

# Customer Convergence: Patients, Physicians, and Employees Share in the Experience and Evaluation of Healthcare Quality

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**ABSTRACT.** This article explores the interrelationships between three categories of service quality in healthcare delivery organizations: patient, employee, and physician satisfaction. Using the largest and most representative national databases available, the study compares the evaluations of hospital care by more than 2 million patients, 150,000 employees, and 40,000 physicians. The results confirm the relationship connecting employees' satisfaction and loyalty to their patients' satisfaction and loyalty. Patients' satisfaction and loyalty were also strongly associated with medical staff physicians' evaluations of overall satisfaction and loyalty to the hospital. Similarly, hospital employees' satisfaction and loyalty were related to the medical staff physicians' satisfaction with and loyalty to the hospital. Based upon the strength of the interrelationships,

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The authors would like to thank Suzanne Coshow, PhD, for an excellent internal review and editorial suggestions.

Health Marketing Quarterly, Vol. 23(3) 2006  
Available online at <http://www.haworthpress.com/web/HMQ>  
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doi:10.1300/J026v23n03\_05

individual measures and subscales can serve as leverage points for improving linked outcomes. Patients, physicians, and employees, the three co-creators of health, agree on the evaluation of the quality of that service experience. The results demonstrate that promoting patient-centeredness, enhancing medical staff relations, and improving the satisfaction and loyalty of employees are not necessarily three separate activities in competition for hospital resources and marketing leadership attention. doi:10.1300/J026v23n03\_05 *Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2006 by The Haworth Press, Inc. All rights reserved.]*

**KEYWORDS.** Customer convergence, patients, physicians, and employees share in the experience and evaluation of healthcare quality

### INTRODUCTION

Healthcare delivery organizations today face critical marketing challenges: acquiring the needed flow of customers, ensuring adequate labor to deliver services to those customers, and assuring the quality of those services. While these challenges touch every facet of a healthcare delivery organization, they project greatest importance for marketing. Customer acquisition and growth depend upon relationships with customers, physicians, and the community. Guaranteeing the presence of talented doctors, nurses, and other healthcare professionals depends upon the organization's labor relations, physician relations, reputation, and brand. Guaranteeing the means of production depends upon the organization's labor relations, physician relations, reputation, and brand. Finally, in order to fulfill the ultimate demand for health improvement, healthcare provider organizations must go beyond simply addressing clinical needs and design memorable service experiences.

As large, bureaucratic entities, healthcare delivery organizations typically face these challenges separately. Human resources departments work on employee issues. A Vice President for Medical Affairs, Chief Medical Officer, medical staff organization, or physician relations staff work on the medical staff relations. A quality department will work on clinical quality improvement and process efficiency, while the patient relationships and the gestalt of service quality will remain the domain of patient advocates, patient relations, or a service excellence council. This division of labor obfuscates the interconnected nature of organizations' internal issues and market outcomes.

Over the past decade, numerous studies demonstrated how internal, non-financial factors ultimately influence financial outcomes. The service-profit chain established the causal connection between employee satisfaction, customer experience, and financial performance in the service industry (Heskett et al. 1994; Rucci, Kirn, & Quinn 1998). Since then, more studies confirmed the model in the healthcare industry while adding details useful in directing optimal performance. Healthcare employees' satisfaction correlates highly with patient satisfaction (Kaldenberg & Regrut 1999) and patient loyalty (Atkins, Marshall, & Javalgi 1996). Employee effort factors into job performance and subsequent customer satisfaction, but employee satisfaction is an antecedent to achieving this employee engagement (Christen, Iyer, & Soberman 2006; Oakley 2005). High customer satisfaction results in higher returns in the stock market *and* lower risk, making service quality an attractive business model (Fornell et al. 2006). The same logic applies to healthcare where patient perceptions of service quality are associated with better financial performance (Nelson et al. 1992) and increased return-to-provider behavior (Garman, Garcia, & Hargreaves 2004). Financial returns are also produced through customer attraction (Kordupleski, Rust, & Zahorik 1993), customer retention (Bolton 1998), positive word-of-mouth (Anderson 1998; Danaher & Rust 1998), increased customer willingness-to-pay (Homburg, Koschate, & Hoyer 2005) and employee productivity and service costs (Harmon et al. 2003). While improving service quality can reduce costs, those organizations that focus service quality efforts on customer acquisition and growth garner the highest return-on-investment in the short term (Rust, Moorman, & Dickson 2002) but, organizations that emphasize *both* cost reduction and customer acquisition achieve the greatest returns in the long-term (Mittal et al. 2005). Healthcare delivery organizations prioritize clinical outcomes as highly as business outcomes and many studies demonstrate relationships between patient satisfaction and clinical outcomes (Clark et al. 2004; Gesell et al. 2005; Sitzia and Wood 1997; van Campen et al. 1995).

