

Continuous Care and Hospitalized Patient's Satisfaction

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Abstract

Introduction: Patient satisfaction is one of the core elements of patient-centered care in addition to clinical outcomes. In this manuscript, we looked at the difference between patient's satisfaction with hospital care when it was provided by hospitalist physicians when compared to non-hospitalists. The null hypothesis was that there are no differences in satisfaction scores provided by patients based on the group of physicians providing the service.

Methods: Data was collected from 4 hospitals in Ohio, USA. Patients were presented with standardized HCAPS questionnaire upon discharge from the hospital. Questions related to satisfaction with physician care were selected and analyzed.

Results: Total of 6,101 patients answered surveys during the study period. They were either cared for by attending hospitalists or non-hospitalists.

Discussion: Based on results seen in this study, issues that had to do with patient's communication with their physician were found to be significant. Patient-physician connection has been shown to have the most significant effect on patient satisfaction.

Keywords: Hospitalist; Patient satisfaction; HCAHPS

Introduction

Patient satisfaction is one of the core elements of patient-centered care in addition to clinical outcomes [1,2]. Hospital Consumer Assessment of Healthcare Providers and System (HCAHPS) is a standardized survey that is designed to provide insight into patient's experience and satisfaction from the care they received[3]. Results gained from these surveys can be used to find areas in need of improvement in behavior and well as decision making.

Hospitalist is a physician specialized in management and providing care for hospitalized patients[4]. This model of care was first introduced in North America in 1996. Under this model, patients whose primary care physician do not provide inpatient services or patients who are unattached to any physician with privileges at a given hospital, are cared by hospitalists. This is in contrast to the traditional model of care that a physician would take care where a patient's primary care physician would take care of them in their office as well as continue seeing them in the hospital if needed[5,6].

Advantages to the new model of hospitalists include onsite availability and more dedicated time on patient management in the hospital. By routinely seeing complex cases and managing them in the hospital an experience is gained over outpatient physicians who do not regularly see these cases[7,8]. Some cost to these gains is loss of continuity of care which may lead to an increase rate of adverse events[7,9]. This is the reason that communication between providers is of significant importance. Delay in communication or inaccuracy in patient information could have serious implications[10,11].

In this manuscript, we looked at the difference between patient's satisfaction when their care was provided by hospitalist physicians or non-hospitalists. The null hypothesis was that there are no differences in satisfaction scores provided by patients based on the group of physicians providing he service. As a secondary outcome, we further identified any variable that significantly influenced the patient's ratings.

Methods

Data was collected from 4 hospitals in Ohio (these include Bay Park Community Hospital, Flower Hospital, St Luke's Hospital, The Toledo Hospital) during December 2011-November 2012. Patients were managed by two groups of either hospitalists or non-hospitalists. Patients were presented with standardized HCAPS questionnaire upon discharge from the hospital. Questions related to the patient's perception of physicians' care was selected from the questionnaire. These questions and their corresponding answer choices are included in Table 1.

Patient's ratings were compared between the two groups using a Chi-square analysis. Variables that predicted patient's rating of the physician service were identified by constructing a logistic regression model. Statistical significance was considered achieved at type I error rate (alpha level) of 5%. All analysis were done using IBM SPSS 24. These variables are demonstrated in Table 2.

Descriptive statistics, such as mean and standard deviations for continuous variables and proportions and frequencies for categorical variables, were used to analyze patient characteristics. Continuous variables were grouped and converted to categorical variables for data analysis. Comparisons were made using Chi-square test/Fisher's Exact Test for categorical variables.

Results

Total of 6,101 patients answered surveys during the time period. They were either cared for by one of attending hospitalists, or non-hospitalists. As the primary admitting service. Patients upon their discharge from hospital answered standardized HCAHPS survey's questions. Results of questions related to the patient's perception of physician's care are explained below as well as summarized in Table 3.

Question 6: During this hospital stay, how often did doctors treat you with courtesy and respect?

There were a significantly higher number of patients that mentioned non-hospitalists treated them better (96.7% vs. 94.9%; $p=0.005$). Once the results were adjusted for patient's race, hospital location and discharge status, leaving AMA was found to be the only significant predictor of results (OR of 13.4); they rated non-hospitalists 13.4 times higher than people who were discharged home.

