

Novel approach to improve patient satisfaction in the outpatient clinic setting

Chester J. Donnally III^{a,*}, Jose R. Perez^a, William H. Cade II^b, Julianne Muñoz^b, Clifton L. Page^b, Thomas M. Best^b, Lee D. Kaplan^b, Michael G. Baraga^b

^a University of Miami Hospital, Department of Orthopaedics, 1400 NW 12th Ave, Miami, FL 33136, United States

^b University of Miami Sports Medicine Institute, 5555 Ponce De Leon Blvd, Coral Gables, FL 33146, United States

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ABSTRACT

Background: With evolving reimbursement patterns and an emphasis on value-based care, patient satisfaction is increasingly becoming a more important metric. However, there remains a dearth of literature examining potential strategies to improve patient satisfaction in the outpatient setting. This study investigates if overall perception of care is influenced by providing biosketch cards to new patients in an outpatient Sports Medicine clinic.

Methods: 144 new patients were assigned to an intervention group based on the date of visit from 3/2017 to 8/2017. Eligible patients received a treating physician biosketch card (Group A), clinical practice biosketch card (Group B) or no additional literature (Control group) during the clinic check-out process. Via email, patients were asked to rate: 1- quality of care, 2- treated with courtesy and respect, 3- listened to carefully, 4- was explained things in a way you could understand, 5- overall rating, 6- recommend to family and friend? We also collected age, gender, level of education, and response time. The three groups were compared.

Results: 96 (66.7%) patients responded with 32 patients in each group (physician biosketch, clinic biosketch, no intervention). There were no significant demographic differences between the groups. The average age was 51.8 years with 52% being male. Mean time from visit to response was 1.6 days. The only significant difference occurred for rating “how would you rate your orthopedic doctor with treating you with courtesy and respect?”, however, post hoc analysis failed to reveal a significant difference in response between each study group. There was no statistical difference between the remaining questions on patient satisfaction.

Conclusion: Increasing a new patient's awareness, via physician or clinic information sheets, has no added benefit for patient satisfaction in the outpatient sports medicine setting.

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1. Introduction

This study investigates use of a biosketch card to improve patient satisfaction in the outpatient setting. With evolving reimbursement patterns and an emphasis on value-based care, patient satisfaction is increasingly becoming a more important metric in reimbursement rates. Although there continues to be an expanded role in the value of patient satisfaction and physician surveys in determining value based incentive payments, there remains a dearth of literature examining potential strategies to improve patient satisfaction, particularly in the outpatient setting.¹

Increasing a patient's familiarity with his or her's medical team has been investigated as a potential avenue to increase patient satisfaction. Previous studies have demonstrated up to 90% of medical in-patients are unable to correctly name their treating physician at the time of discharge.^{2–4} One possible method of improving orthopaedic patient satisfaction ratings is to provide the patient with an information card about their treating physician.

In an effort to clarify the role of informing patients regarding their care and its influence on patient satisfaction, Morris et al. conducted an inpatient study on trauma patients and the value of a single intervention aimed at increasing the patient's knowledge of his or her trauma surgeon. Their results demonstrated clinically significant improvements in patient perception of overall quality of care by providing attending physician biosketch cards.⁵ Our study aims to study this strategy in the outpatient setting. This inexpensive, low-effort method of improving patient satisfaction

* Corresponding author.

E-mail address: Chester.Donnally@jhsMiami.org (C.J. Donnally).

would provide physicians and hospitals with a valuable tool in building rapport with patients, marketing the hospital resources, and improving overall care ratings.

