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Innovations in primary care delivery

Lessons from payment reform in British Columbia

Ruth Lavergne, Assistant Professor
Faculty of Health Sciences, Simon Fraser University

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Overview

- Looking back
 - Primary care reform in BC over the past 15 years
 - Impact of payment reform under the Family Practice Incentive Program
- Looking ahead
 - Lessons for improving value in the context of new reform efforts in BC



Primary care in British Columbia (BC)



Looking back: Primary care reform in BC

“The General Practice Services Committee decided not to force doctors into team models or attempt to restructure the primary healthcare system. At the heart was the conviction that the **doctor-patient dyad** – the trust-based, long-term relationship forged over time – is the critical attribute of a successful primary healthcare system.”

Tregillus V, Cavers W. (2011). General Practice Services Committee: Improving Primary Care for BC Physicians and Patients. *Healthcare Quarterly*, 14, 1–6.

Looking back: Primary care reform in BC

“The province of British Columbia has chosen to revitalize its primary healthcare sector by focusing on **financial incentives to promote evidence-based care** by full-service family physicians (i.e., an enhanced and modified fee-for-service system) and by offering clinical, office management and structural support to family doctors to increase job satisfaction and to enable them to obtain more skills to address gaps in patient care.”

Tregillus V, Cavers W. (2011). General Practice Services Committee: Improving Primary Care for BC Physicians and Patients. *Healthcare Quarterly*, 14, 1–6.

What were incentive payments for?

“Payments recognize the additional work, beyond the office visit, of providing guideline informed care to patients over a year.”

Chronic Disease Management incentive, Billing Guide, GPSC, 2012

- Patient charts must include documentation of care plan relevant guideline indicated processes of care
 - Diabetes and CHF (2003/4): \$125
 - Hypertension (2006/7): \$50
 - COPD (2009/10): \$125
 - Complex care (2007/8): \$315
- Also implemented payments for in-patient care, maternity care networks, mental health, palliative care, personal risk assessment, residential care



What effect did incentive payments have?

Results from evaluation by Hollander et al.

COST AVOIDANCE WITH COPD INCENTIVES FOR APRIL 2009 TO MARCH 2010

Cost per patient without incentives	\$7587
Cost per patient with incentives*	\$7025
Cost avoidance	\$562
<i>(Number of incentives paid)</i>	x 17,915
Total cost avoidance	= \$10,068,230

* Cost excluding main incentive amount (\$125)

Source: Table 12, Hollander COPD Payment Incentives report.

What effect did incentive payments have?

Objective of our research

- Determine the impact of incentive payments to primary care physicians targeting chronic disease management on:
 - primary care visits and continuity;
 - disease-specific care processes;
 - hospitalizations; and
 - costs.
- Considerations:
 - Retrospective
 - Province-wide effect
 - Take into account baseline differences between patients who did and did not receive incentives for their care

Study design overview

- Provincial administrative data:

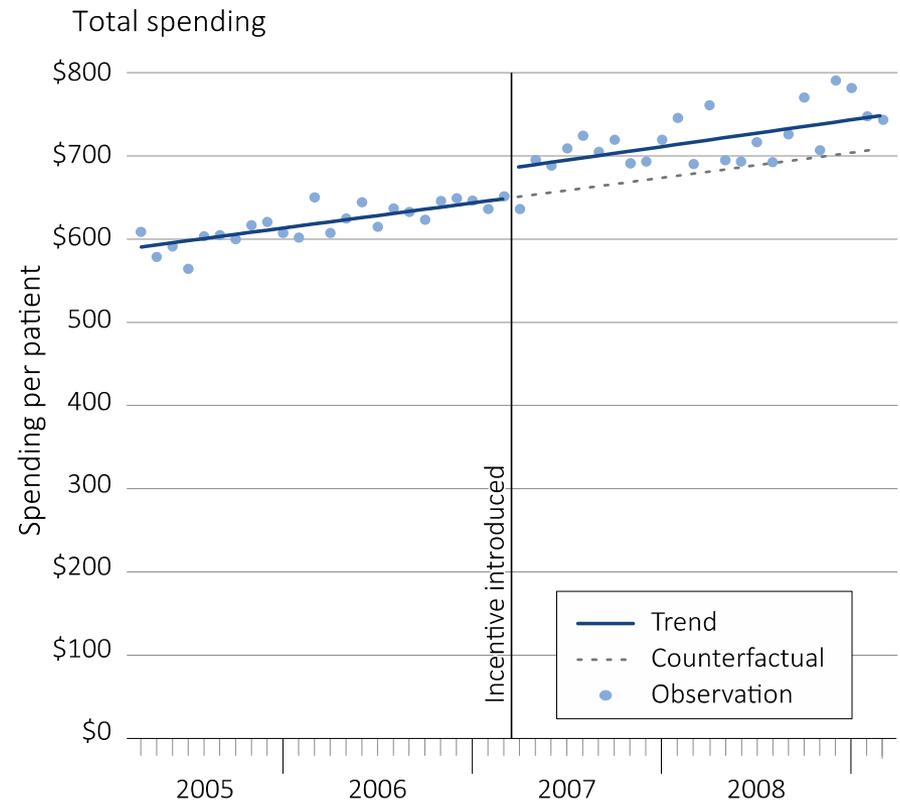
- Physician billings
- Prescriptions dispensed
- Hospital separations

- Interrupted time series

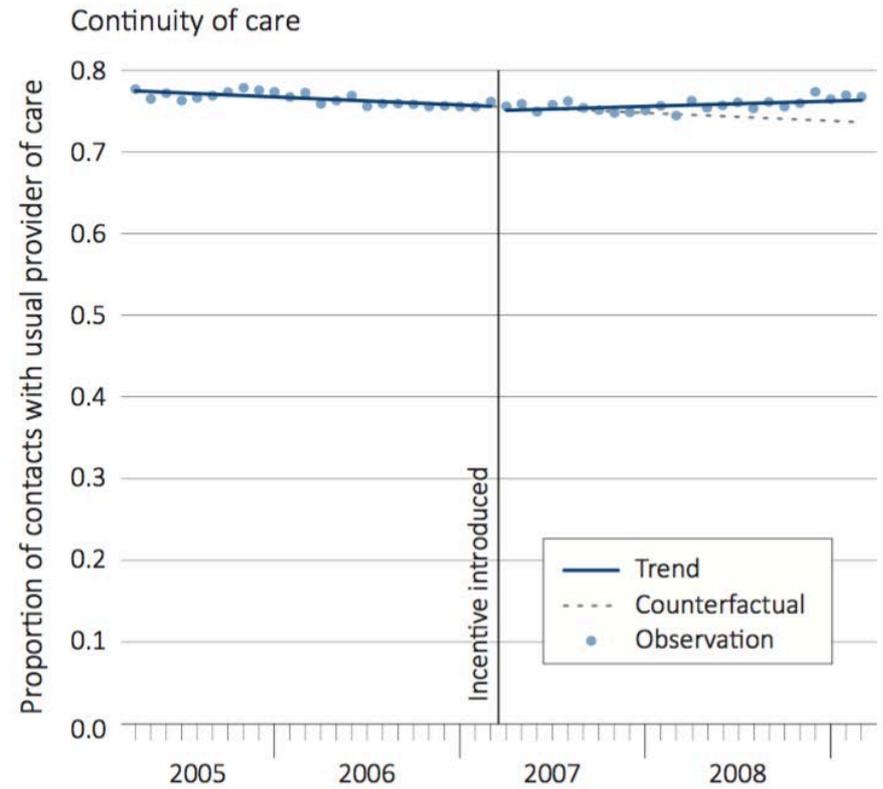
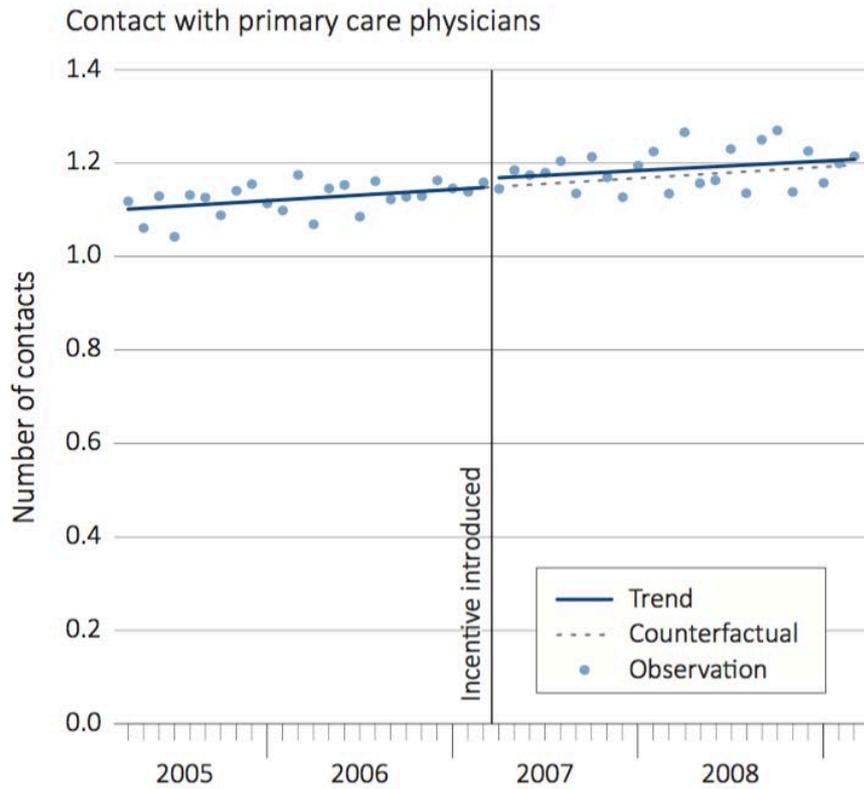
- Various possible choices regarding:
 - Inclusion criteria
 - Selection of controls
 - Timing (study vs. calendar time)

