Table 21 – *Demographic Yearbook 2004*

Table 21 presents deaths and death rates by cause for data from 1995 and 2004 that are new since this table was last published in the *Demographic Yearbook* 2002.

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] Causes and corresponding ICD codes are presented in table 21-1 in the technical notes.

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. 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 reported for the year per 100 000 corresponding mid-year population.

For other cause groups, for which the population more nearly approximates the population at risk, are 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 (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. This may arise in either of two situations. First, no data on population at risk are available. Second, cause-of-death statistics are available for only a limited portion of the country and it is not possible to identify births or population at risk for that limited geographic area. 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.

In general the quality code for deaths shown in table 18 is used to determine whether data on deaths in other tables appear in roman or *italic* type. However, the reliability of data for the completeness of cause of death is provided by the World Health Organisation[2] 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.

In addition, when it is known that registration of cause of death does not cover certain areas of a country, rates are not computed. Those countries are Republic of Moldova and Russian Federation, as indicated in footnotes 6 and 7, respectively. All other footnotes pertaining to the inclusion or exclusion of certain population of a country refer 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 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 21-2 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 2002 and earlier issues of the Demographic Yearbook. For information on specific years covered, readers should consult the Index.

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

[2] For more information on specific method used for countries, see “Mathers CD, Bernard C, Iburg KM, Inoue M, Ma Fat D, Shibuya K et al. *Global burden of disease in 2002: data sources, methods and results.* Geneva, World Health Organization, 2003 (GPE Discussion Paper No. 54).

Table 21-1. Versions of cause of deaths list used by countries/areas
Tableau 21-1. Les versions de la cause des décès énumèrent utilisé par countries/areas

Continent, country or area Continent, pays ou zone	Versions of the cause of deaths list - Les versions de la cause des décès									
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
AFRICA — AFRIQUE										
Mauritius-Maurice	...	...	...	...	...	...	9	9	9	9
Réunion	...	...	...	...	...	...	**10**	...	...	...
South Africa-Afrique du Sud	...	...	...	...	...	...	...	...	...	**10**
AMERICA, NORTH — AMERIQUE DU NORD										
Anguilla	...	...	...	...	...	...	**10**	...	...	**10**
Antigua and Barbuda-Antigua-et-Barbuda	...	...	...	...	...	**10**	**10**	**10**	...	...
Barbados-Barbade	...	...	...	...	...	...	**10**	...	...	...
Belize	...	...	...	...	...	...	**10**	...	...	...
Bermuda-Bermudes	...	**10**	**10**	**10**	**10**	...	...	**10**	...	...
Canada	...	...	...	...	...	...	**10**	**10**	**10**	...
Costa Rica	...	...	...	...	...	...	...	...	**10**	**10**
Cuba	...	...	...	...	...	...	...	**10**	**10**	**10**
Dominica-Dominique	...	...	...	...	...	9	**10**	**10**	**10**	...
Dominican Republic-République dominicaine	...	...	...	...	**10**	**10**	**10**	...	...	...
El Salvador	...	...	...	...	...	**10**	**10**	**10**	**10**	...
Guadeloupe	...	...	...	...	...	**10**	**10**	...	...	...
Guatemala	...	...	...	...	...	9	9	9	9	...
Haiti-Haïti	...	...	...	...	...	...	**10**	**10**	**10**	...
Martinique	...	...	...	...	...	**10**	**10**	...	...	...
Mexico-Mexique	...	...	...	...	...	...	...	**10**	**10**	...
Nicaragua	...	...	...	...	...	...	**10**	**10**	**10**	...
Panama	...	...	...	...	...	...	**10**	**10**	**10**	...
Puerto Rico-Porto Rico	...	...	...	...	...	...	**10**	**10**	...	...
Saint Kitts and Nevis-Saint-Kitts-et-Nevis	...	**10**	**10**	...	...	...	...	...	...	...
Saint Lucia-Sainte-Lucie	...	...	...	...	...	...	...	**10**	...	...
Saint Vincent and the Grenadines-Saint Vincent-et-les Grenadines	...	...	...	...	...	**10**	**10**	**10**	**10**	...
Trinidad and Tobago-Trinité-et-Tobago	...	9	9	...	**10**	**10**	...	...	...	...
Turks Caicos Islands-Îles Turques et Caïques	...	...	...	...	...	**10**	**10**	...	...	...
United States-États-Unis	...	...	...	...	...	...	**10**	**10**	...	...
United States Virgin Islands-Îles Vierges américaines	...	...	...	...	...	...	**10**	**10**	...	...
AMERICA, SOUTH — AMERIQUE DU SUD										
Argentina-Argentine	...	...	...	...	...	...	...	**10**	**10**	...
Brazil-Brésil	...	...	...	...	...	...	...	**10**	...	...
Chile-Chili	...	...	...	...	...	...	...	**10**	**10**	...
Ecuador-Équateur	...	...	...	...	...	...	**10**	**10**	**10**	**10**
French Guiana-Guyane française	...	...	...	...	...	...	**10**	...	...	...
Guyana	...	...	...	...	...	...	**10**	**10**	**10**	...
Paraguay	...	...	...	...	...	...	**10**	...	**10**	...
Suriname	**10**	**10**	**10**	**10**	**10**	**10**	...	...	...	...
Uruguay	...	...	...	...	...	...	**10**	...	...	...
Venezuela	...	...	...	...	...	...	**10**	**10**	...	...
ASIA — ASIE										
Armenia-Arménie	...	...	...	...	...	...	...	...	9	...
Brunei Darussalam-Brunéi Darussalam	...	**10**	**10**	**10**	**10**	**10**	...	...	...	...
China: Hong Kong SAR-Chine: Hong Kong RAS	...	...	...	...	...	...	**10**	**10**	**10**	**10**
Israel-Israël	...	...	...	...	...	**10**	**10**	...	**10**	...
Japan-Japon	...	...	...	...	...	...	**10**	**10**	**10**	**10**
Kazakhstan	...	...	...	...	...	...	...	...	9	**10**
Korea (Republic of)-Corée (République de)	...	...	...	...	...	...	...	**10**	**10**	**10**
Kyrgyzstan-Kirghizistan	...	...	...	...	...	...	...	...	**10**	**10**
Singapore-Singapour	...	...	...	...	...	...	...	9	9	...
Tajikistan-Tadjikistan	...	...	...	9	...	...	...	...	...	...
Uzbekistan-Ouzbékistan	...	...	...	...	...	...	...	9	9	...
EUROPE										
Albania-Albanie	...	...	...	...	...	...	...	9	9	...
Austria-Autriche	...	...	...	...	...	...	...	...	**10**	**10**
Belarus-Bélarus	...	...	...	...	...	...	...	**10**	**10**	...
Bulgaria-Bulgarie	...	...	...	...	...	...	...	...	9	9
Croatia-Croatie	...	...	...	...	...	...	...	...	**10**	**10**
Czech Republic-République tchèque	...	...	...	...	...	...	...	...	**10**	**10**
Denmark-Danemark	...	...	...	...	...	...	**10**	...	...	...

