Title:
Factors Associated With the Successful Implementation of Telehealth in a Retail Health Clinic

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Telehealth
Slot:
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11:35 AM

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Implementation Science, Retail Health and Telehealth

References:
Benbasat, I., & Moore, G. (2014). Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information Systems Research*, *2*(3), 192-222.

Bradshaw, M.J., & Lowenstein, A.J. (2014). Innovative teaching strategies in nursing. (6th ed.). Boston, MA: Jones & Bartlett Learning Books.

Rogers, E. (2002). Diffusion of preventative innovations. *Addictive Behaviors*, *27*, 989-993.

Rogers, E. (2003). *Diffusion of innovations* (5th ed.). New York: The Free Press/ Simon & Schuster.

Rogers, A., Kirk, S., Gately, C., May, C., & Finch, T. (2011). Established users and the making of telecare work in long term condition management: implications for health policy. *Social Science and Medicine*, 72, 1077- 1084. doi:10.1016/j.socscimed.2011.01.031.1084.

Rycroft-Malone, J. (2004). The PARiHS framework- for guiding the implementation of evidence based practice. *Journal of Nursing Care Quality*, *19*(4), 297-304.

Abstract Summary:

Is telehealth replacing the conventional medical office visit? What are the barriers and facilitators to this new technology? Attendees will discover how to lead their organizations through a telehealth implementation process.

Learning Activity:

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
1. Describe Diffusion of Innovation theory and its relation to adoption.	I. Diffusion of Innovations Theory Stages: Innovators, Early Adopters, Early Majority, Later Majority, Laggards.
2. Identify the characteristics that determine the rate of adoption.	II. Characteristics that determine the rate of adoption: Voluntariness, Relative Advantage, Compatability, Image, Ease of Use, Result Demonstrability, Visibility, Trialability.
3. Distinguish between barriers and facilitators of an innovation.	III. ROL Barriers to Innovation: apprehension, cost, knowledge deficits, intrusive equipment, confidentiality, organization misfit. ROL Facilitators to Innovation: cost savings, patient self-efficacy, reduced disease process and long-term health burden, increased rural care access, organizational support.
4. Argue the clinical implications of adoption within your healthcare setting.	IV. Clinical Implications for Practice Change: leadership, champions, peer review, role play.

Abstract Text:

Purpose:

The purpose of this presentation is to identify the factors that influence adoption of telehealth in a retail health clinic setting.

Methods:

A cross-sectional design was employed to address project aims. Nurse practitioners and licensed vocational nurses from four southern California counties completed an online Likert scale survey in fall 2014, which included demographic items as well as a telehealth adoption tool adapted from the Instrument to Measure Perceptions of Adopting an Information Technology Innovation (Benbasat & Moore, 2014). This instrument measures five diffusion of innovations theory (DIT) constructs (relative advantage, compatibility, trialability, observability, complexity) as well as result demonstrability, voluntariness, and image (Benbasat & Moore, 2014). Three open-ended questions were also included. The DIT and Promoting Action on Research Implementation in Health Services model (PARiSH) provided theoretical and conceptual foundations for this project (Rycroft-Malone, 2013).

Results:

A convenience sample of sixty-three nurses from the retail health organization completed the survey (response rate 68%). Of these, 43% worked in high-adoption counties (regions achieving 77% of all telehealth visits). High adopters and low adopters (those underutilizing the innovation of telehealth) did not differ in terms of years of experience, levels of education, and months on telehealth at baseline.

Two questions related to the construct of voluntariness were significantly associated with telehealth adoption. For the question, “Although it might be helpful, using telehealth is compulsory in my job,” there was a ten-fold difference between high adopters and low adopters ($\chi 2 = 18.911$, $p < .0001$). For the question, “My boss requires me to use telehealth,” the high adopters were five times as likely to agree with this statement as the low adopters. Clearly, there was a difference between high and low adopters in the views related to voluntariness.

The construct of voluntariness assumes that adoption could be viewed either as voluntary or compulsory, and that there may be a higher adoption rate if a person is free to choose whether to use it or not (Rogers, 2002). In this sample, all the nurses were informed that telehealth was a mandatory requirement for employment. However, 91.9% of the low adopters believed it to be “voluntary” rather than mandatory. Freedom of choice provides the adopter with control and the desire, therefore, to achieve success.

Furthermore, the company may “expect” an employee to use an innovation, but the employee’s perception may be that it is “voluntary,” as the example above shows. The fact that the company believes it to be compulsory does not ensure that the employee will view it in the same way. In addition, the literature suggests that voluntariness may be perceived differently by individuals of certain social statuses, which may depend on one’s professional role within an organization (Benbasat & Moore, 2014; Rogers, 2003).

Two items reflecting compatibility were statistically associated with telehealth adoption. Both questions reflect an individual’s perception that telehealth is consistent with their needs, current existing beliefs or values, and past experiences (Rogers, 2002). Although these quantitative results yielded a negative compatibility, the qualitative responses (discussed below) showed the opposite. Low adopters were three times as likely to disagree with the statement ($\chi 2 = 5.360$, $p = 0.024$), “I think that using telehealth fits well with the way I like to work,” and four times as likely to disagree with the statement, “Using telehealth fits into my work style,” as high adopters.

Within the qualitative data, the free-text questions provided insight into other aspects of compatibility. The perceived loss of patient contact that occurs with telehealth was viewed as a barrier to adoption. Several nurses stated that they felt patient interaction was compromised during a visit. However, in a telehealth visit, the patient becomes an active participant in their care, thus improving interactions and communication. When the patient can visualize his/her own disease process via pictures, numbers, or trends on a screen, s/he may become more visually aware of his/her own health, and this may improve adherence to their treatment regimen (Rogers et al., 2011). This can increase both clinicians’ and patients’ satisfaction, improve daily work flow, as well as reduce the health-care dollars spent.

Conclusion:

To improve the adoption of telehealth in the future, it is important to identify strategies to improve perceived voluntariness. One suggestion is to have managers regularly visiting low-adoption clinics to ensure that telehealth is being offered to all the appropriate patients, as per company protocols. Due to the logistical constraints that managers face, however, they might consider appointing telehealth champions–both LVNs and NPs–who excel in the operation of telehealth (based on excellent customer service scores and on practice in a high-adoption region). According to Bradshaw and Lowenstein (2014), students respond best to clinicians who exhibit passion for their work, including commitment, trust, collaboration, caring, and achievement.

The Diffusion of Innovations theory suggests that early adopters have more positive perceptions of innovations than the non-adopters (Rogers, 2002). Since diffusion is a process by which an innovation is communicated through certain channels over time among members of a social system, the messages being communicated require attention (Rogers, 2002). This diffusion or spread of messages also introduces an element of uncertainty both to the individuals and the organization as they must digest new ideas that represent proposed innovations. Innovations spread at different rates and it is the

characteristics of an innovation, as perceived by the individuals in the social system, that truly influence the rate of adoption.

In this project, the idea that it is an individual's choice to utilize telehealth, despite the company's expectation, was a strong predictor of adoption. It is important to recognize the construct of compatibility to continue to nurture team support (between the LVNs and NPs) and to monitor the compatibility of work flow. Based on the evidence gathered, successful implementation strategies can be developed and generalized to other similar settings.