



ORIGINAL RESEARCH

What Determinants Affect Inpatient Satisfaction in a Post-Acute Care Rehabilitation Hospital?

Sinyoung Park, PhD,^a Jing Xu, PhD,^a Mindi R. Manes, PhD,^b Allison Carrier, MHA,^a Raine Osborne, PT, DPT, EdD^c

From the ^aDepartment of Health Administration, Brooks College of Health, University of North Florida, Jacksonville, FL; ^bCenter for Data Solutions, Brooks Rehabilitation, Jacksonville, FL; and ^cBrooks Rehabilitation, Jacksonville, FL.

Abstract

Objective: To examine how specific hospital service domains (personal issues domain, discharge domain, rehabilitation doctor domain, nursing domain, physical therapist domain, occupational therapist domain, and food domain) influence final patient satisfaction scores, the overall quality of care, and willingness to recommend the hospital to others among patients in an inpatient rehabilitation hospital.

Design: Longitudinal study.

Setting: Patient-level data from electronic medical records were joined with Press Ganey (www.pressganey.com) satisfaction data for a single post-acute care inpatient rehabilitation facility in northeast Florida.

Participants: Patients who participated in the inpatient rehabilitation survey (N=4,785).

Interventions: Not applicable.

Main Outcome Measures: Main outcome measures included final patient satisfaction scores, overall rating of care during the stay, and willingness to recommend the hospital to others.

Results: This study found the personal issues domain to be the most important factor in determining the final patient satisfaction score, overall rating of care, and likelihood to recommend the hospital to others, followed by the physical therapist, nurse, discharge, and food domains ($P < .0001$). Within the personal issues domain score, staff promptness and explanation upon arrival were areas identified as opportunities to make improvements that would result in the greatest positive effect.

Conclusions: This work represents novel findings by investigating the major determinants of positive patient experience in a rehabilitation hospital setting. These findings provide actionable information to improve patient experience as well as where to focus improvement efforts using limited resources.

Archives of Physical Medicine and Rehabilitation 2022;000:1–7

© 2022 by the American Congress of Rehabilitation Medicine.

Patient experience, also known as patient satisfaction, has been a significant indicator of the quality of care in health care organizations since the Affordable Care Act (2010). The qualitative and quantitative measurements of patient satisfaction may help patients choose the best health care provider and facilities for their situation and inform providers on what domains they can focus on to help improve their patients' experience.^{1,2} In general, patient experience can be determined by hospital service domains (such as patient experience with nursing care, physician care, staff, and environment), patient demographic attributes, and hospital organizational characteristics.^{3–6} Positive patient experience is also

associated with a shorter length of stay, lower readmission, and lower mortality rate after surgical care.^{7–9}

Various features determine patient experience in rehabilitation health care systems. The interaction between patient and therapist is a key factor that may be influenced by the therapist's skills, knowledge, professionalism, attitude, and communication. Research has shown that patients were more satisfied with friendlier therapists who communicated more frequently.¹⁰ Additionally, patients appreciate when the provider presents proper information about their care and condition during and after treatment sessions.¹¹ Patient satisfaction with provider relations also resulted in positive hospital satisfaction scores, whether that be with nurses or, in a particular study on inpatient rehabilitation, the physicians.^{12,13}

Another factor related to satisfaction is the process and continuity of care. Patients provided sufficient time with their therapist,

Presented to the American Medical Rehabilitation Providers Association, October 25, 2021, presented virtually.

