

**BRIEF RESEARCH REPORT**

Infectious Disease

# Influence of COVID-19 outbreak on emergency department Press Ganey scores of emergency physicians

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**Abstract**

**Background and Hypothesis:** The authors investigate whether there is a difference in Press Ganey (PG; patient satisfaction scores) scores for the emergency physicians before and during the coronavirus disease 2019 (COVID-19) outbreak at a regional group of emergency departments in the southeastern United States. The authors hypothesize that decreases in emergency department volume, less emergency department boarding of admissions, reduced use of hallway beds, and favorable attitudes toward emergency physicians during the COVID-19 outbreak may influence patient satisfaction scores measured in the Press Ganey surveys.

**Study Design and Methods:** The authors performed a retrospective review of PG scores obtained over the prior 7 months at 8 larger teaching hospitals in the Southeast region (Florida, Georgia, and South Carolina). Averaged physician PG Scores and their 4 components—courtesy, time to listen, informative regarding treatment, concern for comfort—were collected. The authors evaluated the overall physician PG ratings for March through May 2020 (COVID outbreak) vs the prior 4 months. Overall emergency physician scores, using top box methodology of percent highest response, were averaged from 4 questions regarding the emergency physician's care.

**Results:** There were 6272 patient satisfaction surveys returned in the 7-month study period; 4003 responses during the pre-COVID months (November 2019–February 2020) and 2296 during the COVID months (March through May 2020). Results showed that in the “pre-COVID time” the PG surveys scored in the 17% of all PGs in the country (63.9% “top-box” or highest rating score) as compared to scoring in the 34% of all PGs

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(68.1% “top-box”) during “COVID time.” These data were statistically significant using a chi-square analysis with  $P < 0.001$

**Conclusions:** Emergency physician patient satisfaction scores, as represented by the PG score, were significantly higher during the COVID months, in comparison to the pre-COVID months, for 8 teaching hospitals in the Southeast region of the United States.

**KEYWORDS**

COVID, Patient satisfaction, Press Ganey

## 1 | INTRODUCTION

### 1.1 | Background

The Press Ganey (PG) survey is a patient experience survey, used within the United States, that is offered to patients who are discharged from the emergency department. These surveys are provided to patients via phone, mail, or email.<sup>1</sup> Dr. Irwin Press, PhD and Dr. Rod Ganey, PhD partnered in 1984 to create PG surveys and to fulfil their mission to “reduce patient suffering by supporting the delivery of safe, high-quality, patient-centered care.”<sup>2</sup> PG scores are often used by ED administration to evaluate the perceived quality of care patients discharged from the ED. Patient satisfaction scores are utilized to calculate hospital reimbursement updates from the Centers for Medicare and Medicaid Services (CMS), determine compensation and contract retention for physician groups, and compare hospitals.<sup>3–6</sup> Additionally, PG surveys are used to evaluate both inpatient as well as outpatient experiences. Multiple variables affect patient satisfaction.<sup>7–13</sup> One study showed that greater patient satisfaction was associated with older patient age and shorter wait times.<sup>14</sup> It has been shown in previous studies that satisfied patients are more likely to take their medications as prescribed and follow through with their discharge instructions.<sup>15</sup>

PG surveys evaluate many different aspects of the patient experience including but not limited to patient interactions with nursing staff, physicians, and other ED staff. Several questions are directed toward the patient experience with regard to the emergency physician. Each question is given a score from 1 to 5, ranging from very poor (1) to very good (5). Patients are asked to rate the physicians on 4 domains: (1) courtesy of the provider; (2) degree to which your provider took the time to listen; (3) provider’s concern to keep the patient informed about treatment; and (4) provider’s concern for patient comfort.<sup>1,14,16</sup> At our institution, these surveys are primarily delivered by mail to all patients who have been discharged from the ED.

### 1.2 | Importance and goals of investigation

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is a strain of coronavirus leading to the coronavirus disease 2019 (COVID-19) syndrome that is affecting health care systems worldwide and

within the United States during the latter part of first quarter of 2020. This outbreak has significantly influenced the delivery of care in the ED. The objective of this project is to investigate whether there is a difference in PG (patient satisfaction scores) scores for the emergency physicians before and during the COVID-19 outbreak at a regional group of larger EDs in the Southeast region of the United States. The authors hypothesize that decreases in ED volumes, lower boarding of admitted patients, decreased use of hallway beds, and improved attitudes toward emergency physicians during the COVID-19 outbreak may positively influence patient satisfaction scores measured in the PG surveys.