2. Methods

2.1. Study design and population

Following institutional review board approval, this study was conducted from March 2017 to August 2017. A total of 144 consecutive new patients were considered for inclusion. Inclusion criteria included: new patients, English fluency, access to email, and >17 years old. During the clinic check-out process, eligible patients received a hand out containing treating physician information (Group A; Fig. 1), clinic information (Group B; Fig. 2), or no additional literature (control group). The treating physician biosketch card included a picture of the physician with a brief synopsis of his or her educational background, training, research interests and surgical interests. The clinic biosketch card included a picture of the treating center, practice information, and highlights without specific physician information. The group that new patients were allocated to was based on the date the patient attended clinic. Consistent with our IRB approval, patients were blinded to the study and unaware of the intervention groups in an effort to eliminate bias. Similarly, patients were unaware that within 24 h they would be receiving an email with follow-up questions based on their clinic visit. If not completed within 7 days from initial visit, the responses were discarded to limit recall bias.

2.2. Satisfaction survey

Follow-up questions were completed by an email-administered survey. The question used to assess the primary outcome measure and the overall patient satisfaction with outpatient care serviced by the attending physician was “During this clinic visit, how would you rate your overall quality of care from the orthopedic doctor (excellent, very good, good, fair, or poor)?”. The emailed survey inquired: collected age, gender, level of education, and recorded the response time. On a 5-point Likert scale of “excellent, very good, good, fair, or poor” we asked patients to rate: 1- “during this clinic visit, how would you rate your overall quality of care from the orthopedic doctor?”, 2- “how would you rate your orthopedic doctor with treating you with courtesy and respect?”, 3- “how would you rate your orthopedic doctor with listening carefully to you?”, 4- “how would you rate your orthopedic doctor with explaining things in a way you could understand?”, and 5- “how would you rate this clinic experience?”. On a scale of “definitely no, probably no, probably yes, definitely yes” we also asked, “Would you recommend this orthopedic clinic to your family and friends?”.

2.3. Statistical analysis

Sample size estimates were based on anticipated differences in patient satisfaction measures among intervention groups. Sample size calculations were estimated in the absence of an established minimal clinically important difference for the primary outcome measure. Thereby, an appropriate sample size was determined by selecting a large enough sample to account for a significant difference between types of intervention. In order to reach statistical power of 0.80 and 5% significance for the pairwise comparisons between independent groups, 32 cases were needed per group, for a total sample size of 96. Statistical tests of normality were utilized to assess parametric or nonparametric test(s) deemed appropriate for the analysis of multiple pairwise comparisons. Descriptive statistics were used to summarize all study variables.

3. Results

The primary outcome measure of patient satisfaction was “how would you rate your overall quality of care?” (Table 1). Although no significant difference was found between the cohorts in regards to this question, there exist a significant effect between the intervention and control groups, pertaining to the patients’ rating of courtesy and respect. However, a further post hoc tests reveal a non-significant difference of response, between intervention and control groups for patients’ rating of courtesy and respect. There was no statistical difference between the remaining questions on patient satisfaction (Table 1). In addition, there was no significant difference between the intervention and control groups pertaining to the question “would you recommend this clinic to your friends and family?” (Table 2).

Of the 144 eligible new patients, 96 (66.7%) responded with 32 patients in each intervention group (A- physician biosketch, B- clinic biosketch, C- no intervention). There were no significant demographic differences between the groups based on age, gender, and degree of education. The average respondents age was 51.8 years, the majority were male (52%), and achieved a high school or greater education (98%). A total of 41.7% of respondents were educated beyond 4-years of college. The mean time from patient visit to submitted response was 1.6 days (Table 3).

4. Discussion

Growing financial impacts of healthcare reform and the shift towards value based incentive payments has created a focus on determining metrics which influence patient satisfaction. Previous studies demonstrated that increasing a patient’s familiarity with his or her medical team will result in a significant increase in patient satisfaction in the inpatient setting.^{3,6,7} Additional studies found similar results when evaluating in-patient orthopedic trauma patients using a physician biosketch card as an intervention to improve patients’ recognition of their attending surgeon.⁵ The current study attempted to apply these findings to the outpatient setting in an effort to shed light on modifiable factors which may improve patient satisfaction.

