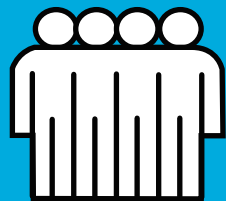
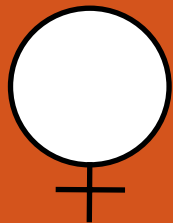


## Goal 4

### Reducing Child Mortality



**Target: reducing under-five child mortality by two thirds between 1990 and 2015.**

#### Indicators:

1. Under-five child mortality rate.
2. Infant mortality rate.
3. Proportion of one-year-old children immunized against measles.

Reducing child mortality is one of the most important priorities for developing countries and the world, which explains its inclusion in the Millennium Goals. The infant mortality rate is one of the key indicators of development for it reflects a set of interrelated dimensions, the most prominent of which are:

1. It reflects the status of children health and living conditions, as per their fundamental right to life.
2. It reflects the level of performance and effectiveness of the health system, which in turn is an essential component of human development.
3. It is a social indicator – for living conditions, where there is a strong correlation between child mortality and poverty and economic and social conditions of families.
4. It is extremely a sensitive indicator of crises, wars and natural disasters.



The level of achievement required at the global level for the fourth goal has been defined in reducing the mortality rate of under-five children by two thirds between 1990 and 2015. Three indicators to measure progress were identified: the mortality rate of under-five children, the infant mortality rate (which are indirect indicators to measure the goal), and the proportion of one-year-old children immunized against measles. The choice of this indicator is based on the fact that measles is of the most prevalent childhood diseases and one of the major causes of child mortality in the world, in addition to the fact that immunization against measles is not comprehensive in a great number of countries, which makes it a valid indicator for measuring progress.

In the Kingdom of Bahrain, under-five child mortality rate amounted to about 10 deaths per thousand live births in 2006 and the infant mortality rate (under one year) reached 7.6 deaths per thousand live births. These rates are good for developing countries, although they are susceptible to be improved to the level of more advanced countries (infant mortality rate in the Organization for Economic Cooperation and Development reported 9 thousandths, while under-five child mortality rate reached 11 thousandths in 2005, according to the Human Development Report, 2008) . The same applies to vaccination against measles, which was covered by 100% as well, indicating the success and effectiveness of the child care system.

**A number of factors play a supporting role in achieving these results; they can be summarized as follows:**

- Financial and economic resources sufficient to each state.
- An acceptable standard of living for families.
- A universal health care system, including care for children.
- The country's size and limited population.

### **What has been done to achieve the fourth goal**

As already noted, this goal includes achieving a single target, which is «reducing under-five child mortality rate by two thirds between 1990 and 2015.» For Bahrain, the commitment to this specific level of universal achievement means lowering the infant mortality rate than that of 22 deaths per thousand live births in 1990 to 7.3 deaths per thousand live births in 2015, with an average decline of 0.6 points per year over the period of time between the two dates.

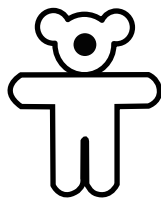
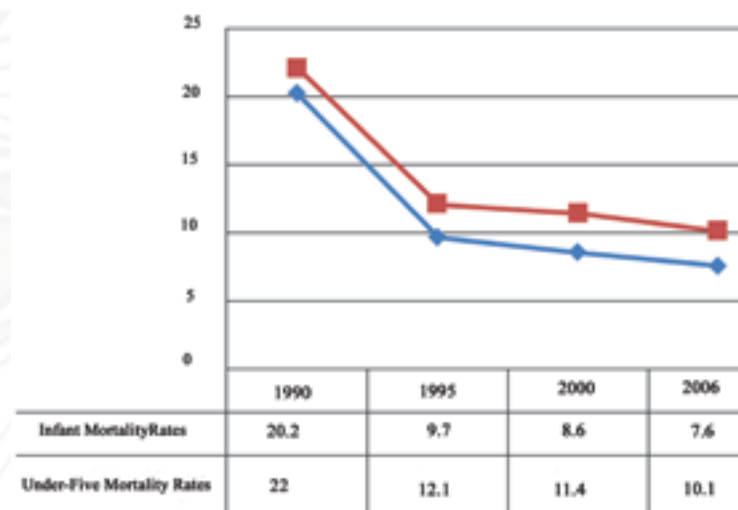


Figure 1: Evolution of under-five child mortality and infant mortality rates Between 1990 and 2006 (per thousand live births)



Source: Health Statistics 2003, 2006 - The Ministry of Health.

