



The Quarterly Quality Report

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The ASQ Quarterly Quality Report provides a detailed look at a variety of quality-related topics and issues. The report is developed by the American Society for Quality in keeping with its role as the steward of the quality profession—to promote the use of quality as a global priority, an organizational imperative, and a personal ethic, and to promote quality concepts, technology, and tools to make the world a better place.

To Err Is Human—But Don't Expect to Get Paid For It *Quality Processes Can Help Prevent Hospital "Never Events"*

October 1, 2008, marked a watershed event in the pay for performance movement in healthcare. That is the day when Medicare stopped paying hospitals for care related to so-called "never events"—errors in medical care that are preventable, clearly identifiable, and serious in their consequences for patients.

This Quarterly Quality Report offers suggestions for ways that healthcare institutions can prevent such "never events" from happening. The suggestions range from simple, common-sense steps to solutions afforded by modern technologies. It also points out things that patients can do to reduce the likelihood of suffering one of these unfortunate occurrences.

The solutions are drawn from a survey of healthcare quality practitioners conducted by ASQ in late August and early September 2008.

MEDICARE DRAWS A LINE

In August 2007 the Centers for Medicare & Medicaid Services (CMS) announced that for hospital discharges of Medicare patients beginning October 1, 2008, it would no longer reimburse hospitals for the costs associated with errors made by hospital staff resulting in any of eight specific conditions. Then in August 2008 CMS released its final acute care inpatient prospective payment rule updating Medicare payments to hospitals for FY 2009. That rule added three more conditions to the list of eight announced a year earlier. The eleven preventable hospital-acquired conditions that Medicare will not reimburse are:

- Foreign object retained after surgery
- Air embolism
- Blood incompatibility
- Pressure ulcer, stages III & IV (serious bed sores)
- Falls and trauma
- Catheter-associated urinary tract infection
- Vascular catheter-associated infection
- Surgical site infection (mediastinitis) following coronary artery bypass graft
- Surgical site infection following certain elective procedures, including certain orthopedic procedures and bariatric surgery for obesity
- Manifestations of poor control of blood sugar levels
- Deep vein thrombosis and pulmonary embolism following certain orthopedic procedures including total knee replacement and hip replacement

SURVEY RESULTS: HEALTHCARE QUALITY PRACTITIONERS WEIGH IN

The ASQ survey was an e-mail survey conducted during the last week in August and first week in September of 2008. Its 180 respondents represent 4 percent of ASQ's database of individuals who work in the healthcare field. About two-thirds of the respondents work in hospitals, with the remainder scattered among medical clinics and independent practices, clinical laboratories, blood banks, home care and long-term care facilities, outpatient services, other facilities, healthcare administration, and consulting.

Three topics were covered in the survey: 1.) Procedures that hospitals should do more of to reduce medical errors; 2.) Technologies designed to reduce medical errors; and 3.) Steps that patients can take.

Processes and Procedures

Respondents were asked to rank a list of seven procedural and process actions according to their importance in helping hospitals reduce medical errors (Table 1).

Heading the list is benchmarking—doing more to learn from other healthcare providers about successful practices for protecting patients from medical errors while they are in the hospital's care. One other item on the list also deals with acquiring new knowledge in the fight against medical errors: soliciting recommendations on error prevention methods in specific care environments. This approach acknowledges the need to tailor

approaches to a variety of care settings and to tap into the knowledge of those working daily in these environments.

Other items on the list are in the nature of procedural drills and disciplines that are meant to error-proof care giving. These include the use of pre- and post-operative checklists, marking surgical sites on the patient's body prior to surgery, requiring verbal confirmation to double-check on phone orders for medications, and constant reinforcement on proper hand washing.

Rank	
1	Benchmark best practices and lessons learned with local and national healthcare systems
2	Review checklists before and after entering operating room
3	Require nurses/pharmacists to read medication orders back to physicians when ordered by phone
4	Solicit recommendations on error prevention methods in specific care environments
5	Mark the correct site on the body before surgery
6	Train staff on proper hand-washing procedures
7	Deploy rapid response teams
8	Other

The last item on the list—rapid response teams—offers hope for reducing errors by reducing the risk that hospital patients will deteriorate to the point of requiring critical care. Critical care clinicians on these teams intervene to identify unstable patients and prevent them from lapsing into a condition that requires expensive and risky intensive care.