In comparison to the in-patient setting, we found similar rates of “excellent” care by providing patients with either attending biosketch cards (66–72%) or clinic information (81–97%).⁵ Additionally, 100% of patients responded they would definitely (94–97%) or probably (3–6%) refer family and friends to the practice. However, providing clinic or attending information failed to demonstrate any statistically significant change in the “overall quality of care” between the control and treatment groups. These results demonstrate familiarizing patients with the practice or their treating physician may not influence their satisfaction with the quality of care.

Regarding the question “being treated with courtesy and respect”, there was a statistically significant difference between the three groups; however, post hoc testing failed to demonstrate which of those groups were responsible for the difference. This may be explained by previous findings taken from a study by Abtahi et al. which examined non-modifiable patient variables and its influence on patient satisfaction in the outpatient setting.⁸ Although those authors noted associations between age, gender, and travel distance with patient satisfaction, they ultimately determined variables that influence patient satisfaction are multifactorial and cannot be fully understood in terms of a single variable or group of variables.

Patient education has been shown to have mixed effects on their satisfaction with medical care. Providing patients with information regarding their treatment has demonstrated to have limited use in improving patient satisfaction, while Francis et al.

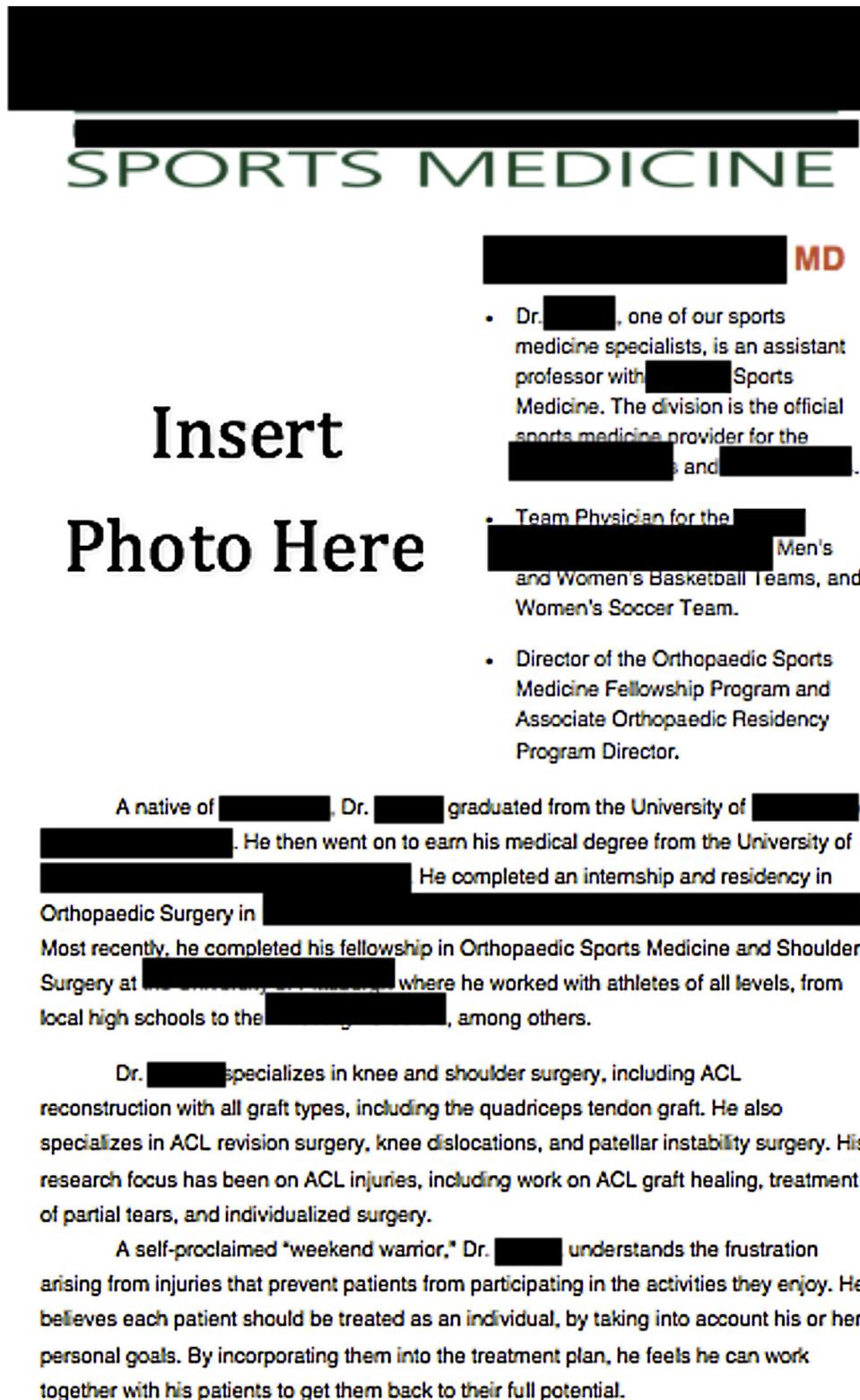


Fig. 1. Example of the Treating Physician Biosketch Card.

showed that providing patients a picture of their physician not only helped patients identify hospital team members, but also led to higher overall patient satisfaction.^{6,9,10} Although studies have demonstrated increased satisfaction by increasing patient awareness regarding their healthcare provider, we did not find similar results.^{5,6} One reason is likely attributed to the setting of these

studies, as patients being seen in a clinic setting are more likely to seek out specific physician information via recommendations or the internet, limiting the use of the biosketch. Additionally, the variation of responses regarding perceived respect could be attributed to the patient learning more about the physician with the biosketch card and forming a bias against certain promotional



