Examining the Relation Between the Use of Electronic Medical Records and the Productivity of Patient Care in Canada: 2014 National Physician Survey

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National Physician Survey

- 5 physician surveys conducted jointly by the CFPC, CMA and Royal College between 2004 and 2014.

- Open to all practising physicians. There were 60,000-75,000 over the years the surveys were conducted.

- 10,000+ respondents in 2014 (16% RR), 12,000+ in 2010 (18% RR), and 19,000+ in 2007 (32% RR).

- 2007 & 2010 surveys were bimodal (paper and electronic); while the 2014 survey was administered electronically.

- Data are weighted to better represent the physician population in Canada.
EMRs are computer-based records detailing patient demographics, medical/drug history, and diagnostic information.

Improves efficiency, quality, cost-effectiveness and safety of primary care. Some examples include:

- Reducing the ordering of duplicate tests
- Enhancing communication among health professionals and between them and their patients
- Reducing wait times for appointments

Source: 2013 Canada Health Infoway; 2014 Canadian Medical Association
Electronic Medical Records (EMRs) in Canada

- Physicians in Canada are undergoing a rapid adoption of electronic medical records.

<table>
<thead>
<tr>
<th>Year</th>
<th>Use electronic records to enter and retrieve patient information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>36%</td>
</tr>
<tr>
<td>2010</td>
<td>50%</td>
</tr>
<tr>
<td>2014</td>
<td>79%</td>
</tr>
</tbody>
</table>

Electronic Medical Records (EMRs) in Canada

- In Canada, EMR adoption has been supported through investments in EMR programs by the provinces/territories, and Infoway.

- However, the use of EMRs in primary care in Canada lags behind that of other countries where 90% of primary care physicians use EMRs.

Source: 2013 Canada Health Infoway; 2014 Canadian Medical Association
How do physicians in Canada perceive productivity change in their medical practice after adopting EMRs?
Objective

- To examine the relationship between adopting Electronic Medical Records and the productivity of patient care provided by physicians in Canada. In particular:

1. To compare *productivity reported* by those using a combination of paper and electronic records **vs.** those using *only electronic records*

2. To compare *productivity reported* as a *function of time* since using electronic records
National Physician Survey

- Results from three questions were examined:

1. Which of these best describes your record keeping system in your main patient care setting?
   - Paper
   - Electronic
   - Paper and electronic

2. Since electronic records were implemented, the productivity at your medical practice has:
   - Increased
   - Decreased
   - No change

3. How long have you been using electronic records in your practice?
   - More than six years
   - Three and six years
   - One and two years
Results

1. Comparing Productivity reported by those using both paper and electronic records VS. those using only electronic records, in 2014

- **Paper and Electronic**
  - Increased: 35%
  - No Change: 36%
  - Decreased: 19%
  - Not sure or no response: 10%

- **Electronic**
  - Increased: 53%
  - No Change: 23%
  - Decreased: 14%
  - Not sure or no response: 10%

Source: 2014 National Physician Survey
1. Comparing productivity reported by Family Physicians and Other Specialties by record system used

- **Paper & electronic**
  - Increased productivity: 36% Family Physicians, 34% Other Specialties
  - Decreased productivity: 22% Family Physicians, 17% Other Specialties

- **Electronic**
  - Increased productivity: 53% Family Physicians, 52% Other Specialties
  - Decreased productivity: 15% Family Physicians, 13% Other Specialties

Source: 2014 National Physician Survey
Results

2. Comparing reported productivity as a function of time since using electronic records, in 2014

<table>
<thead>
<tr>
<th>Years Using Electronic Records</th>
<th>Increased</th>
<th>No Change</th>
<th>Decreased</th>
<th>Not sure or no response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 Years</td>
<td>32%</td>
<td>32%</td>
<td>25%</td>
<td>11%</td>
</tr>
<tr>
<td>3-6 Years</td>
<td>41%</td>
<td>34%</td>
<td>16%</td>
<td>9%</td>
</tr>
<tr>
<td>&gt; 6 Years</td>
<td>49%</td>
<td>29%</td>
<td>13%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Source: 2014 National Physician Survey
Results

Comparing reported productivity by Family Physicians and Other Specialties as a function of time

<table>
<thead>
<tr>
<th>Years Using Electronic Records</th>
<th>% REPORTING INCREASED PRODUCTIVITY</th>
<th>% REPORTING DECREASED PRODUCTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 years</td>
<td>35%</td>
<td>29%</td>
</tr>
<tr>
<td>3-6 years</td>
<td>46%</td>
<td>24%</td>
</tr>
<tr>
<td>&gt; 6 years</td>
<td>52%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Source: 2014 National Physician Survey
Conclusion

- Physicians using only electronic records are more likely to report greater productivity than those using a combination of paper and electronic records.

- The longer physicians use EMRs, the more likely they are to report an increase in productivity providing patient care.

- While these indicators are encouraging, some physicians still reported either “no change” or “decrease” in productivity following the adoption of EMRs.
Recommendations

- Programs set by the provinces and territories should continue advancing the adoption of EMRs – ensuring compatible EMRs, improving connectivity, and providing training and support.

- Continued investments in EMRs will encourage increased adoption and maturity of use – more and more physicians will recognize and appreciate the benefits of utilizing various EMR functions.
References


