

# How to Successfully Implement an EMR in Small Clinics using Best Practices from a Systematic Review

## Presenters:

K. Keshavjee, Centre for Evaluation of Medicines and McMaster University  
J. Bosomworth, University of Victoria  
J. Copen, Northern Ontario School of Medicine  
J. Lai, University of British Columbia  
B. Kucukyazici, McGill University  
R. Lilani, University of Buffalo  
A.M. Holbrook, Centre for Evaluation of Medicines

## KEYWORDS

EHR implementation, EMR implementation, Success factors, physician implementation, frameworks, Small clinics, Workshop.

## BACKGROUND

Computerization of medical practice is an on-going reality. Typically, most of the investment of implementation is borne up-front both in terms of finances, and in time and energy. With increasing fiscal restraint and a greater demand by all stakeholders for demonstrated value, it is important to ensure that EMR implementations are successful. Yet, in spite of over 3 decades of experience with EMR implementation, the penetration of the EMR is still less than 20% in the US and in Canada [1]. The failure rates of EMR implementations are also consistently high at close to 50% [2]. Existing EMR implementation frameworks do not explain all features experienced by implementers and have not helped to make EMR implementation any more successful. To provide more quantitative insight into EMR implementations, we have integrated multiple conceptual frameworks in an overarching, yet pragmatic framework to explain factors which lead to successful EMR implementation. We will demonstrate the first attempt at integrating multiple frameworks from the IT, business and EMR implementation literatures to explain factors that may contribute to the success of EMR implementations.

This workshop will provide an introduction to this framework, its construction, the data supporting it, and a practical toolset and approach to implementing an EMR in your small clinical practice. These best practices can apply to larger clinics and even enterprise level organizations, but our workshop will be tailored to small clinics of 1-6 physicians.

## METHODS

A search of the English language articles in MEDLINE, HealthStar, EMBASE and DARE was conducted from Jan 1, 1985 to May 31, 2006. We searched for key terms that included electronic medical records, its synonyms and the MeSH terms associated with them and the text word 'implementation'. We used PubMed's 'related articles' option. An iterative process of searching by finding a relevant article and then finding 'related articles' was used. Web sources for articles and papers were included by utilizing the Google® Search Engine technology. Bibliographies of relevant articles were combed. Published abstracts and presentations from computers in medicine meetings (AMIA, IMIA, HIMSS and TEPR) were examined. Personal communications with recognized leaders in the field were used to complete the search for relevant articles.

We developed our framework from reading 125 EMR/EHR implementation articles culled from a list of over 1500. Our list of best practices is culled from these primary and secondary descriptions of EMR & EHR implementations.

## RESULTS

There are several features of EMR implementations that stand out in the literature: 1. EMR implementations play out over time. 2. Implementations involve people, processes and technology; 3. Implementations are prone to failure if there is poor governance and leadership; 4. Negotiation and dialogue between different stakeholders and between stakeholders and technology is quite prominent; 5. EMR implementations are dynamic processes which evolve as learning occurs and new problems and opportunities are discovered; 6. Technology reliability and usability play important roles.

## WORKSHOP

Using didactic group sessions, interactive large and small group sessions, and case scenarios, you will participate in a practical workshop aimed at providing you with an effective set of tools and factors to utilize in successfully implementing an EMR in small clinic practices.

## REFERENCES:

- 1 Duke Clinical Research Institute, FDA public meeting, April 20, 2005; Accessed Mar 13, 2006; Available from: [www.fda.gov/cder/meeting/ICHspring2005/Nahm.ppt](http://www.fda.gov/cder/meeting/ICHspring2005/Nahm.ppt)
- 2 Health information technology adoption in Massachusetts: costs and timeframe. Centre for Health Policy and Research [Online]. Accessed Mar 13, 2006; Available from: [www.umassmed.edu/healthpolicy/uploads/eHealthInformation.pdf](http://www.umassmed.edu/healthpolicy/uploads/eHealthInformation.pdf).

DURATION	3 HOURS
Who will benefit from attending?	Physicians, clinic administrators, clinic support staff, vendors and implementers of EMR (government, associations, etc).
Learning objectives for the session	<ol style="list-style-type: none"> <li>1. Learn about the current state knowledge regarding EMR implementation outcomes in the IT, business, and healthcare literatures.</li> <li>2. Understand the evidence-based process used to develop this success factor framework.</li> <li>3. Explore and discuss the success factors and their application as tools to successfully implement an EMR in your small clinic.</li> <li>4. Apply the factor toolsets in case scenarios in small breakout groups.</li> </ol>
Why you should attend	<ol style="list-style-type: none"> <li>1. Learn current best practices for EMR implementation in small clinic practices</li> <li>2. Acquire a toolset of factors to assess and utilize to successfully implement your practice EMR.</li> <li>3. Learn and explore the integrated issues involved in applying these tools and factors in your clinic implementation.</li> </ol>