Understanding the Effect of Computer Use on Dental Provider-Patient Communication in a Dental Encounter

Onur Asan

Mentored by Amit Acharya, BDS, MS, PhD

Asan O. and Acharya A. Biomedical Informatics Research Center, Marshfield Clinic Research Foundation, Marshfield, WI

Background: In the early 21st century there has been a rapid influx of Information Technology (IT) into health care to facilitate record keeping and analysis of data. Such IT advances have helped healthcare providers, administrators, and insurance companies to determine data needs, as well as gather, store and analyze data, and report the information generated. However, health information technology use in the clinical setting has the potential to take the healthcare provider’s attention away from the patient, and profoundly affect provider-patient communication.

Methods: To understand how dental providers interact with electronic health records during the patient visit and how this interaction influences dental provider-patient communication, three forms of data were collected; observations, interviews and questionnaires. We observed 18 patient visits within 3 different dental clinics. In addition, we administered a patient survey after their dental appointment. The provider questionnaire consisted of an online survey administered to all 172 dental providers in Marshfield Clinic system. We also conducted interviews with 6 dentists, 6 hygienists and 6 dental assistants. Quantitative data was analyzed by descriptive statistics, and qualitative data will be analyzed by grounded theory to identify themes.

Results: Overall, patients gave higher satisfaction scores for communication skills of dental providers (> 3 out of 5). Patient surveys indicated that 69.1% of patients felt frustrated when the dentist used the computer during the visit and 48.3% when the assistants or hygienist used the computer. In addition, 58.9% of patients stated that dental provider computer use was distracting. Most of the patients also think that it is useful if the monitor is shared with them during the visit (69%). Moreover, 70% of dental providers think that EHR use during the consultation do not impede communication with the patients. Most of the hygienists and assistant think that EHR use makes the visit feel less personal (58%), although dentists do not think in the same way (20%). Most of the dental providers also think that sharing information through the monitor with patients is useful (69%), although 76% of dental providers have minimal or no monitor sharing with patients during visits.

Conclusions: This work is essential to inform both future electronic health records design and training programs that will help providers effectively integrate EHR use with patient communication.