SYNOPSIS

KEY POINT SUMMARY

OBJECTIVES

This study was conducted to review the literature available on the integration of EHR and extract effective recommendations based on the interaction of clinicians with patients in the presence of computerized systems for the best behavior and communication, and evaluate and rank evidence-based recommendations.

Developing an evidence base of best practices for integrating computerized systems into the exam room: A systematic review

Patel, M. R., Vichich, J., Lang, I., Lin, J., Zheng, Kai, 2010 | *Journal of the American Medical Informatics Association*. Volume 24, Issue e1, Pages e207-e215

Key Concepts/Context

The use of electronic health records (EHR) is increasing at medical facilities across the US. Computerized systems provide a better infrastructure for healthcare delivery. To qualify for an EHR Medicare incentive program healthcare providers must use an approved system.

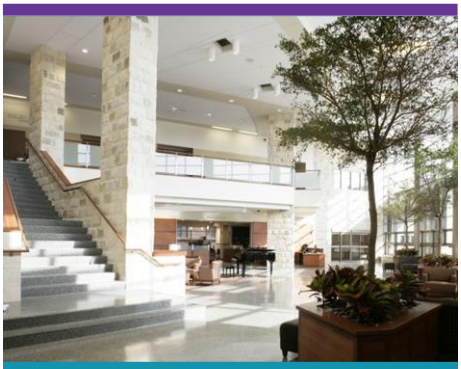
Methods

A literature search using a Boolean combination of medical subject headings (MeSH terms) such as electronic health records, and patient room settings was performed of six databases. The search was customized in each database. The inclusion criteria were interaction between a patient and clinician in an exam room using a computerized system, with a focus on behavioral or communication strategies. The literature search and screening were done by a trained research assistant and librarians. After screening, 52 papers were reviewed. Most of the studies in the articles were empirical investigations with the majority using qualitative methods followed by mixed methods, quasi-experimental, and randomized controlled trials. The extracted data included descriptive information, expert opinions, and other important associations.

Findings

The data analysis resulted in 12 recommendations for behavioral and communication practices:

Using the computer to facilitate conversation – This allows for direct interaction and for the patients to visualize data readily available.



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Adjusting room design – A flexible exam room layout with adjustable and movable furniture improves communication.
Maintaining eye contact with the patient while typing – This is essential for better communication.
Separating typing and patient interaction – Typing should be separated from face-to-face interaction for better patient satisfaction.
Talking to the patient while gazing at the computer – Even while looking away affirmative speech should be used with patients so they wouldn't feel neglected.
Using a postural style that allows the clinician to face the patient most of the time – Adjusting room design would allow for the clinician to face the patient.
Inviting the patient to look at the screen before the patient asks – This would encourage the patient to participate in building their medical charts.
Informing the patient about the functions and role of the computer – Communication was rated more favorably when the clinician explained the role of the computer to the patient.
Greeting the patient and accompanying companions before beginning the interaction.
Telling the patient that the purpose of logging off/securing computer is for his/her privacy.
Reviewing the visit with the patient after finishing with the computer
Using other aids for typing purposes (e.g., clinic staff, transcriptionist)

Of the 12 recommendations, the first eight had the most supporting evidence in the articles and were further reviewed by the authors.

Limitations

Most of the articles reviewed provided results that were based on observation and expert interviews without actually being evidence-based. Only a few articles provided supporting data that was evidence-based and were used to draw conclusions.

Design Implications

The study provided a better understanding of albeit limited evidence-based room design and recommended changes accordingly. Better space planning and furniture placement would enhance the interaction between the patient and the clinician sitting behind the computer screen. Specifically, mobility of furniture and screens would better serve the communication needs of patients.