

## OECD report provides the opportunity to identify areas with unwarranted variation in health care use in Australia

According to a new OECD report, variation in rates of health care activity between geographic areas within a country may be a cause for concern. Wide variation suggests that whether or not patients receive a particular health service depends on the region where they live within a country.

The Australian results report variation for a specified set of hospital interventions in 2010/11 between populations living in Medicare Locals. Variations such as those documented in Table 1 may indicate that either too much care was delivered in areas of high activity, or that there may have been unmet need in areas of low activity. This raises questions about the efficiency and equity of health care services.

**Table 1. Summary measures of variation among Medicare Locals, Australia, 2010-11**

Procedure or activity	Crude rate (number per 100 000) <sup>1,2</sup>	Average age and sex standardised rate (number per 100 000) <sup>1,3</sup>	10th percentile (number per 100 000) <sup>1</sup>	90th percentile (number per 100 000) <sup>1</sup>	Coefficient of variation <sup>4</sup>	Systematic component of variation <sup>5</sup>
Hospital medical admissions <sup>6</sup>	10 986	11 464	9 161	13 945	0.2	6.2
Coronary artery bypass graft	73	70	48	89	0.22	3.7
PTCA and stenting	226	212	162	260	0.22	4.6
Cardiac catheterisation	628	620	400	780	0.33	12.6
Hip fracture <sup>6</sup>	107	105	83	119	0.23	7.5
Knee replacement	238	227	166	280	0.19	3.6
Knee arthroscopy	393	404	262	528	0.3	9.9
Caesarean section	323	314	275	356	0.11	1
Hysterectomy	310	330	250	410	0.21	4.1

1. Data for hysterectomy are per 100 000 female population and data for caesarean sections are per 1 000 live births. The count of live births is based on the total number of hospital (public and private) birth episodes of mothers living in each Medicare Local that included at least one live birth.

2. Crude rate of all Medicare Locals combined.

3. Average age and sex standardised rate. The sum of each Medicare Local age and sex standardised rate divided by the total number of Medicare Locals. Caesarean section and hysterectomy data are age standardised only.

4. The coefficient of variation provides a measure of the spread of Medicare Local age and sex standardised rates relative to the average.

5. The systematic component of variation (SCV) uses the difference between the observed and the expected number of admissions in the Medicare Locals to create a measure of inter-Medicare Local variation. The expected number for a Medicare Local is created by taking the age structure of that region into account. A higher component reflects greater variation in the data between Medicare Locals due to factors other than different age and sex structures.

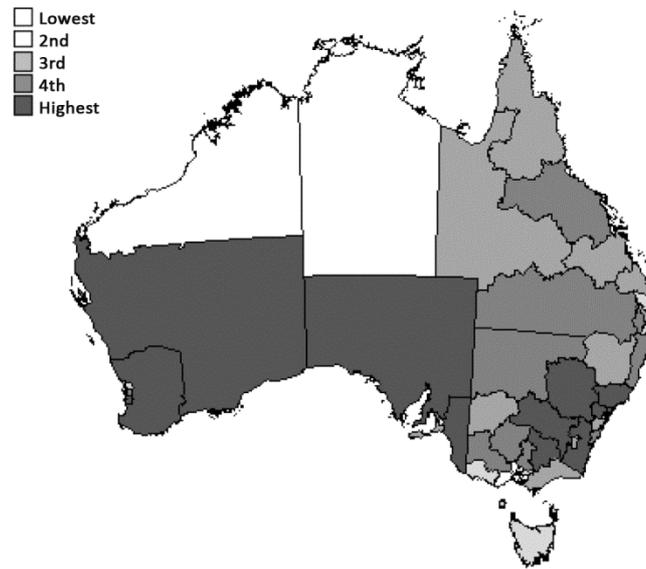
6. Excludes admissions involving an admitted patient transferred from another hospital.

Source: Australian Commission on Safety and Quality in Health Care and Australian Institute of Health and Welfare (2014) Chapter 2: Australia Geographic variations in health care, in *Geographic Variations in Health Care: What do we know and what can be done to improve health system performance?* OECD Health Policy Studies, OECD Publishing.

When outliers are removed, rates for cardiac catheterisation and knee arthroscopy in some Medicare Local populations are twice those in others. Cardiac revascularisation procedures, hysterectomy and knee replacement rates showed moderate variation between Medicare Locals. Rates for caesarean section vary relatively little across the country.

Residents of the Medicare Local, Country North South Australia (330 admissions per 100 000), were over two times more likely to have a knee replacement than those living in the Inner North West Melbourne Medicare Local (140 admissions per 100 000).

