



# Case Study

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## Duke University Hospital: Organizational and Tactical Strategies to Enhance Patient Satisfaction

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### Vital Signs

*Location:* Durham, N.C.

*Type:* Academic medical center, affiliated with Duke University and part of the not-for-profit Duke University Health System.

*Beds:* 924

*Distinction:* Top 5 percent of more than 700 large hospitals (300+ beds) in the portion of patients who gave a rating of 9 or 10 out of 10 when asked how they rate the hospital overall. Timeframe: October 2006 through June 2007. To be included, hospitals must have reported at least 300 surveys. See the [Appendix](#) for full methodology.

This case study describes the strategies and factors that appear to contribute to high patient satisfaction at Duke University Hospital. It is based on information obtained from interviews with key hospital personnel and materials provided by the hospital during August and September 2008.



### SUMMARY

Based on interviews with leaders at Duke University Hospital, ensuring patient satisfaction requires both organizational and tactical strategies. The former includes hospital-wide efforts that develop and sustain a culture that emphasizes patient satisfaction. The latter refers to department-specific initiatives that reflect the needs and circumstances of particular units. Particular strategies at Duke include:

- commitment to improving customer service and work culture and to leadership training;
- use of a “Balanced Scorecard” management tool in which patient satisfaction is assessed in manager and clinical unit evaluations and included in annual performance improvement plans;

- use of Six Sigma improvement methodology to address underperformance; and
- recognition of staff members and units demonstrating outstanding customer service.

Duke University Hospital's experiences underscore the importance of distinguishing between strategies appropriate for the entire hospital and for specific units; educating staff on accessing data and recognizing issues that must be addressed; and training staff in cultural competency.

## ORGANIZATION

Duke University Hospital is a large, full-service tertiary and quaternary care hospital in Durham, North Carolina. It is affiliated with Duke University and a member of the Duke University Health System, which includes the Duke University School of Medicine, the Duke University School of Nursing, the Duke Clinic, and other member hospitals. A leading academic medical center, the hospital has more than 900 beds. In 2007, *U.S. News & World Report* ranked Duke University Hospital the seventh-best medical center in the United States from among 5,462 medical centers.

## STRATEGIES FOR SUCCESS

According to Duke University Hospital Interim CEO Kevin Sowers, improving patient satisfaction requires both organizational and tactical strategies. The former includes hospital-wide efforts that develop and sustain a culture that emphasizes patient satisfaction, while the latter refers to department-specific strategies that reflect the needs of particular clinical service units.

## Leadership Commitment and Training

In 2007, Duke established a "Patient Satisfaction University" for managers, directors, and other staff involving a two-hour training session on the methodology and terminology of patient satisfaction data and an online query tool, which provides access to patients' comments and survey scores. Managers are also encouraged to see how their units perform on Duke's Balanced Scorecard, described below.

Further, hospital leaders emphasize the need to teach staff about different cultures and the value of "difference" in order to improve patient experience. Such training in cultural competence has been helpful, for example, in preparing staff to treat the growing numbers of Latino patients.

