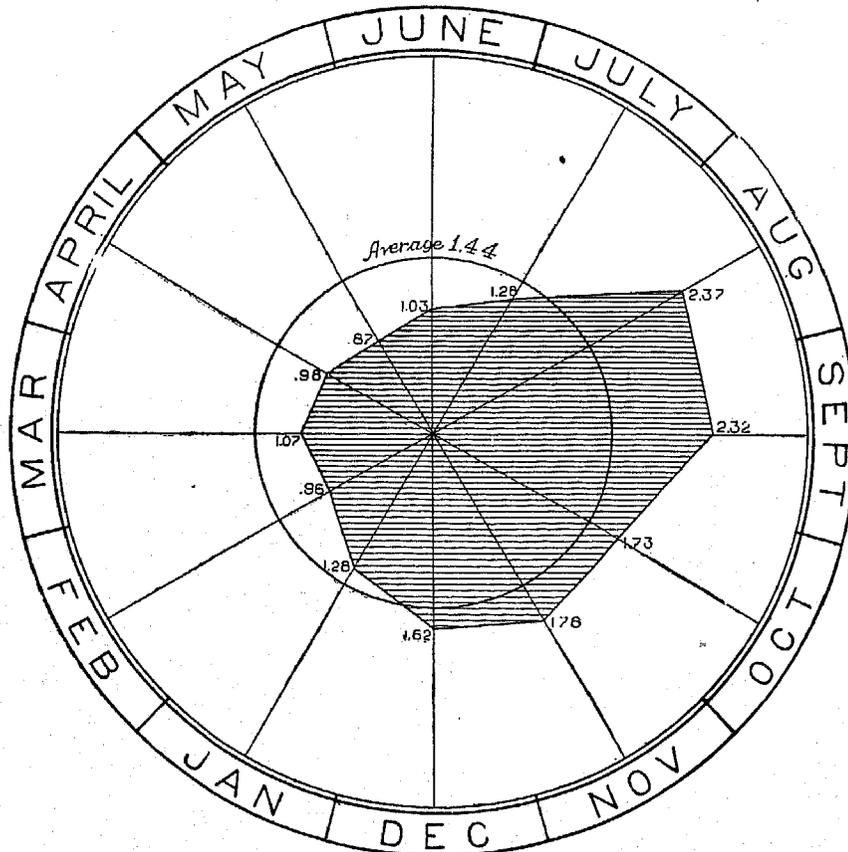


DIAGRAM SHOWING PROPORTION OF DEATHS DUE TO TYPHOID FEVER PER 1,000 DEATHS FROM ALL CAUSES BY MONTHS IN BALTIMORE FOR 6 YEARS ENDING MAY 31, 1890.



CONJUGAL CONDITION.

In the population over 15 years of age the proportion of single persons is greater in the District of Columbia than in Baltimore, and this is true for each sex of both the white and the colored. The proportion of widowed is also greater in the District of Columbia than in Baltimore for white males and females and for colored females.

Of white males 15 years of age and upward almost exactly half of those living in the District of Columbia were married at the date of taking the census, while in Baltimore the proportion was 541.50 per 1,000.

For the white females 15 years of age and upward the proportion of the married was in Baltimore 491.52 and in the District of Columbia 462.05 per 1,000. The proportion of married was greater among the colored males than among the white males in each city, but for those 45 years of age and upward the proportion of married males in Baltimore was greater among the whites (799.32) than among the colored (772.34).

The proportion of widows is greater in the District of Columbia than in Baltimore, except among the colored 45 years of age and upward, of which one-half the women in each city were widows, being 521.21 per 1,000 in Baltimore and 505.97 in the District of Columbia. These and other points for comparison are shown in Table 20.

Table 20 shows for Baltimore and the District of Columbia the number of single, married, and widowed in each 1,000 of population, with distinction of sex, color, and certain age periods.

TABLE 20.

COLOR AND SEX.	Conjugal condition.	OVER 15 YEARS.		15 TO 45 YEARS.		45 YEARS AND OVER.	
		Baltimore.	District of Columbia.	Baltimore.	District of Columbia.	Baltimore.	District of Columbia.
White males.....	Single.....	416.16	448.87	538.20	588.34	78.44	145.50
	Married.....	541.50	499.99	448.33	394.20	799.32	730.11
	Widowed.....	40.90	43.74	12.23	12.61	120.23	111.46
White females.....	Single.....	371.33	387.04	472.16	493.00	103.84	112.99
	Married.....	491.52	462.05	485.19	450.18	508.31	492.49
	Widowed.....	134.97	145.89	40.45	50.80	385.74	389.74
Colored males.....	Single.....	386.57	413.94	470.63	522.95	97.01	84.26
	Married.....	563.73	539.44	503.17	456.39	772.34	799.58
	Widowed.....	47.93	43.15	24.61	17.38	123.25	121.08
Colored females.....	Single.....	376.40	388.06	450.06	475.61	161.96	70.07
	Married.....	439.96	425.75	458.12	427.69	372.30	418.85
	Widowed.....	179.49	181.04	87.77	92.36	521.21	505.97

Taking the data for the census year only, Table 21 shows, with distinction of color and conjugal condition, the death rates for the people 15 years of age and upward per 1,000 population of corresponding age, color, and conjugal condition.

TABLE 21.

CONJUGAL CONDITION.	DISTRICT OF COLUMBIA.		BALTIMORE.	
	White.	Colored.	White.	Colored.
Single.....	11.32	17.96	9.72	15.65
Married.....	15.41	22.26	15.75	19.61
Widowed.....	43.12	46.67	49.51	38.46

This indicates that the death rate was less among the single than among the married and greatest of all among the widowed, that the death rate of the married whites was about the same in the two cities, but that for the single whites it was greater in the District of Columbia than in Baltimore.

For males between the ages of 15 and 45 the death rate was greater among the single than among the married, as is shown by Table 22.

TABLE 22.

CONJUGAL CONDITION.	DISTRICT OF COLUMBIA.		BALTIMORE.	
	White.	Colored.	White.	Colored.
Single.....	10.47	18.58	9.19	13.75
Married.....	9.06	16.67	8.98	13.49
Widowed.....	40.17	50.51	26.95	30.93

VITAL STATISTICS.

For females between the ages of 15 and 45 the death rate is greater among the married than among the single, as shown by Table 23, this being due to the perils of childbirth.

TABLE 23.

CONJUGAL CONDITION.	DISTRICT OF COLUMBIA.		BALTIMORE.	
	White.	Colored.	White.	Colored.
Single	6.44	14.50	6.53	13.20
Married	9.56	16.72	9.76	16.31
Widowed	13.65	15.12	12.02	14.36

If we take those above 45 years of age we find that the death rate both for males and females is decidedly less among the married than it is among the single, as is shown by Table 24.

TABLE 24.

SEX AND CONJUGAL CONDITION.	DISTRICT OF COLUMBIA.		BALTIMORE.	
	White.	Colored.	White.	Colored.
Males:				
Single	48.23	69.33	35.70	60.81
Married	29.94	40.75	31.22	39.60
Widowed	80.12	99.42	74.59	83.48
Females:				
Single	26.04	37.61	37.79	46.05
Married	18.05	28.50	24.13	24.77
Widowed	42.00	56.37	54.85	46.01

It will be seen that the death rate of single white males was greater in the District of Columbia than in Baltimore, and especially so at the ages of 45 years and upward, while for married white males and for both married and single white females the reverse is the case.

At ages above 45 years the excess of the death rate among the colored becomes less, except for the single males. Table 25 shows the differences in death rates in the District of Columbia between the whites of American mothers, the colored, and those of Irish and German descent, with distinction of conjugal condition and two age groups, to which has been added, for purposes of comparison, the corresponding death rates for Prussia, Belgium, and Bavaria.

TABLE 25.

