

## 8. QUALITY OF CARE

### Prescribing in primary care

Beyond consumption and expenditure information (see Chapter 10), prescribing can be used as an indicator of health care quality. Antibiotics, for example, should be prescribed only where there is an evidence-based need, to reduce the risk of resistant strains. Likewise, quinolones and cephalosporins are considered second-line antibiotics in most prescribing guidelines. Their use should be restricted to ensure availability of effective second-line therapy should first-line antibiotics fail. Total volume of antibiotics prescribed, and second-line as a proportion of total volume, have been validated as markers of quality in the primary care setting. In May 2015, the World Health Assembly endorsed a global action plan to tackle antimicrobial resistance ([http://who.int/drugresistance/global\\_action\\_plan](http://who.int/drugresistance/global_action_plan)), which is also reflected in several national strategies.

Figure 8.5 shows volume of all antibiotics prescribed in primary care, with volumes of second-line antibiotics embedded within the total amount. Total volumes vary more than four-fold across countries, with Chile, the Netherlands and Estonia reporting the lowest volumes, and Turkey and Greece reporting volumes much higher than the OECD average. Volumes of second-line antibiotics vary almost 16-fold across countries. The Nordic countries, the Netherlands and the United Kingdom report the lowest volumes of these antibiotics, and Korea, the Slovak Republic and Greece the highest. Variation is likely to be explained, on the supply side, by differences in the regulation, guidelines and incentives that govern primary care prescribers and, on the demand side, by cultural differences in attitudes and expectations regarding the natural history and optimal treatment of infective illness.

In conjunction with additional indicators of the quality of primary care for diabetes (see “Diabetes care”), *Health at a Glance* is for the first time reporting two indicators related to the quality of prescribing in primary care for diabetic patients. In diabetic individuals with hypertension, angiotensin-converting enzyme inhibitors (ACE-I) or angiotensin receptor blockers (ARB) are recommended in most national guidelines as first-line medications to reduce blood pressure, since they are most effective at reducing the risk of cardiovascular disease and renal disease. Figures 8.6 and 8.7 suggest there is wide variability across countries in prescribing practices for diabetic patients, with 27% of diabetic patients in the Slovak Republic given prescriptions for cholesterol-lowering medication, compared with 81% in New Zealand. There is greater consistency in the proportion of diabetic patients on antihypertensive agents with at least one prescription for ACE-I or ARB, with the exception of the Slovak Republic.

Benzodiazepines are often prescribed for elderly patients for anxiety and sleep disorders, despite the risk of adverse side effects such as fatigue, dizziness and confusion. A meta-analysis suggests that the use of benzodiazepines in elderly people is associated with more than double the risk

of developing such adverse effects compared with placebo (Sithampanathan et al., 2012). Figures 8.8 and 8.9 indicate that, across the OECD, on average around 29 per 1 000 elderly patients receive long-term prescriptions for benzodiazepines and related drugs (365 defined daily doses in one year), and 62 per 1 000 have received at least one prescription for a long-acting benzodiazepine or related drugs within the year.

To reduce the potentially harmful overuse and misuse of medicines, diagnostic tests and procedures, the *Choosing Wisely* campaign was launched in 2012. Increasingly international, the campaign comprises evidence-based information for clinicians and patients on when medications and procedures may be inappropriate. Appropriate use of antibiotics and benzodiazepines is addressed ([www.choosingwisely.org](http://www.choosingwisely.org)).

#### 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. DDDs are assigned to each active ingredient in a given therapeutic class by international expert consensus. For instance, the DDD for oral aspirin equals 3 grams, 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. DDDs can be aggregated within and across therapeutic classes of the Anatomic Therapeutic Classification (ATC). For more detail, see [www.whocc.no/atcddd](http://www.whocc.no/atcddd).

