**Impact of EHR on the Management of Patients’ Health: Implementation Plan**

**Introduction**

The adoption of electronic healthcare records as part of the overall healthcare information system in many healthcare setups across the United States has been associated  with instances of improved quality of care for patients, significantly reduced medical errors, reduced costs of health care, and increased administrative efficiencies (Gellert, Webster, Gillean, Melnick, & Kanzaria, 2017). In essence, EHR continues to present significant positive contributions to healthcare. However, the success of EHR depends on many parameters, one of them being the implementation process. Gellert *et al*. (2017) mention that rush implementation of EHR has the potential of laying down a substandard system can have a negative impact on the quality of care as well as the relationship barren patients and their caregivers. Therefore, the implementation process is very critical in ensuring that the EHR is effective in improving healthcare delivery and patient safety.

Typically, the cost of acquiring and implementing EHR in a healthcare facility is usually expensive which proves to be a very significant barrier to its adoption in the first place (Kruse, Kristof, Jones, Mitchell, & Martinez, 2016). Therefore, proper prior planning is imperative not only for the intent of ensuring the setup of an effective platform but as well as saving on wastage of resources. Furthermore, it is also vital to employ an all-inclusive approach involving all the personnel involved in its direct use including physicians, nurses, IT staff, billing personnel, and administrators (Barret, 2018). This not only fosters acceptability but also seamless implementation.

**Implementation Plan**

Successful implementation of an effective EHR system in a healthcare facility begins by putting together an implementation team. The team functions in coordinating the activities of the implementation process (Zheng, 2016). The implementation plan will include input from the personnel involved in its direct use. The implementation team will comprise of representatives from the administrative staff, billing personnel, medical assistants, physicians, and nurses. The representatives will play dual roles in the implementation process, which will include empowering their colleagues while at the same time furnishing the implementation committee on challenges faced in the process of EHR implementation. Gale *et al*. (2015) explain that a system will completely fail if the users completely reject the new system.

User acceptance plays a critical role in the success of any system regardless of the number of flaws that may arise. Cooperation among the participants will help to ensure that the system is well accepted and the needs of each category of users taken into consideration. Working closely with the nurses and educating them on the importance of EHR systems will be critical in winning their attitudes and cooperation during the initial stages of the implementation plan. The administrative representative, possibly from the facility’s leadership will be significant in offering support and strong leadership to lead healthcare facilities during the changes. The leaders will be part of the staff, as they best understand the challenges facing the organization (Gale et al., 2015).

Secondly, considering the cost of implementing EHR systems is quite high, financial management will be a critical element of the implementation plan. It is because many resources will be required for acquisition, setting up the technology, and training of the users. For successful deployment of the EHR systems, financial management must be included in the plan (Woods et al., 2013).

Another important aspect of the implementation plan is the workflow analysis. A number of participants in the medical fraternity postulate the system as a hindrance to the workflow (Gale et al., 2015). It is therefore important to ensure that the new system is implemented in such a way that it does not burden some of the workers. This will eliminate negative attitudes towards the technology. The new EHR systems should make the workflow simple, easier, and more secure. It should also enable improved documentation and delegation of duties. This will ease the workflow, thus improving service delivery. Technology helps to improve data accuracy and therefore, the number of errors that arise in records processing will be reduced (Woods et al., 2013).

In order to enhance data security when implementing the system, it will be vital to setup breach detecting software to prevent any unauthorized access to patients' information. Consistent monitoring of the security of the EHRs is useful in enhancing data confidentiality (Adler-Milstein et al., 2014). Finally, the implementation plan will include training programs to different categories of users as well as post-implementation assessment. This will help to ensure that those involved have the knowledge of what is happening and any mishaps or discontentment are addressed.

**Practice Setting**

The selected practice setting for the assessment will be a clinic based in the U.S. The facility provides health care services to different groups of people including adults and children. It is comprised of a waiting room where patients wait to see the doctor, a triage room, a consultation room, a computer storage room, a conference room and a lab. When patients visit the clinic, their personal details are recorded in a computer system. These records are passed on to the doctor’s office where the patients are diagnosed. For storage and continuous monitoring, the details of the diagnosis are recorded in the system. The finance department at the clinic, which is tasked with billing the patients, collects patient payment details such as credit card numbers, insurance details, and Medicare details, among others. The information is stored in the clinic's database. If a patient visits the facility more than one time, they are not required to register afresh. The details are retrieved from the database when there is a need for them to be being updated. If a patient’s health conditions worsen, they are referred to a higher-level hospital and their records shared with the hospital.

**Readiness for Change Assessment**

The readiness assessment is usually a paramount preliminarily stage in the process of the implementation of EHR in a healthcare facility. It helps evaluate various parameters including staff enthusiasm that can influence the successful implementation of the EHR (Regan & Wang, 2018). In most cases, it can be carried out as the first stage even before the formulation of the implementation team. However, the implementation team can also carry it out. The assessment not only involves analyzing the anticipated goals, benefits and threats but also the organizational needs and available resources required for the setting up and operationalization of the system (Ghazisaeidi, Ahmadi, Sadoughi, & Safdari, 2014).

