NINTH CENSUS—VOLUME II.

THE

VITAL STATISTICS OF THE UNITED STATES,

EMBRACING

THE TABLES OF DEATHS, BIRTHS, SEX, AND AGE,

TO WHICH ARE ADDED

THE STATISTICS

OF

THE BLIND, THE DEAF AND DUMB, THE INSANE,
AND THE IDIOTIC.

COMPILED,

FROM THE ORIGINAL RETURNS OF THE NINTH CENSUS,

(JUNE 1, 1870,)

UNDER

THE DIRECTION OF THE SECRETARY OF THE INTERIOR,

BY

FRANCIS A. WALKER,
SUPERINTENDENT OF CENSUS.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1872.

MAPS AND CHARTS CONTAINED IN THIS VOLUME.

REMARKS UPON THE MAPS AND CHARTS.

The four maps of this volume, which present the range, and, within the range, the degree of prevalence, of certain specific diseases, or groups of diseases, viz: 1. Consumption; 2. Malarial diseases; 3. Typhus, typhoid, and enteric fevers; 4. Diarrhœa, dysentery, and enteritis, have been prepared at the Census Office.

In respect to the three charts intended to illustrate certain of the physical characteristics of the United States, the Census Office has been the recipient of favors from individuals and institutions whose names and titles the Superintendent feels it a high honor to be allowed to associate with his work.

To that eminent and venerable scholar, Professor Joseph Henry, secretary of the Smithsonian Institution, acknowledgment is due for the two charts in the present volume, which show severally the annual distribution of rain and the courses of the lines of equal temperature. These charts are based upon the records of the Smithsonian Institution, extending over a period of more than twenty years, and comprise the results of all the observations made, under the direction of that institution, throughout the United States.

Professor A. Guyot, of Princeton College, through his publishers, Messrs. Scribner, Welford & Co., of New York, kindly placed at the disposal of the Census Office the plates of his valuable physical map of the country, to which Professor Charles A. Schott, of the Coast Survey Office, with the permission of Professor Benjamin Peirce, the Superintendent of the United States Coast Survey, has added by far the most complete and accurate series of elevations yet attained.

VITAL STATISTICS.

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CORRESPONDENCE.

DEPARTMENT OF THE INTERIOR, CENSUS OFFICE,
Washington, D. C., October 27, 1870.

GENERAL: I have the honor to inquire whether it will be convenient and agreeable to your office to direct the compilation of the Statistics of Mortality for the Ninth Census of the United States, in so far as to prescribe the classification of diseases to be adopted, and the amount of detail to be retained. A large clerical force is at present engaged in this office on tabulating the returns of assistant marshals; and it is expected that the Statistics of Mortality for the whole country will be completed, so far as merely clerical labor is concerned, within the next six weeks.

Before publication can take place, however, it becomes necessary to determine what classification of diseases shall be adopted; what divisions of the country shall be separately reported, parts of States, entire States, or groups of States; whether the publication shall present the record of deaths by months or by quarters, &c.

It would be far more agreeable to my view of the interests of medical and sanitary science to have the determination of such questions left to your office than to call in at this office the services of an expert, whose treatment of the subject might be influenced by favorite theories, or who might be disposed unduly to magnify his office, and enlarge the bulk of the publication beyond the real demands of science.

Should you kindly consent to take charge of this work, it will be my endeavor to submit the matter in such form as will involve no clerical labor at your office.

Awaiting the favor of your reply, I have the honor to remain, very respectfully, your obedient servant,

FRANCIS A. WALKER, *Superintendent.*

Major General JOSEPH K. BARNES,
Surgeon General, United States Army.

WAR DEPARTMENT, SURGEON GENERAL'S OFFICE,
Washington, D. C., February 29, 1872.

DEAR SIR: I have the honor to transmit a report from Assistant Surgeon J. J. Woodward, United States Army, on duty in this office, who was directed to comply, as far as practicable, with the request contained in your letter addressed to me on the 27th of October, 1870, and which, in my opinion, meets the objects desired in the most satisfactory manner.

I am, sir, very respectfully, your obedient servant,

J. K. BARNES, *Surgeon General.*

General F. A. WALKER,
Superintendent of the Census, Washington, D. C.

SURGEON GENERAL'S OFFICE,
Washington, D. C., February 28, 1872.

GENERAL: I have the honor to report that, in compliance with the instructions of your indorsement of October 31, 1870, on the letter of the Superintendent of Census, dated October 27, 1870, Dr. Billings and I have had frequent conferences with General Walker, in which various points, involved in the determination of the most useful

mode of publishing the facts embraced in the mortality returns of the census of 1870, were discussed, and various recommendations made and adopted.

It now becomes my duty to state briefly the chief matters discussed and the conclusions arrived at.

General Walker, in his letter, asked advice—

1. As to the classification of diseases which should be adopted; 2. As to what divisions of the country should be separately reported, whether parts of States, entire States, or groups of States; 3. Whether the publication should present the record of deaths by months or by quarters.

1. With regard to the classification of diseases, it was recommended, with your approval, that the tabular form adopted should conform in all essential particulars with the nomenclature and classification published by the Royal College of Physicians of London, in 1869.

It was, of course, fully considered that no classification, based essentially upon pathological views, or upon professional ideas, would be likely to prove acceptable to the majority of medical men; for, in the present condition of medical science, insurmountable differences of opinion still exist as to many unsettled points which must necessarily be involved in the construction of any classification based upon a consideration of the actual nature of disease.

Under these circumstances it would probably have seemed best to have avoided all classifications, and to have arranged the several diseases and injuries alphabetically on the tabular forms, but for the facility of comparing the mortality tables of the present census with other valuable civil and military mortuary statistics, which could be secured only by adapting the London classification; for this classification is now in use by the registrar general of England, who employs it in his invaluable annual reports, which, being based upon the actual registration of each death at the time of its occurence, furnish by far the largest and most valuable mass of mortuary statistics in existence. It has also been adopted in the able and trustworthy annual reports of the medical department of the British army. Moreover, it agrees so nearly in its general outlines with the well-known classification of Dr. Farr, so long employed by statisticians both in England and in this country, as to render it very easy to compare statistical tables, prepared in accordance with either plan, with those prepared in accordance with the other.

If it could be shown that the classification of the English college was based essentially upon false and injurious pathological notions, which would be countenanced to some extent by its adoption, the objection would have very great weight, in spite of the very great convenience resulting from the adoption of a plan so favorable to the comparison of results obtained under so many different conditions of time and place; but, in point of fact, the new classification of the college is, to a great extent, an arbitrary one; motives of convenience rather than pathological dogmas guided its construction. It can, therefore, consistently be used for convenience sake by all, and without serious offense to the individual opinions of any.

The same advantages belonged to the classification of Dr. Farr to a greater extent than has been generally acknowledged. But such designation as *Zymotici*, *Miasmatici*, *Dictici*, *Diathetici*, prefixed to some of his classes and orders, were found to give offense in many quarters, and undoubtedly stood in the way of the general adoption of his plan. Stripped of these objectionable titles, with some consolidations and some minor changes, however, the plan of Dr. Farr has ripened into the present classification of the college.

The general considerations underlying this classification are briefly as follows:

So far as possible, diseases are grouped in accordance with the organs or set of organs deranged; that is, those diseases which are clearly connected with morbid changes of each particular part of the body, as of the liver, the intestines, the kidneys, the ovaries, the brain, &c., are grouped together, and these affections are again collected into larger groups, such as diseases of the digestive organs, of the urinary organs, of the genital organs, of the nervous system, &c. After all those diseases which can properly be referred to local lesions are grouped, a considerable number of "general diseases," that is, of affections which appear to involve a great number of diverse organs, or the "whole frame, rather than any special part of it," remain to be considered.

These general diseases are grouped by the college in two sections, A and B. The first are chiefly acute, the second chiefly chronic disorders. In the language of the preface to the nomenclature of the college—

"Section A comprehends those disorders which appear to involve a morbid condition of the blood, and which present, for the most part, but not all of them, the following characters: They run a definite course, are attended by fever, and frequently by eruptions on the skin, are, more or less, readily communicable from person to person, and possess the singular and important property of generally protecting those who suffer them from a second attack. They are apt to occur epidemically.

"Section B comprises, for the most part, disorders which are apt to invade different parts of the same body, simultaneously or in succession. These are sometimes spoken of as constitutional diseases, and they often manifest a tendency to transmission by inheritance."*

Such are the general outlines of the plan. For its full details, reference may be made to the original publication of the college,† and to the American reprint issued by the American Medical Association.‡

After fixing upon a classification, the next step in preparing the tabular forms to be used for the Mortuary Statistics of the Ninth Census was to determine which diseases and injuries should be presented separately. The nomenclature of the college enumerates over eleven hundred different affections, and, of course, a selection of the more important became imperative. The selection was not attempted until an actual enumeration of a large portion of the census returns had been made, and lists prepared showing, for several of the principal States, the actual number of deaths from each of the diseases mentioned in the returns. It was then agreed that those affections, to which comparatively larger numbers of deaths were attributed, should be separately given in the tables. The same was done with those to which importance attached from their frequent occurrence elsewhere, as shown in other statistical tables, even though the number of deaths reported were few; and the remaining affections were embraced under the head of "Other diseases," of the group to which they belonged. Of course, disorders which did not appear on the returns as having caused any deaths, are omitted from the tabular forms, even when, as in the case of epidemic cholera, &c., they have at other times produced great mortality.

The lists selected were carefully compared with the English registration reports, and with the Mortality Tables of former censuses, in order that no diseases of importance might be omitted.

The nomenclature and classification, as adopted, will be seen in full in the summaries of Tables V and VI for the United States, in which it will be noticed that the names of the diseases embraced under each group are numbered. In the tables for each State, space has been economized by omitting the titles of those diseases from which no deaths were reported, and, as the same numbers are given to the same diseases of each group in all the tables, it is easy to see at a glance which diseases are omitted in each State table, the omission, in every case, representing the fact that no deaths from that disease have been reported for that State.

It was for a time considered whether it would not be desirable to prepare supplementary tables, showing separately the number of cases of each of the diseases embraced under the head of "other diseases," in the several groups, as has been done in the English registration reports; but, on the whole, it was thought that the facts which might thus be presented were not of sufficient importance to warrant the outlay required for their proper preparation and publication. It may be mentioned, however, that the materials for the compilation of a series of such supplementary tables have been carefully preserved, and are accessible to any investigators who may be willing to bestow the necessary labor upon their discussion.

Finally, it may be suggested to those who would have preferred a mere alphabetical list of diseases, that a brief study of the classification employed in these tables will make it easy to compare any individual disease with the same affection as presented in those tables in which diseases are arranged alphabetically.

2. As to what divisions of the country should be separately presented in the Mortality Tables.

It was earnestly urged that the plan of presenting totals for certain groups of States, as pursued in the Mortality Tables of the Eighth Census, should be abandoned. In view of the growth of the country during the last ten years, and of the prospect of further rapid development, it seemed imperatively demanded that the facts relating to the mortality of each State and Territory should be separately presented.

