

EHR Implementation in a First Nations Community:

Applying an evidence-based meta-framework

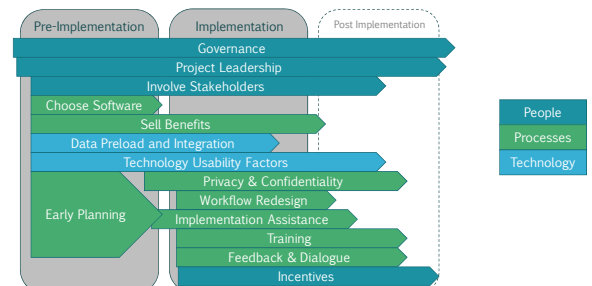
Research Objective & Approach

Presentation Outline

This study used qualitative and quantitative methods to identify the success factors in an EMR implementation at a FN health centre in British Columbia, Canada.

- Research Objectives & Approach
- Study Findings
- Lessons Learned
- Opportunities

Integrated EHR Implementation Best Practices Framework



Kucukyazici B, Keshavjee K, Bosomworth J, Copen J, Lai J. Best practices for implementing electronic health records and information systems. In: Kushniuk A, Borjcki E, editors. Human, social and organizational aspects of health information systems. Hershey, Pennsylvania: IG Global Publishing; 2008.

Slide 4

A2 Could you provide references for this slide and talk about the thought behind it.

Author, 28/10/2013

Research Objective

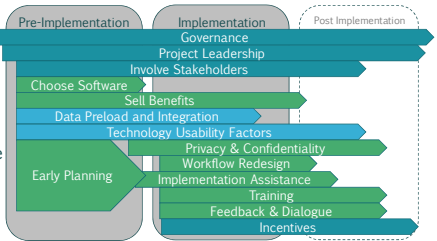
To validate the success factors in the pre-implementation and implementation phases of the Integrated EHR Implementation best practices framework.

Setting & Participant Recruitment

- 1000 member FN community, adjacent to semi-urban community (pop. 30,000)
- FN Health Department: 8 part time staff, 1 Health Director
- Purposive and snowball sampling
- FN Health Director emailed study info and consent

Research Questions

- What, if any success factors were present ?
- What, if any success factors were missing ?
- How important were these factors to implementation success ?



Data Collection & Analysis

Data Collection Tool	Analysis Plan
Demographic Questionnaire	Descriptive Statistics (mean, median, mode)
Success Factor Importance Questionnaire (5 point Likert scale)	Descriptive Statistics (mean, median, mode)
Interviews	Transcribed notes were coded using the meta-framework's success factors (model based coding method)

Study Findings

Participant Characteristics

Characteristic	Frequency (%)
Sex	Female 5 (83)
Computer Proficiency	Average 2 (33) Advanced 2 (33) Expert 2 (33)
Use of EMR	Provide and manage care 4 (67) Assist others to use EMR 2 (33)
Years of Experience using an EMR	7-12 months 3 (50) 3-5 years 2 (33) > 5 years 1 (17)

Participant Demographics

- 7 organization groups were involved in EHR implementation
- Individuals from 5 of these groups participated in study

Organization	n	Implementation Role(s)	Professional Background
FN Health Centre	2	Project manager EHR user	Manager Clerk
Ministry of Health	1	Vendor selection and implementation assistance	Health informatics professional
Regional Physicians	1	Physician champion	Primary Care physician
Health Authority	1	EHR user	Registered Nurse
EHR Vendor	1	Implementation assistance	Health Informatics Professional

Importance of Success Factors

Success Factor	Mean*	Median	Mode	Success Factor	Mean*	Median	Mode
Governance	5	-	5	Privacy & Confidentiality	5	4	5
Project Leadership	5	-	5	Technology Usability Factors	4	4	4
Involving Stakeholders	5	-	5	Workflow Redesign	5	-	5
Choose Software	5	4	5	Implementation Assistance	5	-	5
Selling Benefits	5	-	5	Training	5	-	5
Data Pre-Load and Integration	4	-	-	Feedback & Dialogue	4	-	4
Early Planning	5	4	5	Incentives	4	-	5

Likert Scale: 1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

* Mean is rounded to nearest value.

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A7 Don't forget to comment on the high scores here.
Author, 28/10/2013

Excerpts from Interview Transcriptions

People

Governance

There were presentations for chief and council about what an EMR is, which was very important and they had at that time opportunity to ask questions and we also did a presentation of the EMR that we were proposing. (Participant 1, Line 7)

Involve Stakeholders

That was at what we call a current reality workshop...where flip charts go on the wall, and you empty your brains onto the paper. In the sense of the LPNs, the RNs, the immunization nurse, everyone involved in like seeing the clients, and what they need the EMR to do. How is the medical record tool going to best work for us; what do we need to capture? So it was really refining who is using it, what they needed it for, and then, everything that went on those flipcharts... that was a three hour process. (Participant 5, Line 89)

Excerpts from Interview Transcriptions

Technology

Data Pre-Load & Integration

Well for over 1000 members, it was a few months, several months, and we still aren't done, we type in as we go still, and if we don't have full information on a client we can only type in so much and then we come back and update. (Participant 4, Line 116)

Technology Usability Factors

Well I think, from what I see from staff and their fluidity of work, it's been great. I've seen how they're using the scheduling and that communication with each other a lot better. The scheduling of appointments for clinics and stuff flows so much better. (Participant 1, Line 50)