Disclosures: none.

had the same therapist during the course of treatment, and were more involved in their treatment decisions reported higher satisfaction.^{10,13,14} Environmental factors, including accessibility and availability of health care services and experience of hospital staff, are also important factors. Facility location, working hours, and professionalism/helpfulness of hospital staff are all aspects of environmental factors.¹⁴ Previous literature using focus groups at an inpatient rehabilitation center found that small environmental changes, such as having a room with a garden view or removing a loud utility door, positively affected patient experience.¹⁵

Although there is ample research examining the attributes of patient experience, most studies have looked at specific medical conditions or therapies and have yet to investigate overall patient experience for rehabilitation inpatient care, specifically in freestanding rehabilitation hospitals in the US. In addition, previous literature relied upon self-developed data sources, so the analysis of valid and reliable survey instruments, such as the Press Ganey (PG) patient satisfaction survey, is important in establishing baseline data. The objective of this study is to examine how specific hospital service domains (satisfaction ratings on rehabilitation doctor, nursing care, physical therapist (PT), occupational therapist (OT), discharge, personal issues, and food service) influence final patient satisfaction score, patient's rating on the quality of care, and willingness to recommend the hospital to others in an inpatient rehabilitation hospital.

Methods

Data sources

We used hospital discharge data from electronic medical records and inpatient satisfaction data from PG (www.pressganey.com) surveys from January 2010 through December 2019 for patients utilizing care in a post-acute care rehabilitation hospital located in northeast Florida. Satisfaction data were collected through surveys mailed to all patients discharged from the hospital, excluding some who left the facility emergently or against medical advice. Electronic medical record patient-level data included variables related to the hospital stay, patient demographics, clinical and functional status, and measures of quality of care (table 1).

PG inpatient satisfaction survey data include 8 domains: overall domain, personal issues domain, discharge domain, food service domain, rehabilitation doctor domain, nursing domain, PT domain, and OT domain. Each domain had 2-10 questions (see table 2) and was answered by 5 categories: very poor (0 points), poor (25 points), fair (50 points), good (75 points), and very good (100 points). Survey scoring followed the scoring methodology used by PG. The score for each domain was calculated by taking the average of the scores of all questions in that domain and overall score was calculated as the average of the domain scores.

Variables

The 3 dependent variables for this study were the final patient satisfaction score, overall rating of care during the stay, and the

Table 1 Electronic medical record patient-level variables assessed for correlation with satisfaction among patients in an inpatient rehabilitation facility, 2010-2019

| | |
|---------------------------------------|--|
| Hospital stay | <ul style="list-style-type: none"> • Admission and discharge dates • Length of stay • Diagnosis program • Discharge location • Charges for health care services • Amount paid by patient • Discharges against medical advice • Therapy minutes completed |
| Demographics | <ul style="list-style-type: none"> • Age • Sex • Race/ethnicity • Marital status • Language (nearly all English surveys) • Primary insurance |
| Clinical and functional status | <ul style="list-style-type: none"> • Primary diagnosis • Comorbidities • FIM scores • Pressure ulcers present on admission and discharge |
| Quality of care | <ul style="list-style-type: none"> • Falls • Readmissions • Interrupted stay • Acquired pressure injury |

likelihood of recommendation to others. The final patient satisfaction score is a composite of the multiple domains (personal issues domain, discharge domain, rehabilitation doctor domain, nursing domain, PT domain, OT domain, and overall domain) measured and averaged into a single score. Two questions, “*Likelihood of your recommending our facility to others*” and “*Overall rating of care you received during your stay*,” were analyzed individually from the survey results. The distributions of the values of the dependent variables were highly left-skewed since most of the scores were 100 points. Therefore, the 3 dependent variables were dichotomized with 1 signifying “very good” (extremely satisfied, 100 points) and 0 signifying “good, fair, poor, and very poor” (not extremely satisfied, 0-75 points).

Analytic approach

To assess potential survey response bias, we compared the characteristics of patients who did complete an inpatient survey to those who did not complete a survey. Homogeneity tests were conducted for the demographic factors between survey participants (N= 4,785) and non-participants (N= 24,687), and there were some differences in the distribution of sex, race, and primary insurance.

