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Pharmaceutical consumption

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4.11. Pharmaceutical consumption

The consumption of pharmaceuticals is increasing across OECD countries, not only in terms of expenditure (see Indicator 7.4 "Pharmaceutical expenditure"), but also the volume or quantity of drugs consumed. One of the factors contributing to this rise is a growing demand for drugs to treat ageing-related diseases. However, the rise in pharmaceutical consumption is also observed in countries with younger populations, indicating that other factors, such as physicians' prescription habits, also play a role.

This section discusses the volume of consumption of four categories of pharmaceuticals: antidiabetics, antidepressants, anticholesterols and antibiotics. Consumption of these drugs is measured through the defined daily dose (DDD) unit, as recommended by the WHO Collaborating Center for Drug Statistics (see the box on "Definition and comparability").

There is much variation in the use of drugs for the treatment of diabetes, with consumption in Iceland and Estonia almost half that in Finland or Germany (Figure 4.11.1). This is partly explained by the prevalence of diabetes, which is low in Iceland and higher in Germany (see Indicator 1.10 "Diabetes prevalence and incidence"). However, some of the highest consumers are not countries with high diabetes prevalence. Between 2000 and 2009, the consumption of antidiabetics increased by 75% on average across all countries. The growth rate was particularly strong in the Slovak Republic (although from a low level), Portugal, Germany and Finland. Reasons apart from a rising prevalence of diabetes are increases in the proportion of people treated, and the average dosages used in treatments (Melander *et al.*, 2006).

Iceland reports the highest level of consumption of antidepressants, followed by Australia, Denmark and Sweden (Figure 4.11.2). Variations in consumption across countries may be due to differences in the prevalence of depression. For example, according to the WHO World Mental Health Surveys, self-reported prevalence of depression in France was about twice that in Germany in the mid-2000s (Kessler and Üstün, 2008) which may partly explain the higher consumption in France. However, country differences in drug prescription guidelines and behaviors also contribute. In France, the increase in antidepressant consumption has been associated with a longer duration in pharmaceutical treatments, although the inappropriate use of antidepressants has also been identified as a contributing factor (Grandfils and Sermet, 2009). The consumption of antidepressants has grown substantially in all countries over the past decade, by over 60% on average.

Anticholesterol consumption ranges from a high of 126 DDDs per 1 000 people per day in Australia to a low of 21 in Estonia (Figure 4.11.3). While this might partly reflect differences in the prevalence of cholesterol levels in the population, again, differences in clinical guidelines for the control of bad cholesterol also play a role. Guidelines in Australia target lower bad cholesterol levels than those in European countries; and differences also exist in target levels within Europe (National Heart Foundation of Australia *et al.*, 2005; Hockley and Gemmill, 2007). Both the epidemiological context – for instance, growing obesity – and increased screening and treatment explain the very rapid growth in the consumption of anticholesterols across OECD countries.

The consumption of antibiotics varies from 11 DDDs per 1 000 people per day in the Netherlands to 39 in Greece (Figure 4.11.4). Since over-consumption of antibiotics has been linked to bacterial resistance, many countries have launched information campaigns targeting physicians and patients in order to reduce consumption. Consumption has stabilised in many countries and decreased in others such as Estonia, Slovenia, Hungary, Portugal, the Slovak Republic and France. In contrast, consumption has risen in countries that had below-average levels in 2000, such as the Netherlands, Austria and Denmark, as well as in Greece.

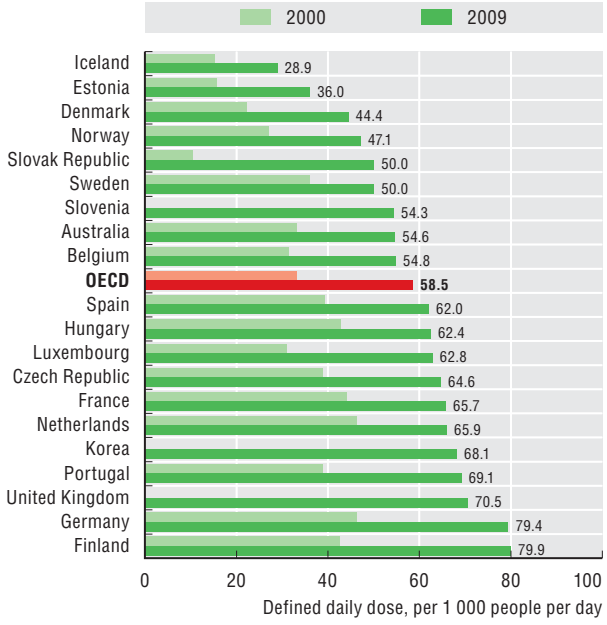
Definition and comparability

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(s) 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*.

Data generally refer to outpatient consumption except for the Czech Republic, Finland and Sweden, where data also include hospital consumption. Greek figures may include parallel exports.

Information on data for Israel: *http://dx.doi.org/10.1787/888932315602*.

