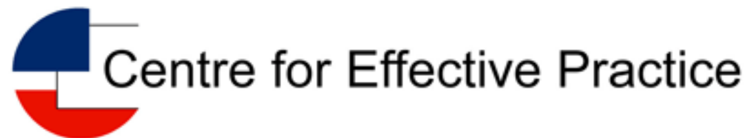

Enhancing Integration & Use of Evidence in Electronic Medical Records (EMRs)

EMR Roundtable Meetings

Summary Report

April 2013

Introduction & Background:

A diverse group of thought leaders with extensive and varied expertise in eHealth and electronic medical records (EMRs) were invited by the Centre for Effective Practice (CEP) in Winter 2012/2013 to participate in two roundtable conversations within a two-month time frame. Specifically, participants were invited to work together to "…identify challenges and opportunities to improve the uptake of evidence-based tools, such as clinical practice guidelines, by physicians and other primary care providers by focusing on electronic medical records."

Roundtable invitees were associated with a variety of organizations including primary care providers, government, eHealth Ontario, Health Quality Ontario, OntarioMD, Cancer Care Ontario, EMR vendors, and 'super-users' including physicians. Participants came to the table to share their collective experiences and opinions (not necessarily as official representatives of these organizations).

To stimulate thinking, invitees were sent an initial Roundtable Proposal (November, 2012) that provided background, highlighted the issues and rationale for meeting. As stated in the Proposal there has been a significant investment in EMRs in Ontario since the early 2000s to support adoption by physicians and other primary care providers in their practice. Currently, over 60% of primary care providers in Ontario are using EMRs to enter and retrieve patient data (Centre for Effective Practice (CEP), 2011, p. 6)[1]. Despite this success, many physicians have yet to adopt EMRs in their practice and, for those who have, fewer physicians report using clinical support tools such as electronic reminders for recommended patient care (National Physician Survey, 2010). Research suggests that the integration of clinical practice guideline tools such as automatic electronic prompts and recommendations at the point of care improves practitioner performance and clinical outcomes [(CEP, Report, pp. 10 & 11 cites Garg et al. (2005) and Kawamoto (2005)].

Adoption of EMRs by health care providers has been a strategic priority at both the provincial and federal levels for a number of years, however there has only recently been a shift in focus beyond adoption to improving results. Governments and organizations are now looking at enhancing the "meaningful use" or "clinical value" of EMRs at the point of care through integration of evidence because of the potential positive impacts for providers and patients. For example, clinical value is enhanced by using EMRs for generating alerts and reminders, recording the patient demographics and encounters, receiving laboratory results and electronic prescribing[2].

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[1] CEP (Nov 30, 2011), Draft, *Opportunities for the Development of electronic Tools to complement Cervical Screening: A Clinical Practice Guideline*

[2] Zucker, L. (2011). Clinical Value: "Meaningful Use" in Canada. Retrieved February 27, 2013 from http://infowayconnects.infoway-inforoute.ca/blog/clinicians-and-health-informatics/220-clinical-value-meaningful-use-in-canada/

Roundtable Process & Objectives:

The half-day meetings took place on December 3, 2012 and January 14, 2013 and were chaired by Dr. David M. Kaplan, Assistant Professor of Family & Community Medicine, University of Toronto (North York Family Health Team) and Primary Care Physician Lead, Central Local Health Integration Network). Tupper Bean, Executive Director of CEP, assisted with facilitation of the meetings. Lists of the invitees and participants attending the two meetings are located in Appendices A and B.

The advice and input provided at the first meeting was captured in a common themes document titled *EMR Roundtable Meeting #1 Summary* (January 7, 2013). This document was distributed to all invitees; an excerpt of the common themes from that document is located in Appendix C. This second report captures the discussion and outcomes from the second meeting and builds on the conversations and opinions expressed at the first meeting. Meeting recommendations and next steps are outlined at the end of this report.

