Innovations in primary care delivery

Lessons from payment reform in British Columbia

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March 7, 2019
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.”

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.”

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

(Number of incentives paid) 

$562 \times 17,915 = $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)

(a) Tests for patients with diabetes

(b) Tests for patients with hypertension

(c) Tests/prescriptions for patients with COPD

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)

Total hospitalizations

Hospitalizations via emergency department

Hospitalizations for incentivized conditions

[Graphs showing trends in hospitalizations over time with different markers for trend, counterfactual, and observation]
Monthly spending (complex care)
What did incentives pay for?

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
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

Source: http://www.gpscbc.ca/what-we-do/system-change
Acknowledgements

Project team: Kim McGrail, Mike Law, Sandra Peterson, Scott Garrison, Lucy Cheng, Jerry Hurley

Funding: Data: populationdataBC

All inferences, opinions, and conclusions drawn in this presentation are those of the authors, and do not reflect the opinions or policies of the data stewards.

References


Thank you!

Questions? Comments? Ideas?
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Overall goal: Patient centred, whole-person care
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

![Graph showing percent of respondents over time with a change in question wording in 2014. The graph includes data for Canada and British Columbia.](image-url)
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)

**PATIENT RATING**

- Unable to find regular GP: 460, Rating 4.6
- Support for chronic conditions: 458, Rating 4.5
- Information sharing, including EMR: 448, Rating 4.5
- Mental health resources: 446, Rating 4.5
- Access to care when/where needed: 462, Rating 4.5
- New models of healthcare: 463, Rating 4.4
- Improve continuity/coordination: 458, Rating 4.4
- Improve patient-provider communication: 461, Rating 4.2
- Challenges in small/remote/rural communities: 424, Rating 4.2
- Care guided by patient needs/values/preferences/priorities: 461, Rating 4.1

**provider rating**

- Unable to find regular GP: Rating 4.6, N 173
- Information sharing, including EMR: Rating 4.4, N 173
- Mental health resources: Rating 4.4, N 173
- Improve continuity/coordination: Rating 4.3, N 173
- New models of healthcare: Rating 4.3, N 172
- Support for chronic conditions: Rating 4.3, N 172
- Access to care when/where needed: Rating 4.3, N 173
- Challenges in small/remote/rural communities: Rating 4.2, N 163
- Improve patient-provider communication: Rating 4.0, N 173
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

Intend to provide comprehensive care to the same group of patients (in first five years of practice)

Plan to focus only on specific clinical areas (such as sports medicine, maternity care, emergency medicine, palliative care, hospital medicine etc.)

Plan to provide comprehensive care that includes a special interest

% indicating somewhat or very likely

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)

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]*
Walk-in style practice?

Searches for walk-in clinics by province, 2011-2017

Source: Google trends (scaled to Saskatchewan). Prepared by J. Ssendikaddiwa
Commonwealth and CCHS survey data on primary care access across Canada

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

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

### Example results using different designs

<table>
<thead>
<tr>
<th>Design</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interrupted time series with control</strong></td>
<td>All diagnosed prior to study period</td>
</tr>
<tr>
<td><strong>Propensity weighted time series</strong></td>
<td>All diagnosed prior to study period, cases limited to incentive in first 3 months (excluding first 3 months from models)</td>
</tr>
<tr>
<td><strong>Single interrupted time series</strong></td>
<td>All who received incentives, time zero = billing date (excluding six months from models)</td>
</tr>
<tr>
<td></td>
<td>All diagnosed prior to or during study period</td>
</tr>
</tbody>
</table>

![Graphs comparing spending per patient over time for different designs](image-url)