

Mobility in Intensive Care: Pre-Implementation Evaluation

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Abstract

Mobile point-of-care solutions could help improve health care in areas where technology-based, high volume data are generated as in intensive care units, by enhancing possible ways to retrieve information anywhere and anytime. The purpose of this study is to explore clinicians' perceptions regarding mobile technology prior to implementation of mobile technology systems in a university hospital intensive care unit. Data about physicians' and nurses' perceptions regarding mobile technology were gathered by the questionnaire developed by the researchers. The participants are 27 physicians and 15 nurses. More than 90% of respondents said that computers had a potential to provide large benefits for clinical care, also 75% of respondents thought that use of computers would be enhanced with mobile technologies in the ward. Most doctors and nurses have positive opinion about usefulness and ease of use of wireless technology.

Keywords:

Mobile technologies, Ease of use, Usefulness, Intensive care

Introduction

Mobile solutions to patient care are important in health care, especially in intensive care units that are technology focused and produce high volume of data. The importance of intensive care units is that the patients usually have the risk of death and medical problems may lead patients to many defects and even death. As a result, these units are one of the important units that have an immediate need of quick and complete access to information. Physicians come across with more than 200 data every morning. Decisions in intensive care require rapid clinical data and medical reference information retrieval and also total data evaluation.

There are limited numbers of studies about the usage of mobile technology in intensive care. In these few studies, it is found that mobile technologies help reducing of patient staying period and the number of antibiotic prescriptions, decrease the time necessary to access to laboratory information.

Methods

In this study, a questionnaire was conducted to gather data about physicians' and nurses' computer usage patterns, attitudes towards the computer technology and perceptions of mobile technologies usefulness and ease of use. The participants were 27 physicians and 15 nurses who were working in intensive care and reanimation units of the University Hospital. SPSS 13.0 was used for data analysis.

Results

The percentage of physicians and nurses who are advanced or good in using computer are 59.3% (n=16) and 42.9% (n=6). 3.8% of the physicians and 6.7% of the nurses defined their usage of hospital information system proficiencies as novice. The number of participants that have taken computer training is 12 (28.6%) of which, 33.3% (n=4) are physicians and 66.7% (n=8) are nurses. The physicians and the nurses also declared that they mostly use computers to check patient information.

88.9% of the physicians and 100% of the nurses admit that computers have potential to improve clinical care and they want to use more computers in clinics. The percentage of the physicians and the nurses think that wireless computer can enhance computer usage in clinics are 70.4% (n=19) and 85.7% (n=12) respectively

More than 80% of the physicians and nurses believe that, wireless computers can provide rapid and easy task accomplishment, increase productivity and improve access to clinical information. On the other hand, the percentages of the total participants who think wireless computers make patients safer are lower ($\approx 60\%$). More than 70% of the physicians and the nurses gave positive response to learning and using wireless computers.

Conclusion

Mobile technologies have a great potential to be an important component of the health information administration in future. This study may not be generalized, but still can emphasize the perception of mobile technology users, who play an important role in information technology adoption.