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CHÉOS
Centre for Health Evaluation
& Outcome Sciences

Healthcare Spending

Using funding policies to improve value

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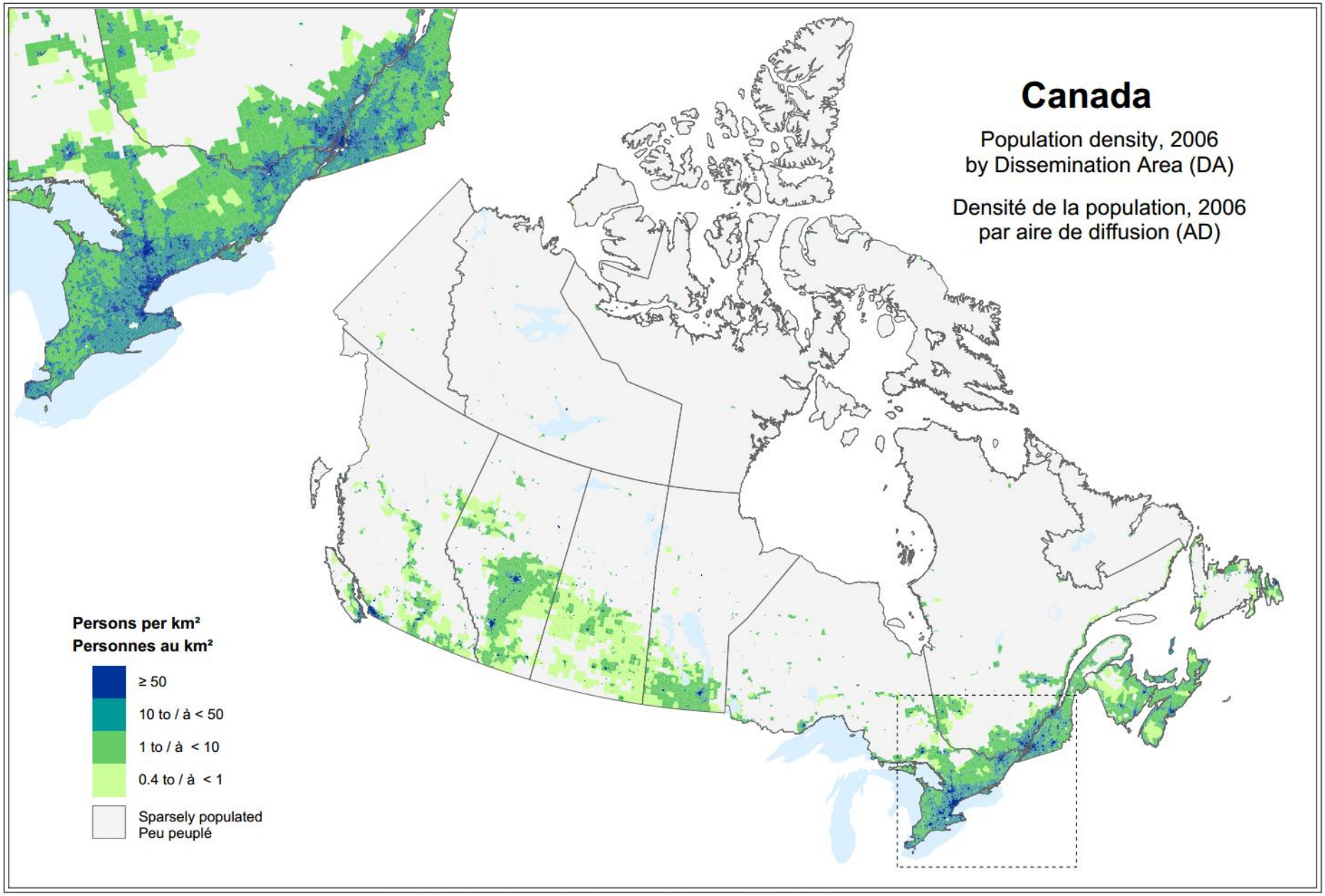
September 7th, 2017

Overview

447,000 km²

Big area:
35 million residents
in 10 provinces

9.9 million
residents



Sources: 2006 Census of Canada. Produced by the Geography Division, Statistics Canada, 2007.
Recensement du Canada de 2006. Préparé par la Division de la géographie, Statistique Canada, 2007.

Overview: Provincial health insurance programs

- Provinces have responsibility for funding and organizing delivery system for residents
  - Each province has its own public insurance program
  - Insures all residents

- Financing
  - General taxation by provincial (and federal) governments
  - Federal spending is ~20% of provincial spending on health
    - Not based on need
    - Source of continual tension

Overview: Provincial health insurance programs

- Absence of national ‘benefit’ package
- Mandated by Canada Health Act to include:
  - All hospital-based care, medically-necessary diagnostic care and physician services
  - No cost sharing for insured services (no co-pays or surcharges)
  - Coverage decisions are made by provinces
    - May include long-term care, home care, or drugs on the basis of age, income
- All other services are insured by mix of public, private and out-of-packet expenditures

Overview: Provincial health insurance programs

- Organization
  - Many provinces ‘regionalized’ healthcare delivery
  - Funded by provinces to organize and fund care within geographic region
    - Responsibilities include: Access, quality, cost-efficiency

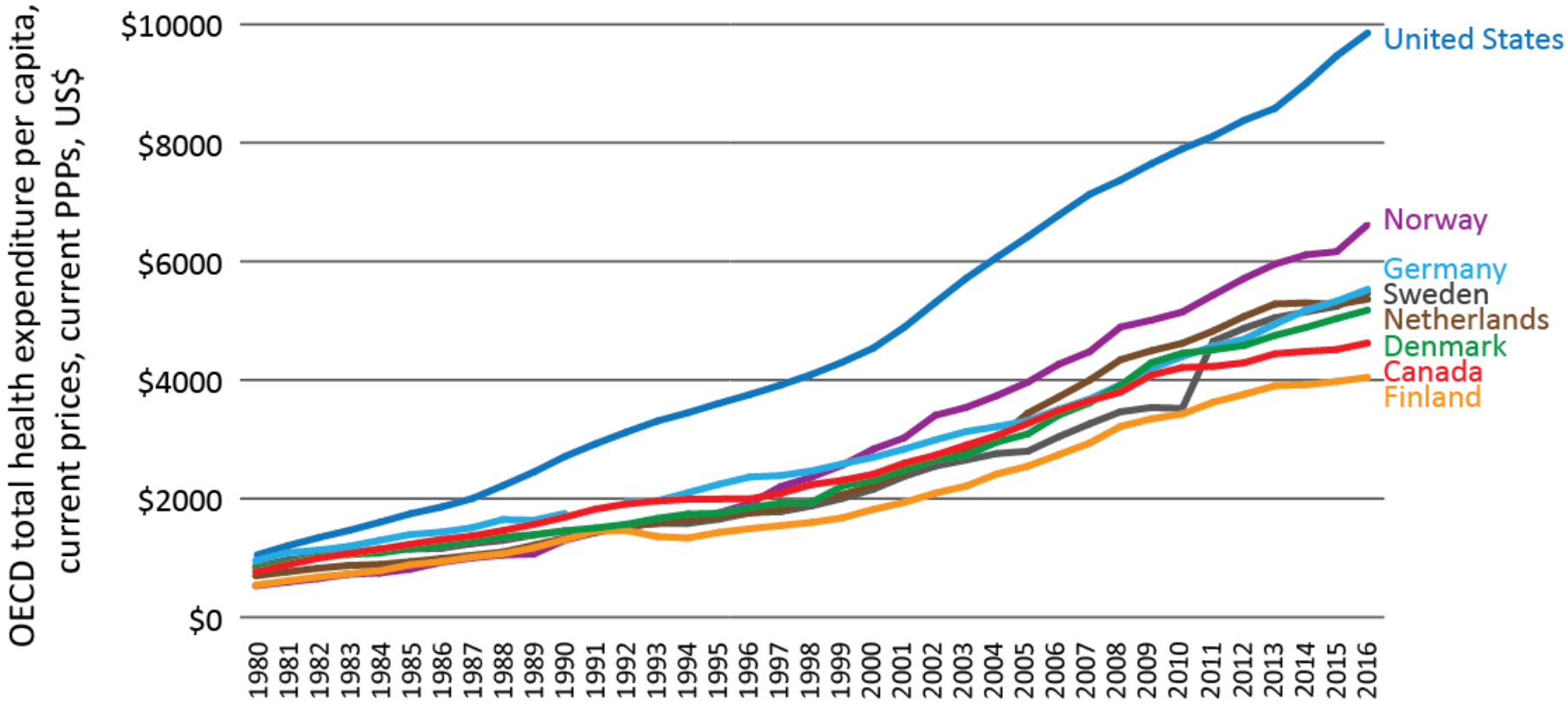
- Delivery system includes primarily private actors:
  - Non-for-profit hospital owned by board or region
  - Physicians, independent businesses, paid by province
  - Community-based care: public, not-for-profit, and private

Overview of spending

- 2016 in Canada:
  - Health care spending: $228.1 billion
  - $6,299 per Canadian
  - 11.1% of GDP – similar to Sweden
- Spending
  - Public spending is ~70% of total health expenditures
- Public spending on health care: ~47% of provincial government's budget
  - Hospitals are the largest and most costly segment
  - Crowding out other sectors of public spending: Education

Source: Canadian Institute for Health Information (2017)

