

1. HEALTH STATUS

1.3. Premature mortality

Premature mortality, measured in terms of potential years of life lost (PYLL) before the age of 70 years, focuses on deaths among younger age groups of the population. PYLL values are heavily influenced by infant mortality and deaths from diseases and injuries affecting children and younger adults: a death at five years of age represents 65 PYLL; one at 60 years of age only ten. Declines in PYLL can be influenced by advances in medical technology, for example, in relation to infant mortality and deaths due to heart disease, and in prevention and control measures, reducing untimely or avoidable deaths from injuries and communicable diseases. A number of other variables, such as GDP per capita, occupational status, numbers of doctors and alcohol and tobacco consumption, have also been associated with reduced premature mortality (Or, 2000; Joumard *et al.*, 2008).

Rates of premature mortality are higher among males in all countries, with the OECD average in 2006 (4 853 years lost per 100 000 males) almost twice that of females (2 548). The main causes of potential years of life lost before age 70 among men are external causes including accidents and violence (29%), followed by cancer (20%) and circulatory diseases (16%). For women, the principal causes are cancer (31%), external causes (17%), and circulatory diseases (12%).

Among males, Sweden and Iceland had the lowest levels of premature mortality in 2006, and for females levels were lowest in Japan and Italy (Figure 1.3.1). Mexico and Hungary reported the highest premature mortality rates for both males and females, with levels more than double those of the lowest OECD country. The rate for the United States was also high – 30% above the OECD average in the case of males, and 43% for females. Among US males, one-third (and in females, one-fifth) of these premature mortality rates can be attributed to deaths resulting from external causes, including accidents, suicides and homicides. Premature death from homicides for men in the United States is over five times the OECD average.

Across OECD countries, premature mortality has been cut by more than half on average since 1970 (Figure 1.3.2). The decline in premature mortality was more rapid for females than for males between 1970

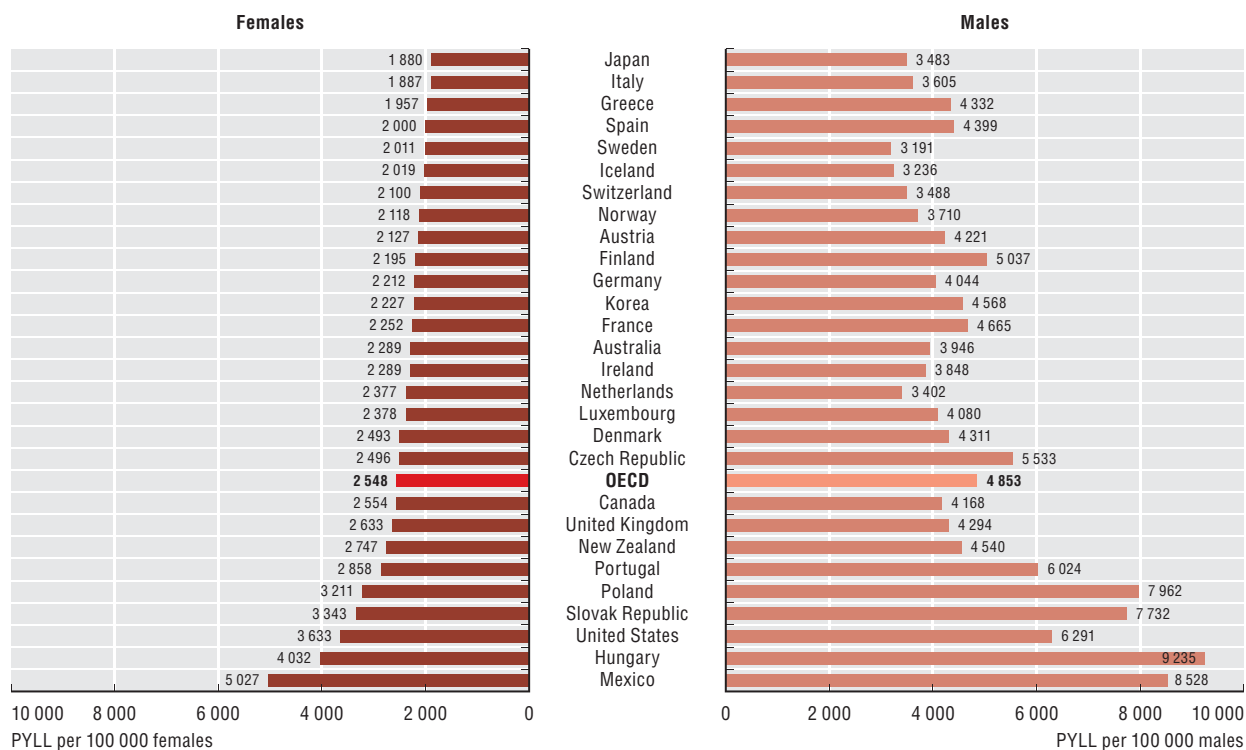
and the early 1990s, but since then the average rate of PYLL has been declining at the same rate for men and women. The downward trend in infant mortality has been a major factor contributing to the decline in earlier years (see Indicator 1.8 “Infant mortality”). More recently, the decline in deaths from heart disease among adults has contributed significantly to the overall reduction in premature mortality in many countries (see Indicator 1.4 “Mortality from heart disease and stroke”).

