

Table 20 – Demographic Yearbook 2008

Table 20 presents deaths and death rates by cause and sex for the two latest available years between 2004 and 2008.

Description of variables: Causes of death are all those diseases, morbid conditions or injuries which either resulted in or contributed to death and the circumstances of the accident or violence which produced any such injuries.¹

The underlying cause of death, rather than direct or intermediate antecedent cause, is the one recommended as the main cause for tabulation of mortality statistics. It is defined as (a) the disease or injury which initiated the train of events leading directly to death, or (b) the circumstances of the accident or violence which produced the fatal injury.¹

Statistics on deaths by cause presented in this table are provided by the World Health Organisation. They are limited to countries or areas that meet the criterion that cause-of-death statistics are classified to the ninth or tenth revisions of the ICD. Data that are classified by the tenth revision are set in bold in the table.

Rate computation: Rates are the annual number of deaths in each cause group by sex reported for the year per 100 000 corresponding mid-year population. For certain causes, the population that more nearly approximates the population at risk is used as denominator, as specified below:

- rates for malignant neoplasm of female breast and malignant neoplasm of cervix uteri are computed per 100 000 female population 15 years and over;
- rates for hyperplasia of prostate are computed per 100 000 male population 50 years and over; and
- rates for direct and indirect obstetric causes, and rates for conditions originating in the perinatal period are computed per 100 000 total live births in the same year.

As noted above, rates presented in this table have been limited to those countries or areas having a total of at least 1 000 deaths from all causes in a given year. In certain cases death rates by cause have not been calculated because the population data needed for the denominator are not available (no data on population at risk are available). Moreover, rates based on 30 or fewer deaths shown in this table are identified by the symbol (♦).

Reliability of data: Countries and areas that have incomplete (less than 90 per cent completeness) or of unknown completeness of cause of deaths data coverage are considered unreliable and are set in *italics* rather than in roman type. Rates on these data are not computed. Information on completeness is normally provided by the World Health Organisation, when this is not the case, information on completeness is set to coincide with that of Table 18. Similarly, the reliability of data for the completeness of cause of death is provided by the World Health Organisation and it may differ from the reliability of data for the total number of reported deaths. Therefore, there are cases when the quality code in table 18 does not correspond with the typeface used in this table.

Territorial composition as set in Section 2.2 of "Technical Notes on the Statistical Tables", including or excluding certain population of a country refers only to the denominator.

Limitations: Statistics on deaths by cause are subject to the same qualifications as have been set forth for vital statistics in general and death statistics in particular as discussed in section 4 of the Technical Notes.

In considering cause-of-death statistics it is important to take account of the differences among countries or areas in the quality, availability, and efficiency of medical services, certification procedures, and coding practices. When a death is registered and reported for statistical purposes, the cause of death if available will be stated in the death registration form. This statement of cause may have several sources: (1) If the death has been followed by an autopsy, presumably the "true" cause will have been discovered; (2) If an autopsy is not performed but the decedent was treated prior to death by a medical attendant, the reported cause of death will reflect the opinion of that physician based on observation of the patient while he

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¹ *International Statistical Classification of Diseases and Related Health Problems*, Tenth Revision, Volume 2, World Health Organization, Geneva, 1992

or she was alive; and (3) If, on the other hand, the decedent has died without medical attendance, the body may be examined (without autopsy) by a physician who, aided by the questioning of persons who saw the patient before death, may come to a decision as to the probable cause of death. These three possible sources of information on cause of death constitute in general five degrees of decreasing accuracy in reporting.

Serious difficulties of comparability may stem also from differences in the form of death certificate being used, an increasing tendency to enter more than one cause of death on the certificate and diversity in the principles by which the primary or underlying cause is selected for statistical use when more than one is entered.

Differences in terminology used to identify the same disease also result in lack of comparability in statistics. These differences may arise in the same language in various parts of one country or area, but they are particularly troublesome between different languages.

Coding problems, and problems in interpretation of rules, arise constantly in using the various revisions of the International Statistical Classification of Diseases and Related Health Problems. Lack of uniformity between countries or areas in these interpretations and in adapting rules to national needs, results in a lack of comparability that can be observed in the statistics. It is particularly evident in causes that are coded differently according to the age of the decedent, such as pneumonia, diarrhoeal diseases and others. Changing interpretations and new rules can also introduce disparities into the time series for one country or area. Hence, large increases or decreases in deaths reported from specified diseases should be examined carefully for possible explanations in terms of coding practice, before they are accepted as changes in mortality.

Further limitations of statistics by cause of death result from the periodic revision of the International Classification of Diseases. Data might not be comparable among countries or areas if different revisions of the Classification were used. Similarly, comparison over time for one country or area is not appropriate if different revisions were applied in the country. For a detailed indication of the revision that countries have used when cause of deaths data are available, see table 20-2 in the technical notes.

In addition to the qualifications explained in footnotes, particular care must be taken in using distributions with relatively large numbers of deaths attributed to ill-defined causes. Large frequencies in this category may indicate that cause of death among whole segments of the population has been undiagnosed, and the distribution of known causes in such cases is likely to be quite unrepresentative of the situation as a whole.