Health spending per capita, selected OECD countries, 1980-2017



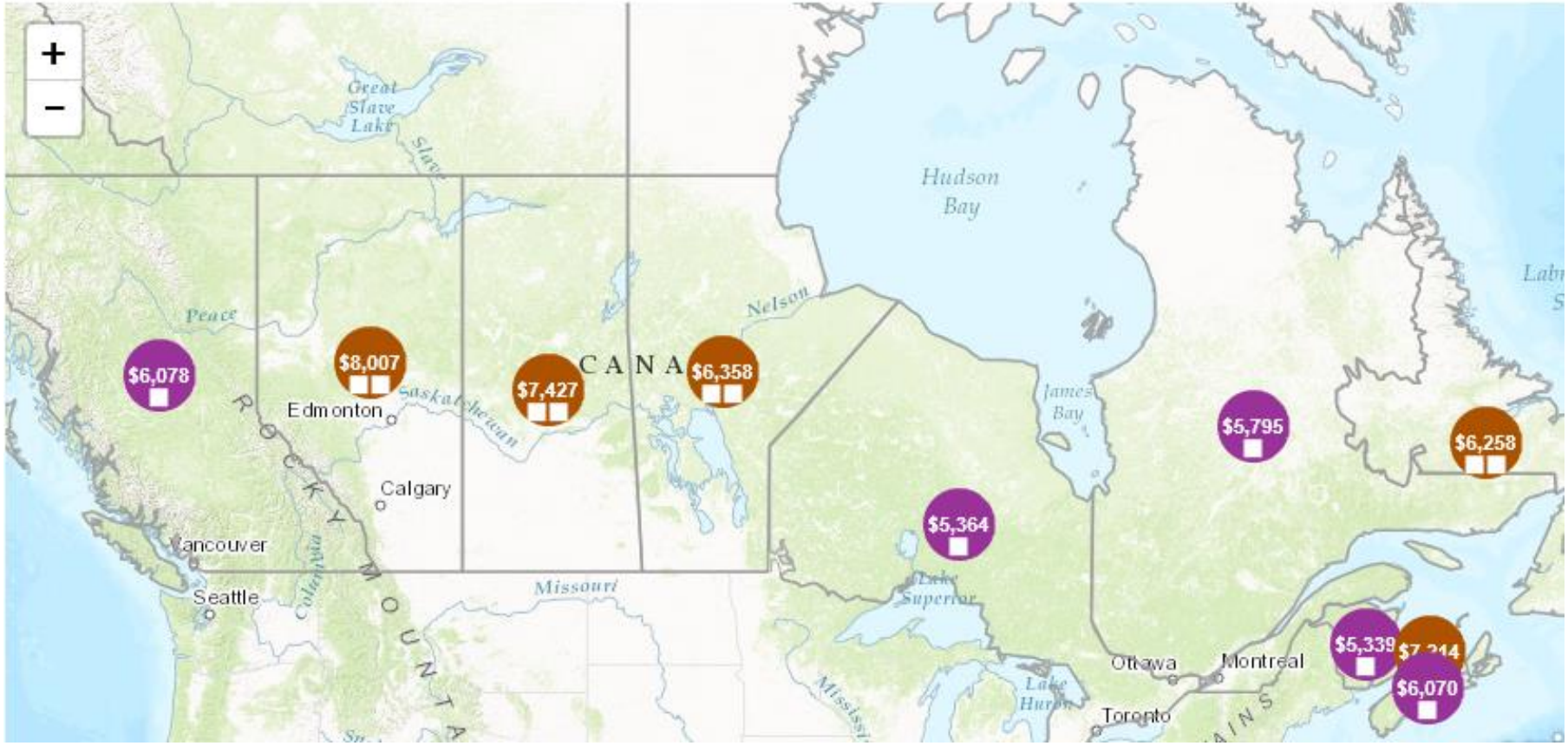
Source: OECD (2017)

Spending on hospitals

Higher than average

Same as average

Lower than average



Source: Canadian Institute for Health Information (2017)

Current state of funding

- Sector-based
- Governments pour in money: Unclear value or relative gain in health

Overview: Silos

- Global budgets for hospitals
  - Pay for all the services delivered by the hospital irrespective of the volume and type of care delivered
  - No incentive for increasing access or improving quality
    - Decreasing wait times and discouraging early discharge
    - Alternate level of care: no 'push' and no 'pull'
    - No incremental funding for high quality or safe care
  - Predictable budgets and cost certainty
  - Hospital budgets have increased ~5%, each year, for the last decade
  - A number of provinces have recently moved to a 'mixed' hospital funding model – global budget, population need and DRG case based

Overview: Silos

- Physician payment
  - Fee-for-service payments based on fee schedules
    - Paid by provinces directly
    - By-pass hospitals and regions
    - No alignment with hospital's mission or region's priorities
  - Incentive for increasing volume of services
  - No incentive for relative effectiveness or increasing quality
  - No alignment with population need or gain in health

Overview: Silos

- Long-Term facility-based care
  - Per bed per day, or global budget
    - Mix of provider types: private for-profit, private not-for-profit and publicly-owned
  - Incentive to have all beds full of least costly residents
- Home care
  - Fee-for-service payments; Incentive for volume
  - Unrelated to outcomes
- No incentive for sector substitutions

Overview: Silos

- Recent, but not new, findings rank Canada's performance among the worst of 11 OECD countries in:
  - Safety and coordination of care
  - Timely communication between sectors
  - Access to specialists and elective surgery
  - Poor access to off-hours primary care

	Australia	Canada	France	Germany	Netherlands	New Zealand	Norway	Sweden	Switzerland	United Kingdom	United States
Able to get Same/Next Day Appointment When Sick	65%	45%	62%	66%	72%	78%	45%	57%	93%	70%	57%
Very/Somewhat Difficult Getting Care After-Hours	59%	65%	63%	57%	33%	38%	45%	68%	43%	38%	63%
Waited Two Months or More for Specialist Appointment[a]	28%	41%	28%	7%	16%	22%	34%	31%	5%	19%	9%
Waited Four Months or More for Elective Surgery[b]	18%	25%	7%	0%	5%	8%	21%	22%	7%	21%	7%

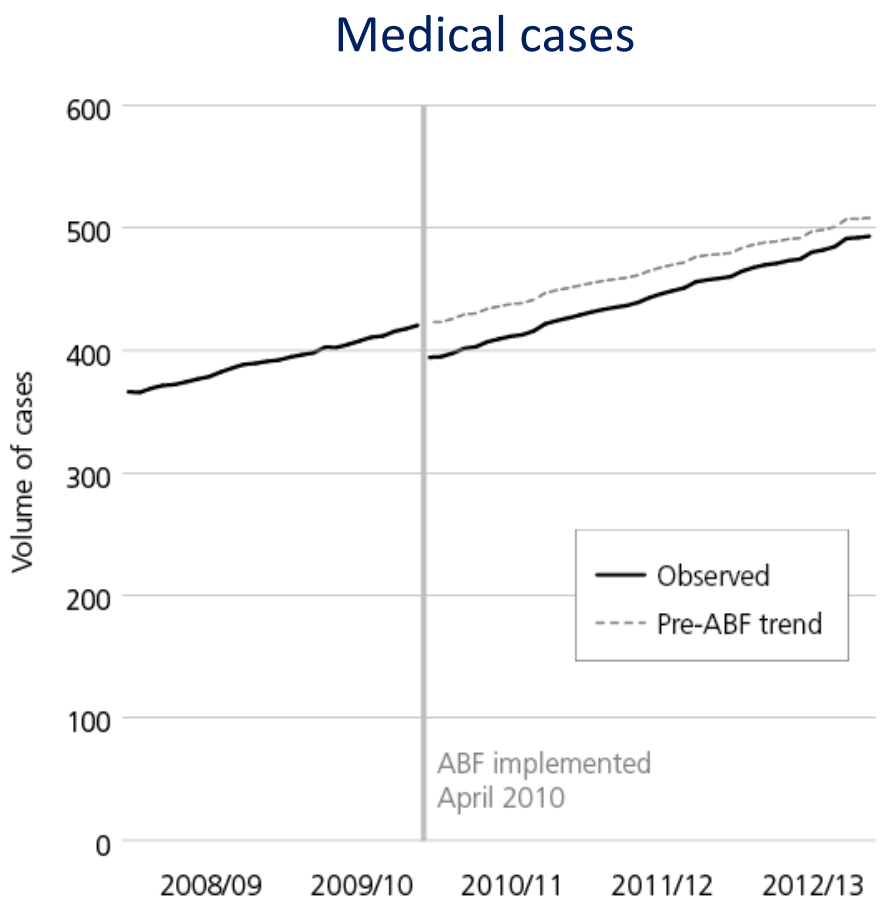
Source: Commonwealth Fund (2016)

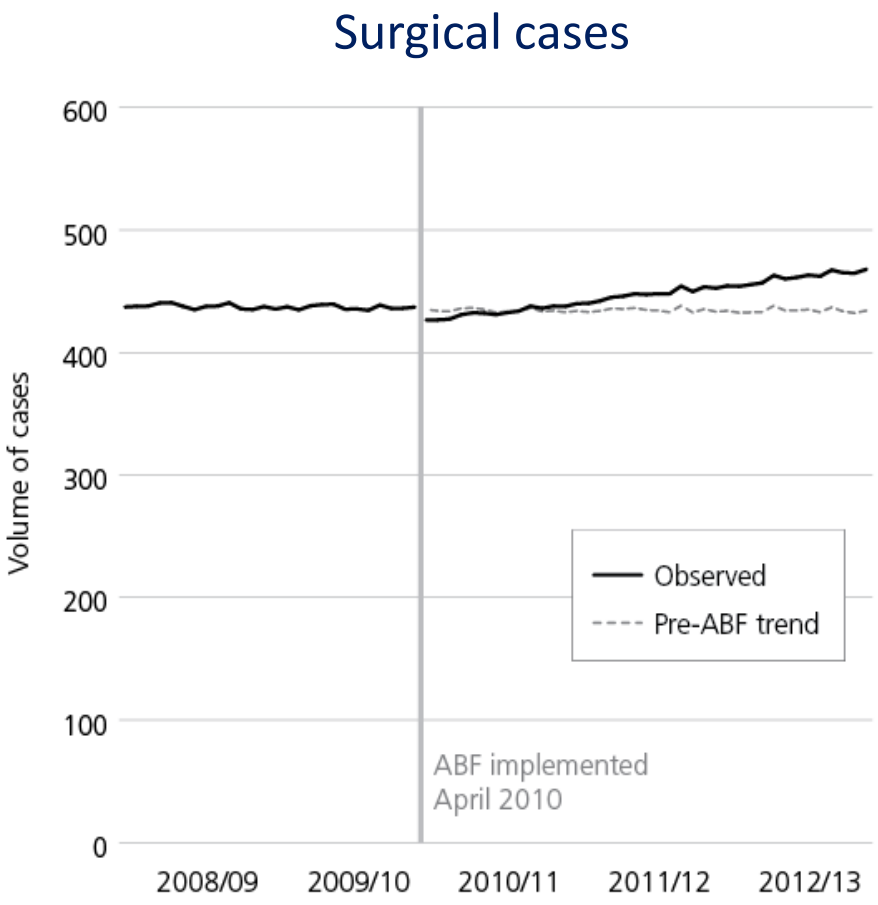
Activity-based funding: Per case funding to reduce ineffective use of in-hospital resources

