

Nurses' experiences with electronic medical records

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Introduction

Electronic medical records (EMR) have the potential to make healthcare better (Haux & Howe et al., 2008; Ayatollahi, Bath & Goodacre, 2009; Goldzweig & Towfigh, et.al., 2009; Chaudhry & Wang, et.al., 2006). Even so, there is a perceived dissatisfaction among nurses worldwide regarding the use of EMR, which indirectly affect patient care (Viitanen & Hyppönen, et. al., 2011; Darbyshire 2004; Timmons 2003; Stevenson, Nilssons et. al., 2010; Top & Gider (2011). There is a lack of knowledge of how widespread this dissatisfaction is amongst Swedish nurses. Too few studies have been done on the subject. according to (Otieno, et. al., 2007; Clark, 2007; Stevansson, et. al., 2010; Stevansson & Nilsson, 2011; Top & Gider, 2011; Holtz & Krein, 2011). This study looks at the dissatisfaction that Swedish nurses experience, in the use of EMR.

Materials and Methods

A survey was conducted with Swedish nurses. Respondents were identified and accessed during May 2013. Firstly 111 nurses were found using goal steered sampling. The second sampling was carried out by getting the nurses' union to send out the survey to 500 of their members. The result is represented by 167 Swedish nurses from a total of 611 nurses who received the survey which gives a response rate of about 27%. The survey questions were based on a framework developed by Otieno et. al 2007 for investigating Japanese nurses opinions in a similar study. Twelve questions were asked and correlations were looked for in terms of which particular system was being used, how long the respondent had worked as a nurse and if the respondent had received education in using the system. Answers were according a five grade likert scale.

Results

On average there was no large scale dissatisfaction with an average score of 3.0 for all respondents and all 12 questions. Dissatisfaction was greatest for the system's ability to; answer questions about normal medical knowledge (2.5) and simplify the collection of information for discharge notes (2.6). Satisfaction was highest for was greatest for the system's ability to; document the physical evaluations of patients (3.6) and acquire results from previous examinations and tests (3.4) .

When comparing different systems, nurses were not more dissatisfied with a particular system (2.9 -3.4) but dissatisfaction

was present for different functions of all the systems. The largest variations between systems were for the systems' ability to acquire information about medicines (1.7). Looking at years of employment, there was no linear correlation between the length of employment and the responses to particular questions or on average for all the questions. When looking at the amount of education in the system, there was a correlation of responses to three of the questions; increasing education gave more satisfaction regarding the systems ability to provide an overview of the patient's medical condition (from 2.8 to 3.0 to 3.3) as well as the system's ability to simplify the collection of information for discharge notes (from 2.4 to 2.6 to 2.8). Increased education led though to more dissatisfaction regarding the systems ability to document daily care. There was no linear positive correlation between education and decreasing dissatisfaction

Discussion

This knowledge acquired from this study can be used to improve the experiences in the use of electronic medical records among Swedish nurses.. A limitation in this study was that no differentiation was made between the different types of nurses, with their different tasks and responsibilities.

The work can be a pilot study for further research with a larger sample that would provide reliability. In a larger study those issues that appeared to point to dissatisfaction could be delved into in greater depth. Differences between different groups of nurses could also be studied to give more refined results.

While there was no extensive dissatisfaction found, most of the responses varied narrowly from 3.0. Given the role that electronic medical records play for nurses and by extension the health of patients, it could be argued that a score of 3.0 is insufficient. It is somewhat surprising then that nurses are not "heard" from more. Even the nurses' union was initially reluctant to allow the researchers access to their members. Access to the limited number of 500 was eventually given.

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