Determinants of Inpatient Satisfaction within the US Military Health System: Analysis of the TRICARE Inpatient Satisfaction Survey (TRISS)

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Introduction

Patient Satisfaction

Patient satisfaction has become a major component to defining and measuring healthcare quality. This is exemplified by the Centers of Medicare and Medicaid Services' (CMS's) initiative to create a national standard for collecting and reporting patient satisfaction information, measured through the ***Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS®)*** survey. This survey provides a nationally representative means of comparing hospital experiences across a variety of domains.

Military Health System

The ***Military Health System (MHS)*** provides a continuum of health services that includes health care delivery, medical education, public health, private sector partnerships, and medical research/development. The Defense Health Agency (DHA) is a joint Combat Support Agency that enables the Army, Navy, and Air Force medical services to provide a ready medical force to Combatant Commands. The DHA supports the delivery of health services to members of ***TRICARE***, which is a health insurance program for military members, retirees, and their families.

Within the MHS, the DHA measures patient satisfaction via the ***TRICARE Inpatient Satisfaction Survey (TRISS)***, which is based on the HCAHPS® survey instrument and protocol. TRISS is administered to adult TRICARE beneficiaries discharged from either a military treatment facility (known as '**Direct Care**') or civilian hospital (known as '**Purchased Care**').The DHA oversees TRISS to measure TRICARE beneficiary satisfaction with received health care services so that they may implement improvement initiatives.

Objective

Our objective is to explore the drivers of inpatient hospital satisfaction in the military community as measured by TRISS. Though there has been considerable investigation of the drivers and predictors of patient satisfaction among the civilian population, little is known about how and whether the military community differs in terms of patient satisfaction. The unique nature of the military setting, both in terms of social structure and healthcare needs, may translate to differences in how patients perceive healthcare and aspects of patient care among TRICARE beneficiaries.

Methods

TRISS Instrument

The TRISS instrument is based on HCHAPS® survey and protocol. Over 40 questions are included in the TRISS instrument to assess 11 domains of inpatient hospital experience. Outcome measures for these 11 domains are compared to ***benchmarks***, national standards provided by CMS based on scores submitted by civilian hospitals.

HCAHPS® Measures	
Overall Hospital Rating	Communication about Medicines
Recommend the Hospital	Discharge Planning
Communication with Nurses	Care Transition
Communication with Doctors	Cleanliness of Hospital Environment
Responsiveness of Hospital Staff	Quietness of Hospital Environment
Pain Management	

Patient Population

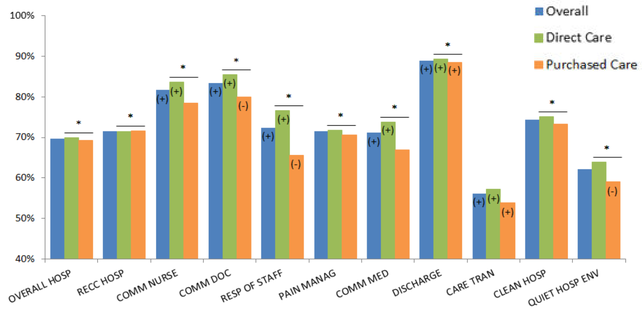
To be surveyed, patients must be aged 18+ with an inpatient admission to a hospital or military treatment facility. Patients surveyed were discharged from 129 facilities, including 56 military treatment facilities and 73 civilian hospitals. Over 86,000 patients were mailed surveys from November 1, 2014 through March 31, 2015, resulting in 33,963 completed surveys.

Drivers Analysis

The driver analysis assessed how the two global measures, Overall Hospital Rating and Recommend the Hospital, were influenced by the remaining nine HCAHPS® Measures. Logistic regression was applied to identify the impact of each predictor, or "driver", on the outcome measure. Results from the drivers analysis are presented as an 'importance' metric, where driver importance represents the proportion of total variance explained by a driver on a 0-100 % scale.

