LESSONS LEARNED

Electronic Health Record Engagement and Implementation

Spring 2021

Introduction

The purpose of this high-level Report is to document Doctors of BC experiences with physician engagement and Electronic Health Record (EHR) implementation within health authority settings. It also provides a brief overview of best practices based on previous experience. The content of this report has been informed by experience from Doctors of BC staff in supporting physicians at facilities such as Lions Gate Hospital, St. Paul's Hospital, Nanaimo General Hospital and other facilities that are in planning and development stages. Overall, these recent examples in EHR implementation have contributed to lessons learned, opportunities for future improvement, and highlighted a need for enhanced knowledge sharing across the Province. Overall Doctors of BC is supportive of efforts to introduce or update EHR's in order to improve patient care, recognizing that challenges for physicians exist and need to be addressed.

Background

The Ministry of Health's objective in moving towards an EHR is to support effective, client-focused, interoperable information systems for the BC healthcare sector. A sample of some benefits and challenges of EHR implementation that have been realized in recent experiences across the Province include:

EHR Benefits	EHR Challenges
• Improved clinical decision support	• Expedited implementation
• Improved health outcomes	• Adapting to physician workflows and processes
• Upgraded patient record security	• Physician input and communication
• Improved efficiencies, for example reducing duplication of tests	• Workload (some short term and some long term impacts)

The unintended consequence of EHR implementation results in some of the aforementioned challenges. For example, working within expedited timelines leads to extra time and effort to refocus the initiative implementation. Meanwhile, there have been successful implementation stories that included physician input; and collaboration resulted in physicians and other providers adjusting to the new system in a timely manner.

A common theme that is shared among successful EHR implementation experiences includes a comprehensive change management plan that includes physician engagement. Overall, appropriate physician input on the process and implementation has helped to express all the associated benefits of such systems.

Memorandum of Understanding

As part of the 2019 Physician Master Agreement, Doctors of BC negotiated a Memorandum of Understanding – Introduction of EHRs in Health Authority Facilities (MOU). Please see Appendix 1 for a copy.

The MOU formalizes a collaborative and structured approach between Doctors of BC and the health authorities in supporting physician engagement, communication, and reporting in anticipation of increased EHR implementation occurring throughout the province. Health authorities are required to work with medical staff (through Medical Staff Associations (MSA) where appropriate) ensuring a clear process to identify and address issues raised by physicians. Additionally, evaluation measures have been mandated to measure the pre and post impact of the EHR implementation through specific metrics.

Pathways to Success

Figure 1 outlines each of the best practices based on recent experience to ensure successful physician engagement for EHR implementation. The following section outlines each of these practices in greater detail.

Figure 1: Summary of the pathways to success

	PHASE 1	PHASE 2	PHASE 3
Health Authority	• Identify Physician Champions • Identify Senior/Medical Leadership Support and Communication		• Post-Metrics Measurements • IT Support
Shared Responsibilities	• Provide Pre and Post Implementation Metrics • Create a Physician Engagement Plan • Create a Communication Plan for Medical Staff • Create a EHR collaborative committee where champions and implementation leadership can connect regularly • Familiarize yourself with Memorandum of Understanding on the Introduction of EHRs in Health Authority Facilities	• Create a Physician Specific Training Plan • Create Clarity About Physician EHR Customization • Ensure Elbow Support • Clearly Outlining Reporting and Resolution of Issues Processes • Create Anonymous Question or Complaint Line	
Medical Staff Association	• Create MSA EHR Subcommittee • Consider collaborating with other MSAs that have implemented EHRs for Knowledge Sharing		• Continued Support and Engagement

Phase 1. Pre-Implementation

1) Identify Physician Champions

Identifying local Physician Champions at the outset is a critical success factor during implementation. Local physician champions are not necessarily required to be experts in EHRs. It is important for groups of local physicians or MSAs to be part of the process in identifying physician champions. Recent experience of challenging implementations included focusing on physicians who were subject matter experts and identified by the EHR project team. In bypassing local groups/MSAs, there is a missed opportunity for buy-in from front-line physicians. Early involvement of physicians is important – this includes the early stages of visioning, design and road mapping.

