REGIONAL VARIATION IN HEALTH CARE FROM INTERNATIONAL PERSPECTIVE: WHAT DO WE KNOW? HOW TO REDUCE UNNECESSARY CARE?

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BETTER POLICIES FOR BETTER LIVES

Key messages

- How to improve measurement of inappropriate (over) use of health services? ("low-value care")
  - Aggregate data at national or regional data may be a useful starting point, but need to "drill down" further by linking diagnostics with interventions at individual level (need more sophisticated databases)

- How to move from problem identification to policy and clinical actions to achieve changes?
  - Need strategies to change behaviours of key actors – physicians, patients, payers
  - Example of Choosing Wisely ® campaign as an interesting bottom-up approach led by physicians

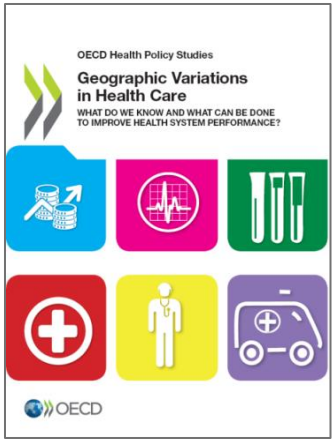
Recent OECD Health Ministerial meeting discussed issue of "waste" in health systems

- Three types of waste:
  1. **Clinical waste (medical errors, duplication, over-testing and over-treatment)**
  2. Operational waste (paying too much for services and goods)
  3. Administrative waste (admin costs that add little value or admin processes that are inefficient)
- Definition of "waste": If these services were not provided (or provided at lower costs), health outcomes would not be worse

➢ Up to a fifth of health spending is ineffective or wasteful

Clinical waste: where and why?

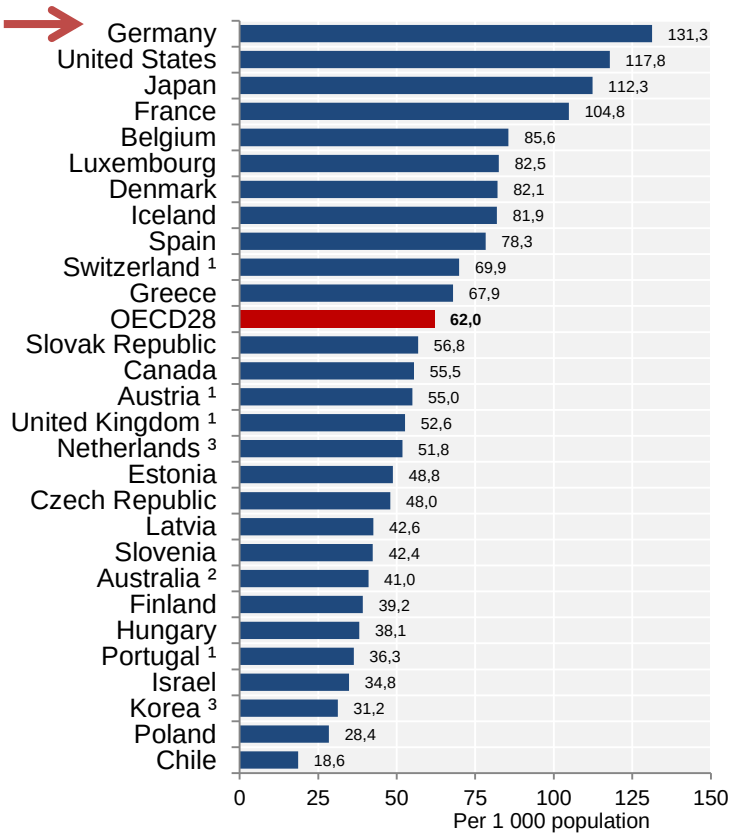
- Building on OECD 2014 report on *Geographic variations in health care* (12 countries), and work on patient safety
- Where does the waste take place? (and who is responsible?)
- Behavioural **root causes:**
  - Don't know better: imperfect knowledge, cognitive biases
  - Can't do better: poor management, organisation and coordination
  - Stand to lose by doing better (incentives misaligned with system goals)



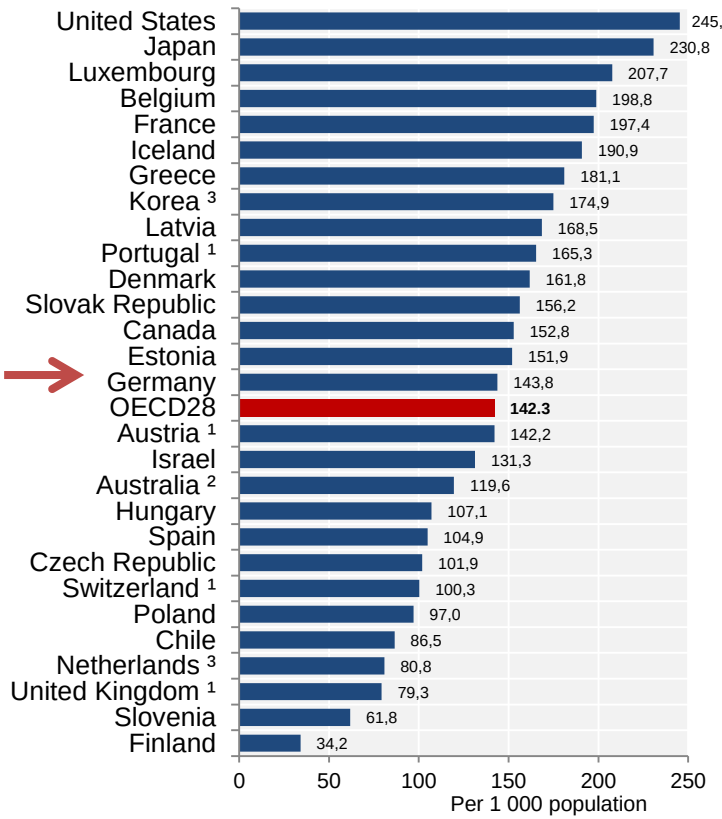
MEASURING WASTE
(OR INAPPROPRIATE USE)