The thought leaders were brought together by CEP to solicit their advice and input to enable further understanding of issues and identify potential solutions regarding the uptake of clinical evidence in EMRs. Specifically, the goals at the first roundtable discussion were to:

- Hold a focused and constructive dialogue amongst EMR thought leaders,
- Identify issues and challenges related to current EMR use and integration of clinical support tools,
- Highlight opportunities and potential solutions to promote broader integration of evidence, including incorporating clinical practice guideline (CPG) recommendations into EMRs, and
- Document common themes and make recommendations for moving forward, including potential roles for key stakeholders.

The goals of the second roundtable discussion were to 1) validate the common themes identified at the first meeting, 2) to conduct a focused discussion to identify a potential project(s) that the roundtable members may collaboratively pursue, and 3) to develop a plan and recommendations for going forward. Copies of the Agendas from the two meetings are included in Appendices D and E.

Summary of EMR#2:

1. Common Themes Validation:

At the second roundtable discussion, the five common themes that emerged from the first meeting were validated by the participants. The five themes were:

1. Improving “Meaningful Use” or “clinical value” of EMRs by Physicians
2. Oversight & Accountability
3. Identifying “Best Practice” & Keeping Evidence Current, and Related Costs
4. Standardizing Data and Improving Data Discipline, and

5. Number of Vendors and challenges with inter-vendor communication

In particular, theme #5 resonated with the group, representing the need to enable communication including the inter-operability among vendor EMR platforms as well as opportunities for communication among vendors. For example, it was suggested to develop indicators and consistent data sets through existing forums or organizations such as the Information Technology Association of Canada (ITAC) or through initiatives that promote best practice sharing among vendors and opportunities for vendors to assess capacity in meeting requirements (e.g. CIHI).

The issue of accountability and oversight (theme #2) was once again discussed as an area that should be addressed to enhance meaningful use and uptake of evidence in EMRs. For example, the group questioned what a governance strategy for effective practice could look like in Ontario and which other stakeholders should be involved going forward. In addition, questions were raised about:

- Accountability for identifying best practices and for keeping guidelines current,
- Responsibility for ongoing knowledge transfer at the physician practice level; and
- Responsibility within the vendor community to adapt EMR systems to meet physician needs.

> *"Knowledge transfer is a fundamental problem…lots of guidelines out there, how to get these into point-of-care tools is the key – all EMR platforms speak the same fundamental language. No entity currently exists that specializes in converting guidelines to clinical tools – doctors are too busy to do this, vendors don't have a lot of clinical experience, resulting in vendors creating suboptimal EMRs"*

2) Potential Projects and Strategies:

> *"[The] Ministry wants quality reporting, so that should be a priority. What would get the field excited? A key combination of what the system wants and what will add value for patients and providers"*

To focus the discussion and to provide a framework for identifying potential projects, it was recommended that the project(s) promote the "quality agenda", which is relevant to both government (e.g. Excellent Care for All Act and Strategy[3]) and practitioners. For example, the Institute for Healthcare Improvement (IHI) Triple Aim[4] framework could be used which focuses on lowering costs, enhancing the patient experience, and improving quality. Projects considered should "speak to the funder, the patient and the provider" and leverage existing investments and priorities (e.g. Health Links, Health Quality Ontario pathways, etc.). It was also noted that potential projects need to build on existing success stories where possible.

With this framework in mind, the participants brainstormed and highlighted some potential subject areas, strategies and/or examples that could be potentially leveraged to facilitate integration. Issues or concerns associated with examples or strategies are also identified. The subject areas or examples are highlighted below, and are not listed in order of priority:

> *"…are there things that already exist on paper to integrate? It is difficult to change two things at once, evidence and technology…. it might be better to use something that's already been accepted and integrate this into the EMR"*

1. **Chronic disease prevention and management** is a priority area, but it is not the only one. Questions were raised about how to prioritize, and the infrastructure required to facilitate timely and meaningful change (e.g. from the vendor community, government, providers, etc.)

