Mortality from circulatory diseases

Circulatory diseases – notably heart attack and stroke – were the main cause of mortality in most OECD countries in 2019, accounting for almost one in three deaths across the OECD. While mortality rates have declined in most OECD countries over time, population ageing, rising obesity and diabetes rates may hamper further reductions (OECD, 2015[11]). Indeed, prior to the COVID-19 pandemic, slowing improvements in heart disease and stroke were one of the principal causes of a slowdown in life expectancy gains in many countries (Raleigh, 2019[2]). Furthermore, COVID-19 may indirectly contribute to more deaths from circulatory diseases, owing to disruptions to acute, primary and preventive care.

In 2019, heart attacks and other ischaemic heart diseases (IHDs) accounted for 11% of all deaths in OECD countries. IHDs are caused by the accumulation of fatty deposits lining the inner wall of a coronary artery, restricting blood flow to the heart. Mortality rates are 80% higher for men than women across OECD countries, primarily because of a greater prevalence of risk factors among men, such as smoking, hypertension and high cholesterol.

Among OECD countries, central and eastern European countries had the highest IHD mortality rates – particularly in Lithuania, where there were 340 deaths per 100 000 people (age-standardised). Rates were also very high in Russia. Korea, Japan, France and the Netherlands had the lowest rates among OECD countries, at about one-third of the OECD average and around one-tenth of the rates in Lithuania and Russia (Figure 3.11). Between 2000 and 2019, IHD mortality rates declined in nearly all OECD countries, with an average reduction of 47%. Declines were most marked in France, Estonia, the Netherlands, Israel, Norway and Australia, where rates fell by over 60%. Mexico is the one country where IHD mortality rates increased. This is closely linked to increasing obesity rates and diabetes prevalence. Survival rates following a heart attack are also much lower in Mexico than in all other OECD countries (see indicator “Mortality following acute myocardial infarction (AMI)” in Chapter 6).

Cerebrovascular diseases (or strokes) were the underlying cause of 7% deaths across OECD countries in 2019. Disruption of the blood supply to the brain causes a stroke. As well as causing many deaths, strokes have a significant disability burden. Mortality rates were particularly high in Latvia, at more than triple the OECD average. Rates were also high in partner countries such as South Africa and Russia (Figure 3.12). The gender gap in (age-standardised) mortality rates from stroke is not as large as the gap for IHDs.

Mortality rates from stroke have fallen in all OECD member and partner countries since 2000, with an average reduction of 52%. Declines have been slower in the Slovak Republic, however, at less than 15%. For strokes, as for IHDs, a reduction in certain risk factors – notably smoking – has contributed to fewer deaths, alongside improved survival rates following an acute episode, reflecting better quality of care (see indicators “Mortality following ischaemic stroke” and “Mortality following acute myocardial infarction (AMI)” in Chapter 6).

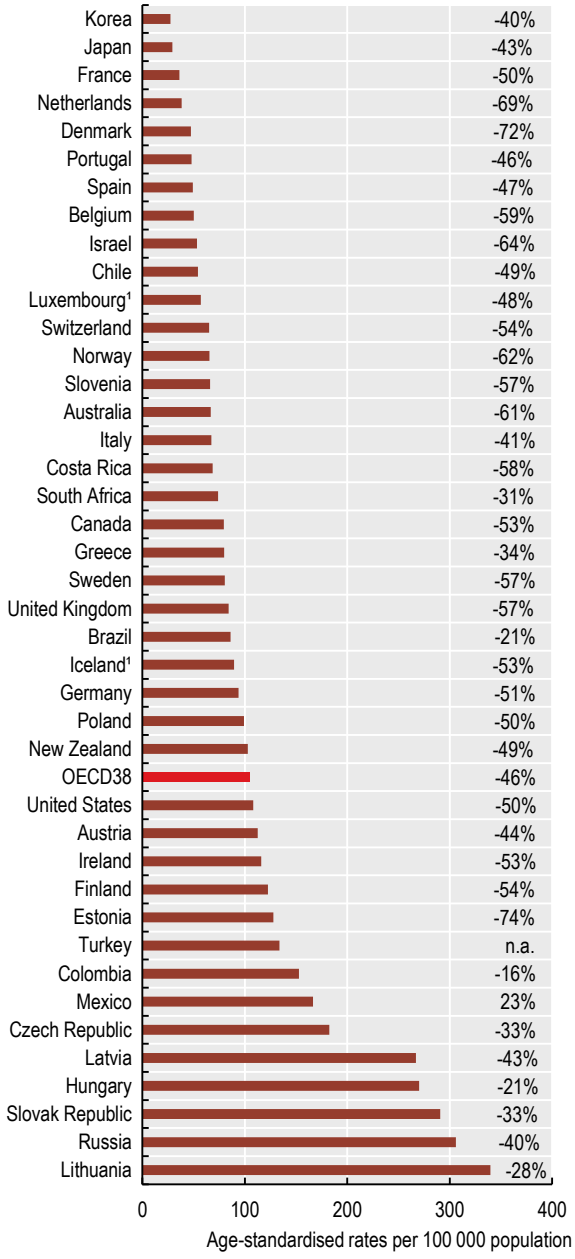
There are wide socio-economic inequalities in mortality from circulatory diseases in most OECD countries, largely reflecting socio-economic differences in major risk factors. Many of these deaths could be prevented, but trends in several risk factors are heading in the wrong direction. While smoking rates have fallen overall, cholesterol, blood pressure, low physical activity, obesity and diabetes are on the rise in many OECD countries (OECD/The King's Fund, 2020[12]). A number of public health, fiscal and regulatory measures can incentivise citizens to adopt healthier lifestyles, thereby reducing the burden of cardiovascular diseases on societies.