International comparisons can be a starting point: Example of diagnostic tests

MRI exams, 2015 (or nearest year)



CT exams, 2015 (or nearest year)



1. Exams outside hospital not included. 2. Exams on public patients not included. 3. Exams privately-funded not included.
Source: OECD Health Statistics 2017

How many of these tests are inappropriate?

Geographic variations within countries can help go beyond national averages: Example of MRI and CT exams in Canada

Figure 4.17. Rate of MRI exams by province, Canada, 2003 and 2010

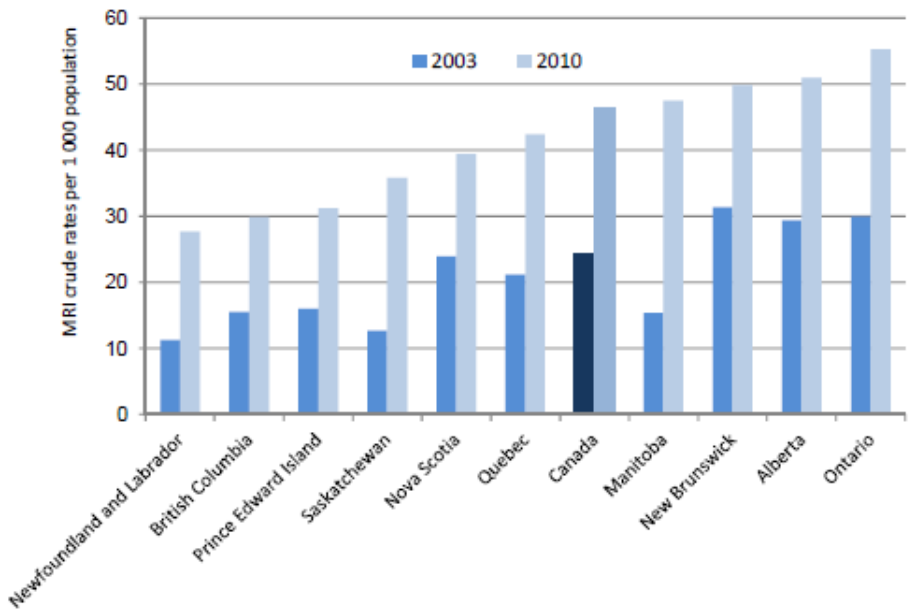
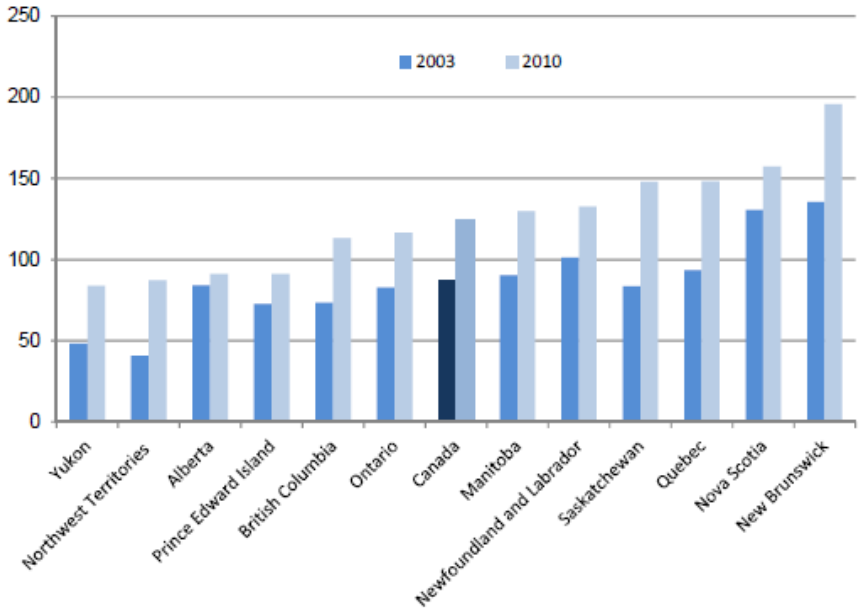
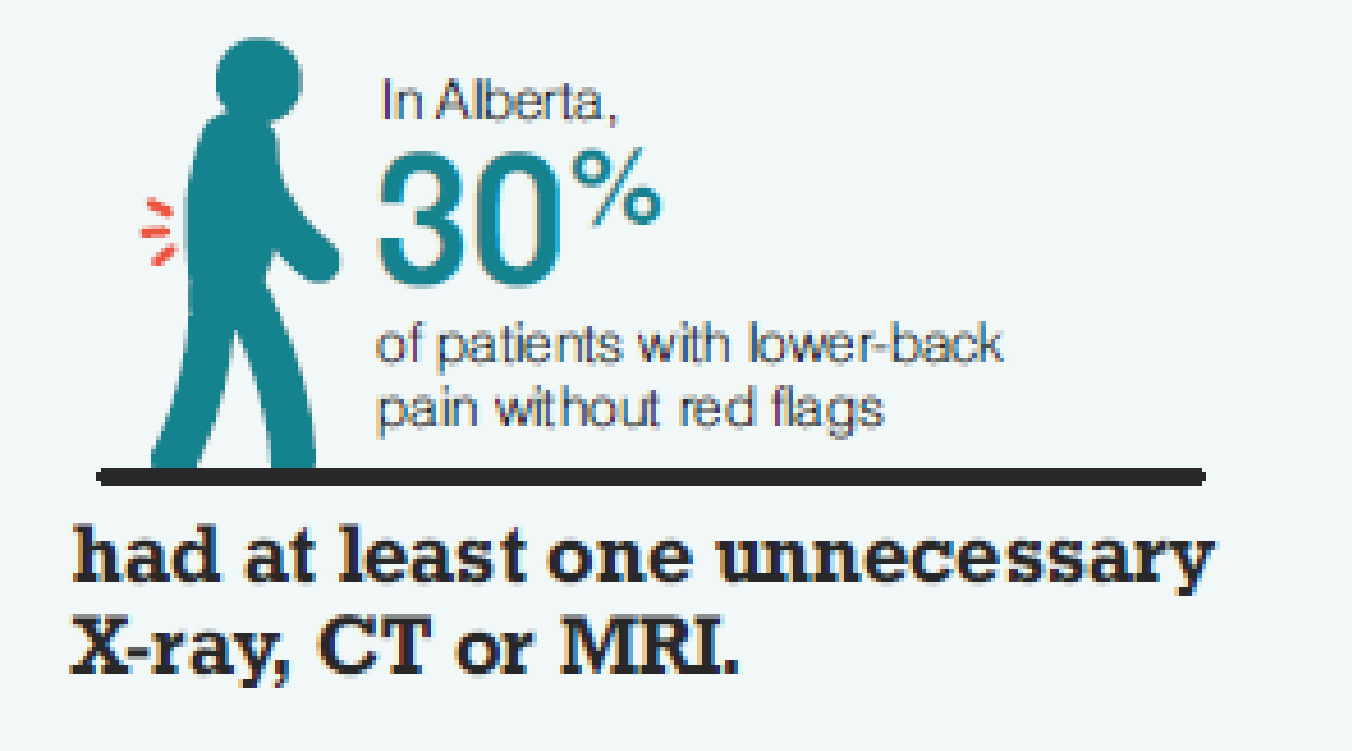


