Examining the Use of Electronic Functions by Physicians in Canada – 2007, 2010 and 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.

- Surveys 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.
Electronic Medical Records (EMRs) in Canada

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

![Bar chart showing percentage of physicians using electronic records from 2007 to 2014.]

- Use electronic records to enter and retrieve patient information

Electronic Medical Records (EMRs)

- EMRs are computer-based records detailing patient demographics, medical/drug history, and diagnostic information.

- However, EMRs are not limited to simple data capture and sharing.

- Health care providers can achieve additional benefits when using EMRs to their fullest potential.

Source: 2013 Canada Health Infoway; 2014 Canadian Medical Association
Using more than one function simultaneously can produce additional clinical benefits, such as:

- Generating lab results and reducing ordering of duplicate tests.
- Producing hospital discharge summaries instantly.
- Serving as reminder for prevention care; providing a complete medication profile and thus preventing adverse drug interactions (clinical decision support tool).
- Enhancing communication among health professionals and between them and their patients
- Easily transmitting prescriptions to pharmacists and referrals to specialists

Source: 2013 Canada Health Infoway; 2014 Canadian Medical Association
The most frequently used functions in 2014 included:

- Lab/diagnostic test results: 85%
- Records for clinical patient notes: 79%
- Medications taken by a patient: 67%
- Warning for drug interactions: 65%
- Clinical decision support tool: 64%
- Receipt of hospital information: 63%

Source: 2014 National Physician Survey
Other functions also used:

- Order lab or diagnostic tests: 57%
- Referral to other physicians: 55%
- Use reminders for patient care: 52%
- Access to prov/terr patient information systems: 50%
- Secure transfer of patient information: 47%
- Interface to non-doctor health professionals: 38%
- Interface to pharmacy/pharmacist: 35%

% Physicians using each function

Source: 2014 National Physician Survey
Are physicians utilizing multiple functionalities? What are some potential barriers experienced when accessing EMRs?
Objective


2. To identify barriers experienced when accessing EMRs in 2014
Results from two questions were examined:

1. 2014, 2010, and 2007 NPS – Please indicate which of the following electronic tools you use in the care of your patients.
   - Records to enter/retrieve clinical patient notes
   - Reminders for patient care
   - Warning for drug interactions
   - Interface to pharmacy/pharmacist
   - Lab/diagnostic test results
   - Access to provincial/territorial patient information systems

2. 2014 NPS – Which of the following barriers have you experienced in accessing electronic records?
   - None
   - Compatibility with other systems
   - Privacy
   - Hardware availability
   - Technical glitches
   - Lack of training
   - Firewalls/security issues
   - Other ______________
Results

Number of electronic functions used by physicians in Canada between 2007 and 2014

- **None**: 45% (2007), 32% (2010), 7% (2014)
- **1-3 functions**: 44% (2007), 42% (2010), 48% (2014)
- **4-6 functions**: 7% (2007), 17% (2010), 43% (2014)

Results

Number of electronic functions used by family physicians and other specialties in Canada between 2007 and 2014

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<tr>
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<th>2007</th>
<th>2010</th>
<th>2014</th>
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<tbody>
<tr>
<td>None</td>
<td>41%</td>
<td>31%</td>
<td>6%</td>
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<tr>
<td>1-3 functions</td>
<td>49%</td>
<td>39%</td>
<td>38%</td>
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<tr>
<td>4-6 functions</td>
<td>5%</td>
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<td>11%</td>
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Barriers experienced when accessing EMRs in 2014

- Technical glitches: 52%
- Compatibility with other systems: 46%
- Connection issues: 43%
- Firewalls/security issues: 26%
- Software issues: 23%
- None: 21%
- Hardware availability: 20%
- Lack of training: 17%

Source: 2014 National Physician Survey
Conclusion

- The number of physicians in Canada using multiple electronic functions has increased since 2007.

- Increased use of a wider variety of electronic functions was greater for family physicians than other specialties especially in the case of those using between 4-6 electronic functions.

- The barriers most physicians experienced when accessing EMRs were technology and compatibility related, and fewer physicians reported “lack of training”.

Recommendations

- The provinces/territories should continue advancing EMR adoption; and carefully develop incentive programs to encourage enhanced use of EMRs.

- While programs support initial EMR adoption (installation and training), strong leadership is required to ensure EMR vendors produce user-friendly and compatible systems.

- In particular, there is a need to limit technological glitches; improve compatibility/connectivity to electronic systems and databases across the provinces/territories (to ensure portability of care), and between different care settings (to enhance continuity of care).
References


