Measuring the Impact of Primary Care Enrolment Policies on Patient-Physician Attachment in Quebec, 2000-2016

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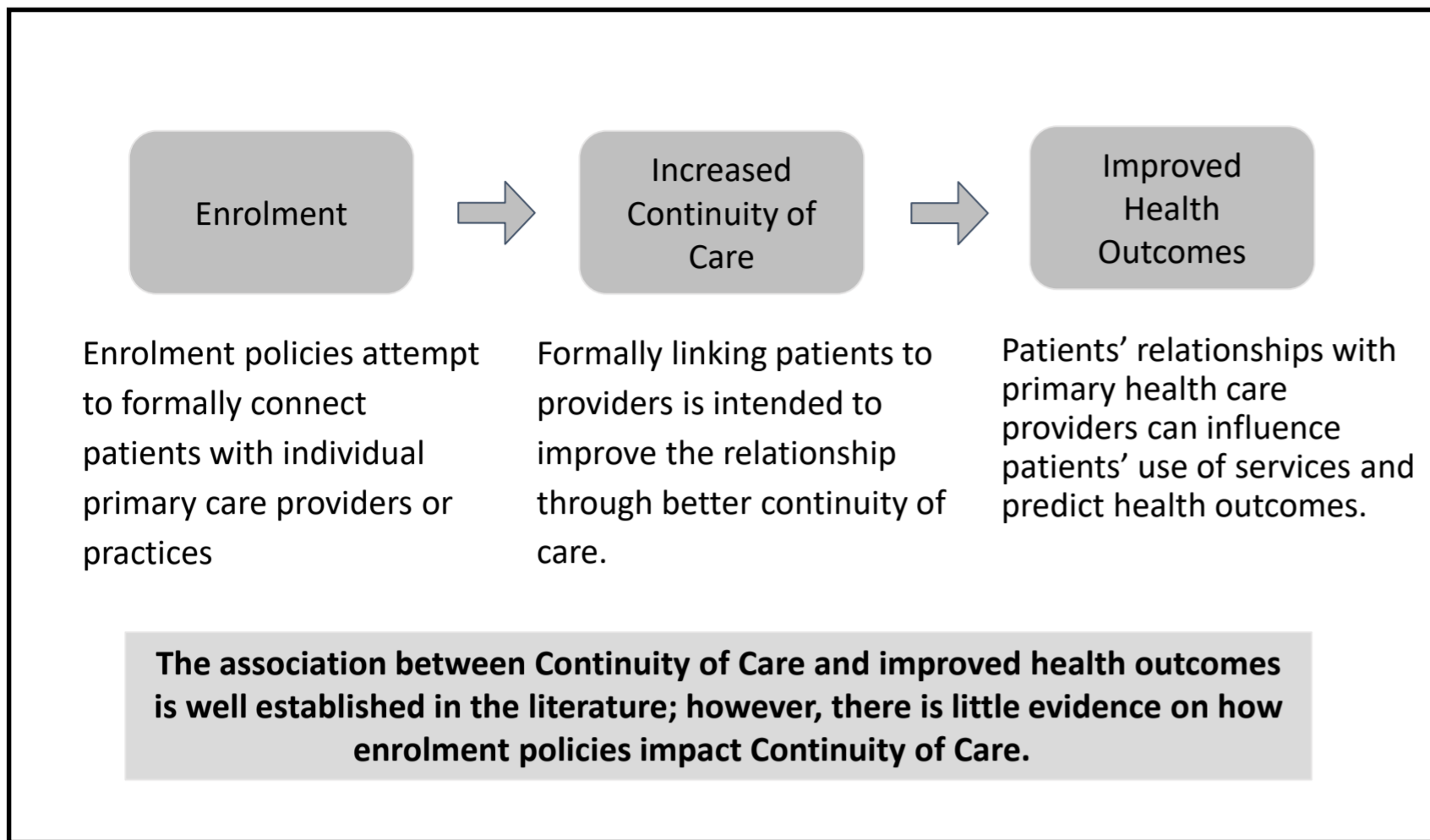
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INTRODUCTION

Enrolment → Increased Continuity of Care → Improved Health Outcomes

Enrolment policies attempt to formally connect patients with individual primary care providers or practices

Formally linking patients to providers is intended to improve the relationship through better continuity of care.

Patients' relationships with primary health care providers can influence patients' use of services and predict health outcomes.

The association between Continuity of Care and improved health outcomes is well established in the literature; however, there is little evidence on how enrolment policies impact Continuity of Care.