Cumulatively, this research has lead business and healthcare leaders to devote increasing attention to those internal factors connected to desired market outcomes. Nevertheless, all the aforementioned research and numerous other studies (Lundby, Fenlason, & Magnan 2001) analyze these interrelationships at aggregate or overall levels. Details are lacking. Research hasn't fully elucidated how specific components of overall measures or outcomes relate to each other. Explicit definition of these relationships would provide specific leverage points on which to focus attention for optimal outcomes.

This research gap is most egregious in healthcare. Services are delivered in one of the most complex organizations ever formed (Drucker 1993), yet most health marketing research does not go beyond the simple provider-customer relationship archetype. Patients, while certainly consumers of healthcare, remain the strongest determinants of their own health. Although selection power and consumer-like behavior (Burns & Wholey 1992) make them hospital customers, physicians most assuredly share in responsibility for the hospital's clinical quality and profitability through their decisions (Healthcare Advisory Board 1999). And yet, clinical and service quality depend heavily upon the nurses and front-line staff who carry out physicians' orders, provide for daily health needs, and organize the service delivery systems. Patients, physicians, and employees share in the experience of co-creating the service of health improvement.

Physicians and employees are the means hospitals deploy to produce health improvement outcomes *with* and *for* patients for whom health is a durable capital good—meaning that patients are also involved in creating the ultimate good being demanded: health (Grossman 1972; Feldstein 2005).<sup>1</sup> Few theories, let alone empirical analyses, exist to explain the connections between employees, physicians, and patients as consumers and evaluators of this service co-creation. Hospitals' success depends heavily upon how effectively they organize the workforce (physicians and employees) to deliver healthcare services with their optimal desired outcomes (patient satisfaction, clinical quality, financial outcomes). Healthcare marketing's role in product and service design makes specifying the precise nature of these interrelationships extremely important.

This article explores the interrelationships between three categories of service quality in healthcare delivery organizations: patient, employee, and physician satisfaction. Secondarily, measures and subscales that can serve as leverage points for improving linked outcomes are delineated.

## METHODS

### *Survey Instruments*

Three survey instruments were used to collect data for this study. Hospital patients completed the Press Ganey Inpatient Survey; hospital employees completed the Press Ganey Employee Perspectives Survey, and physicians who had admitting privileges at these hospitals completed the Press Ganey Medical Staff Survey. Each of these surveys had been

developed, tested, and standardized prior to this study. The basic characteristics of the surveys are shown in Table 1. All instruments are multidimensional with subscales determined through factor analyses and display reliability and validity in excess of prevailing psychometric standards. Additional information about the psychometric properties of the surveys and their development can be found in Kaldenberg, Mylod and Drain (2003), Sengin (2001), Wolosin and colleagues (2006), respectively, or by contacting the authors.

### *Survey Design and Conceptual Models*

Based upon ethnographic and qualitative research, the Inpatient Satisfaction Survey mirrors the major episodes patients experience during a typical inpatient hospital visit. The instrument consists of several demographic items (e.g., age and gender of patient) and 49 items that ask the responding patient to rate specific aspects of inpatient care. For each item, the patient is asked to provide a numeric evaluative rating of an aspect of care, a method superior to frequency estimations or expressions of agreement or disagreement with a statement (Drain and Clark 2004). Items are rated on a balanced 5-point Likert-type scale ranging from very poor (1) to very good (5). Responses are converted to a 100-point scale by a linear transformation for analysis and reporting purposes. The items are arranged into sections corresponding to the inpatient visit

