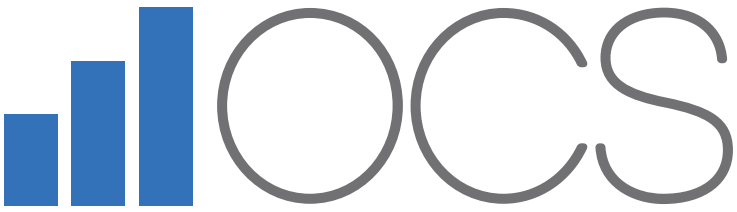
Tying Patient Satisfaction to Quality Improvement



ELEVATING HEALTHCARE INTELLIGENCE

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Introduction

OCS and Press Ganey collaborated with a shared client to explore the relationship between patient satisfaction and clinical outcome data. Our hope is that by better understanding this relationship, our clients can use patient satisfaction data alongside their clinical outcome data to better differentiate the needs of patients and target quality improvement initiatives accordingly.

We obtained permission from a large regional shared client to link their clinical outcome data and Press Ganey data at the patient level to determine disparities in patient satisfaction based on patient characteristics, what happened during the course of care, and the ultimate clinical and functional outcomes of care. This lead to the following three specific research questions:

1. What types of patients are more/less satisfied than others?
2. How do events that take place during care relate to patient satisfaction?
3. What is the relationship between clinical/functional outcomes and patient satisfaction?

To answer these questions, we summarized the clinical outcome data into flags indicating the presence or absence of a characteristic, event, or outcome. For example, ICD-9 codes were summarized as "Presence or Absence of Heart Failure," hospital visits that occurred during care became "Presence or Absence of Hospitalization;" and improvement in pain throughout the course of care became "Presence or Absence of Improvement in Pain." This allowed us to make direct comparisons of satisfaction data based on the presence or absence of each factor. Factors associated with higher patient satisfaction may have a protective effect, while those associated with lower patient satisfaction identify patients who are at risk for low satisfaction.

QUESTION #1: What Types of Patients are More/Less Satisfied than Others?

In examining the relationship between patient characteristic and satisfaction, there is an apparent interaction between type of patient and aspect of service being rated on the Press Ganey survey. As you will see, some of these interactions are obvious, some are not, but they all point to the individuals interacting with each type of patient and highlight opportunities to train appropriate staff to be extra sensitive to patients who are particularly at risk for low satisfaction.

The first patient characteristic we examined was the patient's primary diagnosis, coded using ICD-9. Six codes made up fifty percent of this agency's patient population, with diagnoses for the remaining half consisting of very small numbers of patients. Therefore, the analyses were constrained to the following six ICD-9 codes (see Table 1): Other and unspecified aftercare, Other orthopedic aftercare, Heart failure, Care involving use of rehabilitation procedures, Diabetes mellitus, and Pneumonia, organism unspecified.

TABLE 1

ICD-9 Category	Description	Percent of Population
V58	Other and unspecified aftercare	18%
V54	Other orthopedic aftercare	15%
428	Heart failure	5%
V57	Care involving use of rehabilitation procedures	5%
250	Diabetes mellitus	4%
486	Pneumonia, organism unspecified	2%
	Total	**50%**

Patients with primary diagnoses of "Other unspecified aftercare" or "Care involving use of rehabilitation procedures" showed no differences in satisfaction from other patients. Other orthopedic aftercare patients received an average of eight visits from a physical therapist throughout their course of care. These patients gave the agency significantly higher ratings overall and in likelihood of recommending the agency for care. They had an easier time arranging their home health care than other patients. Although they received no more visits from a home health aide than other patients, they rated home health aides significantly higher in general and specifically on items regarding the aides' concern for the patient's comfort, the technical skill of the aides, and the aides' attention to the patient's own ideas about care. Not surprisingly, they also rated their therapist higher across all measures than do patients with other primary diagnoses.

Heart failure patients received an average of fourteen visits from a nurse and 8 visits from a home health aide. Accordingly, they gave significantly higher ratings to nurses and aides than did other patients. Specifically, these patients gave higher ratings to both the nurses and aides on their technical skill and concern for privacy. In addition, they rated the amount of attention the nurses paid to the patients' own ideas about care and the friendliness of the aides significantly higher than did other patients.