Enrolment Policies in Quebec
- Formal contract between patient and provider
- Quebec introduced 3 enrolment policies:
  - 1) Vulnerable (elderly or chronically ill) patients in 2003 &
  - 2) Non-Vulnerable patients in 2009
  - 3) Family medicine groups in 2002

Measuring a Component of Continuity of Care : Attachment
- COC is complex concept - difficult to capture in health administrative databases (HAD)
  - Attachment is a component of CoC which can be measured in HAD
  - Captures the management/longitudinal aspect of continuity, the idea that a patient has a medical home where they receive most of their care.

Overall Goal: To determine if the Quebec enrolment policies impacted the proportion of visits a patient had with 'their physician' (fidelity) and the percent of the population with a usual provider of care (UPC).

STUDY POPULATION AND METHODS

Exposure: Enrolment Policy Implementation
- 2003 vulnerable enrolment policy in QC
- 2009 NON-vulnerable enrolment policy in QC
- Anyone eligible for the above policies is considered 'treated' (ITT analysis)

Outcome: Attachment
- Usual Provider of Care (>75% of GP visits with 1 GP on an annual basis)
- Fidelity (proportion of GP visits with 1 GP on an annual basis)

Difference-in-Differences Study Design:
- Compare outcome trends before and after the policy among those eligible for enrolment in QC (treated) to a population in BC (control) that would have been eligible for enrolment if they lived in QC.
- Study design accounts for time-trends provided that BC is a good counterfactual for what would have happened in QC had the policy not been implemented.

Data: Health administrative data for Quebec and British Columbia from 1998 to 2013.
- BC - whole population over 40 years old
- QC – random sample (~2%) of QC population over 40 years old

Vulnerable vs Non-Vulnerable: Defining Eligibility
- Need to identify populations that *could have participated* in the policy.
  - Identify everyone in QC and BC who meet the QC definition of vulnerable and those that do not (non-vulnerable population)
- Anyone already enrolled is not eligible for enrolment

Vulnerable
Age +70
Mental Health
Depression
Diabetes
Cardiac
Respiratory
Substance abuse
HIV
Degenerative CNS
Chronic Inflammation
Renal Failure
Thrombosis
Atrial Fibrillation
Cancer

RESULTS

Panel A: Uptake of Policy and Baseline Characteristics

% Population Enrolled in Quebec Over Time

Table 1 Descriptive Characteristics in Year Prior to Policy Implementation

Characteristic	2003 Policy		2009 Policy	
	QC N=20,927 Mean (SE)	BC N= 575,148 Mean (SE)	QC N=36,358 Mean (SE)	BC N=1,158,522 Mean (SE)
Age				
40-49	16.2 (0.07)	20.30	56.2 (0.07)	40.90
50-59	17.9 (0.01)	17.39	27.8 (0.06)	37.06
60-69	14.8 (0.06)	11.31	16.0 (0.05)	22.05
70+	51.1 (0.08)	51.0	-	-
Female (%)	57.70 (0.35)	59.18	46.03 (0.26)	49.50
SES (%)				
1 (low)	28.8 (0.23)	21.62	16.4 (0.22)	17.68
2	21.6 (0.26)	19.98	19.0 (0.22)	18.84
3	19.3 (0.28)	19.33	19.9 (0.21)	20.34
4	17.5 (0.29)	19.01	22.1 (0.21)	21.11
5 (high)	12.8 (0.32)	20.05	22.6 (0.19)	22.03
Mean # of visits with GP	2.32 (0.01)	8.2 (0.01)	1.14 (0.01)	3.42 (0.004)
UPC	69.13 (.32)	70.0 (0.06)	71.69 (0.24)	64.6 (0.04)
Fidelity	82.39 (0.17)	82.0 (0.03)	84.95 (0.12)	80.34 (0.02)

Key Point 1 Uptake: Policies are taken up quickly and a large portion of the population is participating.

Key Point 2 Table: There are differences in pertinent baseline characteristics for QC and BC. Provided they remain stable over time, BC can still serve as a valid control in the DD framework.

Panel B: Outcome Trends in QC and BC 2003 Policy

Fidelity Trends in Vulnerable Population
For GP visits only

UPC Trends in Vulnerable Population
For GP visits only

Panel C: Outcome Trends in QC and BC 2009 Policy

Fidelity Trends in Non-Vulnerable Population
For GP visits only

UPC Trends in Non-Vulnerable Population
For GP visits only

Key Points:
- Trends in the pre-policy period suggest that BC may serve as a valid control for what would have happened in QC had the policy not been implemented.
- UPC and fidelity trends appear to remain stable over time.

NEXT STEPS

- Determine if adjusting/ weighting the the populations to look more like each other makes pre-period trends more parallel
- Estimate effect of policies on outcomes (challenge with separate HADs)
- Explore novel measures of attachment using linked HAD-survey data

PARTNERS