Patient satisfaction surveys are increasingly being used as a measure of physician performance in a hospital setting. We sought to determine what role the clinical condition the physician is treating has on overall patient satisfaction scores. Patient satisfaction scores were calculated for elective and emergent general surgery and trauma patients for eight surgeons taking care of all three types of patients. Both physician satisfaction (PP) and hospital satisfaction (GP) scores were calculated. Mean scores (± standard deviation) between groups were compared with \( P < 0.05 \) significance. Of 1521 trauma patients and 3779 general surgery patients, there was 14.8 and 15.1 per cent response rate, respectively, to the survey. Trauma patients had a significantly lower PP than general surgery patients (81.0 ± 19.4 vs 85.7 ± 16.4; \( P < 0.001 \)). However, the GP between trauma and general surgery was not significant (84.0 ± 13 vs 84.0 ± 12.3; nonsignificant) When general surgery patients were divided into emergent versus elective, the PP was significantly higher for elective than emergent (87.9 ± 14.6 vs 82.7 ± 18; \( P < 0.001 \)). A patient's underlying clinical condition may influence response to patient satisfaction surveys. Further research needs to be performed before patient satisfaction surveys can be adopted as an overall measure of physician competency.

Over the past few decades, patient satisfaction has taken on an increasingly pronounced role in the healthcare field.1 As providers and administrators are confronting the explosion of patient satisfaction in the healthcare market, more and more hospitals are recording patient satisfaction in some way and the literature on the subject has expanded dramatically.1–6 These measurements have proven to be crucial to the healthcare system in myriad ways. Typical quality indicators like mortality rate and length of stay provide a one-sided depiction of hospital care, and patient satisfaction surveys provide health professionals and administrators alike patients’ perspective on experiences in receiving health care.1 Acknowledging patient satisfaction also promotes patient-centered care and a cultural shift toward focusing on patients and building trust.1 More tangibly, patient satisfaction data play an important role in quality improvement, providing a means for management to evaluate staff performance, goal-setting, and hospital quality improvement efforts.6 Finally, patient satisfaction is highly correlated with economic improvement in a hospital; through both official marketing and verbal networking, people’s good experiences at certain hospitals translate into profits.6

With this pertinent topic in mind, we sought to examine the differences between patient satisfaction scores for patients in the trauma service and those requiring general surgery in an effort to determine the influences on patient response. We hypothesized that patients’ satisfaction with their doctors may be related more to their clinical condition than the doctor’s performance or relationship with the patients.

**Methods**

Press-Ganey (South Bend, IN) patient satisfaction score questionnaires were collected for general surgery and trauma patients over a 6-year period (2005 to 2010). Our hospital was unique in that during this time period, we had a consortium of eight surgeons who provided the trauma care for our Level II trauma center as well as for the vast majority of the general surgical
care for the institution. As such, the providers served as their own internal control for the study. The only thing that varied was the area (trauma vs general surgery) in which the providers were evaluated. The questionnaire was divided into 2 sections: physician-specific questions (5 in total; physician satisfaction [PP]) and questions related to the overall hospital performance (of which we chose the 19 most answered question to analyze; hospital satisfaction [GP]; see Table 1). Scores for each question ranged from 1 to 5 with 1 being the lowest level of satisfaction and 5 being the highest. Both mean satisfaction scores (0 to 100, standard deviation) and percentages of patients who responded with the highest rating (“top box,” i.e., a score of 5 on a particular question [TB]) were recorded in each category. Groups were compared using a t test (with appropriate adjustment for the unequal variance assumption) or χ² with P < 0.05 considered significant.

### Results

There were 1521 trauma patients and 3779 general surgery patients included in this analysis. There was a 14.8 per cent response rate for the survey for trauma and a 15.1 per cent response rate for general surgery. Significantly more of the responses were filled out by the patient’s surrogate in general surgery than in trauma (P < 0.001; χ²; Table 2). The PP mean for trauma patients, 81.0 (19.5), was significantly lower than the PP mean for general surgery patients, 85.7 (16.4; P < 0.001; Fig. 1). The percentage of “top box” designation was likewise significantly higher for the general surgical patients (46.9 trauma vs 56.4% general surgery; P < 0.001). The mean GP for trauma patients, 84.0 (13.0), and for general surgery patients, 84.0 (12.3), was not significantly different (P = 0.919; Fig. 1) nor was the “top box” designation for trauma (51.9%) and general surgery (52.3%) patients (P = 0.376).

When general surgery patients were divided into emergent and elective surgery recipients, the PP mean was significantly higher for elective surgery patients, at 87.9 (14.6), than for emergent surgery patients, which was 82.7 (18.1; P < 0.001; Fig. 2). The GP mean was also significantly higher for elective procedures than emergent surgery, at 84.8 (11.7) and 82.8 (13.0; P < 0.001; Fig. 2) respectively. Likewise, “top box” performances were significantly higher in both categories for the elective general surgical patients (PP emergent = 50.0% vs PP elective = 61.1%; P < 0.001; GP emergent = 50.4% vs GP elective = 53.7%; P < 0.001).