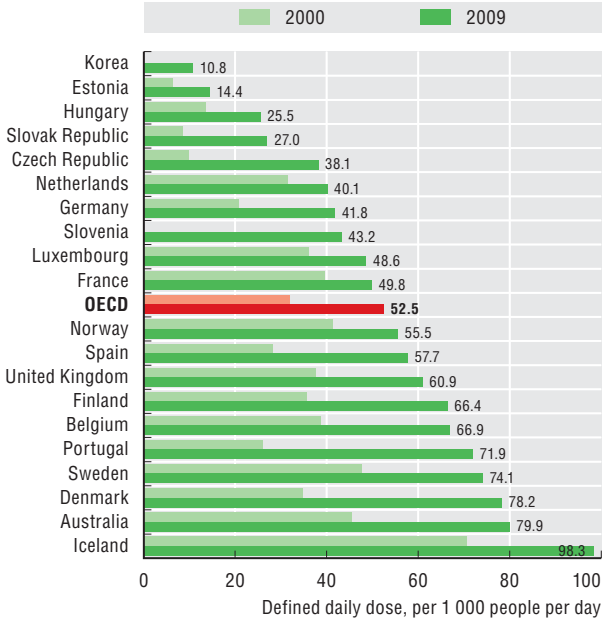
4.11.1 Antidiabetics consumption, 2000 and 2009 (or nearest year)



Source: OECD Health Data 2011.

StatLink http://dx.doi.org/10.1787/888932524963

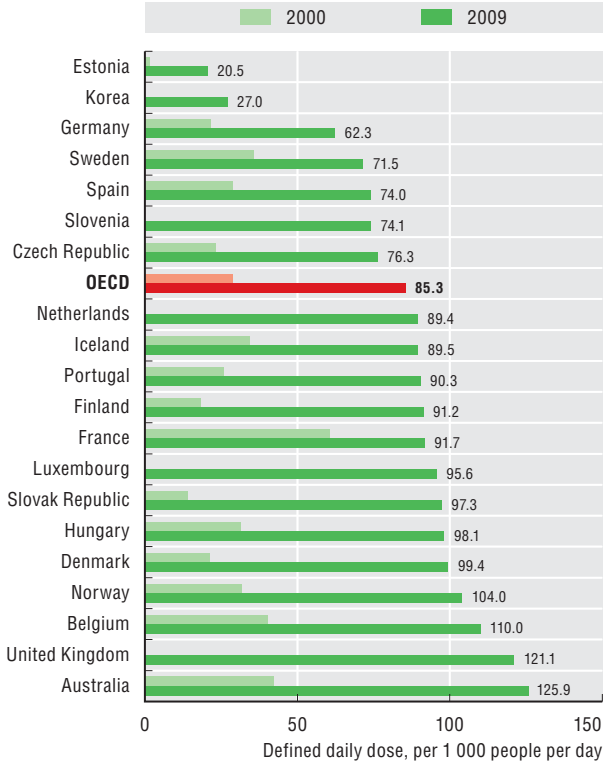
4.11.2 Antidepressants consumption, 2000 and 2009 (or nearest year)



Source: OECD Health Data 2011.

StatLink http://dx.doi.org/10.1787/888932524982

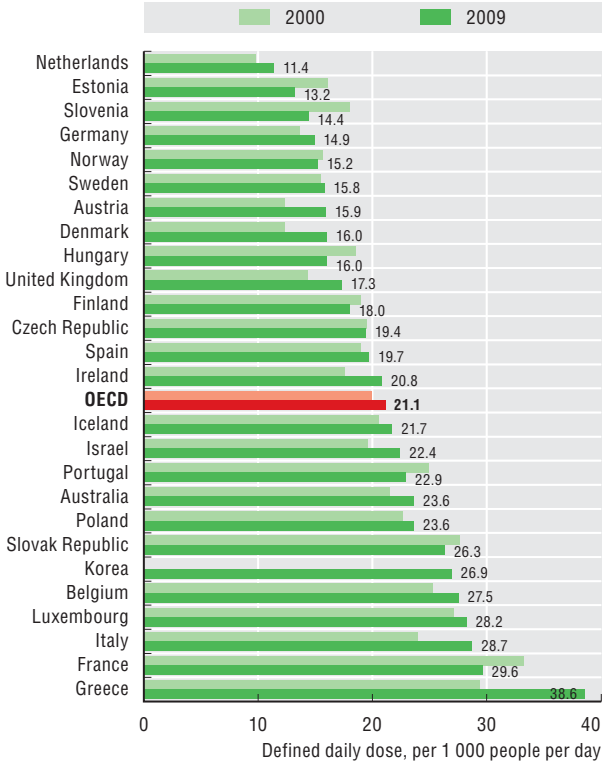
4.11.3 Anticholesterols consumption, 2000 and 2009 (or nearest year)



Source: OECD Health Data 2011.

StatLink http://dx.doi.org/10.1787/888932525001

4.11.4 Antibiotics consumption, 2000 and 2009 (or nearest year)



Source: OECD Health Data 2011.

StatLink http://dx.doi.org/10.1787/888932525020