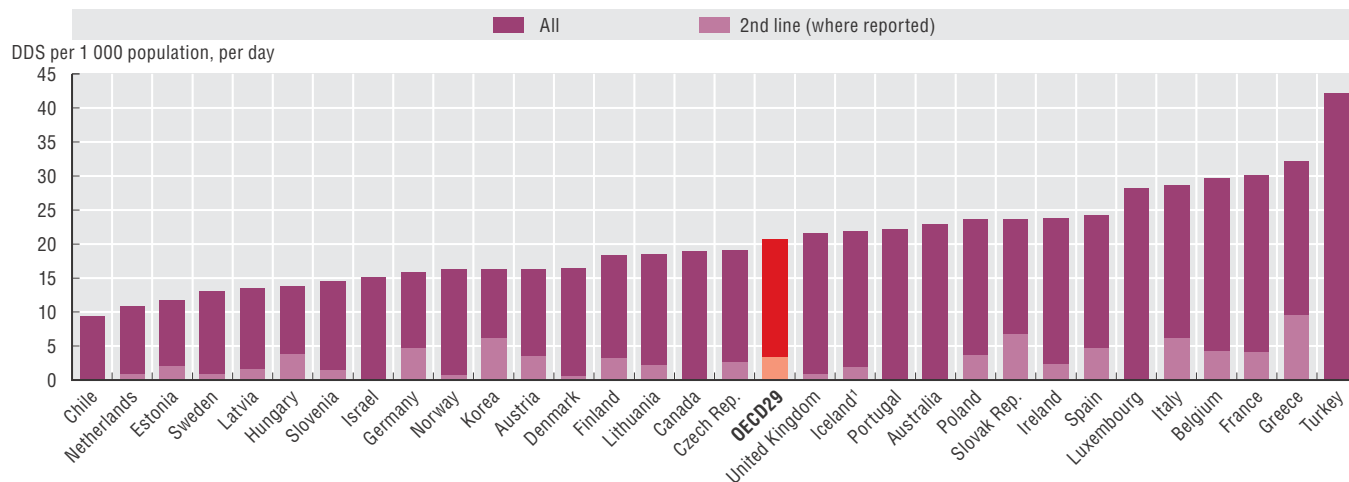
In Figure 8.5, data for Chile include over the counter (OTC) drugs. Data for Canada, Israel and Luxembourg exclude drugs prescribed in hospitals, non-reimbursed drugs and OTC drugs. Data for Iceland refer to all sectors, not just primary care. Data for Portugal include OTC and non-reimbursed drugs. Data for Australia include non-reimbursed drugs. Data for Turkey refer to outpatient health care.

Denominators comprise the population held in the national prescribing database, rather than the general population (with the exception of Belgian data on benzodiazepines, which comes from a national health survey).

#### References

Sithampanathan, K., A. Sadera and L. Leung (2012), “Adverse Effects of Benzodiazepine Use in Elderly People: A Meta-analysis”, *Asian Journal of Gerontology & Geriatrics*, Vol. 7, No. 2, pp. 107-111.

## 8.5. Overall volume of antibiotics prescribed, 2013 (or nearest year)

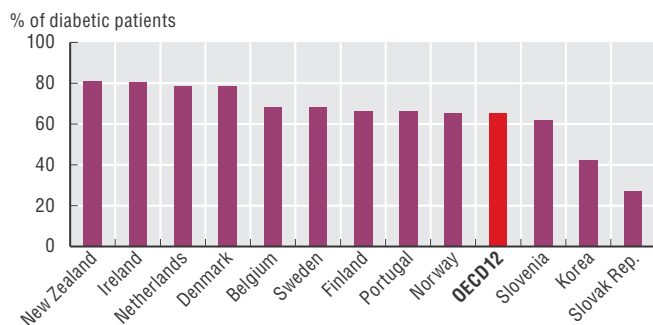


1. Data refer to all sectors (not only primary care).

Source: European Centre for Disease Prevention and OECD Health Statistics 2015, <http://dx.doi.org/10.1787/health-data-en>.

