

### Safe prescribing in primary care

Safe prescribing can be used as an indicator of health care quality, complementing information on consumption and expenditure (see Chapter 9). The overuse, underuse or misuse of prescription medicines can cause serious health hazards and lead to wasteful expenditure. This is the case for opioids and antibiotics, for example.

Opioids are often used to treat acute pain and pain associated with cancer, and over the last decade have been increasingly used to treat chronic pain, despite the risk of dependence, dose increase, shortness of breath and death. Opioid use is now causing an alarming and rising epidemic of overdose deaths in some OECD countries, such as the United States and Canada (OECD, 2019[8]).

Figure 6.3 indicates that, across OECD countries, the average volume of opioids prescribed in primary care in 2019 was 15 defined daily doses (DDDs) per 1 000 population per day. Iceland and Norway reported volumes more than twice the OECD average; Turkey and Korea reported the lowest volumes. Most countries providing data for 2020 reported an increase in the overall volume of opioids prescribed. On average, more than 2% of the adult population across OECD countries were chronic users of opioids in 2019 (Figure 6.4). Korea and Italy reported the lowest and Iceland the highest proportion by a large margin. The wide variation can be explained in part by differences in clinical practice in pain management, as well as differences in regulation, legal frameworks for opioids, prescribing policies and treatment guidelines.

An increase in the volume of opioids prescribed could also occur in the coming years as a consequence of COVID-19 and the treatment of its possible post-acute sequelae, also known as “long COVID-19”. An increased risk of this kind of incident use of opioid-based medication has already been observed (Al-Aly, Xie and Bowe, 2021[9]).

Antibiotics should be prescribed only where there is a need that is clearly supported by evidence, to reduce the risk of resistant strains of bacteria (OECD, 2018[10]). For example, quinolones and cephalosporins are considered second-line antibiotics in most prescribing guidelines, which should generally be used

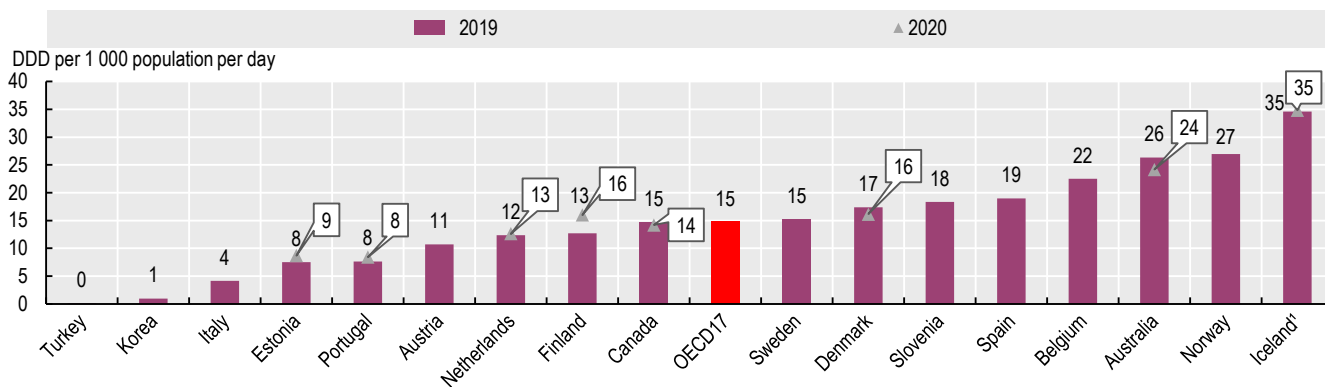
only when first-line antibiotics are ineffective. Total volume of antibiotics and second-line antibiotics (as a proportion of total volume) have been validated as markers of quality in the primary care setting (OECD, 2017[11]), given the rising public health concern caused by antimicrobial resistance across OECD countries (OECD, 2018[10]).

Figure 6.5 shows the volume of all antibiotics prescribed in primary care in 2019, including second-line antibiotics. Total volume of antibiotics use varied nearly four-fold across countries, with Estonia, Sweden and Germany reporting the lowest volumes, and Iceland, Australia and Greece reporting the highest. Volumes of second-line antibiotics vary across countries from 0.4 to 10.6 DDD per 1 000 population per day. The Scandinavian countries and the United Kingdom reported the lowest volumes of second-line antibiotics, whereas Greece and Korea reported the highest. Data for 2020 show a reduction in the overall volume of antibiotics prescribed. Variation is likely to be explained, on the supply side, by differences in the guidelines and incentives that govern primary care prescribers and uptake of e-prescribing solutions and, on the demand side, by differences in attitudes and expectations regarding optimal treatment of infectious illness.

