

## 3. HEALTH WORKFORCE

### 3.3. Medical graduates

Maintaining or increasing the number of doctors requires either investment in training new doctors or recruiting trained physicians from abroad. As it takes about ten years to train a doctor, any current shortages can be met only by recruiting qualified doctors from abroad, unless there are unemployed doctors at home. Conversely, any surpluses or sudden fall in demand may mean that new graduates, in particular, struggle to find vacant posts at home.

Virtually all OECD countries exercise some form of control over medical school intakes, often by limiting the number of available training places, for example in the form of a *numerus clausus*. Such control is motivated by different factors including: i) confining medical entry to the most able applicants; ii) the desire to control the total number of doctors for cost-containment reasons (because greater supply induces greater demand); and iii) the cost of training itself (in all countries, including the United States, a significant part of medical education costs are publicly funded, so expansion of the number of medical students involves significant public expenditure).

Austria, Ireland, Denmark and Greece had the highest number of medical graduates per 100 000 population in 2009. In countries such as Ireland and the Czech Republic, a large share of graduates is made up of foreign students who may return home upon graduation. Graduation rates were the lowest in Israel, France, Japan and the United States. The average across OECD countries was close to ten new medical graduates per 100 000 population (Figure 3.3.1).

Measured in proportion to the stock of physicians (i.e. a measure of the replacement rate), the number of new medical graduates in 2009 was also the highest in Ireland and Austria, along with Chile and Korea (which still have, however, a very low number of doctors per capita). It was the lowest in Israel, France and Spain. The average across OECD countries was 32.5 medical graduates per 1 000 currently employed doctors (Figure 3.3.2).

In several countries (e.g. Canada, Denmark and the United Kingdom), the number of medical graduates has risen strongly since 2000. In some other countries (e.g. Sweden), the rise has been more recent. The increased intake in these countries follow periods of stable or declining graduation numbers in the preceding years, reflecting deliberate changes in policies to train more doctors (Figure 3.3.3). In Germany, although the numbers of medical graduates had started to increase in the past few years, the previous decline will take time to reverse. Due to current concerns about a shortage of doctors, Germany has liberalised its labour market access for doctors from non-EU countries in 2011.

In Italy and France, there was a marked decline in the number of medical graduates between the mid-1980s and the mid-1990s, after which it continued to fall but at a slower rate in the case of France, and stabilised in the case of Italy. The fall in medical graduate numbers in the past has had an impact on the age distribution of the physician workforce; Italy and France are among the OECD countries with the highest proportion of doctors above the age 55 years. Even with an increase in the number of medical school admissions in recent years, the number of doctors leaving the profession will exceed the number of new entrants during this decade. Israel has the highest share of doctors above age 55 among OECD countries, and the lowest replacement rate.

Japan has one of the lowest physician densities among OECD countries. Following a decline of medical school intakes from 8 280 students to 7 625 between 1981 and 2007, admissions to medical faculties increased to 8 923 students in 2011 (MEXT, 2010). Japan also uses medical intake regulation to address geographical inequalities in the distribution of physicians. The quotas of medical departments in underserved regions were expanded, and students who committed to working in underserved areas were given preference in admission (MHLW, 2007).

#### Definition and comparability

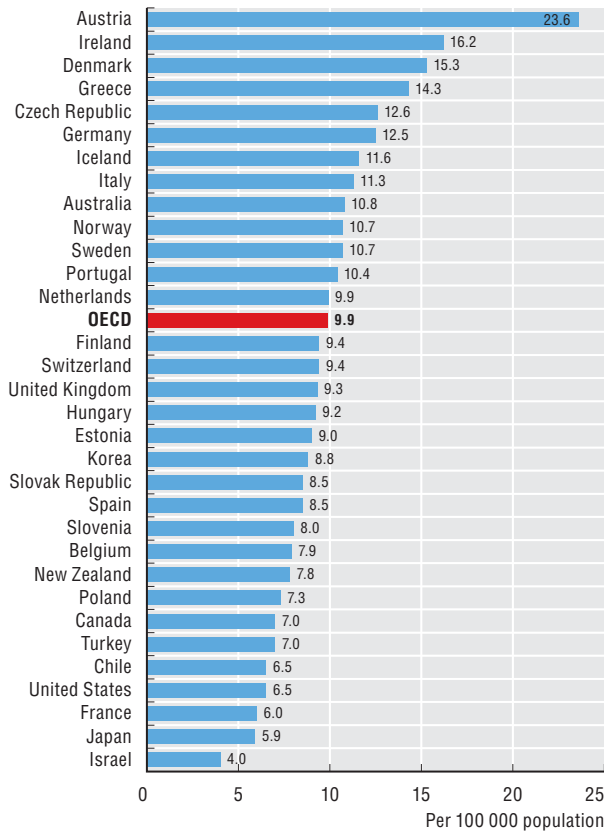
Medical graduates are defined as the number of students who have graduated from medical schools or similar institutions in a given year. Dental, public health and epidemiology graduates are excluded.

The data for the United Kingdom exclude foreign graduates, while other countries include them (foreign graduates account for about 30% of all medical graduates in the Czech Republic). In Denmark, the data refer to the number of new doctors receiving an authorisation to practice.

In Luxembourg, the university does not provide medical training, so all doctors are foreign-trained, mostly in Belgium, France and Germany.