## 2 | METHODS

### 2.1 | Study design and settings

The authors performed a retrospective review of PG scores obtained over the prior 7 months (November 2019–May 2020) at 8 larger teaching hospitals in the Southeast region (Florida, Georgia, and South Carolina). The identities of the hospitals that were used in this study were kept confidential; their identities will be denoted as hospitals A–H. Hospital annual volumes are as follows for hospitals A–H: 51,419, 15,704, 30,532, 58,077, 70,543, 63,124, 72,657, 113,292. All patients who were discharged from the ED received a PG survey. Data on what percentage of patients from this group that responded were unavailable. Sites with < 50 PG responses in any study month were excluded from the analysis; PG recommends sample sizes of at least 50 responses to perform a valid analysis.<sup>7</sup>

### 2.2 | Measurements

Surveys are mailed out 10 days after the ED visit and patients are asked to choose from 5 possible responses to rate their experience: (1) very poor = 1; (2) poor = 2; (3) fair = 3; (4) good = 4; and (5) very good = 5.<sup>13</sup> Averaged Physician PG Scores and their components (courtesy, time to listen, informative regarding treatment, concern for comfort) were collected by month. Scores were calculated using top-box methodology, which represents the percentage of responses when the patient selected the highest (very good) of the 5 ratings for PG scores for that question. Top-box scores were

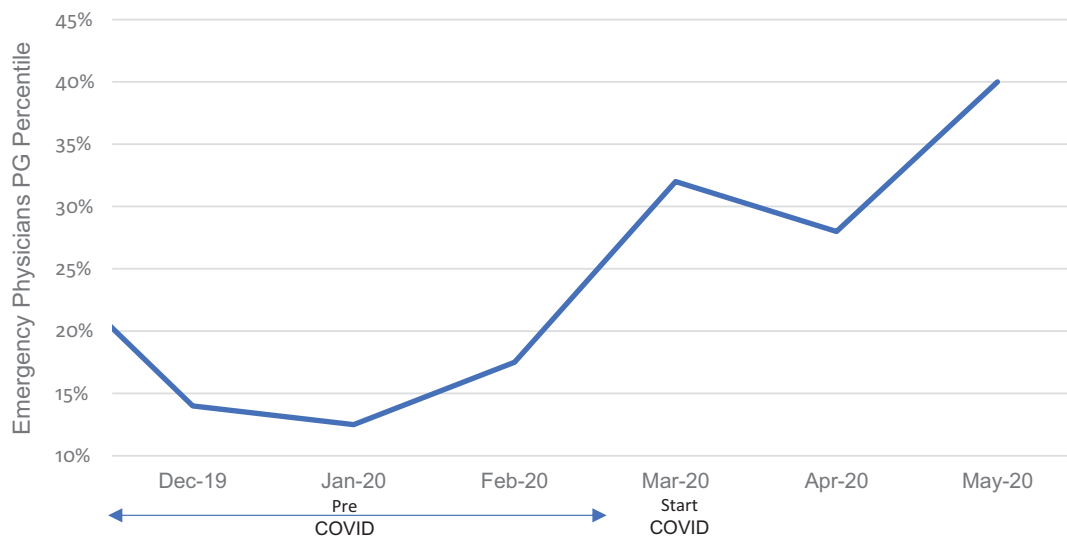
calculated for each of the 4 emergency physician questions. Overall, emergency physician scores at that site were calculated by averaging the 4 top-box scores from the 4 questions that addressed the emergency physician's care. The averaged overall emergency physician score at each site was then weighted by the total number of questionnaire responses at each site to get the averaged total emergency physician top-box score for the 8 hospitals for the month. This overall emergency physician score for the 8 hospitals for the month was compared to the averaged overall top-box score for all physicians that month in the PG database to get a national percentile ranking for the 8 hospitals. The physicians and patients were de-identified in the data set and the surveys were returned in an anonymous manner.

### 2.3 | Analysis

The authors evaluated the overall physician ratings for March and May 2020 (COVID outbreak) vs the preoutbreak prior 4 months (November 2019–February 2020). Univariate analysis was performed using Pearson's chi-square comparing overall departmental physician scores in the 2 time periods. An alpha of 0.05 was used as a threshold to determine statistical significance.

