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Can you demonstrate how your rapid response team has impacted care?

Use the right measures to get meaningful data

Is your organization's rapid response team getting enough calls? Are the calls coming early enough to make a difference? Are outcomes such as mortality rates improving?

To date, 1,770 hospitals have implemented or intend to implement rapid response teams, as recommended by the Institute for Healthcare Improvement's (IHI) 100,000 Lives Campaign. Improving the response to changes in patients' conditions using a designated response team also is one of the Joint Commission's proposed 2007 National Patient Safety Goals.

But what impact are these teams actually having on patient care and outcomes? It's the quality professional's job to find out and share this information with senior leaders on an ongoing basis.

Two things are essential: A clearly stated goal and a measurement strategy. "The importance of monitoring and tracking is to understand how well the team is doing," says **John Whittington**, MD, director of knowledge management/patient safety officer at OSF Healthcare System in Peoria, IL. "Without monitoring and tracking, you will not know if your team is effective."

At Southern Maryland Hospital Center in Clinton, a rapid response team is being implemented for stroke patients. Data are being collected in real time for response times and patient outcomes, says **Vivian Miller**, director of risk management and patient safety officer.

For the first quarter of 2006, approximately 60 cases were reviewed by the stroke team coordinator, who also collects and analyzes the data. The analyzed data are then presented to the stroke team and the stroke committee for evaluation and further action as appropriate.

Process changes are discussed at the team level, which includes staff from the intensive care unit (ICU), the emergency department (ED), the telemetry units, case management, and the rehabilitation therapy department. Adherence to the established care pathways and guidelines is discussed by the stroke committee, comprised of medical staff including neurologists, internists, rehabilitative medicine, interventional radiologists, and emergency physicians. The committee is facilitated by the director of accreditation and standards, with performance improvement

IN THIS ISSUE

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participation.

"Unless you have medical staff involvement, you can't really assess what you are seeing," says Miller.

Your objective is to determine how well the rapid response team process is working, says **Kathy Haig**, director of quality resource management at OSF St. Joseph Medical Center in Bloomington, IL. "The intent of the rapid response team is for early recognition of a deteriorating or changing condition so that early treatment can be initiated to prevent a code and possibly a transfer to a higher level of care, or a downhill cascade of a worsening condition that could result in mortality," she says.

As a result of the Medical Emergency Team (MET) implemented at Tallahassee (FL) Memorial Hospital, several patients have been given medications, had oxygen changes, or gotten respiratory treatments that improved their status and reversed a downward decline. "We have seen a shift from the 'just about to code' type of call to being notified of early, subtle changes, such as the very early stages of septic shock," says **Cathy Pfeil**, RN, BSN, CCRN, director of critical care nursing.

In one case, the MET team was called because a patient had a very high heart rate, and they found that the patient had gone into a cardiac arrhythmia, which affected her blood pressure and oxygen saturation. The respiratory therapist changed the oxygen so the patient could breathe more easily, and the ICU nurse and physician started medication to bring the heart rate down.

"The medication is usually given in an area with cardiac monitors, but there were no available beds, so they treated the patient in her room," says Pfeil. "After an hour, the heart rate was down and the patient got moved to an ICU. Without the intervention, she probably would have arrested."

Share data with leaders

At OSF St. Joseph, measures include the number of calls per month, codes outside the ICU/ED/OR/cath lab setting, total codes, and codes per 1,000 discharges. "We show a cumulative mortality value each month for the fiscal year, raw mortality, and mortality year to date and/or a 12-month rolling mortality rate," says Haig.

The code data are obtained from the hospital's switchboard operators, who log all types of codes, warnings, and alerts. Mortality data are obtained from an internal database and stored on a spreadsheet used to report progress on multiple safety and quality indictors, known as the "quality and safety dashboard." The same data are used to provide year-to-date or rolling mortality rates.

The rapid response team and the team that reviews codes get this information, and management posts the dashboard for front-line staff and reviews findings at department meetings.

The information also is shared with the medical staff at the department quality and medical

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executive meetings and with the quality management council, which oversees all performance improvement activity, and is reported on monthly and quarterly reports at the system level and on corporate board reports.

At Sibley Memorial Hospital in Washington, DC, rapid response team data are collected by running a report from the computerized medical record, which lists all patients who have had a rapid response team intervention. The report gives the patient name, identification number, and date and time of event.

"We then go to the medical record for further information," says **Deborah McDonough**, manager of the patient safety and quality department. "We look for transfers to higher levels of care and final patient outcomes."

Currently, staff in the patient safety and quality department run this report at the end of each quarter and complete chart review to gather additional information. The organization's team consists of an ICU nurse, a respiratory therapist, and the intensivist or hospitalist, with interventions documented by the respiratory therapist. In the future, members from the rapid response team may be involved in the record review process.

"We have discussed the benefit of the rapid response team members reviewing team performance and patient outcomes. This would serve as a team evaluation session and another way to evaluate the care provided to the patient," says McDonough.

Data on rapid response team calls are shared at the hospital's Code Blue committee. Statistics on calls are included on the hospital's clinical dashboard, and those data are reviewed at the hospital's quality council. "The data Sibley has collected on our rapid response team has assisted the team to enhance documentation of the event and outcome," McDonough says.

