

Original Research

The Influence of Hospital Site on Emergency Physician Press Ganey Scores

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Abstract

Background

The use of physician satisfaction scores to evaluate emergency medicine physicians' performance and compensation is controversial. Prior studies have shown that the clinical environment may influence scores. This study compared satisfaction scores for the same physician at different emergency departments (ED). Differences in their individual score may indicate the ED environment could be as important as the physician's interaction.

Methods

Press Ganey satisfaction scores were obtained for physicians at three EDs—Grand Strand, South Strand and North Strand—between July 2018 and June 2019. Included physicians worked at all 3 facilities and had at least 6 patient satisfaction surveys at each site. The Press Ganey scale ranges from 1–5, with 1 as "very poor" and 5 as "very good". Using top-box methodology, the total physician score was generated from the average of 4 questions: courtesies, keeping patients informed, patient comfort and listening. We utilized descriptive statistics to compare scores for all physicians at each of the 3 sites. In addition, each physician's top box scores were averaged by site for analysis (two-way ANOVA) to determine if individual physician scores varied in different EDs.

Results

Fourteen physicians met inclusion criteria. Physicians at the main ED had an average total score of 73.37 ± 6.08 (SD) versus 76.5 ± 8.87 and 85.09 ± 7.75 at the 2 free standing EDs. Two-way ANOVA showed that the Press Ganey scores were significantly different for individual physicians between the newer free-standing ED and either the main ED or the other free-standing ED, $p < 0.001$ and $p = 0.014$, respectively. The observed difference between the main ED and the older free-standing ED was not statistically significant, $p = 0.111$. When applying the same analysis to the 4 individual physician questions, the significant differences or trends persisted.

Conclusion

Physician satisfaction scores demonstrated a significant variance depending on where they practiced. The highest patient satisfaction scores were received at the newest of the 3 facilities with individual rooms. The findings suggest that Press Ganey scores may not be reliable when comparing patient satisfaction scores for providers who practice in different EDs.

Keywords

Press Ganey; patient satisfaction; free-standing vs. hospital-based emergency department; emergency medicine; surveys; quality of care; statistics and numerical data

Introduction

The Press Ganey survey is a widely recognized patient satisfaction assessment following discharge from the emergency department (ED).¹ Press Ganey scores can be used to rate

and stratify hospitals based on patient satisfaction as well as to evaluate physicians and other medical personnel on perceived patient experience and satisfaction. Press Ganey scores range from 1 (very poor) to 5 (very good) and

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include questions addressing four topics: physician courtesy, keeping the patient informed, patient comfort and the degree to which the physician listened to the patient.²⁻⁴ At our institution, these surveys are primarily delivered by mail.

In the past decade, patient satisfaction has become an increasingly significant aspect of health care. This increase is largely due to the new emphasis and incentives put in place by the Affordable Care Act in 2010. With this policy, a fiscal incentive was established for hospitals to increase their patient satisfaction scores by limiting funding to hospitals with lower scores.^{5,6} In addition to hospital reimbursement, physician reimbursement, physician satisfaction and even patient outcomes and compliance to treatment are directly related to Press Ganey scores.^{7,8}

Variable hospital environments have made it difficult to standardize patient satisfaction. In a recent study, Press Ganey scores were shown to be associated with the location of care. Higher average scores were seen in urgent care centers compared to the ED when the same physician was being evaluated in both locations.^{2,9} In addition, factors such as ED crowding, increased time spent in the ED, younger patient age and longer wait time have all been associated with lower Press Ganey scores.¹⁰⁻¹⁴

The objective of this study is to compare Press Ganey scores for the same physicians at 3 different emergency departments to determine if Press Ganey scores vary as a function of the site as well as the provider. The authors hypothesize that a newer emergency department with shorter ED times and absence of hallway beds may have higher patient satisfaction as measured by the Press Ganey scores.

Methods

This was a retrospective cohort study comparing Press Ganey satisfaction scores at three different ED locations: main ED (Main), free-standing ED #1 (FS1) and free-standing ED #2 (FS2). Press Ganey satisfaction scores were reviewed for physicians fitting the inclusion criteria between July 2018 and June 2019. Scores were included only for full time emergency medicine physicians working clinically

for 90–180 hours a month who had at least six Press Ganey surveys filled out at each of the three locations: Main, FS1 and FS2 emergency departments. Press Ganey gave permission for the use of their name and the data from our three sites for the study. This project was determined exempt by the local institutional review board.

