



## KEY POINT SUMMARY

### OBJECTIVES

To evaluate the performance of a newly-designed exam room equipped with an electronic health record system.

## Field investigation of ambulatory clinic exam room design with respect to computing devices: A pilot study

Saleem, J. J., Weiler, D. T., Satterly, T., Nussbaum, M. A., Chumbler, N. R., Fischer, G. M., Rehman, S. U. 2018 | *Conference Paper, Volume 62, Pages 518-522*

### Key Concepts/Context

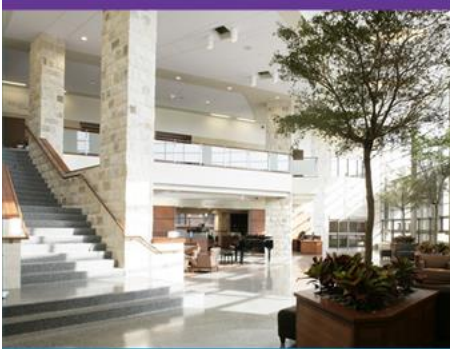
Previous studies have shown that electronic health record (EHR) systems can help enhance patient-staff interactions in ambulatory care environments. However, there is no clear method for how best to integrate EHR technology into these environments. This uncertainty is exacerbated by healthcare provider concerns about whether or not these systems might actually result in some negative interactions with patients due to increasingly complex communications. The authors of this study investigated how redesigning exam rooms might influence the implementation of EHRs so that their benefits might be more fully realized.

### Methods

The authors performed field observations and interviews with both patients and staff in three different hospitals. One hospital featured an exam room equipped with an EHR system and was specially designed to accommodate patient-staff interactions around the EHR. The other two hospitals featured older exam room designs, which featured stationary desks and desktop computers located in the corner of the rooms. Data were gathered from these locations over one five-day workweek through one- to two-hour periods. A total of 11 primary care providers and 18 of their patients were involved. The authors measured degrees of patient-centeredness, workflow impact, and situational awareness using subjective rating instruments.

### Findings

Results from the field observations and patient-staff interviews revealed that the newer exam room design, which featured a wall-mounted monitor for the EHR system and moveable workspace furniture, allowed staff to spend more time focused on patients and greater ease of sharing their screens than the two “older”



### The Center for Health Design: Moving Healthcare Forward

The Center for Health Design advances best practices and empowers healthcare leaders with quality research that demonstrates the value of design to improve health outcomes, patient experience of care, and provider/staff satisfaction and performance.

Learn more at  
[www.healthdesign.org](http://www.healthdesign.org)

or “legacy” exam rooms also reviewed in this study. However, the older exam rooms received higher scores in the area of workflow integration, despite positive feedback from staff members regarding the use of the EHR system. Overall, these results reflect positively on the exam room designed around the EHR system, but further research is required to understand how it might be more effectively integrated into interactions and workflows.

### Limitations

This study took place over a relatively short period of time (one workweek) and involved a relatively small sample size of participants (11 staff members and 18 patients). A longer study period may have produced different results as both staff members and patients became more accustomed to EHR implementation. The authors’ further note that differences in patients and providers within the three different locations may have factored into the results.

### Design Implications

EHR systems may improve patient-staff interactions in some healthcare environments, and the exam rooms equipped with these systems could be better suited for the technology if they feature easily moveable furniture and adjustable wall-mounted screens. Designers might consider patient and staff perceptions of EHR systems and workflows prior to implementation so that patient-centeredness and situational awareness can remain optimized.

#### The Knowledge Repository is a collaborative effort with our partners

Academy of  
Architecture for Health  
an AIA Knowledge Community



Design for Aging  
an AIA Knowledge Community



#### Additional key point summaries provided by:



RESEARCH DESIGN  
CONNECTIONS