

Infant mortality, the rate at which babies of less than one year of age die, reflects the effect of economic and social conditions on the health of mothers and newborns, as well as the quality of medical care and preventive services.

In 2008, infant mortality rates in European countries ranged from a low of less than three deaths per 1 000 live births in Luxembourg, Slovenia, Nordic countries (with the exception of Denmark), Greece and the Czech Republic, up to a high of 11 and 17 deaths per 1 000 live births in Romania and Turkey respectively (Figure 1.8.1). Infant mortality rates were also relatively high (more than six deaths per 1 000 live births) in Latvia, Bulgaria and Malta. The average across the 27 European Union countries in 2008 was 4.6 deaths per 1 000 live births. Infant mortality rates tend to be higher than the EU average in central and eastern European countries, with the exceptions of Slovenia and the Czech Republic, both of which have had consistently lower rates.

Around two-thirds of the deaths that occur during the first year of life are neonatal deaths (*i.e.* during the first four weeks). Birth defects, prematurity and other conditions arising during pregnancy are the principal factors contributing to neonatal mortality in developed countries. With an increasing number of women deferring childbearing and the rise in multiple births linked with fertility treatments, the number of pre-term births has tended to increase (see Indicator 1.9). In a number of higher-income countries, this has contributed to a leveling-off of the downward trend in infant mortality rates over the past few years. For deaths beyond a month (post neonatal mortality), there tends to be a greater range of causes – the most common being SIDS (Sudden Infant Death Syndrome), birth defects, infections and accidents. Advances in neonatal care for very preterm and growth-restricted babies are also associated with a higher proportion of infant deaths occurring after the neonatal period (EURO-PERISTAT, 2008).

All European countries have achieved remarkable progress in reducing infant mortality rates from the levels of 1970, when the average was 25 deaths per 1 000 live births (Figure 1.8.1). This equates to a cumulative reduction of over 80% since 1970. Portugal has seen its infant mortality rate reduced by over 7% per year on average since 1970, going from the country with the highest rate in Europe to an infant mortality

rate among the lowest in Europe in 2008 (Figure 1.8.2). Large reductions in infant mortality rates have also been observed in Luxembourg, Slovenia and Greece. On the other hand, the reduction in infant mortality rates has been slower in Latvia, Malta, Bulgaria and the Netherlands. Infant mortality rates in Poland declined rapidly in the early 1990s to approach the EU average.

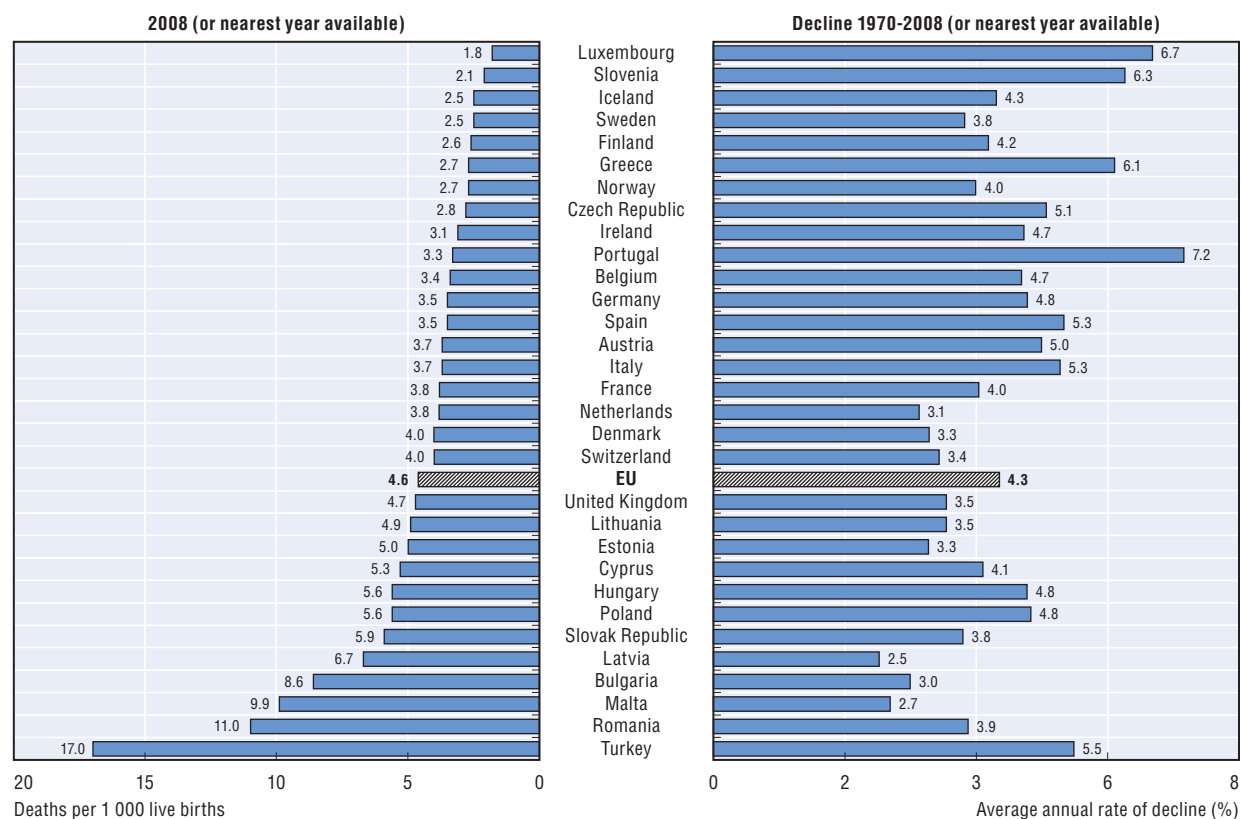
Numerous studies have used infant mortality rates as a health outcome to examine the effect of a variety of medical and non-medical determinants of health (*e.g.* Joumard *et al.*, 2008). Although most analyses show an overall negative relationship between infant mortality and health spending, the fact that some countries with a high level of health expenditure do not necessarily exhibit low levels of infant mortality has led some researchers to conclude that more health spending is not necessarily required to obtain better results (Retzlaff-Roberts *et al.*, 2004). A body of research also suggests that many factors beyond the quality and efficiency of the health system, such as income inequality, the social environment, and individual lifestyles and attitudes, influence infant mortality rates (Kiely *et al.*, 1995).