LOCALITIES AND BIRTHPLACES.	15 TO 45 YEARS OF AGE.				45 YEARS OF AGE AND OVER.			
	Males.		Females.		Males.		Females.	
	Single.	Married.	Single.	Married.	Single.	Married.	Single.	Married.
District of Columbia:								
Whites of American mothers	7.77	6.75	4.94	7.53	22.86	22.06	15.74	14.83
Whites of Irish mothers	19.45	13.61	9.92	19.81	78.84	42.00	33.00	23.32
Whites of German mothers	7.09	12.63	6.64	6.50	78.77	33.48	105.26	19.01
Colored	18.58	16.67	14.59	16.72	60.33	40.75	37.01	28.50
Prussia, 1885	8.11	10.13	5.87	9.62	50.21	32.83	38.82	23.04
Belgium, 1880	8.43	8.62	6.84	9.14	41.29	31.72	35.00	22.39
Bavaria, 1878	8.14	8.58	5.93	10.28	55.04	33.46	45.34	26.75

From this it appears that in general the death rates of white persons whose mothers were of American birth were less than those of persons of Irish or German descent, and less than those in the foreign countries named.

The death rates of Irish adults were greater than those of Germans, except for unmarried females over 45 years of age. Among the married females from 15 to 45 years of age the death rate of those of Irish descent was 19.81; of American descent, 7.53; of German descent, 6.50; and of the colored, 16.72. The death rates of those of Irish descent approximate throughout those of the colored race.

OCCUPATIONS.

The influence of occupation is a special predisposing cause of sickness and death which should be taken into account, when it is possible to do so, in comparing the death rates of different localities. As the population data are not yet compiled by occupations it is not possible to give death rates based upon the number of persons engaged in each specified occupation at this time. This will be covered in greater detail in the census report upon vital statistics in general.

Table 26 shows the number of deaths of those 15 years of age and over, reported as due to certain causes, in 1,000 deaths among males of corresponding age who were engaged in the specified occupations.

TABLE 26.

OCCUPATIONS.	Localities.	Total number of deaths.	NUMBER OF DEATHS PER 1,000 DEATHS FROM ALL CAUSES.								
			Ty-phoid fever.	Consumption.	Cancer.	Heart disease.	Diseases of nervous system.	Diseases of respiratory system.	Bright's disease.	Suicide.	Accidents and injuries, except burns.
All occupations.....	Baltimore.....	10,378	36.13	252.07	30.06	88.07	111.30	113.41	41.43	12.62	70.82
	District of Columbia..	6,850	43.88	250.91	19.68	87.04	133.10	118.53	27.85	10.50	60.80
Clergymen.....	Baltimore.....	72	13.89	138.89	97.23	97.22	152.78	69.44	.....	13.89	41.07
	District of Columbia..	50	.....	120.00	.....	120.00	220.00	120.00	.....	.....	40.00
Lawyers.....	Baltimore.....	67	.....	119.40	20.85	74.63	238.81	134.33	74.63	.....	14.93
	District of Columbia..	152	19.74	125.00	32.89	131.58	164.47	85.53	32.89	6.58	52.03
Physicians and surgeons.....	Baltimore.....	83	24.10	204.82	.....	84.34	180.72	96.39	96.39	12.05	.....
	District of Columbia..	77	25.97	103.90	25.97	38.96	233.77	116.88	64.94	12.99	25.97
Accountants, bookkeepers, clerks, etc.....	Baltimore.....	635	55.12	368.50	14.17	78.74	116.54	94.40	45.67	18.90	29.02
	District of Columbia..	727	46.77	265.47	23.38	90.78	148.56	101.79	33.01	17.88	30.26
Dealers, retail.....	Baltimore.....	782	36.89	163.93	40.18	83.33	176.23	107.92	00.11	12.30	25.96
	District of Columbia..	282	28.37	212.77	39.01	106.38	148.94	78.01	31.91	7.00	28.37
Saloon keepers, bartenders, etc.....	Baltimore.....	244	32.79	213.11	36.89	90.16	102.46	86.07	57.38	32.79	73.77
	District of Columbia..	85	47.06	305.88	35.29	94.12	117.65	105.88	23.53	35.29	23.53
Barbers and hairdressers.....	Baltimore.....	102	29.41	490.20	29.41	68.03	98.04	39.22	19.61	.....	39.22
	District of Columbia..	70	28.57	371.43	.....	100.00	71.43	128.57	28.57	42.86	28.57
Policemen, watchmen, and detectives.....	Baltimore.....	98	40.82	383.67	51.02	122.45	102.04	122.45	30.61	.....	71.43
	District of Columbia..	96	52.08	187.50	10.42	125.00	156.25	135.42	31.25	.....	83.33
Soldiers, sailors, and marines (United States).....	Baltimore.....	9	.....	111.11	.....	222.22	111.11	222.22	222.22	111.11	.....
	District of Columbia..	406	9.85	224.14	27.00	110.84	211.82	130.54	22.17	10.70	34.48
Laborers, not specified.....	Baltimore.....	2,345	36.67	255.01	22.17	91.26	93.82	136.89	36.25	6.40	86.57
	District of Columbia..	1,990	47.74	266.83	8.04	89.95	118.59	127.64	22.11	3.52	70.90
Servants.....	Baltimore.....	363	41.32	380.17	8.26	99.17	93.66	112.95	33.06	2.75	35.81
	District of Columbia..	326	53.21	417.18	30.67	82.82	64.42	153.37	21.47	.....	33.74
Bakers and confectioners.....	Baltimore.....	135	74.07	192.59	37.04	88.89	118.52	66.07	74.07	20.63	44.44
	District of Columbia..	54	92.59	148.15	74.07	92.59	129.63	92.59	18.52	37.04	55.56
Blacksmiths.....	Baltimore.....	134	22.39	171.64	37.31	126.87	134.33	141.79	22.39	7.46	37.31
	District of Columbia..	76	78.95	250.00	13.16	65.79	210.53	195.26	13.16	13.16	52.03
Boot and shoe makers.....	Baltimore.....	370	16.22	245.95	40.54	75.68	145.95	140.54	21.62	13.51	29.73
	District of Columbia..	103	19.42	223.30	9.70	97.09	174.76	126.21	19.42	.....	77.67
Carpenters and joiners.....	Baltimore.....	390	23.08	207.69	58.97	107.69	117.95	100.00	20.51	7.69	64.10
	District of Columbia..	209	66.99	215.31	62.20	43.06	148.33	90.91	38.28	4.78	62.20
Compositors, printers, and pressmen.....	Baltimore.....	114	52.63	429.82	17.54	70.18	96.49	70.18	43.86	8.77	17.54
	District of Columbia..	149	67.11	342.28	13.42	53.69	127.52	100.67	53.69	.....	53.69
Marble and stone cutters.....	Baltimore.....	74	67.57	432.43	.....	40.54	121.62	148.65	13.51	.....	54.05
	District of Columbia..	54	74.07	333.33	18.52	74.07	74.07	106.67	.....	.....	74.07
Masons (brick and stone).....	Baltimore.....	110	54.55	209.09	27.27	72.73	109.09	109.09	72.73	18.18	72.73
	District of Columbia..	80	75.00	225.00	.....	125.00	62.50	162.50	25.00	12.50	137.50
Painters, glaziers, and varnishers.....	Baltimore.....	217	23.04	293.54	41.47	69.12	110.60	96.77	78.34	9.22	82.95
	District of Columbia..	107	37.38	261.68	9.35	65.42	168.22	93.46	46.73	9.35	56.07
Plumbers and gas and steam fitters.....	Baltimore.....	52	19.23	250.00	38.46	10.23	57.69	173.08	38.46	38.46	76.92
	District of Columbia..	32	31.25	468.75	.....	62.50	.....	62.50	.....	.....	62.50
Tailors.....	Baltimore.....	363	27.55	223.14	52.34	79.89	126.72	129.48	35.81	22.04	44.08
	District of Columbia..	56	53.57	160.71	17.86	71.43	250.00	53.57	35.71	17.86	35.71
Draymen, hackmen, teamsters, etc.....	Baltimore.....	345	34.78	281.16	5.80	110.14	86.96	118.84	20.29	5.80	95.05
	District of Columbia..	160	56.25	268.75	12.50	81.25	75.00	175.00	25.00	12.50	100.00
Farmers, planters, and overseers.....	Baltimore.....	170	47.06	141.18	47.06	64.70	76.47	88.24	100.00	.....	52.94
	District of Columbia..	194	41.24	175.26	29.62	92.78	159.79	128.87	20.62	10.31	46.39
Sailors, fishermen, and oystermen.....	Baltimore.....	446	49.33	246.04	17.94	62.78	71.75	89.69	26.91	2.24	213.00
	District of Columbia..	73	27.40	219.18	41.10	109.59	123.29	136.99	27.40	27.40	82.19

Table 27 shows the number of deaths of those 15 years of age and over, reported as due to certain causes, in 1,000 deaths among females of corresponding age who were engaged in the specified occupations.