StatLink <http://dx.doi.org/10.1787/888933281125>

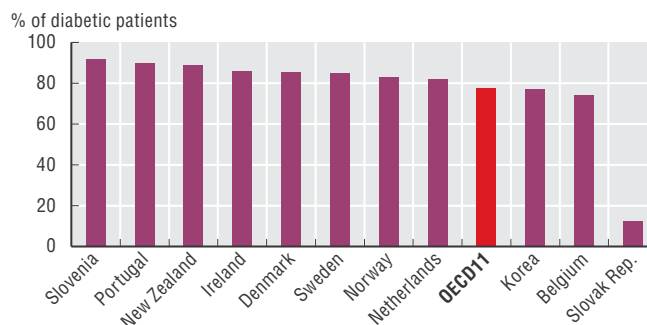
## 8.6. People with diabetes with a prescription of cholesterol lowering medication in the past year, 2013 (or nearest year)



Source: OECD Health Statistics 2015, <http://dx.doi.org/10.1787/health-data-en>.

StatLink <http://dx.doi.org/10.1787/888933281125>

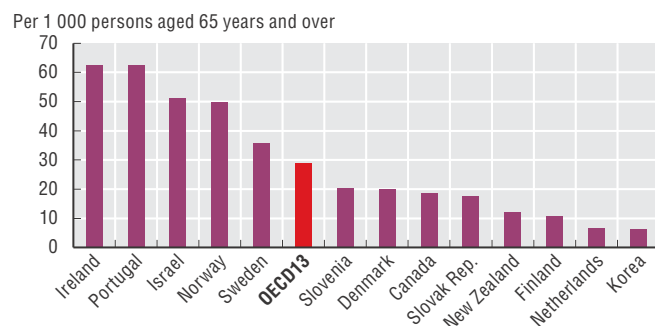
## 8.7. People with diabetes with a prescription of recommended antihypertensive medication in the past year, 2013 (or nearest year)



Source: OECD Health Statistics 2015, <http://dx.doi.org/10.1787/health-data-en>.

StatLink <http://dx.doi.org/10.1787/888933281125>

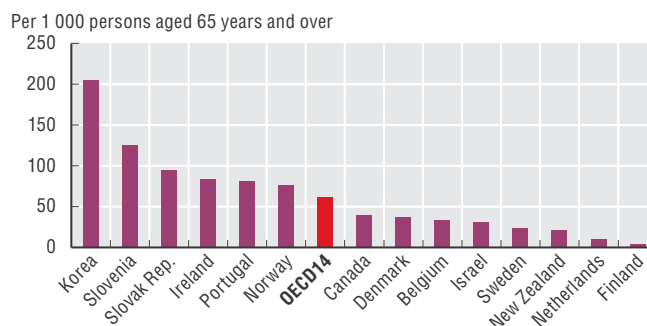
## 8.8. Elderly people prescribed long-term benzodiazepines or related drugs, 2013 (or nearest year)



Source: OECD Health Statistics 2015, <http://dx.doi.org/10.1787/health-data-en>.

StatLink <http://dx.doi.org/10.1787/888933281125>

## 8.9. Elderly people prescribed long-acting benzodiazepines or related drugs, 2013 (or nearest year)



Source: OECD Health Statistics 2015, <http://dx.doi.org/10.1787/health-data-en>.

StatLink <http://dx.doi.org/10.1787/888933281125>

Information on data for Israel: <http://oe.cd/israel-disclaimer>



**From:**  
**Health at a Glance 2015**  
OECD Indicators

**Access the complete publication at:**  
[https://doi.org/10.1787/health\\_glance-2015-en](https://doi.org/10.1787/health_glance-2015-en)

**Please cite this chapter as:**

OECD (2015), "Prescribing in primary care", in *Health at a Glance 2015: OECD Indicators*, OECD Publishing, Paris.

DOI: [https://doi.org/10.1787/health\\_glance-2015-46-en](https://doi.org/10.1787/health_glance-2015-46-en)

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to [rights@oecd.org](mailto:rights@oecd.org). Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at [info@copyright.com](mailto:info@copyright.com) or the Centre français d'exploitation du droit de copie (CFC) at [contact@cfcopies.com](mailto:contact@cfcopies.com).