Type of funding	No. of cases	Spending control	Transparency	Cost efficiency	Quality
Per diem / Cost plus	Yes	No	No	No	Flat
US Medicare					
DRG / Case-based	Yes	No	Yes	Yes	Flat
European Countries					
Global budget	No	Yes	No	Flat	Flat

Adapted from: R. Busse, EuroDRG project

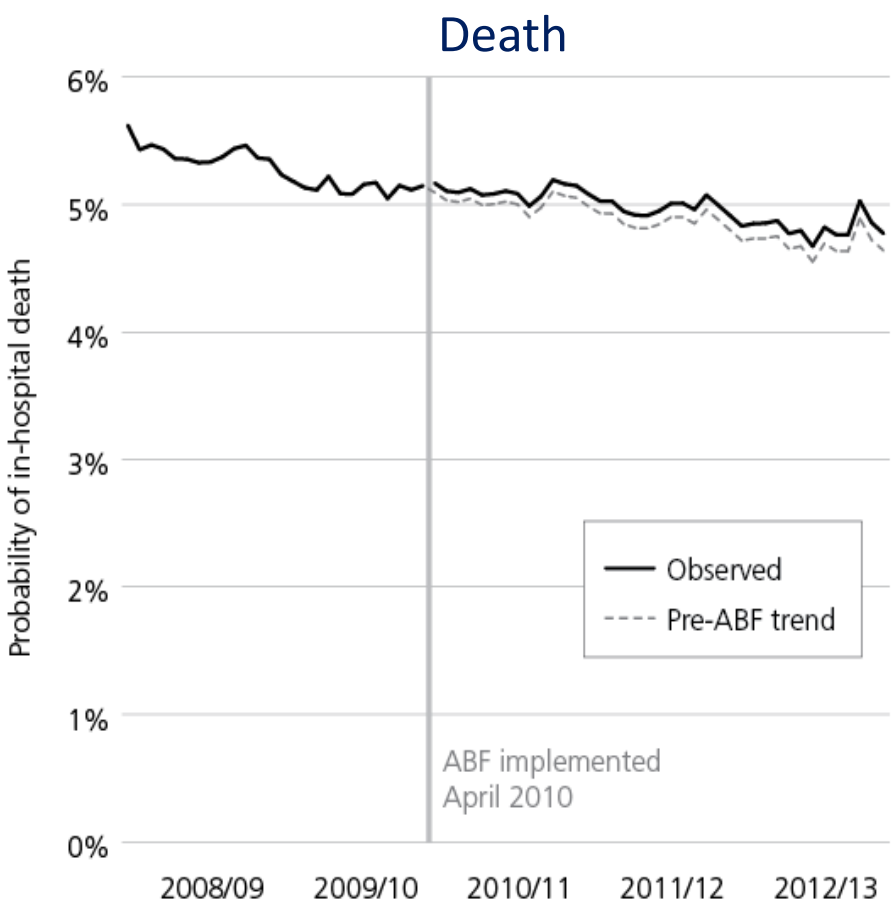
Activity-based funding: The BC experiment

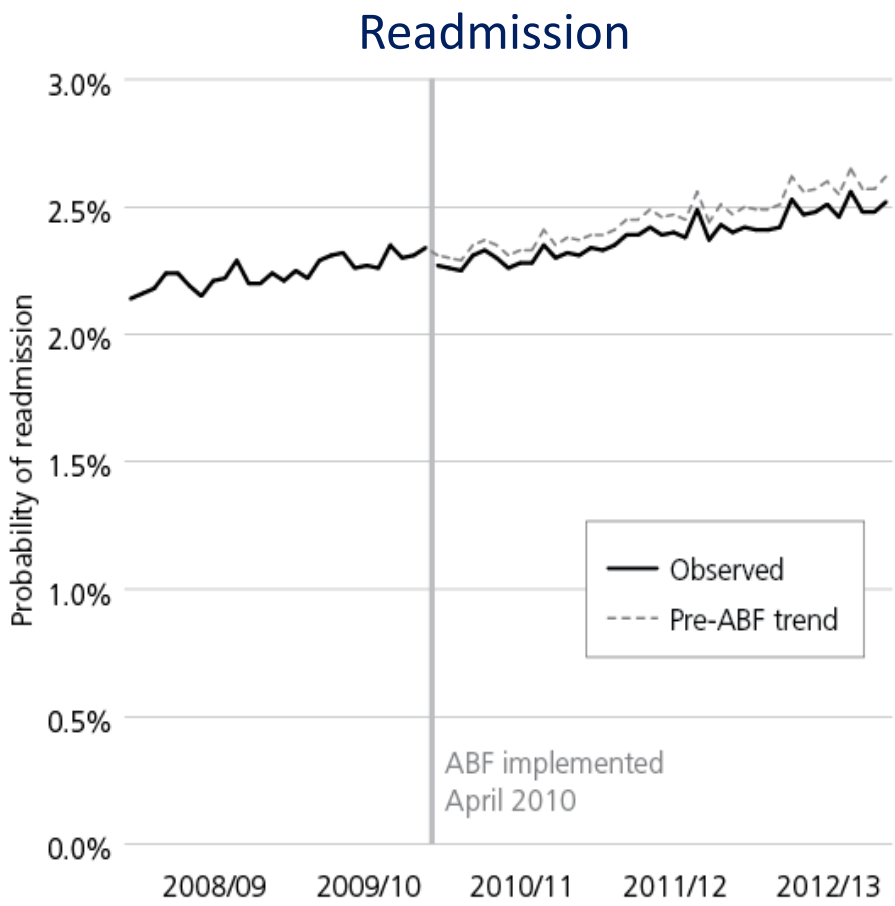




Source: Sutherland et al, 2016

Activity-based funding: The BC experiment





Source: Sutherland et al, 2016

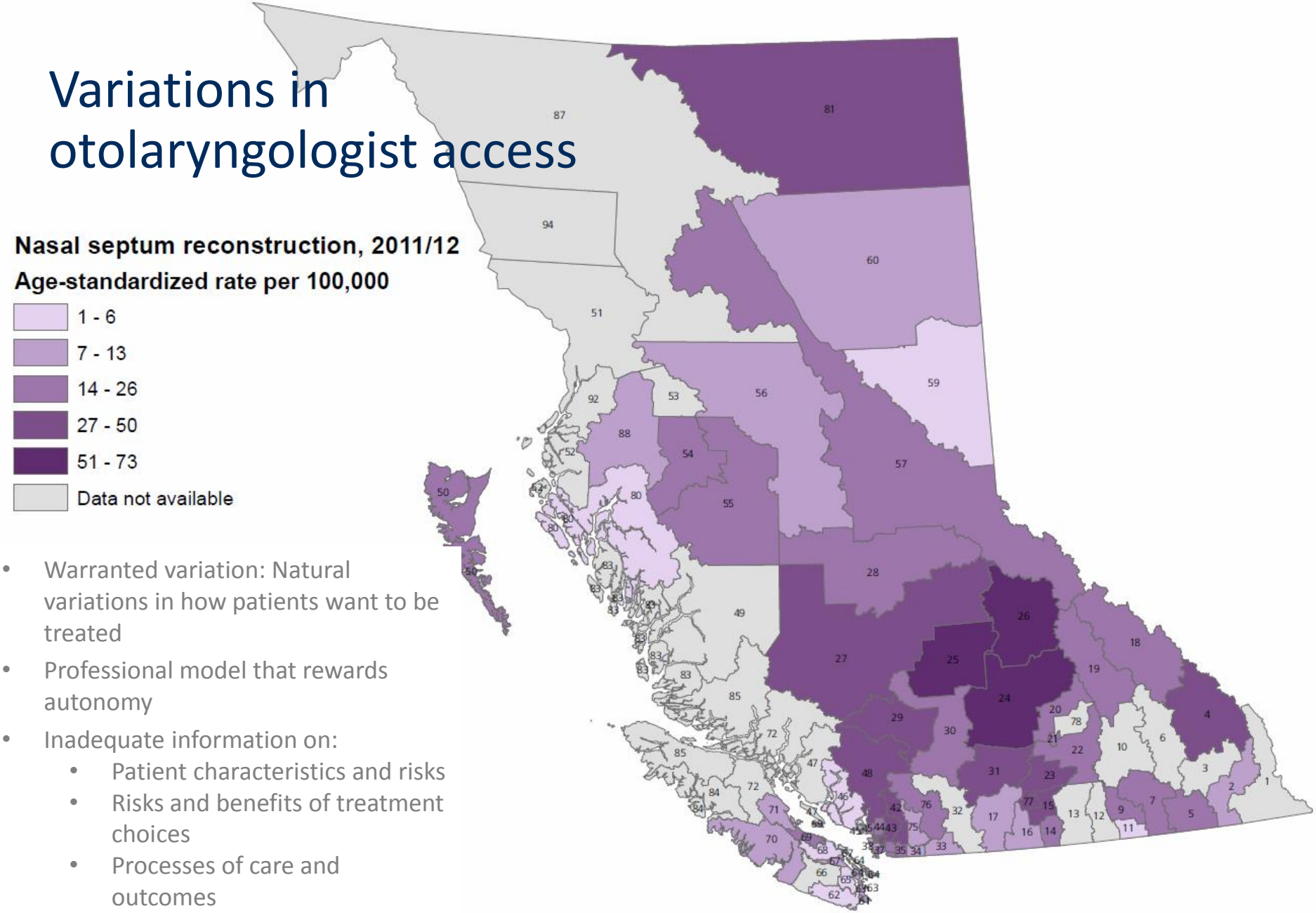
Activity-based funding: The BC experiment