Question 7: During this hospital stay, how often did doctors listen carefully to you?

Again in this category there were a significantly higher number of patients that rated non-hospitalist higher as compared to hospitalist (94.6% vs. 90.9%; $p<0.005$), indicating that patients perceived non-hospitalists to listen to patients better. When results were adjusted for race, gender, hospital and discharge status, Leaving AMA was the only significant predictor of this finding with OR of 7.2 compared to patients who were discharged home (meaning other factors had no significant impact on the results).

Question 8: During this hospital stay, how often did doctors explain things in a way you could understand?

Non-hospitalists were rated significantly higher by patients when it came to explaining things to patients (93.9% vs. 88.8%; $p<0.005$). The main predictors of the results were in order of effect were "Patients who were discharged AMA" (OR 5.4), "Patients discharged to short term hospital care" (OR 1.4) and "Patients specifically from Flower hospital (hospital location)" (OR 0.74).

Question 15: During your hospital stay, how often was your pain controlled?

Patients treated by non-hospitalist had significantly higher rate of pain being controlled when compared to hospitalist group (86.7% vs. 13.3%; $p<0.009$). It was interesting to find that main predictors of the results in pain NOT

Table 1: Questions selected form HCAPS and their possible answer choices.

| Question | Legend |
|--|------------------|
| Question 6: During this hospital stay, how often did doctors treat you with courtesy and respect? | 1 – Always |
| Question 7: During this hospital stay, how often did doctors listen carefully to you? | 2 – Never |
| Question 8: During this hospital stay, how often did doctors explain things in a way you could understand? | 3 – Sometimes |
| Question 15: During your hospital stay, how often was your pain controlled? | 4 – Usually |
| Question 23: Using any number from 0 to 10, where 0 is the worst hospital possible and 10 is the best hospital possible. | Rating from 0-10 |
| Question 24: Would you recommend this hospital to your friends and family? | Yes/No |
| Question 39: When I left the hospital, I had a good understanding of the things I was responsible for in managing my health. | Agree/Disagree |

Table 2: Variables Used as Predictors.

| Demographic | Sub-category |
|--------------------|-----------------------------------|
| Gender | Male |
| | Female |
| Race | White |
| | Black |
| | Hispanic |
| | Other |
| | Left Against Medical Advice (AMA) |
| Discharge Location | Psychiatric Hospital |
| | Long Term Care |
| | Home Health Service |
| | Home |
| | Short Term Hospital |
| | Skilled Nursing Facility |
| Hospitals | Bay Park Community Hospital |
| | Flower Hospital |
| | St Luke's Hospital |
| | The Toledo Hospital |

Table 3: Factors contributing to difference between Hospitalist and Non-Hospitalist.

| Question | Hospitalist (N) | Non-Hospitalist (N) | P-Value* | Contributing Factors | Odds Ratio |
|----------|-----------------|---------------------|----------|-----------------------------|------------|
| 6 | 94.9% (996) | 96.7% (4885) | 0.005* | Left AMA | 13.4 |
| 7 | 90.9% (947) | 94.6% (4755) | <0.005* | Left AMA | 7.2 |
| | | | | Left AMA | 5.4 |
| | | | | Left AMA | 5.4 |
| 8 | 88.8% (931) | 93.9% (4717) | <0.005* | Short Term Hospital | 1.4 |
| | | | | Flower Hospital | 0.74 |
| | | | | Black | 0.6 |
| 15 | 13.3% (542) | 86.7% (3530) | 0.009* | Left AMA | 0.16 |
| | | | | Left AMA | 0.14 |
| | | | | Long Term Care | 0.17 |
| 23 | 94.3% (962) | 95.8% (4766) | 0.49 | Bay Park Community Hospital | 2 |
| | | | | Other Race | 0.29 |
| | | | | Left AMA | 0.0095 |
| 24 | 94.8% (957) | 95.7% (4738) | 0.2 | Bay Park Community Hospital | 2.15 |
| | | | | Other Race | 0.3 |
| 39 | 95.1% (390) | 97.1% (1980) | 0.65 | Left AMA | 0.045 |
| | | | | Skilled Nursing Facility | 0.105 |

being controlled were "Black/African American" (OR 0.6, meaning 1.7 times more likely than whites) and "patients discharged AMA" (OR 0.16 meaning 6.25 times less likely than people that left home and said pain not being controlled).

