



**BACKGROUNDER**

# Emerging benefits of electronic medical record use in community-based care

## About the report

Canada Health Infoway commissioned PwC to conduct a study to determine the current and emerging effects of the implementation of EMRs by primary care physicians and specialists in community-based practice across Canada. The study's findings indicate a compelling reason to continue to expand EMR adoption and maturity of use.

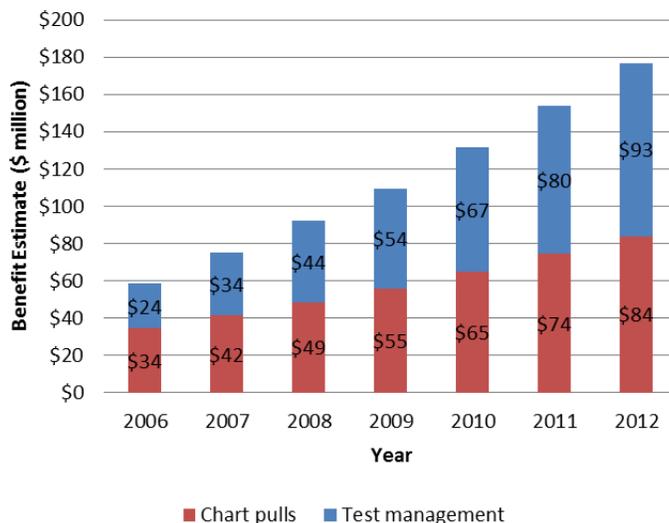
The methodology included a review of literature (more than 250 research articles). It also used national survey and cost data, along with key informant interviews, providing the foundation for the development of benefit estimates.

## Key findings

### 1. Community-based practices experience efficiencies in workflow as staff time is redeployed

The use of EMRs fundamentally changes the workflow of administrative tasks, such as reducing the amount of time spent pulling paper charts and improving laboratory and diagnostic test process management.

The cumulative benefit accrued from 2006 to 2012 in community-based practices is valued at \$800 million, growing from \$58 million in 2006 to \$177 million in 2012 as outlined in the chart below:

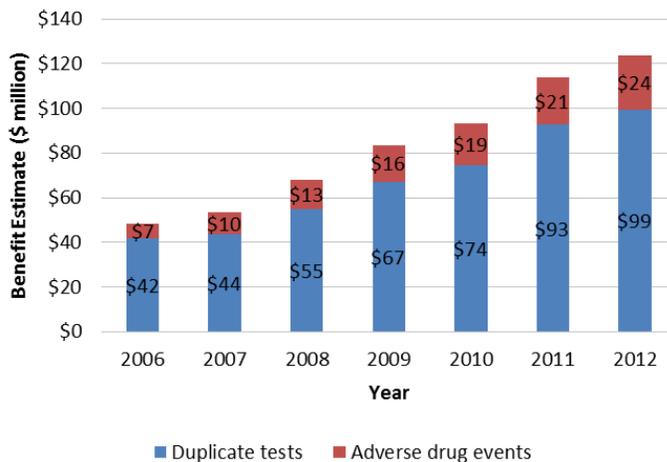


## 2. EMR use results in health system level benefits, such as reduced numbers of duplicate tests and adverse drug events

The use of EMRs can help reduce test duplication by displaying past test results, highlighting redundancy of ordering through alerts, and decreasing the number of test results that are lost or misplaced. Printed prescriptions also help improve legibility, leading to increased patient safety by reducing adverse drug events. These benefits are likely to be substantially enhanced as decision support is optimized and focused, and as there is more integration between EMRs, Electronic Health Records (EHRs), and other systems external to the community-based care setting.

They also help health care providers to obtain a full and accurate medication history and to catch potential drug interactions before they harm patients

The cumulative health system benefit accrued from 2006 to 2012 is valued at \$584 million, growing from \$49 million in 2006 to \$123 million in 2012 as outlined in the chart below:



## 3. Advanced use of EMRs can improve health outcomes and patient safety through preventive care and chronic disease management.

Physicians who actively manage their practice using EMR data and use advanced EMR functions, such as patient population management tools and alerts prompting follow-up for those in need, report improved chronic disease management and prevention, better diabetes management, improved immunization rates and higher cancer screening rates. Advanced use of EMRs is key to seeing these emerging benefits grow. Increasing the number of advanced users represents an opportunity to significantly boost the benefits in this area. The following examples of evidence-based benefits associated with advanced EMR use were highlighted in the study, based on a review of international research:

- 10 per cent increase in mammogram screening rates and 12 per cent increase in cholesterol screening rates.
- 10.9 per cent more patients in EMR-enabled practices achieved target hemoglobin A1c levels, 11.1 per cent more achieved target blood pressure levels, and 18.1 per cent more achieved target cholesterol levels.
- 49 per cent increase in pneumococcal vaccination rates and a 20.7 per cent increase in influenza vaccination rates with EMR reminders.
- Primary care practices with EMRs conducted reviews of all patient charts (e.g. for medication recall) approximately 30 times more quickly than paper-based clinics.

#### **4. EMR use supports improved interactions and communication among care team members and between providers and patients.**

EMRs have proven to help foster a collaborative environment amongst health care providers, improving the ability of clinicians from a variety of disciplines to share patient information on-site and remotely within the practice team. They also provide for additional opportunities for patient education (e.g. trending of test results over time).

These benefits contribute to enhanced continuity of care as evidenced by the following findings cited in the report:

- 63 per cent of Ontario family physicians and specialists report that continuity of care has improved within the first year of implementing their EMR
- 96 per cent of physicians in Alberta's EMR program report access to a summarized patient history has improved continuity of care
- 93 per cent of physicians in Alberta's EMR program report that access to a summarized patient history means that patients spend less time repeating the same information to care providers; and 97 per cent report that they and their clinic associates and care team have more complete patient information
- Canadian adults whose regular physicians look up information about their health using computers or mobile devices are more likely to say that their regular doctor always knows important information about their medical history than those whose physicians use paper records alone

## **EMR adoption in Canada**

- [Adoption of EMRs](#) by primary care physicians in Canada has more than doubled between 2006 and 2012 from 23 per cent to 56 per cent. Australia, New Zealand, the United Kingdom and the Netherlands all report [use of EMRs](#) by more than 90 per cent of their primary care physicians. In all countries, the extent of use of advanced EMR functions varies.
- [The adoption of EMRs by community-based specialists](#) has increased from 28 per cent in 2007 to 41 per cent in 2010.
- EMR adoption for community-based family physicians and specialists is supported through investments by the provinces and territories, health care providers, and by the federal government through Canada Health Infoway (*Infoway*).

## **About electronic medical records**

An electronic medical record (EMR) is the digital file clinicians use within their practice to maintain and track their patients' demographics, medical and drug history, and diagnostic information such as laboratory results and findings from diagnostic imaging. It is often integrated with other software that manages activities such as billing and scheduling.

## **About electronic health records**

An electronic health record (EHR) refers to the systems that make up the secure and private lifetime record of a person's health and health care history. These systems store and share such information as lab results, medication profiles, key clinical reports (e.g. hospital discharge summaries), diagnostic images (e.g. X-rays), and immunization history. The information is available electronically to authorized health care providers.

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## **For more information:**

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