Figure 4.18. Rate of CT exams by province/territory, Canada, 2003 and 2010



Source: OECD (2014), Geographic variations in health care

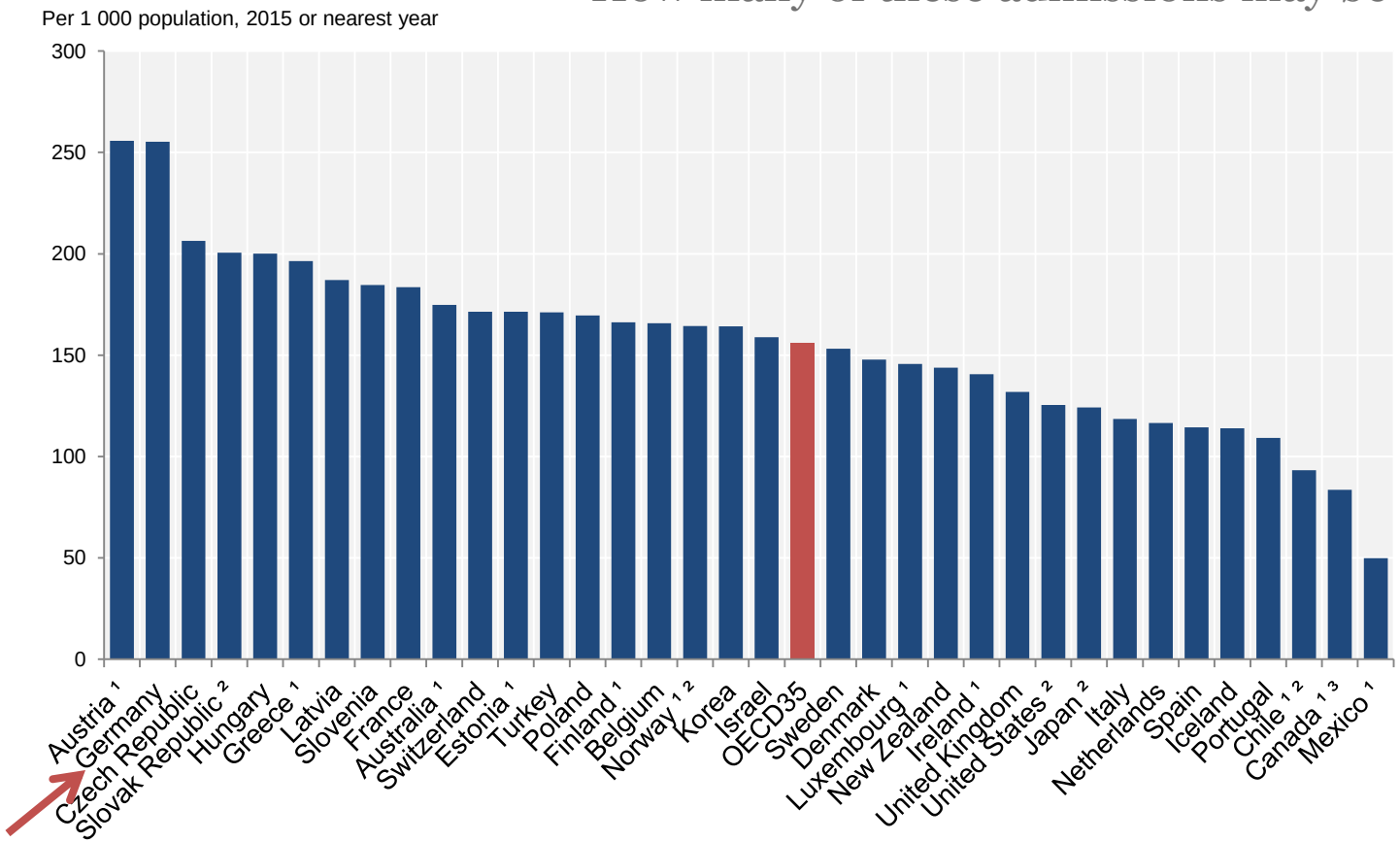
But need to be able to link diagnostics with procedures at individual level to properly measure unnecessary care