'Pulseless' codes are best measure

Many organizations look retrospectively at codes occurring outside the ICU to assess whether a rapid response team intervention prior to having a code called would have made a difference in patient treatment or outcome. "We are currently going back to look at our codes outside the ICU in 2005, to make this assessment," says McDonough.

Sibley initially saw an increase in rapid response team calls and a decrease in Code Blue events in the first year, but the second year of statistics has not shown a consistent trend. "Our team leaders have reviewed the data and are implementing improvements in staff education, as well as documentation," McDonough says.

For example, information on the rapid response team was added to the organization's annual education day, to serve as a reminder to all staff, both clinical and non-clinical, that the rapid response team is available and on call 24 hours a day, seven days a week.

Also, patient assessment triggers were added to the report completed with each call, to assist staff in making the decision to call the team, and the form is now stored on the unit's code carts for quick access.

At Tallahassee Memorial, several processes are measured for the organization's MET team. "Our main measure is our code rate," says Pfeil. "Since we had historical data for all codes, as well as floor versus ICU codes, this was ready-made to continue to use as an effectiveness marker."

Response time, length of calls, where the calls came from, reasons for the call, interventions provided, and patient disposition are tracked, with nursing managers given copies of the calls made by their units. "This has helped us look at where to devote resources and served as an early warning system for problems," says Pfeil. "Some of the calls have led to inservices and staffing changes."

For example, there were three calls from the same nursing unit for nonacute problems, all on the same shift. "Everything turned out well, but when the nurse manager was notified, she realized she needed to ensure more experienced staff were scheduled, to help the less experienced staff manage patients better," says Pfeil.

Carbons of code sheets are collected, and the hospital operator tracks code calls throughout the day, allowing quality managers to pull charts to look at outcomes and relevant factors as needed.

"All of our MET data is reported to our oversight committee periodically, as well as the hospital safety and process improvement committees," says Pfeil. "We have quite a few senior leaders in these groups, so they stay up to date on our results."

To assess the impact of your organization's rapid response team, the IHI recommends using three key measures: codes per 1,000 discharges, codes outside the ICU, and utilization of the team. Additional measures include post-cardiac arrest ICU bed utilization, staff satisfaction with the team, and the percentage of coded patients

surviving at discharge.

However, if you only measure codes that occur outside the ICU, you may not be getting meaningful data, says Whittington. "If that is all you measure, you are just moving a group of patients from one bucket to the other. You may think you are making a big difference because you are having fewer codes in the organization, but it may not be giving you a true representation."

A better measure is "pulseless" codes occurring outside the ICU, so you can determine if the number of times cardiopulmonary resuscitation was required for patients is decreasing.

"If you can decrease pulseless codes, that is a harder outcome measure," says Whittington. "If that rate has dramatically decreased, you are getting closer to a true outcome measure."

Measurement of "pulseless" codes provides a more accurate reflection in the reduction of codes that could result in death, explains Haig.

To get meaningful data from mortality rates, it's necessary to measure the data over a long period of time. Even if mortality rates do decrease, that doesn't necessarily mean that the rapid response team is making the difference. "You might have added a new service line and your acuity is rising, so mortality is going up," says Whittington. For this reason, he recommends using risk-adjusted mortality measures instead of raw mortality rates.

If your hospital has an average daily census of 100 patients, you can expect to get 10 rapid response team calls for that month, according to the IHI. "This is a ballpark number we are using for the number of calls the team should be getting," says Whittington.

If you are averaging less than that, you might want to review the mortalities for the month, cases transferred to a higher level of care, or records of patients coding to determine if there was a failure to identify, communicate, or treat a deteriorating or worrisome condition in the 24 hours prior to the code, recommends Haig.

"You can also compare your rapid response team criteria with the patient's condition in the 24 hours prior to the code or time of death, to see if there was a missed opportunity for a call," she says.

At OSF St. Joseph, a test was conducted using a certain severity score based on vital signs and severe infection criteria as a trigger for an automatic call to the team.

"After a few months of testing this process, we found there were too many unwarranted calls using this severity score as a trigger," says Haig. "To avoid the 'crying wolf' reaction to calls and to be conscious of the team members' time, the trigger for automatic calls was discontinued."

A defined severity score now triggers a patient assessment by two nurses to determine if a call is warranted.

If the number of calls is less than what it should be, this could be because staff are reluctant to call the team. The IHI recommends that specific criteria be established, such as acute changes in heart rate, systolic blood pressure, respiratory rate, saturation, consciousness, urinary output, or simply that the staff member is worried about the patient.

When managers at OSF St. Joseph analyzed rapid response team cases, they saw that support service departments such as respiratory therapy sometimes were reluctant to make the call, adds Haig.

"By reviewing cases, we found that some departments hesitated, thinking they were 'stepping over the line' and that this was a nursing responsibility and that nursing would be offended," says Haig. "We explained that we were all here for one purpose — the patient — and anyone can call the team."

With the exception of cardiac arrest when a patient's heart has stopped or the patient is not breathing, there is usually nothing that forces staff to call the team. "You need to have trained nurses who feel comfortable calling the team and members willing to come help," says Whittington. "Constant education is needed to reinforce this point."

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Is your facility prepared for surveyor imposters?