Further subdivisions will undoubtedly become necessary in the future. As a first step in this direction, it was recommended by Dr. Billings that the extensive State of Texas should be represented by two tables; one for so much of the State as lies east of the Colorado River, the other for the portion west of that stream.

3. With regard to the question whether the record of deaths should be presented by months or by quarters, it was considered that monthly tables were so desirable that, in any choice between the two plans, that of presenting the facts by months should have preference. It then became a question whether totals for each quarter should also be presented, and this was decided in the negative. It would have occupied much space, and entailed considerable additional cost, without answering any very useful purpose. For it must be borne in mind that the English registration tables represent ordinary chronological years, each beginning January 1 and terminating December 31. The American census returns, on the other hand, represent neither chronological years nor the congressional fiscal year, which begins annually July 1 and terminates June 30 of the year following; but, necessarily, from the terms of the law, a peculiar irregular year terminating June 1.

* The Nomenclature of Diseases, drawn up by a joint committee appointed by the Royal College of Physicians, of London, (subject to a decennial revision.) London, 1869. Preface, p. viii.

† *Loc. cit.*

‡ Philadelphia, 1869.

The schedule issued for the mortality returns of the Ninth Census called for the "name of every person who died during the year ending June 1, 1870."

Now, the English registration year is divided into four quarters, of three months each, terminating, respectively, March 31, June 30, September 30, and December 31. These divisions are purely arbitrary, and do not represent the seasons.

In the Eighth Census, besides giving monthly tables, it was endeavored to prepare quarterly totals for periods corresponding to the English. To do this it was necessary to unite the first month represented in the census, viz, June, 1859, with the last two, viz, April and May, 1860, and thus the influence of season is marked by the variations between two different years. Of course, the resulting apparent facility of comparison with the English tables is only apparent.

It was not thought best to follow this example, but it will be easy for those who desire to compare the results for any particular quarter to obtain the necessary data from the monthly tables here given.

In the monthly table (Table VI) the individual months have been arranged in the usual order, beginning with January. It must, however, be understood that, while the several months from January to May, inclusive, belong to the year 1870, the months subsequently given, from June to December, inclusive, belong to the year 1869.

I have the honor to be, very respectfully, your obedient servant,

J. J. WOODWARD,
Assistant Surgeon, United States Army.

Brigadier General J. K. BARNES,
Surgeon General, United States Army.

REMARKS UPON THE STATISTICS OF MORTALITY.

If the value of the Statistics of Mortality in a census of the United States, taken under existing laws, depended upon the return of substantially the whole body of deaths occurring during the year covered by the enumeration, the results would not be worth the space occupied by publication, much less the expense of collection and compilation. At no one of the three censuses taken under the act of May 23, 1850, has the aggregate number of deaths returned by the assistant marshals risen above two-thirds of the number of deaths probably occurring during the year of enumeration, as that number is deduced from the experience of other countries, from the experience of sections of our own country having an established system of registration, and from the ascertained law of the national increase.* With such wholesale omissions from the number of deaths, therefore, if the Statistics of Mortality depended for their value on any assumed completeness in the returns of assistant marshals, the whole would deserve a contemptuous rejection at the outset, and not an elaborate and expensive compilation and publication; but, as matter of fact, the value of the following statistics arises from the consideration that these tables distribute a body of deaths approaching half a million, among the several periods of life, between the two sexes, according to cause of death and month of death, by race, by nationality, and by occupation. Deeply as it is to be regretted that the census of the United States does not afford the material for determining exactly the death-rate of States and sections, and of deducing the effect of the various conditions of life upon the duration of life, from statistics complete and accurate in every particular, the Tables of Mortality in the census have still their value. Many and important principles may be derived with assurance from them, even in their present fragmentary condition; while it is within the power of science to reconstruct and reconstitute them into something closely approaching the facts of the case, to supply the missing parts, to restore lost links of connection, and to effect a result of substantial truth and harmony.

It is easy to explain the cause of the wholesale omissions from the return of deaths in the census, which have been referred to. To take the recent census as an example, the census law required the return of all deaths occurring in families, from the 1st of June, 1869, to the 31st of May, 1870; in all, twelve months. The enumeration in the course of which this was to be accomplished began on the 1st of June, 1870, and closed, nominally, on the 1st of October, but really about the 1st of January, 1871. Thus, the officers of the census were called upon to recover all the deaths occurring during the census year, at a distance in time ranging from one day to nineteen months from the dates at which such deaths severally occurred. The antecedent improbability of success in such an attempt would be of the strongest; while the actual experience of three censuses has shown that assistant marshals fall short of the true number of deaths by not far from 40 per cent., as a rule. In some cases assistant marshals fail to put the question; in others, heads of families, or persons answering for them, fail to recall the fact of a death occurring during the year, especially when ten or eleven months have already elapsed since the date of death, and the mind, not unnaturally, refers to the event as having taken place a year or longer before. In still another large number of cases, persons die *out of families*, which class of cases seems not to have been in contemplation of the census law, which makes the return of mortality a family return. In still other cases, deaths occur in families, but the very death itself breaks up the family and scatters the surviving members, leaving no one to report the death in the census. In still other cases, deaths occur in what are constructively families for the purposes of the census, *i. e.*, boarding-houses, hotels, &c., but the common tie of membership or association is here so casual and so slight that the chances are altogether against the circumstance being retained in memory six or eight months after.

The Superintendent is under obligations to E. B. Elliott, esq., chief clerk of the Bureau of Statistics of the Treasury Department, for the following discussion of the probable rate of mortality in the United States, as projected from the partial and fragmentary returns of mortality in the census and their reduction to the practical forms of a life-table.

*The dimensions attained by the life-insurance interest, within the past few years, make it peculiarly a matter of regret at the present time that the census should not afford the data for determining with absolute precision and certainty the death-rate of the country, whether in the aggregate or by classes of the population. This can never be done without a national scheme of registration, stringently enforced by penalties. Such a scheme, however, does not exist, and is, perhaps, in the nature of our Government, wholly impracticable. The number of States which provide for themselves a system of registering births, deaths, and marriages, will probably increase from decade to decade, while the results of registration will improve steadily with each year for which the effort is continued, affording thus fuller and better material for correcting errors and supplying deficiencies in the census statistics; but it is too much to expect, for many a decade to come, that all the States will join in efforts to secure exact information of this character.

TABLE III.—*Approximate Life-table, (continued,) constructed on the basis of the United States Census of* 1870, *showing, for different ages of life, the number of persons surviving out of* 100,000 *born alive; the number of persons living at and over those ages in a stationary population sustained by* 100,000 *annual births; and the mean future duration of life.*

Ages. Years.	Proportion born and surviving specified ages; also, annual deaths at and over specified ages in a stationary population sustained by 100,000 annual births.	Persons living at and over specified ages in a stationary population sustained by 100,000 annual births.	Mean future duration (or "expectation") of life from specified ages.
x	$\delta_{x:\omega}$.	$P_{x:\omega}$.	$Q_x \div L_x$.
	L_x.	Q_x.	E_x.
1.	2.	3.	4.
0	100,000	3,925,442	39.254
1	84,468	3,834,130	45.392
2	78,857	3,752,333	47.584
3	76,092	3,674,474	48.290
4	74,377	3,598,772	48.386
5	73,170	3,524,518	48.163
10	69,864	3,166,954	45.330
15	67,912	2,822,150	41.556
20	65,083	2,489,305	38.248
25	61,370	2,173,260	35.413
30	57,744	1,875,408	32.480
35	54,143	1,595,772	29.473
40	50,489	1,334,147	26.425
45	44,681	1,091,134	23.374
50	42,606	867,704	20.367
55	38,137	665,725	17.456
60	33,159	487,254	14.695
65	27,616	335,081	12.134
70	21,585	211,006	9.817
75	15,369	119,539	7.778
80	9,544	57,580	6.033
85	4,849	22,217	4.582
90	1,830	6,254	3.416
95	449.6	1,117.7	2.486
100	57.9	103.0	1.779
105	2.9	3.6	1.260

In column (2) of Table III is shown the number surviving the different ages of life, out of 100,000 persons born alive. Thus, out of 100,000 born alive, 69,864 survive age 10; 65,083 survive age 20; 42,606 survive age 50; 9,544 survive age 80; 58 reaching the advanced age of 100 years. In column (4) of the same table is shown the mean after-life time, or mean future duration of life corresponding to the different ages specified. Thus, at birth, the mean future duration of life indicated is 39¼ years; at age 20, 38¼ years; at age 40, nearly 26½ years; at age 60, nearly 15 years; and at age 80, about 6 years.

TABLE IV.—*Proportions born and surviving certain ages in different communities, compared.*

Ages—years.	United States, census 1870.	England and Wales, 1838–'54, (17 years.)	Prussia, 1839–'40–'41, (3 years.)*	Carlisle, 1842–'50, (9 years.)	Belgium, 1842–'50, (9 years.)†	Massachusetts, (part of,) 166 towns, (townships,) 1855.†
	Elliott.	Farr.	Elliott.	Milne.	Elliott.	Elliott.
1.	2.	3.	4.	5.	6.	7.
0	10,000	10,000	10,039	10,000	10,000	10,060
10	6,986	7,025	6,589	6,460	6,912	6,873
20	6,508	6,628	6,165	6,090	6,386	6,437
30	5,774	6,037	5,641	5,642	5,754	5,748
40	5,049	5,386	5,008	5,075	5,130	5,078
50	4,261	4,643	4,243	4,397	4,413	4,409
60	3,316	3,698	3,141	3,643	3,464	3,597
70	2,159	2,380	1,573	2,401	2,185	2,475
80	954	901	444	953	787	1,059
90	183	115	50	142	110	118
100	5.8	2	1	9	5	2

* See published proceedings of American Association for the Advancement of Science, at its meeting held in Buffalo, in 1856.
† See published proceedings of American Association for the Advancement of Science, at its meeting held in Montreal, in 1857.

TABLE V.—*Mean future duration of life at certain ages in different communities, compared.*

Ages—years.	United States census.	England and Wales, 17 years.	Prussia, 3 years.	Carlisle, 9 years.	Massachusetts, (part of,) 166 towns, (townships.)
	Elliott.	Farr.	Elliott.	Milne.	Elliott.
	1870.	1838–'54.	1839–'40–'41.	1779–'87.	1855.
	Persons.	Persons.	Persons.	Persons.	Persons.
0	39.25	40.9	36.7	38.7	39.8
10	45.3	47.4	44.8	48.8	47.1
20	38.2	39.9	37.5	41.5	39.9
30	32.5	33.3	30.6	34.3	34.0
40	26.4	26.7	23.8	27.0	27.9
50	20.4	20.1	17.1	21.1	21.3
60	14.7	13.9	11.2	14.3	15.0
70	9.8	8.7	7.4	9.2	9.4
80	6.0	5.1	4.8	5.5	5.0
90	3.4	2.9	3.0	3.3	2.9
95	2.5	2.2	.....	3.5	2.3

TABLE VI.—LIFE ANNUITIES—5 PER CENT. PER ANNUM.

Present value of one dollar, payable at the end of each year during the life of a person of specified age, the rate of interest on investments being assumed at 5 per cent. per annum.