- The reforms enacted were very modest
- The impacts of the reforms can be considered, at best, mixed:
  - Surgical volume increased, lengths of stay decreased
  - No change in quality or efficiency measures

- Why are the results from hospitals in BC different from those reported in other countries?
  - Three year horizon of the program limited hospital's response to the incentives, such as expanding capacity
  - Less than 20% of hospital's government revenues and a no-loss provision
  - Hospital-focused with no commensurate changes in the post-acute care sector

- Ontario and Quebec proceeding

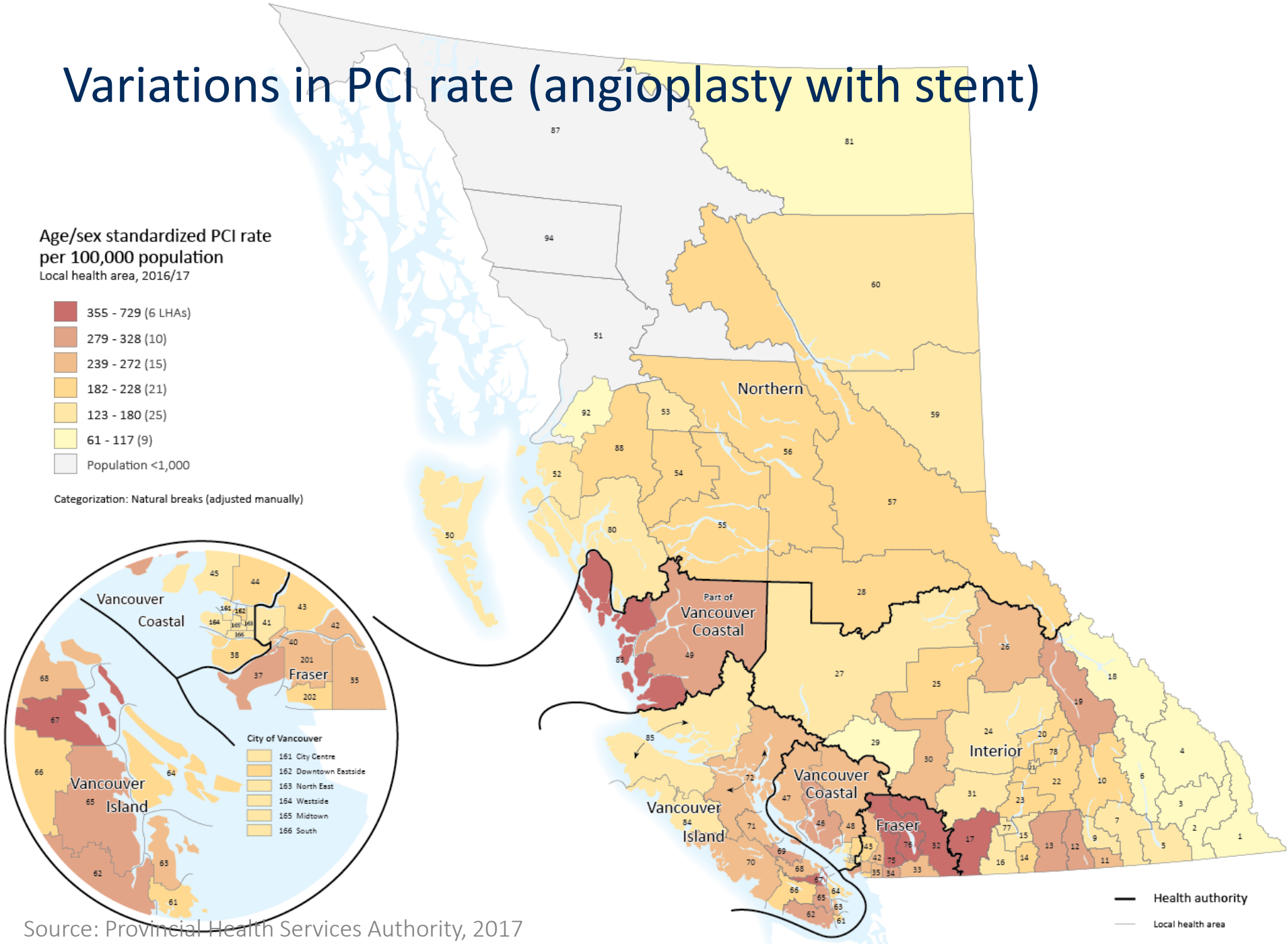
Variations in otolaryngologist access



- Warranted variation: Natural variations in how patients want to be treated
- Professional model that rewards autonomy
- Inadequate information on:
  - Patient characteristics and risks
  - Risks and benefits of treatment choices
  - Processes of care and outcomes

Source: BC Ministry of Health, 2015

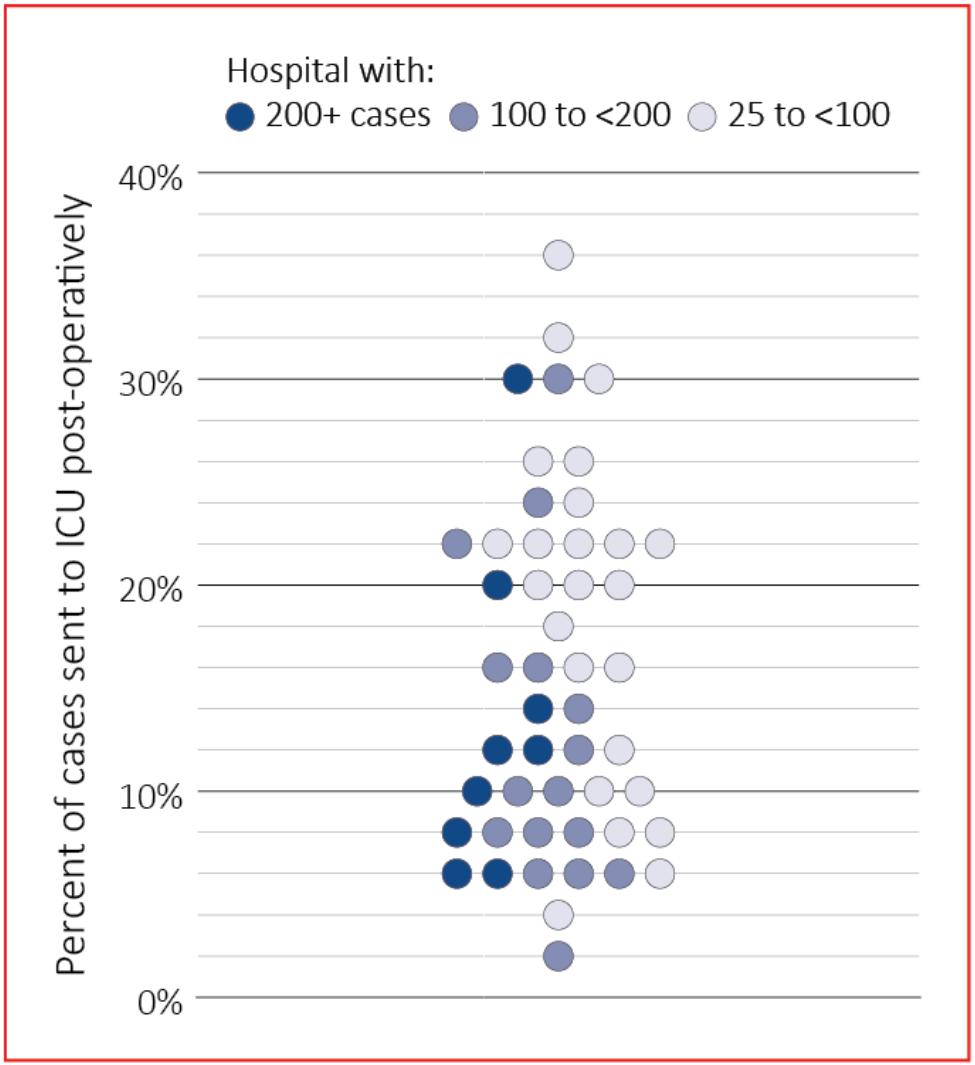
Variations in PCI rate (angioplasty with stent)



