

**Table 16 - Demographic Yearbook 2021**

Table 16 presents infant deaths and infant mortality rates by age and sex for latest available year between 2012 and 2021.

**Description of variables:** Age is defined as hours, days and months of life completed, based on the difference between the hour, day, month and year of birth and the hour, day, month and year of death. The age classification used in this table is as follows: Main categories are “under 1 day”, “1-6 days”, “7-27 days” and “28 days – 11 months”. Additional subcategories are shown within “7-27 days” and “28 days to 11 months” wherever available.

**Rate computation:** Infant mortality rates by age and sex are the annual number of infant deaths that occurred in a specific age-sex group per 1 000 live births of the corresponding sex. These rates have been calculated by the United Nations Statistics Division. The denominator for all these rates, regardless of age of infant at death, is the total number of live births by sex.

Infant deaths of unknown age are included only in the rate for under one year of age. Infant deaths of unknown sex are included in the rate for the total and, hence, these rates, should agree with the infant mortality rates shown in table 15. Discrepancies are explained in footnotes.

Rates presented in this table have been limited to those countries or areas having at least a total of 100 deaths in a given year. Moreover, rates specific for individual sub-categories based on 30 or fewer infant deaths are identified by the symbol “♦”.

**Reliability of data:** Data from civil registers of infant deaths which are reported as incomplete (less than 90 percent completeness) or of unknown completeness are considered unreliable and are set in italics rather than in roman type. Rates on these data are not computed. Table 15 and its technical notes provide more detailed information on the completeness of infant death registration. For more information about the quality of vital statistics, and the information available on their completeness, see section 4.2 of the Technical Notes.

**Limitations:** Statistics on infant deaths by age and sex are subject to the same qualifications as have been set forth for vital statistics and particularly for death statistics 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 of not including 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. In this table, this practice may contribute to the lack of comparability among deaths under one year, under 28 days, under one week and under one day.

Variation in the method of reckoning age at the time of death may also introduce non-comparability. Although it is to some degree a limiting factor throughout the age span, it is an especially important consideration with respect to deaths at ages under one day, under one week (early neonatal deaths) and under 28 days (neonatal deaths). As noted above, the recommended method of reckoning infant age at death is to calculate duration of life in minutes, hours and days, as appropriate. This gives age in completed units of time. In some countries or areas, however, infant age is calculated to the nearest day only, that is, age at death for an infant is the difference between the day, month and year of birth and the day, month and year of death. The result of this procedure is to classify as deaths at age one day, many deaths of infants that occurred before the infants had completed 24 hours of life. The under-one-day class is thus understated while the frequency in the 1-6-day age group is inflated.

A special limitation on comparability of neonatal (under 28 days) deaths is the variation in the classification of infant age used. Some countries or areas continue to report infant age in calendar, rather than lunar month (4-week or 28-day) periods. This failure to tabulate infant deaths under 4 weeks of age in terms of completed days introduces another source of variation between countries or areas. Deaths

classified as occurring under one month usually connote deaths within any one calendar month; these frequencies are not strictly comparable with those referring to deaths within 4 weeks or 27 completed days.

In addition, infant mortality rates by age and sex are subject to the limitations of the data on live births with which they have been calculated. These have been set forth in the technical notes for table 9. These limitations have also been discussed in the technical notes for table 15.

In addition, it should be noted that infant mortality rates by age are affected by the problems related to the practice of excluding infants who were born alive but died before the registration of the birth or within the first 24 hours of life from both infant-death and live-birth statistics and the problems related to the reckoning of infant age at death. These factors, which have been described above, may affect certain age groups more than others. In so far as the numbers of infant deaths for the various age groups are underestimated or overestimated, the corresponding rates for the various age groups will also be underestimated or overestimated. The youngest age groups are more likely to be underestimated than other age groups; the youngest age group (under one day) is likely to be the most seriously affected.

**Earlier data:** Infant deaths and infant mortality rates by age and sex have been shown in previous issues of the *Demographic Yearbook*. For information on specific years covered, readers should consult the Historical Index.