## Balanced Scorecard

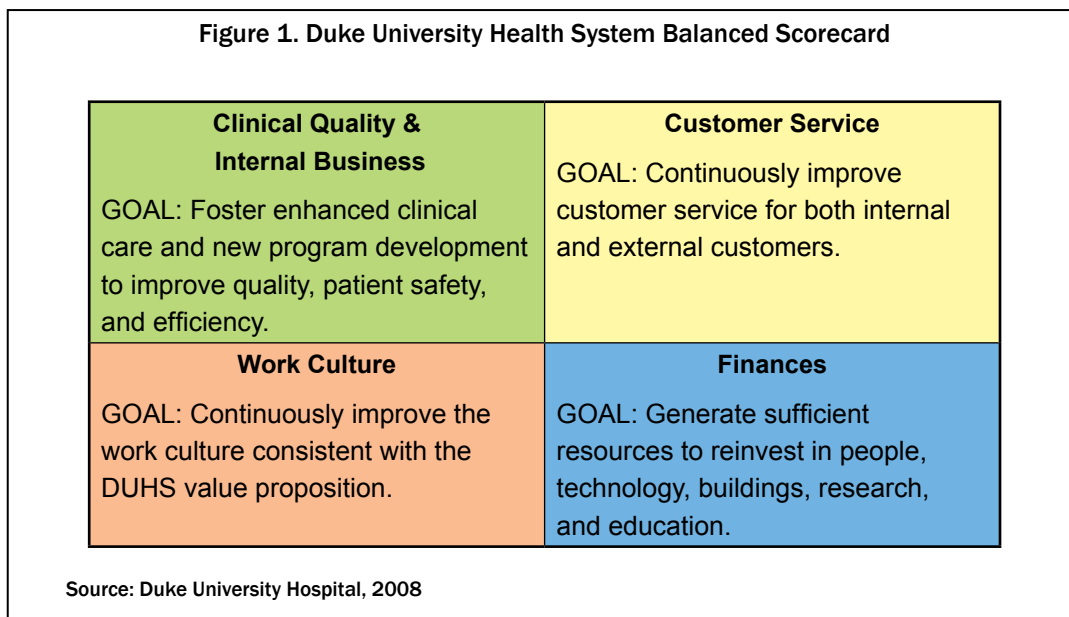
Evaluation within Duke University Health System is based on a Balanced Scorecard, a management tool in which customer service (measured through inpatient and outpatient satisfaction in each unit) is one of four quadrants, along with clinical quality, work culture, and finances (Figure 1). The term "balanced" reflects a shift from only monitoring financial performance or productivity to tracking customer and employee satisfaction as well. For each quadrant, goals are set and progress is monitored at the health system, hospital, unit, and individual staff levels. The four scorecard components are applied not only when evaluating nurses and other direct patient caregivers, but for all units and staff, and are considered in annual performance reviews.

The transporter who has the last contact when a patient is discharged has a tremendous influence on the patient's entire hospital experience.

Kevin Sowers,  
Interim CEO, Duke University Hospital

"It takes an entire team to impact patient satisfaction. The transporter who has the last contact when a patient is discharged has a tremendous influence on the patient's entire hospital experience," says Sowers.

Duke's leaders also stress the interconnectedness across the four quadrants. In particular, they have found a strong correlation between patient satisfaction/customer service and work culture. The latter is measured through surveys asking staff about their ability to learn, grow, change, and improve as Duke employees—an assessment of their satisfaction and engagement with their workplace. Through leadership training, managers are trained to help staff improve interac-



tions with patients, which in turn improves patients' satisfaction. Unit managers are also responsible for incorporating patient satisfaction and other Balanced Scorecard components into annual performance improvement plans.

### **Best Practices and Problem-Solving Methods**

Hospital leaders examine best practices in patient satisfaction primarily by comparing their results on Press Ganey surveys with other hospitals, through retreats and national conferences during which they learn what other hospitals are doing, and in the professional literature. They introduce strategies they believe will work at Duke, some at the organizational level and others for specific clinical service units. For example, hospital-wide strategies that are believed to contribute to patient satisfaction include:

- leadership rounding, whereby senior staff visit patients upon admission or before discharge to inquire about their experiences; and
- communication boards in each room that display the names of that day's nurses and physician on duty as well as the plan of care.

Low patient satisfaction scores in individual clinical units prompt action. When unit managers or senior leadership (including the CEO, who reviews

patient satisfaction scores monthly) notice underperformance, managers generally pull together an improvement team, including staff who work in the particular unit and others as appropriate. According to Pamela Turner, Duke's senior strategic services associate, "you need frontline staff involved. They hear the voice of the customer."

Using the Six Sigma process, staff who receive special training in the "DMAIC" problem-solving model—Define, Measure, Analyze, Improve, and Control—lead the improvement projects.<sup>1</sup>

For example, Duke's Orthopedic Unit used this approach to explore what drives patient satisfaction in their department. Through surveys, they identified the number-one factor to be that patients want to know their care plan each day. According to Sowers, the unit's patient satisfaction scores jumped above the 90th percentile after nurses began to systematically inform patients each morning of their daily schedule (e.g., for physical therapy, occupational therapy, baths, etc.). Duke's Critical Care Unit identified discharge planning as their patients' primary concern, so that unit's management established a team to improve the discharge planning process.

<sup>1</sup> For more information about Six Sigma improvement processes, see: [http://www.isixsigma.com/sixsigma/six\\_sigma.asp](http://www.isixsigma.com/sixsigma/six_sigma.asp).

