INSTITUTE FOR
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IMPROVEMENT

Tapping Front-Line Knowledge

Identifying problems as they occur helps enhance patient safety.

Over the last decade, an extensive list of tools has been developed to improve patient safety in healthcare organizations, especially hospitals. These have been widely adopted with the sole purpose of reducing adverse events. The tools include safety huddles, root cause analyses, risk assessments, staff safety climate surveys, voluntary reporting systems, care bundles and executive walkrounds.

While these efforts have reduced certain unintended events and brought down rates of hospital-acquired conditions such as ventilator-associated pneumonias and central-line infections, the overall safety of patients in U.S. hospitals remains a concern. Indeed, a January 2012 report from the U.S. Department of Health and Human Services Office of Inspector General found that "hospital staff did not report 86 percent of adverse events to incident reporting systems, partly because of staff misperceptions about what constitutes patient harm."

In addition, healthcare CEOs and organizational leaders continue to worry and ask, "What will happen next?" "Is my organization really safe?" "Do I know everything I need to know?" All of these questions indicate that, as an industry, healthcare has not yet confidently developed a way to operate in a truly reliable fashion. Dedicated legions of improvers are still wondering how to close all of the holes in James Reason's now familiar Swiss cheese model that illustrates how many opportunities there are for small problems to go unnoticed or ignored until they eventually align and cause harm to a patient.

Like most hospital quality officers, Neil Romanoff, MD, vice president for medical affairs and chief patient safety officer at Cedars-Sinai Medical Center in Los Angeles, and his leadership team had invested countless hours and significant dollars to improve safety at Cedars-Sinai. Still, the hospital's efforts were not foolproof, and events continued to reveal vulnerabilities. This led Romanoff to pose a crucial question: "How do we find out what we do not know?" Obviously the question was somewhat rhetorical, but it raised an uncomfortable yet important issue about the ongoing efforts of most hospital leaders to truly know the state of safety in their organizations.

Romanoff's query came at a time when patient safety leaders at the Institute for Healthcare Improvement were asking similar questions about the relatively small impact of large, top-down improvement projects on the overall reduction of adverse events. As a result, IHI and Cedars-Sinai partnered in 2010 to investigate what might be missing.

We found that good people, working hard, repeatedly don't register the problems that surface in their daily work as defects related to patient care.

Unearth Better Processes

Working with Steve Spear, who had been studying the characteristics of highly reliable industries outside of healthcare, IHI and Cedars-Sinai saw that the approach in those industries was different. In his book *The High-Velocity Edge: How Market Leaders Leverage Operational Excellence to Beat the Competition* (McGraw-Hill, 2009), Spear describes how then Alcoa Inc. CEO Paul O'Neill was successful in leading a safety turnaround at the aluminum production company. Spear concludes, "The key was to identify problems as they occurred—the more, the better—and solve them when they were seen."

In short, Alcoa committed itself to "unearthing" better processes from what bubbled up from staff, rather than

trying to design "perfect" systems in the abstract. Spear also highlights another company's effective response to problems: Toyota's "stop-the-line" approach, wherein any employee can call out a quality or safety problem and managers work quickly to solve it. These examples from outside healthcare challenged IHI to think about a new approach. Working with Spear and Romanoff and his team, we developed and tested a methodology to help front-line caregivers "see" problems in their systems. Constructed around an informal unit visit and designed to be a "conversation" versus an inspection or evaluation, the basic steps of this methodology are outlined in the chart below.