We used descriptive statistics to identify potential relations between independent and dependent variables among the survey participants. Correlations between independent variables were examined to identify potential confounding effects and multi-collinearity. A strong correlation was observed between PT and OT domain scores. Thus, the PT and OT domain was included in 2 separate models. Also, observations with missing variables were automatically excluded from the final model. Six longitudinal,

List of abbreviations:

OT occupational therapist
PG Press Ganey
PT physical therapist

Table 2 Press Ganey^a inpatient satisfaction survey questions in 8 domains

| | |
|--------------------------------------|---|
| Overall domain | <ol style="list-style-type: none"> 1. Likelihood of recommending our facility to others 2. Overall rating of care you received during your stay 3. How well staff worked together for you 4. How well staff prepared you to function at home 5. How well the staff prepared you to function in the community |
| Personal issues domain | <ol style="list-style-type: none"> 1. When you first arrived, how well staff explained what your stay would be like 2. Staff sensitivity to the inconvenience that health problems and hospitalization can cause 3. Extent to which staff gave you encouragement 4. How well your pain was controlled 5. Extent to which staff treated you with respect 6. Degree of safety and security you felt 7. Staff concern for your privacy 8. Accuracy of the information you received about the rehab program 9. Staff concern for your questions and worries 10. Staff promptness in responding to your requests |
| Discharge domain | <ol style="list-style-type: none"> 1. How well staff explained your discharge plans 2. Assistance with post-discharge arrangements 3. Training given to you and your family about care after discharge |
| Food service domain | <ol style="list-style-type: none"> 1. Overall satisfaction level with food and nutrition services 2. Likelihood of getting the food that you checked off on the menu |
| Rehabilitation doctor domain | <ol style="list-style-type: none"> 1. Courtesy of the rehabilitation doctor 2. Availability of the rehabilitation doctor 3. How well the rehabilitation doctor kept you informed about your treatment and progress 4. How well the rehabilitation doctor discussed your discharge plans and post discharge care |
| Nursing domain | <ol style="list-style-type: none"> 1. Courtesy of the nurses 2. How well nurses kept you informed about your treatment and progress 3. Availability of the nurses 4. How well the nurses instructed you about caring for yourself at home (including medications) 5. Evaluate the overall nursing care you received on the following shifts: day shift (7 AM - 3 PM) 6. Evaluate the overall nursing care you received on the following shifts: evening shift (3 PM - 11 PM) 7. Evaluate the overall nursing care you received on the following shifts: night shift (11 PM - 7 AM) |
| Physical therapist domain | <ol style="list-style-type: none"> 1. Courtesy of the physical therapist 2. How well physical therapy helped you meet your goals 3. Extent to which you were involved in setting your physical therapy goals 4. How well the physical therapist explained your treatment and progress |
| Occupational therapist domain | <ol style="list-style-type: none"> 1. Courtesy of the occupational therapist 2. How well occupational therapy helped you meet your goals 3. Extent to which you were involved in setting your occupational therapy goals 4. How well the occupational therapist explained your treatment and progress |

^a www.pressganey.com.

multivariate logistic regression models were used to analyze the probability of an extremely satisfying experience for each response variable. Most of the variables in [table 1](#) were included in the full model, and then the stepwise method was applied to remove the insignificant predictors. The main predictors in the final models were scores from rehabilitation doctors, nurses, PTs, OTs, discharges, personal issues, and food service domains. Survey year, diagnosis classification, discharge location, length of stay, total therapy minutes per day, age, and sex were adjusted in the model as fixed covariates. These were factors identified as influencers of patient satisfaction scores in the hospital setting.^{3,4,16,17} Statistical analysis was completed using SAS 9.4.^a

Results

Among the 29,473 patients over the 10 year study period, 4785 returned a satisfaction survey, resulting in an overall response rate

of 16.2%. The characteristics of PG inpatient rehabilitation survey participants and non-participants are summarized in [table 3](#). Of the 4785 participants, 52% were male, 85% were White, 60% were married, 63% were Medicare recipients, and 66% were in general rehabilitation, orthopedic, and stroke rehabilitation programs. The summary statistics show that most of the survey participants reported they were extremely satisfied with the final patient satisfaction score (66%), overall rating of care during stay (81%), and the likelihood of recommendation to others (85%), respectively.