Ages—years.	United States census, 1870.	England and Wales, 1838–54, (17 years.)		Massachusetts, (part of,) 1855.
	Persons.	Males.	Females.	Persons.
0	$12 6	$12.7	$13.2	$12.6
10	16.0	16.5	16.5	16.3
20	14.9	15.5	15.5	15.3
30	14.1	14.4	14.6	14.5
40	12.9	13.0	13.3	13.4
50	11.1	11.0	11.4	11.7
60	9.0	8.6	9.0	9.3
70	6.6	5.9	6.2	6.5
80	4.3	3.6	3.9	3.6
90	2.4	2.1	2.2	2.1
100	1.1	1.1	1.2	1.0

Let $P_{x:y}$ denote the number of persons living between the ages of x and y years in a stationary population; that is, in a population uninfluenced by migration, and in which the losses by reason of advancing age and by deaths at each interval of age are exactly compensated by gains from advancing age, and from births; and let $f.\ P_{x:y}$ (that is, f times $P_{x:y}$) denote the corresponding number of persons living in a fluctuating population in which obtains the same invariable law of mortality; that is, in a population in which the numbers at the different intervals of age are increasing or decreasing, the number of persons annually passing from any age-interval not being exactly compensated for by the number of persons entering that interval.

Let $\delta_{x:y}$ denote the corresponding annual number of deaths between the ages of x and y in the stationary population; the corresponding number of deaths in the fluctuating population, considered with reference to the middle of the period in which the deaths occur, when the number of the population is large and the interval of age [illegible] therefore be nearly represented by $f.\ \delta_{x:y}$; and if $M_{x:y}$ be taken to denote the annual rate of mortality of persons in the fluctuating population between the specified ages, it would consequently, also, denote the rate of mortality obtaining at the same ages in the stationary population; that is, $M_{x:y} = \frac{f.\ \delta_{x:y}}{f.\ P_{x:y}} = \frac{\delta_{x:y}}{P_{x:y}}$. Such rate of mortality may, therefore, be considered as independent of the fluctuating character of the population from which it is derived.

The numbers living at different small intervals of age, and the corresponding number of annual deaths in a fluctuating population being accurately known, it is possible from these data to ascertain the proportionate numbers of the living and of deaths in the corresponding stationary population.

These deduced numbers, when tabulated, constitute forms in which a life-table, so-called, may be presented. From such life-table may easily be computed mean future duration of life at different ages; also, life annuities at different rates of interest of money, and other monetary values contingent on the duration of human life.

In passing, summarily, by a novel and compendious process, from the rates of annual mortality at different intervals of age, in a fluctuating population, to the forms of a life-table, or table of values expressing the conditions of a stationary population, advantage was taken of the important analytical principle, necessarily underlying all data of this character, that the rate of mortality within specified limits of age ($M_{x:y}$) in a stationary population, is, also, the derivative (or differential co-efficient) of the Napierian logarithm, taken negatively, of the number of persons surviving within the specified limits of age, $(-\mathrm{D}\,{}^{\lambda}_{e}\,P_{x:y})$; or the differential co-efficient of the Napierian logarithm, taken negatively, of the probability that the persons living within the specified limits of age will survive a moment of time,

$$-\,{}^{\lambda}_{e}\left(\frac{P_{x+dx:y+dy}}{P_{x:y}}\right)\cdot\frac{1}{dx}$$

that is—

$$M_{x:y}=\frac{\delta_{x:y}}{P_{x:y}}=\frac{-\mathrm{D}\,P_{x:y}}{P_{x:y}}=-\,\mathrm{D}\,{}^{\lambda}_{e}\,P_{x:y}=-\,{}^{\lambda}_{e}\left(\frac{P_{x+dx:y+dy}}{P_{x:y}}\right)\cdot\frac{1}{dx}$$

d, denoting the differential of the quantity to which it is prefixed; D, denoting the derivative or differential co-efficient of such quantity; ϵ, (the Greek *epsilon*,) denoting the Napierian base, (to wit, 2.71828;) the symbol $\frac{\lambda}{\epsilon}$ denoting the Napierian logarithm of the quantity to which it is prefixed, and $\frac{\lambda}{10}$ denoting its common logarithm.

It follows, convenient laws of relation being assumed to connect the several successive rates of mortality, that the inverse derivative (or the integral co-efficient) of the specified rate of mortality, ($\mathfrak{C}\, M_{x:y}$), is the Napierian logarithm, taken negatively, of the number of persons living within the specified limits of age in the stationary population; that is—

$$\mathfrak{C}\, M_{x:y} = \tfrac{\lambda}{\epsilon} P_{x:y} + \text{a constant};$$

and, consequently, that the definite inverse derivative (or definite integral) of such rate of mortality, taken from one age-interval $(x:y)$ to the equal age-interval next following, $(y:z,)$ is equivalent to the difference between the Napierian logarithms of the number of persons living in the earlier age-interval, ($\frac{\lambda}{\epsilon} P_{x:y}$), and of the number living in the next later equal age-interval ($\frac{\lambda}{\epsilon} P_{y:z}$); that is—

$$\mathfrak{C}\,{}^{y:z}_{x:y} M_{x:y} = \tfrac{\lambda}{\epsilon} P_{x:y} - \tfrac{\lambda}{\epsilon} P_{y:z}$$

and is, therefore, equivalent to the Napierian logarithm, taken negatively, of the probability that the persons living in the earlier age-interval $(x:y)$ will survive the later $(y:z)$ of the two intervals.

That is—

$$\mathfrak{C}\,{}^{y:z}_{x:y} M_{x:y} = -\tfrac{\lambda}{\epsilon}\left(\frac{P_{y:z}}{P_{x:y}}\right)$$

Successive summation of these results, from the earliest of the equal intervals of age onward toward extreme old age, will give, relatively to the value in the earliest interval, successively, the Napierian logarithms of the proportionate numbers living in the later intervals. From this series of values may be readily obtained the common logarithms of such values ($\frac{\lambda}{10} P_{x:y}$), and the values themselves, ($P_{x:y}$).

The proportionate number of persons living in the stationary population ($P_{x:y}$) in the successive intervals of age being thus determined, the corresponding number of deaths ($\delta_{x:y}$) may be found by multiplying such proportionate number by the corresponding rate of mortality ($M_{x:y}$), already ascertained;

thus—

$$\delta_{x:y} = M_{x:y} \times P_{x:y}$$

By successive summation of the numbers living, ($P_{x:y}$), and of the deaths ($\delta_{x:y}$) at the different consecutive intervals of age, beginning with the extreme limit of old age, may be found the proportionate numbers, at and over specified ages in the stationary population, both of the living ($P_{x:\omega}$) and of annual deaths, ($\delta_{x:\omega}$);

thus—

$$P_{x:\omega} = P_{x:y} + P_{y:z} + \ldots\ldots P_{v:\omega} = Q_x$$

which equals the proportionate number of persons living at and over any specified age (x); and,

$$\delta_{x:\omega} = \delta_{x:y} + \delta_{y:z} + \ldots\ldots \delta_{v:\omega} = L_x$$

which equals the proportionate number of annual deaths at and over the specified age (x) in the stationary population, and is equivalent, also, as may be shown, to the proportionate number of persons surviving the specified age out of the annual number of births (L_0) by which the stationary population is sustained.

In the foregoing formulas and tables, ω (the Greek *omega*) is employed to denote the extreme limit of old age, and the symbol $\mathfrak{C}$ to denote the inverse derivative (or integral co-efficient) of the quantity to which it is prefixed.

The quotient of the proportionate number of persons in the stationary population at and over a specified age, as Q_x, divided by the number surviving the specified age (L_x) out of the annual number of births by which the stationary population is sustained, gives, in years, the mean future duration of life, (commonly called "expectation" of life,) (E_x).

The great deficiency manifest in the returns of deaths, a deficiency inherent in any system which seeks to secure complete returns of these events for an entire year by simply conducting an inquiry at its close, will, for the future, it is earnestly hoped, be remedied by legislation, establishing a national system for the registry of deaths and of births as they occur.

By no simpler or less radical process is it possible for the statistics of the movement of population of the United States to be placed on a par, as to efficiency and completeness, with that of England, France, Belgium, Prussia, Sweden, Norway, and certain other of the progressive states of Europe. Legislation by the several States of the Union is necessarily inadequate to the accomplishment of this object.

Mr. A. W. Paine and Mr. D. C. Marshall, acting under special detail from the Census Office, deserve special mention for the care and accuracy with which they have performed the numerical computations.

E. B. ELLIOTT.

NOTE.—*Anomalous entries.* A few entries in Table V of the present volume may appear strange and questionable, if not wholly impossible and absurd. These are the cases of death, under the age of 3 years, and even of 1 year, from gout, from calculus, from diabetes, from cancer of the uterus, and from disorders of the intellect; and of death at 10, 15, and even 25 years of age, from cholera infantum and from teething. It might also seem to one not familiar with Mortuary Statistics that cancer of the breast should not be assigned as the cause of death in males. The doubtful cases of these classes number in all about 160.

Some of these entries are undoubtedly due to clerical errors on the part of assistant marshals in transcribing their schedules, or to ignorance on the part of families making return of deceased members. Some of the most unmistakable might, perhaps, with advantage have been corrected by the Superintendent; but it has been thought best to exercise great caution in departing from the strict letter of the return, even for the sake of avoiding criticism.

Cholera infantum may be a proper description of the cause of death up to 10 or even 12 years of age, especially where the subject is exceptionally immature and feeble. The 7 cases, above the age of 15, reported from this cause, are probably the result of errors of transcription or otherwise, and should be assigned to some other head in the same general class.

Teething, again, may be a proper description of the cause of death up to the age when the last teeth are finally cut, although the 12 deaths reported from this cause, above the age of 5 years, were more probably due to necrosis of the jaw, connected with teething, and, therefore, in the apprehension of the family, confounded with it.

Cancer of the uterus, under 1 year of age, is possible, but exceedingly improbable, and the single death from this cause, reported within this period of life, is undoubtedly an error.

Calculus and diabetes are established causes of death in children of the earliest age, and the reasonableness of the entries in Table V is sufficiently proved by reference to European statistics.

Gout, although congenital, can hardly be accepted as a cause of death under the age of 1 year, and the single entry to that effect in Table V is probably an error.

Disorders of the intellect may and do cause death in infants of a very early age, and the 4 cases reported under 1 year, although questionable, cannot be pronounced clearly wrong.*

Cancer of the breast is a perfectly proper specification as a cause of death in males, although the number of such cases reported (47) would, perhaps, justify a doubt with regard to some of them.

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* "Disorders of the intellect," in the nomenclature adopted, includes idiocy.

THE PROPORTION OF DEATHS IN THE UNITED STATES, FROM EACH CAUSE AND CLASS OF CAUSES TO DEATHS FROM ALL CAUSES, AND TO POPULATION—1870, 1860, 1850.