TABLE 27.

OCCUPATIONS.	Localities.	Total number of deaths.	NUMBER OF DEATHS PER 1,000 DEATHS FROM ALL CAUSES.								
			Typhoid fever.	Consumption.	Cancer.	Heart disease.	Diseases of nervous system.	Diseases of respiratory system.	Bright's disease.	Suicide.	Accidents and injuries, except burns.
All occupations.....	Baltimore.....	3,433	30.59	270.32	52.14	103.41	100.20	92.63	29.42	1.17	20.68
	District of Columbia..	2,559	46.11	280.58	50.02	98.87	101.21	94.96	18.37	2.74	16.02
Teachers in schools.....	Baltimore.....	84	35.71	452.38	23.81	35.71	59.52	71.43	23.81	.....	50.52
	District of Columbia..	43	139.53	395.35	23.26	46.51	116.28	46.51	46.51	.....	46.51
Accountants, bookkeepers, clerks, etc.....	Baltimore.....	32	93.75	531.25	.....	62.50	.....	93.75	.....	.....	31.25
	District of Columbia..	87	91.95	275.86	114.94	34.48	103.45	98.97	34.48	.....	.....
Laundresses.....	Baltimore.....	452	22.12	202.04	53.10	165.93	108.41	92.02	15.49	.....	8.85
	District of Columbia..	208	19.23	216.95	62.50	149.04	125.00	72.12	14.42	4.81	9.62
Nurses and midwives.....	Baltimore.....	117	17.09	188.03	76.92	145.30	153.85	85.47	25.64	.....	68.38
	District of Columbia..	88	34.00	147.73	68.18	125.00	102.27	170.45	11.36	.....	22.74
Servants.....	Baltimore.....	2,198	28.21	242.04	52.78	97.36	105.55	96.00	31.30	1.36	21.38
	District of Columbia..	1,899	44.23	287.52	43.71	97.95	99.00	100.05	15.80	3.16	16.92
Dressmakers and seamstresses.....	Baltimore.....	250	40.00	396.00	52.00	60.00	36.00	76.00	48.00	4.00	12.00
	District of Columbia..	137	36.50	386.86	58.39	94.89	80.29	23.20	29.20	.....	14.60

The differences in rates for the two cities indicated by the above tables are for the most part within the limits of the probable error due to the smallness of the figures under the individual heads. In each city consumption causes one-fourth of all the deaths among males having specified occupations and more than one-fourth among females. The proportion of deaths from this cause in males was, as usual, very high among compositors and printers, and marble and stone cutters, but in Baltimore it was highest among barbers and in the District of Columbia among plumbers and gas and steam fitters. In females it was highest among accountants, school teachers, and dressmakers, and lowest among nurses and midwives. Typhoid fever caused a greater proportion of deaths among mechanics and laboring men than it did among the professional class. Among females it is curious that the proportion of deaths from this cause should have been below the average in laundresses and nurses, as it is in plumbers among males.

CAUSES OF DEATH.

Tables 51 and 52 show for the District of Columbia and Baltimore, by sanitary districts, the number of deaths which occurred during the 6 years ending May 31, 1890, from certain specified causes, and Tables 53 and 54 give the corresponding average annual death rates per 100,000 of population in each district. The relation of certain causes to the death rates in certain districts will be given hereafter in the description of the several districts.

Table 28 gives a comparison of the death rates from certain causes in Baltimore city and Washington for the 6 year period.

TABLE 28.

CAUSES.	AVERAGE ANNUAL DEATH RATES PER 100,000 OF POPULATION.	
	Baltimore city.	Washington.
All causes.....	2,427.38	2,585.19
Scarlet fever.....	13.11	21.86
Typhoid fever.....	40.17	75.55
Malarial fever.....	41.51	44.44
Diphtheria and croup.....	80.13	59.64
Diarrheal diseases.....	266.38	245.13
Consumption.....	317.35	390.45
Pneumonia.....	168.07	168.16
Measles.....	32.17	14.31
Whooping cough.....	21.78	27.73
Cancer and tumor.....	56.84	56.17
Heart disease and dropsy.....	125.63	133.68
Childbirth and puerperal diseases.....	21.95	20.89
Other diseases of the respiratory system.....	97.99	118.12
Diseases of the digestive system.....	112.66	113.41
Diseases of the nervous system.....	291.04	273.75
Diseases of the urinary system.....	69.77	61.95
Stillborn.....	187.14	227.36
Suicide.....	7.55	6.93
Other accidents and injuries.....	80.21	82.84
All other causes.....	395.92	442.80

It will be seen from this table that the death rates from scarlet fever, typhoid fever, malarial fever, consumption, pneumonia and other diseases of the respiratory system, whooping cough, heart disease and dropsy, and diseases of the digestive system were greater in Washington than in Baltimore city during the 6 year period, while the death rates from diphtheria and croup, diarrheal diseases, measles, cancer and tumor, childbirth and puerperal diseases, diseases of the nervous system, and diseases of the urinary organs were greater in Baltimore city than in Washington.

Taking the census year only, the death rates per 1,000 of population from certain causes, with distinction of color and of certain groups of ages, are given for the two cities in Tables 29 and 30.

VITAL STATISTICS.

Table 29 shows for the District of Columbia the number of deaths for certain groups of ages in 100,000 of population of corresponding ages, by causes and classes of causes, during the census year ending May 31, 1890, with distinction of color.

TABLE 29.