TABLE 1. Survey Characteristics and Administration Modes

	Inpatient	Employee	Physician
<b>Characteristics</b>			
Year developed	1987	1980	1997-99
Most recent validation	2002	2004	2004
Response scale type	Quality	Agreement	Quality
Response scale points	5	4	5
Number of ratings	49	67	20
Number of subscales	10	12	4
Full-scale Cronbach Alpha	0.98	0.98	0.96
<b>Administration Mode</b>			
Mail	X	X	X
Proctored		X	
Telephone			X
Internet		X	X

episode: Admission, Room, Meals, Nurses, Physicians, Discharge, Personal Issues, and Final Assessments. These sections can be conceptualized into larger domains that deal with People (nurses, physicians, and staff), Place (physical attributes), Processes, and Personhood (attention to human needs, such as emotional support).

The Employee Perspectives Survey was conceived in similar fashion with each section corresponding to salient characteristics of employee experiences working in healthcare services: Job Security, Pay and Benefits, Senior Leadership, Participation, Recognition, Supervisor, Teamwork/Coworkers, Staffing, Work Environment, Organizational Impression, and Job Fulfillment. The four-point agree-disagree scale range consists of “Strongly Agree,” “Tend to Agree,” “Tend to Disagree,” and “Strongly Disagree.” By forcing a dichotomous agree-disagree decision, this scale better reflects employees’ true assessments of their workplace satisfaction, engagement, and loyalty. The sections may be conceptually grouped into meaningful conceptual domains comprising Compensation, Capital expenditure, the fostering of workplace Connections, and organizational Climate.

The Medical Staff Survey construction was guided by research on physicians’ practice ethos and medical ethics; namely that physicians, more than any other professional, balance two fundamental yet contradictory principles—Self-Interest (i.e., self-preservation, career, compensation) and Altruism (i.e., caring for the welfare of others, service-orientation), respectively (Jonsen 1983). Medical Staff Survey items expressing self-interest measure how easy it is to practice medicine within a given hospital (i.e., Ease of Practice domain). Altruism will be expressed through Medical Staff Survey measures of clinical quality of care (i.e., Quality of Care domain). Relationships with Hospital Leadership, the third domain, reflects the intersection between the Ease of Practice and Quality of Care domains as these relationships represent the chief means by which physicians influence the first two domains. Table 2 displays a summary of the domains for all three domains.

### ***Survey Methodology***

Each survey has its own inclusion and exclusion criteria. For the Inpatient Satisfaction Survey, eligibility includes all patients admitted and discharged from inpatient care, except deceased patients, newborns, and patients with a repeat visit within 90 days of a previous survey. For the Employee Perspectives Survey, all employees of healthcare facilities are eligible; that is, no exclusion criteria. For the Medical Staff Survey,

TABLE 2. Survey Domains and Sections

<b>Inpatient</b>	
<i>Domains</i>	<i>Sections</i>
People	Nurses, Physician
Place	Room, Meals
Process	Admission, Tests and Treatments, Discharge
Personhood	Visitors and Family, Personal Issues
<b>Employee Perspectives</b>	
<i>Domains</i>	<i>Sections</i>
Climate	Senior Leadership, Job Security
Compensation	Pay, Benefits
Capital	Staffing, Work Environment
Connections	Participation, Recognition, Supervisor, Teamwork/Coworkers
<b>Medical Staff</b>	
<i>Domains</i>	<i>Sections</i>
Patient Care	Patient Care
Ease of Practice	Ease of Practice
Relationship with Leadership	Relationship with Leadership

medical staff members must be fully licensed, with admitting privileges at the facility (unless the specialty does not typically have admitting privileges, such as radiologists and emergency physicians); excluded are residents/interns, other physicians who do not admit patients, and non-physicians who do not admit patients.

Research on the response characteristics of each constituency has yielded unique administration modes for each survey (Table 1). The Inpatient Satisfaction Survey utilized single wave, mail-out/mail-in method to reduce acquiescence bias and minimize costs for hospitals surveying. Client hospitals transmit lists of discharged patients on a regular basis and Press Ganey selects patients to survey from those lists according to a pre-arranged, random sampling plan. Surveys are mailed to patients within one week of discharge, adhering to the response time-frame optimum for accurate patient recall (Bredart et al. 2002).

