Decision support system usage in a hospital: A survey of self- reported use and benefits by nursing staff

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Introduction

As a part of the Master degree in information technology at The University of Aalborg, we have made a study concerning the implementation of a decision support system called Practical Procedures for the nursing Service (PPS) at Akershus University Hospital (Ahus) in Norway. Our main focus has been on the information- and system quality of the system PPS, and how these factors affects use and usage. This is based on DeLone & McLean's model of IS-success. Other factors that may affect use will also be given attention.

Methods

We have performed a survey among nursing staff in the medical and the surgery division at the hospital. We performed a pre-study interviewing two professional nurses. We wanted to get an impression of what they felt about the implementation and use of the system PPS. We also got supplementive material as interviews and observation according to PPS in use. This was according to an agreement on co-operation with InterMedia. The material from InterMedia could substantiate the results of our inquiry. A convenience sample of 346 RN and enrolled nurses were invited to join the survey in a University hospital. 245 respondents completed the survey, representing a 71% response rate.

Results

Our findings show that respondents of Ahus agree that the information quality in PPS is good regardless of the respondents' rate of use. In general PPS was used rarely. A lot of the respondents would rather ask an experienced nurse than use PPS when they were about to perform a task they were not familiar with. Some of the respondents evaluate PPS to have a poor user-interface, it takes to long to get the right information, especially those respondents who has not taken PPS considerable in use. The participants with good data skills use PPS more frequent, and do not share the opinion about the user-interface. A lot of the respondents blame lack of computers for not being able to use PPS when they need it.

Discussion

To succeed with the implementation of new IT-systems in health care, the system has to be of high quality, both according to information and the system itself. It has to be ease of use and the content of the system have to be relevant and have up to date information. This is however not enough to succeed. Human factors as age, general IT-skills and the respondents experience with IT are factors that separate the respondents in regard of use of PPS. Ahus should still focus on improving the nursing staff's general IT skills to fulfil their goals due to implementing PPS. The need for training will vary in the staff, and one should focus on individual needs to succeed in getting the staff to take new IT-systems in use. Another particular factor of importance is to have easy access to computers. In particular staff with lack of IT-competence would be vulnerable according to this. They do need more time in front of a computer, both to practice and to get their way in the system.

Acknowledgments

We would like to thank the employees and the leadership at the Akershus University Hospital for their goodwill. InterMedia by Anne Moen have given us valuable information and her help has been of great importance. Our teaching supervisor by Aalborg University, associate professor Pernille Bertelsen, deserves a particular acknowledgement for her constructive feedback.

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