#### Definition and comparability

Defined daily dose (DDD) is the assumed average maintenance dose per day for a drug used for its main indication in adults. For instance, the DDD for oral aspirin equals 3 grammes, 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. For more detail, see <http://www.whooc.no/atcddd>. Denominators comprise the population in the national prescribing database, rather than the general population. Further information on sources and methods is available at OECD.Stat. Other data in OECD Health Statistics on antibiotics may differ due to differences in data sources and coverage.

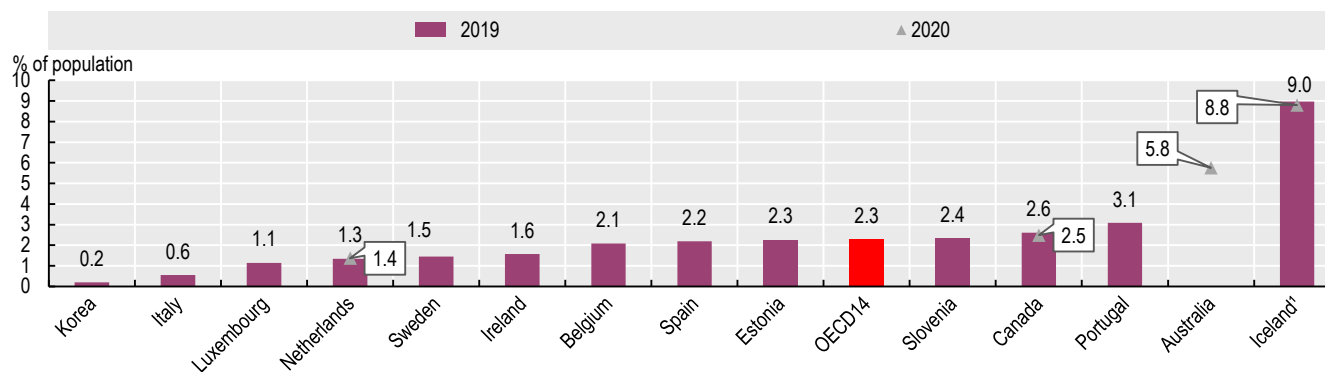
Figure 6.3. Overall volume of opioids prescribed in the adult population, 2019 (or nearest year) and 2020



Note: Adult population covers individuals aged 18 and over. Data exclude products used in the treatment of addiction. 1. Three-year average.  
Source: OECD Health Statistics 2021.

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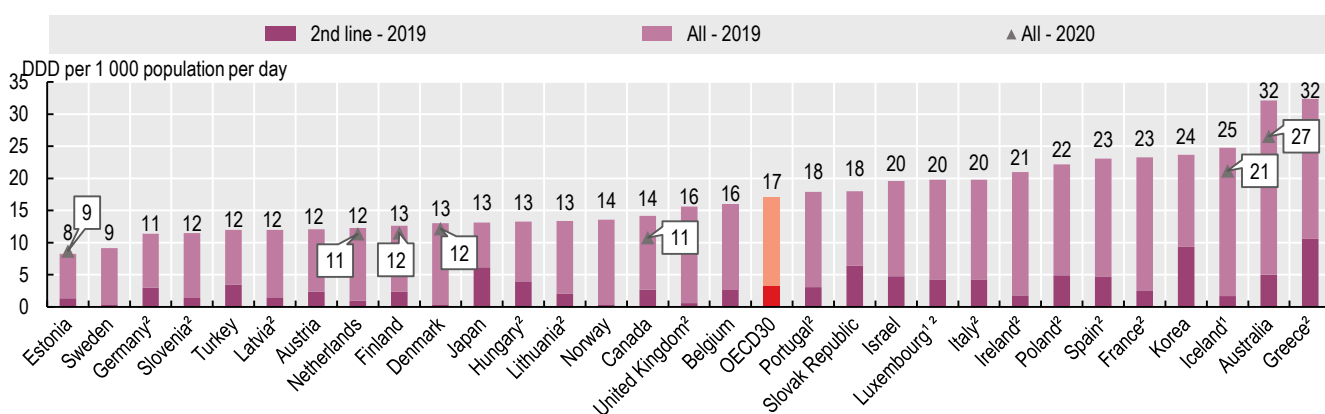
Figure 6.4. Proportion of chronic opioid users in the adult population, 2019 (or nearest year) and 2020



Note: Adult population covers individuals aged 18 and over. Data exclude products used in the treatment of addiction. Chronic use is defined as two or more prescriptions for at least 90 days. 1. Three-year average.  
Source: OECD Health Statistics 2021.

StatLink <https://stat.link/gxjzqp>

Figure 6.5. Overall volume of antibiotics prescribed, 2019 (or nearest year) and 2020



1. Three-year average. 2. Data from European Centre for Disease Prevention and Control.  
Source: OECD Health Statistics 2021.

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