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The number of inpatient consultations is negatively correlated with patient satisfaction in patients with prolonged hospital stays

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Abstract

BACKGROUND: Patient satisfaction is often measured using the Hospital Consumer Assessment of Healthcare Providers and Systems survey. Our aim was to examine the structural and clinical determinants of satisfaction among inpatients with prolonged lengths of stays (LOS).

METHODS: Adult patients who were admitted between 2009 and 2012, had a LOS of 21 days or more, and completed the Hospital Consumer Assessment of Healthcare Providers and Systems survey, were included. Univariate analyses assessed the relationship between satisfaction and patient/system variables. Recursive partitioning was used to examine the relative importance of the identified variables.

RESULTS: One hundred one patients met inclusion criteria. The average LOS was 35 days and 58% were admitted to a surgical service. Satisfaction with physician communication was significantly associated with fewer consultations ($P < .01$), nonoperative admission ($P < .001$), no intensive care unit stay ($P < .01$), nonsurgical service ($P < .01$), and non-emergency room admissions ($P = .03$). Among these, having fewer consultations had the highest relative importance.

CONCLUSIONS: In long stay patients, having fewer inpatient consultations was the strongest predictor of patient satisfaction with physician communication. This suggests that examination of patient-level data in clinically relevant subgroups may be a useful way to identify targets for quality improvement.

With the 2001 Institute of Medicine's (IOM) landmark report Crossing the Quality Chasm, patient-centered care has been prominently emphasized as one of the pillars of high-quality health care.[1] Several critical national efforts focused on patient-centered care began, including the establishment of the Patient-Centered Outcomes Research Institute, and the incorporation of patient satisfaction data, as measured by the Hospital Consumer Assessment of Healthcare Services (HCAHPS) survey, into the standard metrics used to compare hospital services by the Hospital Quality Alliance program.

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Authors Ryan K Schmocker, M.D. and Emily R. Winslow, M.D. had full access to all the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

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The HCAHPS survey was developed jointly by the Center for Medicare and Medicaid Services (CMS) and the Agency for Healthcare Research and Quality beginning in 2002. After testing, rigorous review and initial implementation by CMS, the 1st set of national HCAHPS data became publically available in 2008 and accessible on the Hcahpsonline.org website.[2] Since that time, hospitals have been required to collect HCAHPS data, and the results are now incorporated into patient experience measures used in CMS′ reimbursement formulas.[3]

Although the broad use of the HCAHPS survey has brought focus to the area of patient satisfaction, the important distinction between a hospital's HCAHPS survey ranking and its provision of patient-centered care has been blurred.[4] As defined by the Institute of Medicine, patient-centered care is responsive to the needs, values, and expressed preferences of the individual patient.[1] It has previously been shown in a study examining 1.2 million HCAHPS survey results, that although adjusted hospital scores measure distinctions in quality for the average patient, there is significant variability in hospital performance when specific patient subgroups are examined.[4] This group and others concluded that the best hospitals for most patients are not necessarily the best ones for all patients.[5] Further research that examines patient satisfaction for specific patient subgroups is therefore important.

The aim of our study was to evaluate the determinants of patient satisfaction in 1 such specific subgroup—patients with prolonged lengths of stay (LOS). This subgroup was targeted for detailed analysis because of their unique position among inpatients. Patients with prolonged LOS have accumulated an adequate length of hospital experience to provide a more longitudinal assessment of satisfaction. Specifically, they experience some aspects of the structural processes of inpatient care (eg, transitions in care) that cannot be experienced by those with shorter stays.[6,7] Because physician discontinuity and physician communication has previously been shown to negatively impact patient satisfaction, patients with prolonged hospital stays are the best barometers of how these challenges are being met in the inpatient setting. The impact of hospital structural variables, such as continuity of care, on patient satisfaction is best studied by examining the patients who are most impacted by transitions in care. Furthermore, because a prolonged LOS is a marker of a more complicated hospital course,[8] studying these patients will allow for identification of specific needs that are different from those of more routine patients with less complex admissions.

Methods

Patients

Using institutional hospital administrative data at the University of Wisconsin, adult patients admitted between July 1, 2009 and June 30, 2012 with a hospital stay of 21 days or more, were identified. Only patients with completed satisfaction surveys, both standard HCAHPS and institutional Press Ganey surveys, were included. Standard HCAHPS exclusions applied (eg, patients admitted for rehabilitation or psychiatric care, prisoners, those discharged to skilled nursing facilities or hospice, and those that have received a survey within 90 days).

A retrospective detailed chart review extracted clinical and structural variables. Patient variables included demographics, diagnosis, comorbidities, self-reported health status, educational level, and cognitive functioning at discharge. Medical care variables included admitting diagnosis, LOS, admission route, level of care, invasive procedures, transfusion, and advanced imaging studies. Variables examining the inpatient structural processes were also collected and included admitting service, service transfers, physician coverage model, number of attending providers on primary service, number of consulting services, and continuity of consulting attending providers. Consulting services included only typical medical and surgical services and not ancillary consultative services, such as interpreter services, chaplain services, physical or occupational therapy, or social work/case management services. Other physician consulting services that were included were pain management, surgical nutrition, psychiatry, rehab medicine interventional radiology, and palliative care. For the purpose of analysis, each referral to a consulting service involved in a patient's care during an admission was recorded as 1 referral even if the consulting service was involved multiple times during the admission. Discharge variables were also gathered including discharge location, discharge needs, and need for readmission within 30 days of discharge. Clinical data were collected before analysis of the satisfaction data, so as to avoid the potential for collection bias. The institutional review board approved the study before its inception.

Survey

The standard HCAHPS survey consisting of 32 questions[9] was administered by a 3rd-party vendor. Our institutional survey response rate over the period of the study was 32.4%. For the purpose of this study, outcome measures included only global measures of satisfaction with physicians and the hospital. Domains such as communication with nurses, medications, pain management, discharge information, and hospital environmental factors were not examined. Physician satisfaction was measured using the standard communication composite which includes 3 questions. These include: "During this hospital stay, how often did doctors treat you with courtesy and respect?"; "During this hospital stay, how often did doctors listen carefully to you?"; "During this hospital stay, how often did doctors explain things in a way you could understand?" All these