

# Exploring the Benefits of Web 2.0 for Healthcare in Improving Doctor–Patient Relationship

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## INTRODUCTION

One of the defining characteristics of Web 2.0 is the phenomenon that the creator and the visitors of the webpage often work together to co-create and consume a wide variety of content (O'Reiley, 2007). Web log, or blog, is among the most popular Web 2.0 services and is rapidly receiving managers' attention as a viable vehicle for communicating important messages among business constituencies. According to recent surveys on the state of blogosphere from blog tracking websites such as Wikipedia, Wordpress, Blogger, and Technorati, not only the numbers of blog writers and blog readers are still experiencing exponential growth rates and have reached multiple hundred million entries, the nature of the content and the purposes of blogging have also been expanded to cross far beyond the simple role of online journals as perceived a few years earlier. A specialized website tracking the blogosphere revealed that as much as 81% of U.S. online consumers trust information and advice from blogs (social4retail.com). The level of content diversity that characterizes the blogosphere is so high that many organizations either are currently using or actively experimenting with blogs to establish a convenient external communication platform. Some researchers even refer to blogs, along with other Web 2.0 services, as a new class of disruptive technology that promises to significantly impact many aspects of business decision making (McAfee, 2006; Bonabeau, 2009).

A highly specialized knowledge-intensive service industry, healthcare has long faced a multitude of problems, including rising operational costs and patient frustration. In striving to improve service quality and worker productivity, medical professionals have looked to a variety of information and knowledge technologies for powerful solutions in coping with these problems. Well-known examples of the technological solutions include automatic record keeping, patient monitoring systems, and just-in-time knowledge delivery (Davenport & Glaser, 2002; Pendleton & Hasler, 1983). Most of the efforts, however, have been focused on improving internal work practices to enhance service quality and increase resource utilization efficiency.

Whereas personnel productivity and efficient resource allocation within the healthcare institution are important internal measures of operational excellence, patient satisfaction is an important external measure of organizational success. Much research in marketing and information systems has revealed the significant impact of customer relationship management practices on customer satisfaction (e.g., Lee, et al., 2006; Jih & Lee, 2010). A common finding of these studies is the central role of quality relationship in ensuring customer satisfaction. In healthcare, the lack of trusting relationship between patients and medical personnel has also been identified as a source of other perception-related problems occurring in the process of medical service delivery and consumption (Pendleton & Hasler, 1983). Since effective and in-depth communication is essential in building and nurturing a trusting relationship in general and a patient–physician relationship in particular, healthcare personnel must improve their com-

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munication with patients on important concerns regarding illness symptoms, treatment options, and other healthcare-related issues - an important task in the service delivery process. Effective communication is instrumental in forming a shared mental model between the participants, which in turn helps with reduction of anxiety resulting from the lack of information and distrust. Therefore, quality relationship is more likely to be developed through a relationship learning process driven by effective communication (Selnes and Sallis, 2003).

Among other means of communication, blog sites can be employed to provide a communication space for patients and physicians to communicate about medical concerns. In addition to posting on the blog sites information deemed useful for the patients, physicians can converse with their patients by responding to their questions. Patients can share their experience with each other and thus benefit from community support. Given the ever-increasing demand for medical knowledge and the continual advancement of Web 2.0 capabilities, it can be expected that medical blogs will continue to increase in both number and content depth in the near future. What remains to be answered, however, is the question of how effective these medical blogs are in helping patients as well as physicians improve the quality of their mutual relationship.

Based on the premise that quality of relationship between patients and physicians is a crucial foundation for an effective medical service delivery/consumption process, this research was conducted to explore how effectively our medical blog serves as a communication vehicle for enhancing relationship quality. Inspired by the literature in Web 2.0 services, information systems, marketing and consumer behavior, we formulated a research framework to serve as a conceptual guidance for further exploration of significant determinants of relationship quality. The framework links relationship quality to relationship learning, blog visit experience, and the website's relationship management practices. An online questionnaire was constructed based on this framework. The main purpose of the research is to determine if the blog site's customer (or patient) relationship management practice and patients' visit experience have significant effects on relationship quality. We also evaluated the impact of the blog site's customer (or patient) relationship management practice and patients' visit experience on relationship learning.

The remainder of the paper first briefly reviews existing literature pertaining to our research and describes the logical connection of the research constructs. The conceptual framework developed to guide data collection and analysis for this study is then presented along with the research hypotheses. This is followed by data analysis and research findings. The last section summarizes the research, discusses application implications of the findings, and suggests opportunities for further research.

## BACKGROUND LITERATURE

Effective applications of information technology to accomplish important business goals, such as enhancing customer relationship quality, require creative customer-oriented thinking on the part of product/service providers. Other than speedy and accurate transaction processing, customers also benefit from high quality, context-specific information for problem solving and decision making. The operational aspect of customer relationship management (CRM), therefore, hinges on how well the company collects, disseminates, and responds to market and service-related information (Min, et al., 2002; Jih & Lee, 2010). To further explain the theoretical foundation underpinning this research, the rest of this section reviews the literature on relationship quality, relationship learning, blog visit experience, and Internet-mediated CRM, or IMO as termed by Min, et al. (2002).

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