



Original Contribution

The effect of practice settings on individual Doctor Press Ganey scores: A retrospective cohort review[☆]

Bartholomew Cambria, PA, Joseph Basile, MD MBA FACEP, Elias Youssef, MD^{*}, Josh Greenstein, MD, Jerel Chacko, MD MBA, Barry Hahn, M.D FACEP, Nicole Berwald, MD FACEP, Brahim Ardolic, MD FACEP

Department of Emergency Medicine, Staten Island University Hospital, Northwell Health, 475 Seaview Avenue, Staten Island, NY 10305, United States of America

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ABSTRACT

Objective: The Press Ganey (PG) survey is a patient experience survey mailed to patients upon discharge from the emergency department (ED). It is a nationally recognized survey that is commonly used to measure patient's perception of the healthcare delivered. Emergency medicine physicians at Staten Island University Hospital staff two distinct sites: a tertiary-care setting (SIUH-N) and a community setting (SIUH-S). The goal of our study was to compare the effect of different ED practice settings, within the same hospital and healthcare system, on individual attending physician PG scores.

Methods: This was a retrospective, observational study of EM physicians, conducted at Staten Island University Hospital between January 1, 2015 and December 31, 2016. Physicians with PG survey responses from both sites were included. The number of responses and mean scores for the four doctor specific survey questions and the doctor overall score were extracted from PG surveys.

Results: Mean PG scores at SIUH-N were significantly lower than the mean scores at SIUH-S in each of the four doctor-specific questions, as well as the doctor overall score ($p < 0.05$). 16 out of 18 doctors demonstrated higher doctor overall scores at SIUH-S.

Conclusion: Variables other than the individual doctor may be influencing the PG survey responses and perceptions of care. The PG survey may underestimate the impact of different practice settings on individual doctor PG scores.

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1. Introduction

1.1. Background

The Press Ganey (PG) survey is a patient experience survey that can be provided to patients by mail, phone or email upon discharge from the hospital or emergency department (ED) [1]. At our institution, the primary mode of delivery of this survey is currently by mail. The PG score may be a reflection of the perceived quality of care and is therefore instrumental in understanding the experiences of patients discharged

from the emergency department. The ED PG survey consists of eight different sections related to the patient's visit. There are five doctor specific questions contained in the survey which are graded on a continuous scale ranging from 1 (very poor) to 5 (very good). PG surveys have become commonplace and are used by governmental agencies, hospitals, ED administration, and the public [2]. ED patient experience scores have been shown to be influenced by ED-specific characteristics such as wait times and patient characteristics such as age and race [3]. Shorter door-to-room times were tied to higher patient experience scores and longer length of stays have a negative correlation on patient satisfaction scores [3].

Staten Island University Hospital (SIUH) comprises two geographically distinct clinical sites: The North Site (SIUH-N) and the South Site (SIUH-S). SIUH-N is a 700 bed academic, tertiary care center, with approximately 97,000 ED patient visits per year. SIUH-S is a 200 bed urban, community, teaching hospital, with approximately 32,000 ED patient visits per year. These hospitals are located eight miles apart in Staten Island, New York, but share a single administration with unified oversight of operations, clinical quality, and doctor staffing. During the study period, SIUH ED averaged 52 full-time emergency medicine (EM), board-certified physicians. Nearly half of these doctors, as well

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^{*} Corresponding author.

E-mail addresses: BCambria@northwell.edu (B. Cambria), eyoussef.em@gmail.com (E. Youssef), nberwald@northwell.edu (N. Berwald), bardolic@northwell.edu (B. Ardolic).

as most EM residents and physician assistants, split their clinical duties between the two sites. Both sites use the same ED information system (EDIS) as well as Computerized Physician Order Entry (CPOE).