CAUSE OF DEATH.	1870.					1860.					1850.				
	Deaths from all causes.	Deaths from each cause in 100,000 deaths from all causes.	Deaths from all causes to one death from each cause.	Deaths from each cause in 100,000 living persons.	Living persons to one death from each cause.	Deaths from all causes.	Deaths from each cause in 100,000 deaths from all causes.	Deaths from all causes to one death from each cause.	Deaths from each cause in 100,000 living persons.	Living persons to one death from each cause.	Deaths from all causes.	Deaths from each cause in 100,000 deaths from all causes.	Deaths from all causes to one death from each cause.	Deaths from each cause in 100,000 living persons.	Living persons to one death from each cause.
GRAND TOTAL	492,263	100,000	.....	1,276.7	78	394,153	100,000	.....	1,253.5	80	323,023	100,000	.....	1,392.8	72
Unknown causes	17,266	3,507	29	44.8	2,233	43,762	11,103	9	139.2	719	44,233	13,693	7	190.7	524
I.—GENERAL DISEASES.															
General diseases, A.															
Total	94,832	19,264	5	245.9	407	83,987	21,308	4	267.1	374	91,440	28,308	4	394.3	253
1. Small pox	4,507	916	109	11.7	8,555	1,271	323	310	4.0	24,740	2,352	728	137	10.1	9,860
2. Measles	9,237	1,876	53	23.9	4,174	3,899	989	101	12.4	8,064	2,983	923	108	12.9	7,775
3. Scarlet fever	20,320	4,128	24	52.7	1,898	20,402	6,698	15	84.0	1,191	9,584	2,967	34	41.3	2,420
4. Typhus fever	1,770	360	278	4.6	21,734	.....	.....	.....	.....	.....	240	74	1,346	1.0	96,633
5. Cerebro-spinal fever	651	132	756	1.7	59,229	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6. Enteric fever	22,187	4,507	22	57.5	1,738	19,236	4,860	20	61.2	1,635	13,099	4,055	25	56.5	1,771
7. Yellow fever	177	36	2,781	0.5	217,844	660	167	597	2.1	47,641	785	243	411	3.4	29,544
8. Intermittent fever	7,142	1,451	69	18.5	5,399	4,550	1,154	86	14.5	6,911	964	298	335	4.2	24,058
9. Remittent fever	4,281	870	115	11.1	9,007	11,120	2,821	35	35.4	2,828	148	46	2,163	0.6	156,702
10. Typho-malarial fever	260	53	1,893	0.7	142,301	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
11. Cholera	256	52	1,923	0.7	150,619	996	253	396	3.2	31,570	31,506	9,754	10	135.8	736
12. Diphtheria	6,303	1,280	78	16.3	6,117	1,663	422	237	5.3	18,908	.....	.....	.....	.....	.....
13. Hooping cough	9,008	1,830	55	23.4	4,280	8,408	2,133	47	26.7	3,740	5,280	1,635	61	22.8	4,392
14. Influenza	204	41	2,413	0.5	189,012	385	98	1,024	1.2	81,671	252	78	1,293	1.1	92,031
15. Erysipelas	3,162	642	156	8.2	12,104	2,746	697	144	8.7	11,453	2,786	863	116	12.0	8,324
16. Puerperal fever	1,828	371	269	4.7	21,093	1,202	305	327	3.8	26,159	520	161	621	2.3	44,600
17. Pyæmia	258	52	1,908	0.7	149,451	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
18. Other diseases of this group	3,281	667	150	8.5	11,752	1,449	368	272	4.6	21,700	20,941	6,483	15	90.3	1,107
General diseases, B.															
Total	93,852	19,067	5	243.4	411	71,660	18,181	6	227.9	439	50,809	15,748	6	219.3	456
1. Rheumatism	2,912	592	169	7.5	13,241	1,881	477	209	6.0	16,716	983	304	329	4.3	23,593
2. Gout	43	9	11,448	0.1	890,706	41	10	9,613	0.1	760,910	50	15	6,460	0.2	463,838
3. Syphilis	590	120	836	1.5	65,353	233	59	1,692	0.7	134,950	146	45	2,212	0.6	158,848
4. Cancer of uterus	510	104	965	1.3	75,005	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
5. Cancer of breast	630	128	781	1.6	61,294	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
6. Cancers, other	5,084	1,033	97	13.2	7,584	3,672	932	107	11.7	8,563	2,088	646	155	9.0	11,107
7. Non-malignant tumors	891	181	552	2.3	43,275	668	154	648	1.9	51,716	336	104	961	1.4	69,023
8. Scrofula	3,418	694	144	8.9	11,281	2,703	686	146	8.6	11,633	1,860	576	174	8.0	12,469
9. Consumption	69,896	14,199	7	181.3	552	49,082	12,453	8	156.1	641	33,516	10,376	10	144.5	692
10. Diabetes	837	170	588	2.2	46,007	385	98	1,024	1.2	81,671	231	72	1,398	1.0	100,398
11. Scurvy	69	14	7,134	0.2	558,817	70	20	4,069	0.3	398,017	54	17	5,982	0.2	429,479
12. Anæmia	265	54	1,858	0.7	145,503	30	10	10,106	0.1	806,239	.....	.....	.....	.....	.....
13. Dropsy	7,850	1,596	63	20.4	4,908	12,657	3,211	31	40.3	2,484	11,217	3,473	29	48.4	2,068
14. Other diseases of this group	851	173	578	2.2	45,309	280	71	1,407	0.9	112,298	388	120	833	1.7	59,773
II.—LOCAL DISEASES.															
Diseases of the nervous system.															
Total	60,455	12,281	8	156.8	638	40,216	10,204	10	127.9	782	23,668	7,327	14	102.0	980
1. Encephalitis	13,701	2,783	36	35.5	2,814	10,349	2,626	38	32.9	3,038	6,422	1,988	50	27.7	3,611
2. Meningitis	3,334	677	148	8.6	11,565	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3. Apoplexy	5,226	1,062	94	13.6	7,378	3,083	782	128	9.8	10,199	1,958	606	165	8.4	11,845
4. Sun-stroke	397	81	1,240	1.0	97,124	360	91	1,003	1.1	87,343	248	77	1,303	1.1	93,515
5. Hydrocephalus	4,041	821	122	10.5	9,542	3,414	866	115	10.9	9,210	1,674	518	194	7.2	13,854
6. Paralysis	7,501	1,524	66	19.4	5,140	4,637	1,176	85	14.7	6,781	2,709	839	119	11.7	8,561
7. Tetanus	1,026	330	303	4.2	23,714	1,621	411	243	5.2	19,397	694	215	465	3.0	33,418
8. Hydrophobia	63	13	7,814	0.2	612,038	38	10	10,372	0.1	827,456	26	8	12,424	0.1	891,995
9. Epilepsy	1,414	287	348	3.7	27,209	501	127	787	1.6	62,761	373	115	866	1.6	62,177
10. Convulsions	12,751	2,590	39	33.1	3,024	9,077	2,304	43	28.9	3,464	6,672	1,880	53	26.2	3,819
11. Chorea	76	15	6,477	0.2	507,347	55	14	7,162	0.2	571,697	54	17	5,982	0.2	429,479
12. Disorders of the intellect	731	149	673	1.9	52,747	452	115	872	1.4	69,565	300	93	1,077	1.3	77,306
13. Other diseases of this group	9,594	1,949	51	24.9	4,019	6,629	1,682	59	21.1	4,743	3,138	971	103	13.5	7,391
Diseases of the circulatory system.															
Total	17,034	3,460	29	44.2	2,264	7,880	1,999	50	25.1	3,990	3,202	991	101	13.8	7,243
1. Pericarditis	266	54	1,851	0.7	144,956	49	13	8,044	0.2	641,700	.....	.....	.....	.....	.....
2. Valvular disease of heart	881	179	559	2.3	43,767	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3. Hypertrophy of heart	757	154	650	2.0	50,936	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
4. Cyanosis	314	64	1,568	0.8	122,707	29	7	13,501	0.1	1,084,252	.....	.....	.....	.....	.....
5. Aneurism	1,022	207	482	2.6	37,728	44	11	8,958	0.1	714,621	8	2	40,378	0.0	2,898,984
6. Other diseases of this group	13,794	2,802	36	35.8	2,795	7,758	1,968	51	24.7	4,053	3,194	989	101	13.8	7,261
Diseases of the respiratory system.															
Total	63,971	12,995	8	165.9	603	40,803	12,636	8	158.4	631	31,428	9,730	10	135.5	738
1. Croup	10,692	2,172	46	27.7	3,606	15,211	3,859	26	48.4	2,067	10,706	3,314	30	46.2	2,166
2. Laryngitis	295	60	1,669	0.7	130,706	74	19	5,326	0.2	424,910	1,039	332	311	4.5	22,321
3. Bronchitis	4,049	822	122	10.5	9,523	1,919	487	205	6.1	16,385	3,360	1,040	96	14.5	6,902
4. Asthma	1,264	258	380	3.3	30,505	669	170	589	2.1	47,000	451	140	716	1.9	51,423
5. Pneumonia	40,012	8,128	12	103.8	964	27,004	6,874	15	86.2	1,161	12,130	3,755	27	52.3	1,912
6. Pleurisy	1,084	220	454	2.8	35,570	1,260	320	313	4.0	24,955	2,167	671	149	9.3	10,703
7. Hydrothorax	2,689	546	183	7.0	14,339	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
8. Other diseases of this group	3,886	789	127	10.1	9,922	3,576	907	110	11.4	8,793	1,575	488	205	6.8	14,731

THE PROPORTION OF DEATHS IN THE UNITED STATES, FROM EACH CAUSE AND CLASS OF CAUSES TO DEATHS FROM ALL CAUSES, AND TO POPULATION—1870, 1860, 1850.

