Mortality from circulatory diseases

Circulatory diseases – notably heart attack and stroke – were the main cause of mortality in most OECD countries in 2021, accounting for 28% of all deaths across OECD countries (see Figure 4.5 in section on "Main causes of mortality"). While mortality rates have declined in most OECD countries over time, population ageing, rising obesity and diabetes rates, and delays in diagnoses may hamper further reductions (OECD, 2015[1]). 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 have contributed indirectly to higher death rates from circulatory diseases in some countries, owing to disruptions to acute, primary and preventive care.

In 2021, 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 83% 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 Lithuania, where there were 395 deaths per 100 000 (age-standardised) population. Rates were also relatively high in Latvia, Hungary, Mexico and the Slovak Republic. Korea, Japan, France and the Netherlands had the lowest rates among OECD countries, at about one-third of the OECD average (Figure 3.11).

Between 2011 and 2021, IHD mortality rates declined in nearly all OECD countries, with an average reduction of 20%. Declines were most marked in Estonia (56%), Luxembourg and Costa Rica (both at 45%). However, three OECD countries – Mexico, Colombia and Türkiye – experienced increases in mortality, as did OECD accession countries Bulgaria and Peru. This is closely linked to increasing obesity rates and diabetes prevalence. It may also be linked to recent increases in acute myocardial infarction mortality rates after admission to hospital: survival rates following a heart attack worsened in Mexico and Türkiye between 2019 and 2021 (see section on "Mortality following acute myocardial infarction" in Chapter 6). This may have been caused by bottlenecks in diagnostic testing, possible misclassification of causes of death and overall lower performance of health systems during the pandemic (Roth, Vaduganathan and Mensah, 2022[3]).

Cerebrovascular diseases (or strokes) were the underlying cause of 6% of deaths across OECD countries in 2021. 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, Lithuania, and Hungary, and in OECD accession and partner countries Bulgaria, Romania and South Africa (Figure 3.12).

Mortality rates from stroke have fallen in almost all OECD member and partner countries since 2011, with an average reduction of 25% across OECD countries. However, small increases in mortality have been observed in Latvia and the United States. 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 section on "Mortality following ischaemic stroke" 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, high blood pressure, low physical activity, obesity and diabetes are on the rise in many OECD countries (OECD/The King's Fund, 2020[4]). 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 age-standardised to the 2015 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. In cases where 2020 or older data were used, the year for the time series reference was 2010.

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

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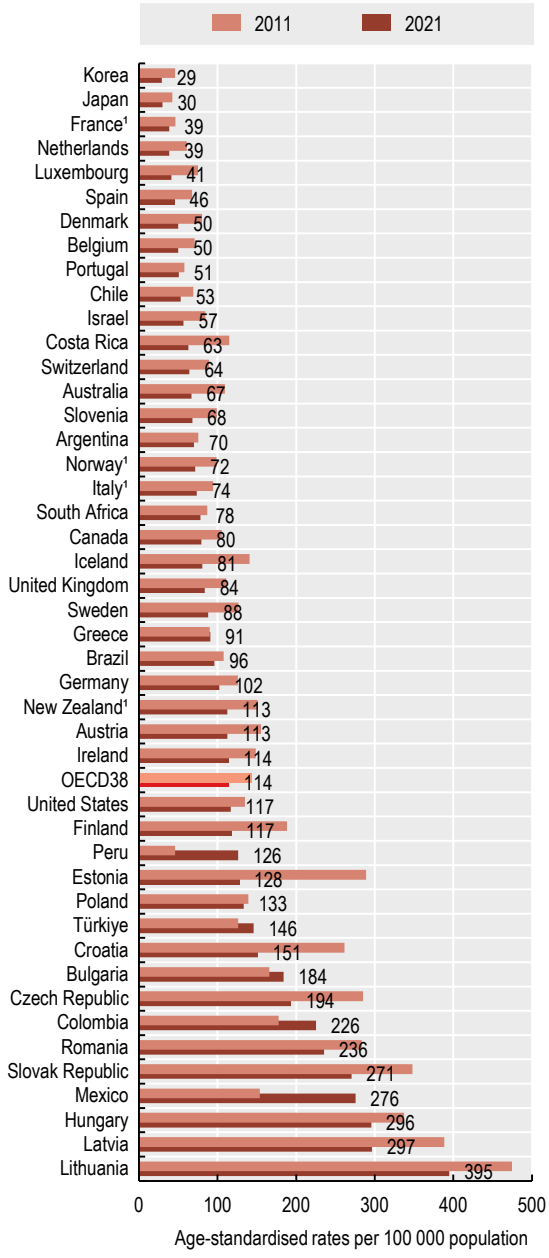
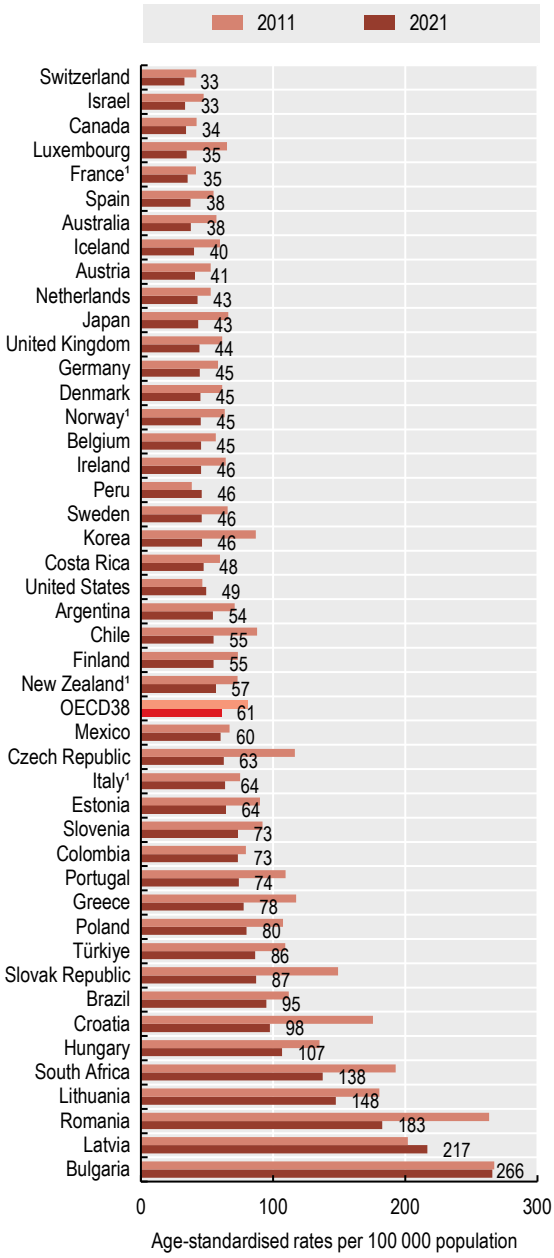
Figure 3.11. Heart attack and other ischaemic heart disease mortality, 2021 and 2011 (or nearest year)



1. Most recent data point corresponds to 2016-17.
Source: OECD Health Statistics 2023.

StatLink https://stat.link/on5wsq

Figure 3.12. Stroke mortality, 2021 and 2011 (or nearest year)



1. Most recent data point corresponds to 2016-17.
Source: OECD Health Statistics 2023.

StatLink https://stat.link/usx7go