We utilized all 3 sites in our study. The patients who submit Press Ganey surveys are the subjects. We chose to utilize 6 surveys at minimum per physician at each site, which excluded the part-time physicians, which we felt could be outliers due to small numbers.

Throughout the duration of the study from July 2018 to June 2019, FS2 ED's patient volume was 15,186; FS1 ED's patient volume was 30,034, and the main ED had a volume of 62,043. That is 1,381 patients per private patient room at FS2 (11 rooms); 2,002 patients per private room/curtain space at FS1 (15 rooms) and 1,591 patients per private room/curtain space at the main ED (39 rooms). The main ED is the largest and busiest of the three EDs in this study. The ED has 9 curtain beds, 13 hallway beds and 15 treatment chairs in addition to its 30 private patient rooms. Of FS1 ED's 17 patient treatment options, there are 2 hallway beds, 7 private rooms and 8 curtain rooms. The FS2 ED only has private patient rooms.

The Press Ganey scale ranges from 1 (very poor) to 5 (very good). Averaged physician Press Ganey scores of the four previously mentioned physician questions were calculated using top box methodology, which represents the percentage of patient responses that were the top choice (5 being very good) per survey. For example, if a patient were to give a physician one 5 (very good) out of the four physician specific questions, the physician's score would be 25%. Press Ganey scores were averaged for all physicians at each given site for descriptive and graphic purposes. In addition, each physician's top box scores were then averaged for all patients seen at each given site, and then those averages were compared via two-way ANOVA to determine if the average top box score for each physician differed depending on location. We utilized a Bonferroni correction for multiple (3) comparisons to adjust the p value of significance from $p < 0.05$ to $p < 0.02$.

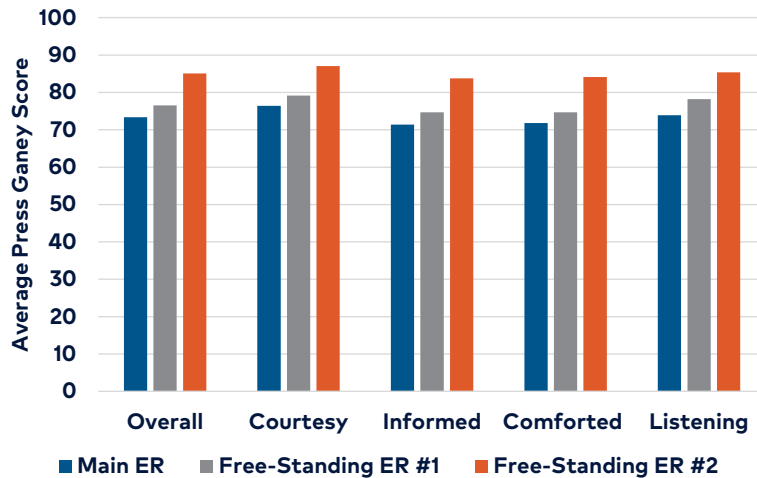


Figure 1. Average Press Ganey scores by location for emergency physicians from July 2018 to June 2019.

Wait times for each ED from July 2018 to June 2019 were also reviewed for all patients (not just those with returned surveys) at each location. Average arrival to provider greet times and provider greet to disposition times were recorded in minutes. Time of disposition was defined as timing of order to discharge or admit.

Results

Fourteen physicians met the inclusion criteria of at least 6 Press Ganey surveys for each location from July 2018 to June 2019. There were 3,749 surveys included in the study. The average was 268 surveys per physician based on the 14 physicians included in the study. Emergency physicians at the main ED had an average overall score of 73.37 ± 6.08 , while emergency physicians at FS1 and FS2 had overall scores of 76.5 ± 8.87 and 85.09 ± 7.75 , respectively. (Figure 1)

Two-way ANOVA showed that there was a significant difference in Press Ganey patient satisfaction scores for individual physicians between the newer free-standing ED (FS2, built in 2017) and either the main ED (renovated in 2012) or

the older, free-standing ED (FS1, built in 1996), $p < 0.001$ and $p = 0.014$, respectively for sites. The comparisons for individual physician factors were insignificant, with p values of 0.04 and 0.39 respectively for same comparisons with the Bonferroni correction (two-way ANOVA). The observed difference between the main ED and the FS1 ED was not statistically significant, $p = 0.111$. Similar patterns persisted within each of the physician-specific questions (i.e., courtesy, keeping the patient informed, concern for comfort and listening). FS2 (the newest ED) had higher scores than the main and FS1 EDs for each question. (Table 1)