Ask the Right Questions
As the IHI team and the Cedars-Sinai leaders tested this model in multiple clinical and nonclinical areas, it quickly

The Unit Visit "Conversation"

Conversation Steps	Specific Duties	Desired Outcomes
1. Organize the visit to the unit beforehand	• Select a mix of front-line staff (six to eight) • Select a small leadership team • Arrange for at least 60 minutes of conversation	• A cross section of staff working on the unit are included in the conversation • Schedule enough time for all staff to be able to discuss their work • The location selected for the conversation will minimize interruptions
2. Arrange for all participants to describe the jobs they do	• Establish a nonthreatening atmosphere • Limit this part of the conversation to the first 10 or 15 minutes • Focus this portion of the conversation on understanding the work and the work environment	• Front-line staff trust that this conversation is not about assessing their personal work performance • Staff are willing to talk about their work, how they do it, and how they add value to the patients and the organization
3. Assess the work environment using "anchoring questions"	• Use questions like: "What causes a bad day for you?" "When was the last time a case was delayed?" "What makes some diabetics more difficult to manage?" • Use these questions to learn about both clinical and nonclinical situations • Steer discussion away from solutions	• A specific example of a defect around which to anchor subsequent questions to staff about frequency, type of patient involved, previous attempts to fix the defect or what might happen if it were resolved • A discussion that's completely non-threatening and blame free, to allow for maximum sharing of information • 10-15 defects that can be easily surfaced during a 60-minute conversation and compiled on a written list
4. Debrief	• First, debrief the team asking the above-mentioned questions • Debrief the front-line team	• A list of defects that the front line has surfaced • Buy-in from the front-line staff for possible action • Buy-in from the questioning team as to the need for action

Source: Institute for Healthcare Improvement

became apparent that a key success factor was the wording of the questions to focus on the specific work of the unit and the individual employee's role. For example, instead of asking, "How's everything going today?" or "What safety concerns do you have?" the questions needed to be more specific, such as "When is the last time a patient wasn't ready for surgery? Tell me about it." or "When was the last time you were missing a critical medication? Describe that incident."

By starting with what we called "anchoring questions" and then asking individual staff how they dealt with or solved the problem at hand, we found that good people, working hard, repeatedly don't register the problems that surface in their daily work as defects related to patient care. In fact,

in our surveying, frequent interruptions, incomplete patient preparations for procedures, unclear instructions and nonstandard orders were not considered to be safety issues but "normal" occurrences. Staff members who came up with solutions on the spot were considered "heroic."

Indeed, once the problem was solved the staff went on to the next thing—without ever asking, "Could we stop this from occurring again?" or "Who should know about how I solved this?" or "How could we change our work to enhance the safety of our patients?"

Develop a Unit-Based System
Fast forward to today and these findings have helped Cedars-Sinai staff to

now ask and then act upon these very questions. Case in point: One of the tasks of the nurse care technician on a 30-bed surgical unit at Cedars-Sinai is to ensure orders are accurate in the computer and that crucial messages are relayed efficiently and precisely. It is exacting work, and a mistake has the potential for tragedy.

During a visit from the IHI team, the nurse care technician noted that she was besieged by interruptions. The unit tracked the interruptions and found that, on average, they occurred 30 times per shift. When analyzed, most of the interruptions fell into three categories:

- Physicians and others asking for phone numbers

- Families asking for blankets and water
- Physicians looking for patient charts

In response, the unit undertook the following solutions:

- The 25 most commonly requested phone numbers were laminated on a reference card and attached to every phone in the area. The nurse care technician no longer responds to requests for nor directs inquiries about the phone lists
- Nursing staff increased room-to-room rounding, and they now routinely ask each patient about blankets and water
- Staff periodically "round up" charts and return them to the rack

The result is that interruptions now average three per shift, safety is improved, job satisfaction for all staff is improved and patients' needs are being met. The unit has gone on to identify and solve multiple other problems using the same method.

This approach has been implemented in other units and settings at Cedars-Sinai and has been used at other organizations, such as Mayo Clinic Rochester. It has unleashed a powerful way for front-line staff to take charge of eliminating many of the daily interruptions that negatively affect their work. The key is to involve the front line in "seeing" the defects rather than accepting them as part of daily work.

The "conversation" and "anchoring questions" techniques not only allow those defects to surface, but also provide the same front-line staff with "permission" to solve the problem and share that learning with others. This begins to close holes in the Swiss cheese one at a time and, better yet, provides a way for front-line staff to see and solve problems that were previously unrecognized and consequently ignored. ▲

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