### Definition and deviations

The infant mortality rate is the number of deaths of children under one year of age in a given year, expressed per 1 000 live births. Neonatal mortality refers to the death of children under 28 days.

Some of the international variation in infant and neonatal mortality rates may be due to variations among countries in registering practices of premature infants. Most countries have no gestational age or weight limits for mortality registration. Minimal limits exist for Norway (to be counted as a death following a live birth, the gestational age must exceed 12 weeks) and in the Czech Republic, France, Malta (the National Mortality Register), the Netherlands and Poland a minimum gestational age of 22 weeks and/or a weight threshold of 500 grams is applied. Lithuania has a gestational age limit.

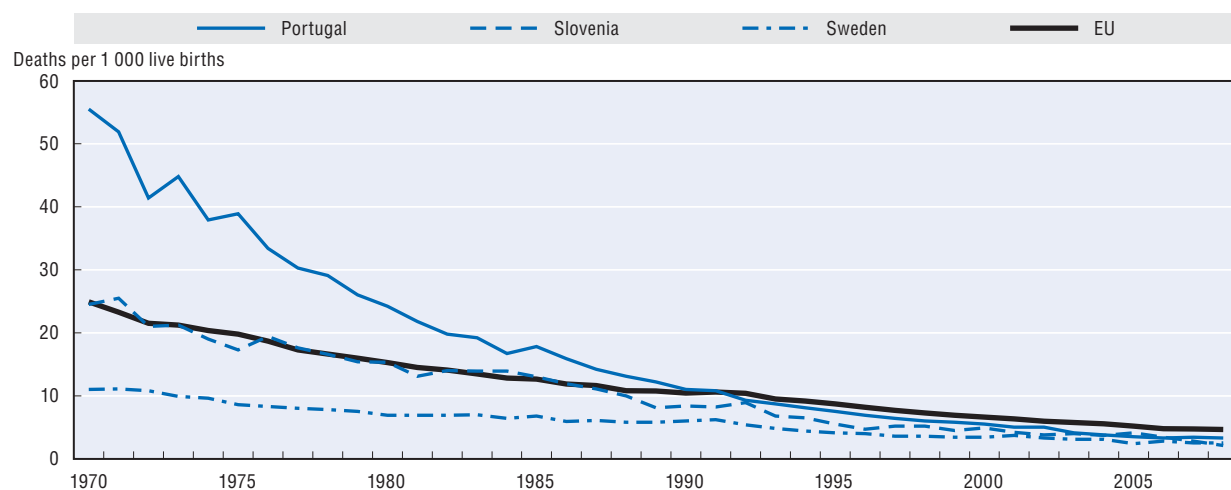
## 1.8.1. Infant mortality rates, 2008 and decline 1970-2008



Source: OECD Health Data 2010; Eurostat Statistics Database.

StatLink <http://dx.doi.org/10.1787/888932335818>

## 1.8.2. Infant mortality rates, selected European countries, 1970-2008



Source: OECD Health Data 2010; Eurostat Statistics Database.

StatLink <http://dx.doi.org/10.1787/888932335837>



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