

### Table 15 - Demographic Yearbook 2016

Table 15 presents infant deaths and infant mortality rates by urban/rural residence for as many years as possible between 2012 and 2016.

Description of variables: Infant deaths are deaths of live-born infants under one year of age.

Statistics on the number of infant deaths are obtained from civil registers unless otherwise noted. Infant mortality rates are, in most instances, calculated from data on registered infant deaths and registered live births for a country or area where civil registration is considered reliable (that is, with an estimated completeness of 90 per cent or more).

The urban/rural classification of infant deaths is that provided by each reporting country or area; it is presumed to be based on the national census definitions of urban population that have been set forth at the end of the technical notes of table 6.

Rate computation: Infant mortality rates are the annual number of deaths of infants under one year of age per 1 000 live births (as shown in table 9) in the same year.

Rates by urban/rural residence are the annual number of infant deaths, in the appropriate urban or rural category, per 1 000 corresponding live births (as shown in table 9). These rates have been calculated by the United Nations Statistics Division.

Rates presented in this table have been limited to those countries or areas having at least a total of 30 infant deaths in a given year and for which the quality code is represented by a "C" or a symbol "I".

Reliability of data: Each country or area has been asked to indicate the estimated completeness of the infant deaths recorded in its civil register. These national assessments are indicated by the quality codes "C", "U" and "I" that appear in the first column of this table.

"C" indicates that the data are estimated to be virtually complete, that is, representing at least 90 per cent of the infant deaths occurring each year, while "U" indicates that data are estimated to be incomplete that is, representing less than 90 per cent of the infant deaths occurring each year. The code "I" indicates that the source of data is not civil registration, but is still considered reliable. The code "..." indicates that no information was provided regarding completeness.

Data from civil registers that are reported as incomplete or of unknown completeness (coded "U" or "...") are considered unreliable. They appear in italics in this table; rates are not computed for data so coded.

Limitations: Statistics on infant deaths 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.

The reliability of the data, an indication of which is described above, is an important factor in considering the limitations. In addition, some infant deaths are tabulated by date of registration and not by date of occurrence; these have been indicated by a plus sign "+". Whenever the lag between the date of occurrence and date of registration is prolonged and, therefore, a large proportion of the infant-death registrations are delayed, infant-death statistics for any given year may be seriously affected.

Another factor that limits international comparability is the practice of some countries or areas not to include in infant-death statistics infants who were born alive but died before the registration of the birth or within the first 24 hours of life, thus underestimating the total number of infant deaths. Statistics of this type are footnoted.

The method of reckoning age at death for infants may also introduce non-comparability. If year alone, rather than completed minutes, hours, days and months elapsed since birth, is used to calculate age at time of death, many of the infants who died during the eleventh month of life and some of those who died at younger ages will be classified as having completed one year of age and thus be excluded. The effect would be to underestimate the number of infant deaths. Information on this factor is given in footnotes when known. Reckoning of infant age is further discussed in the technical notes for table 16.

In addition, infant mortality rates are subject to the limitations of the data on live births that have been used as denominators for these rates. These have been set forth in the technical notes for table 9.

Because the two components of the infant mortality rate, infant deaths in the numerator and live births in the denominator, are both obtained from systems of civil registration, the limitations which affect live birth statistics are very similar to those which have been mentioned above in connection with the infant death statistics. It is important to consider the reliability of the data (the completeness of registration) and the method of tabulation (by date of occurrence or by date of registration) of live birth statistics as well as infant death statistics, both of which are used to calculate infant mortality rates. The quality code and use of italics to indicate unreliable data presented in this table refer only to infant deaths. Similarly, the indication of the basis of tabulation (the use of the symbol "+" to indicate data tabulated by date of registration) presented in this table also refers only to infant deaths. Table 9 provides the corresponding information for live births.

If the registration of infant deaths is more complete than the registration of live births, then infant mortality rates would be biased upwards. If, however, the registration of live births is more complete than registration of infant deaths, infant mortality rates would be biased downwards. If both infant deaths and live births are tabulated by registration, it should be noted that deaths tend to be more promptly reported than births.

Infant mortality rates may be seriously affected by the practice of some countries or areas of not considering infants that were born alive but died before the registration of the birth or within the first 24 hours of life as live birth and subsequently infant death. Although this practice results in both the number of infant deaths in the numerator and the number of live births in the denominator being underestimated, its impact is greater on the numerator of the infant mortality rate. As a result, this practice causes infant mortality rates to be biased downwards.

Infant mortality rates will also be underestimated if the method of reckoning age at death results in an underestimation of the number of infant deaths. This point has been discussed above.

Because of all these factors care should be taken in comparing infant mortality rates.

With respect to the method of calculating infant mortality rates used in this table, it should be noted that no adjustment was made to take account of the fact that a proportion of the infant deaths that occur during a given year are deaths of infants that were born during the preceding year and hence are not taken from the universe of births used to compute the rates. However, unless the number of live births or infant deaths is changing rapidly, the error involved is insignificant.

The comparability of data by urban/rural residence is affected by the national definitions of urban and rural used in tabulating these data. It is assumed, in the absence of specific information to the contrary, that the definitions of urban and rural used in connection with the national population census were also used in the compilation of the vital statistics for each country or area. However, it cannot be denied that, for some countries or areas, different definitions of urban and rural may be used for the vital statistics data and the population census data respectively. When known, the definitions of urban used in national population censuses are presented at the end of the technical notes for table 6. As discussed in detail in the technical notes for table 6, these definitions vary considerably from one country or area to another.

Urban/rural differentials in infant mortality rates may also be affected by whether the infant deaths and live births have been tabulated in terms of place of occurrence or place of usual residence. This problem is discussed in more detail in section 4.1.4.1 of the Technical Notes.

Earlier data: Infant deaths and infant mortality rates have been shown in previous issues of the *Demographic Yearbook*. For more information on specific topics and years for which data are reported, readers should consult the Historical Index.