Institute of Health Policy, Management & Evaluation
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Paying for Primary Care

Payment Reform and Primary Care Physician Behaviour in Ontario

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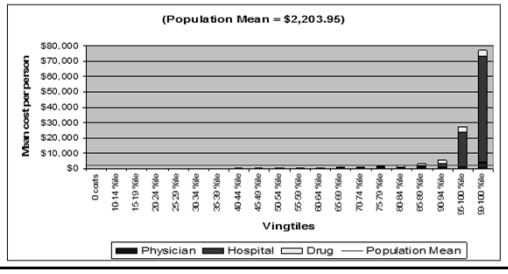
How should we pay doctors? Payment mechanisms can be based on:

- Time (salary, sessional)
- Task (fee-for-service)
- Case/client (capitation, DRG)
- Or blended models
- Traditionally, in Canada:
  - Most hospitals were paid by global budgets
  - Most doctors were paid by fee-for-service (FFS)
- This is changing
- Ontario is experimenting with multiple models for paying primary care physicians (PCPs)

Payment Method Matters

- Fee-for-service (FFS) incentivizes increasing volume
- Capitated models (CAP) incentivize reducing service volumes
- An additional nuance:
  - Not all patients are the same

Mean Total Expenditures for the Full Population by Vingtiles
Manitoba, Fiscal 2005-2006



What Should the Capitation Payment Be?

- CAP formula assumes proper risk adjustment:
  - Otherwise, risk of **Underpayment** or **Overpayment**

Research Questions

- Are there differences across payment models?
- What is the relationship between payment reform and:
  - Self-selection effect
  - Incentive effect
    - Risk selection based on case-mix
    - Service quantity and mix

What we did

Units of analysis: PCP and the PCP Roster for each PCP

- For PCP level analysis:
  - Unbalanced panel (all family physicians). N=13,554 (varies with year)
  - Balanced panel (sub-set of those physicians present in every year - excludes new doctors and those who left/retired) N = 7,917
- Results are similar for balanced and unbalanced panels
- For purposes of time, will concentrate on balanced panel for this presentation

Data

- Administrative data from the Institute for Clinical Evaluative Sciences, Toronto, Ontario
- 12 annual cross-sections (1999/00 – 2010/11)

We classified Ontario's PCP Payment Models (not exhaustive)

Fee-for-Service (FFS)
(1.47 Million patients in 2010/11)

Enhanced Fee-For-Service (EFF)
(5.01 Million patients in 2010/11)

Family Health Groups, Comprehensive Care Model

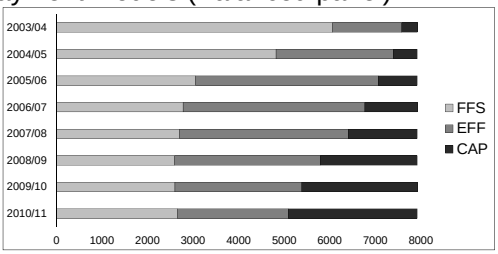
Capitation (CAP)
(5.05 Million patients in 2010/11)

Family Health Networks, Family Health Organizations

For PCP Roster

- Included all patients in their practices (i.e., including those who were born, left, died, etc. over time). N varies, but for 2010/11, N=11.54 million
  - We defined roster as "Virtual rostering", where patient assigned to physician for whom they had highest $ value for primary care claims in the previous two years
  - For some analyses, we compared the sub-set who were also formally rostered patients (patients sign enrolment form with physician) with those only virtually rostered

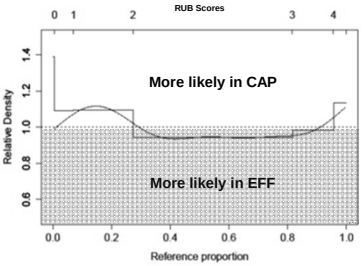
Ontario Family Physician Enrolment in Payment Models (Balanced panel)



1. Differences in costs and expected patient utilization across payment models

- Non-parametric analysis of primary care cost and expected patient utilization differences across payment models
- Primary care costs
  - defined as: (FFS + capitation + individual incentive payments)
  - Which of these are paid depends on model!
- Expected patient utilization
  - Measured by proportion with each Resource Utilization Band (RUB) Score (0 to 5)
- We also compared formally versus virtual rostered patients

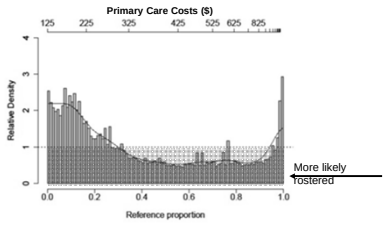
Relative Distribution of RUB scores (2010/11) CAP vs. EFF



What this tells us (not all data shown here)

- Physicians in CAP models are more likely to have healthier patients than those in EFF (but not FFS)

Rostered vs. Non-Rostered in CAP (2010/11)



What this tells us:

- The non-formally rostered patients in CAP are more likely to be either very low cost or very high cost

2. Physician Self-Selection Effect

- Analysis of probability of physician selecting each of the 3 payment models (using mixed logit)
- Panel (2003/04 – 2010/11)
- Key explanatory variables: patient case-mix, patient income, immigrant status, visits

There is a Self-Selection Effect

- E.g., Likelihood of self-selection into CAP vs. EFF
  - 1% increase in patients from lowest neighbourhood income quintile = 1% decrease
  - 1% increase in sickest patients (Resource Utilization Band score = 5) = 5% decrease

3. Payment Incentive Effect

- Controlled for self-selection effect
- Panel (2003/04 – 2010/11)
- Outcome variables: office visits, % non-capitated visits, patient case-mix

Self-Selection Effect

- Impact of CAP vs. EFF
  - Office Visits decreased by 4%
  - % RUB 4-5 decreased by 1%
  - % of patients with 10+ morbidities decreased by 3%
  - BUT
  - % of codes for 'out of basket' (non-capitated visits) increased by 3%

Policy Implications

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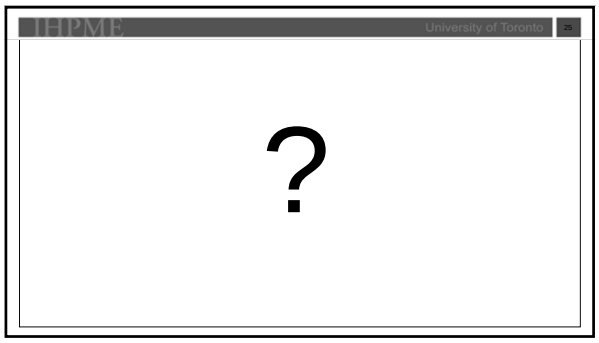
- Ontario's payment models for primary care reform did not sufficiently take into account heterogeneity of physician and patient population
  - Age/sex adjustment was clearly insufficient!
- As a consequence
  - Physicians with healthier patients were financially rewarded
  - Evidence of risk selection, particularly of healthier patients
  - Evidence of physicians placing more emphasis on non-capitated services
- Despite incentives to risk select, risk-selection of sick patients already in a physician's practice has been minimal
  - Possibly mitigated by ability to be able to bill FFS for limited number of non-rostered patients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