

How to Integrate Patient Satisfaction Data to Deliver Quality Healthcare and Improve Operational Efficiency



Texas Children's Hospital®

HEALTHCARE ORGANIZATION

Children's Hospital

TOP RESULTS

- Improved operational efficiencies with integrated data and analytics
- Increased system-wide transparency across 3 campuses, 6 survey types and 139 areas
- Integrated patient satisfaction data into quality improvement initiatives
- Reduced custom reporting requests by approximately 15 percent

PRODUCTS

- Late-Binding™ Data Warehouse
- Patient Satisfaction Explorer

SERVICES

- Installation Services



Patient experience is a critical component of achieving high-quality care. The Institute for Healthcare Improvement included patient experience as one of the main components of its influential Triple Aim framework. Furthermore, a systematic review of 55 studies, published in the *British Medical Journal*¹, demonstrated the positive association between patient experience and clinical effectiveness and patient safety. It is no surprise, therefore, that healthcare organizations dedicated to improving quality are looking at patient satisfaction more closely than ever.

Texas Children's Hospital — a not-for-profit organization consistently ranked among the top children's hospitals in the nation — is one health system that is dedicated to making improving the patient experience an integral component of its quality and cost improvement initiatives. The hospital not only measures patient satisfaction but also ties those scores to hospital-wide strategic measures.

However, incorporating patient satisfaction smoothly into enterprise-wide quality and cost initiatives is a challenging task. This paper examines how Texas Children's laid a strong foundation for analyzing patient satisfaction, the challenges it faced in using data effectively to measure and improve satisfaction, and the results it has achieved through its efforts to establish a data-driven culture and processes.

“Our operational leaders now have more clarity about our patient satisfaction performance. The dashboard in the Health Catalyst Patient Satisfaction application delivers that clarity. Our priority questions and Magnet questions are more easily identified, as well as the level of progress towards our overall performance goal. Now leaders have the ability to easily see which areas present the greatest opportunity for improvement.”

Elisa Mozley, Assistant Director of Patient & Family Services

A FOCUS ON CAPTURING PATIENT SATISFACTION DATA AND DELIVERING TRANSPARENCY

For many years now, Texas Children’s has focused on using technology to help improve clinical outcomes and operational effectiveness. Hospital teams have tackled clinical improvement in such areas as asthma and appendectomy care and operational improvement in areas like labor expenses, clinical documentation and provider productivity. Knowing that the success of these important initiatives depends on data, Texas Children’s has embraced a data-driven culture.

When it comes to the hospital’s patient satisfaction initiatives, capturing data has, of course, been key. The Patient & Family Services team that oversaw patient satisfaction was tasked with running custom reports to help hospital leaders understand the organization’s performance in this area.

Texas Children’s analysis of patient satisfaction went beyond capturing standard patient satisfaction metrics. The hospital focused on two additional, strategic question categories:

- ▶ Magnet questions. Texas Children’s is part of the Magnet Recognition Program™, which is awarded to hospitals promoting quality in nursing practice and is a prestigious credential for high-quality nursing. The Magnet designation requires that the hospital continually collect nursing-specific patient satisfaction data. Hospital leaders consider responses to Magnet questions to be important not only because they affect the hospital’s re-designation status but also because they tend to strongly affect patient experience scores overall.
- ▶ Priority questions. Hospital leaders have identified a series of patient satisfaction questions they consider to be priorities for the organization.

Another important aspect of Texas Children’s patient satisfaction initiative has been transparency to consumers. The hospital shares on its public website five nationally recognized domains of quality and safety for the hospital overall and for multiple clinical programs. Satisfaction scores are also posted in various locations for staff and patient reference.

THE NEED FOR IN-DEPTH ANALYSIS AND SUSTAINABLE REPORTING PROCESSES

Texas Children’s had established a solid foundation for capturing and sharing patient satisfaction information, but they needed to overcome significant obstacles in order to use this data to drive

“Patient satisfaction is at the very core of our mission: to deliver high quality care with a great patient experience. Being able to drill down into detailed patient satisfaction information helps us ensure that what happens day-to-day on the floor delivers on that mission.

Ashley Simms
Senior Project Manager

enterprise-wide improvement. One of the biggest challenges they faced was making patient satisfaction data actionable for the executive team, clinicians and operational leaders.

