



مركز الإحصاء  
STATISTICS CENTRE

# Vital Statistics (Births and Deaths)

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## Overview

Vital statistics are an important component of population and social statistics because they are used for several purposes. These purposes comprise, for instance, population estimates, which are essentially based on the number of births and deaths as well as the volume of net migration. Population estimates are important statistics that help in the demographic analysis necessary in the economic and social planning processes; they also include trends in population growth and population distribution.

This so because data on births is used in public health activities such as postnatal health care programs for mothers and infants, vaccination and awareness-raising programs specific to health and nutrition.

Vital records are an important, basic and direct source of demographic data, and help in exploring the demographics of population growth and change, especially births, deaths and migration. In addition, the data helps us in identifying the trends of the population and its development now and in the future; this helps decision makers and policy designers in developing appropriate plans and programs.

## Importance

Countries need to know the numbers of births and deaths that occur each year - especially the main causes of death - in order to benefit from adequate health systems. The only way to register all people and trace all births and deaths is through civil registration. It provides the basis for giving legal identity to individuals and enables countries to identify their most pressing health issues.

Governments are unable to design efficient health policies or measure their effects when the cases and causes of death remain unrecorded and undocumented. Civil registration systems are resources that all developed countries possess, but developing countries still need them. Information on births and deaths, broken down by age, sex, and cause of death, is the pillar of public health planning.

## Objectives

- Providing reliable, high-quality indicators and statistics on births and deaths in a timely manner.
- Supporting decision makers and data users with respect to their needs of data.

## Concepts and Definitions

Births	
Median age of the of mother	Median age measures the average age of females who gave birth in a given year.
births (live-births)	<p>A birth is live when the baby shows any sign of life such as breathing or heart palpitations.</p> <p>“This term expresses the completion of the process of expulsion or extraction of the product of conception from the mother’s abdomen, irrespective of the duration of pregnancy, so that the newborn breathes after this separation, or shows any other sign of life, such as beating of the heart, umbilical cord pulse or definite movement of voluntary muscles, whether or not the placenta is attached, and any product of such a birth is considered liveborn.” (Source: Dictionary, Principles and Recommendations for a Vital Statistics System, Second Revision, United Nations, 2001).</p>
General fertility rate	The number of live births per 1000 women of childbearing age (childbirth), i.e. in the age group 15-49 years, during a calendar year.
Total fertility rate	The total fertility rate expresses the average number of children a woman may have during her childbearing period. When calculating the rate, fertility rates in the specific age group for each woman should be taken into account. It is also assumed that there are no deaths, and this rate is expressed as the number of children per woman.
Age-specific fertility rate	This rate measures the number of births per year per 1,000 women of a given age. To calculate this rate, the number of births during a given year is divided by the population in mid-year. Births to mothers under fifteen as well as births to mothers over 50 are counted in the age groups 15-19 and 45-49, respectively.
Crude birth rate	The crude birth rate is the simplest way to measure fertility; it is the number of live births registered during a calendar year divided by the total resident population during the 30th of June of that year. It is expressed as the number of births per 1000 population.
Sex ratio at birth	The sex ratio at birth during a calendar year is expressed as the number of male live births per 100 female live births.

## Deaths

Age-specific mortality rate	The number of deaths in an age group, occurring during a period of time (usually one calendar year) per 1000 population in the same age group in the middle of that period.
Crude death rate	The number of deaths occurring during a period of time (usually one calendar year) per 1,000 population in the same age group in the middle of that period.
Death	Death is "a state of permanent interruption of all signs of a person's life at any time after birth including psychosis, cardiac arrest, respiratory arrest, and unresponsiveness". This definition is related to live birth and excludes the category of stillborn and all other cases of fetal loss such as spontaneous abortion and induced abortion.
Infant death	A child who is born with any sign of life and then dies before completing his first year.
Infant mortality rate (under 1 year old)	The number of infant deaths per 1,000 live births during a period (usually one calendar year).
Neonatal mortality rate (less than 1 month)	The number of deaths among infants aged 28 days or less per 1,000 live births over a period of time (usually one calendar year).
Under-five mortality rate (per 1,000 live births)	The inputs are the number of deaths of children under one year of age, and the number of deaths from the age of one year to the probability of death between birth and the age of five, and it is expressed in deaths per 1000 live births.
Average life expectancy at birth	Life expectancy at birth is defined as the number of years a newborn baby is expected to live given the current life expectancy rates prevailing in a period of time (usually one calendar year), and is calculated using standard life tables.

## Geographical Coverage

**Geographical Coverage:** covers the Emirate of Abu Dhabi (Abu Dhabi, Al Ain and Al Dhafra regions).

**Statistical Units Coverage:** The units covered within the births and deaths statistics are all cases registered in government and private hospitals by gender, nationality and age in the three regions: Abu Dhabi Al Ain and Al Dhafra.

## Frequency

Preparation of indicators and collection of data are performed on an annual basis.

## Classifications

- There are no classifications of births
- There is a classification of deaths, which is the underlying cause of death ICD-10 (International Classification of Diseases, Tenth Revision).

## Main Data Sources

Administrative records - Department of Health – Abu Dhabi (DOH)

## Questionnaires

Not available presently.

## Sample Design

Not available presently.

## Data Collection

- Data is obtained from administrative records where cases of birth and death occurring in the Emirate of Abu Dhabi are recorded via the Department of Health – Abu Dhabi (DOH) system of reporting.
- Births data is based on the place of registration and not the mother's usual place of residence.
- Mortality data is based on the place of registration and not the usual place residence of the deceased.

## Data Editing

The data is evaluated by ensuring its logicity and taking into account the internal consistency among its constituents, in addition to making comparisons between this data and the data available from previous years to ensure external consistency, alongside comparing it with the annual report issued by the same body.

## Indicators Calculation

- **Births**

Indicator	Calculation Method
General fertility rate	Number of live births during the year/number of females (age 15-14) in mid-year X 1000.
Total fertility rate	$\Sigma$ Age-specific fertility rate * 5
Age-specific fertility rate	Live births during a year for women in a particular age group/number of women in a particular age group in mid-year X 1000.
Crude birth rate	Number of births during a year/ mid-year total population X 1000
Sex ratio at birth	Number of live births, males in a year/number of live births, females, during the same year X 100

- **Deaths**

Indicator	Calculation Method
Age-specific mortality rate	Number of deaths in a particular age group during a year/total mid-year population in the same age group X 1000
Crude death rate	Number of deaths in a year/total mid-year population X 1000
Infant mortality rate (under 1 year old)	Number of deaths of infants under one year of age in a year/live births in a year X 1000
Neonatal mortality rate (less than 1 month)	Number of deaths among infants aged 28 days in a year/ number of live births during the same year X 1000

## **Timeliness**

Indicators are published annually.

## **Dissemination**

All indicators and data are published by the Publication Department of the Center in the form of graphics, tables and texts and appear in the Center's publications such as:

- Abu Dhabi in figures
- Statistical Yearbook
- Births and deaths reports.
- Demographic and Social Indicators
- Strategy Indicators
- Executive Council Indicators



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