CAUSE OF DEATH.	1870.					1860.					1850.				
	Deaths from all causes.	Deaths from each cause in 100,000 deaths from all causes.	Deaths from all causes to one death from each cause.	Deaths from each cause in 100,000 living persons.	Living persons to one death from each cause.	Deaths from all causes.	Deaths from each cause in 100,000 deaths from all causes.	Deaths from all causes to one death from each cause.	Deaths from each cause in 100,000 living persons.	Living persons to one death from each cause.	Deaths from all causes.	Deaths from each cause in 100,000 deaths from all causes.	Deaths from all causes to one death from each cause.	Deaths from each cause in 100,000 living persons.	Living persons to one death from each cause.
Diseases of the digestive system.															
Total	73,999	15,033	7	191.9	521	47,586	12,073	8	151.3	661	45,683	14,142	7	197.0	508
1. Aphthæ	536	109	918	1.4	71,937	1,012	257	389	3.2	31,070	424	131	762	1.8	54,698
2. Cancrum oris	165	34	2,983	0.4	233,687										
3. Teething	3,247	660	152	8.4	11,875	4,909	1,245	80	15.6	6,405	2,443	756	132	10.5	9,493
4. Tonsillitis	244	50	2,017	0.6	158,026	730	185	540	2.3	43,073	562	174	575	2.4	41,267
5. Gastritis	1,900	386	259	4.9	20,294	1,019	259	387	3.3	30,857	272	84	1,188	1.2	85,264
6. Dyspepsia	841	172	585	2.2	45,848	832	211	474	2.6	37,792	616	190	524	2.7	37,649
7. Other diseases of the stomach	960	195	513	2.5	40,165	274	70	1,438	0.9	114,757	2,886	893	112	12.4	8,001
8. Enteritis	9,046	1,838	54	23.5	4,262	6,304	1,599	63	20.0	4,988					
9. Dysentery	7,912	1,605	62	20.5	4,873	10,468	2,656	38	33.3	3,004	20,556	6,364	16	88.6	1,128
10. Obstructions of the intestines	263	53	1,872	0.7	146,610										
11. Hernia	638	130	772	1.7	60,436	360	91	1,094	1.1	87,343	241	75	1,340	1.2	96,232
12. Diarrhœa	14,195	2,884	35	36.8	2,716	7,850	1,992	50	25.0	4,006	7,034	2,456	41	34.2	2,923
13. Cholera infantum	20,255	4,115	24	52.5	1,904	4,808	1,220	82	15.3	6,540	3,960	1,226	82	17.1	5,857
14. Colic	1,046	212	47	2.7	36,863						1,221	378	265	5.3	18,994
15. Constipation	153	32	3,217	0.4	252,015										
16. Fistula	44	9	11,188	0.1	876,327	37	9	10,652	0.1	849,819	15	5	21,535	0.0	1,546,125
17. Other diseases of bowels	2,550	518	193	6.6	15,121	1,610	408	245	5.1	19,530	58	18	5,569	0.2	399,860
18. Hepatitis	1,534	313	321	4.0	25,136	200	51	1,971	0.6	157,217					
19. Cirrhosis of liver	294	60	1,674	0.8	131,151										
20. Jaundice	1,311	266	375	3.4	29,411	681	173	579	2.2	46,172	464	144	735	2.0	49,982
21. Biliary calculi	36	7	13,674	0.1	1,071,066										
22. Other diseases of liver	2,398	473	211	6.0	16,563	2,033	668	150	8.4	11,942	1,851	573	175	8.0	12,529
23. Peritonitis	957	194	514	2.5	40,291	113	29	3,488	0.4	278,259	37	11	8,730	0.2	626,857
24. Ascites	1,378	278	357	3.6	27,981										
25. Other diseases of this group	2,166	440	227	5.6	17,802	3,746	950	105	11.9	8,394	2,143	664	151	9.2	10,832
Diseases of the urinary system and male organs of generation.															
Total	4,744	964	104	12.3	8,128	1,731	439	228	5.5	18,165	1,068	331	302	4.7	21,715
1. Bright's disease	1,722	350	280	4.5	22,392										
2. Nephritis	517	105	952	1.3	74,581										
3. Other kidney diseases	1,724	350	281	4.5	22,366	816	207	483	2.6	38,533	811	251	398	3.5	28,597
4. Cystitis	311	63	1,583	0.8	123,982	182	46	2,166	0.6	172,766					
5. Calculus	73	15	6,743	0.2	528,197	674	171	585	2.1	46,652					
6. Other diseases of this group	397	81	1,240	1.0	97,124	59	15	6,681	0.2	532,938	257	80	1,257	1.2	90,241
Diseases of the female organs of generation.															
Total	1,318	268	373	3.4	29,255	410	104	961	1.3	76,691	7	2	46,146	0.0	3,313,125
1. Ovarian tumors	169	34	2,913	0.4	228,156	9	2	43,795	0.0	3,493,702					
2. Diseases of uterus	1,029	209	478	2.7	37,472	244	61	1,615	0.8	128,866					
3. Other diseases of this group	120	25	4,102	0.3	321,320	157	41	2,511	0.5	200,276	7	2	46,146	0.0	3,313,125
Affections connected with pregnancy.															
Total	4,810	977	102	12.5	8,016	4,066	1,032	97	12.9	7,733	3,117	965	104	13.4	7,440
1. Abortion	188	38	2,618	0.5	205,098										
2. Childbirth	4,406	895	112	11.4	8,751	4,066	1,032	97	12.9	7,733	3,117	965	104	13.4	7,440
3. Puerperal convulsions	216	44	2,279	0.6	178,511										
Diseases of the organs of locomotion.															
Total	2,187	444	225	5.7	17,631	1,393	353	283	4.4	22,572	787	244	410	3.4	29,469
1. Diseases of the spine	1,663	338	290	4.3	23,186	1,078	273	366	3.4	29,168	607	188	532	2.6	38,207
2. Diseases of the bones	132	27	3,729	0.4	292,109	184	47	2,142	0.6	170,888					
3. Diseases of the hip-joint	188	38	2,618	0.5	205,098						57	18	5,667	0.2	406,875
4. Diseases of the joints	204	41	2,413	0.5	189,012	131	33	3,008	0.4	240,025	123	38	2,626	0.6	188,552
Diseases of the integumentary system.															
Total	2,778	564	177	7.2	13,880	2,422	614	162	7.7	12,982	428	132	755	1.8	54,187
1. Addison's disease	12	2	41,022	0.0	3,213,198										
2. Abscess	665	135	740	1.7	57,983	568	144	693	1.8	55,358	311	96	1,039	1.3	74,572
3. Carbuncle	168	34	2,930	0.5	229,514	98	25	4,022	0.3	320,850	25	8	12,921	0.1	927,675
4. Skin diseases	1,933	393	255	5.0	19,947	1,756	445	224	5.6	17,906	92	28	3,511	0.4	252,086
III.—CONDITIONS NOT NECESSARILY ASSOCIATED WITH GENERAL OR LOCAL DISEASES.															
Total	28,493	5,788	17	73.9	1,353	15,477	3,927	25	49.2	2,032	10,943	3,388	30	47.2	2,119
1. Still-born	9,060	1,841	54	23.5	4,256	1,540	391	256	4.9	20,418	377	117	857	1.6	61,517
2. Old age	7,986	1,621	62	20.7	4,828	10,887	2,762	36	34.6	2,888	9,027	2,795	36	38.9	2,559
3. Debility	11,447	2,326	43	29.7	3,368	3,050	774	129	9.7	10,309	1,539	476	210	6.7	15,069
IV.—POISONS.															
Total	2,351	478	209	6.1	16,401	2,456	623	160	7.8	12,803	1,382	428	234	6.0	16,781
1. Alcohol	1,410	287	349	3.6	27,346	1,506	382	262	4.8	20,879	951	294	340	4.1	24,387
2. Lead	31	6	15,879	0.1	1,243,818										
3. Poisons not specified	910	185	541	2.4	42,372	950	241	415	3.0	33,098	431	134	749	1.9	53,809

THE PROPORTION OF DEATHS IN THE UNITED STATES, FROM EACH CAUSE AND CLASS OF CAUSES TO DEATHS FROM ALL CAUSES, AND TO POPULATION—1870, 1860, 1850.

CAUSE OF DEATH.	1870.					1860.					1850.				
	Deaths from all causes.	Deaths from each cause in 100,000 deaths from all causes.	Deaths from all causes to one death from each cause.	Deaths from each cause in 100,000 living persons.	Living persons to one death from each cause.	Deaths from all causes.	Deaths from each cause in 100,000 deaths from all causes.	Deaths from all causes to one death from each cause.	Deaths from each cause in 100,000 living persons.	Living persons to one death from each cause.	Deaths from all causes.	Deaths from each cause in 100,000 deaths from all causes.	Deaths from all causes to one death from each cause.	Deaths from each cause in 100,000 living persons.	Living persons to one death from each cause.
V.—PARASITES.—Worms	1,069	217	460	2.8	36,070	1,996	506	197	6.4	15,753	2,940	910	110	12.7	7,888
VI.—MALFORMATIONS	364	74	1,352	0.9	105,930	127	32	3,103	0.4	247,585	85	26	3,860	0.4	272,946
VII.—ACCIDENTS AND INJURIES.															
Total	23,740	4,619	22	59.0	1,696	19,181	4,866	21	61.0	1,639	11,743	3,635	28	50.6	1,975
1. Burns and scalds	3,391	689	145	8.8	11,371	4,206	1,082	92	13.6	7,371	2,052	635	157	8.8	11,302
2. Lightning stroke	202	42	2,437	0.5	199,883	191	48	2,064	0.6	164,625	94	29	3,430	0.4	246,722
3. Explosions	200	59	1,697	0.8	132,960										
4. Drowning	4,075	828	121	10.6	9,462	3,121	792	126	9.9	10,075	2,357	730	137	10.2	9,840
5. Suffocation	1,257	255	392	3.3	30,075	2,120	540	185	6.8	14,769	934	289	345	4.0	24,831
6. Exposure to cold	36	7	13,674	0.1	1,071,066	139	35	2,835	0.4	226,211	73	23	4,425	0.3	317,697
7. Neglect and exposure	344	70	1,431	0.9	112,088	162	41	2,433	0.5	194,095					
8. Falls	2,074	421	237	5.4	18,591	1,323	336	298	4.2	23,767					
9. Falling bodies	712	145	691	1.8	54,155										
10. Fractures	665	135	740	1.7	57,983						171	53	1,889	0.7	135,625
11. Gunshot wounds	971	197	507	2.5	39,710	741	188	531	2.4	42,434					
12. Other wounds	1,070	217	460	2.8	36,036										
13. Railroad accidents	1,582	321	311	4.1	24,373	599	152	658	1.9	52,493					
14. Mining accidents	365	74	1,349	0.9	105,639										
15. Injuries by machinery	420	85	1,173	1.1	91,896										
16. Other injuries	1,853	377	266	4.8	20,809	4,469	1,134	88	14.2	7,036	5,323	1,648	61	23.0	4,357
17. Homicide	2,057	418	239	5.3	18,745	989	251	399	3.1	31,793	227	70	1,423	1.0	102,167
18. Suicide by gunshot	251	51	1,991	0.7	153,619	112	28	3,519	0.4	280,744					
19. Suicide by cutting throat	133	27	3,701	0.3	289,913	82	21	4,807	0.3	383,455					
20. Suicide by drowning	119	24	4,137	0.3	324,020	71	18	5,551	0.2	442,864					
21. Suicide by hanging	370	75	1,330	1.0	104,212	300	78	1,288	1.0	102,756					
22. Suicide by poison	203	41	2,425	0.5	189,943	137	35	2,877	0.4	229,513					
23. Suicide not specified	269	55	1,830	0.7	143,340	285	72	1,383	0.9	110,327	491	152	658	2.1	47,234
24. Execution	31	6	15,879	0.1	1,243,818	50	15	6,681	0.2	532,938	21	6	15,382	0.1	1,104,375

DEATHS FROM CERTAIN PRINCIPAL DISEASES SEVERALLY AND IN GROUPS, WITH THE PROPORTION TO DEATHS FROM ALL CAUSES, AND TO POPULATION—BY STATES AND TERRITORIES—1870.