## Recognizing and Rewarding High Performance

In addition to the strategies discussed above, Duke regularly rewards units and teams that are in the highest decile, compared with other large academic medical centers, and those that have demonstrated improvement. Duke also recognizes individuals who demonstrate outstanding commitment to patient service. Each quarter, hospital leaders examine inpatient and outpatient satisfaction scores and present Shining Stars Awards to those with the highest score and those reaching the 90th, 95th, or 99th percentile.

You need frontline staff involved [to improve patient satisfaction]. They hear the voice of the customer.

Pamela Turner,  
Duke's Senior Strategic Services Associate

In Duke's Strength, Hope, and Caring program, staff members nominate individuals or teams who have gone beyond expectations in:

- “inspiring us all”;
- demonstrating special, compassionate care;
- demonstrating a personal, outstanding commitment to patients and colleagues; and/or
- making a significant difference in one patient's/family's/colleague's experience.

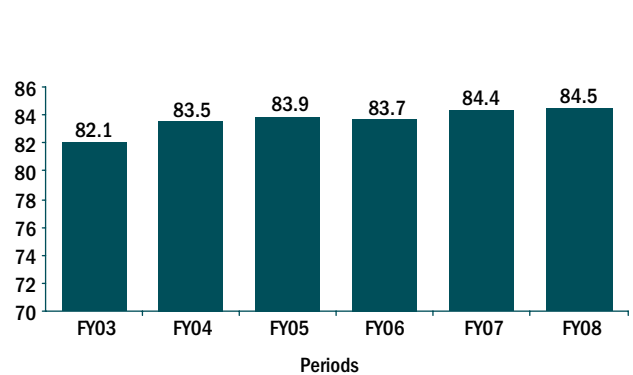
A review committee selects winners on a monthly and annual basis. Monthly winners are surprised at their work site and presented with a certificate and pin by the chief operating officer and chief nursing officer. Photos are featured in the newsletter and lobby display. Annual award winners receive a trophy at a gala event, at which a book of stories highlighting monthly winners is distributed. “The power of storytelling allows people to see what leadership views as important, translating expectations into the culture,” said Sowers.

## RESULTS

Duke has seen improvement in patient satisfaction indicators over recent years. Figure 2 illustrates a slow but steady upward trend in average inpatient satisfaction scores, based on Press Ganey data.

As the Table on page 5 indicates, Duke's scores on the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey, as reported by the Centers for Medicare and Medicaid Services, are significantly higher than national averages on two summary questions: patients' overall rating of the hospital and willingness to recommend it to others. Duke's scores are average or below average, however, on other questions, indicating that there remain opportunities for improvement. According to Turner, there is a hospital-wide effort focused on room cleanliness and overall presentation of the hospital, and a continued focus on improving patient flow and reducing delays.

Figure 2. Duke University Hospital Inpatient Satisfaction Score



Source: Duke University Hospital, 2008.

## LESSONS LEARNED

Leaders at Duke University Hospital have learned a number of lessons during their quest to improve patient satisfaction. These include:

- It is important to deploy both organizational and tactical strategies; particularly in large hospitals, not every strategy fits every unit.
- Hospitals must educate staff on tools to access and understand performance data, and reinforce the emphasis on customer satisfaction through evaluation and rewards.

- In reviewing performance data, it is important to distinguish between a temporary “blip,” evidence of a real problem, and the beginning of a trend. “If you wait six months before responding, it’s too late,” said Sowers.
- Understanding the importance of racial and ethnic diversity and cultural competence and their impact on employee and patient satisfaction is critical.

### FOR MORE INFORMATION

For more information about Duke University Hospital’s patient satisfaction strategies, contact Pamela Turner, senior strategic services associate, Performance Services, Duke University Hospital, [turne068@mc.duke.edu](mailto:turne068@mc.duke.edu).

**Table. Duke HCAHPS Scores Compared with National Average**

Percent of patients who reported that:	Duke	National Average
Their nurses “always” communicated well.	75%	74%
Their doctors “always” communicated well.	79%	80%
They “always” received help as soon as they wanted.	57%	63%
Their pain was “always” well controlled.	67%	68%
Staff “always” explained about medicines before giving it to them.	62%	59%
Their room and bathroom were “always” clean.	55%	70%
The area around their room was “always” quiet at night.	50%	56%
Yes, they were given information about what to do during their recovery at home.	86%	80%
Gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest).	72%	64%
Yes, they would definitely recommend the hospital.	80%	68%

Source: Hospital Compare, 2008 ([www.hospitalcompare.hhs.gov](http://www.hospitalcompare.hhs.gov)), based on surveys from patients with overnight hospital stays from January through December 2007.