2. **Build on previous success stories** (including the Ontario Rheumatology Association, H1N1 tool integration, 18 month Well-Baby visit, CEP/Hamilton FHT Chronic Pain Implementation project etc.) where key success factors include: involving multiple vendors and end-users in the development, ensuring clinical community is in agreement with content to be integrated, and developing tools that are easily adjustable (as new evidence becomes available).

3. **Start with existing tools.** To avoid duplication of efforts, integrating content into EMRs should begin with those tools that have previously been developed and are either accepted by the clinical care community or are required for billing purposes. An example is the diabetes flow sheet developed by the ministry. It was noted that a small percentage of physicians are currently billing the

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[3] Ministry of Health and Long-Term Care. Excellent Care for All Strategy. Retrieved January 30, 2013 from http://health.gov.on.ca/en/public/programs/ecfa/default.aspx/

[4] Institute for Healthcare Improvement. IHI Triple Aim Measures. Retrieved January 31, 2013 from http://www.ihi.org/offerings/Initiatives/TripleAim/Pages/MeasuresResults.aspx

diabetes code, which may be partially due to the lack of integration of this flow sheet into their EMRs or the value of “flow-sheeting” in a non-paper workflow.

4. **Integrate evidence-based tools** that are in demand and where there is wide-spread agreement about the evidence such as the opioid manager, stroke prevention flow sheet or the CHADS$_2$VASC tool used to predict the risk of stroke and appropriate treatment into EMR.

5. **Harness the energy and capacity of peer to peer influencers** who are “super users” and understand the evidence and benefit of tools to the physician end user. Among physicians peer influence has high value in supporting integration. Peer influencers can work in collaboration with the vendors to provide interprofessional perspective and identify key tools for integration as well as assist in the dissemination of the tools to peers. Further, physicians can influence each other by sharing information and communicating with one another. For example, “this is what worked for me, and why don’t you try it?”

6. **Focus on end user** by determining what the system needs and what is most valuable to the physician user. Working with physician groups and using a “bottom-up” approach to identify clinical priorities was suggested. The roundtable participants could identify key questions and next steps going forward to facilitate this process.

7. **Physician incentives** are key to facilitating uptake. It was noted that financial incentives are not the only way to motivate physicians. For example, tools that save physician time or by receiving a professional credit if a new module or flow sheet is used at point of care may serve as incentives. Further, physicians may be incented to use a tool if its use is linked to billing. As one participant suggested “if you submit a code, and do not submit the corresponding flow sheet then you do not get paid.” While incentives have been used to enhance physician uptake, the group acknowledged that *change management* may be a key factor and should be considered in choosing any project going forward.

Change management required: *“Physicians are trained to be independent thinkers…when placed into an environment and asked to behave differently or think systematically some will always feel that there is some independence to maintain, even when good tools are available to support them”*

8. **Provide vendors with evidence-based resources and templates / tools based on clinical practice guidelines to support integration into EMRs.** For example, vendors could be provided with screenshots of the *Low Back Pain* templates on a website with links to additional information. Vendors can use the website to determine what to build and physician users can share tools and information to the site. The goal would be to create the “best of the best rather than to host a whole bunch of tools.” Vendors present indicated this approach would be acceptable if done properly, although they cautioned that there could be proprietary and data portability issues. In addition, general concerns were raised about “policing” to ensure quality of information posted. Many in the group felt that through “crowd-sourcing” and techniques such as rating the data (“thumbs up thumbs down”, e-Bay badge of approval, etc.) or tracking the number of downloads would help ensure the quality of information available to vendors.

In the closing of the brainstorming session, the participants concluded that the recommendations from the meeting should be simple ideas that do not require a huge investment. The priorities of the users and the system should be balanced and that the model or project chosen should have the needed resources to support it. It was felt that issues related to ownership could be worked on and that liability should not be a major stumbling block as illustrated through the ORA example. As one participant noted, the "*ORA tool available is one that is up to you to tweak – this model will likely be appealing to many people. It takes a lot of heavy lifting out of the equation".* Finally having users contribute is a "value-add to the vendor" and can be easily accomplished through face-to face interactions with physicians, through webinars and through the use of other e-tools.