In the individual models for each of the 3 response variables, the scores from all domains were statistically significant at the $P=.05$ level. In addition, length of stay had a negative effect on the final patient satisfaction score but a positive effect on the likelihood of recommendation, and total therapy minutes per day had a positive effect on the overall rating of the hospital. [Table 4](#) shows the marginal odds increase in receiving an extremely satisfied score (the patient change from a non-perfect score to a perfect

Table 3 Characteristics of patients who did and did not complete a satisfaction survey at an inpatient rehabilitation hospital, 2010-2019.*

| | Participants (N= 4785) | Non-participants (N=24,687) |
|--|---------------------------|--------------------------------|
| Sex ($P=.0334$) | | |
| Female | 48% | 46% |
| Male | 52% | 54% |
| Race ($P<.0001$) | | |
| White | 85% | 75% |
| Other | 15% | 25% |
| Marriage ($P<.0001$) | | |
| Married | 60% | 49% |
| Other | 40% | 51% |
| Primary insurance ($P=.0006$) | | |
| Medicare | 63% | 60% |
| Medicaid | 3% | 4% |
| Other | 34% | 36% |
| Program ($P<.0001$) | | |
| General | 23% | 26% |
| Brain injury | 18% | 20% |
| Orthopedic | 20% | 15% |
| Pediatrics | 0.6% | 0.6% |
| Spinal cord injury | 15% | 13% |
| Stoke | 23% | 25% |
| Missing | 0.4% | 0.4% |
| Discharge location ($P<.0001$) | | |
| Acute care | 3.6% | 15.6% |
| Community | 86% | 67.3% |
| SNF | 10% | 16.2% |
| Missing | 0.3% | 0.9% |
| Final patient satisfaction score | | |
| Extremely satisfied | 66% | |
| Not extremely satisfied | 32% | |
| Missing | 2% | |
| Overall rating of care during stay | | |
| Extremely satisfied | 81% | |
| Not extremely satisfied | 17% | |
| Missing | 2% | |
| Likelihood of recommendation | | |
| Extremely satisfied | 85% | |
| Not extremely satisfied | 12% | |
| Missing | 3% | |
| Age (Mean \pm SD) ($P<.1051$) | 68, 16.1 | 65, 17.5 |
| Length of stay (Mean \pm SD) ($P<.0001$) | 16, 8.9 | 16, 10.8 |
| Total therapy minutes per day (Mean \pm SD) ($P<.0098$) | 28, 7.2 | 28, 14.2 |

* Categorical variables were tested by the Chi-Square test; continuous variables were tested by the *t* test..

score) with a 5-point increase in each domain score for each of the 3 models. For example, in the final patient satisfaction model, including the PT domain, the odds of an extremely satisfied score are 1.83 and 1.28 times higher, with a 5-point increase in the personal issues and PT domains, respectively. In the overall rating model, including the OT domain, if we have 5 points increase in the personal issues and OT domains, 1.85 and 1.14 times more

likely to receive a perfect overall rating. McFadden's R Square values were above 0.5 for all 6 models.

The personal issues domain has the highest effect on all 3 models, and the order of importance for each domain displays a similar pattern. The remaining domains ranked by importance are PT/OT, nurse, discharge, rehabilitation doctors, and food domains. Table 5 lists the top 2 questions that have the lowest percentage of 100 points from each domain, which indicates areas to improve for the corresponding domain.

Discussion

Patient experience has been an important factor in determining health care organizations' quality of care, as well as acting as valuable information for patients when choosing health care providers and facilities. The cumulative measure of individual patient experiences with their health care providers and facilities is generally a result of patient experiences on multiple levels during their hospital stays. This study provides important insight into the determinants of positive inpatient experience at a rehabilitation hospital located in Florida. The study results offer a better understanding of how patient experience with hospital service domains affects final patient satisfaction score, overall rating of care, and the likelihood of recommending the facility to others.

