

# MISQ Archivist

## Patient–Provider Engagement and its Impact on Health Outcomes: A Longitudinal Study of Patient Portal Use

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### Abstract

Hospitalization of patients with chronic diseases poses a significant burden on the healthcare system. Frequent hospitalization can be partially attributed to the failure of healthcare providers to engage effectively with their patients. Recently, patient portals have become popular as information technology (IT) platforms that provide patients with online access to their medical records and help them engage effectively with healthcare providers. Despite the popularity of these portals, there is a paucity of research on the impact of patient–provider engagement on patients’ health outcomes. Drawing on the theory of effective use, we examine the association between portal use and the incidence of subsequent patient hospitalizations, based on a unique, longitudinal dataset of patients’ portal use, across a 12 year period at a large academic medical center in North Texas. Our results indicate that portal use is associated with improvements in patient health outcomes along multiple dimensions, including the frequency of hospital and emergency visits, readmission risk, and length of stay. This is one of the first studies to conduct a large-scale, longitudinal analysis of a health IT system and its effect on individual-level health outcomes. Our results highlight the need for technologies that can improve patient–provider engagement and improve overall health outcomes for chronic disease management.

**Keywords:** Patient portals, electronic health records, health outcomes, congestive heart failure, patient-provider engagement