Resident practice-sharing in an academic family medicine teaching unit

Exploring the effects on patient care and the resident educational experience

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Motivation

What is the effect of physician practice sharing on patient outcomes?

- Practice-sharing has the potential to improve patient outcomes through improved provider case-knowledge and through knowledge sharing.
- Is there a free-rider problem inherent in these arrangements on the provider side or is there any evidence of selective sorting of patients?
- There is very little empirical evidence to support or reject the idea of medical practice-sharing.
1. We conducted a pilot study where several senior and junior resident family physicians were formed into practice sharing pairs

2. We were able to show that practice-sharing patients had reduced no-show rates and there were suggestive signs of improved primary provider contact relative to non-practice sharing patients

3. Increases in visits to primary care providers (PCP) are transmitted though visits to the practice sharing partner - not the original provider
Methods

- At Toronto Western Hospital training is conducted in longitudinal blocks and resident physicians are responsible for a roster patients
- Four residents in the TWH clinic were paired together to share aggregate practices
- Our pre-treatment period was from September 1, 2016 to January 29, 2017
- Practice sharing was implemented on January 30, 2017 and our post-treatment period ended May 13, 2017
Data

- Primary outcomes were collected through the clinic electronic medical record system
  1. Whether a patient no-shows for an appointment
  2. Whether a patient visits a primary care provider (composite vs. single)
- We employ a difference-in-differences strategy to identify effects of practice sharing on our outcomes
Results (1)

Figure: The probability a patient does not show to a scheduled appointment
Results (2)

Figure: The probability a patient sees their PCP (Paired comparison)
Figure: The probability a patient sees their PCP (Single comparison)
Results (4)

Figure: The probability a patient sees their PCP for the practice-sharing pairs by resident year
## Results (5)

### Table: Odds ratios for patient outcomes

<table>
<thead>
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<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
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<tbody>
<tr>
<td></td>
<td>% no show</td>
<td>% seeing PCP (single)</td>
<td>% seeing PCP (composite)</td>
</tr>
<tr>
<td>Post-Intervention</td>
<td>0.545 (-1.90)</td>
<td>1.910*** (8.14)</td>
<td>1.791*** (36.63)</td>
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<tr>
<td>Treatment Group</td>
<td>1.185*** (4.31)</td>
<td>0.965 (-1.46)</td>
<td>1.066* (2.47)</td>
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<tr>
<td>Practice-sharing Effect</td>
<td>0.729** (-2.83)</td>
<td>0.866* (-2.25)</td>
<td>1.114 (1.61)</td>
</tr>
<tr>
<td>Pod 2</td>
<td>0.923*** (-7.61)</td>
<td>0.973*** (-3.56)</td>
<td>0.975** (-3.28)</td>
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<td>Pod 3</td>
<td>0.780*** (-34.03)</td>
<td>0.852*** (-24.57)</td>
<td>0.853*** (-23.87)</td>
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<tr>
<td>Pod 4</td>
<td>1.008 (0.82)</td>
<td>0.673*** (-51.71)</td>
<td>0.674*** (-51.00)</td>
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<tr>
<td>N</td>
<td>11053</td>
<td>8048</td>
<td>8048</td>
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</tbody>
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Month, age, and gender effects have been omitted from table for clarity.
Further Results and Robustness

- We were able to examine patient satisfaction around the time of implementation of our practice sharing - no change
- We also conducted a resident focus group - no negative feedback
- Patients associated with practice sharing pairs had an increased probability of seeing other physicians in the FHT
  - Highly suggestive that continuity cascades out onto other physicians after these changes occur
  - Unclear how this would generalize to a full practice
Conclusions

1. Our practice sharing pilot demonstrated that a practice-sharing program is associated with reduced no show rates (by 27%) as well as likely better continuity (by 11%)

2. The picture is complicated by the fact that there seems to be patient substitution away from junior residents towards senior residents

3. Our intervention was not associated with any decrease in aggregate patient satisfaction scores

4. Our intervention was not associated with poorer resident outcomes according to our focus group