

MODULE NAME: Digital Skills and Research Method

MODULE CODE: BMSW4003

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TOPIC: Secondary Research on the Uses of Technology in the hospital

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Introduction

The world is changing in a very rapid state, and it all involved the use of modern technology at home, offices, field work, hospitals and even at events. For hospitals to provide exceptional healthcare to patient, it does not only depend on the clinicians, but the hospital needs a well-designed and a dependable technology to be able to meet the needs of their patient that entrust their life in their care. Technology now has become a huge aspect of providing care in the medical field. Modern technology plays a vital role in caring for patient and their family.

We can all agree that modern day's technology has had a powerful impact on our daily lives. Our PowerPoint on digital literacy, confirm that technology is human need and not luxury (Botu), 2021, slide 12). I do agree with my lecturer because, in this modern day, there is nothing that does not involved technology. From the time a person gets up from a comfortable bed, pillow and linens that are design through technology. Through technology hospitals now have special bed designed for specific patient. Some bed has buttons designs to push for any assistance patient need from care givers or even to call their loved once at home. A patient can be on the bed for a long time but has everything around them for life to continue. When a person wakes up from bed, one tries to eat healthy food to keep the body strong and free from any disease, the water we drink and must importantly all the new devices that are out there to help us filter our water. There is no doubt that technology is now a human necessity.

Legal, ethics and Privacy in research.

As we celebrate the importance of technology in our various lives, one must access and see how technology in our current days is being used in the health care system especially in the hospitals. Technology has indeed improved the overall health of patient through its diagnostic ability and early treatment and prevention. Prior to new technologies, some infectious disease will go unnoticed because medical professionals do not have the ability to know in order to help with diagnosing and possible treatment. Without proper research been done it will be difficult to know how technology is been used in our current situation. Every research must follow the protocol of the country or city in which is being conducted. Health care and patient information is very complicated and must be guided will to avoid disclosing personal information to unwanted people. "There is a requirement to obtain formal ethical clearance to conduct any study in a

hospital or involving patients” (Blandford et al. 2015, p. 490). The researcher must seek the approval of all participants before the start of the research. Participant must know all the advantage and disadvantages of the research and they have the power to accept or decline to be part of the research. As a parent, I have every right to know and accept if my child or his information will be used in research. Failure for research to inform participant will result in a law suit or suspicion of the entire process. Participant also have every right to opt out of any research at any given time when they are not comfortable of whatever situation they are in. The management of the Iran hospital agreed to the terms and conditions of this research before it was done. And all participant was duly notified.

The research must be ethical and there should not be any breach in security. The research team must give respect for participant privacy and practice confidentiality (Blandford et al. 2015, p. 490). I do agree with Blandford and the group because every individual deserve respect and vital information of patient must be kept confidential. Data collected from the research must also be stored and process in a confidential manner to prevent leakage of information to unauthorized people. Patient information must be regulated in a way to allow a few but the right people to have access to patient information in order to avoid posing treat to privacy and security.

Rational and Objectives

With this secondary research paper, I decided to choose research from a different country in order to learn more about the technology that are being use at hospitals in different part of the world. The tittle of the research is called, “Use of Health Information Technology in Patients Care Management: A Mixed Methods Study in Iran” (Askari-Majdabadi, et al. 2019, p 311). This study acknowledges the importance of patient care using technology. The purpose of this study was to access how professional nurses uses information technology in patient care in a hospital setting. There are different forms of patient care and depending on the location and availability of technology, will determine on what is available for the patient and the healthcare team to use. Health information technology can be clinical work, administrative or even for in-service training purpose. Nurses and doctors can access patient information’s like, note, physicians’ orders, allergies, diagnoses and many more information on the electronic health record. The electronic health record serves as a data base for patient information. Every information that is collected on patient are stored electronically. “The 2009 Health Information Technology for Economic and Clinical Health Act established the meaningful use electronic health record (HER). Incentive Program for eligible providers and hospitals to adopt and meaningfully use HER” (Heisey-Grove

et al. 2014, p 144). This indicate that all users must have a level of training in order to work with these modern technologies.