	STATES AND TERRITORIES.	Deaths from all causes.	CHOLERA INFANTUM.					CONSUMPTION.					CROUP.				
			Deaths from cholera infantum.	Deaths from cholera infantum in 100,000 deaths from all causes.	Deaths from all causes to one death from cholera infantum.	Deaths from cholera infantum in 100,000 living persons.	Living persons to one death from cholera infantum.	Deaths from consumption.	Deaths from consumption in 100,000 deaths from all causes.	Deaths from all causes to one death from consumption.	Deaths from consumption in 100,000 living persons.	Living persons to one death from consumption.	Deaths from croup.	Deaths from croup in 100,000 deaths from all causes.	Deaths from all causes to one death from croup.	Deaths from croup in 100,000 living persons.	Living persons to one death from croup.
	The United States	492,263	20,255	4,115	24.3	53	1,904	69,896	14,199	7.0	181	552	10,693	2,172	46.0	28	3,606
1	Alabama	10,771	130	1,207	82.9	13	7,669	761	7,065	14.2	76	1,310	268	2,488	40.2	27	3,720
2	Arizona	252	3	1,191	84.0	31	3,219	1	397	252.0	10	9,658	.....	.....	.....	.....	.....
3	Arkansas	6,119	39	637	156.9	8	12,422	431	7,043	14.2	89	1,124	183	2,981	33.4	38	2,647
4	California	9,025	227	2,515	39.7	41	2,468	1,246	13,806	7.2	222	450	141	1,562	64.0	25	3,973
5	Colorado	375	18	4,800	20.8	45	2,215	32	8,533	11.7	80	1,246	14	3,733	26.8	35	2,847
6	Connecticut	6,796	379	5,577	17.9	71	1,418	1,218	17,932	5.6	227	441	94	1,383	72.3	18	5,718
7	Dakota	101	.....	.....	.....	.....	.....	13	12,871	7.8	92	1,091	4	3,960	25.3	28	3,545
8	Delaware	1,561	87	5,573	17.9	70	1,437	296	18,962	5.3	237	422	42	2,691	37.2	34	2,977
9	District of Columbia	2,015	150	7,444	13.4	114	878	442	21,936	4.6	336	298	61	3,027	33.0	46	2,159
10	Florida	2,264	97	4,285	23.3	52	1,936	131	5,786	17.3	69	1,433	49	2,164	46.2	27	3,832
11	Georgia	13,606	344	2,528	39.6	29	3,442	875	6,431	15.6	75	1,353	356	2,617	38.2	30	3,326
12	Idaho	50	.....	.....	.....	.....	.....	5	10,000	10.0	33	3,000	.....	.....	.....	.....	.....
13	Illinois	33,672	1,869	5,551	18.0	74	1,359	3,641	10,813	9.2	143	698	886	2,631	38.0	35	2,807
14	Indiana	17,661	525	2,973	33.6	31	3,201	2,807	15,894	6.3	167	599	478	2,707	37.0	28	3,516
15	Iowa	9,597	441	4,595	21.8	37	2,708	1,313	13,681	7.3	110	909	163	1,698	58.9	14	7,325
16	Kansas	4,546	199	4,378	22.8	55	1,831	413	9,085	11.0	113	882	101	2,222	45.2	28	3,608
17	Kentucky	14,345	355	2,475	40.4	27	3,721	2,500	17,428	5.7	180	528	551	3,841	26.0	42	2,398
18	Louisiana	14,499	297	2,048	48.8	41	2,448	1,409	9,718	10.3	104	516	126	869	115.1	17	5,769
19	Maine	7,728	179	2,316	43.2	29	3,502	1,991	25,598	3.9	318	315	59	764	131.0	9	10,626
20	Maryland	9,740	604	6,201	16.1	77	1,293	1,678	17,228	5.8	215	465	272	2,792	35.8	35	2,871
21	Massachusetts	25,859	1,685	6,516	15.3	116	865	5,157	19,943	5.0	353	283	500	1,934	51.7	34	2,915
22	Michigan	11,181	425	3,801	26.3	36	2,786	1,844	16,492	6.0	156	642	150	1,342	74.5	13	7,894
23	Minnesota	3,526	108	3,063	32.6	25	4,071	459	13,018	7.7	104	958	70	1,985	50.3	16	6,282
24	Mississippi	9,172	143	1,559	64.1	18	5,790	695	7,577	13.2	84	1,191	281	3,064	32.6	34	2,946
25	Missouri	27,982	990	3,538	28.3	58	1,739	2,717	9,710	10.3	158	634	719	2,570	38.9	42	2,394
26	Montana	185	6	3,243	30.8	29	3,433	17	9,189	10.9	83	1,212	1	541	185.0	5	20,595
27	Nebraska	1,000	58	5,800	17.2	50	2,021	87	8,700	11.5	71	1,414	21	2,100	47.6	17	5,857
28	Nevada	615	16	2,602	38.4	38	2,656	30	4,878	20.5	71	1,416	8	1,301	76.9	10	5,311
29	New Hampshire	4,291	139	3,239	30.9	44	2,290	953	22,209	4.5	299	334	30	699	143.0	9	10,610
30	New Jersey	10,586	783	7,397	13.5	86	1,157	1,822	17,211	5.8	209	479	215	2,031	49.2	24	4,214
31	New Mexico	1,180	116	9,831	10.2	126	792	45	3,814	26.2	49	2,042	36	3,051	32.8	39	2,552
32	New York	69,095	3,577	5,177	19.3	82	1,225	11,578	16,757	6.0	264	379	1,134	1,641	60.9	26	3,865
33	North Carolina	10,588	360	3,400	29.4	34	2,976	1,236	11,674	8.6	115	867	285	2,692	37.2	27	3,759
34	Ohio	20,568	1,109	3,751	26.7	42	2,403	5,255	17,773	5.6	197	507	560	1,894	52.8	21	4,759
35	Oregon	622	6	965	103.7	7	15,154	112	18,006	5.6	123	812	23	3,698	27.0	28	3,953
36	Pennsylvania	52,639	2,683	5,097	19.6	76	1,313	7,481	14,212	7.0	212	471	1,088	2,067	48.4	31	3,237
37	Rhode Island	2,741	197	7,187	13.9	91	1,103	552	20,139	5.0	254	394	39	1,423	70.3	18	5,573
38	South Carolina	7,380	255	3,455	28.9	36	2,767	657	8,862	11.2	93	1,074	108	1,463	68.3	15	6,533
39	Tennessee	14,239	281	1,974	50.7	22	4,479	2,377	16,694	6.0	189	530	652	4,579	21.8	52	1,930
40	Texas, east of the Colorado River	9,015	77	854	117.1	12	8,419	534	5,924	16.9	82	1,214	245	2,718	36.8	38	2,646
41	Texas, west of the Colorado River	2,182	39	1,787	55.9	23	4,367	146	6,691	15.0	86	1,167	30	1,375	72.7	17	5,677
42	Utah	891	99	11,111	9.0	114	877	63	7,071	14.1	73	1,378	12	1,347	74.3	14	7,232
43	Vermont	3,545	105	2,962	144.6	32	3,148	715	20,169	5.0	216	462	41	1,157	86.5	12	8,062
44	Virginia	15,183	573	3,774	26.5	47	2,138	2,095	13,798	7.2	171	585	292	1,923	52.0	24	4,196
45	Washington	223	7	3,139	31.9	29	3,422	35	15,695	6.4	147	684	6	2,691	37.2	25	3,993
46	West Virginia	4,018	107	2,663	37.6	24	4,131	709	17,646	5.7	161	623	138	3,435	29.1	31	3,203
47	Wisconsin	9,960	368	3,695	27.1	35	2,866	1,318	13,233	7.6	125	800	150	1,506	66.4	14	7,031
48	Wyoming	74	.....	.....	.....	.....	.....	4	5,405	18.5	44	2,280	10	13,514	7.4	110	912

DEATHS FROM CERTAIN PRINCIPAL DISEASES SEVERALLY AND IN GROUPS, WITH THE PROPORTION TO DEATHS FROM ALL CAUSES, AND TO POPULATION—BY STATES AND TERRITORIES—1870.