Diabetes mellitus patients showed a different picture of care entirely. They gave significantly lower ratings to items having to do with arranging their care, the nurses, the aides, therapy, and family's involvement in their care. A significantly higher proportion of these patients improved in pain, and on the whole, they received an average of sixteen visits from nurses but rated their ease of scheduling visits, the nurse's concern for privacy, the technical skill of the nurses, and how well the nurses taught self care significantly lower than did other patients. A minority of these patients also received therapy (physical, occupational, speech, or social work) and rated it significantly lower than did other patients as well. In particular, the technical skill of the therapist, the therapist's attention to the patient's own ideas about care, the therapist's concern to contact the patient if

he or she would be late, the therapist's sensitivity to the personal difficulties caused by the patient's health problems, and even the professional appearance of the therapist were rated significantly lower by Diabetes patients than by others. This presents an opportunity for significant improvement efforts. First, it is important to better understand this subset of the patient population, possibly working harder upfront to set their expectations for their care and improvement. During the course of care for Diabetes patients, it is important to be aware of the items on which they tend to report lower satisfaction and make an extra effort to meet their needs.

Finally, Pneumonia patients gave only one significantly lower rating than other patients, but the item they rated low was their likelihood of recommending the agency's home health care services to others. This also presents an opportunity to find out what it was about the care that these patients received that made them less likely to recommend the service, especially considering that their satisfaction was at parity with that of other patients across all other items.

The next patient characteristic we examined was where the patient had been discharged from in the fourteen days prior to beginning home care. Patients who were discharged from hospital gave significantly higher ratings to how well their billing and cost questions were handled, the nurses' and nurses' aides concern to contact the patient if he or she could not make it, or would be coming late, and the technical skill of the aides. In addition, these patients rated: the therapist's sensitivity to the personal difficulties caused by the patient's health problems, the staff's concern to keep the patient's family informed about his or her treatment, and how well calls were handled after hours and on weekends significantly more favorably than did patients discharged from other facilities.

Patients who were not discharged from an inpatient setting (including Skilled Nursing and Rehabilitation facilities) rate similar aspects of their home health care significantly lower than those who came from an inpatient setting. Unlike those who came from a hospital, these patients were less satisfied with how their billing and cost questions were handled, the nurse's sensitivity to the personal difficulty and inconvenience caused by the patient's health problems, and the staff's concern to keep the patient's family informed about his or her treatment. These patients also rated the aides' concern for their privacy, technical skill, and concern to contact the patient if he or she could not make it or would be coming late significantly lower than other patients.

A third patient characteristic that we examined was the presence of a pressure ulcer, stasis ulcer, or surgical wound at the start of care. Although a small proportion of the overall population, patients that had a pressure ulcer gave a significantly lower rating to the friendliness of the aides, and the overall quality of the agency's homecare services. Patients with a stasis ulcer, also a small proportion of patients, gave significantly lower ratings on the friendliness of the therapist, the therapist's concern for their privacy, and the therapist's sensitivity to the personal difficulties caused by the patient's health problems. Interestingly, patients with a surgical wound gave significantly higher ratings than other patients overall and across the entire Press Ganey survey—specifically on items pertaining to arranging their home care, dealing with the homecare office, nurses, aides, therapists, and general final ratings.

We also examined patient satisfaction across personal factors and demographics and found additional protective effects and characteristics that might put a patient at risk for low satisfaction. For example, patients who live alone rate the technical skill of the therapist significantly lower than those who live with someone else. Those who live with a spouse are significantly more satisfied with the friendliness and technical skill of the therapist, the therapist's efforts to contact the patient if he or she could not make it, or would be coming late, and the therapist's sensitivity to the personal difficulties caused by the patient's health problems. Those who live with someone paid to help them are significantly more satisfied with the nurses' concern for the patient's privacy, the technical skill of the nurses, and the amount of attention the nurses paid to the patient's own ideas about care.

Surprisingly, risk factors seemed to have a protective effect on patient satisfaction. Smokers rated the amount of attention that the therapists paid to the patient's ideas about care significantly higher than non-smokers. Obese patients give significantly higher ratings to the aides' concern for the patient's comfort and attention to the patient's own ideas about care. Those patients with no risk factors actually had lower satisfaction than those with risk factors on items related to therapy.

QUESTION 2: How do Events That Take Place During Care Relate to Patient Satisfaction?

To answer this question, we turned to three different components of the OASIS dataset: the number and type of visits that the patient received, the need for emergent care during treatment, and hospitalization during treatment.