Our findings suggest that patient experience was mostly determined by personal issues, such as communication with staff, pain control, and communication upon arrival, followed by PT care, OT care, nursing care, discharge, and rehabilitation doctor care. As these scores were the lowest within their respective domains, explanation upon arrival and staff promptness for the personal issues domain are areas identified as opportunities to make improvements that would result in the greatest positive effect in our study hospital. This could be explained by inpatient services, and personal issues contribute to higher levels of patient understanding of treatment schedules, medications, and provide follow-up care, which are patient empowering domains that directly help the patient's own abilities to self-care outside of the hospital environment. This result is consistent with previous research in inpatient care treatment settings.¹⁸⁻²¹ In a study on inpatient stay of stroke patients, they found much more positive patient experience ratings when patients participated in a "stroke information session" early in their treatment.²² Having a higher patient understanding of the treatments, they are undergoing is also shown to increase helpful discussion about medications and ensure informed consent discussions, which is good for the effectiveness of future treatment.¹¹ Much of the healing and regaining of function a patient will experience will be done outside of the hospital, especially in the case of rehabilitation hospitals. A more informed patient will understand the importance of their responsibility in going to follow-up care, performing exercises required for their rehabilitation, and the importance of medications they may require.

In this study, the second most important factor in determining positive patient experience was the PT domain and OT domain, measured by PT/OT courtesy, ability to explain the treatment, let patients involved in therapy goal settings, and help to meet goals. This result adds to the body of literature that emphasizes the role of PT and OT in improving patient experience. Previous literature found that patient experience in interpersonal relations with PT resulted in a positive patient

Table 4 Multivariate logistic regression results for independent models predicting final satisfaction score, overall rating, and recommendation among patients in an inpatient rehabilitation facility, 2010-2019 (N=4785*)[†]

| Odds Increase and OR With 5 Points Increase in Each Domain (Model With PT Domain Only) | | | | | | |
|--|--------------------------|-------------------|----------------|-------------------|----------------|-------------------|
| | Final Satisfaction Score | OR (95% Wald CI) | Overall Rating | OR (95% Wald CI) | Recommendation | OR (95% Wald CI) |
| Personal issue | 83% | 1.83 (1.68, 1.99) | 80% | 1.80 (1.65, 1.96) | 54% | 1.54 (1.43, 1.67) |
| PT | 28% | 1.28 (1.18, 1.38) | 22% | 1.22 (1.14, 1.30) | 12% | 1.12 (1.05, 1.19) |
| Nurse | 26% | 1.26 (1.18, 1.35) | 24% | 1.24 (1.16, 1.33) | 13% | 1.13 (1.06, 1.20) |
| Discharge | 16% | 1.16 (1.12, 1.21) | 10% | 1.10 (1.06, 1.14) | 11% | 1.11 (1.06, 1.15) |
| Doctor | 12% | 1.12 (1.07, 1.17) | 9% | 1.09 (1.04, 1.14) | 11% | 1.11 (1.06, 1.16) |
| Food | 7% | 1.07 (1.04, 1.10) | 7% | 1.07 (1.04, 1.10) | 8% | 1.08 (1.05, 1.12) |
| McFadden's R Square | 0.51 | | 0.60 | | 0.52 | |
| Odds Increase and OR With 5 Points Increase in Each Domain (Model With OT Domain Only) | | | | | | |
| | Final Satisfaction Score | OR (95% Wald CI) | Overall Rating | OR (95% Wald CI) | Recommendation | OR (95% Wald CI) |
| Personal issue | 85% | 1.85 (1.70, 2.01) | 85% | 1.85 (1.70, 2.01) | 57% | 1.57 (1.45, 1.69) |
| OT | 30% | 1.30 (1.21, 1.40) | 14% | 1.14 (1.07, 1.22) | 6% | 1.06 (1.00, 1.12) |
| Nurse | 23% | 1.23 (1.15, 1.31) | 22% | 1.22 (1.14, 1.30) | 12% | 1.12 (1.05, 1.19) |
| Discharge | 15% | 1.15 (1.10, 1.20) | 9% | 1.09 (1.05, 1.14) | 11% | 1.11 (1.07, 1.16) |
| Doctor | 13% | 1.13 (1.08, 1.18) | 9% | 1.09 (1.03, 1.14) | 11% | 1.11 (1.06, 1.16) |
| Food | 7% | 1.07 (1.04, 1.10) | 7% | 1.07 (1.04, 1.11) | 9% | 1.09 (1.05, 1.12) |
| McFadden's R Square | 0.51 | | 0.60 | | 0.52 | |

