Strategies to Increase Familiarization and Acceptance of Electronic Health Records among Health Professionals and Consumers

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Abstract. There are many reasons an organization may choose to implement electronic health records. The challenge is to acknowledge the benefits and deficiencies of the electronic health record, to understand the driving forces for implementation and the barriers to it, and to effect change in the workplace and consumer behaviour. Indeed, one challenge is the determination of the organizational stance with regard to these factors. If all of these factors are seriously considered and the risks to implementation measured, a successful implementation should ensue.

Keywords. EHR implementation, risk assessment

Introduction

Electronic health records (EHRs) can benefit health professionals and health care consumers. Without their acceptance, implementation will be difficult, their features will be under-utilized and their adoption rate will be slow. An interdisciplinary working group needs to make implementation decisions based on the members’ perceptions of a new system. Stakeholder involvement beyond the interdisciplinary team needs to be encouraged because buy-in is paramount. If clinicians reject the system, implementation will be in jeopardy. Change management, that is, how to lead people through change, and the value of change should be considered. In order for system implementation to be successful, clinicians need to know why and in what way this change will affect them and others within the organization. They need to know the practical benefits and rewards for the organization as a whole.
1. Benefits to Stakeholders

There are many benefits of adopting EHRs: some benefit the clinicians and their decision-making process, others benefit the patients whose information is stored in the EHR. While there are many benefits derived EHRs, only some will be discussed.

The EHR supports and improves the quality of patient care by decreasing drug risks and by enabling access to a more complete medical record. Administrative costs are reduced and the productivity of health care workers is enhanced by decreasing the duplication of tests and by promoting the integration and coordination of health services. Clinical and health service research is supported by providing access to high quality data, access to research findings and improved data management and analysis. EHRs ensure patient confidentiality, provide more security for patient information and provide up-to-date patient information on a need-to-know basis. Future health care development is enabled through improved health resource allocation [1].

2. Deficiencies of the EHR

There are several deficiencies of EHRs. While these are caused for a variety of reasons, all of these deficiencies are costly to clinicians, patients, and the success and adoption of the EHR. While not all situations and implementations are homogenous, several of the main deficiencies include:

- a lack of code sets and consistent standards for information,
- costly implementation due to the need to purchase and/or upgrade hardware and software coupled by with the lack of available funding,
- challenges during implementation due to the lack of staff resources, trainers with sufficient leadership skills, clinician usage and employee trust, and
- systems are not always interoperable with each other and there is not always an existing regional information transfer network available [2].

3. Barriers to Implementation

While there are many barriers to EHR adoption, some of the main themes are generally consistent throughout implementing organizations. These barriers include both internal and environmental barriers incurred in both the short and long term. Barriers to automation can be as unique as the organization attempting to implement the technology. While there is no hard rule as to which barriers an organization may confront, the following are common themes [3]:

- Insufficient number of people to implement all of the desired changes
- Cost (system and induced costs)
- Lack of education or effort made for clinical buy-in
- Difficulty with data entry methods
- Rigid, predefined, structured data entry
- Lack of capacity to include audio files
- Natural skepticism of physicians
- Feelings that the system being forced onto providers
4. Driving Forces for Implementation

There are many situations, an organization may experience that will motivate it to adopt an EHR. While these are generally based on the inefficiency of manual methods that can be automated, there are many driving forces for an organization to adopt electronic record keeping. The driving forces for implementation mentioned may vary across organizations due to what they currently have implemented and their strategic direction, however, many common trends emerge, regardless of geography.

First of all, increased care quality and patient safety is usually the paramount driving force, and risk, when implementing electronic health records. This should lead to a clinician obtaining a holistic view of the patient. Ideally this will lead to increased medical knowledge and decreased medical errors. Chronic disease patients become easier to track and manage proactively in an electronic environment, allowing patients to move across providers with their information still available to their next provider. Clinicians practicing across multiple locations would be able to provide seamless service to their clients as the physician paper chart would no longer be the sole record of that patient. Additional savings can be achieved in reduced malpractice costs, lower storage and supply costs, generic drug substitutions, increased provider productivity, decreased staffing requirements, and increased reimbursement for more accurate evaluation and coding. Reductions in patient chart access times and transcription costs could also be realized. One of the most important driving forces for implementation would be the way encounters are handled. With electronic health records, encounters would become continuous as opposed to the episodic care that is provided today [4].

5. Resistance to Implementation

There are several reasons an organization may resist change or implementation. The reasons are usually personal and shared amongst similar groups. Fear of change is a consistent theme. Some of the reasons clinicians are resistant to implementations include, but are not restricted to [5]:

- Feelings that “a depersonalized notion of ‘information’, centred on the interaction between the individual and the ‘system’ rather than on the interaction between human beings”
- Initially there will be a temporary loss of productivity and strain on staff
- Fear of job loss and the unknown
- Difficulty with data entry and navigation
- Feelings of having the system forced onto them
- Feelings of not having input on the selection of system and the applications implemented

6. Incentives and Perceived Benefits

In order for clinicians to successfully adopt an EHR they need to believe that there are benefits for doing so. Only if the benefits the technology offers outweigh the associated costs will the clinician contemplate the behavioral change required to adopt a new technology. These benefits may be realized in the short or long term, and need to be at
least perceived by the clinician in order to trigger a behavioral change. While not comprehensive and inclusive, some of the incentives and perceived benefits of EHR adoption are:

- a reduction of adverse drug events,
- for physicians, an increased revenue and decreased losses under fee-for-service reimbursement,
- a reduction in drug expenditures,
- an improved use of radiology tests and charge capture,
- an increase in quality of care and patient safety (chronic disease and other provincial registries),
- an increased access to information,
- an ability to see patients at any site and have their information available,
- a decreased duplication of effort, and
- a more holistic patient profile \[3,6\].