During the study period, at the main ED, the average wait time from when a patient walked in to when they were greeted was 10 minutes, and the average wait time from when a patient was greeted to disposition was 132 minutes for all patients (not just those who returned surveys). At FS1 ED, the average wait time to be greeted was 11 minutes, and the average greet to disposition time was 97 minutes. FS2 ED had an average time to be greeted of 10 minutes and 73 minutes greet to disposition time. (Table 2)

Table 1. Results from Two-Way ANOVA Comparing Individual Physicians at Three ED Locations*

Emergency Department	Overall	Courtesy	Informed	Comfort	Listening
Main vs. FS2 (newest)	<0.001	<0.001	<0.001	<0.001	0.001
Main vs. FS1	0.111	0.25	0.131	0.097	0.130
FS1 vs. FS2 (newest)	0.014	0.02	0.013	0.012	0.085

*Comparison of individual physicians at each ED via two-way ANOVA broken down by physician-specific question and by overall PG score. A p-value of <0.02 shows a significant difference.

Table 2. Average Wait Times at Three ED Locations from July 2018 to June 2019

Emergency Department	Arrival to Provider Greet (min)	Provider Greet to Disposition (min)
Main ED	10	132
FS1 ED	11	97
FS2 ED (newest)	10	73

Discussion

In this study, average overall emergency physician Press Ganey scores were significantly higher in the newer FS2 ED (85.09 ± 7.75) compared to the other 2 EDs, Main (73.37 ± 6.08) and FS1 (76.5 ± 8.87). Each physician involved in this study worked at all three locations from July 2018 to June 2019. However, the hospital environment in FS2 ED stands out from the other two emergency departments. Significant differences in patient satisfaction (represented in **Table 1**), as measured by Press Ganey scores, controlled for individual physicians suggests that the location of treatment influences patient satisfaction and perceived quality of care. For the two significant relationships of satisfaction scores between sites, the influence of site was greater than the insignificant influence of individual physicians. We hope that administrators use this information to recognize what the Press Ganey emergency physician satisfaction scores actually measure. The satisfaction scores evaluate both the physician's practice and the environment in which they practice.

The FS2 ED (built 2017) is the newest of the 3 EDs in this study and has 11 private patient rooms. Patients presenting to this ED have lower wait times and always have a single room, a courtesy less frequently experienced in larger and busier EDs. Due to private rooms being the only option for patient treatment, physicians practicing in FS2 have the ability to offer patients complete privacy. These factors may have contributed to the significantly increased Press Ganey scores from this location.

It is important to note that patients admitted to the two free-standing EDs (FS1 and FS2) can only be held for two hours due to the inability for the facility to provide patients meals. Patients admitted to the main ED could be held for more than 24 hours. In addition, the average time to disposition at FS2 ED was shorter than the other two sites. Longer ED

times have been associated with lower patient satisfaction ratings.¹² Although the longer hold times disproportionately affect the admitted patient, admission delays led to system effects that resulted in discharged patients being treated in hallway beds/waiting room chairs and lengthier time to discharge due to patients being placed back in the waiting room after initial triage evaluation. In addition to longer ED times, hallway beds and ED crowding have also been associated with lower patient satisfaction scores.¹³⁻¹⁵

Our study is limited by the sample size of physicians that fit the criteria for enrollment. In addition, Press Ganey recommends a minimum of 50 Press Ganey surveys for a valid analysis of physician quality of care. Although included physicians were required to only have 6 Press Ganey surveys from each location to eliminate potentially confounding part-time physicians, the included physicians averaged 268 surveys each in the study. The Bonferroni correction for multiple comparisons was used to adjust the p value of significance from $p < 0.05$ to $p < 0.02$ to ensure significance. Even with the aforementioned correction, Press Ganey scores remained significantly different for all four physician-specific questions in the comparison of FS2 ED versus the main ED and most physician questions when comparing FS2 ED versus FS1 ED.

Conclusion

Patient satisfaction scores were significantly higher in the FS2 ED when compared to the main ED and FS1 ED. The highest patient satisfaction scores were at FS2—the newest of the three facilities, where patients have private rooms, lower ED times, lower patient volumes per bed spaces and no bed holds. This study suggests that Press Ganey physician satisfaction scores should not be used to compare emergency physicians practicing in different emergency departments. Patient satisfaction, as measured by emergency physician Press

Ganey scores, may at times vary as a function of the ED system to a greater extent than the clinical performance of the emergency provider.

Conflicts of Interest

The authors declare they have no conflicts of interest.

Drs. Doherty, Gutovitz and Wilson are employees of Grand Strand Medical Center, a hospital affiliated with the journal's publisher.

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