DEATHS BY CAUSES AND CLASSES.	Aggre- gate.	WHITE.					COLORED.						
		All ages.	Age periods.					All ages.	Age periods.				
			Under 1 year.	Under 5 years.	5 to 15 years.	15 to 45 years.	45 years and over.		Under 1 year.	Under 5 years.	5 to 15 years.	15 to 45 years.	45 years and over.
Deaths from all causes.....	2,584.73	1,979.38	27,401.52	7,924.81	470.16	928.93	3,388.47	3,821.82	69,612.21	20,519.78	1,159.20	1,709.19	4,760.33
Males.....	1,376.35	1,007.64	15,342.09	4,308.27	242.10	492.82	1,981.82	1,945.92	38,143.67	11,109.52	516.60	788.29	2,413.22
Females.....	1,208.38	881.74	12,059.43	3,616.54	228.06	436.10	1,406.65	1,875.90	31,468.53	9,410.25	642.60	920.90	2,347.11
Measles.....	2.60	1.94	34.55	22.56				3.96	127.15	42.84			
Scarlet fever.....	7.81	7.76	34.55	82.71				7.93		42.84			
Diphtheria and croup.....	83.34	67.88	103.66	421.05	104.91			114.93	445.01	499.79	296.10		
Whooping cough.....	13.02	7.76	207.33	90.23				23.78	572.16	214.19	18.90		
Cerebro-spinal fever.....	9.11	7.76						11.89					
Typhoid fever.....	86.81	74.34			35.00	99.57	59.60	112.29			119.10	149.80	41.32
Diarrheal diseases and cholera infantum.....	256.95	206.21	6,219.77	1,739.84	28.07	22.68	184.77	360.65	11,951.68	3,298.59	12.60	49.11	165.29
Malarial fever.....	42.54	25.21			10.53	23.95	32.78	77.94			50.40	63.85	107.44
Erysipelas and septicaemia.....	9.11	7.76				7.56	11.92	11.89					
Venereal diseases.....	11.72	3.88		37.59				27.74		214.19			
Alcoholism.....	12.59	16.81						3.96					
Premature birth.....	44.27	32.97						67.37					
Stillborn.....	219.63	122.18						418.77					
Inanition, debility, and atrophy.....	203.57	143.51	4,181.06	969.92			265.24	326.30	10,044.50	2,484.65			553.72
Old age.....	16.49	12.28						25.10					
Rheumatism.....	15.63	14.87	103.66					17.17					74.38
Tubercular diseases.....	424.06	296.07	1,554.94	503.76	45.01	311.32	390.40	685.63	2,606.48	1,470.80	308.70	675.33	760.33
Consumption.....	358.95	245.62				293.68	369.54	591.83				658.14	727.27
Serofula and tabes.....	12.59	2.59		15.04				33.03		271.31			
Hydrocephalus.....	14.76	12.28		135.34				19.82		137.08			
Inflammation of brain.....	33.42	31.68		255.64				36.99		299.87			
Diseases of bones and joints.....	4.34	4.53						3.96					
Cancer and tumor.....	49.91	56.89				25.21	199.67	35.67				31.92	115.70
Diabetes.....	3.04	3.88						1.32					
Diseases of the nervous system.....	264.30	248.23	3,040.77	834.66	28.07	81.93	584.12	358.01	7,374.44	2,056.26	37.80	85.95	710.74
Apoplexy and paralysis.....	92.02	91.79					342.72	92.47					402.81
Tetanus.....	2.60	0.04						6.01					
Trismus nascentium and convulsions.....	70.75	30.84		421.05				140.03		1,470.80			
Diseases of the circulatory system.....	132.38	119.59	310.99	75.19	35.09	37.81	402.32	158.53	127.15	28.56	50.40	98.23	578.51
Aneurism.....	5.64	6.40					29.80	3.96				4.91	8.26
Heart disease and dropsy.....	126.74	109.25				37.81	369.54	162.49				98.23	586.78
Diseases of the respiratory system.....	365.03	248.23	2,038.70	932.33	56.14	93.27	506.63	693.72	7,883.03	3,541.34	151.20	221.02	785.12
Bronchitis.....	78.13	41.37		165.41			98.35	153.24		1,413.68			99.17
Pneumonia.....	210.08	140.28		466.17		69.32	274.18	352.72		1,642.15		194.00	416.23
Diseases of the digestive system.....	116.75	104.08	1,002.07	345.86	21.05	55.46	193.71	142.67	2,415.77	871.06	12.60	54.03	106.08
Diseases of the liver.....	24.31	25.21	172.77	37.59			77.48	22.46	190.72	57.12		17.19	49.59
Diseases of the urinary system.....	66.84	66.58				36.55	205.63	67.37				41.75	247.93
Bright's disease.....	26.48	23.27				16.39	65.56	33.03				22.10	132.23
Diseases of the female organs of generation.....	69.93	63.80				64.78	26.13	21.50				33.84	915.50
Affections connected with pregnancy.....	468.74					64.98						393.07	
Abortion.....	410.69					64.78						321.15	
Childbirth and puerperal septicemia.....	441.24					64.64						342.31	
Accidents and injuries.....	94.19	79.51	310.99	120.30	31.58	59.24	151.99	124.18	1,789.04	514.07	44.10	103.14	74.38
Drowned.....	10.42	8.40			7.02	7.50	14.90	14.53			18.90	19.65	
Burns and scalds.....	6.51	4.53		22.56				10.57		42.84			
Gunshot wounds and homicides.....	8.25	5.82						13.21					
Infanticide.....	3.91	0.04	34.55	7.52				10.57	508.58	114.24			
Railroad accidents.....	11.29	10.99						11.89					
Suicides.....	9.11	12.93						1.32				2.46	

a Per 100,000 total females.

b Per 100,000 white females.

c Per 100,000 white females, 15 to 45 years of age.

d Per 100,000 white females, 45 years of age and over.

e Per 100,000 colored females.

f Per 100,000 colored females, 15 to 45 years of age.

g Per 100,000 colored females, 45 years of age and over.

h Per 100,000 total females, 15 to 45 years of age.

DISTRICT OF COLUMBIA AND BALTIMORE.

Table 30 shows for Baltimore the number of deaths for certain groups of ages, in 100,000 of population of corresponding ages, by causes and classes of causes, during the census year ending May 31, 1890, with distinction of color.

TABLE 30.

