

Integrating NarrativeDx into Data Strategy Strengthens Patient-Centeredness at University of Chicago Medicine

By Lauren Keeley

When University of Chicago Medicine started using NarrativeDx in November 2019, Chief Experience Officer Susan Murphy was confident the tool's natural language processing capability would help influence and support the human-centered patient experience.

Even though the academic medical center had been collecting patient comments regularly for years and leaders knew that sharing the comments with staff had a positive impact, there was little standard work and consistency to support the process of gathering and disseminating them, Murphy explained. "It was time to develop more of a strategy than hanging some comments on a bulletin board in the break room," she said.

To this end, they began using NarrativeDx, a Press Ganey solution, to systematically analyze and derive actionable insights from large volumes of patient comments. The artificial intelligence technology uses natural language processing and machine learning to combine and understand unstructured text, such as responses to open-ended questions on patient experience surveys, adding depth and context to the quantitative data.

In addition to patient experience surveys, UChicago Medicine uses NarrativeDx to identify themes from other sources of patient feedback, including its concerns and complaints forms and iPad-based rounding tool. Together, these data help leaders understand gaps and discrepancies in some of their survey results and inform the development of targeted improvement strategies, Murphy said. The technology has proven especially valuable during the COVID-19 pandemic as a way to help caregivers understand patients' evolving needs and expectations.

Elevating the Patient Voice to Catalyze Change

UChicago Medicine's patient experience mission is anchored in the belief that the delivery of "safe, confident care" relies on a strong connection between patient and caregiver and a culture that values exceptional experiences for everyone in the health system, every day, according to Murphy. The patient voice is foundational to this mission, which is why the NarrativeDx capabilities are so valuable, she explained. For example, when performance on some of the health system's environmental services (EVS) survey items began to falter, the leaders decided to take a deep dive into their comments with NarrativeDx analyses. They learned that for many patients, "environmental" concerns had to do with personal hygiene issues (for which there is no specific survey question) rather than the cleanliness of the environment.

"Many patients were commenting that they didn't have a toothbrush, or get a bath, or receive a bin to wash their face in," Murphy recounted. "I realize that we can't have a survey question for everything, but clearly this was degrading the overall experience and tainting patients' perceptions of staff receptiveness."

In response, the patient experience team worked with units with low performance in these areas to develop and implement a plan to address patients' personal hygiene needs and expectations.

AT A GLANCE

- In leveraging NarrativeDx, a natural language processing and artificial intelligence tool that translates patient comments into actionable insights, University of Chicago Medicine has been able to better meet patients' needs both prior to and during the COVID-19 crisis.
- The tool provides a supplement and an enhancement to the organization's traditional surveys by elevating the patient voice to highlight gaps and add additional context to item-level survey questions.
- Although UChicago Medicine has been using NarrativeDx for only six months, its success with the tool has inspired leaders to further integrate it into their post-COVID-19 data strategy by utilizing it to analyze scores and comments in its telemedicine and employee engagement surveys.

Uncovering the “Why” Behind the Data

In addition to identifying nuances in patient responses, NarrativeDx also helps nurture a continuous improvement culture among leaders and staff, Murphy said. Certainly, sharing positive comments with clinicians and employees helps instill a sense of joy and meaning in their work. By providing a clear understanding of the “why” behind patient ratings and consumer behavior, these data can also encourage the leadership engagement needed to support meaningful behavior change. For the UChicago Medicine patient experience team, being able to share this kind of detail and insight has helped leaders understand where and why change was needed and prepares them to collaborate on improvement strategies. “The comments need to tell a story if we want to incite long-term change,” said Murphy. “And that’s what we are able to do with NarrativeDx—understand the ‘why,’ act intentionally, and best meet the needs of our patients.”

In describing the process of sharing comments with leaders, Murphy noted that NarrativeDx provides monthly reports to identified users for overall service areas as well as unit-level reports. Murphy and her team share these reports with the respective directors in these areas, who in turn review them with managers. The managers then work directly with their teams to highlight areas of success and areas of opportunity.

