

Table 20 – Demographic Yearbook 2023

Table 20 presents deaths and death rates by cause and sex for the two latest available years between 2018 and 2022.

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 International Classification of Diseases (ICD-9 or ICD-10). 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.

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 three 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 correspondence between ICD-10 and ICD-9, please see table 20-1 below.

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.

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 annually since the 1951 issue of the *Demographic Yearbook* and every other year since the 2000 issue. For information on specific years covered, readers should consult the Historical Index.

Table 20-1. 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-A33, A35-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 |

Table 20-1. Tabulation list for ICD-9 and ICD-10 data for presentation in the Demographic Yearbook

| Disease | ICD-10 | ICD-9 Basic Tabulation List |
|--|-------------------------|------------------------------------|
| Diseases of arteries, arterioles and capillaries | I70-I79 | 300-302 |
| Diseases of the respiratory system | J00-J98 | 31-32 |
| Influenza | J10-J11 | 322 |
| 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, A34 | 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 "Other direct obstetric causes", except for Belarus, Russian Federation, Seychelles, Turkmenistan and Ukraine, where obstetrical tetanus is included in "Tetanus" and "Other direct obstetric causes" excludes A34 and O95.