

Understanding the Organizational Learning and Financial Impact of Adverse Events in Massachusetts

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By
Katherine T. Fillo, MPH, MA

Adverse events, errors that are caused by medical management, not only compromise patient safety; they also increase the cost of care delivery. Estimates of the prevalence of these events vary and have not been well documented; the Office of the Inspector General asserted that 13.5% of Medicare patients experience an adverse event during a hospitalization (2010) while the Institute of Medicine reported that nationally as many as 92,000 individuals die each year from these events (1999). Preventable adverse events have been estimated to cost at least \$17 billion annually in the United States (IOM, 1999).

Using an evidence base, the National Quality Forum, a nonprofit quality organization with strong ties to the federal government, developed a list of 29 measurable adverse events called serious reportable events (SREs). Since 2008 acute care hospitals in Massachusetts have been required by statute to notify the Commonwealth's Department of Public Health (DPH) when a SRE occurs in their facility. As part of this notification, hospitals submit a report that describes the event, summarizes the root cause analysis that they have conducted, provides a preventability determination and offers corrective actions. The reports shared with the DPH vary greatly in the preventability determination and in the number and nature of proposed corrective actions, even with the same type of SRE. This variation in hospital responses has not been studied. This dissertation study will use absorptive capacity theory and resource dependence theory to understand if this variation is a reflection of a hospital's capacity to learn from an event, the resources that are both available to the facility or at risk, or a combination of these factors. It is hypothesized that acute care hospitals depend upon the financial resources of insurers and consistent patient volume, however, an adverse event may jeopardize these resources and so hospitals must learn as an organization to minimize these events (Pfeffer & Salancik, 2003). Hospitals can gain the necessary knowledge through the acquisition, assimilation, transformation or exploitation of it (Zahra & George, 2002) but they must then apply it in order to prevent a similar adverse event from occurring in the future.

In order to understand how acute care hospitals respond to adverse events, this dissertation study employs a mixed methods approach to analyze the database of the most recent three years of hospital SRE reports to: (1) identify both individual and organizational characteristics that make an individual more likely to experience an adverse event during a hospital encounter through the construction of a rare events logit model (King & Zeng, 2001); (2) investigate the spectrum of organizational learning using content analysis to categorize themes, and (3) calculate the direct costs of adverse events per hospital encounter and in the aggregate using the All Payer Claims Database to model propensity score matching.