Excerpts from Interview Transcriptions

Processes

Choose Software

Yes, yes, the goal was to get clinics. See the issue is... a lot of the community members don't have a family physician. So, a lot of the community members rely on the local walk in clinics. So, having said that, you know, council knew that we had to do something to get support for our community members, thus the clinics came up, so that's the goal, is to get, ah, doctors in for the clinics. (Participant 4, Line 21)

They are now more part of the health system in the region, more than they had ever been before. That's a really important part of going with a system that everyone else is on. Obviously the e-referral and secure messaging to other providers in the area: those are, I think, in time, even now, they are much more important than if the medical record is digitized or not. The EMR facilitates those connections much better, more readily. (Participant 6, Line 38)

Validity of meta-Framework

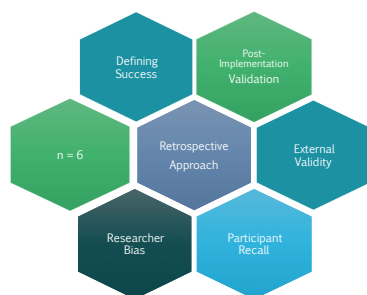
- Activities for all success factors were reported and rated as important
- Success factor definitions were meaningful to all participants
- People – Processes – Technology elements were reflected in participants implementation experiences
- Timing of success factors for pre- and implementation in this implementation was consistent with meta-framework
- These themes persisted across all of the study participants

Additional findings

- OCAP of health information, and other privacy and confidentiality issues were critically important
- Health Department Human Resources limitations are important considerations
- Propose "Collaboration and Commitment" success factor

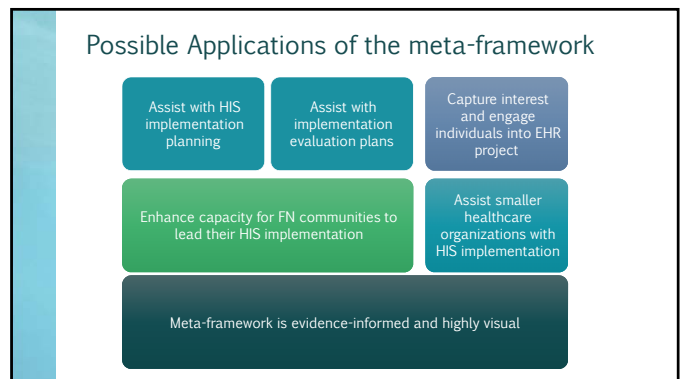
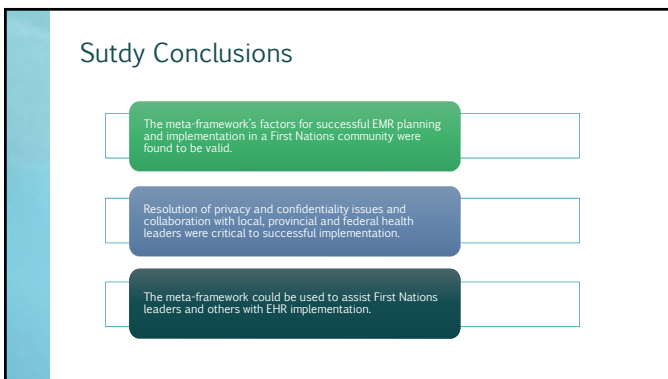
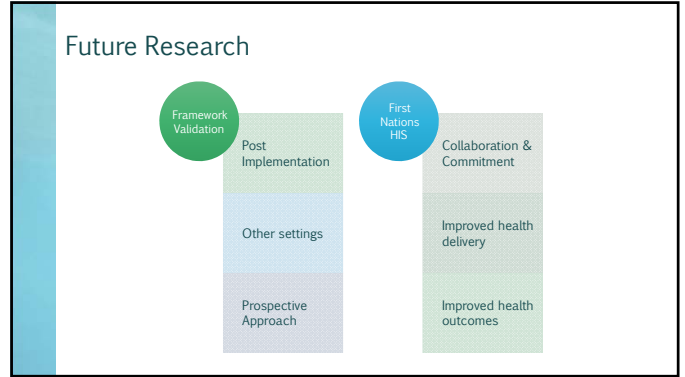
Lessons Learned

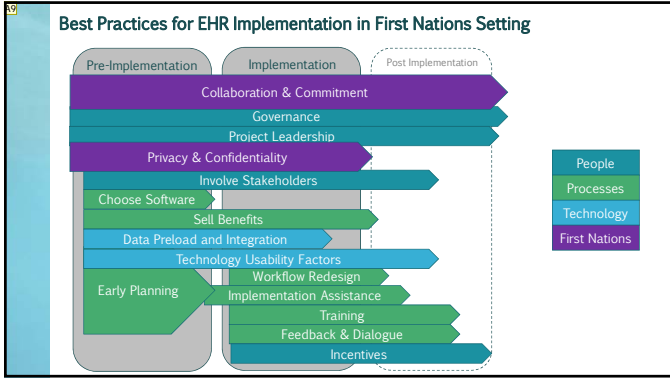
Research Limitations



Lessons Learned

- Planning more time for data preload and integration
- Schedule alternate training dates
- Dedicate more time to review workflow process after go-live
- Invest more time to inform community members about EMR and its benefits





Slide 25

A9 Could you provide references for this slide and talk about the thought behind it.

Author, 28/10/2013