



## KEY POINT SUMMARY

## OBJECTIVES

The study examined the influence of computers in patient exam rooms on patient-clinician communication.

## DESIGN IMPLICATIONS

Exam rooms should be designed so that patients and clinicians can simultaneously view the screens of computers in use.

## Effects of Exam-Room Computing on Clinician-Patient Communication: A Longitudinal Qualitative Study

Frankel, R., Altschuler, A., George, S., Kinsman, J, Jimison, H., Robertson, N, Hsu, J. 2005 | *Journal of General Internal Medicine* Volume 20, Issue 8, Pages 677-682

### Key Concepts/Context

Computers are becoming ubiquitous in patient exam rooms. This research investigated their influence on patient-clinician communication. Of particular interest is a discussion of how the spatial organization of the exam room can support patient-clinician communication. Best were arrangements in which patient and clinician were positioned basically shoulder to shoulder so each could simultaneously view the computer screen.

### Methods

In-exam room sessions of six physicians, two physician assistants, and one nurse with a total of 54 adult outpatients were videotaped at a prepaid, integrated primary care clinic. These sessions took place 1 month before in-exam room computers were installed and 1 and 7 months after their installation. The clinicians involved had been using computers with the same hardware and software at nurse stations and in their own private workplaces for 6 years before research began. The video footage collected was content analyzed, and themes related to the project reported were identified. Spatial organization of the exam room was one of the themes that influenced communication.

### Findings

Communication between patients and clinicians was most effective when computers could be positioned so that the clinician and the patient could both stand or both sit or one could stand and the other sit shoulder to shoulder and simultaneously see the information on the computer screen. This posture also allowed the clinician to easily pivot and make eye contact with the patient.



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Communication was operationalized as the clinician's apparent attention to the patient. Communication could be maintained verbally, visually, or posturally. The opposite of postural communication is clearest to define; it is the clinician having his or her back to the patient.

### Limitations

- Only outpatient primary care was observed.
- The organization had an established electronic medical record system that clinicians were familiar with—outcomes might have been different if the hardware or software were new.
- All data were collected at a single medical clinic.
- Clinicians and patients who participated in the study were not randomly selected.
- Most participants in the study reported that they were white.
- All data were collected in exam rooms. Office computers may have been used by some of the clinicians at other times for additional charting, etc.