Although these internal audiences had access to high-level information, they did not have an easy way to gain access to granular data that would enable them to analyze their performance. They did not have convenient access to trended key performance indicators across the system or by service units. Nor could they easily drill down and analyze their patient satisfaction data at the individual question level. This situation made it cumbersome and confusing for key personnel to understand question-level or unit-level performance.

A further challenge was that leaders could not easily identify Magnet and priority questions using the patient satisfaction vendor's portal. This was an issue because leaders wanted these questions to be especially visible across the organization, since they represent areas of high strategic importance and strongly impact overall score performance.

Unable to conduct analyses on their own, leaders and clinicians relied instead on the Patient & Family Services team to generate customized reports. The frequency of reporting demands taxed this team—and promised to become a significant operational problem with HCAHPS reporting requirements for pediatrics on the horizon.

Knowing that the process was unsustainable, hospital leaders sought another solution. They knew that the ability to view and analyze the data at a more granular level was essential for pinpointing specific opportunities to improve patients' and families' experience. What they needed was a solution that allowed system-wide access to data in a format that was easy to consume and analyze.

THE SOLUTION: INTEGRATING PATIENT SATISFACTION DATA INTO AN ENTERPRISE DATA WAREHOUSE

Texas Children's had previously deployed an enterprise data warehouse (EDW) platform and [analytics applications](#) from Health Catalyst to drive operational efficiencies and clinical improvement in many areas. Leaders determined to use this same platform to display patient satisfaction information, enabling many of their key operational metrics to be on one platform and facilitating seamless workflows for leaders as they monitor all of their metrics.

The EDW had already integrated several of the hospital's different data sources: clinical, financial and operational. Texas Children's and Health Catalyst integrated patient satisfaction data into the existing EDW platform by simply creating a patient satisfaction data mart.

Then, the team deployed the Health Catalyst [Patient Satisfaction Explorer application](#) to run on top of the platform.

The application enables users to view timely patient satisfaction information and, most importantly, to understand the drivers behind patient satisfaction trends. It delivers a dashboard that displays patient satisfaction scores for each of the five service types targeted by Texas Children’s: ambulatory surgery, medical practice, outpatient, pediatric inpatient and emergency center. At one glance, users can see these scores in comparison to organizational goals. The current score for each unit, along with the unit-specific goal and trend lines over time, can be displayed (see Figure 1).

SAMPLE PATIENT SATISFACTION VISUALIZATION, LOCATION VIEW

- 1 Ability to filter by service type (outpatient, ED, inpatient, etc.) and campus
- 2 Ability to select different survey units (Women and Newborns)
- 3 Detailed experience rating (number, mean, goal) for each survey unit—with displayed goals
- 4 Trended overall patient satisfaction ratings versus goal
- 5 Detailed trended rating by survey question
- 6 Easy identification of Magnet and priority questions