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- A division of the Department of Orthopaedics at the University of [REDACTED] is the official sports medicine provider for the [REDACTED]
- As the only academic-based sports medicine program in [REDACTED] that is part of a comprehensive orthopaedics department, [REDACTED] Sports Medicine offers numerous advantages for patients.

Cutting-Edge Research: Our physicians are actively researching sports-related injuries and studying causes and treatments for a wide variety of conditions. Their research has already translated into exciting advances in the clinic through enhanced patient care, and on the field through improved training, performance and injury prevention. This includes platelet rich plasma (PRP) injections, meniscal transplants, stem cell research, proper treatment for concussions, and minimally invasive arthroscopic surgeries.

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Official Medical Provider [REDACTED] is the official medical provider for the [REDACTED], [REDACTED] and the [REDACTED]. We are one of the few sports medicine facilities in the country where X-ray, MRI, Physical Therapy, Concussion Specialists, and an Ambulatory Surgery Center are readily available in one location. Our physicians are fellowship trained in sports medicine and all diagnostic images are read by a Musculoskeletal Radiologist in the clinic. We are your destination for sports injury care and performance.

Fig. 2. Example of the Clinical Practice Biosketch Card.

information or language our biosketch card employed. Further studies evaluating ways to optimize the level of courtesy and respect a patient receives should be conducted.

A limitation to the study is the patient population is exclusive to those reporting to a sports medicine outpatient clinics, and the

results may not be indicative of other orthopedic or treating settings. However, previous studies have found no difference in non-modifiable variables which influence patient satisfaction among different orthopaedic subspecialties.⁸ An additional weakness is that certain patient groups, specifically the older, female population, have

Table 1
Patient's Ratings of Satisfaction (n = 96).