The Employee Perspectives Survey is administered via mail, proctored group, or Internet. Each mode of administration has its own particulars, but all are designed to protect the confidentiality of the respondent. For example, in the mail administration mode, employee names are not required, and only barcodes are used to identify the respondent to Press Ganey; once the survey process has been completed, the key to the barcodes is destroyed. In the group proctored administration mode, a

facility may use a sign-in sheet to keep track of employees who have completed the survey, however employee names are not required on the surveys. In the Internet administration mode, PIN numbers take the place of barcodes, and employees are sent a letter with a PIN and instructions on how to take the survey over the Internet.

Similarly, the Medical Staff Survey and Employee Perspectives Survey protocols keep the identity of the respondent confidential. Mail and Internet administration modes are identical with those of the Employee Perspectives Survey. There is no group proctored administration mode for Medical Staff. The Telephone option uses an outside vendor to survey physicians by telephone from a list provided by the facility. Once all telephone surveys have been collected, the list is destroyed.

An overall satisfaction score is calculated for each survey. Each question response is assigned a numerical score between 0 and 100, evenly distributed across the response scale (e.g., Very Poor = 0, Poor = 25, Fair = 50, Good = 75, and Very Good = 100; Strongly Agree = 100, Tend to Agree = 66.7, Tend to Disagree = 33.3, and Strongly Disagree = 0). The questions' scores within each dimension are averaged to determine a dimension mean score. The mean of all dimension scores is the overall mean score for patient, employee, or physician satisfaction. For patient, employee, and physician loyalty, we use the single-item measure recommended in the *Harvard Business Review* (Reichheld 2003)—“The likelihood to recommend” to friends and family.

### ***Database Characteristics and Limitations***

Press Ganey Inpatient, Employee, and Medical Staff databases are unparalleled in size and representativeness. The Inpatient database contains responses from 2,230,606 patients treated at 1,576 hospitals (approximately 30% of all U.S. acute-care hospitals and 40% of those with more than 100 beds). The Employee Perspectives database contains responses from 167,734 healthcare employees at 281 healthcare delivery organizations. The Medical Staff database contains responses from 40,179 physicians on the medical staff at 247 hospitals. The databases are the largest and most representative of their kind.

### ***Respondents and Analytic Method***

The logic of the study—to examine correlations between two constituencies within the same institutions—restricted data to facilities that use at least two of the three surveys of interest. Table 3 shows the distribution

TABLE 3. Distribution of Surveys

	Employee Perspectives				Medical Staff		
	Hospitals (N)	Inpatients (n)	Employees (n)	Physicians (n)	Hospitals (N)	Inpatients (n)	Physicians (n)
Inpatient	139	319,900	145,312	NA	121	394,669	16,758
Medical Staff	26	NA	32,763	2,921	NA	NA	NA

Note: The distribution includes only hospitals with at least 120 inpatient surveys, at least 30 Medical Staff surveys, or at least 30 Employee Perspectives Surveys.

of survey respondents. In order to eliminate idiosyncratic influences, data from hospitals with fewer than 120 patient surveys, or fewer than 30 Medical Staff or Employee Perspectives Surveys, were not included in the analysis. Table 3 shows that the largest subset of hospitals used the Employee Perspectives and Inpatient surveys, while the smallest subset used the Employee Perspectives and Medical Staff surveys. In any event, the number of respondents from each combination far exceed the minimal number (30) for correlation coefficients to be statistically meaningful.

Results will be presented by pairs of constituencies: correlation of overall evaluations of the hospital, then correlations among the conceptual domains, and, finally, correlations at the individual question level. For an inter-item correlation to be considered high it required an  $r$  of at least 0.40 and statistical significance ( $p$ -value). For the relationship between domains to be considered strong and meaningful required at least 33% of the items between the domains to have high correlations. By assessing the number of statistically significant correlations between these areas, we will determine where high levels of agreement exist between patients, employees, and physicians. The results will give insight on the critical episodes for which marketers can focus their health service design and improvement energies.

## RESULTS

### *Patients and Employees*

*Overall Evaluations:* The correlation between patients' and employees' overall satisfaction was  $r = 0.47$  ( $p < 0.001$ ). For the survey question

that measures loyalty, “Likelihood of recommending the hospital to others for healthcare,” the correlation was  $r = 0.69$  ( $p < 0.001$ ).