Source: Choosing Wisely and CIHI, 2017

International comparisons of hospital admissions also show wide variations (two-fold variations)

How many of these admissions may be avoidable?

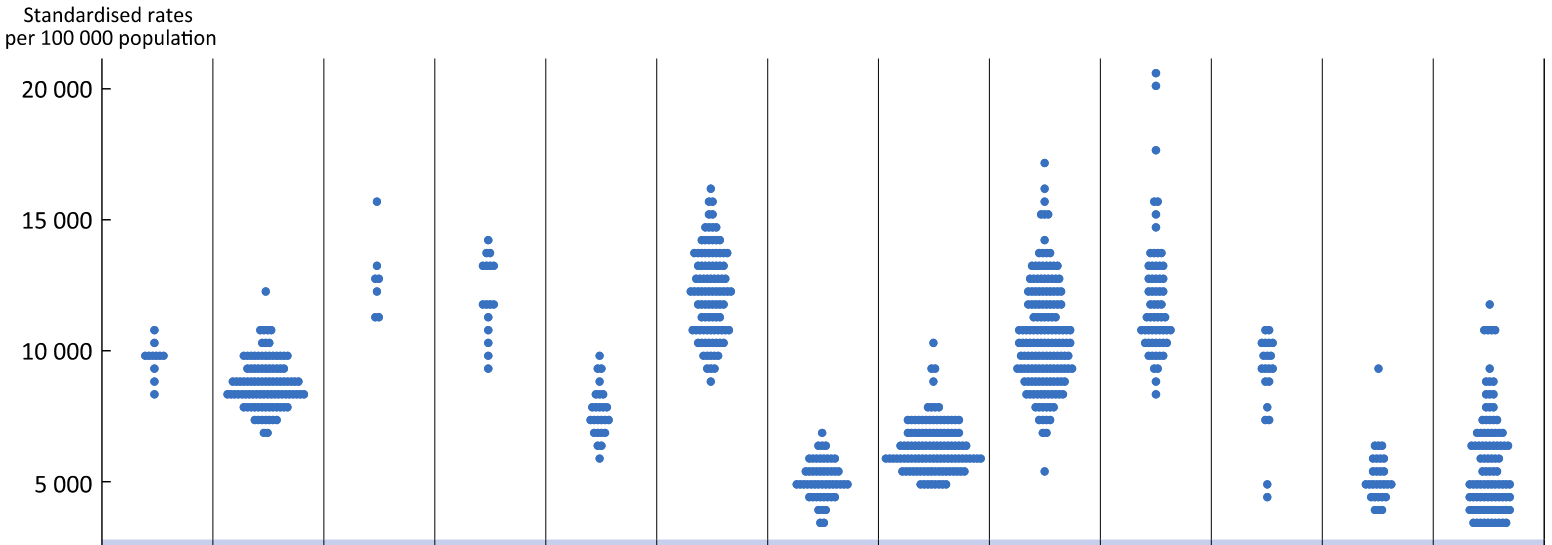


1. Data exclude discharges of healthy babies born in hospital (between 3-10% of all discharges).
2. Data include same-day discharges.
3. Data for Canada include discharges for curative (acute) care only.

Source: OECD Health Statistics 2017.

Two-fold variations also in hospital medical admissions across regions within countries