Source: Provincial Health Services Authority, 2017

Colorectal cancer surgery: Variation in ICU use

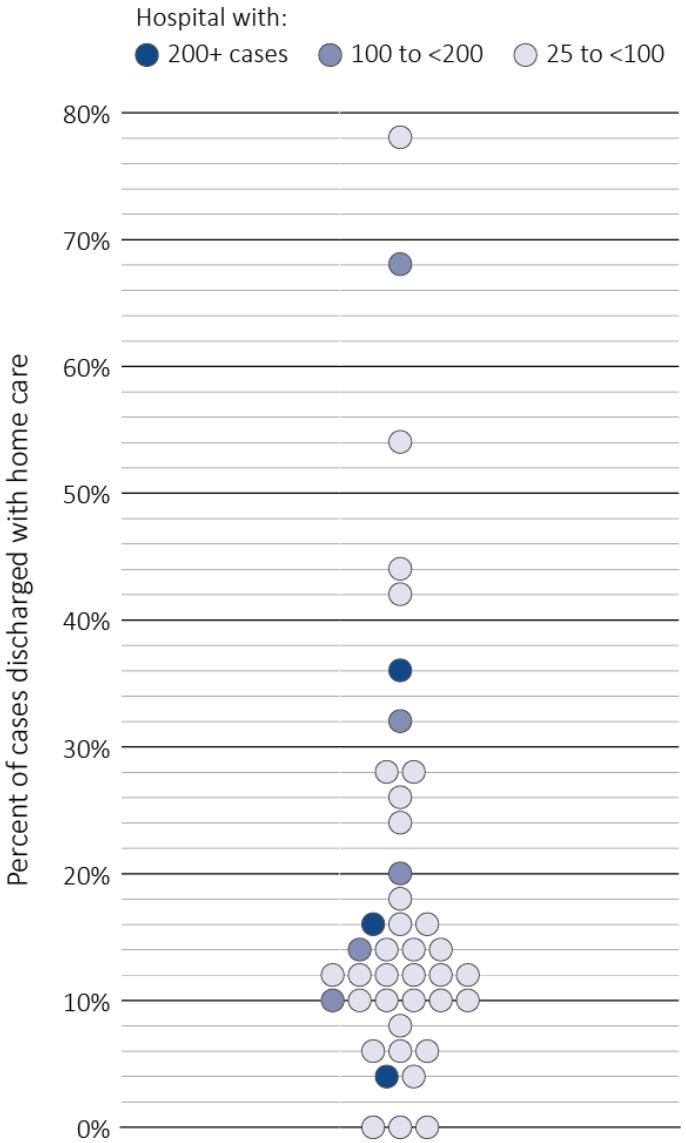
- Hospital paid case mix adjusted per-case rate
  - Rate increases if patient in intensive care



Source: Cancer Care Ontario, 2017

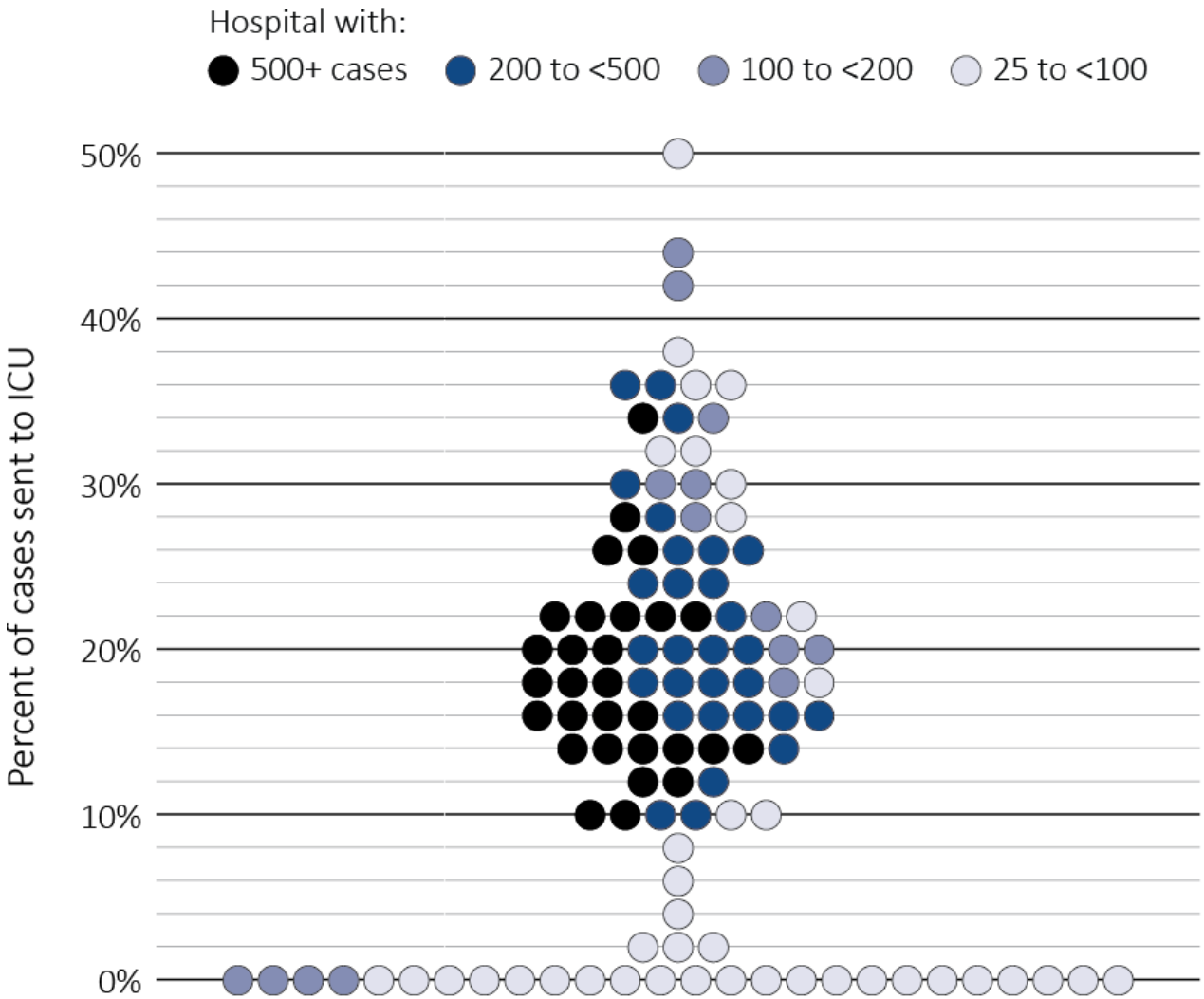
Breast cancer surgery: Variation in discharge to home care

- Hospital paid case mix adjusted per-case rate
  - Rate increases if discharged to receive home care services



Source: Cancer Care Ontario, 2017

COPD hospitalization: Variation in ICU use



Source: Cancer Care Ontario, 2017

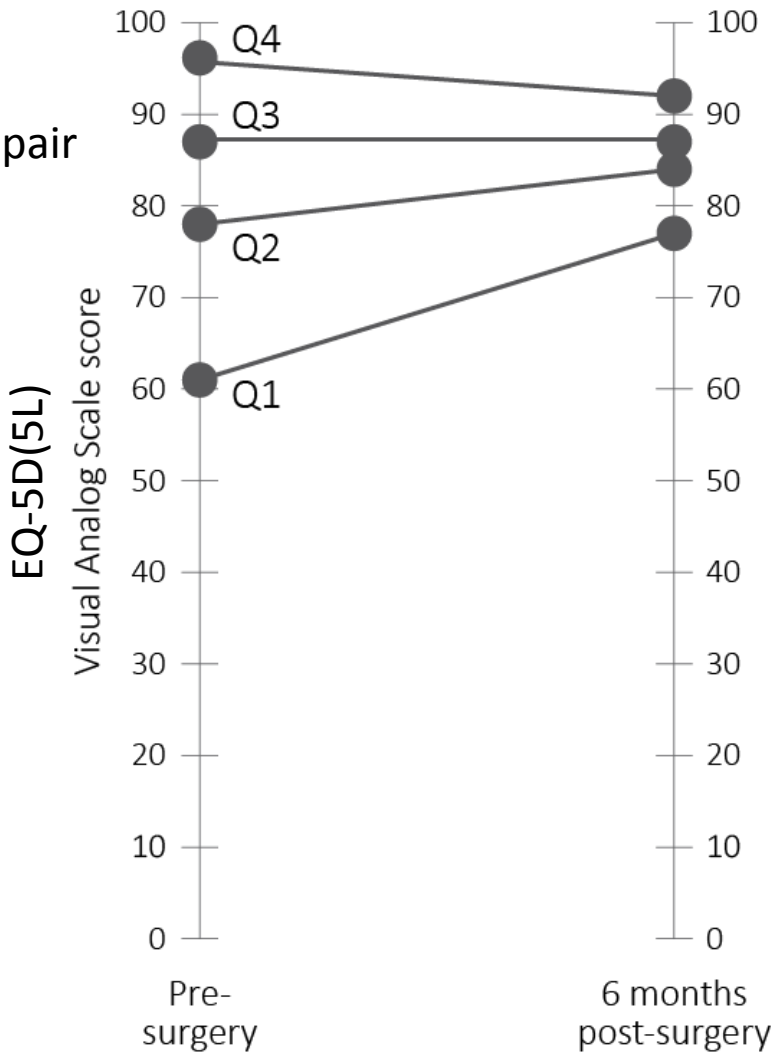
Measuring outcomes: What are we paying for?