Portugal and Italy have seen premature mortality rates decline rapidly among both males and females to stand currently at less than one-third of 1970 levels. Although levels are still high, Mexico has also seen a dramatic decline. In each case, the sharp reduction in infant mortality rates has been an important contributing factor. In contrast, premature mortality has declined more slowly in Hungary, particularly among males. This is largely attributed to persistently high levels of mortality from circulatory disease (currently twice the OECD average) and from liver disease (over three times the OECD average). These reflect unhealthy lifestyles, in particular alcohol and tobacco consumption among males in Hungary, together with high suicide rates. Declines in premature mortality have also been slow in Poland and the United States.

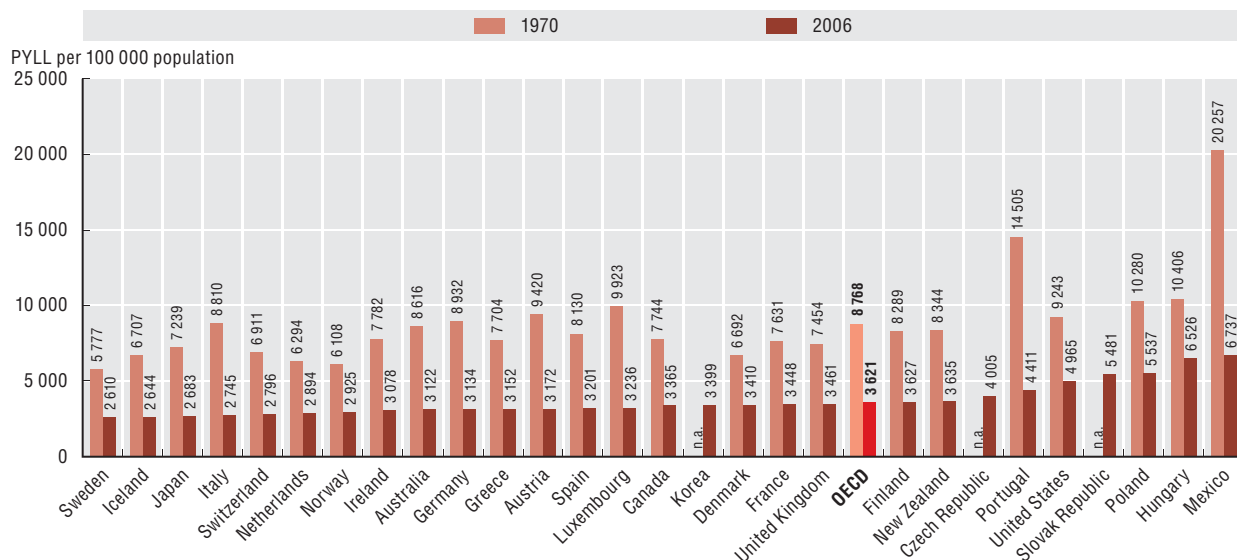
Definition and deviations

Potential years of life lost (PYLL) is a summary measure of premature mortality providing an explicit way of weighting deaths occurring at younger ages. The calculation for PYLL involves adding age-specific deaths occurring at each age and weighing them by the number of remaining years to live up to a selected age limit, defined here as age 70. For example, a death occurring at five years of age is counted as 65 years of PYLL. The indicator is expressed per 100 000 females and males.

1.3.1 Potential years of life lost (PYLL), females and males, 2006 (or latest year available)



1.3.2 Reduction in potential years of life lost (PYLL), females and males combined, 1970-2006 (or nearest year)



Source: OECD Health Data 2009. The raw mortality data are extracted from the WHO Mortality Database.

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