- Outcomes:

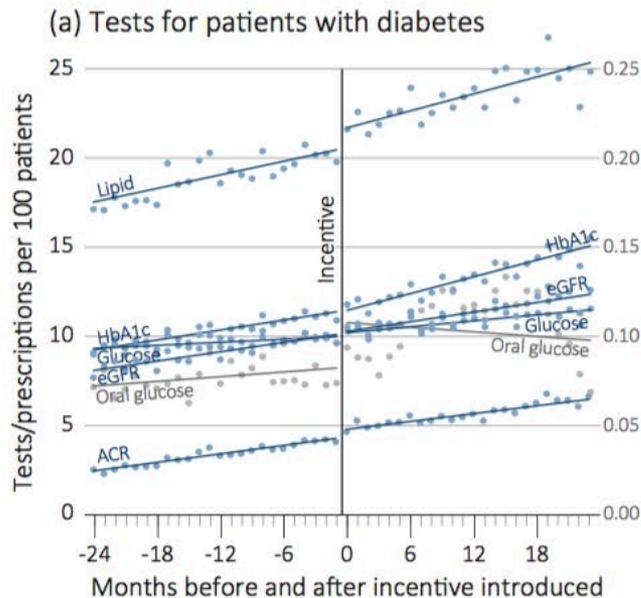
- Primary care visits and continuity
- Disease-specific care processes (lab testing, prescribing)
- Hospitalizations (all cause, disease-specific, via emergency)
- Spending



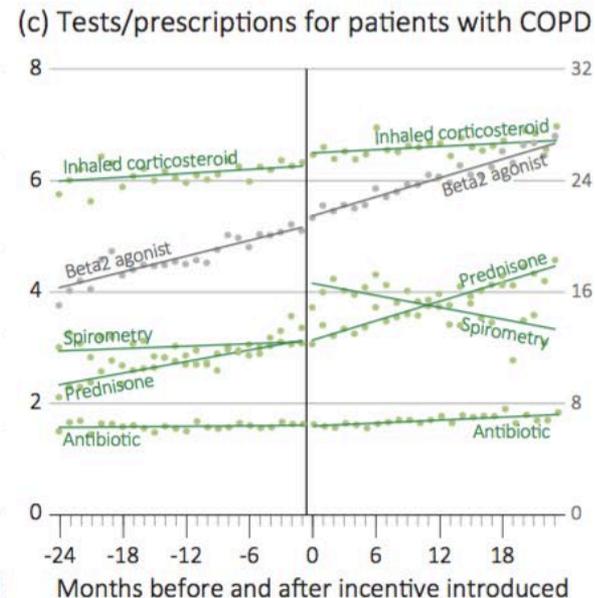
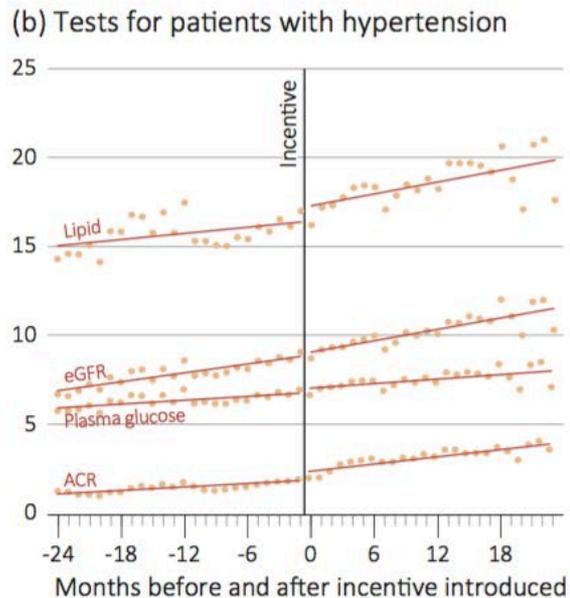
Contact with primary care physicians and continuity of care (complex care)



Care processes (chronic disease)

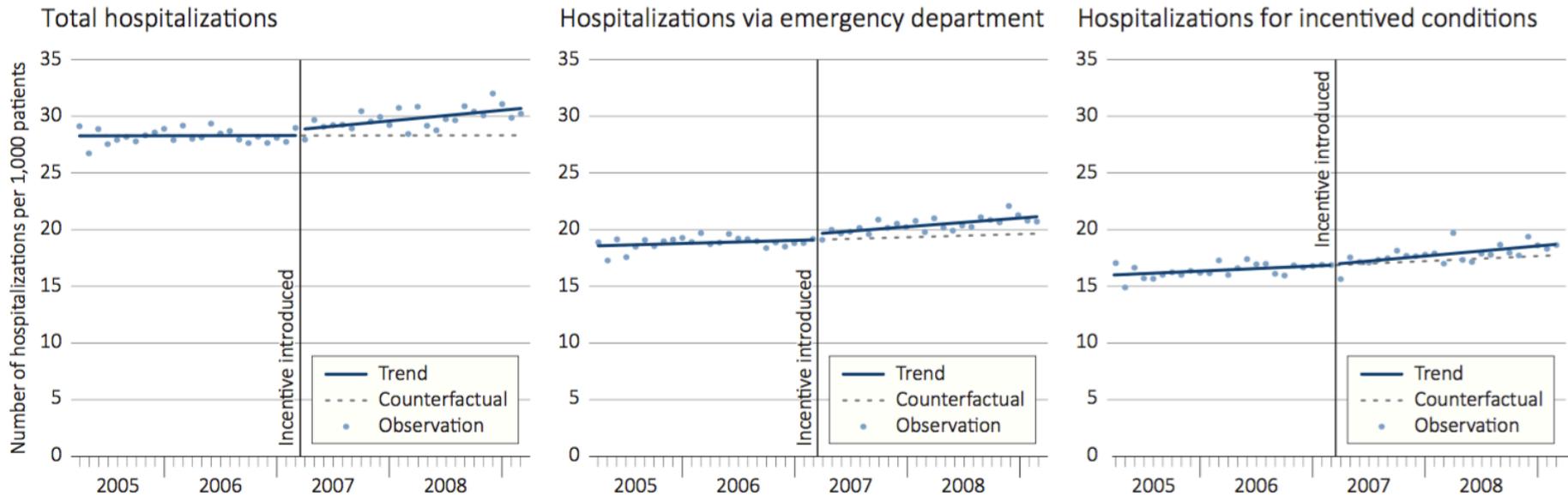


Oral glucose tests (right-side axis) are graphed at 1/100th the scale of lipid, HbA1c, (plasma) glucose, eGFR, and ACR tests (left-side).