“These procedures are becoming the standard of practice—they are the things hospitals are supposed to be doing,” said John Harrison, a hospital surveyor who serves as treasurer of ASQ’s Healthcare Division. “If they’re not doing these things, they’re not following community standards,” he says.

James M. Levett, M.D., a cardiothoracic and vascular surgeon who chairs the ASQ Healthcare Division, agrees with Harrison’s assessment about these types of procedures becoming standard practice. But he also said, “Hand washing is still the most important thing that anyone can do to prevent hospital-acquired conditions.” Levett believes healthcare in general is getting better in its hand-washing practices, but there is room for improvement, and constant reinforcement is needed.

These and other guidelines have been evolving from the work of groups such as the Institute for Healthcare Improvement and the National Quality Forum following publication of reports from the Institute of Medicine (IOM) beginning in 1999 that highlighted the human and economic costs of medical errors. IOM concluded that

medical errors may be responsible for up to 98,000 deaths annually; another IOM study found that medical errors cost Medicare an average of \$700 per case for bedsores and \$9,000 per case for postoperative infections.

Technology Can Deter Errors

Beyond changing procedures and processes, another major thrust in current efforts to improve patient safety centers on employing technology to reduce errors.

Comparing procedural changes to new technologies, Levett states, “The technologies have great potential for hospitals” in reducing never events.

Harrison agrees. “Technology is the part that we’re missing,” he said.

The ASQ survey assembled a list of promising technologies that are being used to varying degrees and asked respondents to rate each on a scale of 1 (not at all important) to 10 (very important) to indicate how effective these technologies would be in preventing medical errors. Table 2 lists these technologies in order of mean response.

Mean Response	
8.81	Computerized physician order entry systems
8.78	Automated process checklists
8.67	IV smart pumps and computerized adverse drug event monitoring
8.48	Barcodes/scanners that help identify medications
8.40	Electronic patient records
8.36	RFID patient identifications systems
7.02	PDA's
6.50	Spectroscopy

Computerized physician order entry systems (CPOE), the first technology on the list, help hospitals avoid never events by eliminating illegibility and transcription errors. When a physician uses CPOE to order medications, it becomes nearly impossible to order a wrong dose; the medication is uniquely spelled out so there is no misspelling. And when the order is read and interpreted by the next person down the line, it is typed and easy to read, eliminating the frequent problem of undecipherable handwriting. When the CPOE is linked to an electronic patient record (item no. 5 in the list of technologies in Table 2),

the medication order automatically becomes part of the medication administration record in the computer. Orders for medication, diagnostic procedures, patient instructions, and therapies are tied together in a seamless package readily accessible by any clinician involved in the patient's care.

Moving from the clinician's order to the administration of medications, two of the other technologies mentioned in the survey help to error-proof the process of administration: barcodes/scanners and IV smart pumps and computerized adverse drug event monitoring systems.

Technology makes identification systems useful not only for medications, but also for patients themselves. RFID patient identification, when cross referenced to medical charts and order entry technology, was also rated as a highly useful technology for preventing never events.

Also rated highly by the survey respondents is the use of automated process checklists for all high-risk, high-acuity, or low-frequency procedures.

The main argument in favor of using these and other technologies is that they help to remove the element of human error.

"Healthcare professionals are working hard to adopt new processes and new ways of work, but humans are prone to make errors even in the best of circumstances," states Harrison. He says the push for technology should be intensified to facilitate efforts to reduce human error.

"How many businesses do you go into right now that don't use barcodes?" Harrison asks. "How many times do you go out to any retail store and they don't scan your purchase? The technology is not new, and yet, healthcare has not used it. There is so much technology out there healthcare can use—it's unbelievable we're so slow in adopting it."

All of the technologies mentioned above were rated highly by survey respondents. Rated as significantly less important by the survey respondents were the use of PDAs by physicians (which research indicates can reduce medical errors by more than 4 percent), and the use of spectroscopy to quickly recognize and positively identify medications based on their unique fluorescent fingerprints.