We have touched briefly on the number of visits for patients with specific primary diagnoses, but in general, the relationship between satisfaction with care and number of visits did not prove to be a strong one. In some cases items within the Press Ganey survey were correlated significantly with the number of visits received but trends were not strong or particularly consistent. Those that appeared did lend considerable credibility to our methodology—for example, patients receiving more visits from a home health aide gave a more favorable rating to the friendliness of the aide and those receiving more visits from a physical therapist rated therapy more favorably overall. Perhaps the most interesting correlation was the negative relationship between the number of visits by a speech therapist and the patient's rating of the therapist's sensitivity to the personal difficulties caused by the patient's health problems. In other words, patients who received more speech therapy visits found the therapists less sensitive than those who received fewer visits.

The need for any emergent care during the course of home health treatment was associated with significantly lower ratings of the friendliness of the therapist, the therapist's concern for the patient's privacy, and the therapist's sensitivity to the personal difficulty caused by the patient's health problems. However, the presence of emergent care was also associated with a significantly higher rating of the degree of involvement that the patient and his or her family had in planning his or her home health care.
Interestingly, a hospitalization for any reason during the course of home health care

was associated with significantly higher general final ratings. However, hospitalizations due specifically to injuries were related to significantly lower satisfaction with the ease of scheduling visits for the days and times that the patient wanted and the helpfulness of the person who made the initial arrangements for the patient's services. Patients who had been hospitalized for injuries also gave lower ratings to their therapists on dimensions of friendliness, concern to contact the patient if they were running late or could not make it, and their sensitivity to the personal difficulties caused by the patient's health problems. Finally, patients who were hospitalized due to respiratory illness rated their therapists significantly lower on the amount of attention they paid to the patient's ideas about care.

QUESTION #3: What is the Relationship Between Clinical/Functional Outcomes and Patient Satisfaction?

Generally speaking, improvement in clinical and functional status was found to have a protective effect on patient satisfaction. Patients who improved on any aspect of clinical or functional status rated aspects of their nursing care, aides, involvement, and especially their therapists more favorably than patients who did not improve. Those who improved in upper body dressing were significantly more satisfied overall, with scheduling, nurses, therapists, and particularly with their home health aides. Patients who improved in toileting were also more satisfied overall, rated the home health office, and nurses significantly more favorably, and reported that they were more likely to recommend the agency to others. Improvement in transferring was associated with significantly higher Press Ganey scores on the nurses' sensitivity to the personal difficulties and inconvenience caused by the patient's health problem, as well as several therapy items. Similarly, those who improved in ambulation or locomotion rated nurses' sensitivity to personal difficulties and the patients' involvement in decisions about changes to care more favorably than those who did not improve.

Interestingly, the improvement in maintenance of oral medications was associated with most differences across the board. Patients who improved in management of their oral medications rated seventy percent of the Press Ganey items significantly higher than patients who did not improve on this aspect of care.

TABLE 2

	Effect on Patient Satisfaction	
	At Risk	Protective
ICD-9	Heart failure; **Diabetes mellitus**; Pneumonia	**Other orthopedic aftercare**; Heart failure
Discharged prior to start of care	Not discharged from Hospital	Hospital; Skilled Nursing Facility
Conditions	Pressure Ulcer; Stasis Ulcer	**Surgical Wound**
Lives with	Alone	Spouse; Paid Help
Risk Factors	No risk factors	Obesity; Smoking
Emergent Care	Any emergent care; Emergent care for respiratory problems	
Hospitalization	Hospitalization for injury	
Improvement		Any improvement; **Improvement in upper body dressing**; Improvement in toileting; Improvement in transferring; **Improvement in management of oral medications**

Bold *indicates very strong effect*

Conclusion

Most basically, we found that patients with a primary diagnosis for "Other orthopedic aftercare," those with a surgical wound, those who improved in upper body dressing, and those who improved in management of oral medications rated satisfaction with the majority of aspects of care significantly higher than those that did not fit these criteria. Conversely, those with a primary diagnosis of Diabetes mellitus rated satisfaction across a variety of aspects of care as significantly lower than patients who did not have this primary diagnosis at the start of care. Additional clinical, demographic, and functional factors also seem to have a protective effect on patient satisfaction or put patients at risk for low satisfaction ratings but as we have shown, this is the case only for certain aspects of satisfaction.

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