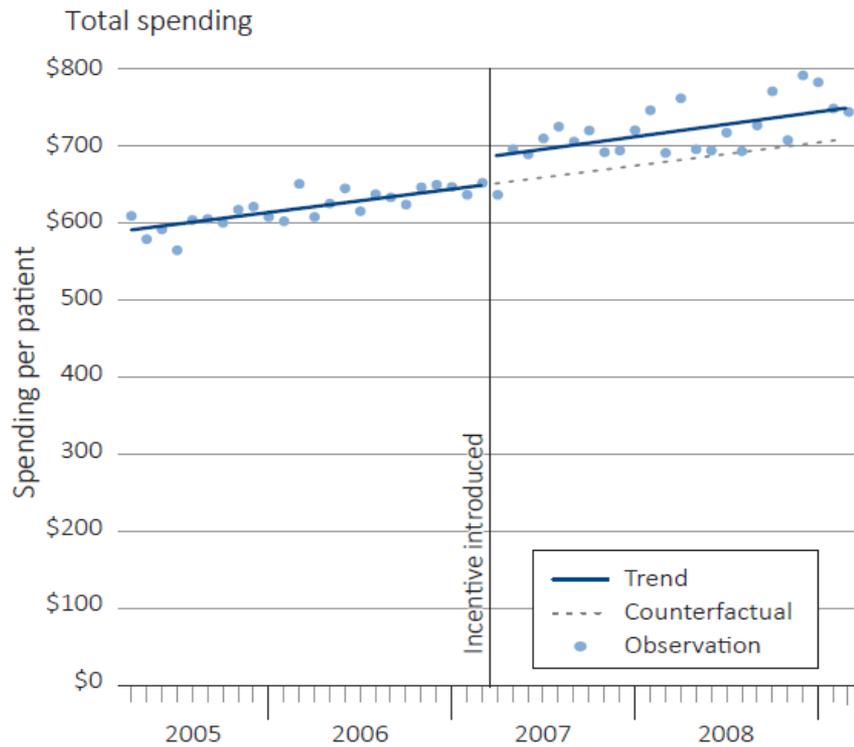


Beta2 agonist prescriptions (right-side axis) are graphed at four times the scale of the corticosteroid, prednisone, and antibiotic prescriptions and the spirometry test (left-side).

Hospitalizations (complex care)

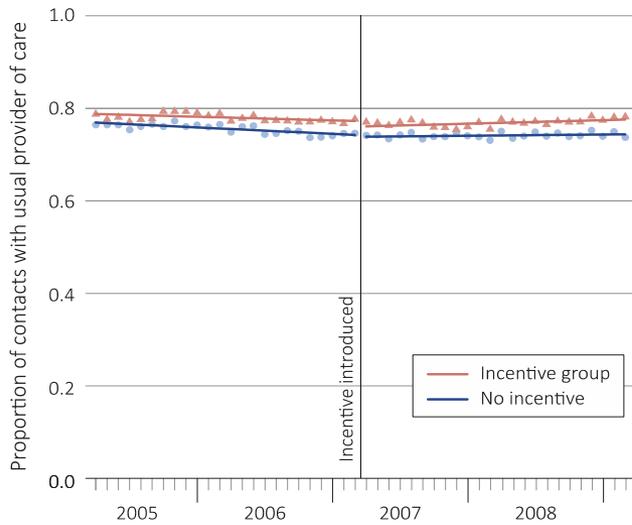


Monthly spending (complex care)

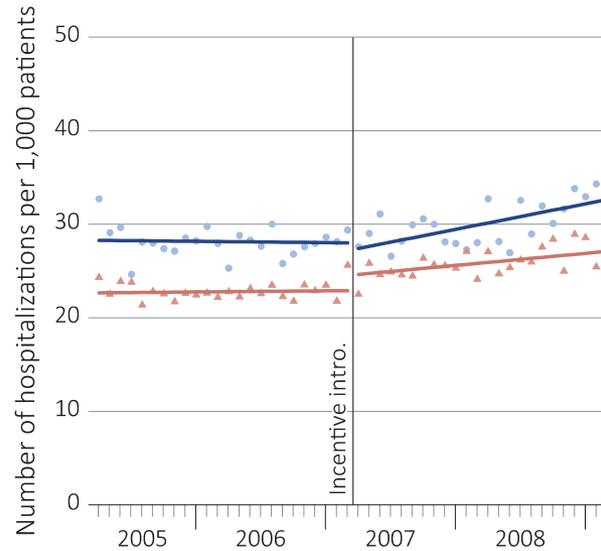


What did incentives pay for?

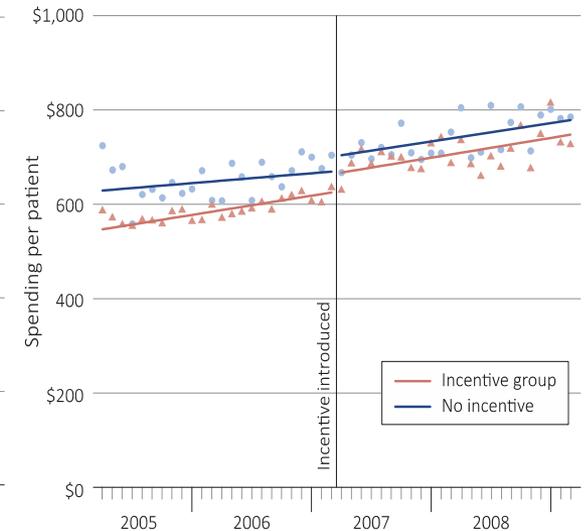
Continuity of care



Total hospitalizations



Total spending



Note: Figures compare patients with diagnoses qualifying for the complex care incentive prior to incentive introduction, who did and did not receive incentives for their care

Limitations

- Can't distinguish effects of payments and distribution of flow sheets for chronic disease management
- Retrospective analysis of routinely-collected data
 - No objective measures of disease severity
 - Prescriptions dispensed, not written
 - No measures of patient education, lifestyle management, other relevant care processes
 - No measures of time spent with patients
- Two year follow-up period



BRITISH COLUMBIA
HEALTH SERVICES



BRITISH COLUMBIA
Ministry of Health

**HYPERTENSION PATIENT CARE
CHECKLIST and FLOW SHEET**

Based on the Guideline Hypertension. Web site: <http://www.health.gov.bc.ca/protoguide/index.html>

NAME OF PATIENT: _____ GENDER: M F BIRTH DATE: _____

COMORBID CONDITIONS: Cardiovascular Kidney Other: _____ REMINDERS:
 - Explain the consequences of hypertension
 - Review medications & adverse effects
 - Quit Now by Phone toll free BC: 1 877 455-2333
 - Refer to guideline & patient resource sheet
 - Set goals with patient:
 - weight loss & exercise - Avoid excessive alcohol - Smoking cessation plan - Salt intake & diet

Guidelines BP target: _____ PHN: _____
 DATE OF DIAGNOSIS: _____

140/90 Hypertension 130/80 Diabetes 125/75 Kidney disease DATE (YY/MM/DD): _____

		INITIAL REVIEW (BASELINE)						
EVERY 2-6 MONTHS BP & SELF-MANAGEMENT	Blood Pressure =							
	Smoking: <input type="checkbox"/> Y <input type="checkbox"/> N packs/day:							
	Activity level (at least 30 mins, 5 days/wk)							
	Salt intake							
	Alcohol consumption							
MEDICATIONS/EFFECTS	Weight (target):							
	Diuretic (first choice):							
	Beta blocker							
	ACE/ARB							
	Combination							
ANNUALLY OR AS APPROPRIATE TESTS	ASA (B1 mg) > 10% CHD risk < 70 yrs							
	Other:							
	Height/Weight Calculated BMI (< 27)							
	Fasting glucose							
	Microalbumin (ACR) Every 2nd yr if BP < 160; Annually if > 160 systolic							
RISK	Lipid ratio TC/HDL							
	LDL-C							
	Triglycerides							
	eGFR							
	Ten-year coronary heart disease risk from risk chart (see over):	High risk: $\geq 20\%$, target TC/HDL 4 Moderate risk: $< 20\%$, target TC/HDL 5						
CLINICAL EVALUATION	Consider end-organ damage = Eyes; Heart/Circulation; Kidneys:							
	VISIT 1						VISIT 2	
	VISIT 3						VISIT 4	

HLTH-BCMA (JAN 2006)