Additionally, physician champions require clear roles and responsibilities outlined by health authority project leaders. For example, requiring clear communication in conveying strict project timelines to their respective departments. Providing clear direction and expectations will strengthen relationships between physicians and their health authorities and help mitigate confusion and misinformation.

Ernst & Young's Report on *IHealth* highlights the need for physician champions to be in place at the clinical program level. These champions will constructively represent their programs in efforts to resolve EHR challenges resulting in increased opportunities for physician advocacy.

2) Identify Senior/Medical Leadership Support and Communication

Physicians must be provided information on the appropriate medical and operation leaders. Clear lines of communication and transparency are critical success factors for EHR implementation. Further, senior leaders must be provided with up to date information. Based on recent experiences, physician frustration emerged through lack of communication and feedback from senior leaders, thereby breeding assumptions and additional misinformation. Where leaders and champions were up to date on current events and knew where to take questions – the process was much more successful.

It is recommend that the health authority creates an organizational chart relevant to the EHR implementation complete with appropriate contact information. Such a chart should be distributed to MSAs, Departments, Divisions of Family Practice and added to the health authority webpage. It is important for the Medical Staff to have a visual of which leaders hold certain responsibilities and further, an outline of where certain inquiries may be addressed. Additionally, an organizational chart may assist internally to ensure all required health authority leaders are receiving relevant communications.

A comprehensive outline indicating how and when EHR implementation groups meet is also necessary and how the health authority, EHR project team, and physicians (including the MSA) jointly support a leadership table during EHR implementations. Well defined roles and Terms of Reference among these groups are strongly recommended to determine how to best outline communication plans and also how questions will be responded to.

Critical leaders identified in other EHR implementations include senior medical directors, chief operating officers, associate chief medical information officers, etc. However, it is not simply identifying these leaders, but also how they present information and respond to issues. This is important during certain phases of the projects when there is heightened anxiety and uncertainty due to impending change. Key traits shown to promote engagement include attending meetings, active listening, respect, engaging behaviour, and flexibility to ensure the EHR works for their needs.

Lastly, ongoing communication and sharing of implementation plans with the medical staff – including the MSA – is strongly recommended. This helps physicians to have an understanding of where the process is and what is coming up. Not providing these updates can lead to speculation and confusion.

3) Create a Physician Engagement Plan

Engagement Plan

The Ministry of Health and health authorities agree that a plan to engage physicians in EHR implementations is essential. However, each facility will need its own engagement plan due to local context. We have heard that physicians have expressed interest in an opportunity to contribute to these types of plans and consider them a key in ensuring effective implementation.

The following attributes should be included in new facility level engagement plans:

- Identifying how and when the change process will occur.
- Identifying who will be affected.
- Identifying who will be making decisions and how they will be made.
- Identifying how issues and concerns will be addressed.

Examples of Engagement Plan Activities:

- Having multi stakeholder kick off meetings when the go live date is identified. This will allow for the governance structures, functions, and intent to be clarified and provide physicians the opportunity to give feedback or suggest improvements.
- Discussions around what data physicians want to collect prior to Go Live (note examples of data collection are outlined below).
- MSA and health authorities may conduct surveys for varying needs. There may be benefits to partnering on these surveys to develop a standard template for comparison. The MSA may gather baseline data regarding general medical staff opinions about EHR implementation and their level of knowledge on processes and timelines.
- Inviting MSA EHR representatives to participate in EHR project tables.
- MSA EHR subcommittees should be established (roles outlined below)
  Frequency of meetings will approximate once per month, one year from Go Live and increase in frequency closer to Go Live (twice per month 3-4 months prior) and likely need to increase to once a week in the last month before Go Live.