Due to the distinct characteristics, there are significant operational differences between the EDs. The physical layout and patient flow into the respective clinical areas also differ amongst the two sites. SIUH-N is comprised of multiple treatment areas which include; [1] critical care, [2] main, [3] fast-track, and [4] pediatrics. A designated provider is responsible for each of these areas. At SIUH-S, patients are assigned to similar areas in the ED based on their triage category. However, the responsibility of caring for these patients is shared by all providers, regardless of the patient's physical location in the ED, age or triage category. On average, EM physicians see circa 1.25–1.75 patients per hour at SIUH-N and 2.0–2.5 patients per hour at SIUH-S. This difference is likely due to a higher percentage of fast-track patients seen by each physician at SIUH-S.

1.2. Importance

Through studying the impact of different practice settings on individual doctor PG scores, we can better understand the factors that may be influencing the PG survey responses and perceptions of care.

1.3. Goals of this investigation

The goal of our study was to compare the effect of different ED practice settings, within the same hospital and healthcare system, on individual attending physician PG scores.

2. Methods

2.1. Study design and setting

This was a retrospective, observational study of EM physicians, conducted at SIUH between January 1, 2015 and December 31, 2016. Prior approval was granted by the Institutional Review Board for Northwell Health.

2.2. Selection of participants

All doctors with at least 10 PG survey responses from both the SIUH-N and SIUH-S ED were included in the study. To exclude potential bias that would be introduced by level of experience, doctors in residency training were excluded. Since the goal of the study was to evaluate the attending physician, the response from “overall rating of doctors in training (residents, interns)”, which is the 5th doctor specific question included in the PG survey, was excluded.

2.3. Measurements and outcomes

The questions which were included were; [1] “courtesy of the doctor”, [2] “degree to which the doctor took the time to listen to you”, [3] “doctor's concern to keep you informed about your treatment”, and [4] “doctor's concern for your comfort while treating you”. Each question is graded on a continuous scale ranging from 1 (very poor) to 5 (very good). PG then converts response ratings to a score from 0 to 100 and reports a “doctor overall” score (Appendix 1). Doctor overall is a proprietary PG summation score of the four doctor specific questions and is a metric provided to departments that use the PG survey. The number of responses, mean score for each of the individual doctor-specific survey questions and the one doctor overall score were extracted from PG survey reports provided to our institution by Press Ganey Associates, Inc. (South Bend, IN).

2.4. Statistical analysis

Demographic data were summarized using descriptive statistics. Mean and frequency counts were utilized for categorical variables. Median and interquartile ranges (IQRs) were used to describe continuous variables. Age and experience were converted to categorical variables because we believe that in this study setting, age and experience range categories were more informative. The study period and the number of subjects enrolled were based on study feasibility. For each question, the paired difference between doctor's mean scores was calculated using paired *t*-test with a 0.05 significance level. Data analyses were conducted using Analyse-it version 4.90 (Analyse-It Software Ltd., UK).

3. Results

3.1. Characteristics of study subjects

18 subjects received PG survey responses at both SIUH-N and SIUH-S which were all included in the final analysis. 1710 overall responses from SIUH-N and 1719 SIUH-S were obtained with 190.5 mean responses per physician. Table 1 summarizes the demographic characteristics of subjects enrolled in the study.

3.2. Main results

Mean PG scores at SIUH-N were significantly lower than the mean scores at SIUH-S in each of the four doctor-specific questions, as well as the doctor overall score (Fig. 1). 16 out of 18 doctors demonstrated higher doctor overall scores at SIUH-S. The differences in doctor overall scores by site are illustrated in Fig. 2.

Females scored significantly higher on 3 of 4 PG questions and the “doctor overall” score. No differences between PG score and race, physician age or practice experience were identified (Table 2).

4. Limitations

This study has several limitations. First, this study is subject to the inherent limitations of a retrospective study. Additionally, this study was performed at a single hospital, in a single region, and therefore the results may not be generalizable to other practice sites.

