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Training Plan for Anesthesia Information Management Systems (AIMS)

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Executive Summary

Title

Training Plan for Anesthesia Information Management Systems (AIMS)

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Introduction of the Problem

According to a survey conducted in January 2017, anesthesia providers at a medium sized mid-western hospital who have zero or less than one-year experience or training with electronic charting expressed resistance to change from standard paper chart to an Electronic Medical Record (EMR). Resistance to change may disrupt in anesthesia workflow and make the paper to electronic transition challenging. An effective, efficient training plan in Epic EMR would reduce resistance, improve anesthesia staff adoption, and ensure a smoother transition.

Background

The federal government has set a mandate for healthcare facilities to adopt EHR or be penalized through reimbursement cut. With this in mind, a Southern Illinois Hospital (SIH) installed Epic for anesthesia care documentation in December 2017. A survey conducted by the author at the SIH revealed that over 60% of anesthesia providers at the SIH have zero or less than one-year experience with electronic charting. Which in turn, causes them to have some level of anxiety and resistant to Epic transition. Resistance from anesthesia providers would disrupt the anesthesia workflow in the operating room. The purpose of this project is to improve anesthesia provider acceptance of electronic medical record use by developing a training plan for an anesthesia information management system (AIMS) at a medium sized SIH.

Literature Review

Over the years, there have been numerous limitations in anesthesia paper charting such as illegible documentation, lost records, less medico-legal protection, incomplete charting, reduced patient care, and lack of electronic record storage. All of these limitations can, in turn, be counteracted and solved by introducing AIMS (Kadry, Feaster, Macario, & Ehrenfeld, 2012). As previously stated, AIMS is an electronic medical record for anesthesia care that presents numerous components that are beneficial to healthcare, and more specifically, a SIH. To further investigate these components and benefits, a Medline search using “AIMS,” “anesthesia electronic record,” and “electronic charting” as keywords were performed for English-language articles, along with additional data that was obtained from a survey completed by anesthesia providers at a SIH. The search concluded that AIMS provide numerous benefits and advantages seen in clinical practice, surgery case management, quality assurance, and improvement and financial operations.

The first benefit, the ability to improve the availability of historical medical records for clinical practice, is important because it allows multiple providers access to all medical documents simultaneously at various sites. The EMR gives access to critical, life-saving information such as patient’s airway assessment, narcotic needs, and hemodynamic responses (Douglas & Ritter, 2011). AIMS can improve medication safety because providers would have access to medical information, a necessity that can prevent a significant number of medication errors that are related to unverified patient allergy and drug interactions. The second benefit, the capability to better track surgery cases, will further improve decision-making in allocating operating room for cases. Anesthesia Information Management Systems contributes to smooth employee assignments, optimizes staff time, reduces room-turnover time, and assists students and residents by facilitating the optimal learning experience. (Ehrenfeld, 2010)

The third benefit, quality assurance and improvement, aids in keeping track of an individual provider's performance and highlights problematic patterns. Anesthesia Information Management Systems monitors and can identify increase incidence of adverse events such as ICU admissions, persistent hypotension and postoperative nausea, and vomiting (PONV) (Ehrenfeld, 2010). The last benefit of AIMS, financial operations, helps to improve billing efficiency and allows for real-time charging. Anesthesia Information Management Systems contains the necessary elements required for billing, chiefly, American Society of Anesthesiologists (ASA) score, surgical procedure code and anesthesia end times. Because these billing requirements are readily available in AIMS, hospitals can adhere to regulatory billing guidelines and complete billing forms thoroughly to ensure prompt reimbursement (Douglas & Ritter, 2011). It is important to note the benefits of AIMS. It is critical that, as an anesthesia professional, there is a system that fosters excellence in clinical practice, surgery case management, quality assurance/improvement and financial operations.

Plan

To comply with a federal law that mandates hospitals to switch to EHR, a SIH decided to adopt Epic as their Anesthesia Information Management System. The decision was met with resistance, as indicated by anesthesia providers in the survey (appendix a) conducted by the author. The chief anesthesiologist at the SIH and the author agreed that a training plan would help reduce anxiety and decrease such resistance. The survey completed by anesthesiologists, nurse anesthetists, and anesthesia assistants provided an opportunity for them to indicate how they preferred to see the training accomplished. The findings of the survey were then relayed to the Epic IT specialist to utilize. The findings indicated that there was no difference among anesthesiologists, nurse anesthetists and anesthesia assistants' preferences on the number of

training days, as most of the anesthesia providers preferred 2-3 days. Anesthesia providers who had more than one-year experience with the electronic documentation preferred 1-2 hours training session, while anesthesia providers with less than one-year experience with electronic charting desired 4-5 hours session. For class size, 50% of anesthesia providers chose a class size of 5-10 employees, 30% preferred 3-5 employees and 20% desire 2-3 employees. All the anesthesia providers who participated in the survey chose to have access to the Epic playground at home.

Institutional Review Board (IRB)

After the author's communication with the chief anesthesiologist at SIH, the author applied for an Institutional Review Board (IRB) at the Southern Illinois University Edwardsville (SIUE). The IRB approval was required for the author's proposal to conduct research involving human subjects entitled: "Training Plan for AIMS." An IRB approval was granted to the author on October 10, 2017.

Discussion

In the days following Epic going live, the author conducted an informal conference in December 2017 to gain feedback from anesthesia providers on the Epic training. More than half of the providers expressed a decrease in the disruption of workflow because the Epic training helped them understand their duties and what was expected during the transition. Providers who used the Epic playground at home stated that they easily grasped and had a better understanding of Epic during the in-class training. Overall, the Epic training eased anxiety, reduced resistant and was effective in facilitating a smooth transition.

Evaluation

After Epic went live at the Southern Illinois Hospital, the author distributed a post-survey on November 2017 to compare with the pre-survey and determine the effectiveness of the training

plan. Unlike the pre-survey, in which 57% of anesthesia providers express some anxiety about Epic transition, only 33% expressed anxiety after the implementation of training plan. The post-survey indicated 56% of anesthesia providers favored hybrid (blended) learning as their preferred learning style, compared to 36% who favored it before the training.

Impact on Practice

A training plan for AIMS was in place at SIH prior to the installation of Epic. The training plan helped decreased anesthesia providers resistance and in resultant, facilitated a smooth transition from paper charting to electronic documentation. Anesthesia providers at SIH expressed patient care during the transition period was not affected and workflow in the anesthesia department was not disrupted. Because they understood what was expected and were well prepared for the transition through the training plan.

Conclusions

SIH complied with the federal law that mandated hospitals to adopt EHR or face a reimbursement cut by installing Epic. Prior to the Epic installation, a survey completed by anesthesia providers at SIH revealed a significant level of anxiety and resistance among staff that would disrupt patient care and workflow during the transition phase. The result of this survey prompted the chief anesthesiologist to accept the author's proposal to coordinate with the IT specialist and design a training plan that best suited SIH. The success and effectiveness of the plan was evident when anesthesia providers expressed patient care and departmental workflow was unaffected during the Epic transition.

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