Maximizing EMR benefits through data standards & CIHI’s Primary Health Care Voluntary Reporting System

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Introduction: The issue
Clinicians tell us that they need more comparable information about patients in their practice, especially regarding quality, coordination of care and outcomes for groups of patients with multiple chronic conditions. Health system managers tell us they need better PHC data to support policy development and decision making. Significant investments are being made across Canada to implement more EMRs in PHC settings, yet the data collected in many current EMRs are not generally comparable or portable and have limited ability to support coordinated, interdisciplinary care and the goal of an interoperable electronic health record (EHR).

Background: Draft Pan-Canadian PHC EMR Content Standard released in early 2011
CIHI has been working with jurisdictions, clinicians, researchers and Canada Health Infoway (Infoway) to lead the development of a priority set of commonly collected data elements to ensure that PHC EMR data is comparable, portable and that it supports interdisciplinary care and EHR interoperability. As a result, there are now 106 data elements that make up the core content of the recently released Draft Pan-Canadian Primary Health Care Electronic Medical Record Content Standard, Version 2.0, February 2011 (PHC EMR CS). These data elements range from patient care activities like observed health concern (diagnosis or symptom) to encounter specific information like intervention (treatment) and can be used for many purposes including populating thirty-three of CIHI’s pan-Canadian PHC indicators.

The PHC EMR CS only includes data elements that had both a primary use (information typically documented during the patient care process) and a health system use (information useful to clinicians and others for improving care patterns for groups of patients, such as those with chronic diseases). This approach minimizes the need to collect extra data while maximizing the potential for point of care EMR benefits and the benefits achieved through the increased availability of structured high quality data.

Informing efforts to better manage the health system
“This standard enables the consistent capture of information in EMRs that will help inform efforts to better manage the health system.” - Tom Fogg, Former Director of Strategy and Planning, Manitoba eHealth, now Primary Health Care Consultant with Manitoba Health (Co-Chair of the pan-Canadian PHC EMR Content Standard Jurisdictional Advisory Group)

The development and implementation of this standard coincides with the rapid evolution and increased use of EMRs in PHC settings across all Canadian jurisdictions. It is being included in several jurisdictional EMR requirements and is supported as one aspect of Canada Health Infoway’s EMR upgrade initiative. From a jurisdictional perspective, a pan-Canadian PHC EMR CS is one of the foundational elements for ensuring that high quality PHC EMR data can be efficiently collected and used to inform a range of decision making, regardless of where or how patients access PHC—and in a way that minimizes data collection burdens.

Clinicians have the most to benefit
“CIHI can play a leadership role in helping to support standards in the EMR space, and in particular standards on an agreed upon set of data and indicators that all EMRs must be able to generate. That will allow us to have a national conversation about what’s working in primary care, which primary care reform activities seem to be generating the best
CIHI's PHC indicators and other essential with comparative feedback reports on Health Care Voluntary Reporting System (PHC VRS) is used to provide participating clinicians VRS EMR data from multiple clinicians. To ensure relevancy, data elements that were included in the standard were reviewed by individual clinicians across Canada and clinician networks. One such network was CIHI's Primary Health Care Voluntary Reporting System (PHC VRS), a national network of clinicians that voluntarily provide CIHI with a subset of their de-identified EMR data. PHC VRS EMR data from multiple clinicians is used to provide participating clinicians with comparative feedback reports on CIHI’s PHC indicators and other essential PHC practice information—to support their quality improvement and practice management goals.

Summerville Family Health Team has been on an extensive quality improvement journey over the past several years. According to Summerville clinician, Dr. Dainen, they envision the PHC VRS and the quality improvement tools that it offers, as being a central part of this journey. “The ability to introduce quality improvement without increasing the amount of time that we have to get to quality improvement is the right strategy and I think CIHI has really helped us in that respect,” says Dr. Dainen.

Participating PHC VRS clinicians receive patient-centric reports that provide an overview of their respective patient populations to support planning, outcome and trend analysis and comparison of results with the broader PHC VRS patient groups (all in a privacy sensitive manner). Sites also receive an interactive, electronic reporting tool, the Quality Management Improvement Compass which allows clinicians to dynamically look at their data to evaluate several dimensions of care, as well as identify patients for follow-up.

Over time, as more jurisdictions implement the PHC EMR CS, clinicians and jurisdictions alike will be able to realize greater EMR benefits from consistent, comparable EMR data and additional tools can be developed to support quality improvement and health system planning for clinicians and jurisdictions. For more information on the PHC EMR CS and the resources available to support its adoption and implementation or to learn more about participating in CIHI’s PHC VRS, please go to www.cihi.ca/phc or e-mail: phc@cihi.ca.

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Senior Principal Investigator, Medical Informatics

The Ontario Institute for Cancer Research (OICR) accelerates the translation of new discoveries into effective interventions that impact cancer. Large-scale programs include the One Millimetre Cancer Challenge, the Cancer Stem Cell Program, the Pancreatic Cancer Genome Project (part of the International Cancer Genome Consortium), High Impact Clinical Trials, the Ontario Health Study, a long-range longitudinal study, and the Ontario Tumour Bank.

We are seeking a Senior Principal Investigator in Informatics and Bio-computing to build the OICR Digital Medicine Initiative, to develop software systems to integrate research and clinical information systems. The effort will tie together many of OICR’s information holdings, including genomics, medicinal chemistry, genetic, imaging and clinical trials databases, and to produce portable software and standards that can be adopted by other groups and institutions.

Qualifications

• MD or PhD with a proven track record in medical informatics, bioinformatics or biostatistics;
• International recognition and a strong relevant publication record;
• Proven leadership and management including building strong teams;
• A strong record of mentorship and/or teaching;
• Eligible to hold the rank of associate or full professor at an Ontario university;
• Excellent communication and presentation skills.

Resources Available

OICR has allocated $2.75M over five years to support salary, benefits and operations (including programmers and students). The Institute has an extensive compute infrastructure in place (cluster and storage), as well as world-class genomic, medicinal chemistry and medical imaging platforms.

Conditions of Employment

• The position will be based at OICR;
• The appointee will devote at least 80 per cent of time to research. Clinical and academic appointments can be coordinated with one of the adjacent university-affiliated hospitals and/or the University of Toronto;
• The initial appointment will be for five (5) years and is renewable.

Salary and benefits

A competitive package will be negotiated.

Application Process

Please submit a curriculum vitae, research plan and names of three references to search@oicr.on.ca.

The position will remain open until a suitable candidate is found.