*Domain Level: Capital*, the Employee Perspectives Survey domain consisting of Staffing and Work Environment, manifested the highest percentage of correlations to every Inpatient Satisfaction Survey domain. In other words, employees’ perspectives of staffing and their work environment were the strongest and most frequent predictors of every aspect of patients’ evaluations in their care experience. *Compensation* (Pay, Benefits) showed notable relationships with the Inpatient Satisfaction Survey domains *People* (Nurses, Physicians) and *Process* (Admissions, Tests and Treatment, Discharge). Table 4 displays the percentage of all items jointly comprising these domains correlated at  $r = .40$  ( $p < 0.001$ ) or above.

### *Patients and Physicians*

*Overall Evaluations:* The correlation between patients’ and physicians’ overall satisfaction with the hospital was  $r = 0.56$  ( $p < 0.001$ ). For the survey question that measures loyalty, “Likelihood of recommending the hospital to others for healthcare,” the correlation was  $r = 0.64$  ( $p < 0.001$ ).

*Domain Level:* The Medical Staff Survey domain, *Ease of Practice*, exhibited the highest percentage of correlations to every Inpatient Satisfaction Survey domain. *Patient Care* showed meaningful connections to the Inpatient Satisfaction Survey domains of *People* (Nurses, Physicians) and *Process* (Admissions, Tests and Treatment, Discharge). Table 5 displays the percentage of all items jointly comprising these domains correlated at  $r = 0.40$  ( $p < 0.001$ ) or above.

TABLE 4. Percent of Possible Correlations<sup>1</sup> by Survey Domains, Inpatient and Employee Perspectives

		Employee Perspectives Survey Domains <sup>2</sup>			
		Climate	Compensation	Capital	Connections
Inpatient Survey Domains	People	11%	36%	43%	0%
	Place	12%	10%	44%	1%
	Process	25%	40%	48%	0%
	Personhood	21%	13%	43%	0%

<sup>1</sup>Only statistically significant correlations .40 or larger.

<sup>2</sup>For definitions of domains, see Table 3.

TABLE 5. Correlations<sup>1</sup> by Survey Domains, Inpatient and Medical Staff

		Medical Staff Survey Domains <sup>2</sup>		
		Patient Care	Ease of Practice	Relationship with Leadership
Inpatient Survey Domains	People	36%	43%	0%
	Place	10%	44%	1%
	Process	40%	48%	0%
	Personhood	13%	43%	0%

<sup>1</sup>Percent of possible inter-item correlations .40 or larger.

<sup>2</sup>For definitions of domains, see text.

### *Employees and Physicians*

*Overall Evaluations:* The correlation between physicians' and employees' overall satisfaction was  $r = 0.56$  ( $p < 0.001$ ). For the survey question that measures loyalty, "Likelihood of recommending the hospital to others for healthcare," the correlation between physicians' and employees' ratings was  $r = 0.67$  ( $p < 0.001$ ).

*Domain Level:* Physicians' and employees' ratings of the hospital evidenced the greatest agreement. There were more highly correlated items among this pair of constituents than the others. Employees' assessments of *Climate* (Senior Leadership, Job Security) boasted the highest percentage of correlations to every PSS domain. In fact, 98% of all items measuring employees' perspectives of *Climate* (Senior Leadership, Job Security) were highly correlated with the items measuring physicians' estimates of the quality of *Patient Care* at the hospital—the highest percentage of inter-item correlations between any two domains. The Employee Perspectives Survey domains *Compensation* (Pay, Benefits) and *Capital* (Staffing, Work Environment) also revealed a substantial connection to the PSS domain *Patient Care*. Table 6 displays the percentage of all items jointly comprising these domains correlated at  $r = 0.40$  ( $p < 0.001$ ) or above.