## APPENDIX. SELECTION METHODOLOGY

Selection of hospitals for inclusion in this case study series is based on data voluntarily submitted by hospitals to the Centers for Medicare and Medicaid Services (CMS). Between October 2006 and June 2007, hospitals or their survey vendors sent a survey to a random sample of recently discharged patients, asking about aspects of their hospital experience. The survey instrument, called the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS), was developed with funding from the Agency for Healthcare Research and Quality (AHRQ). CMS posts the data on the Hospital Compare Web site ([www.hospitalcompare.hhs.gov](http://www.hospitalcompare.hhs.gov)).

The survey contains several questions about nurse and physician communication, the physical environment, pain management, and whether the patient would recommend the hospital to family or friends. One question inquires about the patient's overall experience: "Using any number from 0 to 10, where 0 is the worst hospital possible and 10 is the best hospital possible, what number would you use to rate this hospital during your stay?"

HCAHPS is a relatively new survey, and hospitals across the country are not yet achieving very high scores across all of the questions. Nevertheless, some hospitals are scoring significantly better than others. By profiling hospitals that score within the top 5 percent (among those that submitted at least 300 surveys) on the question concerning overall experience, this case study series attempts to present factors and strategies that might contribute to and/or improve patient satisfaction.

An initial list of top scorers among all hospitals submitting HCAHPS data contained a disproportionate number of very small, southern hospitals.<sup>1</sup> Concerned about the ability to generalize experiences and lessons and replicate strategies, we profiled one hospital from this list but chose to then examine high scorers among larger hospitals that were more diverse in region of the country, urban/suburban/rural setting, and teaching/nonteaching status. We thought that such diversity would provide lessons that would be useful to a broader range of U.S. hospitals.

Therefore, for this case study series, most hospitals were selected from among 736 large hospitals (300 or more beds), primarily based on their ranking in the percentage of survey respondents giving a 9 or 10 rating on the "overall" HCAHPS question. In the future, we will present case studies of hospitals of different size, ownership status (e.g., public, private), and other peer groupings.

While high HCAHPS ranking was the primary criteria for selection in this series, the hospitals also had to meet the following criteria: ranked within the top half of hospitals in the U.S. on a composite of Health Quality Alliance process-of-care measures as reported to CMS; full accreditation by the Joint Commission; not an outlier in heart attack and/or heart failure mortality; no major recent violations or sanctions; and geographic diversity.

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<sup>1</sup> Further examination and analysis may reveal reasons for this.

#### ABOUT THE AUTHOR

Sharon Silow-Carroll, M.B.A., M.S.W., is a health policy analyst with nearly 20 years of experience in health care research. She has specialized in health system reforms at the local, state, and national levels; strategies by hospitals to improve quality and patient-centered care; public–private partnerships to improve the performance of the health care system; and efforts to meet the needs of underserved populations. Prior to joining Health Management Associates as a principal, she was senior vice president at the Economic and Social Research Institute, where she directed and conducted research studies and authored numerous reports and articles on a range of health care issues.

#### ACKNOWLEDGMENTS

We wish to thank Kevin Sowers, interim CEO, and Pamela Turner, senior strategic services associate, Performance Services, Duke University Hospital, for sharing their time, information, and perspectives about Duke University Hospital’s patient satisfaction efforts, challenges, and achievements.

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This study was based on publicly available information and self-reported data provided by the case study institution(s). The Commonwealth Fund is not an accreditor of health care organizations or systems, and the inclusion of an institution in the Fund's case studies series is not an endorsement by the Fund for receipt of health care from the institution.

The aim of Commonwealth Fund–sponsored case studies of this type is to identify institutions that have achieved results indicating high performance in a particular area of interest, have undertaken innovations designed to reach higher performance, or exemplify attributes that can foster high performance. The studies are intended to enable other institutions to draw lessons from the studied institutions' experience that will be helpful in their own efforts to become high performers. It is important to note, however, that even the best-performing organizations may fall short in some areas; doing well in one dimension of quality does not necessarily mean that the same level of quality will be achieved in other dimensions. Similarly, performance may vary from one year to the next. Thus, it is critical to adopt systematic approaches for improving quality and preventing harm to patients and staff.

