Pharmaceutical consumption

Pharmaceutical consumption has been increasing for decades, driven by a growing need for medicines to treat age-related and chronic diseases, and by changes in clinical practice. This section examines the consumption of four categories of medicines used in selected chronic conditions: antihypertensives, lipid-modifying agents (such as cholesterol-lowering medicines), antidiabetic agents and antidepressants (Figure 9.6). These medicines address illnesses for which the prevalence has increased markedly across OECD countries in recent decades.

Consumption of antihypertensive medicines in OECD countries increased by around 8% on average between 2011 and 2021, but nearly tripled in Chile. It remained highest in Germany, which reported consumption levels almost five times those seen in Korea. These variations probably reflect both differences in the prevalence of hypertension and variations in clinical practice.

Much greater growth was seen in the use of lipid-modifying agents, with consumption in OECD countries increasing by almost 60% between 2011 and 2021 on average. Denmark, the United Kingdom and Norway reported the highest levels of consumption per capita in 2021, with over a five-fold variation in consumption levels across OECD countries.

The use of antidiabetic medications also grew dramatically, by 30% over the same period and more than doubled in Canada and Chile. The growth in countries may be explained in part by the rising prevalence of diabetes, which is largely linked to the increasing prevalence of obesity, a major risk factor for development of type 2 diabetes. In 2021, consumption of anti-diabetic medicines was highest in Canada and lowest in Austria and Latvia, with more than a two-fold variation.

Consumption of antidepressant medicines increased by nearly 50% in OECD countries between 2011 and 2021, more than tripling in Chile and doubling in Korea, Latvia and Estonia. As well as a potential increased burden of mental ill-health, this may also reflect improved recognition of mental health disorders and evolving clinical guidelines and availability of therapies, as well as longer-term prescribing (Bogowicz et al., 2021[1]; Madeira, Queiroz and Henriques, 2023[2]). There was significant variation between countries in 2021, Iceland reported the highest level of consumption, at a rate eight times that of Latvia.

More recently, pharmaceutical consumption in each of these four categories increased by around 10% in OECD countries on average between 2019 and 2021, except for antihypertensive medicines, where consumption remained relatively stable and even decreased in some countries. Increases were highest for lipid-lowering medicines in Lithuania and Türkiye, for antidiabetic medicines in Chile and Canada, and for antidepressants in Chile and Korea. These consumption patterns may in part reflect differences in the burden of the disease since the COVID-19 pandemic – for example, the increased prevalence of anxiety and depression (see section on "Mental health" in Chapter 3).

Definition and comparability

The defined daily dose (DDD) is the assumed average maintenance dose per day for a medicine used for its main indication in adults. DDDs are assigned to each active ingredient in a given therapeutic class by international expert consensus. For example, the DDD for oral aspirin is 3 grammes, which is the assumed maintenance daily dose to treat pain in adults. DDDs do not necessarily reflect the average daily dose actually used in a given country. They can be aggregated within and across therapeutic classes of the Anatomical Therapeutic Chemical (ATC) classification of the World Health Organization (WHO). For more detail, see www.whocc.no/.

The volume of antihypertensive medicine consumption presented in Figure 9.6 refers to the sum of five ATC 2nd level categories, which may all be prescribed for hypertension (C02 – antihypertensives, C03 – diuretics, C07 – beta blocking agents, C08 – calcium channel blockers and C09 – agents acting on the renin-angiotensin system). ATC codes for other medicine classes are C10 – lipid-modifying agents, A10 – medicines used in diabetes (i.e. antidiabetic medicines, including insulins and analogues) and N06A – antidepressants. Comparisons of medicine consumption, however, should be treated with caution as variations may reflect differences in disease burden and clinical practice. Moreover, the same medicine can be used to treat multiple diseases, which may result in overreporting of consumption levels.

Data refer to outpatient consumption only, except for Chile, Costa Rica, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, Italy, Korea, Lithuania, Luxembourg (since 2021), Norway, the Slovak Republic, Spain (since 2018) and Sweden, where data also include hospital consumption. For Canada, only data from provinces for which population-level data were available were included (British Columbia, Manitoba and Saskatchewan). Data for Spain refer to inpatient and outpatient consumption for prescribed medicines covered by the national health system (public insurance), while the data for Luxembourg refer to outpatient consumption and since 2021 also includes medicines delivered only by hospitals. Data for Luxembourg are underestimated due to incomplete consideration of products with multiple active ingredients.