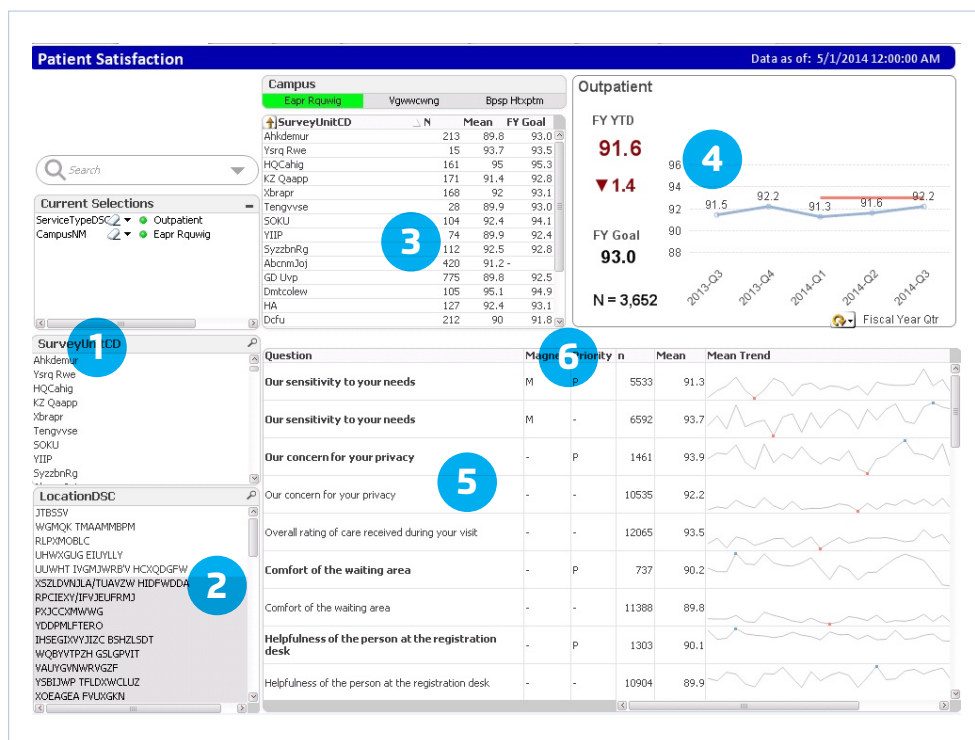


Figure 1: Sample patient satisfaction visualization, location view

As shown in the sample visualization, the application flags Magnet and priority questions so that users can easily identify them. Moreover, users can filter the Magnet and priority questions by a number of variables including campus, survey type (e.g., medical practice, inpatient, ambulatory surgery), location and section (e.g., nursing care). The application also enables Texas Children’s to easily change or update Magnet and priority questions as needed.

Importantly, the [Patient Satisfaction Explorer](#) application is able to meet the needs of different user types and different hospital departments. Users can customize the application and they can filter the data by area or by section (e.g., nursing, provider). They

can also track, trend and drill down to look at specific question performance related to their particular area, as shown in Figure 2.

SAMPLE EXECUTIVE HEALTHCARE DASHBOARD

- 1 Drill down into a specific questions (e.g., amount of time the care provider spent with you and overall rating of care received)
- 2 Filter the question by date, campus, service type, location or section
- 3 Analyze performance of selected questions side by side, trended over time

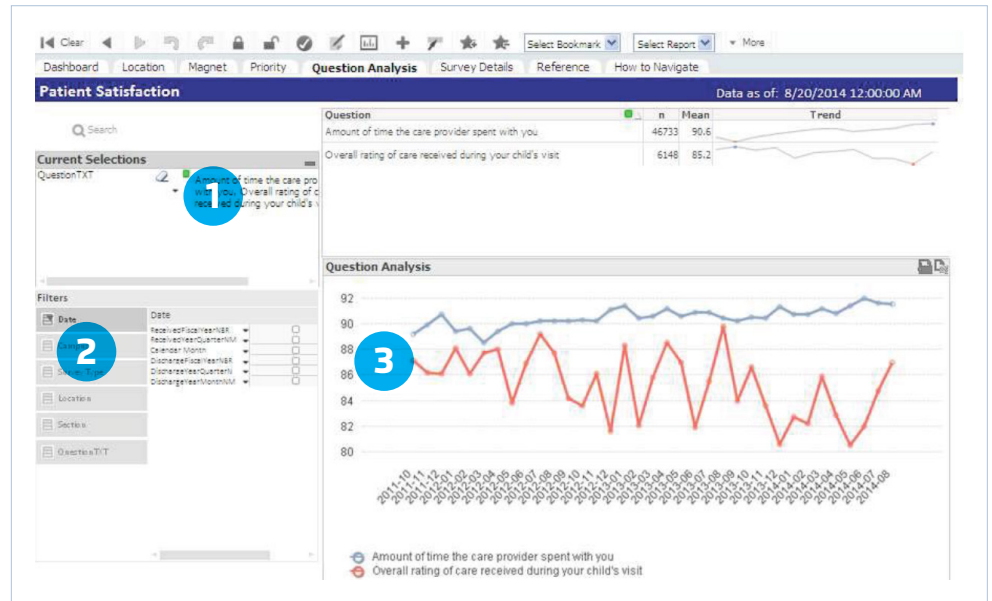


Figure 2: Sample question analysis visualization

RESULTS

Improved operational efficiencies with integrated data and analytics

Texas Children's patient satisfaction data is now integrated into the EDW platform and available for use by any analytics application running on the platform. This consolidation of data into a single source of truth is helping the hospital achieve its system-wide initiative to reduce the use of vendor portals, driving operational efficiencies and effectiveness.