	Poor	Fair	Good	Very Good	Excellent	p-value
How would you rate your overall quality of care?						0.144
Physician (n = 32)	0	0	3 (9%)	8 (25%)	21 (66%)	
Clinic (n = 32)	0	0	0	5 (16%)	27 (84%)	
Control (n = 32)	0	0	0	7 (22%)	25 (78%)	
How would you rate your orthopedic doctor with treating you with courtesy and respect?						0.007
Physician (n = 32)	0	0	3 (9%)	7 (22%)	22 (69%)	
Clinic (n = 32)	0	0	0 (0%)	1 (3%)	31 (97%)	
Control (n = 32)	0	0	0 (0%)	5 (16%)	27 (84%)	
How would you rate your orthopedic doctor with listening carefully to you?						0.325
Physician (n = 32)	0	0	5 (16%)	4 (12%)	23 (72%)	
Clinic (n = 32)	0	0	1 (3%)	4 (13%)	27 (84%)	
Control (n = 32)	0	0	0	6 (19%)	26 (81%)	
How would you rate your orthopedic doctor with explaining things in way you can understand?						0.507
Physician (n = 32)	0	0	3 (9%)	6 (19%)	23 (72%)	
Clinic (n = 32)	0	1 (3%)	1 (3%)	3 (9%)	27 (84%)	
Control (n = 32)	0	0	1 (3%)	6 (19%)	25 (78%)	
How would you rate this clinic experience?						0.631
Physician (n = 32)	0	0	3 (9%)	6 (19%)	23 (72%)	
Clinic (n = 32)	0	0	1 (3%)	5 (16%)	26 (81%)	
Control (n = 32)	0	0	0	8 (25%)	24 (75%)	

Bolded values indicate statistical significance ($p < 0.05$). All values are n (%). Wilcoxon rank sum tests were used to compare variables.

Table 2
Patient's Ratings of Recommendation (n = 96).

	Definitely No	Probably No	Probably Yes	Definitely Yes	p-value
Would you recommend this clinic to your friends and family?					0.7725
Physician (n = 32)	0	0	2 (6%)	30 (94%)	
Clinic (n = 32)	0	0	1 (3%)	31 (97%)	
Control (n = 32)	0	0	1 (3%)	31 (97%)	

All values are n (%). Wilcoxon rank sum tests were used to compare variables.

Table 3
Demographics and Clinical Characteristics of Study Population.

Respondent Characteristics (n = 96)	Physician Biosketch (n = 32)	Clinic Biosketch (n = 32)	Control (n = 32)	p-value
Mean age (SD), yr.	49.5 (15.5)	54.9 (13.0)	50.9 (12.5)	0.684
Gender, n (%)				
Female	12 (38)	14 (44)	20 (62)	0.114
Male	20 (62)	18 (56)	12 (38)	
Highest grade or level of school completed, n (%)				0.072
8th grade or less	0 (0)	0 (0)	0 (0)	
Some High School, but not graduate	1 (3)	0 (0)	1 (3)	
High School or earned a GED	5 (16)	0 (0)	0 (0)	
Some college or earned a 2-year degree	8 (26)	10 (32)	11 (34)	
Completed 4-year college	6 (19)	4 (13)	8 (25)	
More than a 4-year college degree	11 (35)	17 (55)	12 (38)	
Mean length of email-respondent time (SD), days	2.1 (3.9)	1.8 (2.2)	1.0 (4.4)	0.412

Student's *t* tests were used to compare the continuous variable (age) that are presented as mean (SD). X^2 test were used to compare categorical variables.

been shown to have a higher response rate with satisfaction questionnaires.^{11,12} In addition, older patients and younger male patients compared to female patients, tended to report greater satisfaction rates in the outpatient orthopaedic setting.⁸ Potentially those very dissatisfied patients may not have responded to our survey, thereby skewing the results more favorably. Additionally, due to the blinded nature of the study, we were unable to verify if the respondents viewed their biosketch card. While a patient may have been recorded as being in a certain intervention group, he or she may not have reviewed the additional literature.

5. Conclusion

While providing physician biosketch cards may increase the patient's satisfaction in an inpatient setting, it does not appear to

improve the patients' perception of overall care in the outpatient setting. Increasing a new patient's awareness, via physician or clinic information sheets, has no added benefit for patient satisfaction in the outpatient sports medicine clinic. Further research is needed to identify potential modifiable variables which may positively influence the perception of overall care.

Data statement

In an effort to protect the confidentiality of our patients and abiding by our institutional review board, the data is unavailable to post.

Conflict of interest

None.

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