Contact security and police if incident occurs

A group of well-dressed people walk into the main entrance of a southern California hospital and announce they're going to do a walk-through before a JCAHO survey. In another California facility, a professional-looking man comes to the lobby and explains that he is with JCAHO and needs access to several clinics. When a woman is found wandering the hallways of a Wisconsin hospital, she says she's doing work in preparation for a JCAHO survey.

All these individuals were imposters, and all fled as soon as they were challenged by staff. Would they have gained access to your facility?

A year after individuals impersonating JCAHO surveyors tried to enter hospitals in Boston, California, Detroit, and elsewhere, a rash of similar incidents has occurred.

Although in these cases the imposters all claimed to be from JCAHO, other individuals may present themselves as employees of pharmaceutical companies, contractors, or other agencies.

"I don't think anybody knows how many imposters present themselves at medical centers. We just hear about the ones claiming to be with JCAHO, but I'm sure there are others," says **Joseph Cappiello**, JCAHO's vice president of accreditation field operations. "Our medical centers are not closed facilities. You can walk in, and, by and large, they don't have someone at every door 24 hours a day, seven days a week."

As for a motive, Cappiello says his gut feeling is that theft is a more likely possibility than terrorism. Possibilities include narcotics, antibiotics, portable medical equipment, or personal identification data of patients.

"We did contact the FBI and the Department of Homeland Security just to make sure that someone at a national level was collecting data to see if there were any patterns to this," he says. "It's certainly not the JCAHO's desire or expertise to get into the investigation of these incidents."

For this reason, JCAHO has instructed organizations reporting incidents to contact local law enforcement and ensure there is a police report and contact their state office of homeland security so that the incident is registered in a federal database.

The positive side is that most organizations have taken steps to increase their awareness and level of security, says Cappiello. "I believe they have taken these messages to heart, based on the number of calls I have received after each of our alerts," he adds. "They have reviewed their internal policies and established new parameters for identification of all persons presenting at their medical centers."

On JCAHO's part, surveyor badges have been modified with embedded holograms to make them more difficult to copy, and pictures and biographies of surveyors are posted on the Extranet site by 7 a.m. on the morning of an organization's survey.

"We have instructed all our field surveyors to make sure badges are displayed, report to the front office or security desk, and patiently wait for the verification and validation to take place," says Cappiello.

If there is ever a question as to the validation of a surveyor's identity, staff should err on the side of caution and call the hospital's own internal security, he underscores. "None of us want untrained staff trying to be heroic," he says.

At La Cross, WI-based Franciscan Skemp-Mayo Healthcare System, an unannounced surveyor policy states that when any type of surveyors present, they must show their credentials and will have an escort. In addition to JCAHO, other surveyors may come unannounced, such as state surveyors, federal surveyors completing a validation survey, or surveyors from the Occupational Safety and Health Administration or the Office of Inspector General, notes **Kristine Von Ruden**, RN, the organization's quality improvement specialist and Joint Commission coordinator.

"We posted little cheat cards in our receptionist, nursing, and information areas that outlined the key steps to take in the event of a surveyor arriving," says Von Ruden. "We also did an education session with managers so they could take it to their staff."

When JCAHO presented for an unannounced survey, the surveyor's identities were verified via the Jayco Extranet site. "Our director of quality

pulled their info up, and surveyors waited in a conference room that was used as their headquarters," she says.

At Holyoke (MA) Medical Center, staff are trained to ask for identification from any individuals who present themselves as surveyors, says **Mike Zwirko**, CHE, vice president. "In addition, all sales people must report to purchasing to register and get special badges. Sales people are known to just walk into pharmacy or surgery selling their wares," says Zwirko. "This also applies to equipment service or repair technicians from outside companies."

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Are you collecting data you don't really need?

Know when to put your resources elsewhere

In the process of collecting restraint data, you learn that certain physicians are not signing daily orders. Other data being collected show that patient education is being documented 97 times out of 100.

These are two examples of scenarios where ongoing data collection is no longer needed, says **Paula Swain**, MSN, CPHQ, FNAHQ, director of clinical and regulatory review at Presbyterian Healthcare in Charlotte, NC. In the former example, action needs to be taken by profiling noncompliant physicians and speaking to them directly. In the latter, spot checks can be used instead of rigorous data collection.

"A notice can be sent to staff that a good job has been done and letting them know that, since we are still interested, we will spot check from time to time and provide them feedback on this process," says Swain.

Almost all quality managers are struggling with increasing data collection burdens with limited resources. Yet many organizations are collecting the same data twice, or data that don't give meaningful information.

"Much of the data being collected lacks validity. Even if data is valid, it may not be important," says **Peter J. Pronovost**, MD, PhD, director of the Johns Hopkins Quality & Safety Research Group in Baltimore, MD.

Since data collection requirements are largely driven from outside the health system by insurers, accreditators, and regulators, it would be helpful for these groups to integrate their data collection requirements, says Pronovost.

"There are national efforts by JCAHO, CMS, and others to integrate their measures. However, the measures vary widely among insurers. It would be helpful if insurers could consolidate measures," he says.

To find out if redundant data collection is occurring, say the following to anyone who requests that data be collected, recommends Swain: "If I'm to collect data for you, I need to know: Why am I collecting it? What question will the data answer? And, if I'm still collecting, why? What is our goal, have we met our goal, and when will we know we have met it?"

Take an inventory of all the measures you collect, who is collecting the data, and what resources are being devoted to collecting it.