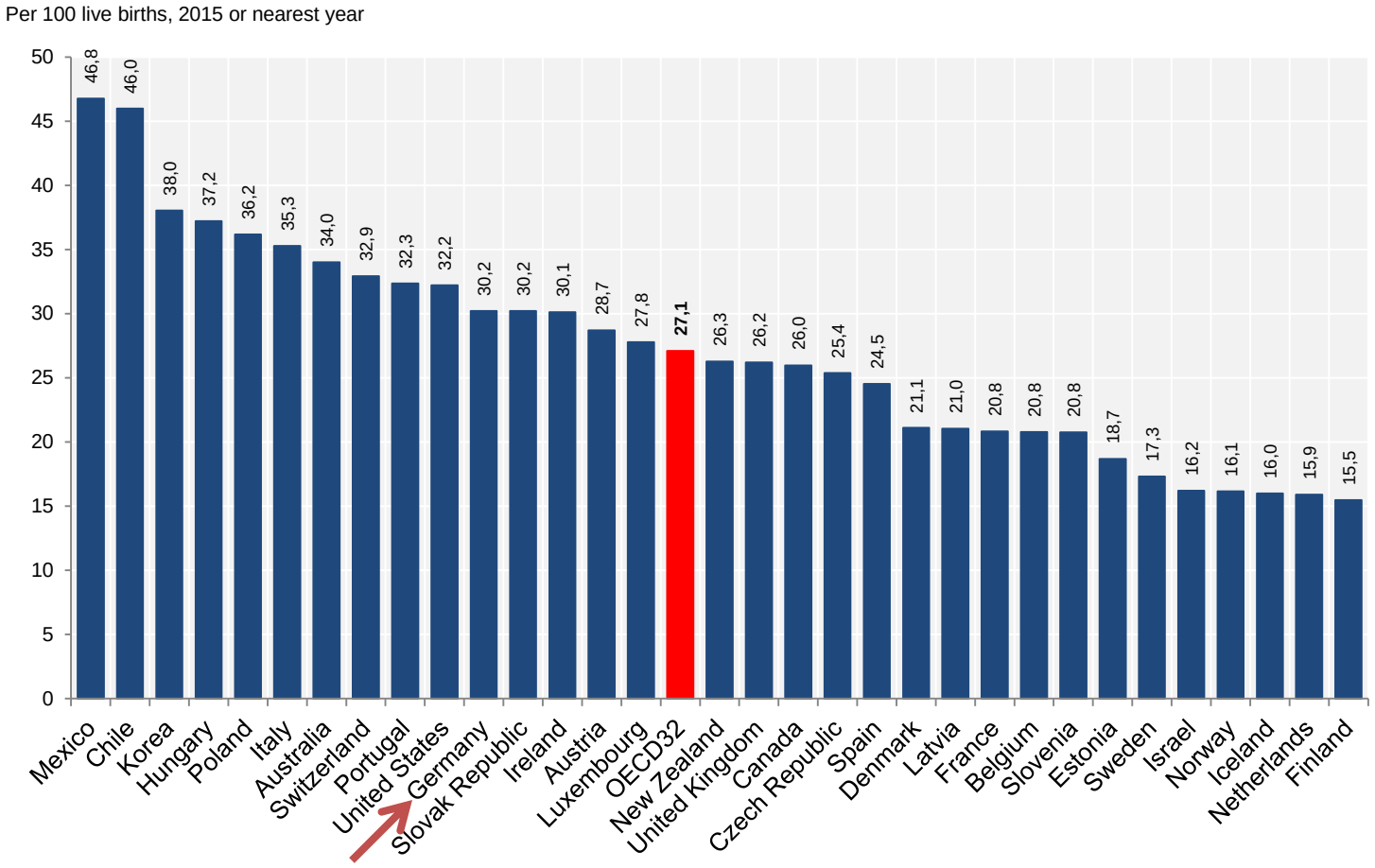
Hospital medical admission rates (2011 or latest year)



	Belgium	France	Israel	Germany1	Switzerland	Germany2	Spain	Italy	England	Australia	Finland	Portugal	Canada
Crude rate	10 337	8 802	11 878	13 342	7 047	13 342	5 244	7 403	10 276	10 986	8 168	5 277	4 376
Std rate	9 723	8 805	12 755	12 102	7 662	12 267	5 121	6 370	10 585	12 033	8 962	5 245	5 717
Coeff. of variation	0.08	0.11	0.12	0.12	0.13	0.14	0.14	0.15	0.19	0.20	0.20	0.21	0.34

Note: Hospital medical admissions exclude admissions involving surgical interventions. Germany 1 and 2 refer to Landers and Spatial Planning Regions.
Source: OECD (2014)