The readiness assessment will involve assessing architecture readiness, which will include the extent of alignment of the facility with elements such as communication and information exchange standards, standard operating systems, access to infrastructure, automated services, and archived data. Infrastructure readiness may involve probes on aspects such as the necessary hardware, interdepartmental connectivity, and data exchange and information flow mechanisms and tools as well as user support (Ghazisaeidi et al., 2014).

Apart from architecture and infrastructure readiness, other significant elements to evaluate in terms of readiness include organizational culture, management, and leadership, as well as operational and technical readiness (Ghazisaeidi et al., 2014). Organizational culture in reference to EHR involves personnel overall perceptions and attitudes towards such systems. Organizational culture can be assessed from the viewpoint of staff willing to be accountable, committed, dependable, and accurate in the use of EHR (Ghazisaeidi et al., 2014). On the other hand, management and leadership readiness revolve around elements such as availability of finances and alignment to the facility’s strategic plan. Operational readiness reflects the ease of redesigning the workflow, meeting staff needs, relationship with the EHR vendor, and the availability of customized trainings for the users (Ghazisaeidi et al., 2014). Lastly, technical readiness revolves around IT capabilities such as IT setup and maintenance as well as staff IT competence.

**Outcome Measures/ Tools**

Herrett et al., (2015) in their research indicated that a full perspective of the impact of EHR systems could only be determined using multiple measures. The choice of the assessment methods must be able to produce the required information. In this case, a pre-test post-test evaluation survey before and after the implementation of the EHR will be conducted to establish its efficacy among administrative staff, billing personnel, medical assistants, physicians, and nurses. The data collected will be recorded and analyzed to determine the performance and acceptability of the EHR. User feedback will be used to measure the outcome and effectiveness of the technology. The results will also be used to inform on the existing gaps and hence the measures that can be put in place to improve the situation. Herrett et al. (2015) indicate that the main advantage of this type of information is that it is factual and provides a clear picture of what the impact of the technology is.

**Ethical Considerations**

There are many ethical issues related to electronic health records, however, most of them confront health personnel. According to Ozair, Jamshed, Sharma, and Aggarwal (2015), there is a deficiency in the electronic health records among several ethics such as the disadvantaged persons. They conflict with the ethical principles of autonomy, fidelity, and justice. When a person’s health data are shared or leaked without their knowledge or consent, there is a breach of the ethical considerations (Ozair et al., 2015). It is thus imperative to uphold utmost confidentially when dealing with patients’ health records. Another consideration to consider in the electronic system is the exposure of their patient’s data through mistakes or theft. It is also feared that the system does not provide adequate security to patients, thus making it inefficient in implementing quality systems. In order to find a solution that incorporates all the ethical breaches in the health care system, the solution should incorporate the ethics coupled with regulations and standards. Together with this, a culture of information ethics is recommended to help harmonize the systems with the HIM ethics.

**Conclusions**

Concisely, the process of implementing an EHR system in any healthcare providing facility is an overall fundamental component of the process. This is because it contributes significantly to the efficacy and successful adoption of the system by the personnel involved directly in its use. Without a well-thought-out and inclusive process of its implementation, it is possible that the successful adoption and use of the system will face challenges such as rejection by the users possibly out of resistance or the lack of capacity or competence to operate it. Furthermore, without proper implementation planning, it may be impossible to comprehend all the other possible setbacks that may hinder the successful implementation of the EHR. Such factors may include the organizational infrastructure and architecture capacity and readiness, availability of resources, as well as alignment with the management’s strategic plan and organization vision. With proper implementation, it is evident that EHR is able to lead to a drastic reduction in medical errors, increase administrative efficiencies, and overall improve the quality of care that patients receive (Gellert et al., 2017). Furthermore, a well-crafted implementation plan has the benefit of ensuring that the system setup overcomes challenges such as possible breach that could lead to data insecurity or even the misuse or manipulation of patients’ health records. In other words, proper implementation of EHR systems in a hospital not only contributes towards exemplary quality care but also fosters patient safety. Furthermore, it can also prevent possible waste of resources incased a rushed implementation process leads to a malfunctioning system.

The implementation process needs to be all-inclusive. As such the formulation of the implementation team must take into consideration the representation of the diverse teams of personnel involved in its direct use including physicians, nurses, IT staff, billing personnel, and administrators (Barret, 2018). Such an approach ensures that all the members of these teams are able to voice out their concerns, give their opinions, and provide feedback during the adoption and implementation process. Such a strategy enhances acceptability but also seamless implementation by the staff.

Importantly, apart from consideration granted to the multidisciplinary teams that make use of the EHR in a clinical center, other considerations such as the contextual feasibility of the proposed system must be accounted for. Furthermore, considering that EHR is costly, it is vital to weigh the facility’s financial capability as well as significant financial management. The management of the hospital must also offer strong leadership during the adoption and implementation process. In most cases, the introduction of EHR in a healthcare facility may also require the possibility of carrying out workflow analysis and redesign. However, the workflow redesign must be carried out in such a way that it does not interfere with the typical working of the staff lest they become discouraged and develop a negative attitude towards the system. Lastly, the implementation process must be cognizant of the significance of data security and as a result, proper data protection approaches must be employed. For instance, it may be vital to setup breach detecting software and carry out consistent monitoring of the security of the EHRs to ensure that the system does not experience any unauthorized access. More importantly, it is necessary to practice ethical consideration such as handling patients' information with the utmost confidentially.

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