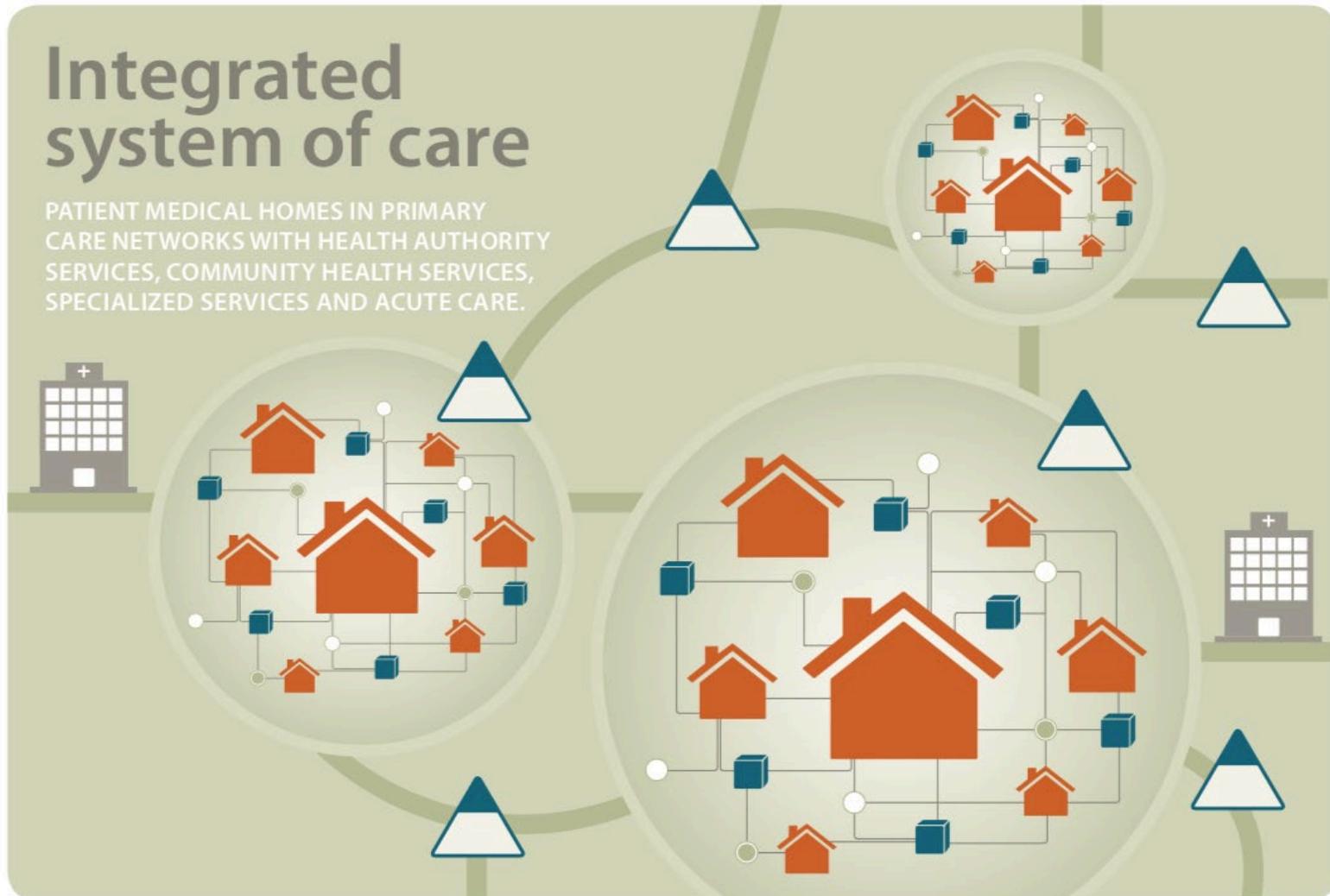
Conclusions

- Findings consistent with broader literature on incentive payments to individual physicians
 - No increase in primary care visits or continuity
 - Limited impact on care processes (testing, prescribing)
 - No consistent evidence of reduced hospitalizations or costs
- Patients who received incentives already had higher continuity, lower costs, fewer hospitalizations (on average)

Looking ahead: Lessons from payment reform

- Payment reform implemented at the level of patient-physician dyad
 - Accountability limited to a subset of patient needs
 - Limited ability to collaborate with other care providers
 - Limited non-financial supports (training, office management)
- Not true-pay-for performance
 - No clear definition of “value” (nor plans to measure it)

Looking ahead: Lessons from payment reform



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References

Lavergne MR, Law M, Peterson S, Garrison S, Hurley J, Cheng L, McGrail K. (2016). A population-based analysis of incentive payments to primary care physicians for the care of patients with complex disease. *CMAJ*. 188 (15), E375-E383. DOI: 10.1503/cmaj.150858. PMID: 27527484.

Lavergne MR, Law M, Peterson S, Garrison S, Hurley J, McGrail K. (2017). Effect of incentive payments on chronic disease management and health services use in British Columbia, Canada: interrupted time series. *Health Policy*. 122(2):157-164. DOI: 10.1016/j.healthpol.2017.11.001. PMID: 29153847.

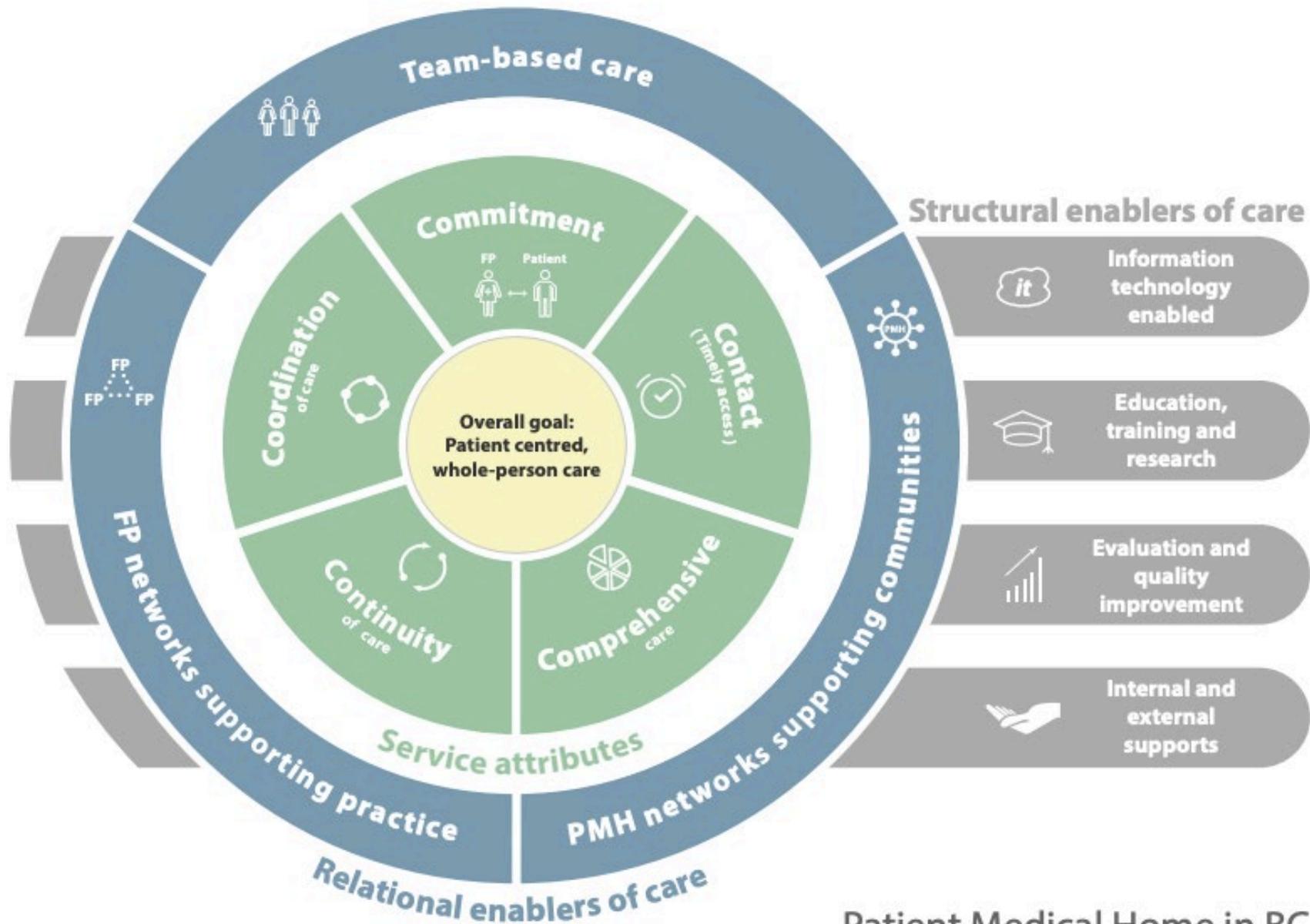
Lavergne MR. (2017). Financial incentives for physicians to improve health care (invited commentary). *CMAJ*. 189(49):E1505-E1506. DOI: 10.1503/cmaj.171126. PMID: 29229710.

Thank you!

