

Risk Adjusting Measures of Patient Harm

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Public reporting of health care quality is endorsed as a means to improve performance and a basis for differential payments (pay for performance). Patient safety, an important component of quality health care, has received much attention since the Institute of Medicine report projected that almost 100,000 lives per year were lost to medical misadventures. However, the field of patient safety is relatively young and consensus has not been reached on common measures. Furthermore, like other health care outcomes, measures related to patient safety are influenced by patient characteristics and may need to be risk-adjusted to provide valid conclusions.

This study examined several issues related to the measurement and reporting of patient safety events and their sequelae. Using information from Mayo Clinic hospitals in Rochester, Minnesota, the effects of pre-existing severity of illness and underlying comorbidities on the identification, extent of harm and incremental resource consumption from adverse patient safety events were examined. Patients admitted to the hospital at higher levels of severity of illness and with more comorbidities were at higher risk of patient safety events as measured through reported events, Patient Safety Indicators (PSI) or global trigger tools. These relationships persist after adjusting for age, gender and other patient factors, except that the effect of comorbidity on PSI was significantly negative when simultaneously considering severity. Incremental costs of adverse events were also significantly associated with admission severity of illness, but not comorbidity. Public reporting of safety measures including complications and events needs to incorporate severity of illness measures.