Methodology

The research was conducted in a Kowsar Hospital which is also an educational hospital in Semnan, Iran. Inpatient and those in an emergency room were included in the research. For the research team to collect enough data, they used three different methods for this study. For effective data collection, they used interview, observation checklist and a well-designed questioner there by making it a mixed method of collecting data. For research to be successful I believe that proper planning of data collection is a very vital aspect of it. Without getting accurate information the whole purpose of the research will be meaningless. The researcher made 5 questions to be used for observing the use of technology by nurses during their care to patient, information transfer and analyzing. The questioner method that was designed "including 5 demographic questions and 8 main questions was designed by a researcher and used for data gathering. The questionnaire answers were ranked with 5-point, from completely agree to complete disagree. For validity of the checklist and questionnaire, 10 experts had been consulted and their views were considered" (Askari-Majdabadi, et al. 2019, p. 312). Cronbach alpha scored the questionnaire at 0.87.

This research was group in three different ways of collecting data. First step was collecting of data using the checklist from admission throughout their stay and the time of discharged from the hospital. Step two involved the use of the questioner. Sample of two or more nurses with over one-year experience are made to answer the questioner on the use of technology at the hospital. The third step is to interview the hospital staff.

Literature Review Methodology

"Mixed methods add value by increasing validity in the findings, informing the collection of the second data source, and assisting with knowledge creation. A mixed method is used in the health services research" (McKim CA. 2017). It is obvious that in caring for the sick or finding the best solution and prevention methods in healthcare, accuracy is very important. Mix method research uses both quantitative and qualitative method to bring out a variety of idea for the research. The more knowledge gain will enrich the quality of the research. When a researcher can get all the needed and accurate information from different sources, it helps produce a good result for the research. Mixed method gives a wide range of information to the researcher to work with. Mix methods of research need extra time and resources like people, extra money

and logistics to be able to complete. This is because, single research may be simple and easy to conduct with minimum cost than the use of multiple methods. Qualitative technique of research is a way of allowing participant to bring out their thought in a variety of ways that have not been explored. Participants brainstorm ideas and brings out the best answers that are needed. They are given the chance to think thereby producing quality answers. As quantitative research helps the researcher to be able to observe what is being done or practice with scientific methods. Quantitative research helps the researcher to gather a variety of numeric data. All these data that are collected through the various means are analyzed using scientific method that have been developed.

Data Analysis

A total of 10 nurses was interviewed, 26 nurses were able to complete the questioner and 24 computers was used. The research was able to be revealed that, each ward averagely has 2 computers. Every unit head has an extra programmer running on their computer. Nurses has formal training and can use health information system on daily bases for admitting of new patient, accessing medical record, administration of medication and during their care for patient. As much as 23.1% of nurses accepted that computer technology helped them in accessing patient information. 46% do not have any idea about the use of internet and 28% did not use the internet regardless of its availability. The qualitative data displayed how fast, and convenience modern technology can be. "Most of the time, it is very likely that, after a short time after a computerized request, medical equipment bring and ready for use" (Askari-Majdabadi, et al. 2019, p. 313). Nurses no longer have to go through anybody when they need equipment or something from the para clinic units. They can make their own request through the computer system. Nurses can receive diagnostic test directly through the computerized system instead of the old fashion paperwork. According to the result of the survey, nurses have little time to expand their scoop of practice using the internet. They are unable to retrieve disease evidence that may help prevent any complication.

The purpose of this study is to access how healthcare professional like nurses are using information technology in patient care in a hospital setting. It was discovered that nurses use information technology for support services and interact with patient and their care. The research also reveals lack of computerizing physician order entry, and for prescribers to give electronic order, thereby increasing errors and putting the patient at risk. Nurses must be involved when developing any health information technology that they are going to use. This helps them to design it in a way that can be easily accessible and nurse friendly system. If all

the information's are recorded in the computer, nurses will not waste much time looking for it and that will motivate them to use computer system for retrieving patient information. This will increase the use of evidence based in caring for patient. According to the study, communication must be increase between information network, workload, and how beneficial it is for all parties involved. Again, one can agree the most helpful thing for this research is how multiple research tools were used to gather information.

Conclusion and Recommendation

In conclusion, the study noted that as much as technology is increasing, there is still room for improvement in clinical information, clinical judgment and evidence-based care ((Askari-Majdabadi, et al. 2019, p. 316). This can help increase the quality of care and decrease cost of caring for patient.

Reference

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