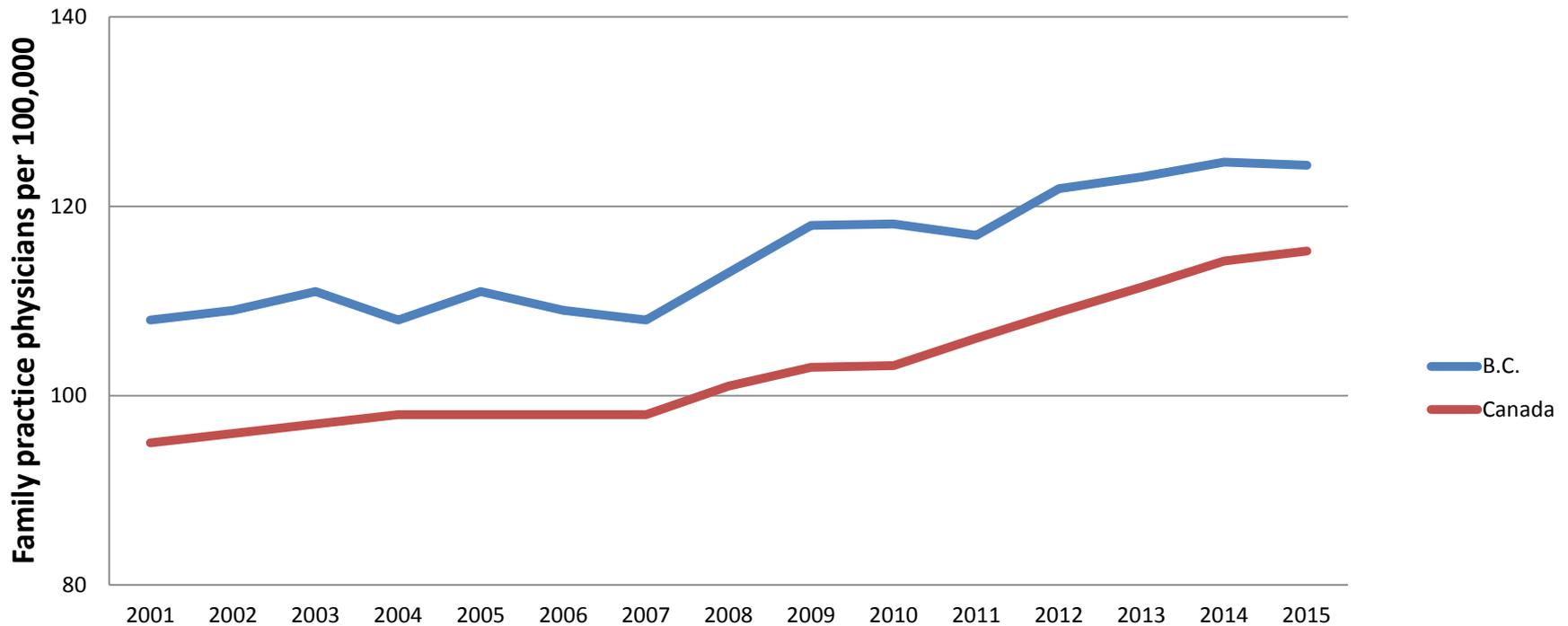
Questions? Comments? Ideas?

ruth_lavergne@sfu.ca

@RuthLavergne

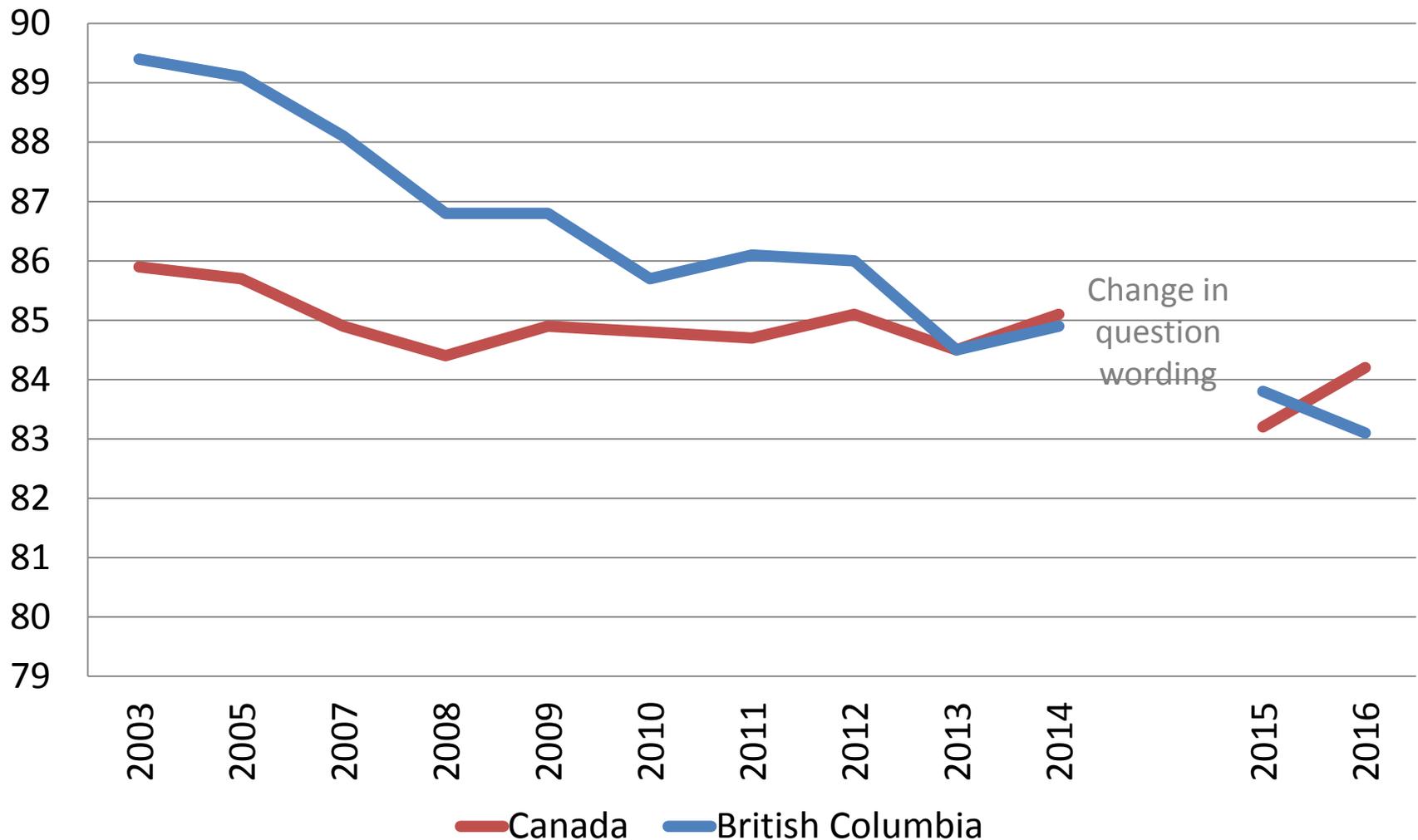


Did incentives keep attract/retain physicians in comprehensive primary care?

