



Title	Evaluation for a New Electronic Database in an Osteoporosis Outpatient Clinic
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Aim

To investigate the implementation of a database for examination of patients requiring an osteoporosis exam.

Conclusions and results

The database on diagnosis and treatment of osteoporosis has been implemented as a permanent part of the Osteoporosis Outpatient Clinic at Hvidovre Hospital. As of June 1, 2007, over 5000 patients were in the database, accounting for over 12 000 consultations.

Patient satisfaction was investigated, showing no significant difference in feedback between electronic patient records (EPR) and conventional paper records. The EPR model used was fully accepted by patients. Patient satisfaction with the two record systems was similar, mainly because the content of the consultations (according to the patient) were the same; the doctors' behavior and the patients' experience were identical, regardless of the record system used.

Although changes in the traditional division of labor between doctors and secretaries were noticeable in connection with the EPR, only minor changes were found in the combined time consumed. By redefining doctors' and secretaries' tasks, major changes were achieved in treating patients, increasing time consumption by 0.5 minutes for secretaries and 1.4 minutes for doctors per consultation. The combined additional expenditures to manage the Osteoporosis Outpatient Department given current referrals (1200 patients/year) is estimated at 17 000 DKK (max.) per year. Hence, the increase in human resources to introduce this type of EPR is marginal. The difference might be further reduced as familiarity in using the EPR increases. Hence, concerns are unfounded that human expenses should hinder introducing an EPR system, and it is important to clarify that the EPR model does not imply any personnel cut-backs.

The development process has been quick and efficient. Detailed knowledge of the specific disease is thought to be an essential prerequisite to communicate a pre-

cise demand to a computer programmer. It is essential that all of the involved personnel groups participate in the process from day one, and that all parties test all software versions quickly. Actual development costs are difficult to calculate because none of the involved parties are paid in a customary manner.

Implementation was simple since the hospital already had the necessary intranet and hardware. An important prerequisite was that the development group consisted of key individuals, but was kept to the smallest possible number of participants. A small group promotes efficiency and a broad dynamic. Having two specialists is thought to be important for stimulating discourse about ideas. Likewise, it is important to balance the level of ambition with what is likely to work successfully. Early user acceptance helps promote further development of software, and it is crucial to involve users in the process at an early stage so they have joint ownership of the product and become positive partners in the ongoing development of the technology.

At present, the EPR model must work collaboratively with hospital paper records. Hence, printed notes from the osteoporosis journal must be entered into paper records. This can be avoided when a general EPR model is introduced, and the results are expected to be immediately accessible in the general EPR.

Methods

Text (assessment strategy, eg, systematic review, meta-analysis), type of analysis (eg, decision analysis, cost analysis, social/ethical implications consideration), data sources, types of studies assessed (eg, RCT, CCT).