3) Recommendations:

1. ***Canadian Diabetes Guidelines (CDA) 2013***

Preamble: Recognized that vendors are not communicating with each other and with the upcoming release of the CDA guidelines it was identified as an opportunity to promote collaboration amongst vendors. The ORA model can be used as a model to demonstrate success to engage stakeholders at the forum.

Recommendation: CEP to gauge interest and to host a forum with HQO, ONMD and other key stakeholders with CDA and vendors to promote collaboration amongst vendors to facilitate uptake and implementation of the guidelines. CEP may explore or piggyback on existing structures such as Infowave and ITAC to facilitate engagement in the forum.

2. Best Practice

Preamble: Who decides what best practice looks like? It must be evidence-based and have a strong lever to facilitate physician behaviour change. In hospitals the lever is linked to funding, but in primary care this is not always the case. A variety of stakeholders set the guidelines, but there is not always agreement in the field amongst providers about that evidence.

Recommendation: CEP partner with HQO (potentially others e.g. MOHLTC) to convene a meeting with relevant stakeholders to identify levers / ways to promote use of evidence by physician providers.

3. Governance

Preamble: Currently there is no coordinated approach or oversight for the integration of evidence into EMRs in Ontario. It is recognized that many organizations have different responsibilities and types of leadership roles, such as Ontario MD, eHealth Ontario, CIHI and HQO, however there may be a need for an oversight mechanism or body. There is also a need to engage key stakeholders who have not participated to date in future conversations.

Recommendations: CEP to contact organizations such as professional colleges and other vendors who have not been included in the Roundtable discussions to date to share learnings and gauge interest in future participation. CEP should convene a small working group to continue dialogue about a possible governance and accountability structure. The working group will be tasked with establishing scope and the terms of reference. CEP to continue dialogue with the current EMR Roundtable participants, including sharing this report and setting up a future meeting of the group to discuss next steps.

Conclusion & Next Steps:

The CEP has highlighted the conversation from the first roundtable, and summarized key findings from EMR #2 and recommendations in this second summary report. This report is intended to serve as a record of the discussions and will be shared with all invitees and participants. This second report may be shared with government and other key organizations involved in EMR development and improvement.

The individuals who have participated in these discussions do not necessarily represent the views of the organizations, but were invited to participate because of their expertise in EMR use and integration of best practices. CEP intends to lead the implementation of the recommendations in partnership with key stakeholders to maintain momentum of the initiative.

Contact:

If you would like to know more about this initiative or have questions about the content of this report or the other CEP documents referenced within please contact:

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Toronto, ON, M5T 1P9
W: 647.260.7887
C: 416.892.3628

tupper.bean@effectivepractice.org

http://www.effectivepractice.org/ [5]

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[5] CEP mandate is to work collaboratively with health consumers and leading interprofessional clinicians, academics, researchers, and policy-makers to effectively meet the needs of our clients and primary care practitioners to close the gap between best evidence and current practices.

Appendix A

List of EMR Roundtable #1
Invitees / Participants

Attendees:

1. Dr. David Kaplan: North York Family Health Team, Primary Care Lead Central Local Health Integration Network (Chair)
2. Dr. David Chan: Department of Family Medicine, McMaster University, OSCAR
3. Colin Greenway: Optimed software/ Accuro EMR Sales Engineer
4. Dr. Doug Kavanagh: Medical Director and Founder of CognisantMD Inc.
5. Nizar Ladak: Executive Vice President and COO, Health Quality Ontario
6. Dr. Darren Larsen: OntarioMD Peer Lead
7. Andrew Levstein: IT Consultant, Family Health Team EMR implementation expert
8. Jillian Paul: Manager, Policy Development & Implementation, Health Quality Branch, Negotiations and Accountability Management Division, MOHLTC
9. Dr. Wei Qui: eHealth Ontario
10. Fredrika Scarth: Manager, Quality Programs and HQO Liaison, Health Quality Branch, Negotiations and Accountability Management Division, MOHLTC
11. Christine Sham: Manager, Strategy, Planning and Alignment, Ehealth Liaison Branch, Health System Information Management and Investment Division, MOHLTC
12. Tupper Bean, ED, CEP (Sponsor & co-facilitator)
13. Katie Hunter, Manager, CEP (Staff support)
14. Jane Fahey-Walsh, Consultant