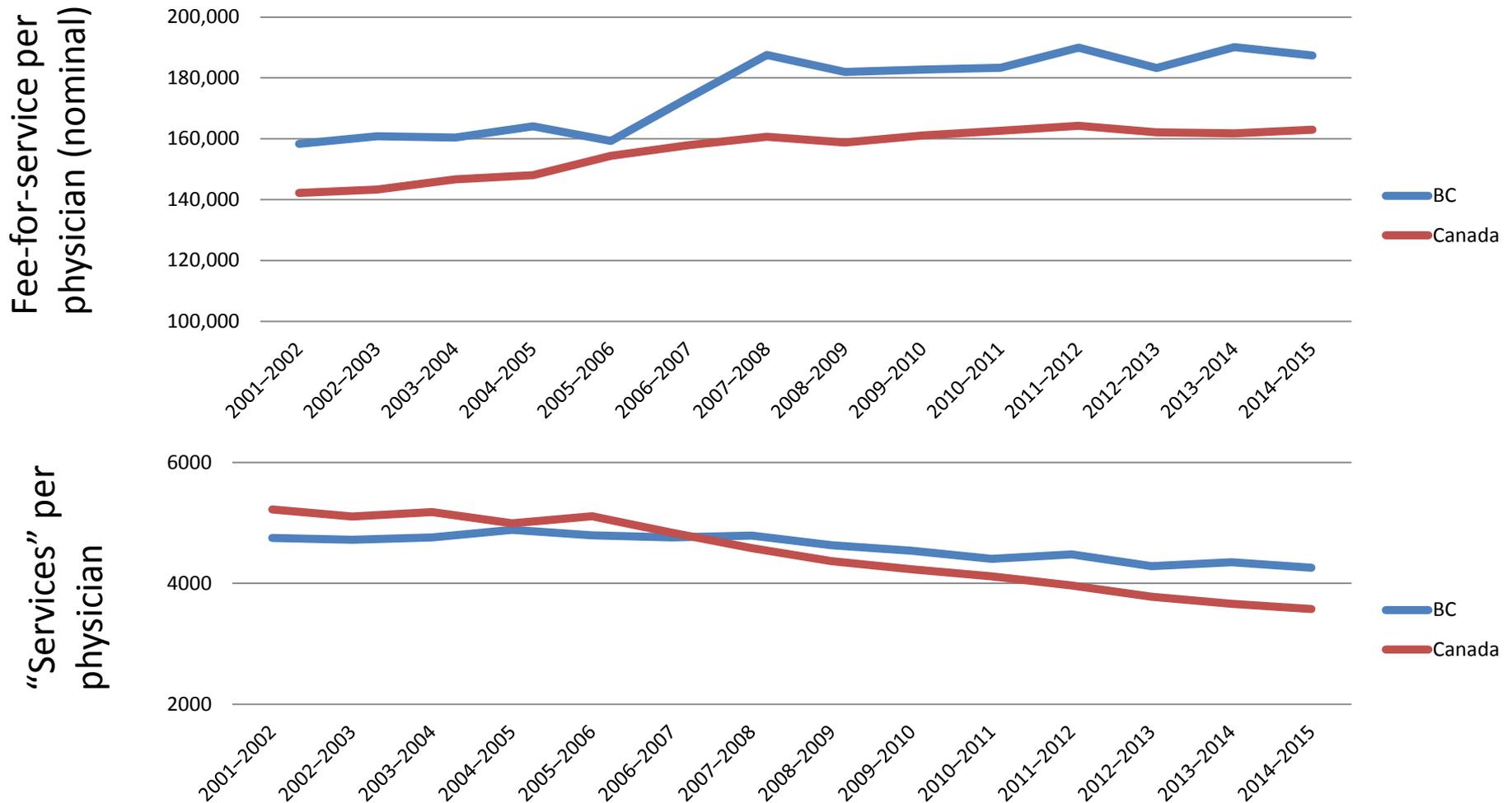


Source: CIHI National Physician Database (NPD), 1999-2015

Percent of respondents on the Canadian Community Health Survey who report having a regular doctor/health care provider

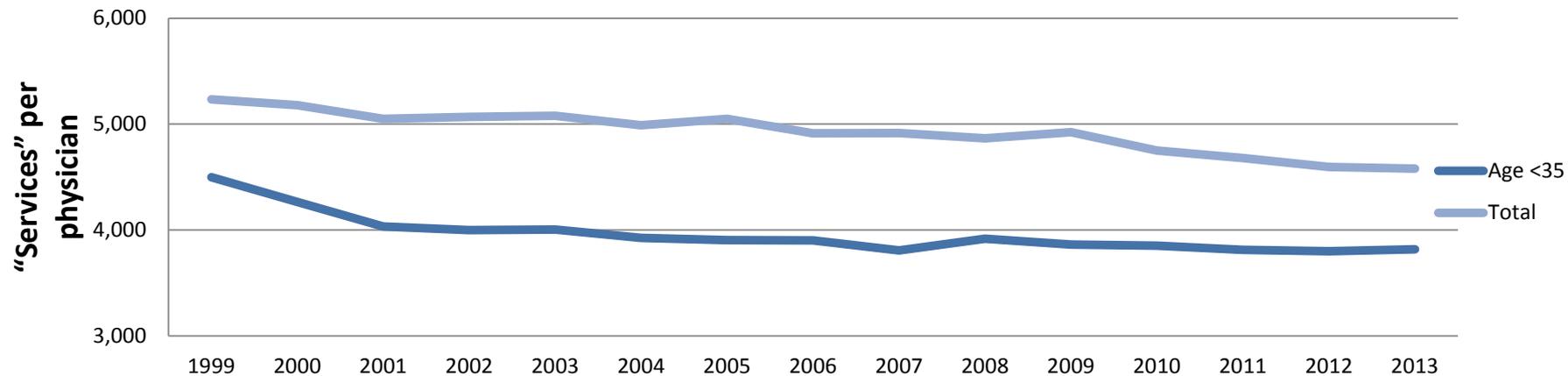
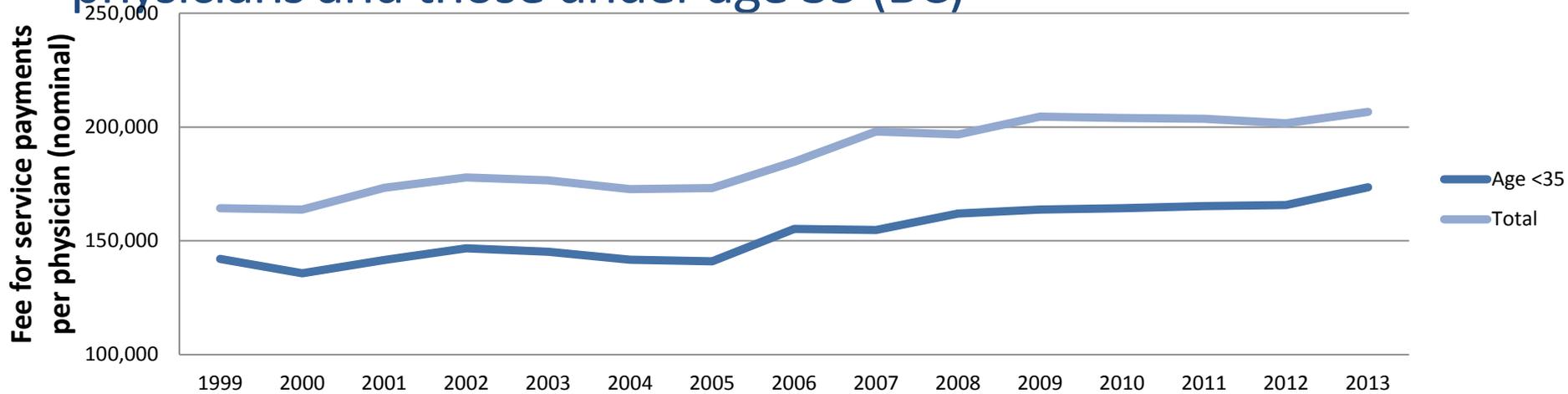


Trends in fee-for-service payments and “services” per physician



Source: CIHI National Physician Database (NPD), 1999-2015

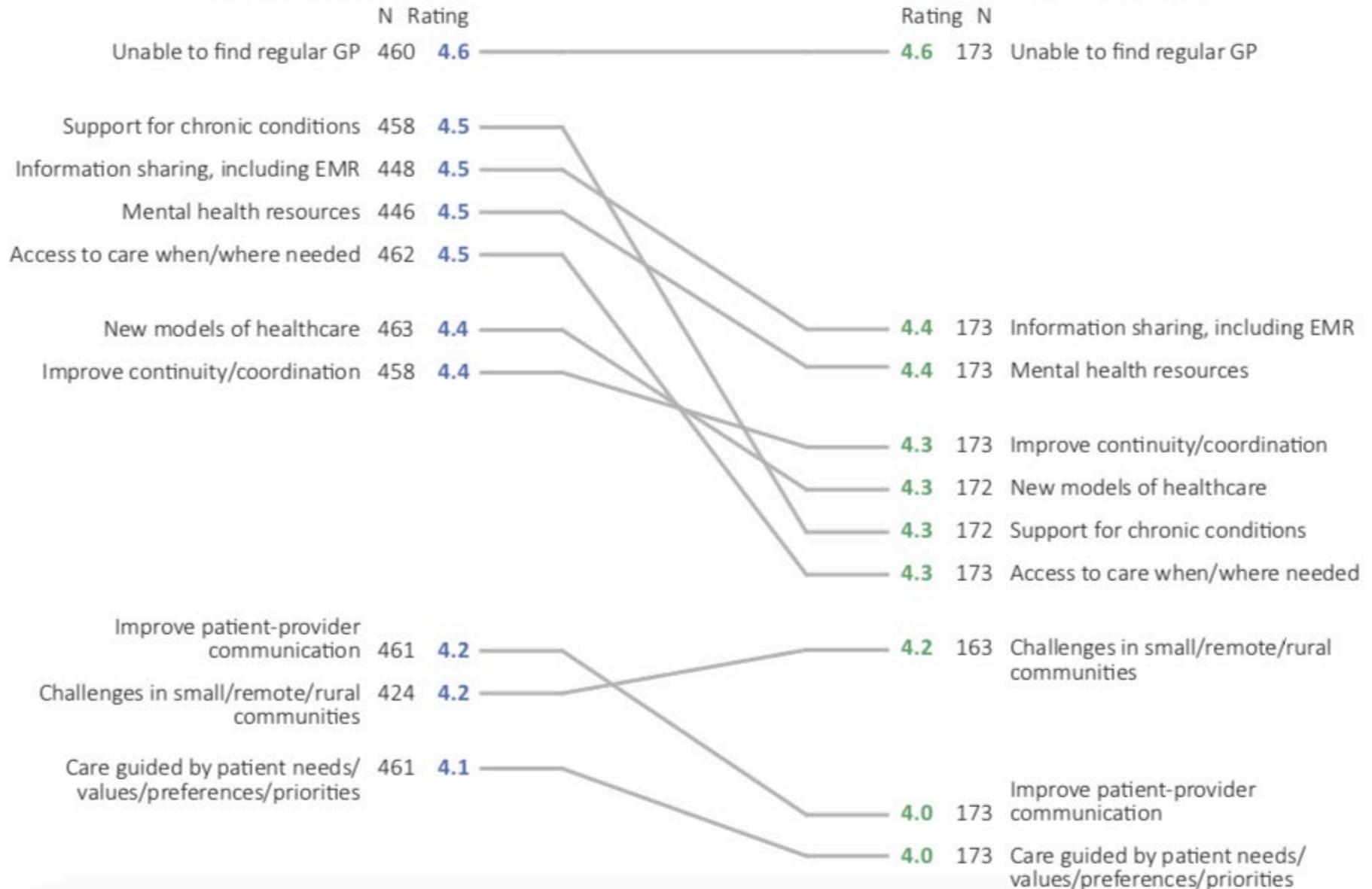
“Work-life balance”? Trends in fee-for-service payments for all physicians and those under age 35 (BC)



