

Chapter 4.3

Electronic Medical Records: TAM, UTAUT, and Culture

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ABSTRACT

Many policymakers, industry experts, and medical practitioners contend that the U.S. health care system—in both the public and private sectors—is in crisis. Among the numerous policy issues associated with the provision of US healthcare is the call for increased adoption and use of health care information technology (HIT) to address structural inefficiencies and care quality issues [11, p. 33]. This paper reports the first steps in a multi-phased research effort into Electronic Medical Records system adoption. The first two phases of our research applies the Unified Theory of Acceptance and Use of Technology as a lens to interpret the responses of physicians completing their Residency in Family Medicine and the third phase examines the role of organizational culture as a critical variable for effective strategy implementation in the same setting

INTRODUCTION

The 2005 Government Accountability Office (GAO) (2005) report, 21st Century Challenges: Reexamining the Base of the Federal Government, was intended to identify critical issues and potential options for addressing key fiscal challenges facing the federal government; the GAO identified healthcare as one of the most critical issues facing federal policy makers. Among the numerous policy issues associated with the provision of US healthcare is the call for increased adoption and use of health care information technology (HIT) to address structural inefficiencies and care quality issues plaguing the US health care industry (GAO, 2005). Multiple clinical and administrative benefits have been identified with the adoption of HIT generally and EMR systems specifically. Yet the health care industry remains a laggard in IT

adoption relative to other industries (Burke, D. E., & Menachemi, N., 2004).

The United States federal government is actively encouraging the development of “a nationwide interoperable health information technology infrastructure that:

- a. Ensures that appropriate information to guide medical decisions is available at the time and place of care;
- b. Improves health care quality, reduces medical errors, and advances the delivery of appropriate, evidence-based medical care;
- c. Reduces health care costs resulting from inefficiency, medical errors, inappropriate care, and incomplete information;
- d. Promotes a more effective marketplace, greater competition, and increased choice through the wider availability of accurate information on health care costs, quality, and outcomes;
- e. Improves the coordination of care and information among hospitals, laboratories, physician offices, and other ambulatory care providers through an effective infrastructure for the secure and authorized exchange of health care information; and
- f. Ensures that patients’ individually identifiable health information is secure and protected.

Thus, a key objective of federal policy is to achieve widespread adoption of EMR within the next 10 years (Department of Health and Human Services, 2004).

This paper reports the first steps in a multi-phased research effort seeking to:

- Assess new physician residents’ beliefs, attitudes and perceived group norms concerning EMR use within their residency, using UTAUT (Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D., 2003)..

- Identify HIT related education and training provided by medical schools and residency programs, and its impact on future career choices.
- Evaluate the role of culture as a value added support strategy in assessing the match between mission and vision, and organization priorities.
- We employed both qualitative and quantitative data collection and analysis to provide what we believe to be a richer understanding of the role of the Unified Theory of Acceptance and Use of Technology (UTAUT) and the role of culture in the adoption of HIT.

THEORETICAL FRAMEWORKS

The Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT)

TAM has been the dominant theoretical approach for studying individual IT adoption and use and has spawned an incredibly rich and widely cited stream of theoretical and empirical research (Lucas Jr., H. C., Swanson, E. B., & Zmud, R. E., 2007; Benbasat, I., & Barki, H., 2007; Straub Jr., D. W., & Burton-Jones, A., 2007). TAM is an information systems theory that models how users come to accept and use technology: the main dependent constructs are behavior intention to use and system usage. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it, specifically Perceived usefulness and Perceived ease of use (Wikipedia, 2008). TAM is a derivation of Ajzen and Fishbein’s Theory of Reasoned Action (TRA) and assumes that “when someone forms an intention to act, that they will be free to act without limitation (Bagozzi, R. P., Davis, F. D.,

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