Next, go to the "consumers" of that data — whoever is supposed to take action on it — and ask if they believe it is valid, if they believe it is important, and whether it should continue to be collected, Pronovost advises.

"We did this exercise. It is eye-opening to see how much data being collected that the recipients believe is neither important or valid," he says.

Two examples of meaningless data collection include auditing operating room practices without clear specifications and collecting data on readmission to the intensive care unit within 30 days. "When we audited this measure, we found that readmissions were due to patients developing a new problem," he says. "We changed the time from readmission to within 48 hours, and it was much more useful."

All committees routinely evaluate the need to collect data. "There is such a large need to collect data that we can't support it all. So if we have something that seems to be a non-issue, we stop collecting it," says **Dana Moore**, RN, MS, a coach at the Baltimore-based Center for Innovation in Quality Patient Care, and clinical nurse specialist

(Continued on page 83)

PATIENT SATISFACTION PLANNER™

ED quadruples patient satisfaction rankings

How can one keep numbers that high?

In the third quarter of 2001, the ED at Methodist Medical Center of Illinois, Peoria, ranked in the 17th percentile in patient satisfaction surveys by Press Ganey Associates in South Bend, IN. By the end of 2003, that number had risen incredibly to the 95th percentile.

That happy ending, however, is not quite the entire story. "We've become victims of our own success," notes **Elsburgh Clarke**, MD, chairman of the department. You see, the boost in patient satisfaction mirrored a similar growth in caseload for the ED, which now sees 55,000 patients a year instead of the 37,000 it was seeing a few years ago. This increase has made the maintenance of a 95% patient satisfaction rate impossible, Clarke says; still, the ED's rankings consistently remain in the mid-80s.

When the downward trend in patient satisfaction rates became apparent, Clarke and **James Sowards**, MD, the medical director, were charged with the task of getting patient turnaround to 30 minutes, which, it was felt, would bring the satisfaction numbers up.

"As we all know, length of wait is one of the main determinants [of patient satisfaction], so I had to devise a process and procedure so that, no matter what a patient came in with, they could be seen in a timely fashion," recalls Sowards.

That timeliness can't happen with standard triage, he says. By moving the physician out to the patient, not only do they not have to see minor complaints in ED beds, but the patient is taken care of just as quickly, he says. If they triaged patients in standard fashion, someone with a toothache could wait four to five hours, Sowards explains. He says this new system "is a win for the ED and for the patient who comes in with a nonurgent complaint — and that represents a large portion of our patients."

Clarke says they have a physician out front from 9 a.m. to 5 p.m. and from 5 p.m. to 1 a.m. They also have a fast-track service that is open during those same hours, he says. These practices continue, he notes.

During the turnaround process, the ED managers kept a close eye on satisfaction performance.

"We get weekly updates on Press Ganey scores, and we post them in the department so everyone can see how we are doing," Clarke explains. Survey comments were shared with staff at least twice a week.

Patient satisfaction became a topic in the monthly physician meetings. Also at the physicians' meetings, the individual scores were posted.

"When you have peer pressure like that, you don't want to be in a lower percentile," Clarke says. "If a physician is under percentile for several months, we will have a separate meeting with them." The nurses, he adds, only see a graph that represents the performance of the entire department.

Sowards says another factor in improvement has been a financial incentive. "Doctors are paid on a base salary and an incentive bonus, which is partly based on customer satisfaction," he says. "While 90% of your salary is set, 10% is at risk for productivity, customer satisfaction, and coding."

Since the department volume hit 55,000 patients a year, the satisfaction scores have typically ranged between 83% and 85% — still far above their low baseline, but lower than their 95% target, Clarke says.

"The community knows this is just a better place to come, and it's put a lot of stress on the system," he says. "We're trying to get back" to 95%.

Clarke identifies several possible remedies. "We need a bigger ED and more people working, but that will not happen anytime soon," he says. However, he adds, "the nursing staff has basically bought into [the satisfaction goal] and knows we basically have to be fluid with staffing as volume shifts and changes on a daily basis." The nursing staff is at its maximum, he says, "but we've made changes in our schedule, and they have to accommodate those changes to help us out."

Sowards says they have adjusted their hours to meet the increased volume. "And we do have an on-call system if it gets even crazier, to bring in extra people and de-compress. We do whatever it takes to get the volume out of here." ■

Diabetes care program addresses specific needs

Program addresses cultural differences

Project Dulce, a diabetes care management program housed at Whittier Institute for Diabetes in La Jolla, CA, has successfully addressed not only the difficult challenge of helping patients manage their diabetes, but also another issue of growing concern to quality managers: improving outcomes among minority populations.

Using a combination of trained diabetes educators, endocrinologists, and peer educators (minority individuals who have successfully managed their own diabetes), the program has achieved impressive results.

Project Dulce, partially underwritten by Scripps Health (which owns the Whittier Institute), has cared for more than 4,000 individuals at 17 sites since its inception in 1997. In its initial 18-month pilot program alone, Project Dulce was able to reduce the average hemoglobin A1c in 300 patients from nearly 12 to 8.

"We developed an approach we thought would work," recalls Chris Walker, MPH, director of strategic planning and development at the Whittier Institute. "We brought together endocrinologists, plus people who had worked in the community setting and knew how to approach diabetes patients. The program combines clinical expertise and community-based knowledge about how to reach [minority] populations."