Regrets:

1. Dafna Carr: Director of Knowledge Translation and Exchange, and Primary Care at Cancer Care Ontario
2. Antony Gagnon: Hamilton Family Health Team
3. Dr. David Price: Chair, Department of Family Medicine, McMaster University; Chief, Department of Family Medicine, Hamilton Health Sciences; and Clinical Lead OSCAR EMR
4. Nick Schurman: Regional Sales Manager, Nightingale
5. Dr. Joshua Tepper: CEP Board Member; and VP Education, Sunnybrook HSC

Appendix B

List of EMR Roundtable #2
Invitees / Participants

Attendees:

1. Dr. David Kaplan: North York Family Health Team, Primary Care Lead Central Local Health Integration Network (Chair)
2. Dafna Carr: Director of Knowledge Translation and Exchange, and Primary Care at Cancer Care Ontario
3. Colin Greenway: Acuro / QHR
4. Dr. Doug Kavanagh: Medical Director and Founder of CognisantMD Inc.
5. Ben King: Senior Program Consultant, Strategy, Planning and Alignment, MOHLTC (Observer)
6. Nizar Ladak: Executive Vice President and COO, Health Quality Ontario
7. Andrew Levstein: IT Consultant, Family Health Team EMR implementation expert
8. Dr. Jamie Meuser: CEP Board member
9. Dr. Wei Qui: Director, EMR Adoption and Benefit Realization, eHealth Ontario
10. Nick Schurman: Regional Sales Manager at Nightingale
11. Peter Sgro: Clinical Consultant at NightingaleMD
12. Christine Sham: Manager, Strategy, Planning and Alignment, Ehealth Liaison Branch, Health System Information Management and Investment Division, MOHLTC (Observer)
13. Doug Watt: Vice President, NOD Development
14. Tupper Bean: ED, CEP (Sponsor & co-facilitator)
15. Katie Hunter: Manager, CEP (Staff support)

Regrets:

1. Dr. David Chan: Department of Family Medicine, McMaster University; Chief, Department of Family Medicine, Hamilton Health Sciences
2. Antony Gagnon: Hamilton Family Health Team
3. Dr. Darren Larsen: OntarioMD Peer Lead
4. Jillian Paul: Manager, Manager, Policy Development & Implementation, Health Quality Branch, Negotiations and Accountability Management Division, MOHLTC
5. Dr. David Price: Chair, Department of Family Medicine, McMaster University; Chief, Department of Family Medicine, Hamilton Health Sciences; and Clinical Lead OSCAR EMR
6. Fredrika Scarth, Manager, Quality Programs and HQO Liaison, Health Quality Branch, Negotiations and Accountability Management Division, MOHLTC
7. Dr. Joshua Tepper: CEP Board Member, VP Education, Sunnybrook HSC
8. Jane Fahey-Walsh: Consultant

Appendix E
Common Themes - EMR #1 Summary Report

To further understanding of the issues and opportunities to enhance integration of evidence in EMRs the thought leaders in attendance at EMR #1 were invited to share their collective experiences and provide their perspectives on the issues. The comments and opinions from the conversations were broad-ranging and go beyond improving the integration of evidence. Common themes are documented and summarized below based on the conversations. The themes are not listed in any particular order of importance.