In addition, some individual respondents mentioned other miscellaneous technology-based solutions that they regarded highly, such as error and near-miss capture/evaluation systems and bedside bar-coding checks.

Patient Action Steps

Today patients are being encouraged to be more informed about healthcare decisions that affect them and to play a more active role in their medical care.

The final item in the ASQ survey asked for opinions on the importance of a list of steps that patients can take to help prevent medical errors when they are hospitalized (Table 3).

TABLE 3
How important are the following steps patients can take to help prevent medical errors during a hospital visit?

Mean Response	
9.41	Bring and keep lists of all medications you take
8.98	Ask physicians/staff to wash hands
8.77	Choose a hospital with a good track record
8.40	Ask a physician if you have doubts or questions
8.38	Get results of any test or procedure in writing
8.35	Have a loved one accompany you and stay with you
7.56	Mark yourself with an indelible marker on the spot where you are to have surgery

Firmly in place at the top of the list is for patients to bring and keep with them a list of all medications that they take.

“Bringing a list of your own medications is the one thing that stands out clearly for me,” states Harrison. He points out that when the patient has this information, it facilitates the medication reconciliation process that takes place upon hospital admission and again at discharge.

Several of the categories relate to patients becoming more assertive or proactive in their own care. In a nod to the importance of hand washing, for example, respondents felt it was very important that patients should feel free to ask physicians and hospital staff to wash their hands prior to patient contact if they are not observed doing so by patients or family. Somewhat less important are patients speaking up and asking a physician if there are any doubts or questions, and asking to get the results of any test or procedure in writing.

Choosing a hospital with a good track record in the procedure or surgery was also rated highly by respondents. Not long ago that would have been difficult to do. But today patients have available more information, from multiple sources, to help them evaluate their healthcare providers.

Survey respondents also felt it is a good idea to have a loved one accompany you and stay with you as much as possible while you are a patient.

Having the patient mark himself or herself at the site of surgery—a tactic that has received some attention recently—was viewed by survey respondents as the least helpful among the list of actions that patients can take.

Levett believes there is a limit to the benefits of patient involvement in prevention of medical errors. “Much more important is to have professionals who know what they’re

doing, and to back them up by the procedures and technologies that will help to ensure delivery of care according to the highest recognized standards,” he says.

CONCLUSION

The Medicare ruling marks the first major event in a seismic shift of thinking on medical errors. Previously, many conditions that may have been recognized as preventable were nevertheless thought of as just an inevitable aspect of business as usual in healthcare. When Medicare, the largest purchaser of healthcare services in the United States, announced its new reimbursement rules, it set off reactions that are expanding beyond the initial list of conditions and beyond hospitals to other care providers.

It's quite possible other conditions will be added to Medicare's "do not reimburse" list in the future. When the current prospective payment rule was being developed, a total of nine additional categories of conditions were considered. But based on comments received from the public, CMS decided to finalize just the three additional conditions.

At the same time CMS was announcing the new non-payment rule, the agency sent a letter to state Medicaid directors informing them how the states can adopt the same never events practices. CMS also is considering expanding the policy beyond hospitals to providers such as home healthcare agencies and skilled nursing homes.

Other payers are beginning to voice their objections to paying for medical mistakes.

The Medicaid programs in at least three states have already enacted rules denying reimbursement for certain hospital-acquired preventable conditions. Large commercial insurers such as Blue Cross and Blue Shield, Cigna, and Aetna are moving in that direction. And state hospital associations are beginning to recommend that hospitals in their states not bill patients or insurance companies for various mistakes made to patients. CMS has reported that some 20 states already have or are considering procedures to eliminate payment for never events.

The message to hospitals and other healthcare providers is clear: The need to find and, more important, to vigorously implement known solutions such as the methods outlined in this report, is more urgent than ever if they want to avoid the costly consequences in terms of diminished reimbursements and continued harm to patients. The methods, practices, and technologies are currently available. The challenge is in putting them into practice, making the necessary investments, and establishing and supporting a culture of patient safety.

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