Question 23: Using any number from 0 to 10, where 0 is the worst hospital possible and 10 is the best hospital possible.

We dichotomized the results to two groups; those <5 and those >5. It was interesting to find that there was No significant difference between the two groups (94.3% vs. 95.8%; p=0.49). When scores of <5 were measured (dissatisfied group), main factors predicting patient's low rating of hospitals were from "Patients discharged AMA" (OR 0.14), "Discharge to long-term care" (OR 0.17), "Results from Bay park community hospital" (OR 2).

Question 24: Would you recommend this hospital to your friends and family?

No significant difference between hospitalist and non-hospitalist groups were found when looking at results of patients "not recommending the hospital" (94.8% vs. 95.7%; p= 0.2). Main significant contributing factors were found to be "patients in other race", i.e. not self-identified as white or black (OR 0.29), "patients discharged with AMA" (OR 0.095), "Results from Bay park community hospital" (OR 2.15).

Question 39: When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.

There was Not significant difference amongst number of patients who agreed that they understood their responsibilities regarding their health upon discharge (97.1% vs. 95.1%; p= 0.65). Significant predictors in patients who agreed with the statement once dichotomized, were from groups in "other race" (OR 0.30), "patients discharged AMA" (OR 0.045), "patients discharged to skilled nursing facility" (OR 0.105).

Discussion

Patient satisfaction is known to be multidimensional. Factors like age, educational background, patient's expectations, and financial status are amongst some confounders that could influence their experience in hospital[12]. Based on results seen in this study, answers to questions six, seven, and eight which had significant differences between the groups, appears to be as a result of patient's communication with their physician. Patient-physician connection has been shown to have the most significant effect on patient satisfaction[13,14]. Features like practitioner's style and preferences, quality of doctor patient communication and mutual agreement on treatment plan are all factors that fall under this umbrella[15-17]. It could be that higher rating of non-hospitalists in our study group was due to patients' stronger connection to the physician they were more familiar with.

A positive correlation between patient experiences and quality of clinical care has been shown by several studies using HCAHPS[18,19]. One of the main variables for patient's higher rating was found to be their expectation of their results and treatment. Provider's discussion and explanation of medical management was found to directly influence patient's rating in this section[20, 21]. In our study, patients ranked hospitalists significantly lower for "how often their pain was being controlled" (question fifteen). At the same time, ranking for questions seven and eight, which were "how often did doctors listen carefully to you" and "how often did doctors explain things in a way you could understand", were also low for patients treated by hospitalists. One should keep in mind that answer to question thirty nine that asked "When I left the hospital, I had a good understanding of the things I was responsible for in managing my health" was not significantly different; A future study could look into these results and see if by improving physicians listening to patients and explaining the patient's condition as well as outcome expectations, they could possibly have a higher ranking on pain control. Our analysis demonstrated that main contributor to low scores was from patients who left against medical advice. This can again be linked to possible less time for interaction between patient and provider. Also being cared for by a physician that the patient is familiar with would decrease the likelihood of them leaving AMA.

This study demonstrates the importance of physician-patient relationship and patient satisfaction. It should be taken into consideration that many studies show that specialized care given by hospitalists is critical and crucial in managing hospitalized patients in today's medical delivery structure. Since the questions are related to patient and physician communication, this appears to be a confounding variable in these results, especially given the significant factors in the prediction model e.g. leaving the hospital AMA.

A major limitation of this study is that the non-hospitalist group is a heterogeneous group of physicians that did not self-identify as hospitalist but admitted patients to the hospital. Future studies on this subject matter should look into restricting the non-hospitalist group to only the patient's primary care physicians. We would recommend that hospitalists work to improve communication with patients by providing channels for more effective patient-hospitalist interaction, this will enable patients to build trust in the hospitalist and the care they provide.

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