1. Improving "Meaningful Use" of EMRs by Physicians

Issue:

The group agreed that despite increased adoption of EMRs amongst physicians in Ontario, the actual percentage of physicians engaged in "meaningful use" of EMRs beyond scheduling and billing, is low. Many physicians are using EMRs at several different levels, while still others are not using them at all. For many users, it was noted that a significant amount of information is entered into the records, but the mechanisms to harness the clinical value of that information is unclear.

Potential Solutions:

To help address this issue, it was suggested that engaging physicians and learning directly from them where the "pain points" are may help facilitate "meaningful use" rather than using the current "top-down" approach where user input into EMR development is not a key focus. Some participants have met extensively with physicians in the province, who have identified priorities to facilitate better integration and use through improving standardization and information sharing, and better integration of evidence / guideline recommendations. Addressing these priority issues may help to facilitate uptake of evidence. Using incentives was also identified for both vendors and physicians. For example, one participant suggested promoting the use of non-monetary incentives to physicians so that they can see the value of accessing evidence at the point of care and the potential positive impacts (e.g. preventing prescription errors, reducing unnecessary tests and referrals, etc.). Creating a "community of practice" including the use of peer leaders to enhance information sharing and knowledge transfer and to look for models where this is working well was also suggested (e.g. Champlain LHIN).

2. Oversight & Accountability

Issue:

The group noted that there is currently no coordinated approach or oversight for the integration of evidence into EMRs in Ontario, while recognizing that many organizations have different responsibilities and types of leadership roles such as Ontario MD, eHealth Ontario, CIHI and HQO. There was no consensus about the identity or characteristics of a preferred oversight body, or what partnership approach could be devised to coordinate and be accountable for integration of changes in practice. It was also widely acknowledged amongst the participants that the specification process for the design of EMRs, which takes approximately two years before implementation, makes it difficult for EMRs to keep pace with ongoing changes in practice.

Potential Solution:

Participants discussed various approaches to establish oversight including setting up a single corporate entity that could be accomplished by expanding the mandate of existing organizations (e.g. ONMD, eHealth Ontario, etc.) or by using a coalition or partnership approach. Regardless of the approach used, it was indicated that the coordinating body will need to be adequately resourced and funded to implement the agenda and mandated to work with government and other key organizations currently engaged in EMR implementation. Examples of key questions that may be explored at the next meeting include what that oversight model should look like, the advantages and disadvantages of these models, and the responsibility for the development.

3. Identifying "Best Practice" & Keeping Evidence Current, and Related Costs

Issue:

There are differences in opinion amongst participants regarding what constitutes best practice and the usefulness of certain "evidence" that may be pushed through EMRs. For example, who decides what to do? Does the EMR serve the provider or is it the other way around? Some participants spoke about existing tools that may generate or "push" automatic referrals based on results of a lab test even though the referral may not be necessary. The importance of not being overly prescriptive and permitting physicians to consider patient-sensitive information was highlighted. As one participant noted, without the ability to add patient sensitive / specific information, unnecessary referrals may be made or tests ordered. Some participants commented on how the length of some CPGs making it difficult to identify key information at the point of care. Keeping evidence current and the costs to maintain currency as well as health care costs associated with unnecessary "pushed" referrals are also issues.

Potential Solution:

To address this issue, some participants suggested that CPG recommendations in EMRs be condensed to bite-sized pieces of information such as a "simple tweet", something that is easily accessible and most relevant and applicable at the point of care. The theme of physicians or the users developing the tools rather than vendors was a recurring one. There has to be value for the end-user without hindering work such as earning CME credit, reducing tests and not prescribing the wrong medication. Examples of projects such as the eReferral form project sponsored by the Ontario Renal Network were highlighted as a potential way of helping decrease inappropriate referrals associated with chronic kidney disease management. Others suggested that using eConsultation as a means of improving patient care be pursued. The group indicated that these types of approaches be explored as potential models. Building on web-based tools developed by physicians that are highly adaptable across all platforms is another strategy to enhance the integration of evidence.