### Discussion

Trauma is a sudden devastating event that occurs in a person’s life. As such, the individual has no time to...
prepare for it emotionally, physically, or in any other regard. Furthermore, the circumstances surrounding traumatic events many times involve nonaccidental causes (such as drinking and driving, assault, etc.), which add another level of personal dysfunction to an already catastrophic event. These individuals may have a vastly different perception of their hospital and physician care than the patient who has an elective hernia repair, who meets and develops a relationship with his or her personal surgeon in an outpatient clinic. In this study, we have shown that Press-Ganey scores are vastly different in patients who were admitted for trauma versus those who were admitted for general surgery, although the same group of surgeons cared for both groups of patients. We believe that, especially as it relates to the physician scores, it is more the treating condition rather than the individual surgeon’s bedside manner, that is driving these differences in scores. The trauma scores were lower as a result of the fact that the reasons for hospitalization were not volitional, sudden, and usually upsetting. In contrast, the elective surgical patient comes into his or her doctor–patient relationship of their own accord, optimistic regarding the pending results. It should be noted that the trauma service and general surgery services have vastly different configurations that could have accounted for these Press-Ganey results. In trauma, the service was configured such that the doctor who admitted the patient would not necessarily be after his care in the intensive care unit or floor because those schedules rotated on a weekly basis. This may have led to the impression that care was more of a group effort (hence no identifying provider) and more impersonal than in general surgery where the same provider saw the patient from beginning to end. The fact that the institutional Press-Ganey scores were not different between general surgery and trauma attests to the fact that the patient’s perception of the hospital care was the same regardless of what service they were on.

With the rise in popularity and increased use of patient satisfaction scores, many in the medical community have sought to understand the factors that impact patients’ responses and determine what factors influence patients’ answers. Although the literature has identified certain demographic variables as influential, a general consensus on the underlying determinants of patient satisfaction has not been reached. Older patients have been reported to have higher patient satisfaction scores than younger age cohorts. Also, blacks have shown to be less satisfied with their hospital care in certain research. Some studies have found lack of insurance to be correlated with lower patient satisfaction scores, but other work has not found this to be the case. Mental acuity is thought by some to increase satisfaction scores. As evidenced, a plethora of data exists on the topic; however, definitive conclusions are yet to be reached with regard to the influence of these variables on patient satisfaction. One area lacking in the literature on patient satisfaction is the role of clinical condition in patients’ satisfaction with their medical doctors. Furthermore, no research exists on trauma-specific patient satisfaction data. Our study sought to act as a catalyst to filling both of these gaps by examining the impact of one’s injury type (emergent vs elective) on his or her patient satisfaction score.

One could argue that the verbiage used in the PP questions is inherently biased against trauma surgeons. For example, “Time physician spent with you” will be invariably less in trauma and emergent general surgery as a result of the urgency of clinical dictates, at least in the sense of a patient’s perception that the surgeon is addressing all their questions and helping them to understand the nature of their illness. In addition, for “Friendliness/courtesy of physician,” these niceties may be subordinated to the priorities of the physician’s imperative to deal with the life-threatening illness. Also, “Physician kept you well informed” may be difficult in a rapidly changing trauma or emergent surgery situation, where clinical priorities take precedence over informing the patient minute to minute. It appears that the PP questions are more designed to improve the growth of a private surgical practice and this is corroborated by the informational material or the Press-Ganey commercial web site.

Although the response rate of 15 per cent is relatively low, it is certainly within the acceptable sample size for Press-Ganey. Press-Ganey has set an absolute minimum sample size of 30 (randomly selected) to ensure a reasonable standard error and to ensure that inferential statistics can be conducted, even if the population from which it is derived is not normally
In our study, there were on average greater than 40 satisfaction surveys returned per year for trauma and 110 satisfaction surveys returned for general surgery; this exceeds the minimum sample size required by Press-Ganey.\textsuperscript{12}

This study does not intend to purport that Press-Ganey scores cannot be useful to an individual trauma service. For instance, it certainly may be valid to compare individual trauma surgeons who are taking care of the same group of trauma patients. In addition, Press-Ganey scores may be valuable to look at individual surgeons on a longitudinal basis to determine if their patient satisfaction scores are changing over time. However, we do not feel that Press-Ganey scores should be used to compare PP between services, even between surgical services.

This study has some inherent limitations. Although we measured patient satisfaction in this study, there was no measure of physician satisfaction with the care that they provided. It is generally understood that for many general surgeons, trauma care is unrewarding. This lack of interest/dissatisfaction may have translated to the bedside measure of the trauma patients the surgeons were caring for and accounted for the trauma PP scores. Furthermore, this study did account for other factors such as injury severity, comorbidities, or physiological derangement, all of which could have factored into the patient’s perception of their care.

**Conclusion**

In summary, trauma and emergent general surgery patients have worse patient satisfaction scores than elective general surgery patients. Physician satisfaction scores should not be used to judge physician performance relative to other services nor as a surrogate for quality between services. Further research is needed as to the role the underlying clinical condition plays in determining the overall satisfaction a patient has with their care in the hospital.

**REFERENCES**