### Indicator 1: Under-five child mortality rate

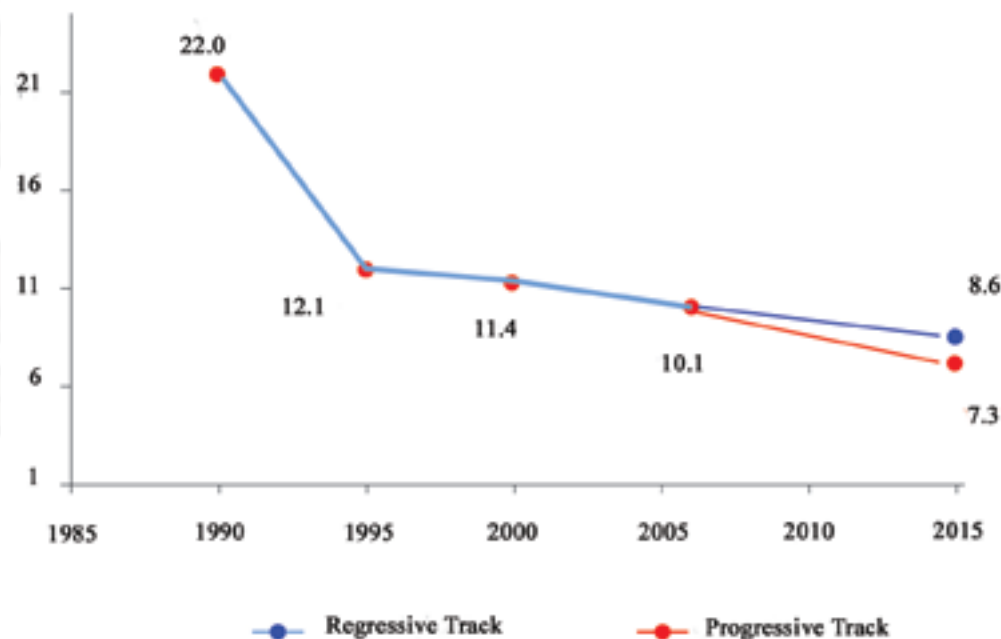
Health statistics indicate a marked decrease in under-five child mortality rate per 1000 live births from 22 deaths in 1990 to about half (10.1) in 2006, because of the remarkable progress in services designed for this age group such as periodic checkups from birth to six years old. This measure is necessary to the early detection of most diseases that lead to ill health and delays in growth and the treatment of cases by specialists in this field, as well as immunization of children against most infectious diseases in this age besides the special care for mothers before delivery and during pregnancy. The Ministry of Health is currently adding laboratory tests to detect certain cases, such as hereditary blood disorders and periodic screening for thyroid failure at birth. One of the best achievements in the Kingdom of Bahrain is to provide periodic examinations and immunization in all governmental and private health centers and clinics designed for the follow-up and treatment of children.

### Ability to achieve the goal

Progressing towards achieving this goal (i.e. reducing this rate by two-thirds) means a decline of 7.3 per thousand live births in 2015, an average annual decline of 0.6 points over the period. As it is known, the decline in the indicator does not follow a linear path, but a curve, since the speed of reducing the mortality rate decreases whenever its value decreases for objective reasons relating to the nature and type of health problems, with a varying difficulty to deal with the various causes of child mortality by different ages. As shown in the figure above, a significant decline in the mortality rate by 45% has been noted between 1990 and 1995 from 22 thousandths to 12 thousandths, with the rate of 9% per year. While the decline was less significant between 1995 and 2006, it did not exceed 16.5% during ten years with a rate of 1.65% points annually.

If the same rate of decline persists for the last ten years until 2015, the infant mortality rate will be approximately 8.6 deaths per thousand live births. This means that the level of achievement set globally, which means 7.3 deaths per thousand live births, is achievable if effective and action-oriented measures are taken to address the weaknesses and deal with the different characteristics of child mortality in the Kingdom. Such measures require the reduction of infant mortality rate, especially neonatal mortality rate which constitutes the largest part of child deaths.

