

## Executive summary

Geographic variations in health care use across and within countries have been widely documented, for a limited number of countries including the United States, Canada, the United Kingdom and Nordic countries. While some of these variations reflect differences in patient needs and/or preferences, others do not. Instead, they are due to variations in medical practice styles, the ability of providers to generate demand beyond what is clinically necessary, or to unequal access to health care services. These *unwarranted* variations raise concerns about the equity and the efficiency of health systems.

This report presents new information on geographic variations in health care utilisation within and across 13 OECD countries: Australia, Belgium, Canada, the Czech Republic, Finland, France, Germany, Israel, Italy, Portugal, Spain, Switzerland and the United Kingdom (England). The analysis focusses on a selected set of high-volume and high-cost health care activities. Data are reported for the most recent year (often 2011) and sometimes for several years, allowing some analysis of trends. Health care utilisation is recorded at the patient's place of residence. Hence, the level of use in a given area cannot be explained by patients receiving treatment in other geographic areas. Utilisation rates have been standardised by age and sex to remove the effect of differences in population structures. The report considers possible causes of these variations and explores health policies expected to reduce unwarranted variations.

### Key findings

#### ***Geographic variation in health care use persists, across and within countries, even after taking account of differences in demographic structures***

- *Cardiac procedures rates show the highest level of geographic variations.* They vary by more than three-fold *across* countries and have the highest level of *within-country* variation for more than half of the countries. The latter are particularly high for coronary bypass in Spain and Portugal.
- *Knee replacement rates display high levels of variations.* They vary by more than four-fold across countries. They also vary by two- to three-fold across geographic areas in most countries, and by more than five-fold in Canada, Portugal and Spain.
- *Variations in hysterectomy rates are relatively high, in a context of declining use of this intervention.* The prevalence of hysterectomy is 75% higher in Canada and Germany (above 350 per 100 000 females) than in Israel, Spain, Portugal or the Czech Republic. Most countries have two- to three-fold variation across geographic areas but Canada and the Czech Republic have higher levels of variation (close to four-fold).
- *Hospital medical admission rates are twice as high* in Israel, Germany or Australia (around 12 000 per 100 000 population) than in Canada. While within-country variations are lower than for other procedures, Canada, Australia, Finland

and England display the highest levels of variation (from 2.4 to 3.6-fold), partly due to outlying regions.

- *Caesarean section rates are as much as 50% higher* in Italy, Portugal, Australia, Switzerland and Germany (above 300 per 1 000 live births) than in Finland. Within-country variations are relatively low, except in Italy where caesarean section rates vary by six-fold across regions.
- *Rates of admissions/surgery after hip fracture are about twice as high* in Germany and Switzerland (more than 150 per 100 000 population) than in Belgium and Finland. They show the lowest level of within-country variations (less than two-fold), with the exception of Australia, where one area has a very high rate.

These large geographic variations can only in part be explained by differences in morbidity or patient preferences. The data used in the report were adjusted for differences in age and sex, which removes some of the variation in morbidity across regions within a country. Others factors play a significant role, such as differences in supply of services (e.g. for hospital medical admissions) or variations in medical practices (e.g. hysterectomy). These are unwarranted and ought to be tackled if health systems are to deliver the high-quality care that patients need.

## Key recommendations

The primary objective of health policies is to promote appropriate care, including by responding better to patient preferences, not to reduce variations in health care. However, a number of interventions or initiatives can have an impact on addressing *unwarranted* variations in health care use. This report identifies several policy options.

### ***“Soft touch” policies, such as public reporting and target-setting, can be catalysts for change***

- *Countries should publish information on geographic variations in health care use.* Canada, the Netherlands, Spain and the United Kingdom already publish “Atlases” of variations in health care, building on the pioneering work of the Dartmouth Institute for Health Policy and Clinical Practice in the United States. These atlases mainly serve to identify potential under or over-use, and raise questions about why such variations take place. In and of themselves, however, Atlases can change nothing. Rather, they provide the basis for starting discussions and actions involving key stakeholders, notably health care providers, as to why these variations exist and what should be done to address them.
- *Countries could consider setting targets where appropriate.* For instance, Belgium developed a strategy with stakeholders to reduce exposure to ionising radiation from imaging tests by 25%. Italy set regional targets for caesarean section rates which probably contributed to the decline in rates observed in 2012, particularly among regions with the highest rates.

### ***Policies targeting providers can improve the appropriateness of care***

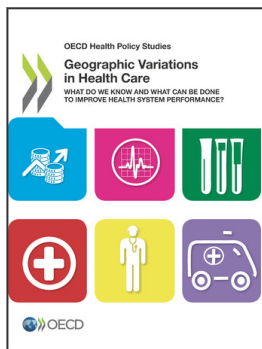
- *The development and monitoring of clinical guidelines is a key policy lever to standardise clinical practices.* In almost all countries, physician societies and/or health authorities have produced clinical guidelines for many of the procedures

examined in this report. The public expenditure constraints that have recently affected health systems have given an additional impetus to the development of such guidelines. Rigorous monitoring systems may help to promote compliance with the established standards. In Spain, some hospitals used a tool to assess the need for caesarean section, which led to a small reduction in their use.

- *Provider-level reporting and feedback, which can be delivered privately to reduce resistance from providers, shows promising results.* In Canada, a recent report by a Cardiac Care Network on variations in the ratio of coronary bypass to coronary angioplasty across different hospitals in Ontario identified opportunities to improve transparency and consistency in decision making for coronary revascularisation. In Belgium, hospitals received feedback on variations in caesarean section rates, which led to a convergence in rates among hospitals with both high and low rates.
- *A few countries have introduced financial incentives to reduce the use of unnecessary caesarean sections.* France reduced the gap between the prices paid by health insurance for caesarean sections and normal delivery, while England decided to align the prices of the two procedures. Korea implemented a pay-for-performance scheme for hospitals, which slightly reduced caesarean section rates.

***Shared decision making between patients and providers and patient outcome measurement are needed to reduce unwarranted variations***

- *Comparing patient outcomes across geographic areas or over time helps to assess the appropriateness of care.* Over-utilisation of health care can lead to diminishing outcomes. Sweden and the United Kingdom have led the way by collecting systematically *patient-related outcomes* after certain surgical procedures such as knee and hip replacement.
- *The diffusion of decision aids for patients can help patient preferences to be taken into account.* The United States and the United Kingdom publish decision aids for a range of procedures (e.g., knee replacement). These tools complement information provided by physicians and help patients assess the potential benefits and risks of different treatment options. In some cases, they can reduce the use of resource-intensive interventions.



**From:**

## **Geographic Variations in Health Care**

**What Do We Know and What Can Be Done to Improve Health System Performance?**

**Access the complete publication at:**

<https://doi.org/10.1787/9789264216594-en>

### **Please cite this chapter as:**

OECD (2014), "Executive summary", in *Geographic Variations in Health Care: What Do We Know and What Can Be Done to Improve Health System Performance?*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264216594-3-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).