Originally designed to serve Spanish-speaking patients, project Dulce has expanded to include Vietnamese and Filipino patients. As a hospital-sponsored program, officials of the American Hospital Association and others believe it may offer a valuable model for other hospitals to emulate.

"The New Jersey Hospital Association has called and asked us to present to their groups; they're thinking of doing something similar there," shares **Athena Philis-Tsimikas**, MD, executive director and chief medical officer of the Whittier Institute.

The staffing in the original pilot program created the model for the full-blown program, says Walker. "We had one team - a diabetes nurse educator, a dietician, and a peer health educator," she explains.

"They provided clinical management, and the nurse educator and dietitian developed the whole curriculum to train people with diabetes to deliver diabetes education," she says.

The peer educator curriculum involves a 10-week course. The peer educators also are complemented in-hospital by the nurse educators, who use hand-outs from the course in Spanish, English, Vietnamese and Filipino, adds Walker.

"The nurses and dietitians we work with are all certified diabetes educators; each has had about 10 years' experience in managing diabetes," Philis-Tsimikas adds.

When a patient is identified as having diabetes by a physician in one of the participating health centers (the community clinic system and primary care physicians are part of the program), they are referred to the project. "We explain the program to them in their native language, set them up for an appointment with the nurse, and enroll them in group education classes," says Walker.

The nurse conducts a comprehensive assessment, which takes about an hour. "The nurse works with the patient to develop a care plan and does the clinical management in collaboration with the physician; she takes charge of labs and medication judgment, under the physician's guidance," says Walker.

Some of the nurses are not bilingual, but each has an assistant who is, she continues. "After all clinical exams are done, the patients come in as needed," she shares. "We collect all the data and put it in an electronic registry, which allows us to track clinical outcomes and also to track patient activities — which of them, for example, has not had a recent retinal exam."

The specialized knowledge of the educators and dietitians, as well as the special experiences of the peer educators, are keys to the success of the program, she says.

"Look at the ease with which [the nurse educators] use insulin," offers Philis-Tsimikas. "You have a lot of patients with Type II diabetes, of lower income, ethnically diverse, and they have let their disease go for quite a while; many have had the disease for 10 years and have had minimal care. You have primary care physicians who are very motivated but who deal with a lot of different diseases and conditions, and their level of expertise in insulin is not that great. So when you put in a person who can teach someone to start insulin 'in their sleep,' - or any of the meds required, for that matter - the patient looks at that person as an expert in diabetes."

Their experience also has enabled them to

recommend the best possible combination of medications, she adds. "And they are able to educate the patient about why it is important to take your meds, test your blood sugar, alter your diet, and so forth," she notes. "They work with them; that's important to the patients."

The peer educators complete the "package" of care. "They connect with them culturally," says Philis-Tsimikas.

Walker agrees. "They are from all different cultures; different belief systems impact their ability and willingness to manage their diabetes," she says. "There might be the whole concept that the disease is their fate — which they might have done something wrong and there is nothing they can do about it. Yet studies show the key to improved self-efficacy is feeling your can control the disease. We address these issues in a culturally sensitive way and complete their education so they have more accurate information," she says.

It is that complete package that is so key, adds Philis-Tsimikas. "It is very hard to treat Type II diabetes and get people where they need to be with their goals just with the peer educator," she says. "You really need the combination, because they each attack things from a different perspective."

Just as Scripps Health is underwriting Project Dulce, says Philis-Tsimikas, other hospitals and health systems can pursue a similar model.

"Hospitals need to know there's a program they can send their hospitalized patients out to," she explains. "They might be admitted with something else, but if their blood sugars are running around 200 to 300 you might have to keep them in the hospital an extra two to three days - unless you know you have someone you can send them out to with whom you feel comfortable. In our communities, we are the program. Other hospitals can have the same sort of program set up in their own location."

That's just what Scripps Health has done, she continues. "Yes, we are subsidized, but we are able to bill for services, and we have made a really good effort to try and get as much reimbursement as possible so as to be self-sufficient; and we are pretty darn close. Scripps does help us with a little bit of the rent."

It's important to remember, says Philis-Tsimikas, that setting up such programs not only helps the community, but it also helps the hospital in the long run. "For one thing, we conduct monthly professional education programs; we teach in-hospital nurses how to better care for diabetes patients," she says.

The ability to reduce LOS for patients with diabetes becomes even more significant, she says, when you realize just how many patients who are hospitalized also have diabetes.

"Our hospitals here have recently gained the ability to look at the percentage of patients who have diabetes," she shares. "It ranges from 12% of all admissions in one hospital all the way up to 35%." One cath lab, she continues, reported 40% to 45% of its patients had diabetes.

"So we're not talking about a small number of people, but a large percentage of those patients in a hospital who are affected," she emphasizes. "They have longer hospital stays - by a day and one-half on the average. If you have outpatient education plus better inpatient care, you will get better outcomes." ■

Customer service key to patient satisfaction

Respond to complaints, utilize survey trends

Anyone who works in retail knows that customer satisfaction is the key to repeat business, leading to a more successful financial future.

Customer satisfaction also is just as important to a home health agency's successful future, according to home health managers who have focused on improving their own agencies' patient satisfaction programs.

