Implementing Electronic Medical Records: What Do Users Think?

Implementing electronic medical records (EMR) in a healthcare organisation is a major innovation, which does not always run smoothly. Although barriers to, and facilitators for, implementation have been researched, their relative importance to end-users has not been clearly understood. Recently published research in Implementation Science found that doctors and nurses both ranked flexibility of the interface as the most important factor in using an EMR.

Dutch researchers used a discrete choice experiment with doctors and nurses from across the Netherlands to explore their preferences. 148 nurses and 150 doctors answered ten choice sets with two scenarios, which included barriers: data entry hardware, technical support, head of department's attitude, performance feedback, flexibility of interface and decision support. Mixed Multinomial Logit analysis was used to determine the relative importance of the attributes.

Findings

Nurses' rankings

1. Flexibility of interface
2. Head of department's attitude
3. Decision support
4. Performance feedback

Doctors' rankings

1. Flexibility of interface
2. Decision support
3. Performance feedback
4. Head of department's attitude

Both nurses and doctors perceived technical support and data entry hardware as least important. Physicians and nurses both preferred monthly performance feedback above no feedback. This feedback would include an overview of patient characteristics, number of diagnoses, complications and patient satisfaction scores.

The respondents preferred fixed hardware over using a tablet, a finding the researchers did not expect. They suggest potential reasons for this, including difficulty of using multiple tabs on EMRs on a table, difficulty of typing text into the EMR and other negative effects.

Training was given low priority. The researchers speculate that this may be because the questionnaire stated that training would take a whole day.

The authors note that a limitation of the study is that responses were based on the users' current use of an EMR. Therefore the results do not correct for the influence of EMR implementation stage on user preferences. They write that current EMRs only partially comply with users' needs, and suggest that closer attention is paid to users' needs during the development stages of EMRs.

Implications for implementing an EMR are that for physicians the innovation needs to be fully developed and have immediate ease of use and added value, while for nurses, managerial support can positively affect the implementation process amongst the users.

They conclude:

"The differences in priorities amongst nurses and physicians show that different users have different needs during the implementation of innovations. Hospital management may use this information to design implementation trajectories to fit the needs of various user groups."

Reference: Implementation Science

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