### *Inter-Item Correlations*

Table 7 shows the percentage of all possible survey items to survey item correlations (for each pair of surveys) that exceeded  $r = 0.40$ . Thus, for example, the first line indicates that the Medical Staff item, "Staff's concern for and interest in your patients," correlated at  $r = 0.40$  or larger

TABLE 6. Correlations<sup>1</sup> by Survey Domains, Medical Staff and Employee Perspectives

		Employee Perspectives Survey Domains <sup>2</sup>			
		Climate	Compensation	Capital	Connections
Medical Staff Survey Domains	Patient Care	98%	50%	86%	27%
	Ease of Practice	58%	17%	13%	14%
	Relationship with Leadership	66%	0%	0%	17%

<sup>1</sup>Percent of possible inter-item correlations .40 or larger.

<sup>2</sup>For definitions of domains, see text.

TABLE 7. Item-Item Correlations, Inpatient, Employee Perspectives and Medical Staff Surveys<sup>1</sup>

	Inpatient	Employee Perspectives	Medical Staff
<i>Medical Staff</i>			
Staff's concern for and interest in your patients	89%	59%	
Quality of the nursing staff		56%	
Staff reliability in recognizing and reporting changes in patients' conditions	59%	50%	
Timeliness of follow-through on written orders	65%	60%	
Ease of admitting patients	89%		
Ease of scheduling inpatient tests/therapy	88%		
Overall rating of how well this facility provides you with timely clinical information for the management of your patients	84%	71%	
Overall rating of the degree to which this facility made caring for your patients easier	84%	71%	
Overall rating of how well this facility's administration has positioned it to deal with the changes in the health care environment		59%	
Overall rating of quality of care at this facility	78%	63%	
Overall satisfaction with this facility	67%	57%	
Recommendation you would give this facility to other physicians		60%	
Likelihood you would recommend this facility to friends and family for care	57%		
<i>Inpatient</i>			
Speed of admission process			70%
Courtesy of the person who admitted you			75%

	Inpatient	Employee Perspectives	Medical Staff
Rating of pre-admission process (if any)			70%
Friendliness/courtesy of the nurses			50%
Nurses' attitude toward your requests			60%
How well the nurses kept you informed			50%
Skill of the nurses			60%
Waiting time for tests or treatments			60%
Concern shown for your comfort during tests or treatments			65%
Explanations about what would happen during tests or treatments			60%
Skill of the person who started the IV (e.g., did it quickly, with minimal pain)			50%
Courtesy of the person who started the IV			60%
Helpfulness of the people at the information desk			50%
Staff attitude toward your visitors			50%
Information given to your family about your condition and treatment			55%
Speed of the discharge process after you were told you could go home			70%
Staff sensitivity to the inconvenience that health problems and hospitalization can cause			55%
How well your pain was controlled			80%
Staff effort to include you in decisions about your treatment			60%
Overall cheerfulness of the hospital			85%
How well staff worked together to care for you			90%
Likelihood of your recommending this hospital to others			75%
Overall rating of care given at hospital			80%
<i>Employee Perspectives</i>			
Senior Leadership promotes high quality care	94%		90%
Senior Leadership does a good job of communicating major developments			80%
Senior Leadership is aware of the major concerns of employees			85%
Senior Leadership really listens to employees			75%
Senior Leadership responds promptly to employees			75%
Senior Leadership is doing a good job of planning for the future	57%		85%
Senior Leadership can be trusted to be straightforward and honest			75%
Senior Leadership's actions reflect our mission and values			85%
This organization does its best to provide job security for employees			80%
As long as I perform well, this organization will try to find a place for me			55%

TABLE 7 (continued)

	Inpatient	Employee Perspectives	Medical Staff
Job security is as good or better than at other healthcare organizations			65%
Overall, I am satisfied with my pay	69%		55%
Compared to other healthcare organizations, my pay is fair	65%		60%
Compared to other people with jobs like mine in this organization, my pay is fair	73%		55%
Excellent performance is recognized here			60%
The current performance review system is fair			60%
I am satisfied with how my supervisor conducts my performance review			50%
My supervisor sets fair standards of performance			55%
It is easy to talk to my supervisor about things that go wrong on the job			55%
This facility has enough staff to provide quality care	65%		60%
There is adequate staffing in my work group			55%
The amount of work I have to do is reasonable	88%		60%
Staffing arrangements have not lowered performance in my work group			55%
The reasons for the current staffing pattern in my department have been explained clearly to me			50%
The equipment I use is well maintained	94%		
I have the equipment I need to do my job	94%		
This organization uses customer feedback to improve quality	94%		65%
Employees go out of their way to help and support patients	49%		75%
This organization emphasizes the importance of customer service	94%		75%
Overall, the quality of care here is excellent	100%		85%
I would recommend the healthcare services provided here to my friends and relatives	100%		80%
There are very high standards for performance here	96%		65%
This organization is highly regarded in the community			55%
The values of the organization are evident in our everyday practices	86%		70%
I would recommend this organization to a friend as a good place to work	76%		75%
Overall, I am satisfied with this organization			80%
I plan to be working for this organization one year from now			75%