A continuous staff education awareness program, inservices to better prepare staff members to handle complaints from patients, and hiring the right staff members for the job all contributed to the Press Ganey Compass Award won by Mercy Homecare in Cadillac, MI, for a significant improvement in patient satisfaction scores, says **Maureen Hayes**, RN, professional service manager of the agency.

"All staff members worked together to make customer service a part of our agency's culture," explains Hayes. "Customer service became a part of every meeting's agenda, all new employee orientations, and inservices that were designed to help employees address patient's individual concerns," she says.

Because staff morale affects the level of customer service you can provide, some processes and staff positions were restructured to better use staff members' talents, says Hayes. "We focused on hiring the right people for each job, whether it was

a case manager or a physical therapist," she says. "By making sure the employee is handling a job for which he or she is best prepared, we improved everyone's enthusiasm because no one felt like they were overwhelmed or forced to cover for someone else," she says.

After reviewing patient concerns on satisfactions surveys, Hayes' agency discovered a trend in dissatisfaction with physical therapist availability. "We added physical therapists to our staff to better meet patients' needs and satisfaction scores for that service increased," she says.

While patient satisfaction scores and comments are discussed at all staff meetings, and posted for all staff members to read, Mercy Homecare emphasizes the importance of customer service by developing customer service competencies that must be met for each position.

Along with spelling out what customer service activities each person must demonstrate in their job, inservices that teach each staff member how to handle complaints were also developed, says Hayes. "We teach everyone how to accept the complaint and listen carefully, then we tell him or her how to refer the complaint for resolution."

Mercy Homecare's process spells out the staff members' responsibility to report a complaint to a supervisor, case manager or other appropriate staff member to make sure the complaint is not ignored or lost in a shuffle of paperwork, says Hayes. "We make it clear that reporting a complaint is an important part of providing care to that patient," she adds. "We don't make it a punitive process, we make it a learning process," she says.

When reviewing your patients' satisfaction with your service, the real challenge is to make sure you get a good return rate on your surveys, says **Karen Marshall Thompson**, RN, MS, administrator of Southern Ohio Medical Center Home Health Services in Portsmouth. "You need at least a 25% return rate to ensure reliable data," she says. "We increased our return rate by addressing the survey to a specific person," she explains. While it does take a little extra effort to personalize each letter with a survey, return rates do go up because patients like the personal touch and it doesn't make them feel like they are just part of a mass mailing, she explains.

Another way to increase survey return rates is to make sure that you have the patient's correct address, Thompson says. "We often get their primary address for insurance purposes, but sometimes a patient might stay with family members during the home health episode or they might move during or immediately after we provide care," she says. "All of our nurses know to communicate with the business office so that surveys will be mailed to the correct location," she adds.

"Keep your survey short," suggests Thompson. "We have a one-page survey that is succinct and easy to complete, and we include a postage-paid return envelope," she says. By keeping it simple, you further increase the chances the survey will be returned, she explains.

Once you get the surveys back in your office, look for trends in order to prioritize areas you need to improve, Thompson advises. "People are generally satisfied with home health care but we are always looking for ways to improve because we are in a very competitive market," she says.

"Our patients think that their ability to reach us 24 hours each day is very important and when we noticed some ratings in this area that were not as high as we wanted, we looked at how we handled evenings and weekends," says Thompson. "We had always used an outside answering service for on-call and we tried a number of different services but we always had problems with missed calls or delays in getting messages to nurses," she says.

Thompson found the answer to her on-call answering service dilemma with her hospital's switchboard. "We analyzed the number of calls we actually received on weekends and evenings and we showed that the extra number of calls for the home health nurses would not result in a need for more switchboard operators and would not affect the operators' ability to handle hospital calls," she says. "Our home health phone line now rolls over to the hospital switchboard operator after-hours and the operator will take messages and page nurses," she explains.

"We discovered that the hospital switchboard operators were perfect for this task because they are trained for customer service, they are accustomed to anxious callers, they know how to stay calm, and they are used to paging people," Thompson says. "Our patients and our nurses are very happy with this change, which did improve our ability to respond to patients 24 hours a day."

At Mercy Homecare, patient satisfaction has improved because customer service has become an integral part of the agency's culture, says Hayes. The change didn't happen overnight but it can be accomplished, she says. "Just keep talking about customer service, don't make it a once a year topic for a meeting, make customer service a standing agenda item for every meeting that occurs in the agency." ■

in the medical ICU at Johns Hopkins Hospital.

For example, the infection control department measured infection rates in intravenous lines used for parental nutrition for years, but the rates were low and below the national norms, so it is no longer collected.

There are many other examples, Pronovost says, adding that it is important to recognize that measurement has costs. "If measures are not valid or not important, then we should not waste resources collecting them," he says. "You are better off not spending your resources collecting invalid data that can misinform."

A better strategy is to collect data for a smaller number of valid measures, and choose your indicators carefully.

"Data collection, especially for quality control, can go on and on," Swain says. "When it does, there needs to be one indicator that is really important to the whole process. That indicator should also be simple to collect and sensitive enough that when it falls out, some action is taken."

For example, the indicator, "Is patient education documented?" is not a good choice, because it is too vague. A better indicator to use would be, "Is the patient educated at least daily while in the hospital by any provider?"

Data collection that is done to assure a process "took" and that change is being sustained also needs to stop at some point, says Swain. "Most PI projects end if some data is collected to verify that the process change was made and that desired results were achieved," she explains. "When the final report in the project's success is submitted, plan to roll the indicator off."