4. Standardizing Data/ Improving Data Discipline

Issue:

There was consensus that significant inconsistency regarding data coding and entry of that data into EMR exists. For doctors, coding represents "net new work unless it is an intuitive system," and physicians have not been trained to do coding. In addition, the current system is complicated with too many codes or options for physicians to choose from to code the same disease (e.g. ICD codes, Canadian Institute for Health Information or CIHI codes). This has resulted in inconsistent coding in the patient EMR making it difficult to extract information about the patient and to examine health care trends and issues to inform planning within the physician's practice and for the health care system at large. There are systems in place like CPCSSN[6] that are used by Family Health Teams (FHTs) which enable users to "slice and dice" data to identify gaps in care without coding (e.g. identify a cohort of patients who have not been vaccinated for pneumonia). However, some participants suggested that because of the vast inconsistency in ways to enter patient information, it leads to "too much uncertainty for clinical medicine."

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[6] CPCSSN or Canadian Primary Care Sentinel Surveillance Network is a pan Canadian chronic disease network "started in 2008 with a grant from the Public Health Agency of Canada (PHAC) to study the feasibility of developing a network to collect health information on patients with chronic diseases across the country. This information is intended to be a resource for monitoring chronic disease in Canada, as well as for primary care research." (Birtwhistle, R.V. (2011). Canadian Primary Care Sentinel Surveillance Network: A Developing Resource for Family Medicine and Public Health. *Canadian Family Physician*, 57 (10) 1219-1220 found at http://www.cfp.ca/content/57/10/1219.full)

Potential Solutions:

It was noted by many that standardizing data coding and data collection is a high priority for government and physicians alike, for example "to identify and standardize 19 codes rather than 200 codes for the same disease." The group suggested that opportunities be sought out to facilitate a consistent approach to data collection, include developing and implementing standards for vendors that facilitate collection in a consistent way. This standardization should be developed to recognize and permit the continued use of various EMR platforms rather than requiring a single patient health record (PHR) or EMR. Further, physicians should be trained through a "community of practice" to learn proper coding to facilitate consistent data collection. Alternatively, IT students or individuals trained in coding can be hired to perform coding work. Further, standardization or data discipline should be consistent and applicable to EMRs not only across vendor platforms, but also across practice settings including physician offices to hospitals. Engagement or input from physician users is also needed to inform thinking and to help determine what is needed to facilitate consistency in data collection.

5. Number of Vendors and Inconsistency and Inability to Communicate

Issue:

Even though there are a large number of EMR vendors in Ontario, roughly 83% of EMR users are covered by only five vendors[7]. Participants agreed that EMR platforms generally do not communicate with one another making it difficult to communicate patient information between systems. For example, it is not uncommon for physicians with different EMR systems to have to fax patient information to one another because the EMRs cannot communicate. Issues related to intellectual property and licensing have also hindered information sharing and the use of email on mobile devices to communicate patient information has led to privacy and confidentiality concerns. A related issue raised is the inability to access patient information and data from EMRs when the vendor is no longer in business. In addition, EMR specifications which must be met by certified vendors take two years to be implemented and are outdated before the EMR is launched. The specification process is extensive and expensive and user requests are often "at the bottom of the list".

Potential Solutions:

Participants suggested that over time that the number of vendors in Ontario will diminish organically. Many participants felt that the development of specifications should be led by peer-leaders rather than vendors and that innovative ways to engage end-users such as "crowd sourcing" could be used. Crowd sourcing is a distribution method that can be used to