The possibility of error being introduced by the exclusion of deaths of infants who were born alive but died before the registration of the birth or within the first 24 hours of life should not be overlooked. These infant deaths are incorrectly classified as late foetal deaths. In several countries or areas, tabulation procedures have been devised to separate these pseudo-late-foetal deaths from true late foetal deaths and to incorporate them into the total deaths, but even in these cases there is no way of knowing the cause of death. Such distributions are footnoted.

For a further detailed discussion of the development of statistics of causes of death and the problems involved, see chapter II of the *Demographic Yearbook* 1951.

In addition, it should be noted that rates are affected also by the quality and limitations of the population at risk that are used in their computation. The problems of under-enumeration or over-enumeration and, to some extent, the differences in definition of population and live births have been discussed in section 3 of the Technical Notes dealing with population data in general and section 4 with vital statistics, respectively. Specific information pertaining to individual countries or areas is given in the footnotes to table 3 on total population and to table 9 on live births.

Earlier data: Deaths and death rates by cause have been shown in the 2006 and earlier issues of the *Demographic Yearbook*. For information on specific years covered, readers should consult the Historical Index.

Table 20-2. Tabulation list for ICD-9 and ICD-10 data for presentation in the Demographic Yearbook

Disease	ICD-10	ICD-9 Basic Tabulation List
All causes	A00-Y89	01-56
Certain infectious and parasitic diseases	A00-B99	01-07, 184
Intestinal infectious diseases	A00-A09	01
Tuberculosis	A15-A19	02
Tetanus ¹	A33, A35	037
Diphtheria	A36	033
Whooping cough	A37	034
Meningococcal infection	A39	036
Septicaemia	A40-A41	038
Acute poliomyelitis	A80	040
Measles	B05	042
Viral hepatitis	B15-B19	046
Human immunodeficiency virus [HIV] disease	B20-B24	184
Malaria	B50-B54	052
Neoplasms	C00-D48	08-17
Malignant neoplasms	C00-C97	08-14
Malignant neoplasm of lip, oral cavity and pharynx	C00-C14	08
Malignant neoplasm of oesophagus	C15	090
Malignant neoplasm of stomach	C16	091
Malignant neoplasm of colon, rectosigmoid junction, rectum, anus and anal canal	C18-C21	093-094
Malignant neoplasm of liver and intrahepatic bile ducts	C22	095
Malignant neoplasm of pancreas	C25	096
Malignant neoplasm of trachea, bronchus and lung	C33-C34	101
Malignant neoplasm of female breast	C50	113
Malignant neoplasm of cervix uteri	C53	120
Malignant neoplasm of prostate	C61	124
Malignant neoplasm of lymphoid, haematopoietic and related tissue	C81-C96	14
Disorders of the blood and blood-forming organs and certain disorders involving the immune mechanism	D50-D89	20
Anaemias	D50-D64	200
Endocrine, nutritional and metabolic diseases	E00-E88	18-19, minus 184
Diabetes mellitus	E10-E14	181
Malnutrition	E40-E46	190-192
Mental and behavioural disorders	F01-F99	21
Diseases of the nervous system	G00-G98	22
Diseases of the circulatory system	I00-I99	25-30
Acute rheumatic fever and chronic rheumatic heart diseases	I01-I09	25
Hypertensive diseases	I10-I13	26
Ischaemic heart diseases	I20-I25	27
Cerebrovascular diseases	I60-I69	29
Diseases of arteries, arterioles and capillaries	I70-I79	300-302
Diseases of the respiratory system	J00-J98	31-32
Influenza	J10-J11	322

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Disease	ICD-10	ICD-9 Basic Tabulation List
Pneumonia	J12-J18	321
Chronic lower respiratory diseases	J40-J47	323-325
Diseases of the digestive system	K00-K92	33-34
Gastric and duodenal ulcer	K25-K27	341
Diseases of the liver	K70-K76	347
Diseases of the musculoskeletal system and connective tissue	M00-M99	43
Diseases of the genitourinary system	N00-N98	35-37
Disorders of kidney and ureter	N00-N28	350-351
Hyperplasia of prostate	N40	360
Pregnancy, childbirth and the puerperium	O00-O99	38-41
Pregnancy with abortive outcome	O00-O07	38
Other direct obstetric causes ¹	O10-092, O95, A34	39
Indirect obstetric causes	O98-O99	40
Certain conditions originating in the perinatal period	P00-P96	45
Congenital malformations, deformations and chromosomal abnormalities	Q00-Q99	44
Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	R00-R99	46
All other diseases	H00-H95, L00-L98	23-24, 42
External causes	V01-Y89	E47-E56
Accidents	V01-X59	E47-E53
Transport accidents	V01-V99	E47
Falls	W00-W19	E50
Accidental drowning and submersion	W65-W74	E521
Exposure to smoke, fire and flames	X00-X09	E51
Accidental poisoning by and exposure to noxious substances	X40-X49	E48
Intentional self-harm	X60-X84	E54
Assault	X85-Y09	E55
All other external causes	Y10-Y89	E56

¹ In ICD-10 obstetrical tetanus is classified to A34 but in this table it is included with the "Other direct obstetric causes".