Surveys are only given to patients that were discharged from the hospital and thus may be subject to selection bias. Moreover, patient's perceptions might vary by geographical region thus limiting the generalizability of this study. Lastly, only Caucasian and Asian physicians met inclusion criteria to be included in this study. Therefore, our results may not be generalizable to other practice settings.

5. Discussion

When comparing the PG scores for individual EM physicians working at two different ED practice settings, within the same city, hospital and healthcare system, but with distinct characteristics and operational differences, PG scores were significantly higher at SIUH-S. The

Table 1
Demographics of doctors.

Total physicians	18
Sex	
Male	14 (78%)
Female	4 (22%)
Age, median [IQR]	34 [31.25–39.75]
Years post-residency, median [IQR]	3.5 [2–8]
Race	
Asian	7 (39%)
Caucasian	11 (61%)

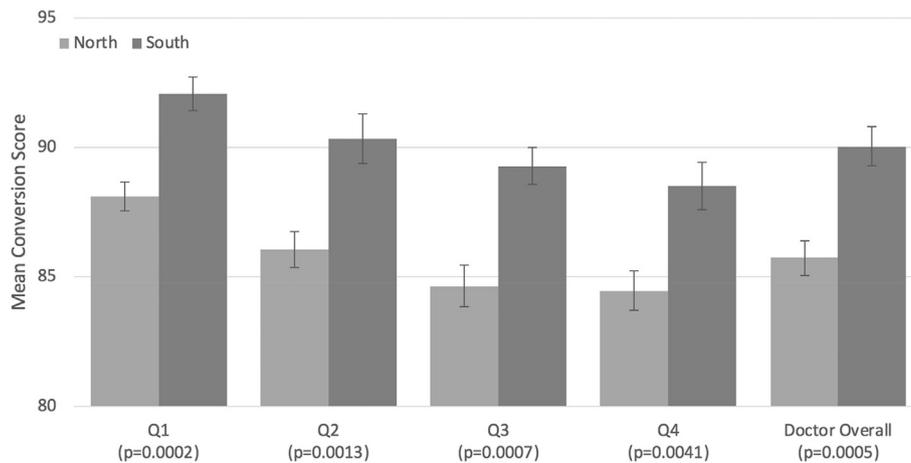


Fig. 1. Comparison of north vs south for doctor-related questions.

implication is that patients perceived the same doctor as more courteous, attentive, informative, and concerned with comfort at SIUH-S than at SIUH-N.

We believe the PG score differences identified in this study is not due to the specific doctor-patient interaction alone. Instead, it is more likely based on the differences in the individual characteristics and operational differences mentioned. Rating responses to doctor-specific questions should not vary based only on practice setting when it is the same physician utilizing similar practice patterns, bedside manner, and treatment plans. It is likely that patients perceived a doctor as more or less courteous, attentive, informative, or concerned with comfort due to factors beyond the doctor's interactions. These results indicate variables other than the individual doctor that may be influencing the PG survey and perceptions of care.

During the study period, the physician turn-around-time (TAT), defined as the time interval from patient arrival to doctor or advanced care practitioner assigned to the patient, was 36 min at SIUH-N and 13 min at SIUH-S. The length of stay (LOS) for discharged patients, defined as the time interval from patient arrival to disposition was 182 min at SIUH-N and 139 min at SIUH-S. The admission rate, which is often considered a surrogate for population acuity, [4] differs as well with a 25% admission rate at SIUH-N versus a 19% admission rate at SIUH-S. ED “holds” of inpatient admissions are present at both sites but are higher and more common at SIUH-N. In our experience, ED holds often limit the ability to care for newly arriving patients and may contribute to delays in completing daily nursing responsibilities in their care. Finally, the

percentage of patients that leave the ED without being evaluated (LWBE) at SIUH-N is 0.77% compared to 0.22% at SIUH-S. Specifically, the positive impacts of traditional quality indicators (Doctor TAT, LWBE, percent boarding rate, nurse to patient ratios, etc.) may play a more significant role in the doctor-patient experience score than the specific doctor-centric scores.