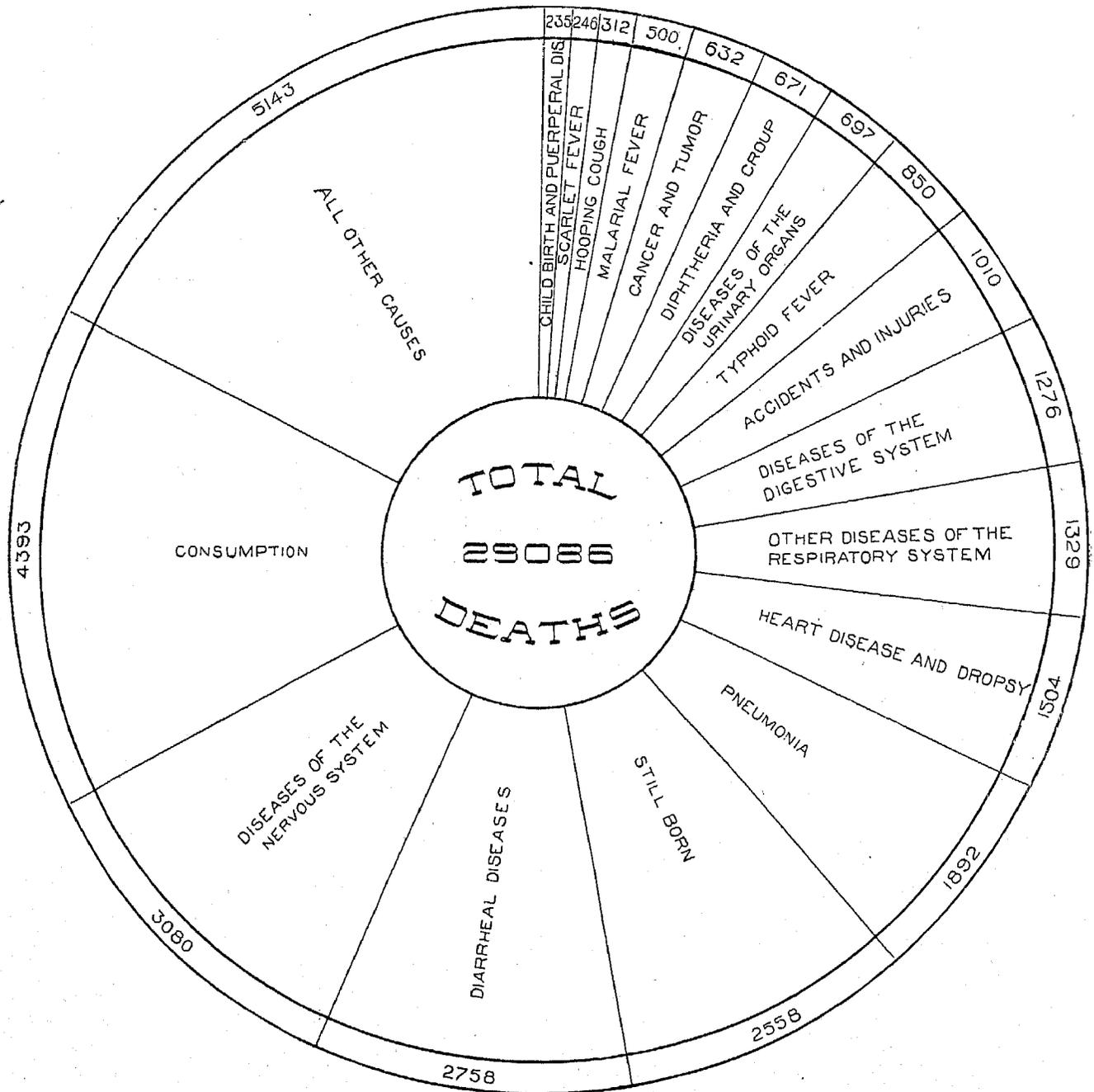
DEATHS BY CAUSES AND CLASSES.	Aggre- gate.	WHITE.					COLORED.						
		All ages.	Age periods.					All ages.	Age periods.				
			Under 1 year.	Under 5 years.	5 to 15 years.	15 to 45 years.	45 years and over.		Under 1 year.	Under 5 years.	5 to 15 years.	15 to 45 years.	45 years and over.
Deaths from all causes...	2,474.92	2,261.24	32,918.04	9,476.18	434.29	898.57	3,749.41	3,640.63	71,304.35	20,822.90	872.30	1,487.51	4,231.50
Males.....	1,263.93	1,161.95	18,395.02	5,175.24	230.55	461.47	1,741.32	1,820.32	39,347.83	11,326.66	379.61	621.33	2,068.31
Females.....	1,210.99	1,099.30	14,523.02	4,300.94	203.74	437.10	2,008.09	1,820.32	31,956.52	9,496.25	492.69	866.18	2,163.19
Measles.....	53.17	55.56	732.87	468.64				40.12	507.25	391.11			
Scarlet fever.....	13.58	14.16	24.43	90.71				10.40	72.46	78.22			
Diphtheria and croup.....	55.93	60.19	171.00	405.65	72.38			32.69	434.78	203.38			
Whooping cough.....	11.97	11.71	280.93	103.30				13.37	144.93	93.87	24.23		
Cerebro-spinal fever.....	4.37	3.27						10.40					
Typhoid fever.....	46.50	42.49		20.11	50.04	39.58		68.35		64.62	81.62	28.46	
Diarrheal diseases and cholera infantum.....	307.06	289.53	7,731.77	2,156.77	33.51	27.62	192.01	402.70	14,565.22	3,895.49	32.31	26.33	75.90
Malarial fever.....	28.08	27.78		16.08	17.87	58.63		29.72		16.15	23.69	75.90	
Erysipelas and septicæmia.....	8.98	8.99				7.04	24.92	8.92					
Veneral diseases.....	6.21	3.54		17.64				20.80		125.16			
Alcoholism.....	10.59	10.35						11.89					
Premature birth.....	49.49	45.76						69.84					
Stillborn.....	185.99	156.61						346.23					
Inanition, debility, and atrophy.....	172.64	150.03	4,800.29	1,053.10		180.29		295.71	11,884.06	2,831.66			151.80
Old age.....	41.66	40.58						47.55					
Rheumatism.....	15.88	13.07					39.58	31.21					85.39
Tubercular diseases.....	373.82	328.21	1,514.63	589.58	48.25	326.06	483.10	622.62	2,173.01	1,361.08	266.54	621.33	597.72
Consumption.....	293.02	259.58				313.07	449.99	524.55				592.37	569.26
Scrofula and tubercles.....	9.21	6.81		40.91				22.29		100.51			
Hydrocephalus.....	21.87	20.43		156.21				20.72		234.67			
Inflammation of brain.....	44.06	44.67		325.03				44.58		344.18			
Diseases of bones and joints.....	5.06	5.72						1.49					
Cancer and tumor.....	61.92	64.55				17.87	290.22	47.55				39.49	161.29
Diabetes.....	3.68	4.36											
Diseases of the nervous system.....	269.54	257.39	3,652.13	1,050.67	29.49	47.66	612.69	335.83	7,028.99	2,018.15	40.38	73.72	607.21
Apoplexy and paralysis.....	95.99	95.33					451.45	99.56					483.87
Tetanus.....	0.92	1.09											
Trismus nascentium and convulsions.....	82.17	69.18		619.82				153.06		1,564.46			
Diseases of the circulatory system.....	116.93	104.32	427.51	100.78	17.43	46.58	357.65	185.75	289.86	93.87	40.38	115.84	664.14
Aneurism.....	1.84	1.91				1.62	5.86	1.49				2.69	
Heart disease and dropsy.....	104.96	89.88				42.79	331.26	187.23				105.31	711.57
Diseases of the respiratory system.....	351.26	305.60	2,748.26	1,274.91	85.79	94.79	552.56	600.33	8,623.16	3,011.14	161.54	184.29	697.21
Bronchitis.....	76.65	59.11		282.19			124.59	172.37		1,361.08			104.36
Pneumonia.....	262.10	174.86		645.01		74.20	323.93	350.99		2,158.95			123.74
Diseases of the digestive system.....	122.92	116.58	1,416.88	453.53	17.43	46.58	218.40	157.51	2,893.55	1,016.90	8.08	68.45	132.83
Diseases of the liver.....	20.72	22.06	122.14	27.72		11.92	70.36	13.37				15.80	28.46
Diseases of the urinary system.....	77.34	73.81				47.66	240.38	96.59				57.92	341.56
Bright's disease.....	46.96	43.85				33.04	142.18	68.90				36.86	246.68
Diseases of the female organs of generation.....	116.64	114.20				22.76	110.98	228.85				736.01	750.31
Affections connected with pregnancy.....	165.61					64.13						767.52	
Abortion.....	112.62					12.41						713.50	
Childbirth and puerperal septicæmia.....	52.99					51.72						73.01	
Accidents and injuries.....	92.76	87.70	305.36	123.46	50.94	76.37	137.78	120.36	1,449.28	422.40	80.77	76.35	142.31
Drowned.....	17.26	16.89			20.11	18.42	17.59	19.82			24.23	21.06	18.98
Burns and scalds.....	6.45	6.26		35.27				7.43		31.29			
Gunshot wounds and homicides.....	5.98	5.72						7.43					
Infanticide.....													
Railroad accidents.....	6.45	7.63											
Suicides.....	6.21	7.35				8.12	17.59						

a Per 100,000 total females. d Per 100,000 white females, 45 years of age and over. g Per 100,000 colored females, 45 years of age and over.
 b Per 100,000 white females. e Per 100,000 colored females. h Per 100,000 total females, 15 to 45 years of age.
 c Per 100,000 white females, 15 to 45 years of age. f Per 100,000 colored females, 15 to 45 years of age.

VITAL STATISTICS.

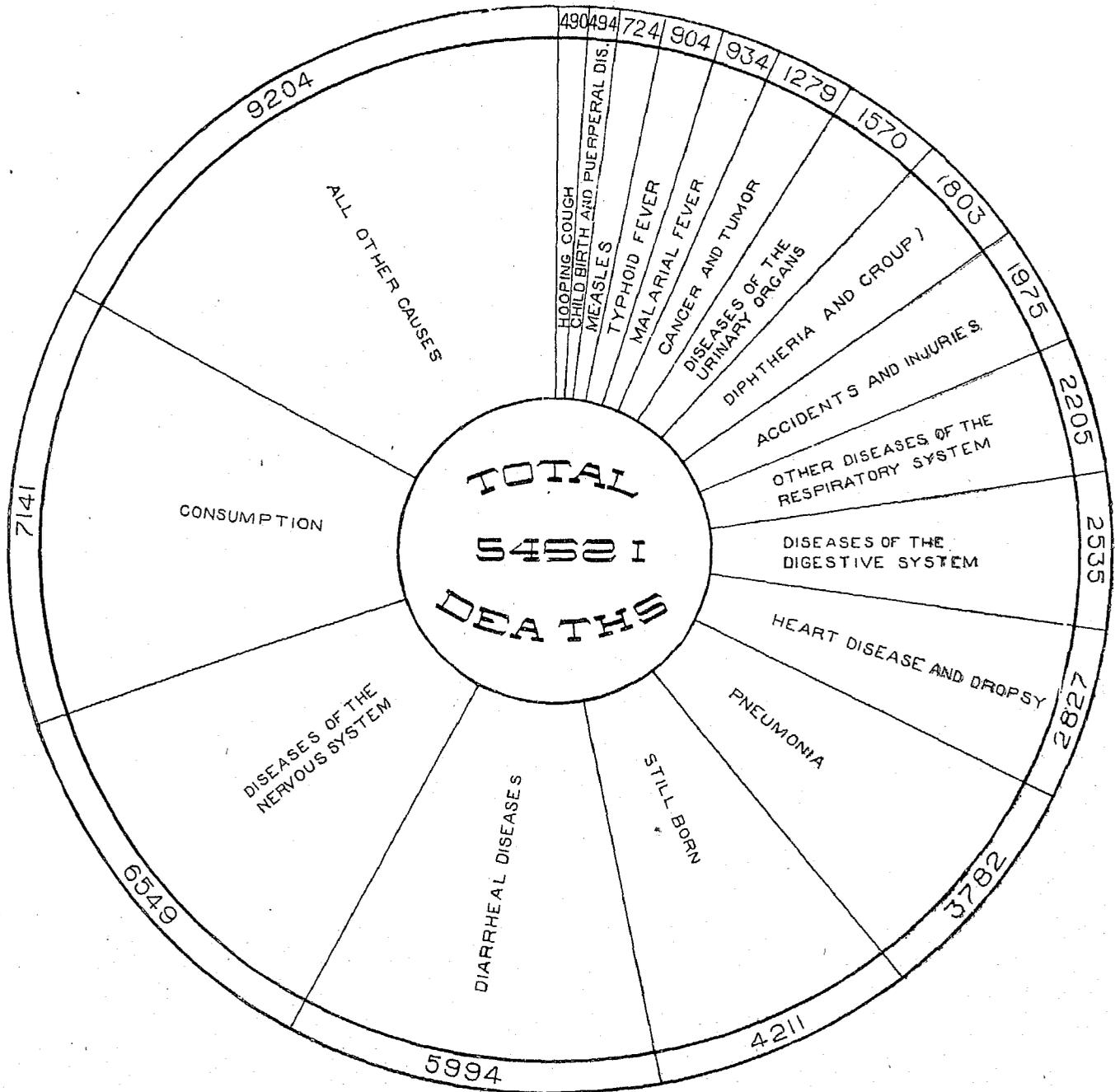
The comparative number and proportion of deaths in the two cities during the 6 years are graphically represented in the following diagrams.

