

Available online at www.sciencedirect.com

ScienceDirect

journal homepage: www.JournalofSurgicalResearch.com

Patient satisfaction: does surgical volume matter?



Sarah E. Tevis, MD, and Gregory D. Kennedy, MD, PhD*

Department of Surgery, University of Wisconsin, Madison, Wisconsin

ARTICLE INFO

Article history:

Received 31 December 2014

Received in revised form

18 February 2015

Accepted 20 February 2015

Available online 26 February 2015

Keywords:

Patient satisfaction

Surgical volume

HCAHPS

ABSTRACT

Background: Patient satisfaction is an increasing area of interest due to implications of pay for performance and public reporting of results. Although scores are adjusted for patient factors, little is known about the relationship between hospital structure, postoperative outcomes, and patient satisfaction with the hospital experience.

Methods: Hospitals participating in the University HealthSystem Consortium database from 2011–2012 were included. Patients were restricted to those discharged by general surgeons to isolate surgical patients. Hospital data were paired with Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) results from the Hospital Compare website. Postoperative outcomes were dichotomized based on the median for all hospitals and stratified based on surgical volume. The primary outcome of interest was high on overall patient satisfaction, whereas other HCAHPS domains were assessed as secondary outcomes. Chi square and binary logistic regression analyses were performed to evaluate whether postoperative outcomes or surgical volume more significantly influenced high patient satisfaction.

Results: The study population consisted of 171 hospitals from the University HealthSystem Consortium database. High surgical volume was a more important predictor of overall patient satisfaction regardless of hospital complication ($P < 0.001$), readmission ($P < 0.001$), or mortality rates ($P = 0.009$). Volume was found to play less of a role in predicting high satisfaction on the other HCAHPS domains. Postoperative outcomes were more predictive of high satisfaction with providers, the hospital experience, and environment.

Conclusions: High surgical volume more strongly predicted overall patient satisfaction on the HCAHPS survey than postoperative outcomes, whereas volume was less predictive in other HCAHPS domains. Patients may require more specific questioning to identify high quality, safe hospitals.

© 2015 Elsevier Inc. All rights reserved.

1. Introduction

The Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) [1] survey is now used nationwide to measure and compare patient satisfaction across hospitals. Because of both transparent reporting of results and penalties on financial reimbursement, hospitals face increasing pressure to perform well on the HCAHPS survey [2,3]. While

hospitals are incentivized to produce highly satisfied patients, little is known about what drives patient satisfaction on the HCAHPS survey.

Hospital characteristics, markers of high quality and safe care, and patient outcomes have been evaluated as potential predictors of high patient satisfaction. Studies assessing culture of safety and process measure compliance have identified weak and conflicting relationships between high performing

* Corresponding author. Department of Surgery, University of Wisconsin, 650 Highland Avenue, Madison, WI 53792. Tel.: +1 608 263 1164; fax: +1 608 263 7652.

E-mail address: kennedyg@surgery.wisc.edu (G.D. Kennedy).
0022-4804/\$ – see front matter © 2015 Elsevier Inc. All rights reserved.
<http://dx.doi.org/10.1016/j.jss.2015.02.054>

hospitals and patient satisfaction [4–7]. Similar conflicting results have been observed when assessing the relationship between patient outcomes and satisfaction scores, with the strongest documented relationship between low readmission rates and high satisfaction [6,8–10]. The authors have previously demonstrated no correlation between safety and effectiveness measures or patient outcomes and HCAHPS scores. However, a strong relationship between high surgical volume and high overall patient satisfaction was identified [11].

We sought to clarify the relationship between hospital structural measures such as surgical volume and short-term patient outcomes in predicting satisfaction scores on the HCAHPS surveys. Our aims were to assess surgical volume and patient outcomes in relation to overall patient satisfaction, as well as in relation to HCAHPS domains relating to provider communication, hospital experience, and hospital environment. We hypothesized that risk-adjusted outcomes and surgical volume would independently predict satisfaction scores, whereas non-risk adjusted outcomes would not correlate with satisfaction across HCAHPS domains.