The following illustrates two supports available through Doctors of BC and Facility Engagement:

i) Doctors of BC Regional Advisors and Advocates (RAAs)

Each Health Authority in BC has a designated Doctors of BC's Regional Advisor and Advocate. In this role they serve as a local representative from Doctors of BC. As outlined in the roles and responsibilities under the MOU, RAAs can support physicians to raise questions and potential concerns about how the EHR may impact their work through the proper channels.

RAAs can support physicians to support them in ensuring they have a voice in the implementation process. It is advised that Doctors of BC participate in each EHR project via the RAA to have a better understanding of implementation plans and assist physicians in acting proactively in the process. This does not require their attendance at every meeting – but rather as a connection point on key issues and tasks.

ii) Facility Engagement Support

Facility Engagement (FE) is a collaborative initiative under the Specialist Services Committee (SSC) struck in partnership with Doctors of BC and the Ministry of Health. Their goal is to increase meaningful physician involvement in health authority decisions regarding work environment and the delivery of patient care. FE funding ranges from $35,000 to $50,000 for each facility. Please see Appendix 2 for more fulsome funding guidelines.

The Engagement Partners (EP) provides strategic guidance and operational support to MSAs and the health authority to support physician engagement in the implementation of EHR at the site level. The EP will assist an MSA to apply for the SSC funds, set up an EHR MSA sub-committee, and provide on-going advice and recommendations to the MSA and health authority based on EHR best practices and key learnings.

4) Create an MSA EHR Subcommittee

One element that has proven to be very successful in supporting implementation at a specific site is the creation of an EHR Subcommittee by the Medical Staff Association. This is specifically different than identifying physician champions, but plays an equivalent role in ensuring engagement and feedback on implementation. An EHR subcommittee will dedicate MSA Representatives to focus on this work and allocate resources to help support physician engagement and advocacy in a safe and protected space. MSAs can help ensure communication and timely feedback to medical staff at a facility level – and can be coordinated with the Health Authority. It also serves as a conduit to address concerns and questions from its members. However, in order to serve its members, MSAs require up to date information and the ability to strengthen and bolster relationships with the health authority.

For MSA members, engaging on EHR implementation is a significant time commitment and physician members should be compensated for this type of time commitment. Please see

Appendix 3 for the FE EHR Frequently Asked Questions document that outlines funding guidelines in greater detail.

Purpose of the Subcommittee	Composition of the Subcommittee
• Support MSA participation and engagement in EHR development, implementation, and communication	• Chair- MSA Executive or Physician Lead • Site Administration / Health Authority EHR Sponsor • MSA EHR Reps from core groups and departments • Representatives from SSC and Doctors of BC (EP ,RAA, Digital Health Strategy Director) • MSA Support Staff (Project Manager) • Subject matter expert on impact of EHR on utilization • Others as required (communications etc.)
• Point of contact for Health Authority Leadership	
• Dedicated space for MSA members to discuss and prioritize EHR-related issues	
• Augment EHR communications and connecting medical staff to information	
• Understand and evaluate impact of EHR utilization on medical staff	

5) Create a Communication Plan for Medical Staff

Communication that is clear, timely and consistent is key for medical staff during EHR implementation. In recent scenarios, the volume of communications sometimes became too unwieldy. Health authority produced communications focused on all staff, and in some cases this was not sufficient or specific enough for medical staff or disengaged them due to volume or amount of information not relevant for them. Accuracy and brevity is preferred along with ensuring communication is physician-specific and delivered through multiple channels and through a wide variety of tactics. This requires someone dedicated to physician communications with experience in doing this work.

Communication content should be developed in collaboration with health authorities, EHR project teams, and medical staff through an MSA. Communications should start early in the process and any changes to timelines would be considered important and urgent to convey. This includes providing time for medical staff to review information and updates. For example, communication updates distributed on a Friday are not best practice unless urgent and weekend memos should be only be circulated if critical.