HOOPING COUGH.					MEASLES.					PNEUMONIA.					SMALL POX.					
Deaths from hooping cough.	Deaths from hooping cough in 100,000 deaths from all causes.	Deaths from all causes to one death from hooping cough.	Deaths from hooping cough in 100,000 living persons.	Living persons to one death from hooping cough.	Deaths from measles.	Deaths from measles in 100,000 deaths from all causes.	Deaths from all causes to one death from measles.	Deaths from measles in 100,000 living persons.	Living persons to one death from measles.	Deaths from pneumonia.	Deaths from pneumonia in 100,000 deaths from all causes.	Deaths from all causes to one death from pneumonia.	Deaths from pneumonia in 100,000 living persons.	Living persons to one death from pneumonia.	Deaths from small pox.	Deaths from small pox in 100,000 deaths from all causes.	Deaths from all causes to one death from small pox.	Deaths from small pox in 100,000 living persons.	Living persons to one death from small pox.	
9,008	1,830	54.6	23	4,280	9,237	1,876	53.3	24	4,174	40,012	8,128	12.3	104	964	4,507	916	109.2	12	8,555	
133	1,235	81.0	13	7,496	403	3,472	28.7	40	2,474	1,505	13,973	7.2	151	663	20	186	538.6	2	49,850	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	42	16,667	6.0	435	230	95	37,698	2.7	980	108	2
219	3,579	27.9	45	2,212	204	3,334	30.0	42	2,375	1,191	19,464	5.1	246	407	29	474	211.0	6	16,700	3
134	1,485	67.4	24	4,181	84	931	107.4	15	6,670	559	6,194	16.1	100	1,002	254	2,814	35.5	45	2,206	4
6	1,600	62.5	15	6,644	1	267	375.0	3	30,864	19	5,067	19.7	48	2,098	1	267	375.0	3	30,864	5
83	1,221	81.9	15	6,475	30	441	226.5	6	17,015	427	6,283	15.9	79	1,259	10	147	679.6	2	53,745	6
1	990	101.0	7	14,181	.....	.....	.....	.....	.....	8	7,921	12.6	56	1,773	.....	.....	.....	.....	.....	7
42	2,691	37.2	34	2,977	33	2,114	47.3	26	3,788	126	8,072	12.4	101	992	.....	.....	.....	.....	.....	8
42	2,684	48.0	32	3,136	21	1,042	96.0	16	6,271	123	6,104	16.4	93	1,071	3	149	671.7	2	43,900	9
7	309	323.4	4	26,821	23	1,016	98.4	12	8,163	271	11,970	8.4	144	693	1	44	2,264.0	1	187,748	10
92	676	147.9	8	12,871	270	1,984	50.4	33	4,386	1,363	10,018	10.0	115	869	18	132	755.9	2	65,784	11
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	2,000	50.0	7	14,999	.....	.....	.....	.....	.....	12
640	1,901	52.6	25	3,969	702	2,085	48.0	28	3,618	2,882	8,559	11.7	114	881	170	505	198.1	7	14,941	13
449	2,542	39.3	27	3,743	201	1,138	87.9	12	8,361	1,514	8,573	11.7	90	1,110	60	340	294.4	4	28,011	14
337	3,512	28.5	28	3,543	268	2,793	35.8	22	4,455	678	7,065	14.2	57	1,761	24	250	399.9	2	49,751	15
124	2,728	36.7	34	2,939	126	2,772	36.1	35	2,892	599	13,176	7.6	164	608	40	880	113.7	11	9,110	16
326	2,273	44.0	25	4,052	249	1,736	57.6	19	5,305	1,364	9,509	10.5	103	969	175	1,220	82.0	13	7,549	17
420	2,898	34.5	58	1,731	375	2,586	38.7	52	1,938	1,292	8,911	11.2	178	563	925	6,380	15.7	127	786	18
71	919	108.8	11	8,830	66	854	117.1	11	9,409	495	6,405	15.6	79	1,267	14	181	552.0	2	44,780	19
281	2,885	34.7	36	2,779	177	1,817	55.0	23	4,412	742	7,618	13.1	95	1,052	6	62	1,623.3	1	130,149	20
361	1,396	71.6	25	4,037	291	1,125	88.9	20	5,008	1,696	6,559	15.2	116	859	116	449	222.9	8	12,563	21
244	2,182	45.8	21	4,853	133	1,190	84.1	11	8,903	703	6,279	15.9	59	1,687	26	233	430.0	2	45,541	22
103	2,921	34.2	23	4,269	97	2,751	36.4	22	4,533	177	5,020	19.9	40	2,484	36	1,021	97.9	8	12,214	23
159	1,734	57.7	19	5,207	272	2,966	33.7	33	3,044	1,177	12,833	7.8	142	703	54	589	169.9	7	15,332	24
484	1,730	57.8	28	3,556	869	3,106	32.2	50	1,981	2,800	10,006	10.0	163	615	1,034	3,695	27.1	60	1,065	25
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3	1,022	61.7	15	6,865	11	5,940	16.8	53	1,872	26
37	3,700	27.0	30	3,324	41	4,100	24.4	33	3,000	88	8,800	11.4	72	1,398	5	500	200.0	41	24,599	27
6	976	102.5	14	7,082	3	488	205.0	7	14,164	50	8,130	12.3	118	850	29	4,715	21.2	68	1,465	28
25	583	171.6	8	12,732	51	1,189	84.1	16	6,241	364	8,483	11.8	114	875	2	47	2,145.5	1	159,150	29
181	1,711	58.5	20	5,006	166	1,568	63.8	18	5,458	700	6,613	15.1	77	1,294	22	208	481.2	2	41,186	30
28	2,373	42.1	31	3,231	.....	.....	.....	.....	.....	63	5,339	18.7	69	1,458	36	3,051	32.8	39	2,552	31
862	1,248	80.2	20	5,084	1,073	1,553	64.4	24	4,085	5,262	7,616	13.1	120	833	582	842	118.7	13	7,531	32
296	2,796	35.8	28	3,620	87	822	121.7	8	12,315	741	6,999	14.3	69	1,446	3	28	3,529.3	0	357,120	33
574	1,941	51.5	22	4,643	621	2,110	47.6	23	4,292	1,997	6,754	14.8	75	1,335	332	1,123	89.1	13	8,028	34
19	3,055	32.7	21	4,785	2	322	311.0	2	45,462	30	4,833	20.7	33	3,031	3	482	207.3	3	30,308	35
901	1,712	58.4	26	3,909	554	1,052	95.0	16	6,357	2,773	5,268	19.0	79	1,270	25	475	2,105.6	1	140,878	36
70	2,554	39.2	32	3,105	32	1,168	85.7	15	6,792	169	6,166	16.2	78	1,286	11	401	249.2	5	19,760	37
37	501	199.5	5	19,070	273	3,698	27.0	39	2,585	709	9,607	10.4	101	995	3	41	2,460.0	0	235,202	38
361	2,535	39.4	29	3,486	335	2,353	42.5	27	3,757	1,298	9,116	11.0	103	970	94	660	15.1	8	13,389	39
173	1,919	52.1	27	3,747	368	4,082	24.5	57	1,762	1,355	15,031	6.7	209	478	11	122	819.6	2	58,933	40
34	1,558	64.2	20	5,009	55	2,521	39.7	32	3,097	144	6,600	15.2	85	1,183	114	5,225	19.1	67	1,494	41
2	225	445.5	2	43,393	56	6,285	15.9	65	1,550	84	9,428	10.6	97	1,033	2	224	445.5	2	43,393	42
39	1,100	90.9	12	8,476	17	480	208.5	5	19,444	225	6,347	15.8	68	1,469	4	113	886.3	1	82,638	43
284	1,871	53.5	23	4,314	407	2,681	37.3	33	3,010	1,452	9,563	10.5	119	844	1	7	15,183.0	0	1,225,163	44
2	897	111.5	8	11,978	.....	.....	.....	.....	.....	5	2,242	44.6	21	4,791	.....	.....	.....	.....	.....	45
108	2,688	37.2	24	4,093	49	1,220	82.0	11	9,021	258	6,421	15.6	58	1,713	2	50	2,009.0	1	221,007	46
211	2,119	47.2	20	4,998	152	1,526	65.5	14	6,939	487	4,890	20.5	46	2,166	104	1,044	95.8	10	10,141	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	2,703	37.0	22	4,559	.....	.....	.....	.....	.....	48

DEATHS FROM CERTAIN PRINCIPAL DISEASES SEVERALLY AND IN GROUPS, WITH THE PROPORTION TO DEATHS FROM ALL CAUSES, AND TO POPULATION—BY STATES AND TERRITORIES—1870.

	STATES AND TERRITORIES.	Deaths from all causes.	DIPHTHERIA AND SCARLET FEVER.							INTERMITTENT AND REMITTENT FEVERS.						
			Deaths from diphtheria.	Deaths from scarlet fever.	Deaths from diphtheria and scarlet fever.	Deaths from diphtheria and scarlet fever in 100,000 deaths from all causes.	Deaths from all causes to one death from diphtheria and scarlet fever.	Deaths from diphtheria and scarlet fever in 100,000 living persons.	Living persons to one death from diphtheria and scarlet fever.	Deaths from intermittent fever.	Deaths from remittent fever.	Deaths from intermittent and remittent fevers.	Deaths from intermittent and remittent fevers in 100,000 deaths from all causes.	Deaths from all causes to one death from intermittent and remittent fevers.	Deaths from intermittent and remittent fevers in 100,000 living persons.	Living persons to one death from intermittent and remittent fevers.
	The United States	492,263	6,303	20,320	26,623	5,408	18.5	69	1,448	7,142	4,281	11,423	2,321	43.1	30	3,376
1	Alabama	10,771	45	13	58	539	185.7	6	17,190	408	346	754	7,000	14.3	76	1,322
2	Arizona	252	.....	.....	.....	.....	.....	.....	.....	2	2	4	1,587	63.0	41	2,415
3	Arkansas	6,119	33	16	49	801	124.9	10	9,887	310	129	439	7,174	13.9	91	1,104
4	California	9,025	255	479	734	8,133	12.3	131	763	95	43	138	1,529	65.4	25	4,060
5	Colorado	375	5	9	14	3,733	26.8	35	2,847	.....	4	4	1,067	93.8	10	9,966
6	Connecticut	6,796	56	286	342	5,032	19.9	64	1,572	7	21	28	412	242.7	5	19,195
7	Dakota	101	1	2	3	2,970	33.7	21	4,727	.....	1	1	991	101.0	7	14,181
8	Delaware	1,561	36	58	94	6,022	16.6	75	1,330	13	10	23	1,473	67.9	18	5,435
9	District of Columbia	2,015	63	69	132	6,551	15.3	100	998	15	6	21	1,042	96.0	16	6,271
10	Florida	2,264	8	10	18	795	125.8	10	10,430	130	84	214	9,452	10.6	114	877
11	Georgia	13,606	61	12	73	537	186.4	6	16,231	405	300	705	5,182	19.3	60	1,680
12	Idaho	50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
13	Illinois	33,672	603	2,162	2,765	8,212	12.2	109	919	613	275	888	2,637	37.9	35	2,861
14	Indiana	17,661	241	353	594	3,363	29.7	35	2,829	390	131	521	2,950	33.9	31	3,226
15	Iowa	9,597	148	325	473	4,929	20.3	40	2,524	94	67	161	1,678	59.6	14	7,416
16	Kansas	4,546	46	354	400	8,799	11.4	110	911	178	62	240	5,279	18.9	66	1,518
17	Kentucky	14,345	145	80	225	1,569	63.8	17	5,871	223	111	334	2,328	43.0	25	3,955
18	Louisiana	14,499	66	68	134	924	108.2	18	5,425	637	199	836	5,766	17.3	115	870
19	Maine	7,728	80	422	502	6,496	15.4	80	1,249	27	12	39	505	198.2	6	16,075
20	Maryland	9,740	218	331	549	5,637	17.7	70	1,422	81	73	154	1,581	63.2	20	5,071
21	Massachusetts	25,850	280	911	1,191	4,606	21.7	82	1,224	15	48	63	244	410.5	4	23,133
22	Michigan	11,181	141	707	848	7,584	13.2	72	1,396	153	97	250	224	44.7	21	4,736
23	Minnesota	3,526	63	238	301	8,537	11.7	68	1,461	9	6	15	425	235.1	34	29,314
24	Mississippi	9,172	46	24	70	763	131.0	9	11,837	377	256	633	6,901	14.5	77	1,308
25	Missouri	27,982	356	1,049	1,405	5,021	19.9	82	1,225	799	253	1,052	3,760	26.6	61	1,636
26	Montana	185	1	1	2	1,081	92.5	10	10,298	.....	.....	.....	.....	.....	.....	.....
27	Nebraska	1,600	12	90	102	10,200	9.8	83	1,206	11	5	16	1,000	62.5	13	7,687
28	Nevada	615	9	141	150	24,390	4.1	353	283	8	8	16	2,602	38.4	38	2,650
29	New Hampshire	4,291	51	96	147	3,426	29.2	46	2,165	1	20	21	489	204.3	7	15,157
30	New Jersey	10,586	177	781	958	9,050	11.1	106	946	36	41	77	727	137.5	9	11,767
31	New Mexico	1,180	28	36	64	5,424	18.4	70	1,436	12	31	43	3,644	27.4	47	2,137
32	New York	69,095	864	3,403	4,267	6,176	16.2	97	1,027	124	312	436	631	158.9	10	10,052
33	North Carolina	10,588	145	14	159	1,502	66.6	15	6,738	204	241	445	4,203	23.8	42	2,408
34	Ohio	29,568	474	552	1,026	3,470	28.8	39	2,598	248	111	359	1,214	82.4	14	7,424
35	Oregon	622	34	16	50	8,039	12.4	55	1,818	8	6	14	2,251	44.4	15	6,495
36	Pennsylvania	52,639	702	5,645	6,347	12,058	8.3	180	555	126	124	250	475	210.6	7	14,088
37	Rhode Island	2,741	25	186	211	7,697	13.0	97	1,030	2	5	7	255	391.6	3	31,050
38	South Carolina	7,380	28	18	46	623	160.4	7	15,339	226	141	367	4,973	20.1	52	1,923
39	Tennessee	14,239	96	29	125	878	113.9	99	10,068	366	205	571	4,010	24.9	45	2,204
40	Texas, east of the Colorado River	9,015	78	19	97	1,076	92.9	15	6,683	476	246	722	8,009	12.5	111	898
41	Texas, west of the Colorado River	2,182	17	1	18	825	121.2	11	9,462	120	81	201	9,212	10.9	118	847
42	Utah	891	6	36	42	4,714	21.2	48	2,066	10	1	11	1,235	81.0	13	7,889
43	Vermont	3,545	61	54	115	3,244	30.8	35	2,874	3	10	13	367	272.7	4	25,427
44	Virginia	15,183	239	43	282	1,857	53.8	23	4,345	131	120	251	1,653	60.5	21	4,881
45	Washington	223	13	8	21	9,417	10.6	88	1,141	1	1	2	897	111.5	8	11,978
46	West Virginia	4,018	60	157	217	5,401	18.5	49	2,037	18	9	27	672	148.8	6	16,371
47	Wisconsin	9,960	186	1,016	1,202	12,068	8.3	114	877	30	26	56	562	177.9	5	18,833
48	Wyoming	74	1	.....	1	1,351	74.0	11	9,118	.....	1	1	1,351	74.0	11	9,118

DEATHS FROM CERTAIN PRINCIPAL DISEASES SEVERALLY AND IN GROUPS, WITH THE PROPORTION TO DEATHS FROM ALL CAUSES, AND TO POPULATION—BY STATES AND TERRITORIES—1870.