2. Methods

2.1. Data source and patients

The University HealthSystem Consortium (UHC) database was queried from 2011–2012 to identify participating hospitals. The patient population was composed of adult patients who were discharged by general surgeons to isolate the surgical patient population. Hospital-level data were paired with HCAHPS survey results and Surgical Care Improvement Project (SCIP) process measure compliance from the Hospital Compare website over the same period. Hospitals were excluded if data from the UHC database or the Hospital Compare website were incomplete.

2.2. Explanatory variables

Hospitals were categorized as having high or low surgical volume based on whether they fell above or below the median of volume in the UHC database. Surgical volume reported by UHC includes all inpatient operations. Other hospital characteristics analyzed included geographic location, SCIP compliance, and proportion of intensive care unit (ICU) cases. The following patient outcomes were also assessed: length of stay (observed and risk adjusted), complication rate, patient safety indicators (PSIs), readmission rate (all and related), and mortality rate (overall, early, and risk adjusted). A summary of the length of stay and mortality risk adjustment models is available at www.uhc.edu. The complication measure, as defined by UHC, was based on 14 International Classification of Diseases, Ninth Revision-defined complications and identified complications that developed during the index hospitalization, which were not present on hospital admission. Geographic location was evaluated as West, Midwest, Northeast, or South. SCIP compliance and PSIs were evaluated as proportion of measures where hospitals had perfect performance (100% SCIP compliance or zero PSIs). High-performing hospitals were defined as those performing better than the

median for included hospitals on these measures. Similarly, the remaining explanatory variables were assessed as high performance, scoring in the top 50th% of hospitals, versus low performance, and hospitals scoring in the bottom 50th% for that measure.

2.3. Outcomes measures

The primary outcome of interest was overall patient satisfaction on the HCAHPS survey. The overall satisfaction domains on the HCAHPS survey are the overall rating of the hospital from 0–10 and the recommendation of the hospital to friends and family. Hospitals were defined as high performers if the proportion of top-box scores at the hospital was above the median for all hospitals.

Secondary outcomes included the other HCAHPS domains as follows: nursing communication, physician communication, receiving help, pain control, explanation of medications,

Table 1 – Hospital structure and patient outcomes in relation to surgical volume.

Hospital structure and patient outcomes	Low volume, N = 86, n (%)	High volume, N = 85, n (%)	P value
Geographic location			
West	10 (37)	17 (63)	
Midwest	27 (56)	21 (44)	
Northeast	27 (52)	25 (48)	
South	22 (50)	22 (50)	0.451
SCIP compliance, %			
100	0 (0)	1 (100)	
<100	86 (51)	84 (49)	0.313
% ICU cases			
Low	48 (56)	37 (44)	
High	38 (44)	48 (56)	0.002
Length of stay			
Short	61 (71)	25 (29)	
Long	25 (29)	60 (71)	<0.001
Length of stay index			
Low	53 (62)	32 (38)	
High	33 (38)	53 (62)	0.002
Complication rate			
Low	55 (65)	29 (34)	
High	31 (36)	56 (66)	<0.001
PSI			
None	3 (100)	0 (0)	
≥1 PSI	83 (49)	85 (51)	0.082
Readmission rate (all)			
Low	59 (68)	28 (32)	
High	27 (32)	57 (68)	<0.001
Readmission rate (related)			
Low	56 (65)	30 (35)	
High	30 (35)	55 (65)	<0.001
Early mortality rate			
Low	51 (59)	35 (41)	
High	35 (41)	50 (59)	0.018
Mortality rate			
Low	56 (65)	30 (35)	
High	30 (35)	55 (65)	<0.001
Mortality index			
Low	43 (51)	41 (49)	
High	43 (49)	44 (51)	0.817

Download English Version:

<https://daneshyari.com/en/article/4299971>

Download Persian Version:

<https://daneshyari.com/article/4299971>

[Daneshyari.com](https://daneshyari.com)