**Figure 1. Map of admissions for knee replacement per 100 000 population by Medicare Local, Australia, 2010-11**

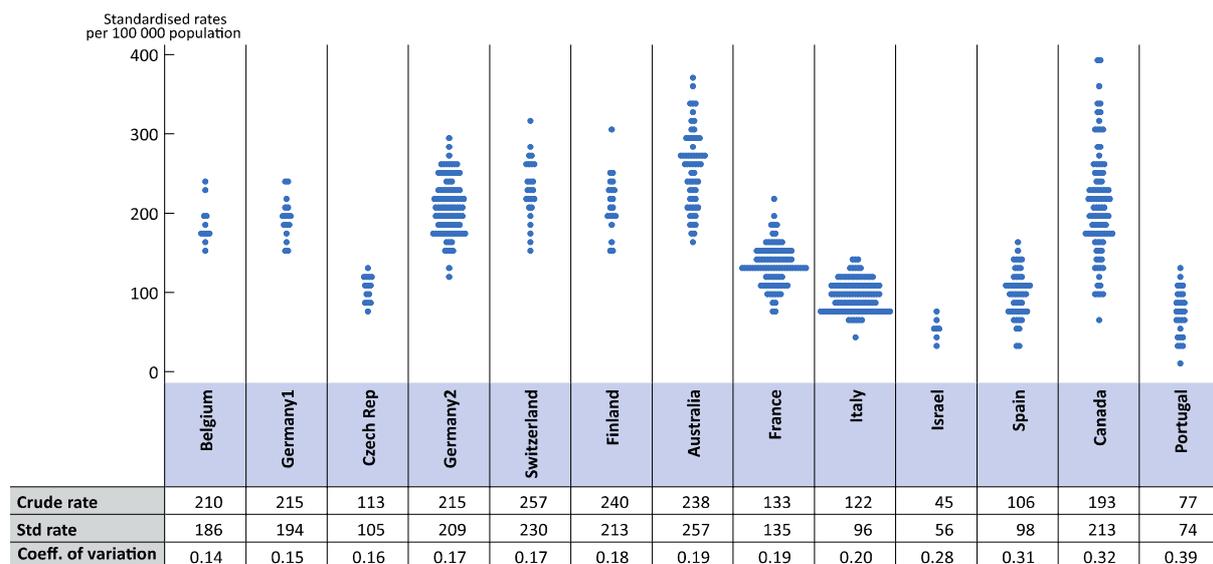


Note: The five groups are based on age- and sex-standardised rates. The range within each group is as follows: Lowest (140-182); 2nd (183-217); 3rd (218-241); 4th (242-261); Highest (262-330).

Source: Australian Commission on Safety and Quality in Health Care and Australian Institute of Health and Welfare (2014) Chapter 2: Australia Geographic variations in health care, in *Geographic Variations in Health Care: What do we know and what can be done to improve health system performance?* OECD Health Policy Studies, OECD Publishing.

Like Switzerland, Finland, Canada, and Germany, Australia has high rates of knee replacement (above 200 per 100 000 population over 15-years old), four times higher than in Israel (56 per 100 000 population). Within countries, knee replacement rates vary by two-to three-fold, but more than five-fold in Canada, Portugal and Spain.

**Figure 2. Knee replacement rate across and within selected OECD countries, 2011 or latest year**



Note: Each dot represents a territorial unit. Countries are ordered from the lowest to highest coefficient of variation within countries. Data for Portugal and Spain only include public hospitals. Germany 1 and 2 refers respectively to Länder and Spatial Planning Regions.

Source: Srivastava et al. (2014). Chapter 1: Geographic variations in health care use in 13 countries: A synthesis of findings, in *Geographic Variations in Health Care: What do we know and what can be done to improve health system performance?* OECD Health Policy Studies, OECD Publishing.

Australia has a high rate of caesarean section (above 300 per 1000 live births) and a relatively high hysterectomy rate (330 per 100 000 females) compared to other OECD countries in the report. However, variation between Medicare Locals is relatively low for caesarean section compared with other countries.

The report suggests that a number of factors can influence healthcare activity. For example socio-economic status and physician discretion have been found to influence knee replacement rates.

Australia's recent national and local policy efforts are welcome to address variations. These include the promotion of national clinical guidelines for cardiac care; the development of criteria to define priorities for hip and knee replacements; and the introduction of payment incentives to encourage the provision of evidence-based health care. The active role on the part of many stakeholders to monitor, assess and follow clinical guidelines led to a reduction in the variation in caesarean section rates but, nevertheless, these remain higher than the OECD average.

Further efforts could promote the delivery of more appropriate care. More systematic public reporting of high-cost, high-volume procedures would help to raise awareness among providers and the public. There is scope to move towards policies that target providers through providing feedback, setting targets for specific health care activities (e.g. as in Canada, Belgium and Italy) and financial incentives (e.g. as in England, France and Korea). Patients would be better engaged through tools of shared decision-making and measurement of outcomes after surgical procedures. The latter is done for example for knee replacement in Sweden and the United Kingdom.

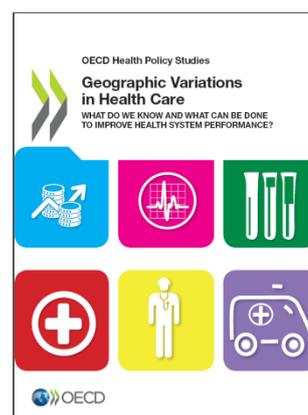
The OECD report will be released at a joint conference organised by the OECD and the Bertelsmann Foundation on 16<sup>th</sup> September in Berlin to discuss the report's findings among German stakeholders ([www.faktencheck-gesundheit.de](http://www.faktencheck-gesundheit.de)).

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The report **Geographic Variations in Health Care: What do we know and what can be done to improve health system performance?** is available at <http://dx.doi.org/10.1787/9789264216594-en>.

More information on Australia is available in the report in **Chapter 2, Australia: Geographic variations in health care**.

**OECD contacts:** Divya Srivastava ([divya.srivastava@oecd.org](mailto:divya.srivastava@oecd.org), tel. +33 1 45 24 16 35) or Valérie Paris ([valerie.paris@oecd.org](mailto:valerie.paris@oecd.org), tel. + 33 1 45 24 80 29) of the OECD's Health Division.



The **OECD press release, country notes and further information** are available at <http://www.oecd.org/health/health-systems/medical-practice-variations.htm>.