References

Bogowicz, P. et al. (2021), "Trends and variation in antidepressant prescribing in English primary care: a retrospective longitudinal study", *BJGP Open*, Vol. 5/4, p. BJGPO.2021.0020, https://doi.org/10.3399/bjgpo.2021.0020. [1]

Madeira, L., G. Queiroz and R. Henriques (2023), "Prepandemic psychotropic drug status in Portugal: a nationwide pharmacoepidemiological profile", *Scientific Reports*, Vol. 13/1, https://doi.org/10.1038/s41598-023-33765-0. [2]

Figure 9.6. Consumption of medicines for selected chronic conditions, 2011, 2019 and 2021 (or nearest years)
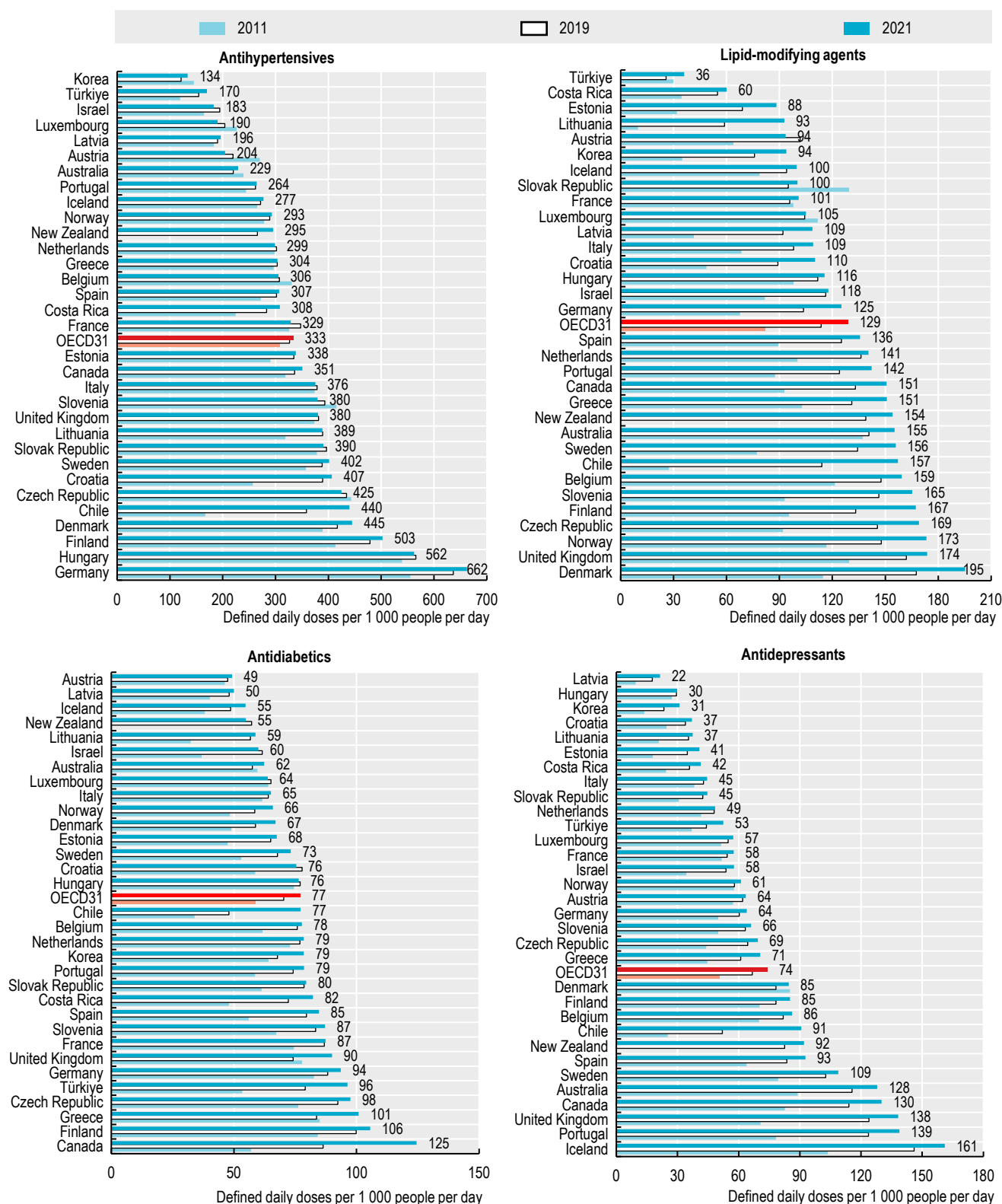
Note: See the "Definition and comparability" box for a breakdown of ATC codes. Data labels correspond to 2021 data.
Source: OECD Health Statistics 2023.

StatLink ᓂᑭ https://stat.link/6icvb8