For example, if it is established that a practice is being done consistently, weekly data collection can stop and be replaced by a monthly quality control with a reduced sample size.

"Also, if findings from data collection are not being acted upon, it may be time to discontinue the study and breathe life back into the project, since it is not performing as it should," says Swain. "Or you may need to evaluate if this is the 'steady state' of the process and accept it, at whatever level it has steadied out."

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ACCREDITATION
Field Report

JCAHO wants hospital leaders involved in quality

Staffing also a key area of focus

Information management, communication, quality improvement, and staffing. These were four key areas of focus during a recent unannounced JCAHO survey at Harbor Hospital in Baltimore. "Surveyors noted our hospital's readiness and longevity and experience of staff. Overall, the surveyors were fair and made the staff comfortable during the tracers," says **Nilda L. Ledesma**, RN, director of quality case management.

Here are some specific items surveyors wanted to see:

- Receipt of critical test results. "What they are looking for is the timeliness of reporting to the responsible licensed caregiver," says Ledesma.
- Documentation of timeout for bedside invasive procedures, such as lumbar punctures or insertion of a central venous catheter.
- Medication reconciliation across the continuum of care.
- A complete pre-anesthesia assessment for patients undergoing moderate sedation in interventional radiology.
- Discharge instructions that were understandable by the average layperson. In some cases, residents and attending physicians were writing medical abbreviations such as "PO" instead of "by mouth," says Ledesma.

The physician surveyor conducted the environment of care (EOC) tracer and building inspections, and discussed the EOC plan with a risk manager, the plant operations manager, a clinical engineer, and a security officer.

To assess emergency preparedness of the staff, the surveyor interviewed nonclinical staff, such as asking an employee in laundry what she would do in the event of a fire.

Surveyors liked that hospital leaders were involved in the organization's strategic and quality initiatives, including the rapid response team, fall prevention, stroke, heart failure, heart attack, pneumonia, and sepsis efforts.

In preparation for the unannounced survey, the hospital developed a task force to review the standards for continuous compliance on a weekly basis, developed a code to alert the chain of command when mock unannounced surveys occur, and conducted unannounced tracers. "During mock tracers, managers gave staff either a certificate of compliance or an RFI certificate. Staff counseling is given by managers as appropriate, depending on the seriousness of the error," says Ledesma.

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Are tubing errors harming patients at your facility?

Recent sentinel event alert warns of errors

Tubing from a portable blood pressure monitoring device is inadvertently connected to a patient's intravenous (IV) line, and a fatal air embolism results.

Oxygen tubing is mistakenly connected to the IV line of a pediatric patient receiving medication via a nebulizer to treat asthma. The oxygen tubing is disconnected in seconds, but air was allowed into the IV tubing and the child dies instantly.

These are two examples of patient deaths resulting from tubing misconnection errors reported to the Institute for Safe Medication Practices (ISMP). A recent sentinel event alert from the Joint Commission warns that these dangerous errors are continuing.

Organizations are challenged to develop successful interventions to ensure that nurses always trace a tube or catheter from the patient to the point of origin before connecting any new device or infusion.

Part of administering an IV medication is making sure the tube is going where you want it to go, says **Alison Page**, MHA, director of patient safety at Fairview Hospital in Minnesota. "We consider 'tracing your tube' to be a part of standard nursing care," she says. "Some of these errors are also caused by people forcing tubes to connect where they should not." For example, a nurse may be used to giving a certain drug intravenously, so she forces the tube into the IV adapter even though it is supposed to connect to the feeding tube.

At Paradise Valley Hospital in National City, CA, a multidisciplinary team was formed with representation from inpatient, outpatient, and home care services, to review all aspects of tubing selection, use, and education. "This is a serious problem," says **Catherine Fay**, RN, director of performance improvement. "We anticipate that the committee will identify best practices and measures for monitoring."

At Covenant HealthCare in Saginaw, MI, the first step that quality professionals are taking is to give the Sentinel Event Alert recommendations to the value analysis committee. "Any equipment that is purchased goes through this committee for review," says **Ann D. Law**, RN, outcomes specialist. "Secondly, we will take the recommendations to our central clinical practice committee to see what protocols or guidelines we can create or revise to help address the concerns. We will also have our central educators address this at their orientation presentations."

The JCAHO alert recommends the following:

- Do not purchase non-intravenous equipment that is equipped with connectors that can physically mate with a female luer IV line connector.
- Conduct acceptance testing for performance, safety and usability and, as appropriate, risk assessment, such as performing a failure mode and effect analysis, on new tubing and catheter purchases to identify the potential for misconnections and take appropriate preventive measures.
- Always trace a tube or catheter from the patient to the point of origin before connecting any new device or infusion.

• Recheck connections and trace all patient tubes and catheters to their sources upon the patient's arrival to a new setting or service as part of the hand-off process. Standardize this "line reconciliation" process.

• Route tubes and catheters having different purposes in different, standardized directions (for example, IV lines routed toward the head; enteric lines toward the feet).

• Inform nonclinical staff, patients, and their families that they must get help from clinical staff whenever there is a real or perceived need to connect or disconnect devices or infusions.