Females scored significantly higher on 3 of 4 PG questions and the “doctor overall” score. It is unclear why women scored higher than males. However, the study was not powered to measure differences amongst individual demographic characteristics. Further investigation may be required to confirm these specific findings in the present study.

While there is value in the PG score, caution should be used when comparing doctors across different sites without considering the effects of other factors. It may be more prudent to compare overall doctor scores with others in similar practice settings, sites, or on similar work-shifts rather than evaluating scores against multi-site group averages. This practice could mitigate some of the confounding variables discussed by “leveling the playing field” and providing administrators more accurate physician comparisons.

In Summary, mean PG scores at SIUH-N were significantly lower than the mean scores at SIUH-S in each of the four doctor-specific questions as well as the doctor overall score. In addition, 16 out of 18 doctors demonstrated higher doctor overall scores at SIUH-S. This study suggests that variables other than the individual doctor may be influencing the PG survey responses and perceptions of care. The PG survey may underestimate the impact of different practice settings on individual doctor PG scores.

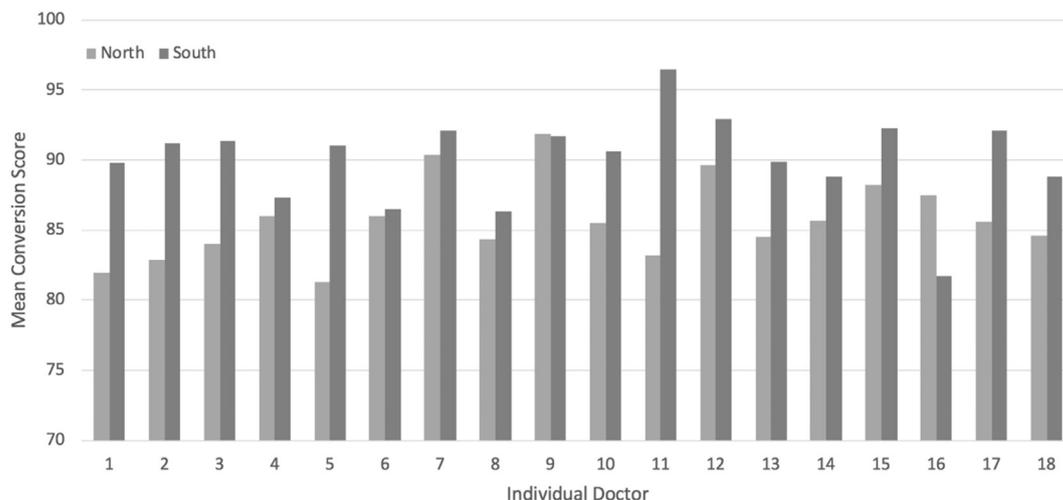


Fig. 2. North vs south doctor's overall mean scores by site.

Table 2

Mean Press Ganey conversion scores by sex, race, age, and post-residency years.

	Sex			Race			Age			Years post-residency		
	Males	Females	p-value	Asian	Caucasian	p-value	20–39	40–65	p-value	<5	≥5	p-value
Q1	2.96	7.48	0.0073	4.26	3.77	0.7917	4.69	2.06	0.1756	3.42	4.64	0.4966
Q2	2.99	8.80	0.0540	5.97	3.20	0.2280	5.35	1.50	0.1248	3.81	4.86	0.6525
Q3	2.92	10.68	0.0155	6.21	3.65	0.3112	5.51	2.40	0.2267	3.87	5.61	0.4587
Q4	2.21	10.48	0.0021	5.06	3.40	0.5446	4.83	2.00	0.3123	2.80	5.60	0.2659
Doctor overall	2.88	9.33	0.0114	5.54	3.53	0.3562	5.15	2.14	0.1931	3.66	5.13	0.4901

Appendix 1

	Very poor	Poor	Fair	Good	Very good
Answer scale	1	2	3	4	5
Conversion score	0	25	50	75	100

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