DIAGRAM SHOWING THE NUMBER AND PROPORTION OF DEATHS FROM DIFFERENT CAUSES IN WASHINGTON DURING THE 6 YEARS ENDING MAY 31, 1890.



DISTRICT OF COLUMBIA AND BALTIMORE.

DIAGRAM SHOWING THE NUMBER AND PROPORTION OF DEATHS FROM DIFFERENT CAUSES IN BALTIMORE CITY DURING THE 6 YEARS ENDING MAY 31, 1890.



Let us now consider briefly a few of the more important causes of death as shown by the figures in the tables just referred to.

CONSUMPTION.

During the 6 year period consumption caused 7,141 deaths in Baltimore city, or 317.35 deaths annually per 100,000 of population. During the census year it caused 1,168 deaths, or 295.66 per 100,000, the rate being below the average. In Washington the death rates from this cause were greater; 4,393 deaths from it occurred during the 6 years, or 390.45 per 100,000 of population, and 738 deaths during the census year, or 363.59 per 100,000, being also below the average for the 6 years.

VITAL STATISTICS.

Table 31 shows the death rates from consumption during the census year for two groups of ages per 100,000 of population of those ages, with distinction of color.

TABLE 31.

LOCALITIES.	DEATH RATES.			
	White.		Colored.	
	15 to 45 years.	45 years and over.	15 to 45 years.	45 years and over.
Baltimore.....	313.07	449.99	592.37	589.26
District of Columbia.....	293.68	369.54	658.14	727.27

It is evident from this that the excessive death rate from consumption in the District of Columbia is entirely among the colored, and that the rate for the whites is less in the District of Columbia than it is in Baltimore.

Table 32 shows the number of deaths from consumption during the census year per 100,000 of population in Baltimore and in the District of Columbia, with distinction of color, nativity, and parentage.

TABLE 32.

COLOR, NATIVITY, AND PARENTAL NATIVITY.	DEATH RATES.	
	Baltimore.	District of Columbia.
White.....	250.58	245.00
Native born.....	227.08	226.91
Both parents native.....		191.76
One or both parents foreign.....		346.39
Foreign born.....	352.89	378.03
Colored.....	524.55	591.83
Birthplace.....	(of person)	(of mother)
United States (white).....	227.08	179.15
Ireland.....	522.82	489.62
Germany.....	329.17	268.69

Tables 8 and 9 give the death rates from consumption in each sanitary district according to average altitude, from which it appears that the rates become less as the altitude of the district increases.

Tables 26 and 27 show the different proportions of deaths due to consumption out of the total number of deaths in persons of certain occupations, and Tables 51 to 54 show the number of deaths due to consumption during the 6 years and the average annual death rates per 100,000 of population in each sanitary district in Baltimore and in the District of Columbia.

The highest and the lowest rates due to this cause occurred in Baltimore city, the first mentioned being 877.19 in sanitary district B of ward 9 and the last mentioned being 98.91 in sanitary district C of ward 2.

In Washington the rates from this cause varied from 226.70 in sanitary district No. 10 to 543.38 in sanitary district No. 5.

PNEUMONIA.

During the 6 year period pneumonia caused 3,782 deaths in Baltimore city, or 168.07 deaths annually per 100,000 of population. During the census year it caused 831 deaths, or 210.35 per 100,000, the rate being above the average for the 6 years.

In Washington the death rates from this cause were greater, the number of deaths during the 6 years being 1,892, or 168.16 per 100,000 of population. For the census year the number was 436 and the death rate was 214.80 per 100,000, being also above the average for the 6 years.

Table 33 shows the death rates from pneumonia during the census year for four groups of ages per 100,000 of population of those ages, with distinction of color.

TABLE 33.

LOCALITIES.	DEATH RATES.							
	White.				Colored.			
	Under 5 years.	5 to 15 years.	15 to 45 years.	45 years and over.	Under 5 years.	5 to 15 years.	15 to 45 years.	45 years and over.
Baltimore.....	645.01	37.52	74.20	323.93	2,158.95	105.01	123.74	360.53
District of Columbia.....	466.17	23.08	69.32	274.18	1,642.15	119.72	194.00	446.28

It is evident from this that the greater death rate from pneumonia in the District of Columbia was entirely among the colored, and that the rate for the white was less in the District than it was in Baltimore.

Table 34 shows the number of deaths from pneumonia per 100,000 of population in Baltimore and in the District of Columbia during the census year, with distinction of color, nativity, and parentage.

TABLE 34.

COLOR, NATIVITY, AND PARENTAL NATIVITY.	DEATH RATES PER 100,000 OF POPULATION.	
	Baltimore.	District of Columbia.
White	174.86	140.28
Native born	166.80	122.63
Both parents native		124.87
One or both parents foreign		114.31
Foreign born	209.99	270.02
Colored	350.69	352.72
Birthplace	(of person)	(of mother)
United States (white)	166.80	111.51
Ireland	283.82	247.76
Germany	228.45	107.48

Tables 51 to 54 show the number of deaths due to pneumonia during the 6 years and the average annual death rate per 100,000 of population in each sanitary district in Baltimore and the District of Columbia.

TYPHOID FEVER.

During the 6 year period typhoid fever caused 904 deaths in Baltimore city, or 40.17 deaths annually per 100,000 of population. During the census year it caused 161 deaths, or 40.75 per 100,000 of population, the rate being a little above the average.

In Washington the death rates from this cause were much greater; 850 deaths due to it occurred during the 6 year period, or 75.55 per 100,000 of population, and 175 deaths during the census year, or 86.22 per 100,000 of population. The census year rate was considerably higher than the average annual rate for the 6 years.

Table 35 shows the death rates from typhoid fever during the census year for three groups of ages per 100,000 of population of those ages, with distinction of color.

TABLE 35.

LOCALITIES.	DEATH RATES.					
	White.			Colored.		
	5 to 15 years.	15 to 45 years.	45 years and over.	5 to 15 years.	15 to 45 years.	45 years and over.
Baltimore.....	20.11	59.04	39.58	64.62	81.62	28.40
District of Columbia	35.09	99.57	59.60	119.10	149.80	41.82

The death rate from typhoid fever was therefore greater among the colored, and especially so for the group 5 to 15 years of age.

Table 36 shows the death rates from typhoid fever per 100,000 population in Baltimore and in the District of Columbia, with distinction of color, nativity, and parentage.

TABLE 36.

COLOR, NATIVITY, AND PARENTAL NATIVITY.	DEATH RATES.	
	Baltimore.	District of Columbia.
White	42.49	74.34
Native born	41.87	69.76
Both parents native		71.76
One or both parents foreign		62.35
Foreign born	45.21	108.01
Colored	68.35	112.29
Birthplace	(of person)	(of mother)
United States (white)	41.87	62.15
Ireland	52.28	108.18
Germany	51.59	46.06

Tables 51 to 54 show the number of deaths due to typhoid fever during the 6 years and the average annual death rates per 100,000 of population in each sanitary district in Baltimore and in the District of Columbia.