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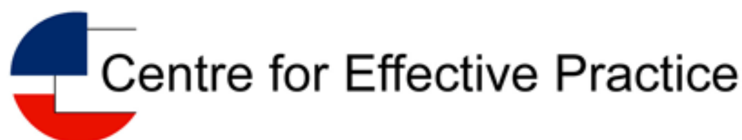
[7] Fourteen vendors in total, with 83.1% of the marketshare held by top five vendors- OntarioMD, https://www.ontariomd.ca/portal/server.pt/community/emr_offerings/inv0#1 (November, 2012)

send issues or problems to a large network of people to gather feedback and possible solutions without the intensive use of time, resources and research. This type of approach may help facilitate information sharing amongst physicians, but also help ensure “best practice” is considered in specification development. Further, it was suggested that future EMR specifications require mandatory sharing of information across platforms to enhance continuity and that vendor platforms that already enable this be identified. Participants recommended that funding be available to support these initiatives and that stories of success be identified and built on. For example one participant highlighted a project implemented by the Ontario Rheumatology Association (ORA) that involved four of the leading EMR vendors to identify and integrate rheumatology-specific tools within the EMR. Developers should also consider scalability in the development of the systems and recognize there are many different ways to be innovative. Further, some participants felt that a single PHR/EMR was not required, rather the key is that all EMR platforms should “talk to each other.”

Appendix D



Agenda
Roundtable EMR Thought Leaders
Enhancing Integration & Use of Evidence in EMR
Meeting #1, December 3, 2012, 0900 – 1200
Boardroom, 203 College Street Suite 402 Toronto, ON

Meeting Objectives:

1. Exchange ideas, communicate issues and identify potential opportunities and practical solutions for greater coordination and collaboration.
2. Identify and validate issues and challenges for organizations related to current EMR use and the integration of clinical support tools.
3. Highlight opportunities and potential solutions to promote broader integration of evidence into EMR.
4. Identify and document common themes to inform the development of a plan and recommendations.

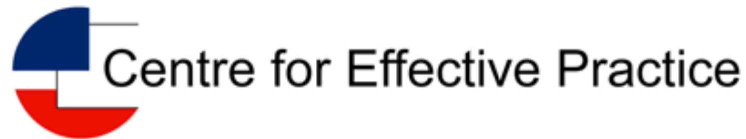
Time	Item	Lead
9:00 – 9:15	1. Introductions: • Name & organization • Expectations for today's meeting	All
9:15 – 9:30	2. Setting the stage: • Purpose, background & plan	Dr. David Kaplan & Tupper Bean
9:30 – 10:30	3. Discussion: • Issues & challenges	All
10:30 – 10:45	4. Break	
10:45 – 11:45	5. Discussion: • Solutions & opportunities	All
11:45 – 12:00	7. Summary & Next Steps	Tupper Bean & Jane Fahey-Walsh

*Tea/coffee/ juice and muffins will be available in the boardroom beginning at 8:45 AM

Potential Discussion Points:

- What are some of the key priorities for your organization?
- What are the key issues / challenges for your organization?
- What are the barriers to success?
- What are strengths of current system?
- What are some opportunities / innovative practices we can learn from?

Appendix E



Agenda
Roundtable EMR Thought Leaders
Enhancing Integration & Use of Evidence in EMRs
Meeting #2 January 14, 2012, 0900 – 1200
Boardroom, 203 College Street Suite 402 Toronto, ON

Meeting Objectives:

1. Validate common themes identified in Meeting #1.
2. Identify potential project(s) that the roundtable members may collaboratively pursue
3. Develop a plan and recommendations for going forward

Time	Item	Lead
9:00 – 9:15	2. Welcome & Introductions	All
9:15 – 9:30	2. Review common themes: • Changes / additions Meeting #1 common themes	Dr. David Kaplan & Tupper Bean
9:30 – 10:30	3. Discussion: • Potential project	All
10:30 – 10:45	4. Break	
10:45 – 11:45	5. Discussion: • Potential project	All
11:45 – 12:00	7. Summary & Next Steps	Dr. David Kaplan & Tupper Bean

*Tea/coffee/ juice and muffins will be available in the boardroom beginning at 8:45 AM

In preparation for this meeting please come prepared to discuss examples or possible ideas for potential collaboration. Please consider:

- Leadership
- Funding opportunities
- Benefits / challenges
- Current innovative practice / opportunities for collaboration
- Alignment with government priorities