Abbreviations: CI, confidence interval; OR, odds ratio.

* Only include data from 2011 to 2019 because data for food domain is missing in 2010.

[†] Covariates adjusted in the final models: year, diagnosis program, discharge location, length of stay, total therapy minutes per day, age, and sex.

Table 5 Top 2 concerns among hospital service domains among patients in an inpatient rehabilitation facility, 2010-2019

| Domain | Item | Percentage of 100 Points (%) |
|-----------------------|--|------------------------------|
| Personal issue | Explanation upon arrival | 62.5 |
| | Staff promptness | 66.5 |
| PT | Involvement in setting goals | 76.0 |
| | Help to meet goals | 81.2 |
| OT | Involvement in setting goals | 74.5 |
| | Help to meet goals | 77.2 |
| Nurse | Night shift nurses | 67.0 |
| | Instruction for home care | 69.2 |
| Discharge | Training given to you and your family about care after discharge | 69.1 |
| | Assistance with post-discharge arrangements | 70.6 |
| Doctor | Information about treatment | 67.6 |
| | Discharge discussion | 68.1 |

satisfaction score.²³ In addition, particular characteristics of the PT domain were identified as significant determinants, such as their empathy and effective communication about the patient's conditions and treatment process.^{14,24} Regarding the role of OT, our findings reconfirmed patients' perceptions of the collaborative nature of the therapeutic goal-setting process between OT and patients.²⁵ A previous study found that the occupational therapy outcomes of gains in self-care and in functional status were the determinants of patient satisfaction.¹⁷ While looking at functional outcomes is important, our study's focus on the interaction between patients and OT and communication with OT adds to the understanding of the importance of OT and how it can affect patient satisfaction.

Notably, this result differs from previous literature in acute care settings where the relations with nurses and physicians were the largest determinants of patient experience and contributed the

most to an overall better patient experience during their hospital stay.^{3,4} This could be explained by the fact that, for a rehabilitation hospital, PT and OT spends the most active, and what the patient perceives as most useful, time with the patient. While obviously nursing and doctor roles are vital in day-to-day patient care, PT and OT have a unique role in which they are tasked with helping the patient regain the loss of function and increase their independence from outside help in living their normal daily routine. In the eyes of an average patient, this role is in some ways more important. While the doctor and nursing care will get them through the acute issues they are having, appropriate PT and OT care will allow the patient to have a more functional life after leaving the hospital and beyond. Perception of patient care and experience is not necessarily the number of staff per patient but rather the amount of quality time spent with each patient, which usually increases in number as provider availability increases.^{5,16,26-28} This idea is reinforced by several qualitative studies, which conclude that patients want to feel like they are listened to, cared for at a personal level, and have personalized time and treatment.^{14,22,29,30}

Study limitations

There are several limitations in this study that should be addressed. We did not investigate other hospital-level and environmental-level determinants that may influence patient experiences, such as patient experience on continuity of care, hospital location, size, competition around hospitals, and fulfillment of patient expectations. This study also used a longitudinal data set from a single rehabilitation hospital, and the data collection was based on voluntary participation. The population characteristics for the survey participants show some level of difference from the non-participants, which may indicate a sampling bias. For this reason, the sample is not representative of the entire US population because of an overrepresentation of Whites and Medicare/Medicaid insurers. According to the 2020 Census, Medicare patients comprised 18.4%, and Medicaid patients were 17.8% of the total US population.³¹ This is in comparison with 63% and 3%, respectively, in our study cohort. Therefore, it is not appropriate to

generalize the findings of this study to all US rehabilitation hospitals and patients without further investigation.