Additional Communication Plan elements include:

- All communications and meetings should clearly articulate IAP2 spectrum (i.e. Inform, Consult, Involve, Collaborate or Empower)
- Outlining training processes and requirements
- Outlining process for identification and resolution of issues (training or implementation)
- Creating anonymous process for people to raise issues or questions

- Ongoing location for Q&A both online and in person
- Outlining feedback loops for questions or resolutions to issues.

6) Identify Pre and Post Implementation Metrics

Prior to implementation, a concern that many physicians raise is the potential impact on patient flow and volumes. Pre and post metrics may indicate the effectiveness of the implementation and impact on patient outcomes. To highlight the efficiency and efficacy of the EHR system, the EHR evaluation team and EHR subcommittee should work together to develop metrics for ongoing monitoring and evaluation.

Examples for metrics include:

- Average length of stay
- Admissions
- EHR time
- Work outside of dedicated hours
- Time on documentation
- Time on prescriptions
- Inbox time
- Quality outcomes

Physicians may identify other metrics, but having a variety of indicators will help provide a broad range of information on the effectiveness of the implementation and ultimately its impact on patient outcomes. Physician champions, medical leaders and MSA Working Group representatives should be informed on these measures wherever possible.

Phase 2. Go-Live

1) Create a Physician Specific Training Plan

Training is an important part of any implementation. In most cases health authorities have developed a training plan that is either mandatory or has mandatory elements. The way training is designed, communicated, and rolled out will have a direct impact on physicians and their experience in transitioning to a new EHR. This is particularly true for areas that are developing or adapting order sets at the same time. There is additional benefit to custom demonstration sessions for individual departments that include skill sharpeners. Once preliminary training activities are completed, physicians will have access to the “play” domain. This is the standard approach to education; however, some physicians have expressed that it was not sufficient going into Go-Live. Physicians believe strongly that the two interfaces should be consistent and continue to advocate for their involvement with the goal of increasing the overall training effectiveness. The most valued training was time spent on items specifically relevant to the physicians’ individual workflow. Note that efforts should be made for the training domain to mirror the live system.

As part of their EHR roll out, Vancouver Coastal Health (VCH) evaluated the effectiveness of their training tools. Physicians stated that the most effective tools are skill sharpeners and

personalization/customization. Please see Appendix 3 for a full Report based on the Go-Live experience from Providence Health Care (PHC).

VCH also stated that live training failed in situations where trainers lacked clinical education and experience as they were unable to relate to and understand the information itself. This highlights the importance of having local and/or clinical knowledge. These deficits resulted in physicians working through training by trial and error. It is important to have educators who can relate to clinical workflows and answer any system questions. Specifically, external (e.g., US based) trainers that come into a facility for support were generally not seen to be as beneficial as having local knowledge champions (physicians, nurses) to assist with training. Attention should also be made to include training unique to residents and medical students.

2) Create Clarity About Physician EHR Customization

Health authority staff with experience in implementation at multiple facilities acknowledge how each facility has its own unique requirements based on the services provided. The level to which changes can or cannot be made should be clear throughout the implementation stages. If issues or questions emerge, it may be necessary to consider adjustments to training and/or aspects of the EHR itself to meet the needs of groups or individual physicians and/or culture at the facility.

One critical aspect of this relates to health authority leadership approach to transparency during implementation. Based on observations, when physicians found it difficult to obtain concrete answers from the EHR team or health authority, greater challenges arose. It is recognized that some challenges will be inevitable when implementing a proposed solution. Often more important during these periods is clarity around whether customization is possible. To mitigate these concerns, clear articulation of EHR customization limits should be shared with physicians as early as possible and at the appropriate level.