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

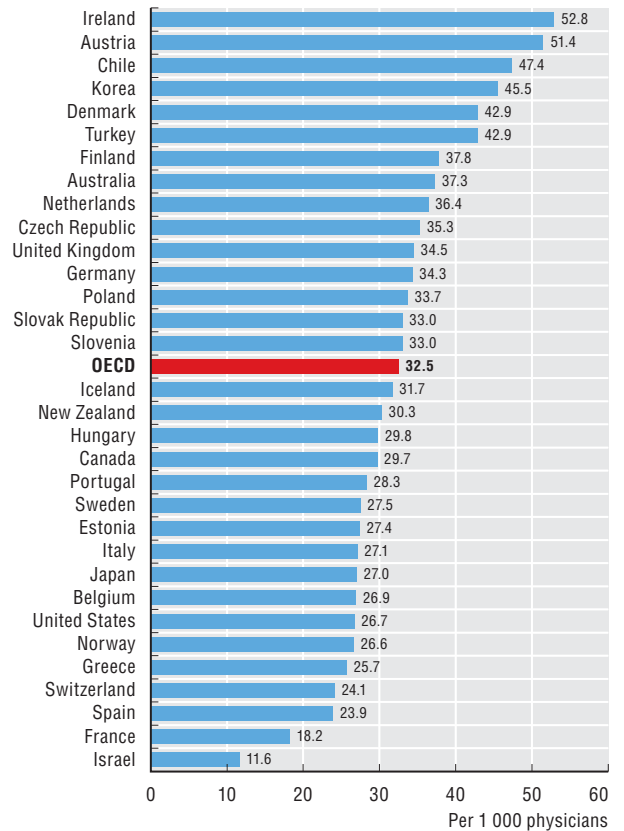
3.3.1 Medical graduates per 100 000 population, 2009 (or nearest year)



Source: OECD Health Data 2011.

StatLink <http://dx.doi.org/10.1787/888932524108>

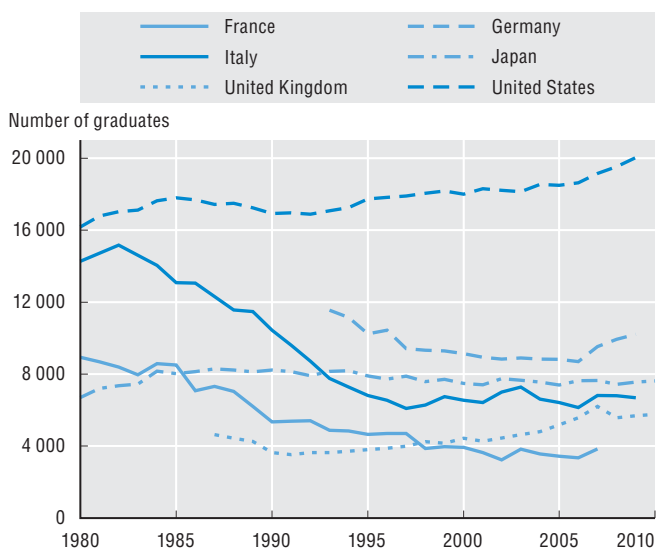
3.3.2 Medical graduates per 1 000 physicians, 2009 (or nearest year)



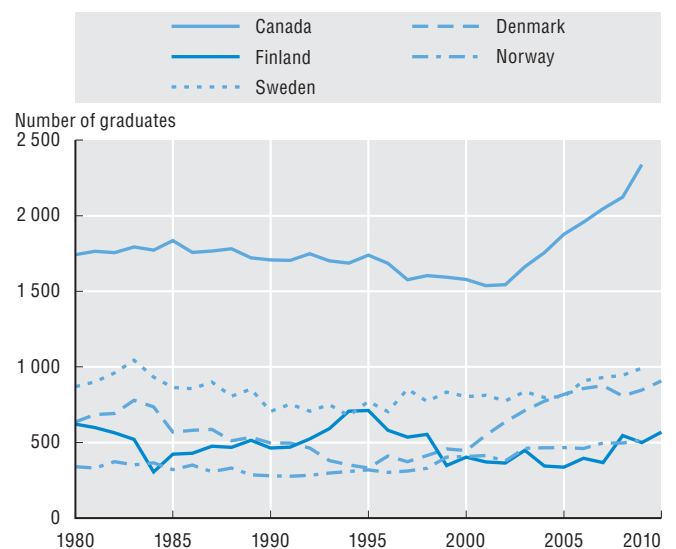
Source: OECD Health Data 2011.

StatLink <http://dx.doi.org/10.1787/888932524127>

3.3.3 Absolute number of medical graduates, selected OECD countries, 1980 to 2010



Source: OECD Health Data 2011.



StatLink <http://dx.doi.org/10.1787/888932524146>



**From:**  
**Health at a Glance 2011**  
OECD Indicators

**Access the complete publication at:**  
[https://doi.org/10.1787/health\\_glance-2011-en](https://doi.org/10.1787/health_glance-2011-en)

**Please cite this chapter as:**

OECD (2011), "Medical graduates", in *Health at a Glance 2011: OECD Indicators*, OECD Publishing, Paris.

DOI: [https://doi.org/10.1787/health\\_glance-2011-22-en](https://doi.org/10.1787/health_glance-2011-22-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).