Conclusions

The results of this study contribute to our knowledge of the major hospital service domain determinants of positive patient experience in a rehabilitation hospital setting. This study found the personal issues domain to be the most important factor in determining the final patient satisfaction score, overall rating of care, and likelihood to recommend the hospital to others, followed by the PT, nurse, discharge, and food domains. The findings presented here may result in providing actionable insights that can be used to improve the patient experience. For instance, “onboarding” new patients where they are told in detail the reasons why they are there, what they will focus on, and discuss what concerns they have could be helpful in empowering patients to take the initiative in their own care, which can positively affect their own experience and interactions with health care providers. Focused strategic improvements based on survey results at individual health care facilities can improve patient experience scores, which may lead to better patient health outcomes.

Suppliers

a. SAS 9.4; SAS Institute.

Keywords

Hospitals; Patient Satisfaction; Rehabilitation

Corresponding author

Sinyoung Park, PhD, Department of Health Administration, Brooks College of Health, University of North Florida, 1 UNF Dr., Jacksonville, FL 32224. *E-mail address:* sinyoung.park@unf.edu.

Acknowledgments

The authors acknowledge the support of Brooks Rehabilitation Hospital and University of North Florida.

References

- Elliott MN, Lehrman WG, Goldstein E, Hambarsoomian K, Beckett MK, Giordano LA. Do hospitals rank differently on HCAHPS for different patient subgroups? *Med Care Res Rev* 2010;67:56–73.
- Deutsch A, Heinemann AW, Cook KF, et al. Inpatient rehabilitation quality of care from the patient’s perspective: effect of data collection timing and patient characteristics. *Arch Phys Med Rehabil* 2019;100:1032–41.
- Park S, Xu J, Smith FS, Otani K. What factors affect patient perceptions on their hospital experience? *Hosp Top* 2020;98:127–34.
- Otani K, Waterman B, Faulkner KM, Boslaugh S, Dunagan WC. How patient reactions to hospital care attributes affect the evaluation of overall quality of care, willingness to recommend, and willingness to return. *J Healthc Manag* 2010;55:25–37; discussion 38.
- Al-Amin M, Schiaffino MK, Park S, Harman J. Sustained hospital performance on hospital consumer assessment of healthcare providers and systems survey measures: what are the determinants? *J Healthc Manag* 2018;63:15–28.
- Chumbler NR, Otani K, Desai SP, Herrmann PA, Kurz RS. Hospitalized older adults’ patient satisfaction: inpatient care experiences. *SAGE Open* 2016;6:2158244016645639.
- Tsai TC, Orav EJ, Jha AK. Patient satisfaction and quality of surgical care in US hospitals. *Ann Surg* 2015;261:2–8.
- Tajeu GS, Kazley AS, Menachemi N. Do hospitals that do the right thing have more satisfied patients? *Health Care Manage Rev* 2015;40:348–55.
- Jha AK, Orav EJ, Zheng J, Epstein AM. Patients’ perception of hospital care in the United States. *N Engl J Med* 2008;359:1921–31.
- O’Keeffe M, Cullinane P, Hurley J, et al. What influences patient-therapist interactions in musculoskeletal physical therapy? Qualitative systematic review and meta-synthesis. *Phys Ther* 2016;96:609–22.
- Goggins KM, Wallston KA, Nwosu S, et al. Health literacy, numeracy, and other characteristics associated with hospitalized patients’ preferences for involvement in decision making. *J Health Commun* 2014;19(Suppl 2):29–43.
- Malik N, Alvaro C, Kuluski K, Wilkinson AJ. Measuring patient satisfaction in complex continuing care/rehabilitation care. *Int J Health Care Qual Assur* 2016;29:324–36.