Executive team members, clinical and operational leaders can now view the data in the form of easily accessible, visual reports. They can also filter and drill into the data to perform detailed analyses.

Access to the Patient Satisfaction Explorer application and its ease of use is driving broader interest in patient satisfaction and is encouraging more detailed reviews of the data. Examples of initiatives where patient satisfaction has been tracked as a key measure of success using the application include:

- Care rounds to ensure patients see a nurse on an hourly basis
- Timely, effective communication between providers, patients and families in order to deliver family-centered care

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We look to patient satisfaction as a way to connect with families and see how well we’re serving them. It provides an important gauge of how effective our operations are in any particular unit of the organization. Now, with our satisfaction data integrated into the EDW, we can also analyze with accuracy how the quality improvement initiatives we’re implementing are affecting patient satisfaction. Having patient satisfaction as a balance measure to these other initiatives enhances the effectiveness of our improvement program.”

Elisa Mozley, Assistant Director of Patient & Family Services

- Patient and family preparedness at discharge to ensure quality outcomes
- A drive to boost courtesy and friendliness in the hospital

Increased system-wide transparency across 3 campuses, 6 survey types and 139 areas

How patient satisfaction performance is being measured is becoming increasingly transparent at Texas Children’s. Personnel across the hospital’s three campuses, 6 survey types and 139 areas have increasing access to the data and are empowered to discover how to improve their patients’ experience. As a result, physicians and clinicians have become more engaged in patient experience as a measure of quality and can more clearly see the benefits of their efforts with patients.

In addition, Magnet and priority questions are now easily visible to users. Although it wasn’t possible to flag both of these important questions in the patient satisfaction vendor portal, they are clearly marked in the EDW. Operational leaders and clinicians can analyze these specific responses in detail to help the organization reach its patient satisfaction goals.

Integrated patient satisfaction data into quality improvement initiatives

The EDW aggregates data from a variety of hospital systems, including clinical, financial, operational—and now patient satisfaction. Because this data is housed in the EDW, Texas Children’s can now integrate patient satisfaction data into many of its quality improvement initiatives. Some examples of analyses that Texas Children’s can perform include:

- Improving outcomes for surgical patients
 - How does patient engagement and education impact family and patient satisfaction?
 - How does decreased postoperative length of stay impact patient satisfaction?
- More timely care delivery in radiology
 - How do wait times for an exam impact patient satisfaction?

Reduced custom reporting requests by approximately 15 percent

Reporting performed by the Patient & Family services team that was previously requested from all levels of the organization has

“The EDW has brought a whole new level of transparency to patient satisfaction in our organization. Now clinicians, operations personnel and executives throughout the hospital have access to dynamic data—and they can customize their views to see the information that interests them in the format they want to see it. The process is much more user friendly and effective than what we had in the past.

Ashley Simms
Senior Project Manager

now been reduced by an estimated 15 percent, because users are now able to answer questions on their own using the extensive drill-down and filtering capabilities in the application. Since data can automatically be pulled into other quality improvement initiatives through the EDW, the team doesn't need to devote as many resources to that process either. This has freed up the Patient & Family Services team to focus their efforts on other strategic areas such as official Magnet reporting and hospital performance reporting.

WHAT'S NEXT

The hospital is well positioned to have patient satisfaction scores increase in the near term and to have high baselines when the HCAHPS regulatory requirements and pay-for-performance kicks in. Texas Children's will continue to integrate patient satisfaction into additional clinical and operational improvement initiatives such as surgical transplants, diabetes care, practice management and more. 🏡

References

1. <http://m.bmjopen.bmj.com/content/3/1/e001570.full.pdf>

ABOUT HEALTH CATALYST

Health Catalyst is a mission-driven data warehousing, analytics, and outcomes improvement company that helps healthcare organizations of all sizes perform the clinical, financial, and operational reporting and analysis needed for [population health](#) and [accountable care](#). Our proven enterprise data warehouse (EDW) and analytics platform helps improve quality, add efficiency and lower costs in support of more than 50 million patients for organizations ranging from the largest US health system to forward-thinking physician practices.

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