The death rates from this cause in Baltimore city varied from nothing in several sanitary districts to 116.28 in sanitary district B of ward 13.

In Washington the lowest rate was 23.49 in district No. 3 and the highest was 111.11 in district No. 7.

MALARIAL FEVER.

It is quite possible that some of the deaths attributed to malarial fever were in reality due to typhoid fever, but we must accept them as reported. During the 6 year period malarial fever caused 934 deaths in Baltimore city, or 41.51 deaths annually per 100,000 of population. During the census year it caused 118 deaths, or 29.87 per 100,000 of population, the rate being decidedly below the average. In Washington the death rates from this cause were greater; 500 deaths due to it occurred during the 6 year period, or 44.44 per 100,000 of population, and 83 deaths during the census year, or 40.89 per 100,000 of population, being also below the average for the 6 years.

Table 37 shows the death rates from malarial fever during the census year for three groups of ages per 100,000 of population of those ages, with distinction of color.

TABLE 37.

LOCALITIES.	DEATH RATES.					
	White.			Colored.		
	Under 15 years.	15 to 45 years.	45 years and over.	Under 15 years.	15 to 45 years.	45 years and over.
Baltimore.....	25.37	17.87	58.63	15.98	23.69	75.90
District of Columbia.....	21.53	23.05	32.78	87.43	63.85	107.44

Table 38 shows the number of deaths from malarial fever during the census year per 100,000 of population in Baltimore and in the District of Columbia, with distinction of color, nativity, and parentage.

TABLE 38.

COLOR, NATIVITY, AND PARENTAL NATIVITY.	DEATH RATES.	
	Baltimore.	District of Columbia.
White.....	27.78	25.21
Native born.....	22.11	26.44
Both parents native.....		25.16
One or both parents foreign.....		31.18
Foreign born.....	52.50	16.20
Colored.....	29.72	77.94
Birthplace.....	(of person)	(of mother)
United States (white).....	22.11	24.68
Ireland.....	52.28	29.50
Germany.....	68.78	7.68

Tables 8 and 9 give the death rates from malarial fever in each sanitary district according to average altitude, from which it appears that the rates become less as the altitude increases.

Tables 26 and 27 show the different proportions of deaths due to malarial fever out of the total number of deaths in persons of certain occupations.

Tables 51 to 54 show the number of deaths due to malarial fever during the 6 years and the average annual death rates per 100,000 of population in each sanitary district in Baltimore and in the District of Columbia.

There were no deaths from this cause in several sanitary districts in Baltimore city. For the districts in which deaths occurred, the lowest rate was in sanitary district C of ward 11 and the highest in sanitary district B of ward 2, a small district.

In Washington the rate varied from 5.87 in district No. 3 to 256.41 in district No. 7.

DIPHTHERIA AND CROUP.

During the 6 year period diphtheria and croup caused 1,803 deaths in Baltimore city, or 80.13 deaths annually per 100,000 of population. During the census year they caused 222 deaths, or 56.20 per 100,000, the rate being below the average.

In Washington 671 deaths from these causes occurred during the 6 years, or 59.64 per 100,000 of population, and 170 deaths during the census year, or 83.75 per 100,000, being above the average for the 6 years.

Table 39 shows the death rates from diphtheria and croup during the census year for four groups of ages per 100,000 of population of those ages, with distinction of color.

TABLE 39.

LOCALITIES.	DEATH RATES.							
	White.				Colored.			
	Under 1 year.	Under 5 years.	5 to 15 years.	15 to 45 years.	Under 1 year.	Under 5 years.	5 to 15 years.	15 to 45 years.
Baltimore.....	171.00	405.05	72.38	3.25	434.78	203.38	32.31	7.90
District of Columbia.....	103.66	421.05	164.91	2.52	445.01	499.79	296.10	12.28

In both places the death rate from these causes was much higher among the colored infants than among the white infants. The higher death rate in the District of Columbia occurred mainly among the children of the group 5 to 15 years of age for both white and colored.

Table 40 shows the number of deaths from diphtheria and croup per 100,000 of population in Baltimore and in the District of Columbia during the census year, with distinction of color, nativity, and parentage.

TABLE 40.

COLOR, NATIVITY, AND PARENTAL NATIVITY.	DEATH RATES.	
	Baltimore.	District of Columbia.
White	60.19	67.88
Native born.....	72.35	77.10
Both parents native.....		78.28
One or both parents foreign.....		72.74
Foreign born	7.20	
Colored	32.69	114.93
Birthplace	(of person)	(of mother)
United States (white).....	72.35	81.35
Ireland		41.29
Germany	4.91	46.06

The low death rate among the foreign born in Baltimore is due to the fact that there were very few foreign born children there.

Tables 51 to 54 show the number of deaths due to diphtheria and croup during the 6 years and the average annual death rates per 100,000 of population in each sanitary district in Baltimore and in the District of Columbia.

The highest rate from this cause in Baltimore city was 385.86 in sanitary district D of ward 13. There were no deaths from this cause in some districts.

In Washington the highest rate was 168.63 in sanitary district No. 5 and the lowest was 17.09 in sanitary district No. 7.

VITAL STATISTICS.

DIARRHEAL DISEASES.

During the 6 year period diarrheal diseases caused 5,994 deaths in Baltimore city, or 266.38 deaths annually per 100,000 of population. During the census year they caused 1,234 deaths, or 312.37 per 100,000 of population, the rate being above the average. In Washington the corresponding rates were less, being 215.13 for the 6 year period and 250.27 for the census year per 100,000 of population.

Table 41 shows the death rates from diarrheal diseases during the census year for three groups of ages per 100,000 of population of those ages, with distinction of color.

TABLE 41.

LOCALITIES.	DEATH RATES.					
	White.			Colored.		
	Under 1 year.	Under 5 years.	45 years and over.	Under 1 year.	Under 5 years.	45 years and over.
Baltimore	7,731.77	2,156.77	192.01	14,565.32	3,895.40	75.00
District of Columbia	6,219.77	1,730.84	184.77	11,051.68	3,298.59	163.50

The death rate from diarrheal diseases was therefore greater among the colored than among the whites, especially in infancy, and in Baltimore.

Table 42 shows the death rates from diarrheal diseases per 100,000 of population in Baltimore and in the District of Columbia during the census year, with distinction of color, nativity, and parentage.

TABLE 42.

COLOR, NATIVITY, AND PARENTAL NATIVITY.	DEATH RATES.	
	Baltimore.	District of Columbia.
White	280.53	206.21
Native born.....	322.88	210.03
Both parents native.....		227.98
One or both parents foreign		170.00
Foreign born	144.37	120.01
Colored	402.79	306.05
Birthplace.....	(of person)	(of mother)
United States (white)	322.88	206.57
Ireland	170.25	141.58
Germany	157.21	115.15

Tables 51 to 54 show the number of deaths due to diarrheal diseases during the 6 years and the average annual death rates per 100,000 of population in each sanitary district in Baltimore and in the District of Columbia.

The highest and also the lowest rates from this cause occurred in Baltimore city, the highest being 904.82 in sanitary district B of ward 2 and the lowest 83.89 in sanitary district C of ward 13.

In Washington the lowest rate was 120.11 in sanitary district No. 17 and the highest 427.35 in sanitary district No. 7.

DISEASES OF THE NERVOUS SYSTEM.

During the 6 year period diseases of the nervous system caused 6,549 deaths in Baltimore city, or 291.04 deaths annually per 100,000 of population. During the census year they caused 1,069 deaths, or 270.60 per 100,000, the rate being below the average for the 6 years.

In Washington the death rates from these causes were less, the number of deaths during the 6 years being 3,080, or 273.75 per 100,000 of population. For the census year the number was 532 and the death rate was 262.10 per 100,000, being also below the average for the 6 years.

Table 43 shows the death rates from diseases of the nervous system during the census year for four groups of ages per 100,000 of population of those ages, with distinction of color.

TABLE 43.

LOCALITIES.	DEATH RATES.							
	White.				Colored.			
	Under 5 years.	5 to 15 years.	15 to 45 years.	45 years and over.	Under 5 years.	5 to 15 years.	15 to 45 years.	45 years and over.
Baltimore	1,050.67	29.49	47.66	612.09	2,018.15	40.38	73.72	607.21
District of Columbia	894.66	28.07	81.93	584.12	2,056.26	37.80	85.95	710.74

The high death rates from this group of causes among the infants, and especially colored infants, are due to meningitis, much of which is probably tubercular, and to various ill defined causes, reported under the head of "Convulsions."