Based on survey results and comment data insights collected since November, UChicago Medicine has implemented communication workshops for leaders and their teams and built out standard work for conducting conversations during patient rounding. During these hourly visits, staff conduct safety checks and, guided by the comment data outcomes, address potential patient needs. And because NarrativeDx comment reports are distributed monthly, caregivers can stay abreast with patient needs as they evolve, Murphy said.

As UChicago Medicine has become more familiar with the NarrativeDx capabilities, opportunities for innovation have emerged. For example, the organization was one of the first health systems to categorize and view comments by diagnosis-related group (DRG). Murphy hopes that uncovering similarities among patients with different types of conditions will allow the health system to move away from one-size-fits-all interventions and better tailor efforts to patients’ unique needs.

For example, after categorizing and reviewing the NarrativeDx outcomes over a period of many months, UChicago Medicine found that for male patients undergoing an orthopedic procedure, meal quality exerts a strong influence on their overall care experience. “Something like food quality during a hospital visit may seem inconsequential, but we have to remember that patient experience encompasses more than clinical care delivery,” Murphy emphasized. Now, with any new patient admitted to the orthopedic unit, the chef visits their room to collect meal preferences.

Transitioning into the COVID-19 Era

UChicago Medicine has continued to use NarrativeDx during the COVID-19 pandemic to capture patient feedback, and the ability to identify themes and subthemes from patient comments during this time has proven particularly useful. Like all hospitals, the organization had to change its rounding procedures according to social distancing guidelines and enforce strict visitor restrictions that left many patients feeling isolated and unsettled. By analyzing patient comments captured through their electronic rounding tool, providers can better understand the needs of their patients during the crisis, Murphy noted.

For example, with respect to visitor restrictions, Murphy knew from previous insights generated by NarrativeDx that human-to-human connections are very therapeutic to patients. The day the visitor restrictions went into full effect, she started brainstorming ways that UChicago could connect with patients who were missing their loved ones. She decided that every day the same members of the experience department would call inpatients—both COVID and non-COVID—to ask how they were doing. This was a shift from more traditional check-ins, which focused on logistical matters such as room temperature and call light response times.

“The goal was to have patients hear from someone in the hospital other than the person hidden under PPE taking their temperature and vital signs,” Murphy said. “We genuinely asked patients, ‘How are you doing *today*?’ We wanted to show them that we cared about them more than their diagnosis.” The content from all the calls was analyzed by NarrativeDx.

At first, the calls and subsequent comment analysis alerted the experience team to practical patient concerns specific to COVID-19 circumstances. “I talked to a patient who had forgotten his phone charger at home and was very anxious because his wife couldn’t come into the hospital to drop it off,” recalled Murphy. “In normal times, I’d never have imagined the possibility of that situation.” In response, the experience team started to provide phone chargers to admitted patients as needed.

Other patients used the calls as an additional outlet for clinical questions, which the team could easily route to their providers. However, the greatest theme to emerge from NarrativeDx analysis was loneliness. “The majority of patients just wanted someone to talk to,” Murphy said.

One way that Murphy and her team addressed this loneliness was to provide iPads to all patients so that they could connect with family and friends at home. The iPads also served to increase and personalize interactions between patients and their caregivers.

The positive response to the new communication initiative, as evidenced by one of the hospital’s more recent NarrativeDx reports, has exceeded expectations. “It has reminded our caregivers how vital person-centeredness and empathy is in the healing process,” Murphy said. She is eager to see how perception of UChicago Medicine’s culture unfolds in its telemedicine surveys and comment analysis as the organization continues to build out its telemedicine infrastructure. The patient experience team is also looking to work more closely with Human Resources to use NarrativeDx with employee comments, as employee engagement is closely linked to patient experience outcomes, Murphy noted.

For now, Murphy is grateful that NarrativeDx has allowed UChicago Medicine to look at its culture and patients’ perceptions of that culture with fresh eyes. “The insights from our survey outcomes combined with NarrativeDx comment data have pushed our employees to be both innovative and empathetic,” Murphy concluded. “It keeps us in tune with the patient at the center of all our decisions.”