Factors Affecting Physician-Patient Communication in the Medical Exam Room

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Moving towards future patient-centered healthcare requires increasing health literacy [1] and encouraging patients to take a more active role in their own care. Physician-patient communication is a key factor influencing health literacy for patients. Poor health literacy can lead to poorer medical outcomes for patients [2-4]. Thus, an important design goal of Electronic Medical Records (EMR) and other medical information technology should be to facilitate physician-patient communication and increase health literacy.

To better understand the dynamics of physician-patient communication, we conducted a study at a local community health center, which provides comprehensive medical care for low income and multi-ethnic patient populations, collecting video data from two Microsoft Kinect cameras during 12 medical exams. Of the 12 patients we studied, 6 required an interpreter to facilitate communication. We analyzed the data using ChronoViz [5], a visualization tool to code and analyze multimodal activity (talk, gesture, and movements of the body and head).

Using a Distributed Cognition framework, we observed how medical examination activity was distributed across individuals, artifacts, and technology, identifying three main factors that affect physician-patient communication: consequences of seating arrangement, interaction with the EMR and paper documents, and the interpreter’s access to the EMR and documents. We report a novel use of the EMR system as a communication tool by both physician and patient. However, interaction with the EMR was often awkward or difficult due to the layout of the room, EMR interface, and EMR positioning. In the case of interpreter-mediated communication, this interaction was not supported due to the interpreter’s inability to see the screen.

There is potential to redesign medical examination rooms and information technologies to create collaborative spaces that better support physician-patient communication, enhances patient understanding, and improve health literacy.

References