3) Ensure Elbow Support

It cannot be overstated how important effective elbow support is during the go-live phase. This type of support can make or break early implementation as it can resolve issues and problems quickly and effectively without the need for escalation. In addition, effective support can also ease anxiety and support work flows during those early days of implementation. As noted earlier, experience with the local site often outweighs having someone from outside Canada in providing support. Sufficient elbow support is also an important component to ensure physicians are trained on EHR systems to their optimal abilities. As implementation expands, it is important that Health Authorities draw on those physicians currently trained to use EHR's at various sites to assist newer sites in implementation support. Ensuring adequate and appropriate elbow support at Go-Live enhances the available knowledge base required for physician support.

4) Clearly Outlining Reporting and Resolution of Issues

A clear and streamlined process for reporting issues is critical to addressing site based EHR concerns. Various approaches used at EHR implemented sites include PSLS, jiras, and

dashboards with FAQ and reporting options. Special attention should be paid to closing the loop on reported issues, and consolidation of common themes.

Ensuring appropriate follow up with physicians on tickets has been a challenge. Clear communication and ticketing processes going forward will aid in streamlining issues. One of the main challenges at one site that experienced the most difficulties during implementation was where issues or problems went days or weeks without a response or resolution. While it is important to have a clear process, additional resources and commitments are needed to respond to arising issues and question in a timely manner.

5) Create Anonymous Question or Complaint Line

To support feedback and confidentiality, an anonymous complaints line should be initiated. This line will allow physicians to report patient safety issues or concerns confidentially. This focus has been highlighted in discussions with physicians at every site involved in the collaborative EHR implementation. A complaint line will further allow the health authority to be notified of rising concerns that may otherwise not be reported, and ensure concerns are addressed in a proactive rather than reactive matter. This was successfully implemented at Lions Gate Hospital and helped to identify and resolve issues quickly and efficiently.

Phase 3. Post Project

1) Post Metric Measurements

Vital to success is an evaluation and sustainment plan. Any previously conducted surveys should be repeated to keep apprised of physician experiences during implementation and post-implementation. Results from these surveys and other formal and informal feedback initiatives should be used to continuously update IT support needs and physician engagement strategies. A continuous evaluation plan should be implemented to ensure EHR operations continue to match how physicians are practicing and inputting patient data.

2) IT Support

At a certain point in the process the main implementation team may move on or be reduced in capacity or size. At that point the ongoing work often transfers to the “sustainment team” or existing IT team for support at the site. In order to be successful – this team must have the capacity and knowledge to carry the load of questions and issues resolution after the main team leaves. Therefore it is important for the team taking this on has the supplementary knowledge and experience to assist users. One of the challenges identified is that support in the post implementation phase has decreased and in some cases too quickly.

3) Continued Support and Engagement

Health authorities should continue to provide support and assess if supplemental training and resources are needed. This may include tailored video tutorials, hacks, tips and tricks, and refresher courses for physicians to reference as needed. This may need to occur on an individual, team or department level, and health authorities may need to verify this through

surveys, interviews or other tools. Optimization sessions should additionally be offered to physicians for EHR customization and increased efficiency and effectiveness. It is important for departments, medical staff, and the facility to celebrate success, while continuing to share documented challenges and address concerns.

Conclusion

This report enables physicians and health authorities to learn from past implementation practices and build upon them to support a seamless process in the future. Doctors of BC supports best practices being utilized in EHR implementation across all health authorities and sites. By providing recommendations and best practices for EHR expansion, knowledge dissemination, and training, implementations can become streamlined and efficient to support physician engagement with their health authorities and optimize patient care.

Appendices

Appendix 1: 2019 Physician Master Agreement (PMA) – MOU on EHRs

PMA 2019 Memorandum of Understanding EHRs in Health Authority Facilities

Appendix 2: Facility Engagement

FE Funding Guidelines – MSA EHR engagement

Appendix 3: EHR FAQ

EHR FAQ June 2019

Appendix 4: VCH/PHC Go-Live Report

PHC – VCH Survey report

Reference Documents

CST Conversations that Matter summary, Jan 29, 2019

MSA EHR Sub-committee Terms of Reference (Template)

PHC CST FAQs