- Measuring patients' health
  - Patient-reported outcome measures (PROs)
  - Pre-operative and post-operative

- Key measures:
  - Measure gain in health, pain, depression, and anxiety
    - Symptom burden
  - Change in health while waiting for surgery
  - Gain in health attributable to surgery

Variation in patient-reported surgical outcomes

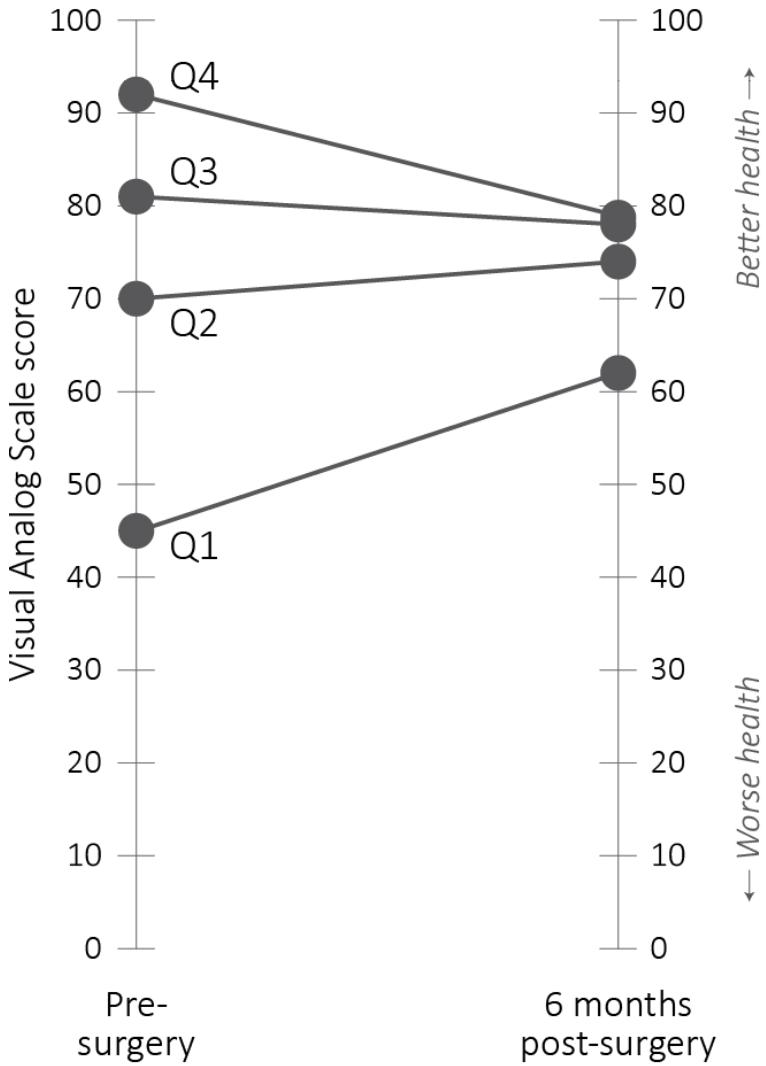
DRG/CMG 229
Non-complex hernia repair



Source: Sutherland, In Press

Variation in patient-reported surgical outcomes

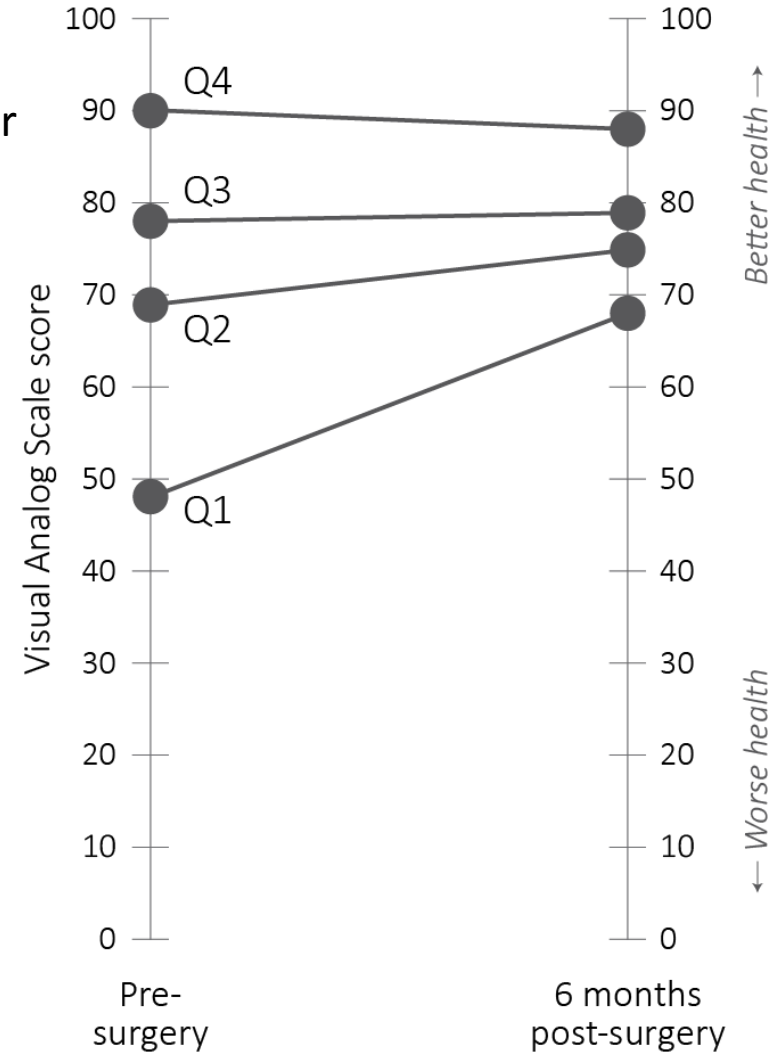
DRG/CMG 221
Colostomy/enterostomy



Source: Sutherland, In Press

Variation in patient-reported surgical outcomes

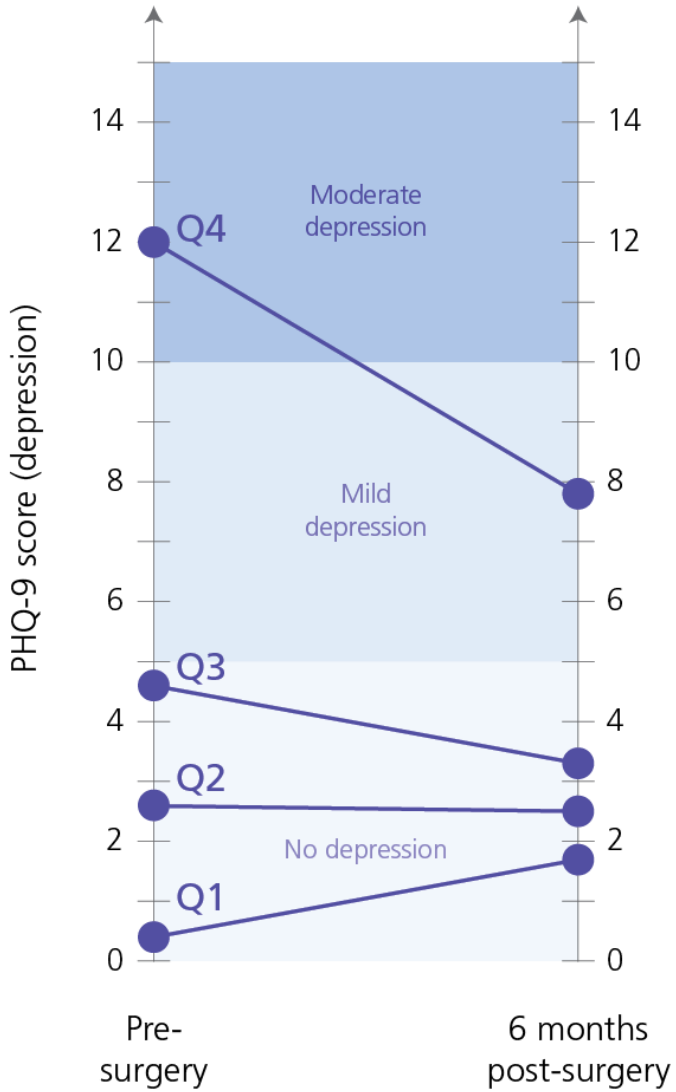
DRG/CMG 225
Non-major excision/repair of upper GI, planned



Source: Sutherland, In Press

Variation in patient-reported surgical outcomes

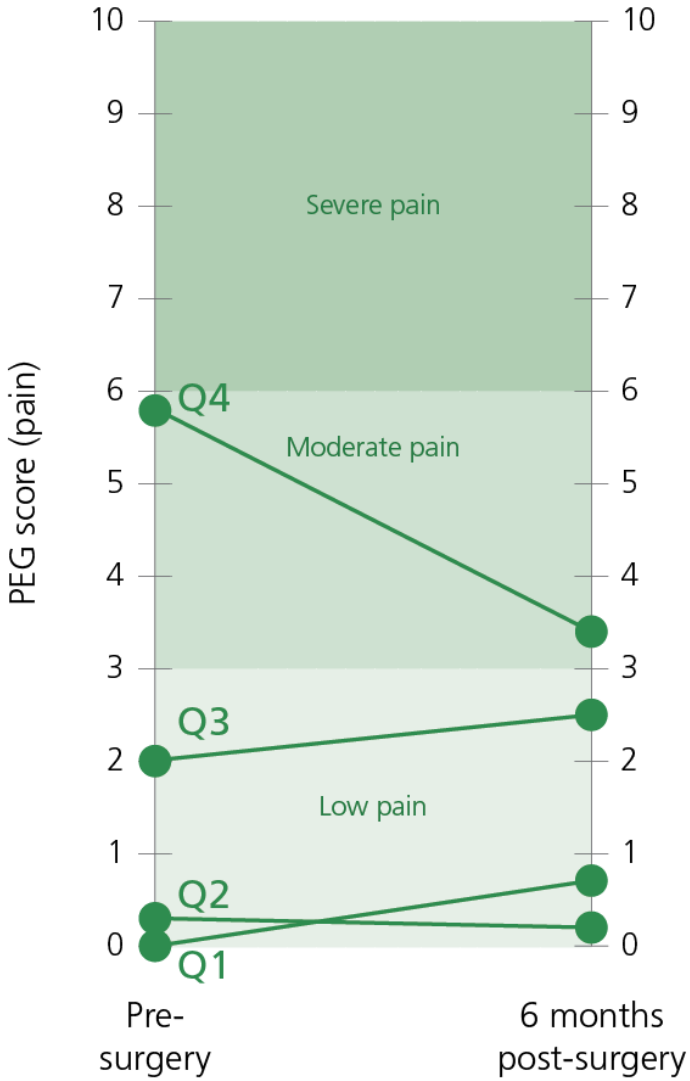
DRG/CMG 225
Non-major excision/repair of upper GI, planned