Table 44 shows the number of deaths from diseases of the nervous system per 100,000 of population in Baltimore and in the District of Columbia during the census year, with distinction of color, nativity, and parentage.

TABLE 44.

COLOR, NATIVITY, AND PARENTAL NATIVITY.	DEATH RATES PER 100,000 OF POPULATION.	
	Baltimore.	District of Columbia.
White	257.39	248.23
Native born	256.56	220.30
Both parents native		193.83
One or both parents foreign		318.08
Foreign born	261.02	453.64
Colored	335.83	358.01
Birthplace	(of person)	(of mother)
United States (white)	256.56	159.95
Ireland	380.91	294.95
Germany	270.21	353.14

Tables 51 to 54 show the number of deaths due to diseases of the nervous system during the 6 years and the average annual death rate per 100,000 of population in each sanitary district in Baltimore and the District of Columbia.

HEART DISEASE AND DROPSY.

During the 6 year period heart disease and dropsy caused 2,827 deaths in Baltimore city, or 125.63 deaths annually per 100,000 of population. During the census year they caused 430 deaths, or 108.85 per 100,000, the rate being below the average for the 6 years.

In Washington the death rates from these causes were greater, the number of deaths during the 6 years being 1,504, or 133.68 per 100,000 of population. For the census year the number was 260 and the death rate was 128.09 per 100,000, being also below the average for the 6 years.

VITAL STATISTICS.

Table 45 shows the death rates from heart disease and dropsy during the census year for two groups of ages per 100,000 of population of those ages, with distinction of color.

TABLE 45.

LOCALITIES.	DEATH RATES.			
	White.		Colored.	
	15 to 45 years.	45 years and over.	15 to 45 years.	45 years and over.
Baltimore.....	42.79	331.26	105.31	711.57
District of Columbia	37.81	369.54	98.23	586.78

It is evident from this that the greater death rate from these causes in the District of Columbia was entirely among the whites of 45 years of age and upward, and that the rates for both white and colored under 45 years of age were less in the District of Columbia than they were in Baltimore.

Table 46 shows the number of deaths from heart disease and dropsy per 100,000 of population in Baltimore and in the District of Columbia during the census year, with distinction of color, nativity, and parentage.

TABLE 46.

COLOR, NATIVITY, AND PARENTAL NATIVITY.	DEATH RATES PER 100,000 OF POPULATION.	
	Baltimore.	District of Columbia.
White	89.88	109.25
Native born.....	64.64	96.20
Both parents native.....		88.53
One or both parents foreign.....		124.70
Foreign born.....	199.78	205.22
Colored	187.23	162.49
Birthplace	(of person)	(of mother)
United States (white).....	64.64	79.52
Ireland	261.41	171.07
Germany.....	201.43	161.22

Tables 51 to 54 show the number of deaths due to heart disease and dropsy during the 6 year period and the average annual death rates per 100,000 of population in each sanitary district in Baltimore and the District of Columbia.

CANCER AND TUMOR.

During the 6 year period cancer and tumor caused 1,279 deaths in Baltimore city, or 56.84 deaths annually per 100,000 of population. During the census year they caused 258 deaths, or 65.31 per 100,000, the rate being above the average for the 6 years.

In Washington the death rates from these causes were less both in the census year and in the average for the 6 years, the number of deaths during the 6 years being 632, or 56.17 per 100,000 of population. For the census year the number was 103 and the death rate was 50.74 per 100,000.

Table 47 shows the death rates from cancer and tumor during the census year for two groups of ages per 100,000 of population of those ages, with distinction of color.

TABLE 47.

LOCALITIES.	DEATH RATES.			
	White.		Colored.	
	15 to 45 years.	45 years and over.	15 to 45 years.	45 years and over.
Baltimore.....	17.87	290.22	39.49	161.29
District of Columbia	25.21	199.67	31.92	115.70

It is evident from this that the greater death rate from cancer and tumor in Baltimore was among the white 45 years of age and over and the colored, the rate among the white under 45 years of age being less in Baltimore than it was in the District of Columbia.

Table 48 shows the number of deaths from cancer and tumor per 100,000 of population in Baltimore and in the District of Columbia during the census year, with distinction of color, nativity, and parentage.

TABLE 48.

COLOR, NATIVITY, AND PARENTAL NATIVITY.	DEATH RATES PER 100,000 OF POPULATION.	
	Baltimore.	District of Columbia.
White.....	64.55	56.89
Native born.....	45.55	43.33
Both parents native.....		45.66
One or both parents foreign.....		34.64
Foreign born.....	147.28	156.01
Colored.....	47.55	35.67
Birthplace.....	(of person)	(of mother)
United States (white).....	45.55	43.87
Ireland.....	171.78	82.59
Germany.....	164.58	92.12

As usual, the death rates from this cause are greater among the white than among the colored, but from Table 47 it would seem that this is only true for ages of 45 years and upward.

Tables 51 to 54 show the number of deaths due to cancer and tumor during the 6 years and the average annual death rate per 100,000 of population in each sanitary district in Baltimore and in the District of Columbia.

STILLBORN.

During the 6 year period there were 4,211 stillbirths in Baltimore city, or 187.14 per 100,000 of population annually. During the census year there were 767, or 194.15 per 100,000, the rate being higher than the average for the 6 years.

In Washington the rates from this cause were greater, there having been 2,558 stillbirths during the 6 years, or 227.36 per 100,000 of population, and 455 during the census year, or 224.16 per 100,000, being less than the average for the 6 years.

Table 49 shows the number of stillbirths during the census year per 100,000 of population at all ages and under 1 year of age, with distinction of color.

TABLE 49.

LOCALITIES.	DEATH RATES.			
	White.		Colored.	
	All ages.	Under 1 year.	All ages.	Under 1 year.
Baltimore.....	156.61	7,024.19	346.23	16,908.56
District of Columbia.....	122.18	6,528.50	418.77	20,152.57

It is evident from this that the greater rate from stillborn in the District of Columbia was entirely among the colored and that the rate for the white was less in the District than it was in Baltimore.

VITAL STATISTICS.

Table 50 shows the number of stillbirths per 100,000 of population in Baltimore and in the District of Columbia during the census year, with distinction of color, nativity, and parentage.

TABLE 50.

COLOR, NATIVITY, AND PARENTAL NATIVITY.	DEATH RATES PER 100,000 OF POPULATION.	
	Baltimore.	District of Columbia.
White	156.61	122.18
Native born	192.59	138.79
Both parents native		136.99
One or both parents foreign		145.48
Foreign born		
Colored	346.23	418.77
Birthplace	(of person)	(of mother)
United States (white)	192.59	139.84
Ireland		64.89
Germany		92.12

Tables 51 to 54 show the number of stillbirths during the 6 years and the average annual rate per 100,000 of population in each sanitary district in Baltimore and in the District of Columbia.

Bearing in mind the relations of race and age to mortality above referred to, let us now consider some of the characteristics of different parts of the two cities in connection with their special death rates. For the purposes of this report the District of Columbia has been divided into 29 districts designated by consecutive numbers. Of these numbers 1 to 5, inclusive, are in the built up portion or municipal area of West Washington or Georgetown; numbers 6 to 27, inclusive, are in the municipal area of Washington proper, and numbers 28 and 29 include the rural portion of the District. This division, as well as that of Baltimore, has been made as the result of a preliminary survey made by Mr. Harry Tiffany, who has furnished the descriptions of the topography of each district.

It is to be distinctly understood that in these descriptions the remarks about character of buildings and of inhabitants of the several districts apply to the period for which the death rates were calculated and not to the present time. The statements are purely historical and are intended to furnish the means of estimating the relations of altitude, character of people, and nature of habitations to the death rates which occurred during the 6 years ending May 31, 1890; and while no doubt many of the conditions referred to still exist, yet a number of changes have occurred, and the statements are not intended to be applicable to the present time. How far they may be thus applicable in the case of any particular district at the present time is not shown by this report.