Figure 2: Progressive and Regressive Tracks for Under-Five Child Mortality Rates Between 1985 and 2015



## Indicator 2: The infant mortality rate

Infant mortality rate per 1000 live births decreased by two thirds, from 20 deaths in 1990 to 7.6 per in 2006, reflecting the healthy progress that was achieved in the periodic examinations. Like the examination before marriage to detect hereditary diseases, particularly genetic blood diseases, such as anaemia thalassaemia and sickle-cell, which began in 1992 and was made mandatory for all those who were getting married by a Royal Decree in 2004. And there is also the follow-ups for expectant mothers, and providing safe deliveries at the hands of qualified persons, and provide health services for infants and preterm and increase the number of qualified women to follow up in case the cases of deliveries and to care for infants and preterms. This age group (infants) is given special care, where periodic checkups are done when they reach the ages of two months, four, six, nine months and years, where their growth is monitored as well as their immunizations.

Interventions were also developed to achieve the national goal, including the promotion of breastfeeding because of its importance to the health and child's development, especially during the first year. After the royal decree in 1996 in which Bahrain adopted the International Code of Marketing of Breast-milk Substitutes, control and monitoring were imposed on the marketing of alternatives to breastfeeding in hospitals and clinics both public and private. General periodic tests for the early detection and treatment of iron deficiency anemia have been carried out.

## Indicator 3: the percentage of children aged one year and immunized against measles

The percentage of one year old children who are immunized against measles rose from 87.0% in 1990 to 100% in 2006, due to periodic follow-up tests for this age group and monitoring and follow-up immunization schedules for those who don't show up. The level of coverage for children immunization vaccines against major childhood diseases are also almost 100%. The percentage of children immunized against polio, diphtheria, whooping cough and tetanus are almost 98% and 99% as of the year 2000. The Ministry of Health seeks to maintain this high percentage of coverage.

Table 1: Percentage of children aged one year and immunized against measles

1990	1995	2000	2006
87%	95%	98%	100%

Source: Health Statistics, 2003 - 2006.

## What was done to meet this Goal?

The steps and policies followed in order to meet this goal can be summarized as follows:

- 1 - Periodic checkups for children, from birth till the age of six were done, where children are checked for early detection of most diseases that lead to ill-health and delays in growth to be able to treat these cases by specialists.
- 2 – Immunization of children against most infectious diseases affecting children of early age and provide periodic examinations and immunization in all health centers, clinics, public and private, which carry on follow-ups and treatments for children.
- 3 - Care for mothers before and during pregnancy and providing them with guidance regarding health, immunization and testing and treating of diseases related to pregnancy or other diseases that may affect the health of the fetus.
- 4 - Adding laboratory tests to detect some cases of hereditary blood diseases thyroid problems at birth.

## Outlook: Child Nutrition

With the accomplishment of low levels of infant and child mortality in Bahrain, it is now necessary to act in two directions regarding the fourth goal. The first is the allocation of interventions to address the actual problems identified (such as infant mortality), which already mentioned. The second direction is to expand the perception of the fourth objective to be appropriate with the characteristics of the kingdom, especially dealing with this goal so that it also includes child nutrition, and not only be confined to mortality rate. It was mentioned previously, when discussing the first goal that it is advisable to transfer the goal regarding low-weight children to the fourth goal, where dimension nutritional health is more important than the dimension of poverty.

There are three internationally certified indicators for measuring mal-nutrition for children under five, an indicator of underweight (weight for age), dwarfism (or short stature: height for age), under-weight (weight for height), and in fact, each of these indicators has its implication, The first indicates direct form of mal-nutrition, and the second for a chronic imbalance in the pattern of nutrition and quantity, and the third to the temporary drop in weight due to food shortages or disease.

According to available data, the percentage of children under five who are underweight has fallen from 8.7% in 1995 to 4.2% in 2000, and the goal set to be achieved for this indicator (the first goal) is to reduce this rate by half between 1990 and 2015 (according to the understanding of the goal globally). For Bahrain, a reduction of 52% was achieved within five years, and therefore there is no worry of the ability to complete required task.