Chapter 7.9
Integrating Telehealth into the Organization's Work System

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ABSTRACT

With increased use of telehealth to provide health-care services, bringing telehealth technology out of experimental settings into real life settings, it is imperative to gain a deeper understanding of mechanisms underlying the assimilation of tele-heath systems. Yet, there is little understanding of how information systems are assimilated by organizations, more work is then warranted to understand how telehealth can be integrated into administrative and clinical practices and to identify factors that may impinge onto telehealth integration. Borrowing from institutional, structural and organizational learning theories, the authors develop a multilevel model for understanding assimilation of telehealth systems. Their study addresses limitations of past work and will be helpful for guiding research and managerial actions while integrating telehealth in the workplace.

INTRODUCTION

Telehealth has emerged as a key strategy for providing healthcare services to underserved or difficult-to-serve populations and low-cost specialty services to areas where full-time staffing would be uneconomical. It is expected to provide many other benefits such as shortening the time-frame for decision-making related to diagnosis and treatment, cutting emergency transfer costs, reducing expenses for patient travel from remote regions to healthcare service points, reducing delays in providing healthcare, promoting continuous healthcare, and attracting and retaining clinicians in remote regions.

However, the experience with telehealth has not always been positive, for many reasons: lack of acceptance by physicians, poor-quality technology (e.g., low resolution video data), and premature funding termination (Bashur, Sanders and Shannon, 1997). Although some of these limitations have been resolved recently, additional problems have emerged such as legal issues pertaining to professional liability and cross-province licensing; safety guidelines and standards regarding interconnectivity and interoperability; and the privacy, security and confidentiality of individually identifiable health information (DHSS, 2001).

Despite these barriers, governments keep funding telehealth projects and programs. Motivated by the collective performance of such programs in terms of clinical value and technical feasibility, governments are trying to integrate telehealth into the mainstream clinical care system. This concern, which seems a priori to be related to management, is also technological in nature, given the central role of information technologies in telehealth projects. Incorporating telehealth into the health-care system means inserting telehealth systems into clinical and administrative routines and integrating them into the technological and information architecture.

As a result, integration calls for adjustments not only to healthcare organizations' administrative and clinical routines (Saga and Zmud, 1994) but also to their work systems and technological configurations (Chatterjee and Segars, 2001; Keen and McDonald, 2000; Cooper and Zmud, 1990; Kwon, 1987). Indeed, to be truly valuable, telehealth systems not only need be accepted but also must be smoothly assimilated (routinized and infused) into existing routines, as well as into clinical and administrative functions (Zmud and Apple, 1992; The Lewin Group, 2000). Many experts recognize that the most effective telehealth programs are those that are most seamlessly integrated into current clinical and business practice and that can operate on their own in the absence

of outside funding (Akerman, 2000). Their success should be measured by the extent to which they are no longer stand-alone applications (Grigsby, Schlenker, Kaehny, Shaughnessy and Sandberg, 1995).

Thus, the assimilation of telehealth systems may not be as smooth as we would wish, as The Lewin Group Report states: "Unlike most new technologies that diffuse smoothly into health care delivery, implementing telemedicine systems and teleconsultation in particular, often presents departures from standard means of health care delivery, administration and financing" (2000, p.21). Therefore, understanding the mechanisms whereby telehealth systems are assimilated and the factors that influence this process is a matter of vital importance in both theory and practice. Little is known, however, about the process of telehealth systems assimilation and the enabling and impeding factors since most studies to date have focused on user acceptance and adoption; little has been said on what happens after the initial adoption decision has been taken.

In addition to being understudied in the literature on information systems, this phenomenon suffers from a lack of theorization. Consequently, the aim of this chapter is twofold. First, it is intended to enrich our understanding of the process of technology assimilation by making both its dimensions and the underlying mechanisms more explicit. As well, it uses this understanding as a basis for identifying factors that could potentially influence assimilation. Thus, this chapter attempts to add to our knowledge of assimilation of large-scale information systems in healthcare settings. Telehealth constitutes a new field for experimentation involving information technologies. It also provides a new context of study, given the specificities of the healthcare milieu in terms of organization, culture and professional practices. Due to their highly complex nature, healthcare organizations allow us to extend, propose and test theories that go beyond our current understanding of informa-

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