<sup>1</sup>Percent of possible correlations > .4

for 89% of Inpatient items and 59% of Employee Perspectives items. In general, the larger the percentage, the more that item taps experiences common between two hospital constituents—patients, physicians, or employees.

## **DISCUSSION**

### ***Convergent Evaluations of Patients, Physicians, Employees***

The results confirmed the relationship connecting employees' satisfaction and loyalty to their patients' satisfaction and loyalty. Patients' satisfaction and loyalty were also strongly associated with medical staff physicians' evaluations of overall satisfaction and loyalty to the hospital. Similarly, hospital employees' satisfaction and loyalty were related to the medical staff physicians' satisfaction with and loyalty to the hospital. Patients, physicians, and employees, the three co-creators of the health service experience, generally agree on the evaluation of the quality of that service experience.

For hospital marketing leadership, several implications present themselves. Service quality improvement in one area—customer experience, employee worklife, or physicians' practice—will likely positively influence the other two areas. This halo effect presents leaders the opportunity to gain substantial efficiencies by pursuing improvement strategies targeting operations or factors which directly affect patients, physicians, and employees. The strongest leverage points can be deciphered by analyzing the correlations between their evaluations at the smallest level possible—individual questions and domains. The Press Ganey methodology lends itself to this approach. Patient, employee, and physician experiences are multidimensional by nature (Sitzia & Wood 1997) and the survey subscales reflect this.

### ***Leverage Points to Direct Improvement***

Table 8 depicts the conceptual domains of employee, patient, and physician satisfaction that could be deployed as leverage mechanisms to achieve improvements in related domains.

*Staffing* and *Work Environment*, two domains of employee satisfaction, appear most frequently as a path to improving patient and physician

TABLE 8. Subscales as Leverage Points

Issues to Address	Leverage Points
Patient satisfaction with:	
<b>People:</b> Nurses, Physicians	Staffing Work Environment Ease of Practice Patient Care Quality
<b>Place:</b> Room, Meals	Staffing Work Environment
<b>Process:</b> Admissions, Discharge, Tests and Treatment	Staffing Work Environment Ease of Practice Patient Care Quality
<b>Personhood:</b> Visitors and Family, Personal Issues	Staffing Work Environment
<b>Physician satisfaction with:</b>	
Quality of Patient Care	Senior Leadership Job Security Pay Benefits Staffing Work Environment
Ease of Practice	Senior Leadership Job Security
Relationship with Leadership	Senior Leadership Job Security
<b>Color legend:</b>	
Green = Physician area	
Orange = Employee area	

satisfaction. Every aspect of patient satisfaction can be improved with improved staffing and work environment for employees. *Staffing* includes having adequate staff to provide quality care at the facility and local unit-level, workload, and how staffing issues are handled by leadership. The influence of appropriate staffing—particularly among nurses—cannot be overestimated. On a local, unit-level (Vahey et al. 2004) and on the aggregated, state-level (Clark et al. 2007), patient satisfaction improves or declines with the nurse-patient staffing ratio. Just

as clinical staffing affects numerous objective clinical quality outcomes (Hassmiller & Cozine 2006; Seago, Williamson, & Atwood 2006), staffing also affects physicians' subjective evaluations of the *Quality of Patient Care*.

It's not simply getting the right staffing, but the *Work Environment* in which staff practice makes a significant difference. Work environment involves having the necessary equipment, physical conditions conducive to optimal performance, cleanliness, and leadership support to fulfill these needs. Work environment affects patient care quality via staff engagement and burnout; poor work environments lead to dissatisfaction, burnout and lower engagement which decreases employees' performance and effectiveness (Spence & Leiter 2006). Work environment is inextricably linked to staffing and patient safety as poor work environments represent a common cause for seeking employment elsewhere (Patrician 2002) and safety problems for both patients and employees (McGillis Hall 2005). It is clear from our results that patients and physicians can see the effects of employees' work environment and the result influences their evaluations of quality at that hospital.