Source: Sutherland, In Press

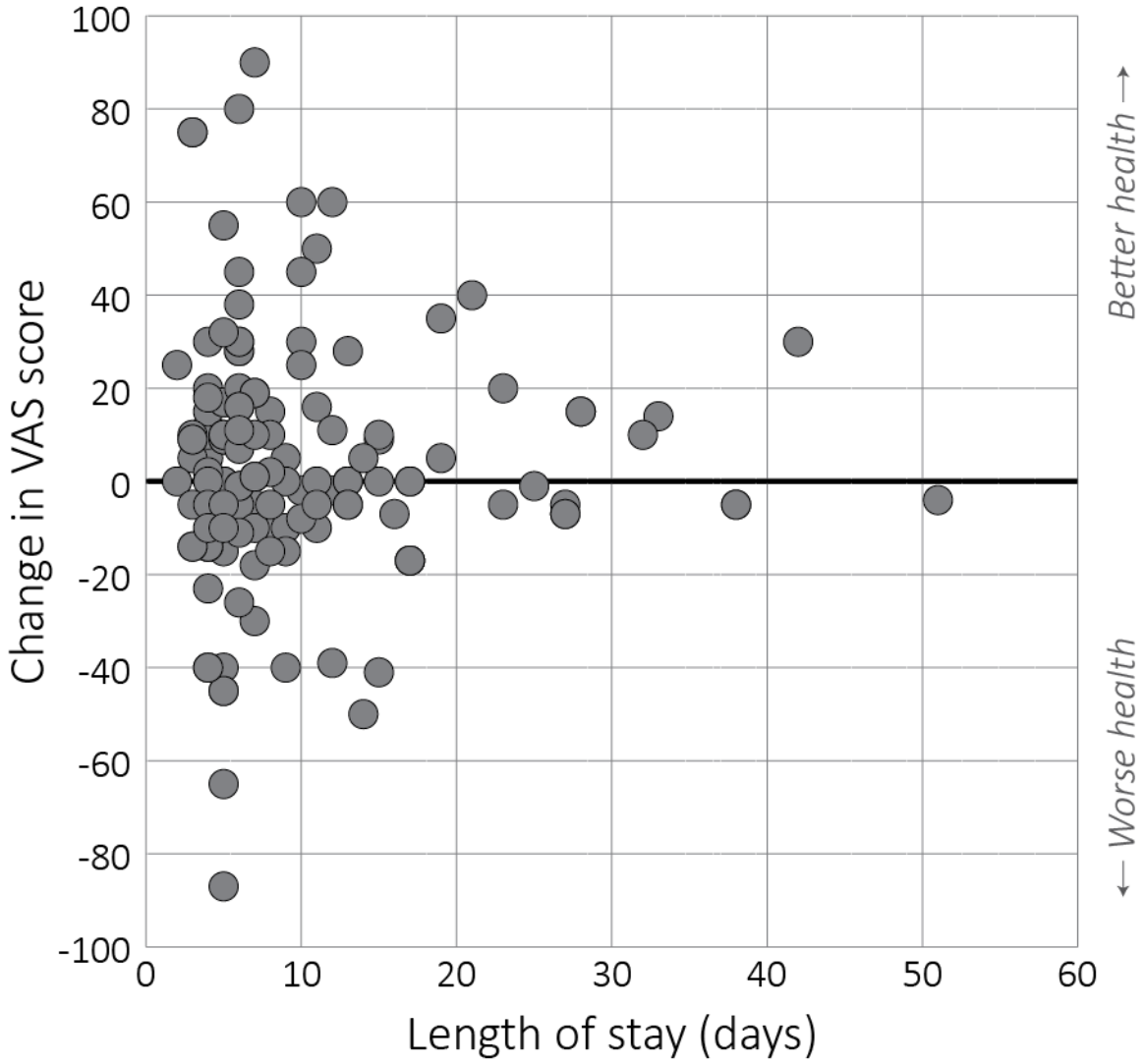
Variation in patient-reported surgical outcomes

DRG/CMG 221
Colostomy/enterostomy



Source: Sutherland, In Press

DRG/CMG 221 – Colostomy/enterostomy



Overview

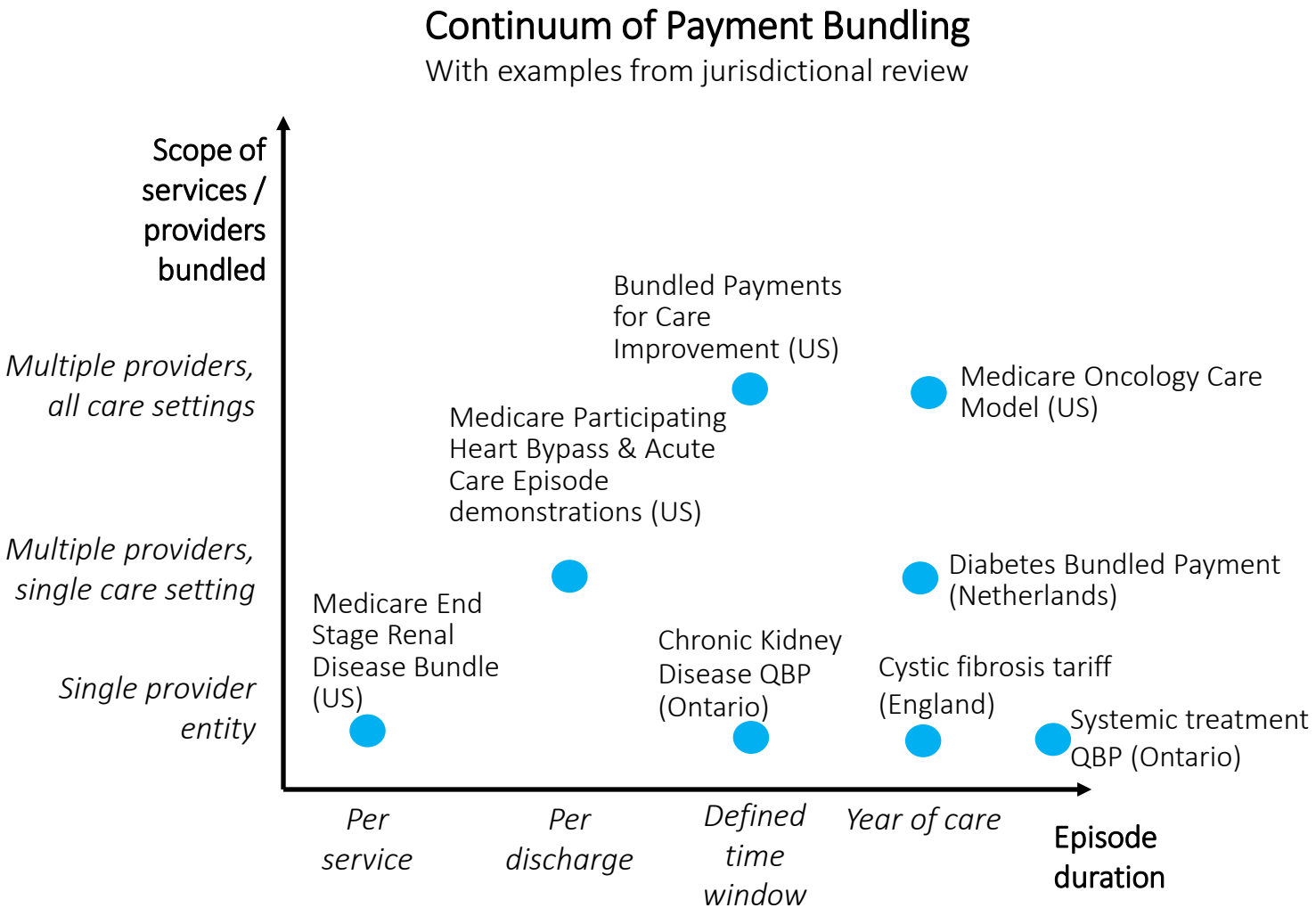
- Glaring problems – easy to see, hard to fix
- Most significant issues:
  - Physician accountability for resource use
  - Government and regions have shown no leadership or vision for aligning funding policies with sought-after delivery system changes
  - Government and region are built/organized on same silos as the delivery and funding policies
- Providers respond to financial incentives – change behaviors

The current international direction is to encourage integrated models of care using financial incentives

Lever	Quality	Fragmentation	Effectiveness
Funding policy	Value-based purchasing and non-payment	Episodes of care	Episodes of care
		Meaningful use of EHR	Meaningful use of EHR
Organization and delivery system	Accountable care organizations	Accountable care organizations	Accountable care organizations
		Medical home	Medical home
System-level	Cross sector data standardization Patient outcomes and experience		