Results

Primary Outcome Measures

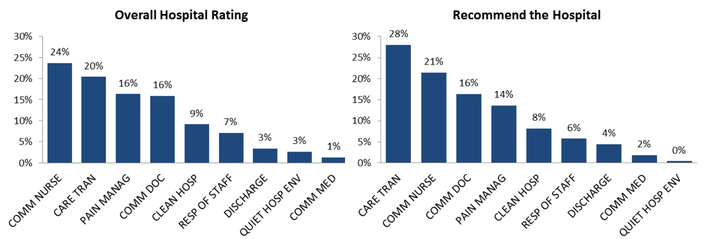


HCAHPS Scores by Care Type. A plus (+) sign inside a bar indicates that the score is significantly greater than the benchmark, while a minus (-) sign indicates that the score is significantly less than the benchmark. Horizontal bars marked with asterisks (*) indicate a significant difference between the Direct Care and Purchased Care values. All statistical tests use α = .05 as the threshold for significance.

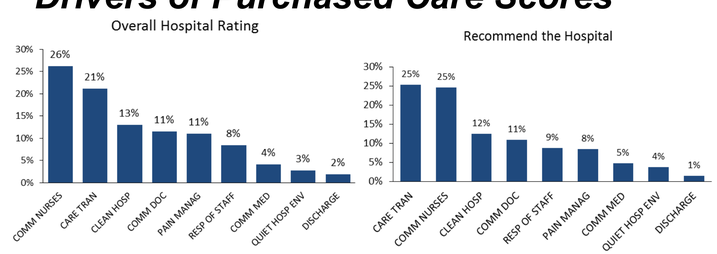
- Scores from DC patients meet or exceed CMS benchmarks.
- Scores from PC patients tend be lower than scores from DC patients.

What aspects of care predict responses on the global measures?

Drivers of Direct Care Scores



Drivers of Purchased Care Scores



Comparison of Top- and Bottom-ranked Facilities

What differentiates top 10% and bottom 10% facilities?

	Direct Care			Purchased Care		
	Bottom Decile	Top Decile	Δ	Bottom Decile	Top Decile	Δ
Overall Rating	56.4%	80.9%	24.5% *	52.7%	83.5%	30.8% *
Recommend	56.6%	83.9%	27.3% *	53.6%	86.1%	32.5% *
Discharge Information	88.4%	89.7%	1.4% *	87.1%	90.9%	3.8% *
Cleanliness of Hospital	71.7%	75.5%	3.9% *	**64.8%**	**79.3%**	**14.4% ***
Communications about Medications	69.4%	74.2%	4.8% *	60.3%	73.3%	13% *
Pain Management	67.0%	74.4%	7.4% *	62.4%	74.2%	11.9% *
Communications with Doctors	81.3%	87.3%	6% *	75.4%	84.2%	8.9% *
Communications with Nurses	79.3%	86.6%	7.3% *	71.6%	84.3%	12.7% *
Responsiveness of Staff	73.3%	82.3%	9% *	59.2%	68.3%	9.1% *
Care Transition	51.2%	60.5%	9.3% *	44.8%	62.4%	17.6% *
Quiet Hospital Environment	**56.8%**	**69.2%**	**12.4% ***	**52.5%**	**64.3%**	**11.7% ***

Limitations

- We cannot infer causality from the current results, as there were no direct manipulation of the predictor variables (purely correlational).
- The current population is predominately white and educated (at least some post-high school education).
- Whereas we sample a "census" of Direct Care facilities (all inpatients are sampled), we sample a subset of Purchased Care inpatients.

Implications

- Communication is a strong driver of global satisfaction, consistent with previous literature.
  - ➢ *Communication with Nurses* is a particularly strong driver.
- *Care Transition*, a relatively recent measure, also strongly influences global ratings.
- Facility variables (*Quietness*, *Cleanliness*) may have "sufficiency" thresholds: high scores may not yield high global scores, but poor scores can drive down scores. Facilities may need to meet sufficiency requirements to maintain high global scores.