*Senior Leadership* and *Job Security* for employees strongly influence every aspect of physicians' evaluations of the hospital. *Senior leadership* encompasses the perception of leaders' commitment to high quality patient care and the hospital mission, communication of major developments, planning effectiveness, trustworthiness, and leaders' skill at listening, awareness, and response to employees' concerns. Despite differences in survey methodology, it's revealing that employees and physicians agree on senior leaders' effectiveness at promoting quality care, operational efficiency, and building good relationships. The results confirm studies that show senior leaders' direct involvement in and support of quality improvement projects directly affect the success of those projects (Bradley et al. 2005). *Job security* invokes employees' perceptions of the organization's commitment to employees who perform well. It is an artifact of organizational culture and history heavily determined by senior leadership decisions. These results reinforce the observations of Herzberg (2003) whose research determined that the fundamental workplace hygiene factors (e.g., Maslow hierarchy's lower needs) serve as the minimal necessities to alleviate dissatisfaction before motivation for high performance can occur. Likewise, the relationship of employees' *Pay* and *Benefits* to fulfilling these minimal needs as well as to attracting and retaining staff makes its relationship to physicians' evaluations of patient care quality a logical result.

Finally, physician relations can serve as a strategic asset for improving patients' care experiences and loyalty. Our results show that improving *Patient Care Quality* and medical staff's *Ease of Practice* has a relationship to patients' experiences with physicians, nurses, admissions and discharge processes, and their tests and treatment. *Ease of Practice* involves the ease of admitting patients, test turnaround time and results access, as well as medical technology and equipment—all factors which clearly and directly impact the patient's experience as well as the physician's practice. *Quality of Patient Care* covers basic evaluations of the nursing staff, medical staff, and staff effectiveness in discharge arrangements, monitoring the patient's condition, and follow-through on orders. Our results show that the observations and needs of the medical staff often will coincide with enhancing patients' experiences and loyalty. Our experience with several hospitals has shown that investments in improving human capital (such as providing for nurse education to BSN or MSN) and operational effectiveness reap benefits in both improved physician loyalty and patient satisfaction (Press Ganey Physician Satisfaction Case Studies, 2006).

### CONCLUSION

An analysis of the evaluations of millions of patients, hundreds of thousands of hospital employees, and tens of thousands of physicians on the hospitals' medical staff reveals that physicians, patients, and employees converge in their estimations of the quality of hospitals as places to co-create health care experiences. All three constituents provide perspectives that prove invaluable in guiding hospitals' quality improvement initiatives. Furthermore, our analysis identifies specific leverage points for targeting these improvement efforts. The results demonstrate that promoting patient-centeredness, enhancing medical staff relations, and improving the satisfaction and loyalty of employees are not necessarily three separate activities in competition for hospital resources and marketing leadership attention. To the contrary, our results indicate that many service quality improvement activities will have an overflow effect, simultaneously creating a positive impact on the satisfaction and loyalty of patients, physicians, and employees.

The results also indicate a need for a more holistic quality improvement and research agenda for marketing practitioners and researchers, respectively. Hospital and health systems could garner greater returns on service quality improvement by systematically using the perceptions

of patients, physicians, and employees to guide their initiatives. Furthermore, this convergence compels marketing executives to collaborate with the medical staff, CMO/VPMA, human resources, and other disciplines when designing and executing marketing initiatives. Organizational surveys of patients, physicians, and employees can provide a starting point by delivering objective, independent data to guide analysis and decision-making. Future research can explore the business and productivity outcomes associated with these relationships.

#### NOTE

1. It's worth noting that no one demands a hospital visit, test, treatment, therapy, or other specific health service. Rather, patients demand a restoration or improvement of health. Viewing market demand for *health* instead of a specific service can change a healthcare provider organization's marketing paradigm.

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RECEIVED: 01/15/05

REVISED: 10/01/06

ACCEPTED: 11/01/06

doi:10.1300/J026v23n03\_05