Source: CIHI National Physician Database (NPD), 1999-2013.

PATIENT RATING

PROVIDER RATING

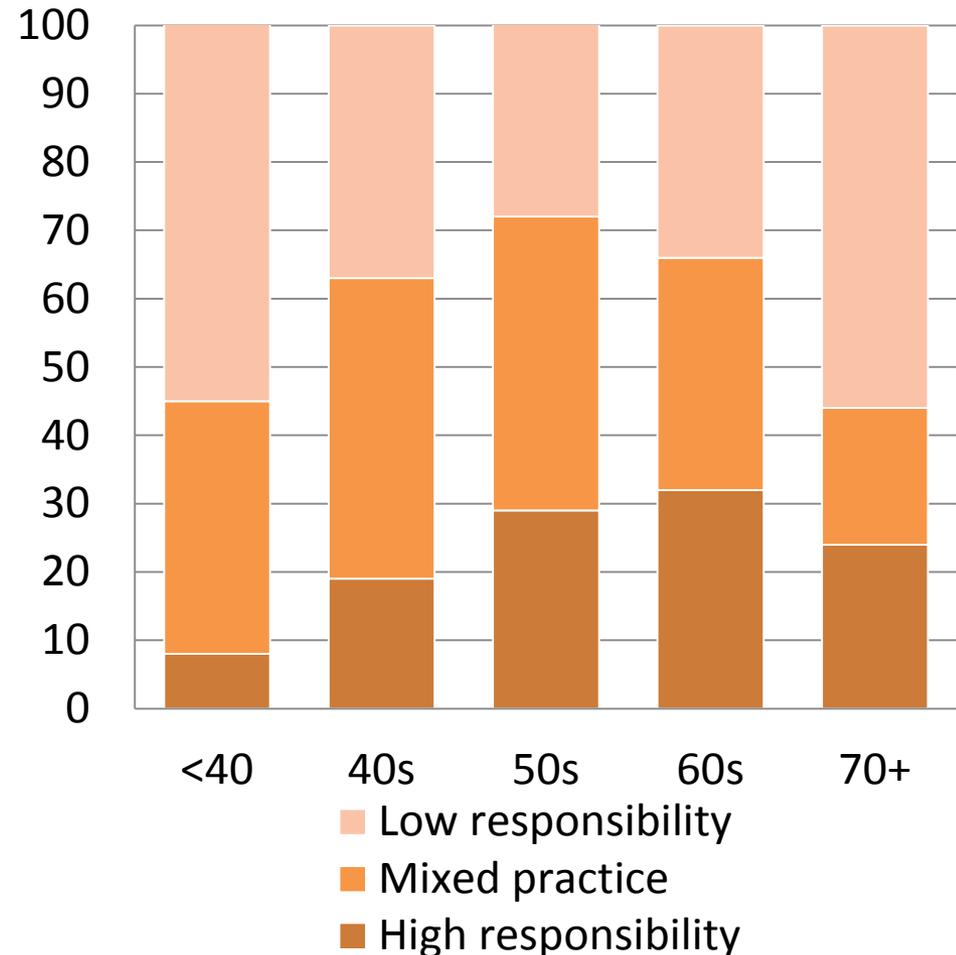


Walk-in/focused practice: “Low responsibility” practice by age group

Variables used to classify
“responsibility”

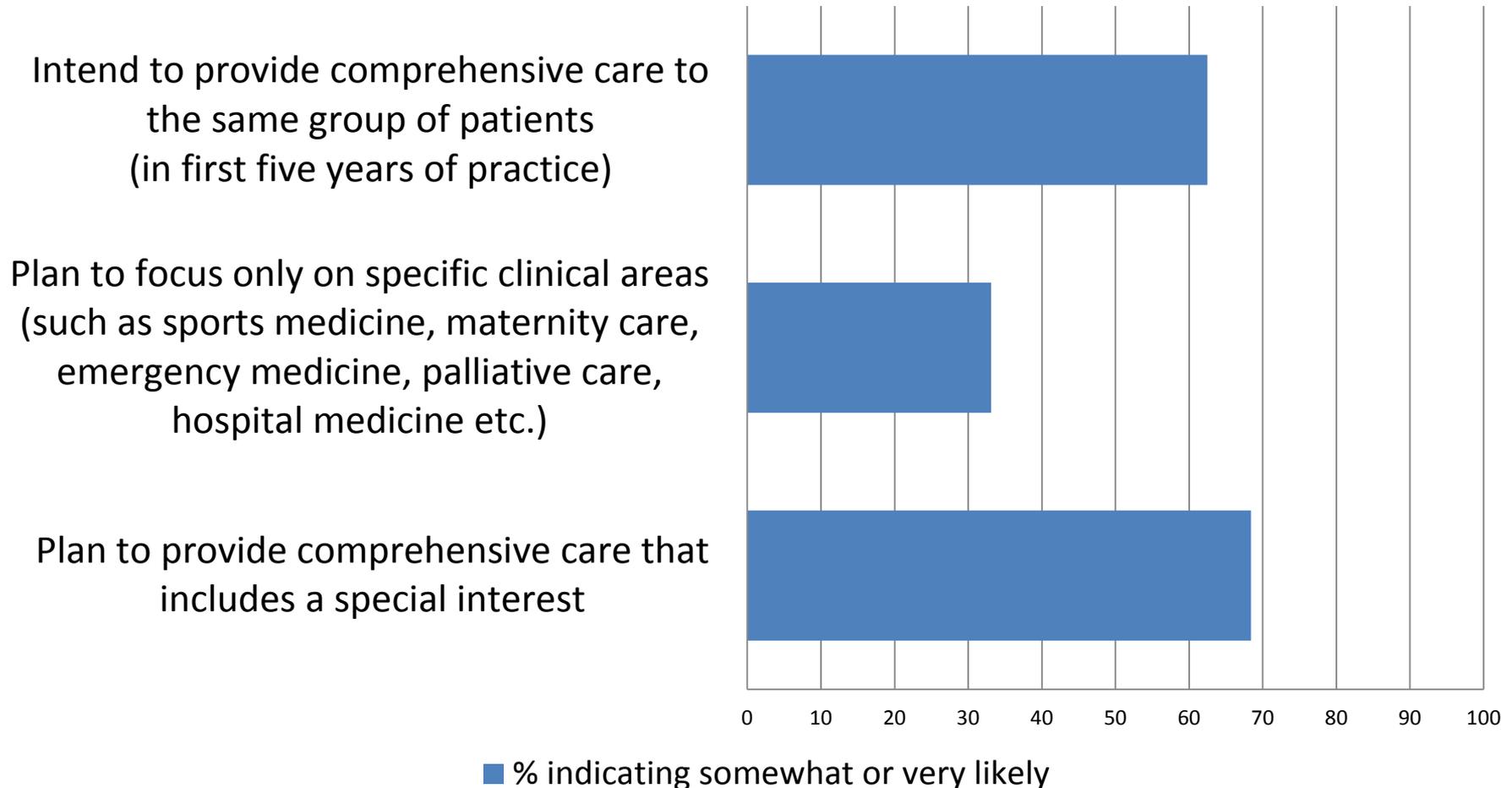
- First-ever prescriptions of long-term medications
- Patient oversight: laboratory tests for INR monitoring, prenatal ultrasounds
- Screening and risk management: lipids, ACR, HbA1c
- Specialist referrals
- Repeat visits: proportion of patients seen in preceding four years