Definition and comparability

Mortality rates are based on numbers of deaths registered in a country in a year divided by the size of the corresponding population. The rates have been directly age-standardised to the 2010 OECD population (available at *http://oe.cd/mortality*) to remove variations arising from differences in age structures across countries and over time. The source is the WHO Mortality Database.

Deaths from IHDs are classified as ICD-10 codes I20-I25, and from cerebrovascular diseases as codes I60-I69.

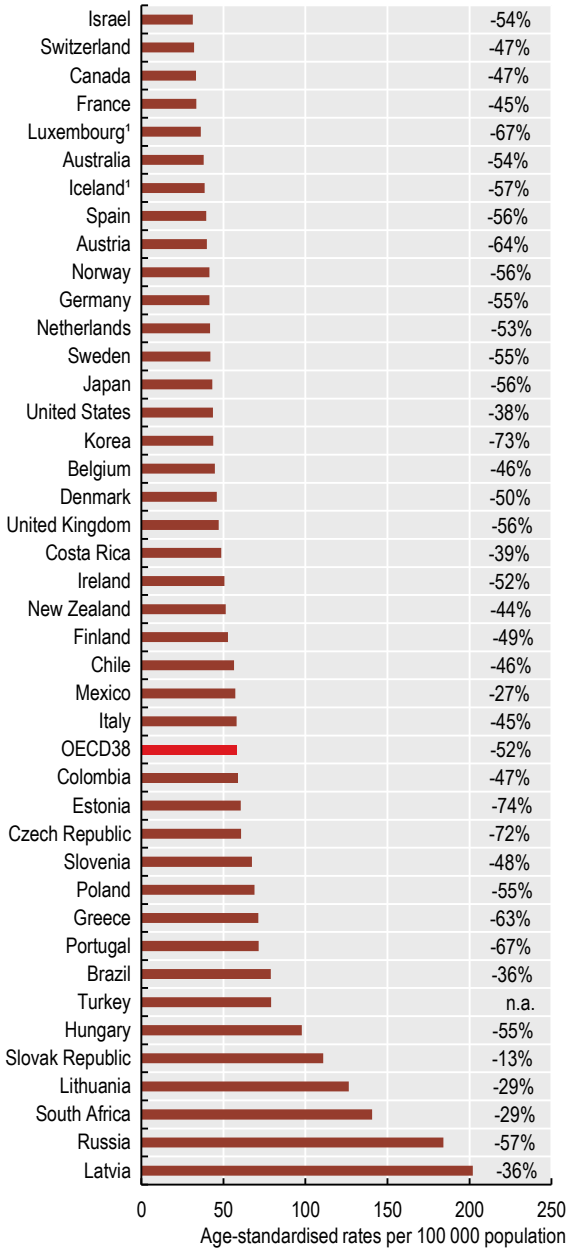
Figure 3.11. **Heart attacks and other ischaemic heart disease mortality, 2019 and change 2000-19 (or nearest year)**



Note: Data label shows percentage change between 2000 and 2019.
1. Three-year average.
Source: OECD Health Statistics 2021.

StatLink https://stat.link/

Figure 3.12. **Stroke mortality, 2019 and change 2000-19 (or nearest year)**



Note: Data label shows percentage change between 2000 and 2019.
1. Three-year average.
Source: OECD Health Statistics 2021.

StatLink https://stat.link/o9tasv