Three-fold variations in caesarean sections across countries

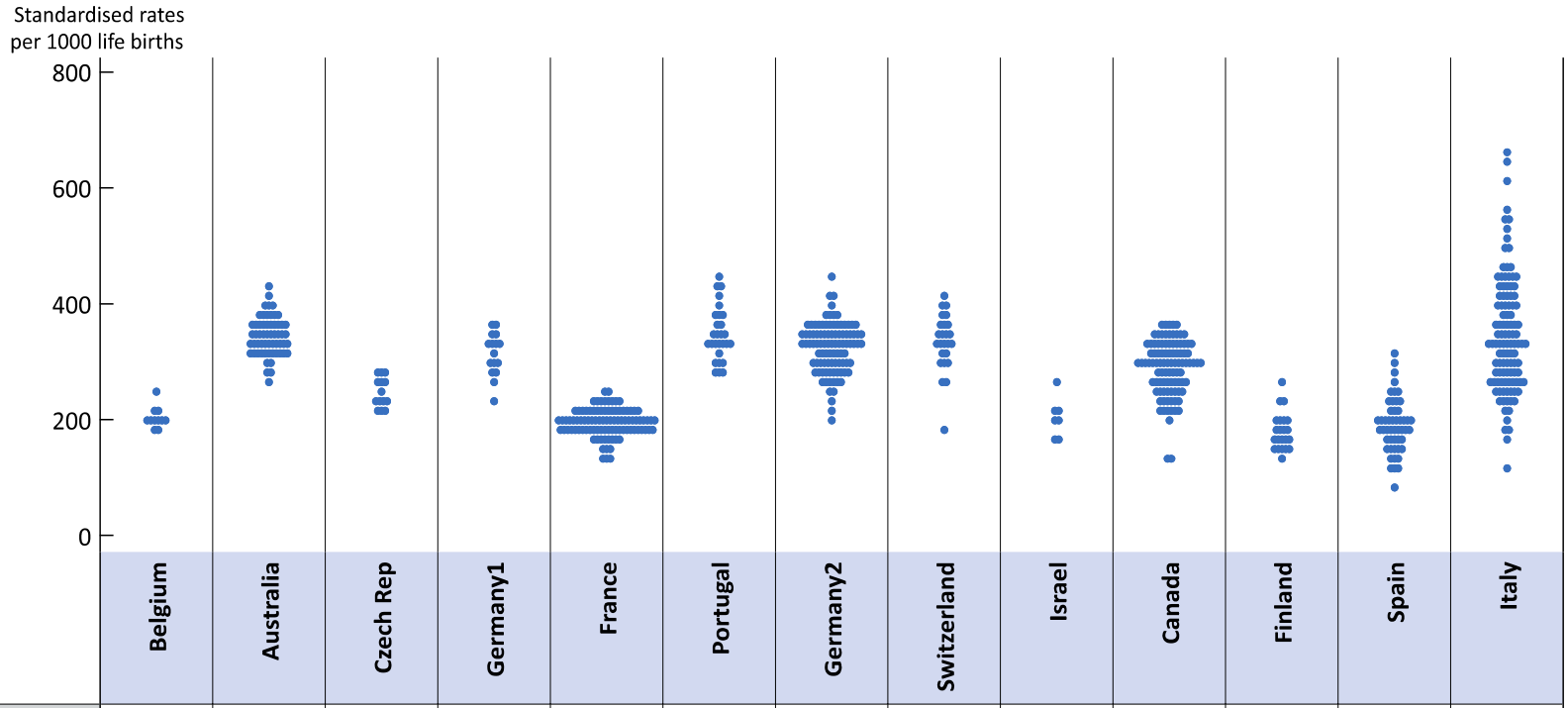


Source: OECD Health Statistics 2017

How many of these caesareans are inappropriate?

Large geographic variations in caesarean sections in some countries (e.g. Italy)

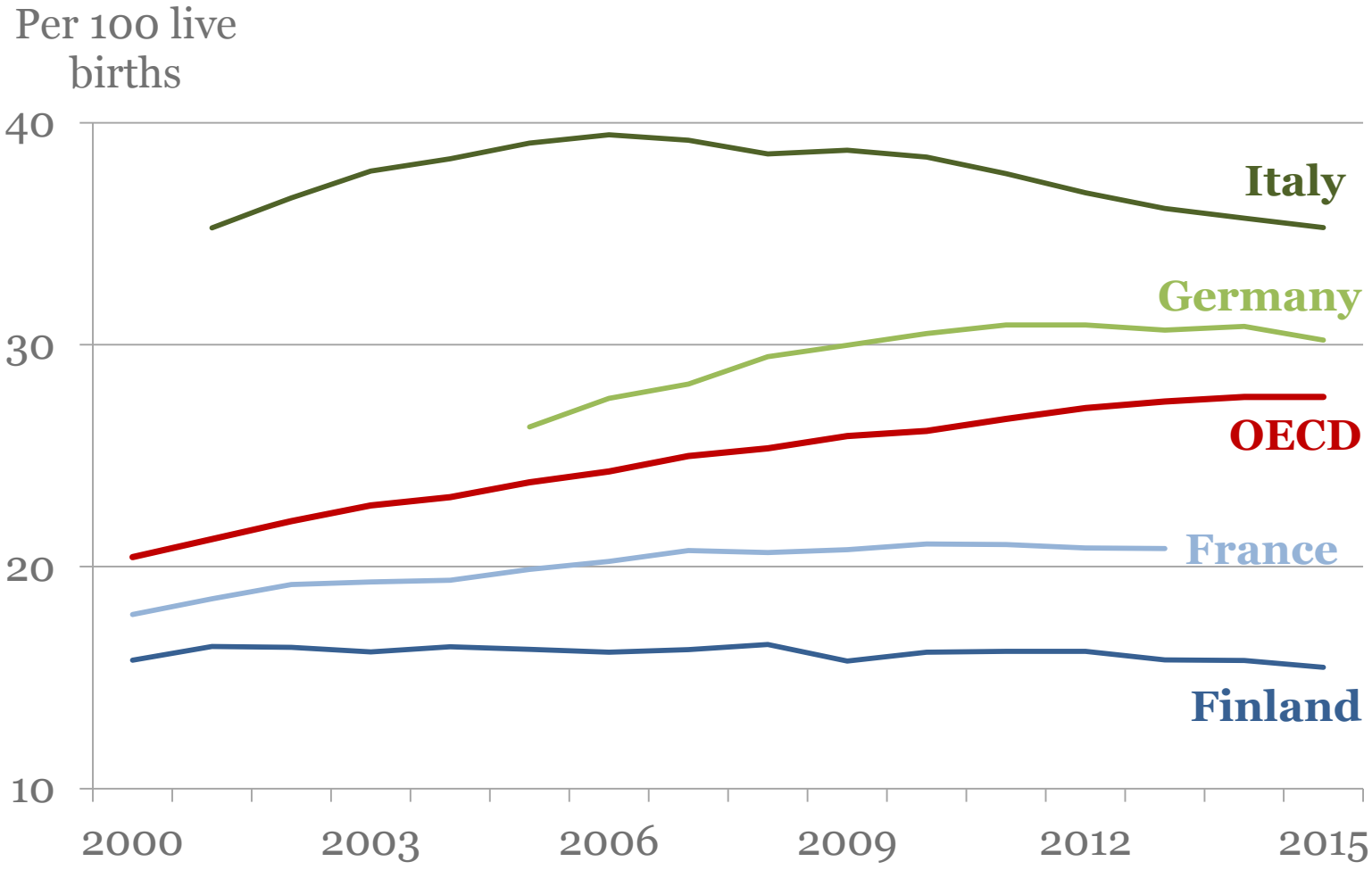
C-section rate (2011 or latest year)