CANCER OF THE BREAST, OF THE UTERUS, AND OTHER CANCERS.								CEREBRO-SPINAL, ENTERIC, AND TYPHUS FEVERS.								DIARRHŒA, DYSENTERY, AND ENTERITIS.								
Deaths from cancer of the breast.	Deaths from cancer of the uterus.	Deaths from other cancers.	Deaths from cancer of the breast, of the uterus, and other cancers.	Deaths from cancer of the breast, the uterus, and other cancers in 100,000 deaths from all causes.	Deaths from all causes to one death from cancer of the breast, of the uterus, and other cancers.	Deaths from cancer of the breast, the uterus, and other cancers, in 100,000 living persons.	Living persons to one death from cancer of the breast, of the uterus, and other cancers.	Deaths from cerebro-spinal fever.	Deaths from enteric fever.	Deaths from typhus fever.	Deaths from cerebro-spinal, enteric, and typhus fevers.	Deaths from cerebro-spinal, enteric, and typhus fevers in 100,000 deaths from all causes.	Deaths from all causes to one death from cerebro-spinal, enteric, and typhus fevers.	Deaths from cerebro-spinal, enteric, and typhus fevers in 100,000 living persons.	Living persons to one death from cerebro-spinal, enteric, and typhus fevers.	Deaths from diarrhœa.	Deaths from dysentery.	Deaths from enteritis.	Deaths from diarrhœa, dysentery, and enteritis.	Deaths from diarrhœa, dysentery, and enteritis in 100,000 deaths from all causes.	Deaths from all causes to one death from diarrhœa, dysentery, and enteritis.	Deaths from diarrhœa, dysentery, and enteritis in 100,000 living persons.	Living persons to one death from diarrhœa, dysentery, and enteritis.	
630	510	5,084	6,224	1,264	79.1	16	6,105	651	22,187	1,770	24,608	4,999	20.0	64	1,567	14,195	7,912	9,046	31,153	6,329	15.8	81	1,238	
10	8	69	87	808	123.8	9	11,460	22	409	9	440	4,850	24.5	44	2,206	335	203	129	667	6,193	16.2	67	1,495	1
....	....	.....	.....	.....	.....	.....	.....	1	11	.....	12	4,762	21.0	124	805	5	5	1	11	4,365	23.0	114	878	2
1	4	25	30	490	204.0	6	16,149	3	237	7	247	4,037	24.8	51	1,961	173	39	94	306	5,001	20.0	63	1,583	3
4	13	70	87	964	103.7	15	6,440	6	392	51	449	4,975	20.1	80	1,248	131	91	220	442	4,898	20.4	79	1,268	4
....	1	2	3	800	125.0	8	13,288	.....	11	5	16	4,267	23.4	40	2,492	8	7	26	41	10,933	9.1	103	972	5
10	8	139	157	2,310	43.3	29	3,423	2	444	19	465	6,842	14.6	87	1,156	72	116	72	260	3,826	26.1	48	2,067	6
....	....	1	1	990	101.0	7	14,181	.....	2	2	4	3,960	25.3	28	3,545	5	3	1	9	8,911	11.2	64	1,576	7
3	....	15	18	1,153	86.7	14	6,945	.....	91	1	92	5,894	17.0	74	1,359	31	20	16	67	4,292	23.3	54	1,866	8
3	2	7	12	596	167.9	9	10,975	1	62	1	64	3,176	31.5	49	2,058	80	31	26	137	6,799	14.7	104	961	9
3	3	10	16	707	141.5	9	11,734	.....	107	1	108	4,770	21.0	58	1,738	64	40	52	156	6,891	14.5	83	1,204	10
16	29	86	131	963	13.9	11	9,039	145	741	29	915	6,725	14.9	77	1,294	448	327	239	1,014	7,453	13.4	86	1,168	11
....	....	1	1	2,000	50.0	7	14,999	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1	2	4,000	25.0	13	7,500	12
35	21	228	284	843	118.6	11	8,043	43	1,758	131	1,932	5,738	17.4	76	1,315	1,284	664	603	2,551	7,576	13.2	100	996	13
22	13	133	168	951	105.1	10	10,004	75	1,029	172	1,276	7,225	13.8	76	1,317	664	101	386	1,241	7,027	14.2	74	1,354	14
9	8	70	87	907	110.3	7	13,724	6	521	45	572	5,960	16.8	48	2,087	339	228	238	805	8,388	11.9	67	1,483	15
4	2	16	22	484	206.6	6	16,564	4	204	20	228	5,015	19.9	63	1,598	171	59	89	319	7,017	14.3	88	1,142	16
22	12	101	135	941	106.3	10	9,785	41	661	35	737	5,138	19.5	56	1,792	357	211	292	860	5,995	16.7	65	1,536	17
13	19	118	150	1,035	96.7	21	4,846	23	449	50	522	3,600	27.8	72	1,393	509	336	294	1,139	7,856	12.7	10	6,382	18
7	5	174	186	2,407	41.5	30	3,371	1	608	32	641	8,295	12.1	102	978	103	50	116	269	3,481	28.7	43	2,331	19
20	8	98	126	1,294	77.3	16	6,198	1	434	82	517	5,308	18.8	66	1,510	157	107	87	411	4,220	23.7	53	1,900	20
30	25	477	532	2,057	48.6	37	2,739	8	1,142	33	1,183	4,575	21.9	81	1,232	406	427	281	1,114	4,308	23.2	77	1,308	21
13	7	125	145	1,297	77.1	12	8,166	8	606	37	711	6,359	15.7	60	1,665	363	258	240	861	7,701	13.0	73	1,375	22
6	3	26	35	993	100.7	8	12,563	1	236	31	268	7,601	13.2	61	1,641	112	84	83	279	7,013	12.6	64	1,570	23
6	13	43	62	676	147.9	8	13,354	6	333	6	345	3,761	26.6	42	2,400	325	103	237	665	7,250	13.8	80	1,245	24
18	10	146	174	622	160.8	10	9,893	15	1,395	60	1,470	5,253	19.0	85	1,171	1,300	593	467	2,270	8,112	12.3	132	758	25
....	....	.....	.....	.....	.....	.....	.....	.....	9	.....	9	4,865	20.6	44	2,288	9	1	3	13	7,027	14.2	63	1,584	26
1	....	3	4	400	250.0	3	30,748	1	52	3	56	5,000	17.9	46	2,196	26	12	25	63	6,300	15.9	51	1,952	27
....	....	1	1	163	615.0	2	42,491	.....	14	.....	14	2,276	43.9	33	3,035	5	2	19	26	4,228	23.7	61	1,634	28
7	2	110	119	2,773	36.1	37	2,675	1	302	4	307	7,155	14.0	96	1,037	49	71	57	177	4,125	24.2	56	1,798	29
8	2	130	140	1,323	75.6	16	6,472	3	336	18	357	3,372	29.7	39	2,538	141	170	232	552	5,214	19.2	61	1,641	30
....	3	14	17	1,441	69.4	19	5,404	.....	90	11	101	8,569	11.7	110	910	21	29	30	80	6,780	14.8	87	1,148	31
142	122	905	1,169	1,692	59.1	27	3,749	61	2,020	369	2,450	3,559	28.0	56	1,782	2,243	1,068	1,330	4,641	6,717	14.9	106	944	32
16	12	87	115	1,086	92.1	11	9,316	4	862	19	885	8,359	12.0	83	1,211	418	135	175	728	6,876	14.5	68	1,472	33
44	33	348	425	1,437	69.6	16	6,271	74	1,280	80	1,434	4,850	20.6	54	1,859	794	461	629	1,884	6,372	15.7	71	1,415	34
1	...	1	2	322	311.0	2	45,462	1	52	2	55	8,842	11.3	61	1,653	6	6	9	21	3,376	29.6	23	4,330	35
66	55	646	767	1,457	68.6	22	4,592	18	1,898	262	2,178	4,138	24.2	62	1,617	953	684	996	2,633	5,002	20.0	75	1,338	36
4	....	54	58	2,116	47.3	27	3,747	.....	88	2	90	3,284	30.5	41	2,415	27	59	30	116	4,232	23.6	53	1,874	37
7	11	43	61	827	121.0	9	11,567	8	515	41	564	7,642	13.1	80	1,251	278	147	112	537	7,276	13.7	76	1,314	38
9	16	121	146	1,025	90.7	12	8,620	6	687	36	729	5,130	19.5	58	1,726	445	79	226	750	5,267	19.0	60	1,678	39
5	10	39	54	599	166.9	8	12,005	38	377	7	422	4,681	21.4	65	1,536	303	81	171	555	6,157	16.2	86	1,168	40
2	1	9	12	550	181.9	8	14,193	1	87	9	97	4,446	22.5	57	1,756	36	12	28	76	3,463	28.7	45	2,241	41
1	....	1	2	225	445.5	2	43,393	.....	24	3	27	3,030	33.0	31	3,214	46	4	52	102	11,448	8.7	118	851	42
6	2	91	99	2,703	35.8	30	3,339	2	221	3	226	6,375	15.7	68	1,463	35	103	59	197	5,557	18.0	60	1,678	43
31	22	121	174	1,146	87.3	14	7,041	.....	676	7	683	4,499	22.2	56	1,794	494	293	230	1,026	6,758	14.8	84	1,194	44
1	....	4	5	2,242	44.6	21	4,791	.....	13	2	15	6,727	14.9	63	1,597	.....	2	4	6	2,691	37.2	25	3,993	45
6	....	34	40	996	101.0	9	11,050	16	167	2	185	4,604	21.7	42	2,389	128	55	50	233	5,799	17.2	53	1,897	46
18	5	142	165	1,606	60.4	16	6,302	5	464	31	500	5,020	19.9	47	2,109	296	265	280	841	8,444	11.8	80	1,254	47
....	....	.....	.....	.....	.....	.....	.....	.....	1	.....	1	1,351	74.0	11	9,118	.....	.....	.....	.....	.....	.....	.....	.....	48