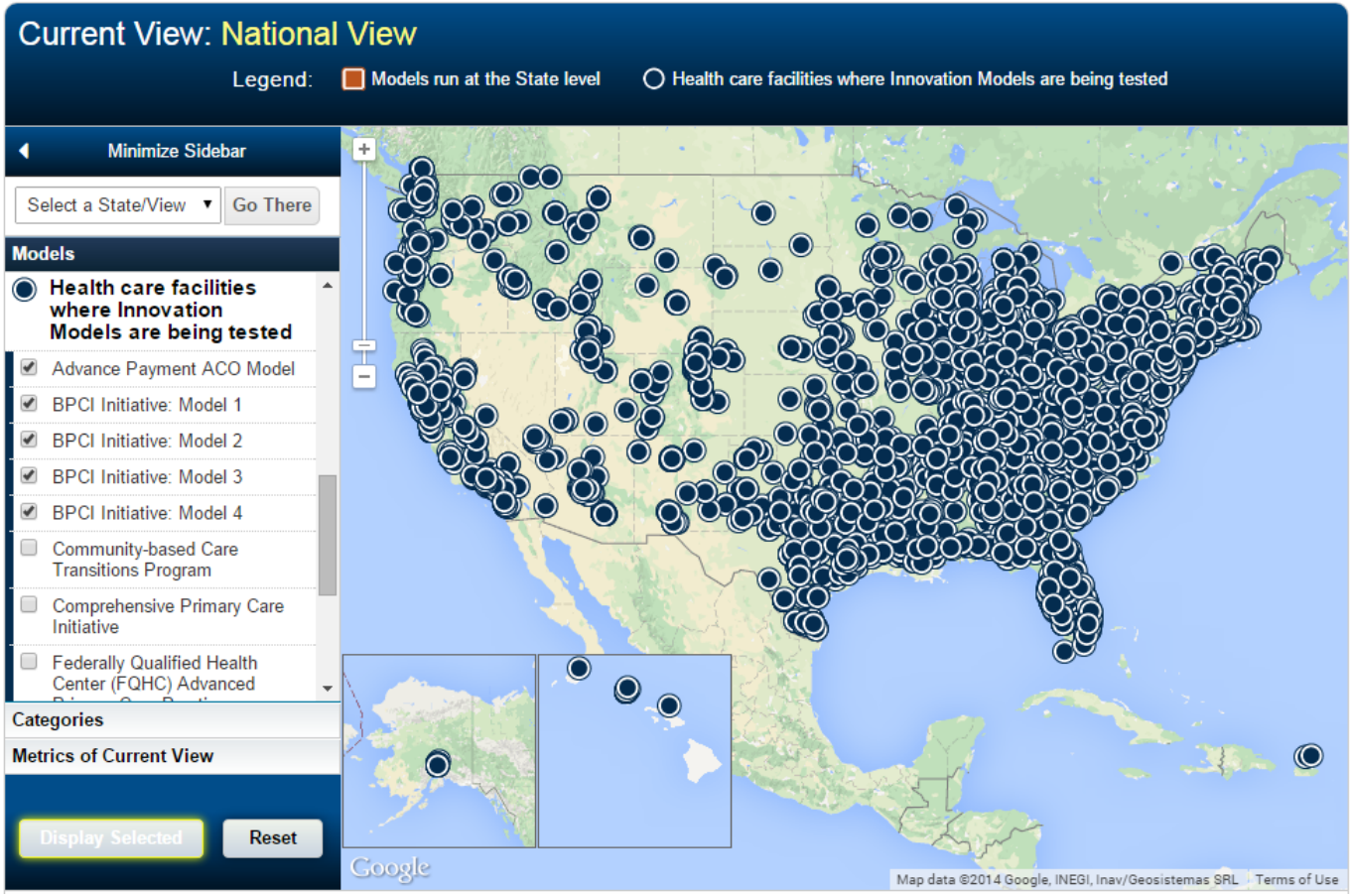
*By 2018, 50% of Medicare spending will be through value-based initiatives

Contrasting approaches to improving value



Contrasting approaches to improving value

- Funding and health system reform is not rare
  - Over 3,000 in the US alone

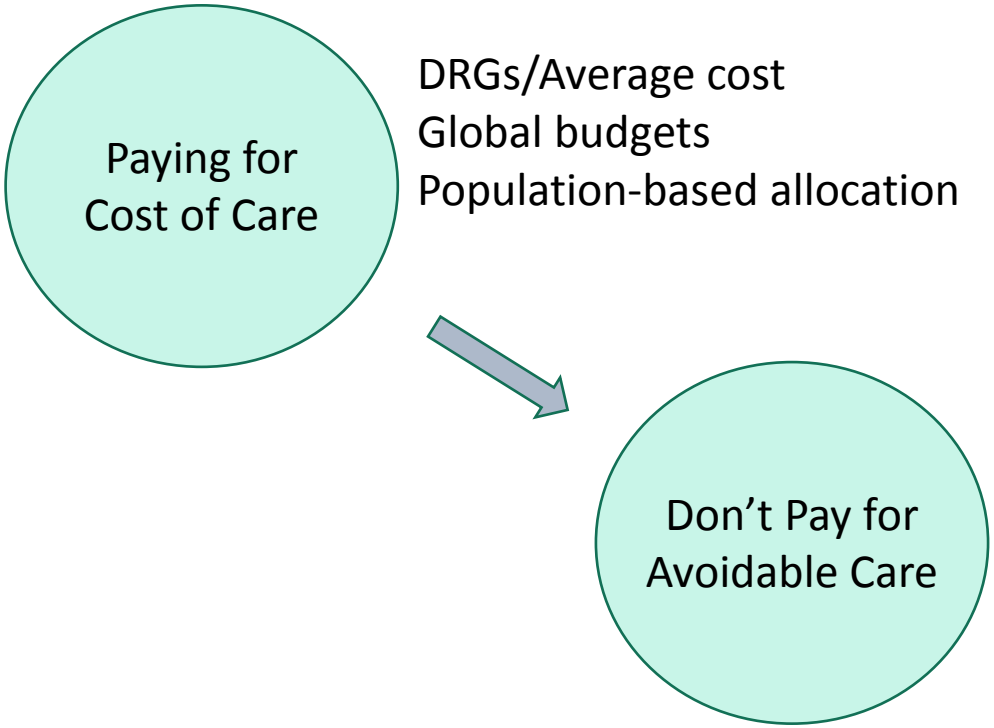


Improving value in hospital spending

Current State
DRGs/Average cost
Global budgets
Population-based allocation

Adapted from: Grattan Institute, 2014

Improving value in hospital spending



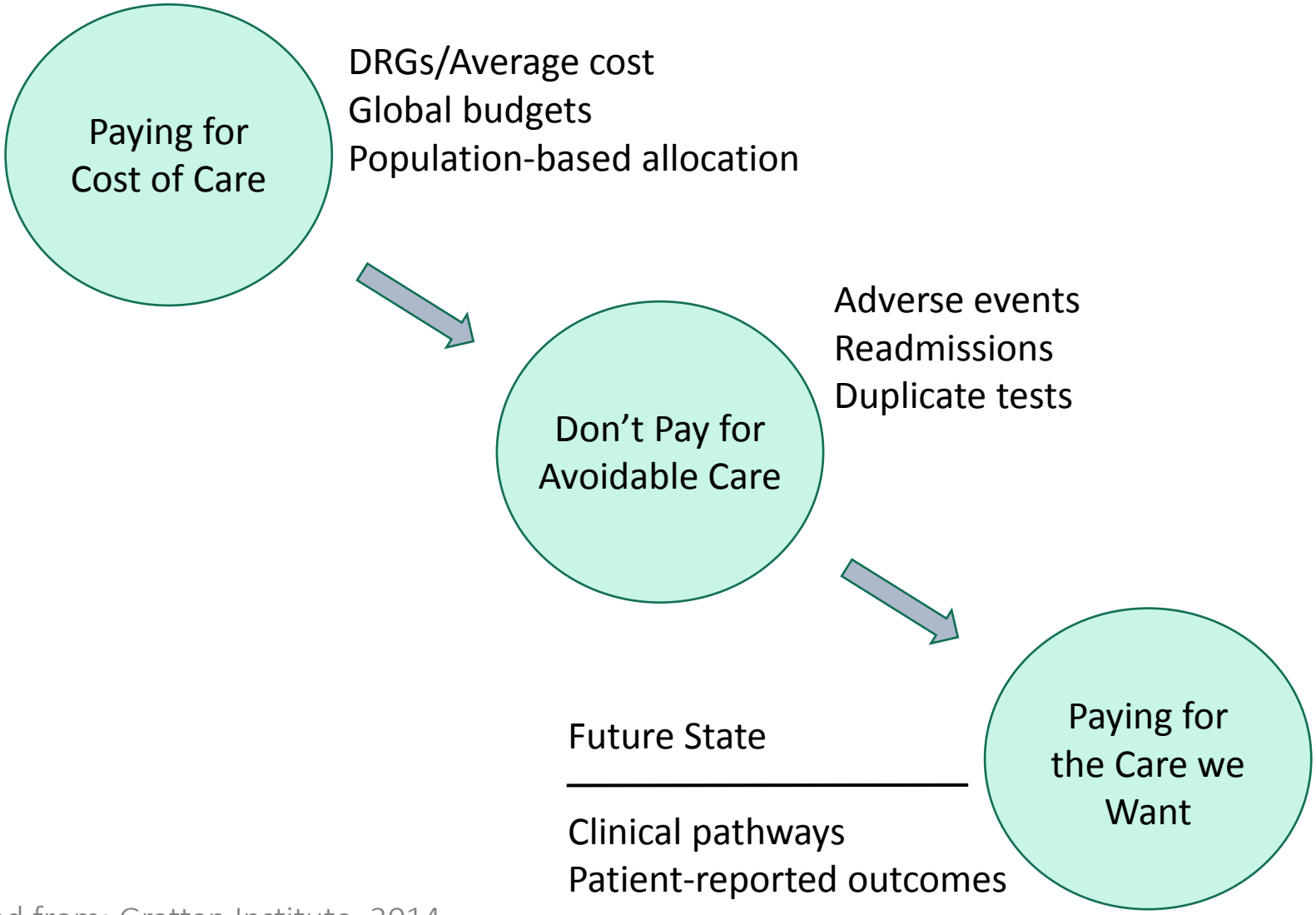
Transition State

Adverse events
Readmissions
Duplicate tests

Value-based Purchasing Programs

Adapted from: Grattan Institute, 2014

Improving value in hospital spending



Adapted from: Grattan Institute, 2014

Contrasting approaches to improving value

Medicare (USA):	Provinces (Canada):
• Cost • Quality / Safety • Access • Effectiveness	• Cost • Access
• Outcomes	
• Patient preferences • Convenience	• Quality / Safety • Effectiveness • Outcomes • Patient preferences • Convenience

Improving value - barriers

- Mis-aligned financial incentives between sectors
  - Fragmentation between sectors
- Over-reliance on hospital-based care (Canada)
- Physician payment policy:
  - Remuneration and accountability
- Poor accountability for hospital effectiveness

Summary

- Paying for quality – or paying for quantity in silos?
  - A lack of clarity regarding governments' objectives for their health insurance programs - hospitals
    - Maximize health of residents?
    - Low cost growth?
    - Accountabilities in return for funding?
- International trend: Integrated funding models
  - Provinces/regions hold policy levers
  - Physicians play a key role
- Develop funding policies that align with long-term vision for hospital-based care
- Many opportunities for improvement! Barriers are well known.

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