	Belgium	Australia	Czech Rep	Germany1	France	Portugal	Germany2	Switzerland	Israel	Canada	Finland	Spain	Italy
Crude rate	194	323	237	314	196	328	314	332	185	270	161	170	369
Std rate	206	343	243	311	194	349	324	332	207	292	181	189	346
Coeff. of variation	0.09	0.10	0.11	0.11	0.12	0.13	0.13	0.15	0.16	0.16	0.18	0.25	0.29

Source: OECD (2014), Geographic variations in health care

C-section rates have been reduced in some countries in recent years



Source: OECD Health Statistics 2017

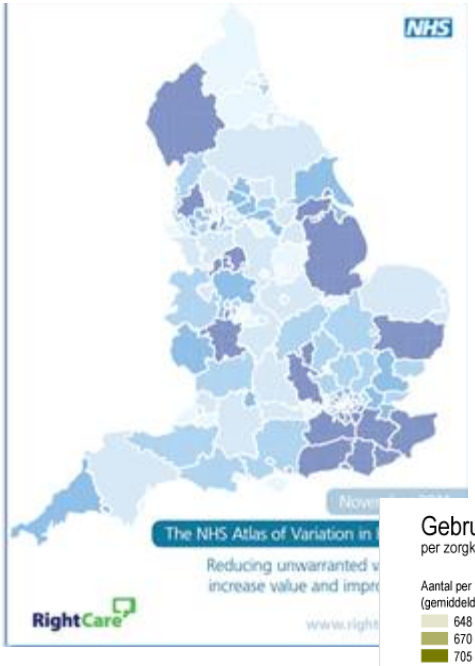
WHY SUCH VARIATIONS?

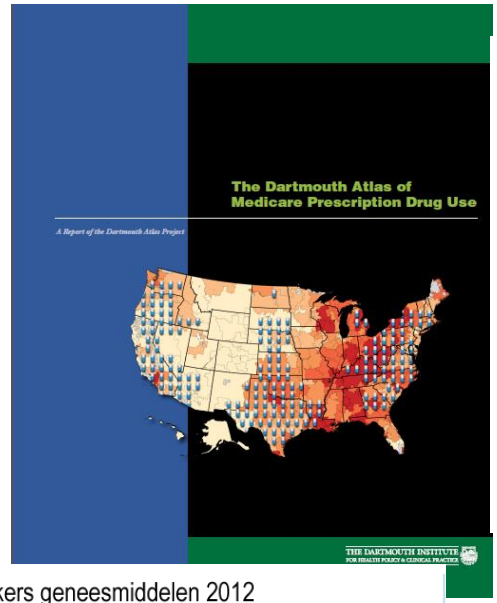
Demand or supply-side factors?

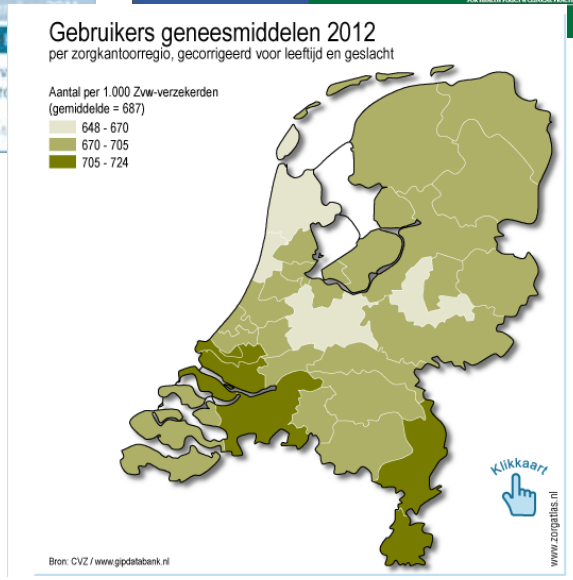
- Demand side:
  - Differences in population needs? (age and sex standardisation reduce, but does not eliminate, variations across countries or regions)
  - Patient preferences? (to be more hospitalised, to get more tests or procedures?)
- Supply side:
  - Differences in overall supply of resources? (number of doctors and surgeons, hospital beds, diagnostic/therapeutic equipment)
  - Differences in clinical practice style/tradition?

HOW TO TACKLE OVERUSE OF HEALTH SERVICES?

Regular public reporting on variations in health care can help raise questions and public debates







Policies targeting providers (and patients)

- Development of clinical guidelines:
  - Example of Spain: Development of guidelines to promote more appropriate use of c-section in some hospitals led to a small reduction
  - But evidence-based clinical guidelines only still exist for a limited part of health care interventions, and where they exist, are often not implemented

- New Choosing wisely® campaign:
  - Bottom-up approach led by clinicians to develop clear and simple clinical guidelines to help doctors and patients reduce unnecessary tests and procedures potentially wasteful and harmful ("don't do" lists)

Choosing Wisely® Campaign

- Began in 2012 in US (American Board of Internal Medicine); about 70 medical societies participating now
- Launched in Canada in 2014; 200+ recommendations now from Canadian physicians on ‘don’t do’ interventions
- International Choosing Wisely® roundtable organised in Amsterdam on 12-13 September 2017:
  - Participation from Australia, Canada, Germany(?), Italy, Japan, Netherlands, Switzerland, United Kingdom, United States

Choosing Wisely Canada
In partnership with the Canadian Medical Association

The College of Family Physicians of Canada / Le Collège des médecins de famille du Canada
Association médicale canadienne / Canadian Medical Association
Forum on General Family and Practice Issues

Eleven Things Physicians and Patients Should Question

1 **Don't do imaging for lower-back pain unless red flags are present.**

Red flags include, but are not limited to, severe or progressive neurological deficits or when serious underlying conditions such as osteomyelitis are suspected. Imaging of the lower spine before six weeks does not improve outcomes.

