

MISQ Archivist

CPOE-Enabled Coordination: Appropriation for Deep Structure Use and Impacts on Patient Outcomes

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Abstract

In the United States, the Centers for Medicare & Medicaid Services (CMS) has begun instituting pay-for-performance incentives that reward hospitals based on patient-centric outcomes such as patient satisfaction. Further, to promote the “meaningful use” of health information technology (HIT), CMS has been prompting hospitals to adopt and use HITs. Computerized Provider Order Entry (CPOE) is one such HIT and is designed to improve coordination in *patient care teams* and consequently patient outcomes. We explore the impact of CPOE-enabled coordination on patient satisfaction with the care team. In a departure from prior research that has tended to treat the team as *all* clinicians within a hospital unit/clinic, we conceptualize (and operationalize) patient care teams as ad hoc and patient-specific and thus comprised of those clinicians having direct contact with the patient. In a further departure from prior research that has employed lean measures of IS use (e.g., use intentions, duration, or frequency of use), we respond to the call for rich measures of IS use by conceptualizing deep structure use (DSU) of CPOE as patient care team-level usage of CPOE *features*.

We draw upon adaptive structuration theory (AST) to identify faithfulness of appropriation (FOA) and consensus on appropriation (COA) as two related, but distinct, aspects of CPOE appropriation by patient care teams that affect DSU. We also draw on relational coordination theory to conceptualize communicative coordination (CC) as team communication for coordination purposes and theorize that DSU affects patient satisfaction through CC and informing the patient differentially across high/low patient mortality risk conditions.

Based on data from 224 patient care teams caring for both low and high patient mortality risk conditions, our results indicate that FOA and COA are salient predictors of DSU, and that the effect of COA on DSU is mediated by FOA. We also observed a significant indirect effect of DSU on patient satisfaction (as mediated by communicative coordination and patient informing), but only for high patient mortality risk conditions. Our findings are important because they show that by using CPOE in a comprehensive manner, patient care team members are better able to coordinate patient care and are able to better inform the patient about their care, ultimately leading to improved PATSAT. Additional implications for HIT research and practice are discussed.

Keywords: CPOE adoption, adaptive structuration theory, deep structure use, relational coordination, patient satisfaction