7. Implementing Change in the Workplace

Change seems to have become an everyday part of doing business and it often seems to happen quickly and continuously. Our health care organizations are no exception. It is not uncommon for employees to be confronted with simultaneous change. Successful leaders will be able to guide people through the uncertainty that accompanies periods of change, they will give employees reasons to change, and they will implement successful everyday strategies to achieve sustainable change.

In order for leaders to guide people through the uncertainty that accompanies change, they will have to respond to the new reality for leadership by moving from:

- Stability to Change and Crisis Management: leaders must accept the inevitability of change and accept it as a potential source of energy,
- Control to Empowerment: leaders have to guide workers to be the best they can be by creating a climate of respect and development for all employees,
- Competition to Collaboration: leaders must create a climate of teamwork and community that fosters mutual support and collaboration,
- Uniformity to Diversity: encouraging diversity is the way to attract the best human talent and for the organization to develop a broad mind-set,
- Self-centered to Higher Purpose: honesty, integrity and accountability to stakeholders are crucial, and
- Hero to Humble: behind-the-scenes leaders quietly build a strong company by developing others \[7\].

According to Senge et al \[8\], to achieve sustainable change, employees need to be given 3 major reasons. First, they need to know that it matters to them, they need personal results. Direct personal benefits are the first source of motivation for sustaining deep change. Secondly, they need to see that their colleagues take it seriously. Therefore, leaders need a network of committed people. We naturally pay attention when people we know and rely on talk about something new, it adds credibility. Finally, they need to see that it works; they need to see concrete business results. As new business practices lead to better results, it increases credibility and more people are willing to commit to the change.
Strategies for everyday change have to be used by good leaders who are working on a daily basis to gradually shift behaviours and attitudes toward the desired change [7]. Many strategies can be used including: 1) disruptive self-expression (A leader must act in a way that others will notice and that reflects the behaviors he or she wishes to instill in employees); 2) variable-term opportunism (A leader must look for, create, and capitalize on opportunities to motivate others to change); 3) acknowledge negative consequences of change (A leader must acknowledges that change can be inconvenient, stressful, and downright scary. The fear of facing personal loss and of quickly having to learn entirely new tasks must be acknowledged and dealt with appropriately in a timely manner. Leaders must listen to what is being said, and not said, and deal with it immediately); and 4) start small and grow steadily (A leader must find a few partners who share their passions and ideas, identify key practical issues and work on them. Leaders and employees must remember that profound change is a self-reinforcing process).

8. Implementing Change in Consumers

Consumers can react to change with an uncanny similarity to employees [9]. Before discussing how to implement change in consumers, it’s important to examine some reasons for barriers to change implementation that result from individual resistance:

- Habit: Reliance on programmed responses to deal with life’s complexities.
- Security: Change may be threatening to feelings of security.
- Economic Factors: This one is more applicable to the workplace. Workers may fear that their lack of understanding of the changes may result in poor performance evaluations.
- Fear of the unknown: Change brings doubts about stepping away from known processes.
- Selective information processing: The tendency to ignore new information that may challenge the status quo.

There have been several models developed for change implementation, such as Kurt Lewin’s three step model and John Kotter’s, even more elaborate, Eight-Step plan for implementing change. Although both models focus on managing change within organizations rather than on service consumers, these well known models identify important points that may also be applicable to consumers. Lewin’s model calls for “unfreezing the status quo, moving to a new state, and refreezing the new change to make it permanent” [9]. However, what should come between these three steps is what is more important to consumers. The consumer mindset needs to be handled with a more deliberate approach, which means there should be transitional steps between Lewin’s three steps, making the whole process more fluid reducing the sense that the change is being forced upon them.

Kotter’s Eight-Step plan is a more detailed approach. Again, there are some steps in this plan for implementing change that are applicable to consumers. These include:

- establishing a sense of urgency, by creating a compelling reason for change,
- forming a coalition with enough power to lead the change,
- communicating the new vision, and
- reinforcing changes by focusing on success resulting from the new changes [9].
Based on these models for managing organizational change, one can develop an implementation strategy designed specifically for consumers. It is important to understand the consumer population that the change will affect and have a clear reason for the change. Consumers need to be made aware of the benefits and costs of the proposed change and be included as stakeholders in the change-planning process. Planning the change should include identifying those processes that could be affected by the change and what the effect could be. Piloting the changes will provide results that could ease the change process and contribute to a subsequent evaluation of the organizational impact of the change. The results of the process analysis and pilot project should be shared with the all stakeholders, especially the consumers. Natural resistance to change should be anticipated resulting in different levels of adoption of the change among consumers [10]. The above strategy to implementing change in consumers is drawn from a review of expert models and market assessments, and presents a combined approach that aims to enhance the process of change implementation in consumers.

9. Conclusion

When system implementations are done using some, but not all, of the strategies, success is not always guaranteed. Considering the issues mentioned previously, clinician acceptance and familiarization with the systems implemented have increased. This has led to more successful clinical system implementations where clinicians feel they have a stake in the system; they see the value it possesses and benefits to both themselves and the patients. The topics outlined above are all key ingredients to the successful implementation of a clinical system. If any one of these components is lacking or missing, the chance of a successful clinical system implementation is diminished. By using these strategies to increase familiarization and acceptance of a new system, whether electronic or manual, clinicians will ultimately become champions of the implementation and lead to its success.

References


