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Usage of Technology enabled Services in Healthcare

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Usage of Technology enabled Services in Healthcare

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Abstract

Technological change in the healthcare environment provides opportunities to improve quality of care, increases patient satisfaction and reduces costs. However, employee training is seen as a major factor that influences the change management processes of healthcare projects. This research focuses on the healthcare providers' perceptions of Health Information Technology project training. A qualitative survey was used to collect physicians' and healthcare provider responses by a previous research team. This Graduate student research project used open coding to analyze the data. Our findings reveal that the physicians' and healthcare providers are not satisfied with the Health Information Technology project training. We identified five categories that influence user training.

Background

Health Information Technology (HIT) enables care providers and patients to exchange health information in an electronic environment. The use of HIT improves quality of healthcare, reduces paperwork and increases access to affordable care (U.S. Department of Health and Human Services, n.d.).

The Health Information Technology for Economic and Clinical Health (HITECH) Act encourages the adoption and meaningful use of HIT.

Change management strategies enable healthcare organizations to successfully accomplish the transformation to this technology-oriented model (Allcock, Dormon, Taunt, & Dixon, 2015).

User training plays an important role in the change management process.

According to Gomes and Romao (2015), studies reveal high failure rates HIT projects. They found that training is necessary for the successful implementation and use of IT.

Training is a considerable determinate in the success or failure of a project (Gomes & Romao, 2015).

Training provides an opportunity to diminish the resistance seen among the doctors to the ongoing change in the field (Kruse, Kristof, Jones, Mitchell, & Martinez, 2016).

Literature Review

In a 2015 study conducted at a premier medical university, the results showed that the staff had an average knowledge in IT (Khan, Kijsanayotin, Sinthuvanich, Soonthornworasiri, & Lawpoolsri, 2015). Almost half of the nurses had no experience using technology. This indicates that training will be required to improve their knowledge, skills and abilities to use IT systems.

Granja, Janssen, and Johansen (2018) reviewed previous research to determine the factors that affect the eHealth intervention projects. From their study, it was found that technology systems which are implemented that do not align with the old clinical processes are a significant barrier that hinder project success. There is a need for change management to implement new processes and provide training for staff.

A study by Ifinedo (2016) reveals that the acceptance of IT implementation by nurses is one of the main factors in the success or failure of a HIT project. Computer training and knowledge are viewed as important factors for nurse acceptance of HIT implementations. Thus, it is recommended that basic computer knowledge and training be included in the nursing program to develop higher levels of experience and computer knowledge to increase IS acceptance (Ifinedo, 2016).

Research Objective

The main objective of this research is to:

Understand the physicians' and the care providers' perceptions of IT user training in their organization.

Identify the positives and limitations to effective training in HIT projects.

Investigate the research question, "What are healthcare providers' perceptions of HIT project training?"

Methodology

This research uses qualitative survey methodology with open coding for data analysis. The data was collected using quantitative and qualitative questions with a survey tool developed by Dr. Cherie Noteboom and Andrew Behrens which was approved by our university's IRB on 2017-18-10. The study involved sending a survey via email to 16 physicians and care providers at a rural hospital. The participants are physicians and care providers with a variety of ages and specialties in a rural Midwest hospital. The care providers have many roles that range from walk-in clinics to emergency care. We surveyed all the physicians, nurse practitioners, and physician assistants at the selected institution. The specialties include, but are not limited to, surgeons, midwives, nurse practitioners, physicians, and physician assistants. We received 11 responses for a response rate of 68.75 percent. The completion rate was 91 percent. One aim of the questions was to gather information regarding training on HIT projects.

Results and Discussion

The data was analyzed using open coding. First, we abstracted the participants' responses in the form of codes. We then compared our codes and summarized them into concepts and categories. The table below shows the categories and definitions that affect HIT project training identified through our analysis.

Categories	Definitions
Domain Knowledge	The HIT project trainers and IT support staff do not possess the domain/clinical knowledge to efficiently train the physicians and care providers
Consistency	HIT new project training is not made available to all the care providers
Proactiveness	Proactive training regarding any changes in the HIT projects is not provided appropriately
Efficiency	The end user training being provided is not effective, which hinders the current patient care process
Trust	Insufficient training and unavailability of IT staff during after-hours and weekends is a major concern for care providers

Our analysis found that more than half of the respondents answered that the training provided for HIT projects being implemented was insufficient or ineffective.

It is very important that the physicians and the care providers are trained properly to implement the patient care process efficiently.

IT staff and the trainers must possess the clinical domain knowledge to help support the care process in a timely and effective manner. Healthcare is one of the most essential services as it involves treating patients 24 hours a day. As a result, It staff should be available 24/7 to respond to end user requests.

Efforts to provide consistent, effective training to all healthcare team members must be a priority. Any change or new feature added to the process should be communicated with the healthcare providers.

Our findings indicate that training plays a major role in a project resulting in a success or a failure.

Conclusions

This research discovered that the perceptions of physicians and healthcare providers indicate necessary attributes of the provided training. It must be provided by trainers with sufficient domain knowledge, with consistent availability, within a proactive time frame, with an efficient focus to develop trust in the implementation. The findings have answered our research question "What are healthcare providers perceptions of HIT project training?" and shows that healthcare organizations should focus on training initiatives to improve project success. Future research can be extended by surveying a variety of healthcare clinical and administrative stakeholders.

Acknowledgements