Table 21-1. Versions of cause of deaths list used by countries/areas
Tableau 21-1. Les versions de la cause des décès énumèrent utilisé par countries/areas (continued — suite)

Continent, country or area Continent, pays ou zone	Versions of the cause of deaths list - Les versions de la cause des décès									
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
EUROPE										
Estonia-Estonie	...	...	...	...	...	...	...	...	**10**	**10**
Finland-Finlande	...	...	...	...	...	...	...	...	**10**	**10**
France	...	...	...	...	...	...	**10**	**10**	**10**	...
Germany-Allemagne	...	...	...	...	...	...	...	**10**	**10**	**10**
Greece-Grèce	...	...	...	...	...	...	...	9	9	9
Hungary-Hongrie	...	...	...	...	...	...	...	...	**10**	...
Iceland-Islande	...	...	...	...	...	...	...	**10**	**10**	**10**
Ireland-Irlande	...	...	...	...	...	...	...	9	9	9
Italy-Italie	...	...	...	...	...	...	...	9	...	...
Latvia-Lettonie	...	...	...	...	...	...	...	...	**10**	**10**
Lithuania-Lituanie	...	...	...	...	...	...	...	...	**10**	**10**
Luxembourg	...	...	...	...	...	...	...	...	**10**	**10**
Malta-Malte	...	...	...	...	...	...	...	...	**10**	**10**
Netherlands-Pays-Bas	...	...	...	...	...	...	**10**	**10**	**10**	**10**
Norway-Norvège	...	...	...	...	...	...	...	**10**	**10**	**10**
Poland-Pologne	...	...	...	...	...	...	...	...	**10**	**10**
Portugal	...	...	...	...	...	...	...	...	**10**	...
Republic of Moldova-République de Moldova	...	...	...	...	...	...	...	...	**10**	**10**
Romania-Roumanie	...	...	...	...	...	...	...	...	**10**	**10**
Russian Federation-Fédération de Russie	...	...	...	...	...	...	...	...	**10**	**10**
Serbia and Montenegro-Serbie-et-Montenegro	...	...	**10**	**10**	**10**	...	**10**	**10**	...	...
Slovakia-Slovaquie	...	...	...	...	...	...	...	**10**	...	...
Slovenia-Slovénie	...	...	...	...	...	...	...	...	**10**	**10**
Spain-Espagne	...	...	...	...	...	...	...	**10**	**10**	**10**
Sweden-Suède	...	...	...	...	...	...	...	**10**	...	...
Switzerland-Suisse	...	...	...	...	...	...	...	**10**	**10**	**10**
The Former Yugoslav Rep. of Macedonia-L'ex-République yougoslave de Macédoine	...	...	...	...	...	...	9	9	9	...
Ukraine	...	...	...	...	...	...	...	...	9	9
United Kingdom-Royaume-Uni	...	...	...	...	...	-	...	...	**10**	**10**
OCEANIA — OCEANIE										
Australia-Australie	...	...	...	...	...	...	...	**10**	**10**	...
New Zealand-Nouvelle-Zélande	...	...	...	...	...	...	**10**	**10**	**10**	...

FOOTNOTES - NOTES

Data in bold refer to deaths by cause based on ICD-10 Classification, otherwise data refer to deaths by cause based on ICD-9 Classification. - Les données en typographie gras se rapportent aux Décès selon la cause basées sur la classification CIM-10, autrement les données se rapportent aux Décès selon la cause basées sur la classification CIM-9.

... Data are not presented in the current Yearbook.

- Combination of ICD 9th and 10th revision: Scotland used ICD-10 while England andWales and Northern Ireland used ICD-9.

9 ICD-9 Classification - Classification CIM-9
10 ICD-10 Classification - Classification CIM-10

Table 21-2. 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

Table 21-2. Tabulation list for ICD-9 and ICD-10 data for presentation in the Demographic Yearbook

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".