The Evolvement of Physicians' Communication Behavior Induced by the Introduction of EMRs into Primary Care

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INTRODUCTION

EMR (Electronic Medical Records) implementation in primary care is continuingly growing around the world (Jha et al., 2008; Margalit et al., 2006). By 2008, Australia and Germany have reached a 90% EMR adoption rate, the Netherlands, New Zealand, the UK and Israel have reached close to 100% adoption rates. The US and Canada are behind with less than 30% EMR adoption rates in primary care.

Exam room computerization and more specifically, the introduction of EMRs into the medical encounter have transformed the dyadic relationship between physician and patient into a triadic one (Pearce et al., 2009, 2011, 2012), thus requiring physicians to alter their attention between the patient and the computer. This new dynamics of the medical encounter raise the question if, and how, has exam room computing altered physicians' communication behaviors and as a result, affected patient-physician communication?

The communication behaviors required from physicians and necessary for executing a well preformed interview have been widely discussed in the literature and include various typologies of general communication styles as well as supporting communication skills. Following the computerization of the exam room, these behaviors have changed and research has begun to describe physicians' communication

behaviors during EMR use. Communication skills during the medical encounter have been recognized in the U.S. by the Accreditation Council for Graduate Medical Education (ACGME), as a core competency required for physicians' graduation. Thus a need for re-examination of the communication skills required during EMR use has surfaced.

This article offers an overview of research addressing physicians' communication styles and skills during the medical encounter, and how these have evolved since the introduction of EMRs as an integral part of the medical encounter in primary care. This overview attempts to find out the skills necessary for carrying out a patient centered medical encounter while using the computer. As research on physicians' communication behaviors during EMR use has not reached its full potential, we will show that there is scarce literature containing guidelines and best practices for effective incorporation of EMRs into the medical encounter while maintaining patient-centered and relationship-centered care. We find that it is important to discuss and obtain a better understanding of this triadic patient-physician-computer relationship in order to find out how computers and information systems can be incorporated in healthcare-related encounters so that their benefits to healthcare quality are maximized. Moreover, by enhancing understanding of the nature of the medical encounter, the importance of communication and the

effects of the EMR on communication, EMR systems can be better designed to fit and support communication as well as clinical tasks.

BACKGROUND

The physician-patient relationship is one of the most complex inter-personal relationships (Ong et al., 1995). This complexity can be attributed to several factors: first, the relationship is held between individuals that are by definition not in equal positions; second, the relationship is not necessarily a voluntary one (Chaitchik et al., 1992); third, the physician-patient relationship is very much led by emotion and concern for issues of vital importance (Ong et al., 1995). Researchers in the medical communication literature suggest that physicians show distinct and apparent communication behavioral patterns (Frankel & Stein, 1999) which have different effects on the relationship and communication established during the medical encounter. Analyzing these behaviors can lead to understanding how they influence various components of the medical encounter as well as medical outcomes such as: patient satisfaction, patient behaviors and well-being, patient adherence to physician instructions, building rapport with the patient, etc. Recognizing behaviors that are considered more effective and that may lead to positive outcomes provides an opportunity for formulating recommendations for improving physicians' communication with patients during the medical encounter (Roter & Hall, 2006).

MAIN FOCUS OF THE ARTICLE

Issues, Controversies, Problems

Communication Frameworks for Organizing the Medical Encounter

Physicians in the US conduct approximately 120,000-160,000 interviews throughout their career (Stein et al., 2005), making the medical interview one of the physician's most commonly performed task (Epstein et al., 1993). The literature on physician-patient communication is unanimous on the fact that the relationship established between physician and patient during the medical encounter is the heart of medicine since it affects the flow of knowledge and understanding that are necessary for a successful and therapeutic medical encounter (Epstein et al., 1993; McGrath, 2007: Pearce et al., 2009; Ventres & Frankel, 2010). Recognizing the importance of patient-physician communication, organizations such as the Institute of Medicine, the Accreditation Council for Medical Education (ACGME) and the American Board of Internal Medicine, require medical students as of 2004 to demonstrate communication competencies in order to receive their certifications (Frankel et al., 2005; Stein et al., 2005).

According to the biopsychosocial model, physicians must view the patient within a larger context, that of family and community rather than purely biomedical. Engel (1977) suggests that physicians must "listen with both ears," meaning listening to and interpreting the patient in both the biomedical context and the psychosocial context, e.g., social aspects and circumstances of the patient's life. Though Engel's writings on the biopsychosocial model have served as the baseline for educational objectives in family medicine, it is still difficult to put into practice. Too often medical education places most of the weight on the biomedical aspects of the encounter and the result is that physicians and students tend to ignore the psychosocial aspects (Epstein et al., 1993). In addition to calling for a shift from the biomedical to the biopsycosocial approach, medical educators have been calling recently for a shift from patient centered care to relationship centered care (Frankel et al., 2005; Stein et al., 2005).

The following sections describe three main approaches which specify the skills necessary for carrying out a successful interview and establishing effective physician-patient communication. The first approach is the three function model (Bird & Cohen-Cole, 1990), the four habits model (Frankel & Stein, 1999), and the SEGUE framework (Makoul, 2001).

The Three Function Model of the Medical Interview

The three function model developed by Bird & Cohen-Cole (1990) highlights three core functions or outcomes of the medical encounter. Each of the three functions includes basic skills: (1) gathering data to understand the patient. This function requires skills such as: using open-ended questions, using an open-to-closed cone of questioning to progressively narrow the focus of the narrative and surveying for new problems; (2) developing rapport and responding to patient's emotions. This function requires skills such as: recognizing and

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