- Leung J, Fereday S, Sticpewich B, Stroud K. Factors influencing the overall satisfaction in patients with severe brain injury with physiotherapy services during inpatient rehabilitation. *J Head Trauma Rehabil* 2018;33:E56–63.
- Hush JM, Cameron K, Mackey M. Patient satisfaction with musculoskeletal physical therapy care: a systematic review. *Phys Ther* 2011;91:25–36.
- Gill SD, Dunning T, McKinnon F, Cook D, Bourke J. Understanding the experience of inpatient rehabilitation: insights into patient-centred care from patients and family members. *Scand J Caring Sci* 2014;28:264–72.
- Andaleeb SS. Determinants of customer satisfaction with hospitals: a managerial model. *Int J Health Care Qual Assur Inc Leadersh Health Serv* 1998;11:181–7.
- Custer MG, Huebner RA, Howell DM. Factors predicting client satisfaction in occupational therapy and rehabilitation. *Am J Occup Ther* 2015;69:6901290040.
- Mazurenko O, Zemke D, Lefforge N, Shoemaker S, Menachemi N. What determines the surgical patient experience? Exploring the patient, clinical staff, and administration perspectives. *J Healthc Manag* 2015;60:332–46.
- Nápoles AM, Santoyo-Olsson J, Karliner LS, Gregorich SE, Pérez-Stable EJ. Inaccurate language interpretation and its clinical significance in the medical encounters of Spanish-speaking Latinos. *Med Care* 2015;53:940–7.
- Lee S, Groß SE, Pfaff H, Dresen A. Waiting time, communication quality, and patient satisfaction: an analysis of moderating influences on the relationship between perceived waiting time and the satisfaction of breast cancer patients during their inpatient stay. *Patient Educ Couns* 2020;103:819–25.
- Diviani N, van den Putte B, Giani S, van Weert JCM. Low health literacy and evaluation of online health information: a systematic review of the literature. *J Med Internet Res* 2015;17:e112.
- Aguirrezabal A, Duarte E, Rueda N, Cervantes C, Marco E, Escalada F. Effects of information and training provision in satisfaction of patients and carers in stroke rehabilitation. *NeuroRehabilitation* 2013;33:639–47.
- De Paula DAG, Piatti N, Costa LM, Chiavegato LD. Satisfaction levels with physical therapy in hospitalized patients. *Braz J Phys Ther* 2020;24:118–23.
- Keith RA. Patient satisfaction and rehabilitation services. *Arch Phys Med Rehabil* 1998;79:1122–8.
- McAndrew E, McDermott S, Vitzakovitch S, Warunek M, Holm MB. Therapist and patient perceptions of the occupational therapy goal-setting process. *Phys Occup Ther Geriatr* 2000;17:55–63.

26. Kraska RA, Weigand M, Geraedts M. Associations between hospital characteristics and patient satisfaction in Germany. *Health Expect* 2017;20:593–600.
27. Al-Amin M, Hefner JL, Hogan TH, Li K. Sustainers: hospitals with sustained superior performance. *Health Care Manage Rev* 2020 Jan 10. [E-pub ahead of print].
28. Anhang Price R, Elliott MN, Zaslavsky AM, et al. Examining the role of patient experience surveys in measuring health care quality. *Med Care Res Rev* 2014;71:522–54.
29. Ullrich A, Hauer J, Farin E. Communication preferences in patients with fibromyalgia syndrome: descriptive results and patient characteristics as predictors. *Patient Prefer Adherence* 2014;8:135–45.
30. Cheruiyot JC, Brysiewicz P. Nurses' perceptions of caring and uncaring nursing encounters in inpatient rehabilitation settings in South Africa: a qualitative descriptive study. *Int J Afr Nurs Sci* 2019;11:100160.
31. U.S. Census Bureau. *Health Insurance Coverage in the United States: 2021 Current Population Reports*. 2021. Available at: <https://www.census.gov/content/dam/Census/library/publications/2022/demo/p60-278.pdf>. Accessed January 11, 2022.