

Understanding Critical Barriers that Impact Collaborative Doctor-Patient Workflow

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Abstract— *Advances in technology coupled with the US government mandate for healthcare providers to migrate to electronic health records (EHR) has provided opportunities for expanded information exchange between doctors and patients. The promise of more effective collaboration between all parties using EHRs is often compromised due to a variety of barriers that minimize the value of an integrated workflow. Understanding barriers that impact effective doctor-patient collaboration is critical to improving the workflow and wide-scale adoption. This session will explore a method to quantify the “collaboration space” between doctors and patients and the exchange of information associated with electronic health information.*

I. INTRODUCTION

The healthcare industry looks to patient-centered care as a key solution to help balance the rising cost of healthcare while providing more targeted care. The patient-centered healthcare approach, assumes expanded participation and collaboration by doctors and patients yet is riddled with gaps in the processes, technology, and human computer interaction necessary for optimum workflow. Understanding the barriers to collaboration for both doctors and patients can pave the way for system designers and developers to address the gaps necessary to deliver effective HIT workflow. The session will highlight initial research in the current-state workflow between doctors-patients using a hypertension out-patient example compared to a future-state workflow using a collaborative platform developed to enhance the timely interaction between doctors and patients. This research leverages the “Collaboration Space Model [2] (Figure 1.) as a means to better qualify and quantify specific barriers to effective collaboration.

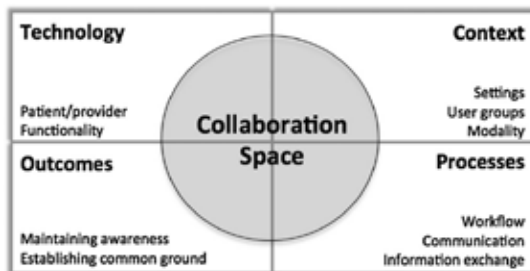


Figure 2: Collaborative Space Model, Eikey, E., et al. (2015) [5]

This session will focus on identifying barriers to effective collaboration between doctors and patients using electronic health information. The research will leverage the Eikey, et al. [2] collaborative space model as a basis framework for research, testing, and analysis of doctor-patient collaboration.

The collaboration space model [2] provides a model to further investigate the critical dynamics of collaboration in HIT. The collaboration space model consists of 4 key components: (1) Context, (2) Outcomes, (3) Technology, (4) Process. Each of these four collaborative components, when properly defined and integrated, provide a comprehensive HIT collaboration framework that can be used to drive streamlined HIT workflow with the aim of a more tightly integrated systems that enables better collaboration of all parties.

This research has extended the CSM for field deployment in the form of a CSM-Analysis Framework (Figure 2). This framework will apply three components of the Technology Acceptance Model (External Variable, Perceived Usefulness, and Perceived Ease of Use) [1] in conjunction with Value Stream Mapping (VSM) of the current-state workflow to identify doctor-patient collaboration barriers [3]. The research will incorporate the Collaborative Space Model with the first three elements in the Technology Adoption Model, and Value Stream Mapping methodology to form the CSM-Analysis Framework (Figure 2).

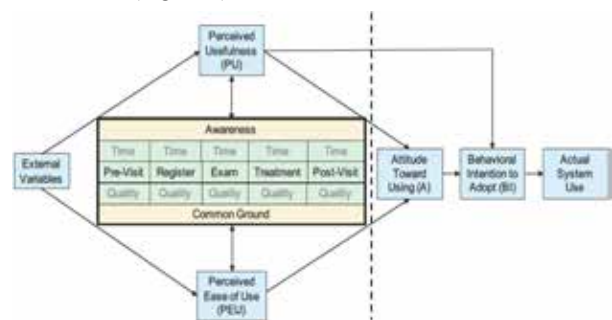


Figure 3: CSM - Analysis Framework

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