2 **Don't use antibiotics for upper respiratory infections that are likely viral in origin, such as influenza-like illness, or self-limiting, such as sinus infections of less than seven days of duration.**

Bacterial infections of the respiratory tract, when they do occur, are generally a secondary problem caused by complications from viral infections such as influenza. While it is often difficult to distinguish bacterial from viral sinusitis, nearly all cases are viral. Though cases of bacterial sinusitis can benefit from antibiotics, evidence of such cases does not typically surface until after at least seven days of illness. Not only are antibiotics rarely indicated for upper respiratory illnesses, but some patients experience adverse effects from such medications.

trivial diagnostic yield, but a significant number of false positive reports. Potential harms of such routine screening exceed the potential benefit.

4 **Don't screen women with Pap smears if under 21 years of age or over 69 years of age.**

- Don't do screening Pap smears annually in women with previously normal results
- Don't do Pap smears in women who have had a hysterectomy for non-malignant disease

The potential harm from screening women younger than 21 years of age outweighs the benefits and there is little evidence to suggest the necessity of conducting this test annually when previous test results were normal. Women who have had a full hysterectomy for benign disorders no longer require this screening. Screening should stop at age 70 if three previous test results were normal.

5 **Don't do annual screening blood tests unless directly indicated by the risk profile of the patient.**

There is little evidence to indicate there is value in routine blood tests in asymptomatic patients. Instead, this practice is more likely to produce false positive results that may lead to additional unnecessary testing. The decision to perform screening tests, and the selection of which tests to perform, should be done with careful consideration of the patient's age, sex and any possible risk factors.

6 **Don't routinely measure Vitamin D in low risk adults.**

Because Canada is located above the 35° North latitude, the average Canadian's exposure to sunlight is insufficient to maintain adequate Vitamin D levels, especially during the winter. Therefore, measuring serum 25-hydroxyvitamin D levels is not necessary because routine supplementation with Vitamin D is appropriate for the general population. An exception is made for measuring Vitamin D levels in patients with significant renal or metabolic disease.

7 **Don't do screening mammography for low risk women aged 40-49.**

If, after careful assessment of women less than 50 years of age, their risk profile for breast cancer is low, the benefit of screening mammography is also quite low. Furthermore, for this age group there is a greater risk of a false-positive and consequently undergoing unnecessary or harmful follow-up procedures.

New report from Choosing Wisely and Canadian Institute for Health Information (April 2017)

Unnecessary care in Canada

- Wastes health system resources
- Increases wait times for patients
- Can lead to patient harm

Canadians have

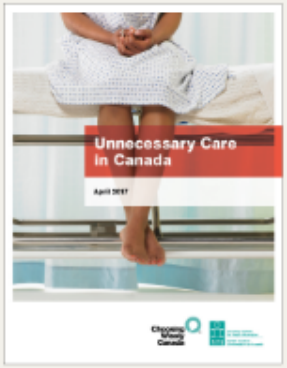
1 million+

potentially unnecessary medical tests and treatments each year.

of patients indicated in the 8 selected Choosing Wisely Canada recommendations had tests, treatments and procedures that **are potentially unnecessary**.

There is room to reduce unnecessary care.

Substantial variation exists among regions and facilities in terms of the number of unnecessary tests and procedures performed — **this points to an opportunity to improve.**



Choosing Wisely Canada is a campaign to help clinicians and patients engage in conversations about unnecessary tests and treatments, and make smart choices.

Unnecessary Care in Canada explores 8 out of 200+ Choosing Wisely Canada recommendations across sectors of the health system: primary care, specialist care, emergency care and hospital care.

cihi.ca

Choosing Wisely Canada

CIHI

OECD supports Choosing Wisely in promoting better measurement of unnecessary care

- Supporting development of three **indicators of inappropriate care** for international comparison:
  1. Imaging tests for uncomplicated lower back pain
  2. Prescribing antibiotics for upper respiratory tract infection
  3. Prescribing sedatives for the elderly

- Step 1: Assessing data availability

For more information

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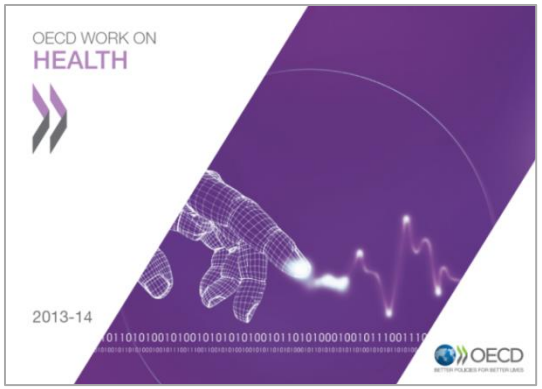
Read more about OECD work



Website: www.oecd.org/health