Approach: cluster analysis



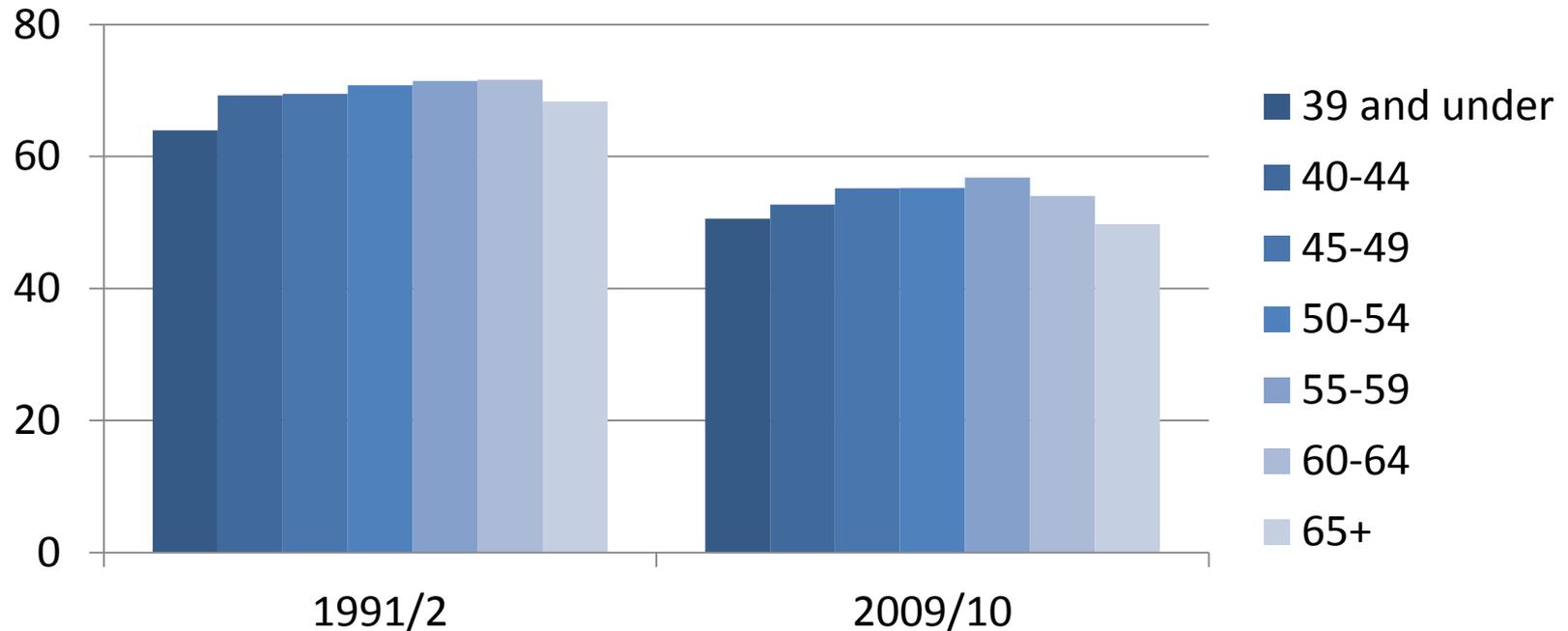
Focused practice

Practice intentions among Canadian Family Medicine Residents



Source: CFPC Family Medicine Longitudinal Survey T2 (exit) survey. 2015.

Focused vs. comprehensive practice: Examining “full-service family practice” in BC data



Variables used in composite measure of full-service family practice: Services outside of office, continuity, number of other GPs seen by patients, comprehensive care (maternity, mental health, reproductive health, geriatric, screening tests)

Lavergne MR, Peterson S, Mckendry R, Sivananthan S, McGrail K. (2014). Full-Service Family Practice in British Columbia: Policy Interventions and Trends in Practice, 1991–2010. *Healthcare Policy*. 9(4):32–47.

Practice patterns among early-career primary care physicians

Qualitative: What values and preferences shape the intentions and choices of family medicine residents and early career primary care physicians?

Quantitative:

- How do practice patterns among early-career (<10 years in practice) and established (10+ years) primary care physicians compare?
- Do any changes over time reflect cohort effects (attributes unique to the most recent cohort), or period effects (changes over time across all physicians)?

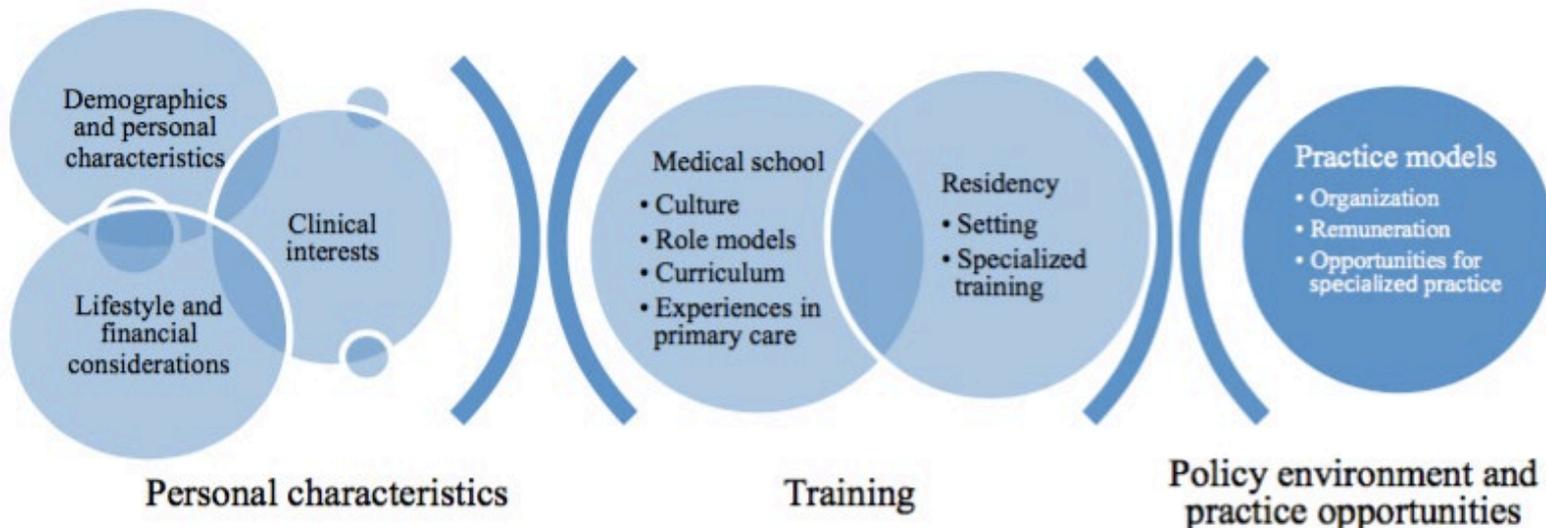


Figure 1. Factors that may shape choice of practice style within primary care based on literature studying choice of primary care specialty [32–44]

Commonwealth and CCHS survey data on primary care access across Canada

	BC	AB	SK	MB	ON	QC	NB	NS	NFLD
Able to get same /next day appointments*	44%	48%	49%	47%	44%	39%	33%	34%	34%
Evening/weekend care easy to get**	27%	42%	32%	34%	40%	27%	35%	26%	16%
Has a regular healthcare provider (CCHS)	83%	82%	81%	85%	90%	90%	90%	90%	90%

Commonwealth survey definitions

*Percentage of respondents who were able to get an appointment to see a doctor or a nurse on the same or next day

**Percentage of respondents who thought it was very or somewhat easy to get medical care evenings, weekends or holidays without going to the hospital emergency department

Walk-in style practice?

Examining practice style in BC data: Measures of “responsibility”

Variables used to classify “responsibility”

- First-ever prescriptions of long-term medications
- Patient oversight: laboratory tests for INR monitoring, prenatal ultrasounds
- Screening and risk management: lipids, ACR, HbA1c
- Specialist referrals
- Repeat visits: proportion of patients seen in preceding four years

Approach: cluster analysis

	High responsibility	Mixed practice	Low responsibility
Total	861 (24%)	1400 (39%)	1287 (36%)
Billings	\$266,995	\$244,497	\$163,565
Number of unique patients	1,437	1,719	2,156
Number of patient contacts	5,786	5,108	3,084
Contacts/patient	4.0	3.0	1.4

Example results using different designs

Interrupted time series with control	Propensity weighted time series	Single interrupted time series	
All diagnosed prior to study period	All diagnosed prior to study period, cases limited to incentive in first 3 months (excluding first 3 months from models)	All who received incentives, time zero = billing date (excluding six months from models)	All diagnosed prior to or during study period

