The Relationship between Primary Care Practice Organizational Characteristics and Chronic Disease Prevention and Management

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**Background**

- The performance level of primary care (PC) practices varies considerably, even those with a similar organizational model.
- Practices also vary in the way they are organized.
- Understanding how organizational attributes are related to performance could help identify the type of investments that should be made in PC.
- A number of organizational attributes of PC practices have been shown associated with quality of care1,2

**Objective**

➢ To examine the association between primary care practices’ organizational attributes and measures of quality of primary care in Ontario.

**Methods**

**Design:** Cross-sectional survey to be inked to health administrative data

**Sample:** Inter-professional primary care practices:
- Salaried Community Health Centres (CHC) (n=56)
- Capitation Family Health Teams (FHT) (n=77)

**Tool:** Adapted from the Canadian Institute for Health Information Survey delivery: Online population-based survey of primary care practices in 2016 to capture organizational characteristics of primary care practices in Ontario.

**Outcome:**
- Quality of care composite score derived from chronic disease prevention and management indicators (CDPM)
- Represents the proportion of processes of care performed for which an individual was eligible between 2016-2018 (0.0-1.0)

**Independent variables:** Organizational Characteristics

**Statistical Analysis:** Clustered linear regressions

**Covariates:**

<table>
<thead>
<tr>
<th>Patient</th>
<th>Provider</th>
<th>Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Age</td>
<td>Model Type</td>
</tr>
<tr>
<td>Sex</td>
<td>Sex</td>
<td>Rurality</td>
</tr>
<tr>
<td>Household Income</td>
<td>Foreign Graduate</td>
<td>Size of Practice (number of MDs)</td>
</tr>
<tr>
<td>Recent Immigrant</td>
<td>Years since graduation</td>
<td>Years Practicing in Current Model</td>
</tr>
</tbody>
</table>

**Linkage:**

- **Organizational Characteristics**
  - Identification of Practices: Practice Type, Teaching, Rurality
  - Practice Site Resources: Number and FTE of personnel, Resource Sufficiency
  - Practice Site Structures: Health Quality Improvement Processes, Clinical Quality Improvement Initiatives, Audit and Patient Feedback
  - Service provision and Clinical Practice: Service as Assessory, Chronic Disease Management and Education Programs, Walk-ins, Evaluation Time
  - Practice Site Context: Coordination with other practices and hospital

**OUTCOME:** Health Administrative Data at ICES

- **CPDM:** Contains 7 tests
  - Chronic Disease Screening: Lipid Test, Cancer Screening: mammography, pap test, colorectal test
  - Chronic Disease Management: DM: eye exam, DM: lab test, DM: HgA1c tests
- **Derived as follows:**
  - Test Score = sum(1 if triggered indicators) / sum (eligible indicators)

Note: Triggered indicates that the test was done within the time frame required; i.e. the quality was good.

**Preliminary Results**

Table 1: Frequency distribution of number of patients within each CPDM category (2012)

<table>
<thead>
<tr>
<th>Categorized score</th>
<th>Number of Individuals</th>
<th>% Individuals</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00-0.20</td>
<td>1,986,923</td>
<td>26.2</td>
</tr>
<tr>
<td>0.21-0.40</td>
<td>421,773</td>
<td>5.6</td>
</tr>
<tr>
<td>0.41-0.60</td>
<td>697,204</td>
<td>9.2</td>
</tr>
<tr>
<td>0.61-0.80</td>
<td>547,860</td>
<td>7.2</td>
</tr>
<tr>
<td>0.81-1.00</td>
<td>3,948,472</td>
<td>52.1</td>
</tr>
</tbody>
</table>

**Conclusions**

- This will be the first study, to our knowledge, to report a relationship between a breadth of organizational attributes and a composite measure of quality of care.
- Results from this study will highlight factors that are likely to drive quality in primary care practices, and can be used to inform practices and policy makers on future investments to strengthen primary care delivery.

**References**

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