## 3 | RESULTS

There were 6272 patient satisfaction surveys returned in the 7-month study period; 4003 responses during the pre-COVID months (November 2019–February 2020) and 2269 during the COVID months (March through May 2020). Results showed that in the "pre-COVID time" the PG surveys scored in the 17th percentile of all PGs in the country (63.9% "top-box" or highest rating score) as compared to scoring in the 34th percentile of all PGs (68.1% "top-box") during "COVID time." These data were statistically significant using a chi-square analysis with  $P < 0.001$ . The percentile PG scores and overall "top-box" scores were also calculated by month. These data are represented in Figure 1.



**FIGURE 1** Press Ganey (PG) percentile scores for emergency physicians at 8 teaching hospitals from November 2019 to May 2020

### The Bottom Line

One emergency department looked at the impact of COVID-19 on patient satisfaction scores. Looking at the 4 months before vs during the pandemic, the Press Ganey scores for physicians rose from 64% (17th percentile for United States) to 68.1% (34th percentile).

## 4 | DISCUSSION

In this study, the patient satisfaction scores, as represented by the PG scores, were significantly higher during the COVID months, in comparison to the pre-COVID months, for the 8 teaching hospitals in the Southeast region of the United States. Decreases in ED volume with shorter times to being seen, changes in ED boarding practices, decreased use of hallway beds, and more favorable attitudes toward emergency physicians (and first responders) during the COVID-19 outbreak may improve patient satisfaction scores measured in the PG surveys. Although statistical significance does not inherently imply a meaningful change, the researchers felt that this topic warranted investigation as there was a general sense of community support of front-line physicians during this pandemic. There was a statistically significant increase in the average composite PG scores, increasing from 63.7% pre-COVID to 68.1% during the COVID period (17th percentile of physicians to 34th percentile).

Use of hallway beds in the ED has a significant correlation with lower hospital and ED satisfaction scores; although their use to decrease waiting times results in increased departmental efficiency.<sup>17</sup> Increased ED crowding is also associated with lower patient satisfaction scores.<sup>15,18</sup> Patient satisfaction scores for a single physician practicing at different EDs also suggest that multiple departmental conditions can influence satisfaction.<sup>1,11,13</sup> In several studies, individual

physicians received higher patient satisfaction scores at freestanding EDs than at hospital-based EDs.<sup>11,13,19</sup>

Nationally, our ED volumes have decreased by 42%,<sup>20</sup> and we now rarely use hallway beds, but there has also been a decrease in staffing as we adjust to our lower census. The same physicians have been working during both the pre-COVID months as well as the COVID months. Therefore, the increase in scores should not be solely attributed to more time and resources being available for each patient. Also, it should be noted that there were no visitors allowed to accompany any patients under investigation for COVID-19 in the ED during the COVID months. Nursing and physician staff worked together to provide family members and caregivers with frequent updates.

There has been favorable media coverage of emergency physicians and other front-line medical providers during the coronavirus pandemic. Medical providers have seen displays of support and appreciation by local and national media, ranging from standing ovations recorded in Istanbul, London, Buenos Aires, and Tamil Nadu, India, to free smoothies, meals, and reduced cost gas. The rise in patient satisfaction scores that we see in our corner of the United States further demonstrates the support and gratitude that we are receiving from our local population.<sup>21</sup>

Our study is limited in that it has a relatively small amount of data from the COVID months. This study should be performed again when more COVID months are available in comparison to the pre-COVID months. This study used an aggregate of physician PG survey scores from the 8 regional teaching hospitals. We have reviewed only composite survey data for each month for the 6 outside sites; however, the improvement in PG scores occurred for all 4 physician questions at our own 2 sites. Interactions with non-physician staff and students can influence patients' perception of care. In addition, teaching hospitals tend to have higher volumes, use hallway beds, and have more bed holds. These results may not be able to be completely extrapolated to less busy non-teaching hospitals that do not have these issues.

## 5 | CONCLUSIONS

Patient satisfaction scores were significantly higher during the COVID months, in comparison to the pre-COVID months, for the 8 teaching hospitals in the Southeast region of the United States. In the future controlling for individual physician PG surveys at each of these hospitals for the pre-COVID, COVID, and post-COVID times could adjust for more confounding variables and strengthen these findings.

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