Clinical staff should be instructed to never use "orphan" equipment, according to **Debbie Benvenuto**, BS, CRNI, education manager for the Norwood, MA-based Infusion Nurses Society. Also, infusion equipment and supplies should be stored separately from those indicated for enteral or respiratory care provision. "'Making do' or 'creative care practices' is not appropriate," she says.

Flagging all infusion sets and catheters should be a matter of daily routine for nursing staff, says Benvenuto. When accepting patients from one unit or another, or one shift to another, reconciliation of administration systems should be completed at the time of patient transfer and acceptance.

Performance should be measured during scheduled monitoring intervals, in addition to the times where an untoward event has occurred, says Benvenuto. "Historical problematic issues such as staffing, shift changes, or fluctuations in bed occupancy can be correlated with occurrences of untoward events, such as flawed parenteral administration practices," she says.

Consider doing a root cause analysis on tubing misconnection errors, says Benvenuto. "Whatever mechanisms the organization employs to identify, monitor, and track these events should be followed with process scrutiny and assessment activities," she adds.

Other effective interventions are ensuring good lighting, using luer-locking mechanisms, using dedicated infusion equipment that cannot be interchanged with other administration systems, requiring consistent nursing practices in conjunction with infusion-based policies and procedures, and use of dedicated infusion teams or experts in the delivery of infusion care.

You should also measure the number of near-miss events, issues surrounding staffing mix and adequate staffing levels, and validation of staff education and competencies, advises Benvenuto.

Share reports of both adverse outcomes and near misses with the Joint Commission, the U.S. Phamacopeia, the Food and Drug Administration, ISMP, and ECRI, recommends Benvenuto. This information also should be shared with all decision-makers and educators, health care clinicians, clinical practice committees, and risk management professionals at your organization.

"Both types of reporting events will be beneficial to health care organizations in the prevention of patient injuries and promotion of safety in the overall health care system," Benvenuto says.

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THE QUALITY - CO$T CONNECTION

Preplanning improves survey data

Part 1 of 2

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There are many techniques used in a health care organization to gather information about performance. One of the most commonly used instruments is the opinion survey. Such instruments are to collect information about employee morale, departmental efficiency, patient satisfaction, and a host of other variables that describe or relate to performance. Some surveys are focused

on a single variable, such as timeliness of services, while others are comprehensive instruments for use in broad organizational assessments.

To ensure that data gathered through survey instruments will meet the user's needs, it is important that considerable planning go into developing the tool. Without adequate planning, the survey results may not yield useful information and the work that went into the survey process will be wasted. Part one of this two-part series describes how to create an effective survey. In next month's column, pilot testing and reporting results will be covered.

Define objectives and population

Start the process of survey development by clearly defining the purpose or intent of the survey. What precisely are you trying to find out with the survey? Why are these data needed? The objectives should be defined in writing as precisely as possible and should be limited to those issues that are really important. If more than four or five basic topics will be addressed by the survey, the instrument will probably be too long and the people who are asked to fill out the questionnaire will not respond. Keep the survey focused on just the high-priority questions that need to be answered to meet your objectives.

The population is everyone from whom you will need to have a response in order to completely and correctly answer the basic questions. It is important to be precise in defining the population to be used. Although this does not mean that a list should be made of everyone in the specific population, this is the time to consider how the survey instrument physically will be brought to the people in the respondent population. For example, will the members of the group be assembled in one place or will the questionnaire be mailed to them at their home or business address?

Ideally, one would like everyone in the population of interest to receive and respond to the survey. If the population is small, e.g. all employees in the radiology department, this might be possible. However, this may not be realistic if the survey population is all patients discharged from the hospital.

You may need to settle for a sample of the population, preferably a sample that will provide the same results as if everyone actually had responded. The two more common techniques

CE *questions*

21. Which of the following data elements should be collected when an organization implements a rapid response team?
    A. Codes per 1000 discharges.
    B. Codes occurring outside the intensive care unit.
    C. The number of calls the team is receiving.
    D. All of the above.

22. Which is the most effective measure to determine the impact of a rapid response team?
    A. Codes occurring outside the intensive care unit.
    B. "Pulseless" codes.
    C. Raw mortality data.
    D. Data should not be collected until the team has been in place for 12 months.

23. Which of the following is an example of meaningful data collection?
    A. Auditing operating room practices without clear specifications.
    B. Collecting data on readmission to the intensive care unit within 30 days.
    C. Using broad indicators to determine whether patient education was documented.
    D. Determining whether patients were educated at least once a day during their hospital stay.

24. Which of the following is an effective way to prevent tubing misconnection errors?
    A. Use non-intravenous equipment equipped with connectors that can mate with a female luer IV line connector.
    B. Don't track near-misses.
    C. Always recheck connections during patient handoffs.
    D. Store infusion equipment and supplies in close proximity to those used for enteral or respiratory care provision.

Answer Key: 21. D; 22. B; 23. D; 24. C

CE instructions

Nurses participate in this continuing education program by reading the issue, using the provided references for further research, and studying the questions at the end of the issue. Participants should select what they believe to be the correct answers, then refer to the list of correct answers to test their knowledge. To clarify confusion surrounding any questions answered incorrectly, please consult the source material. After completing this semester's activity with the **June** issue, you must complete the evaluation form provided in that issue and return it in the reply envelope provided to receive a certificate of completion. ■

for sampling are random sampling and stratification.

Random sampling should ensure that every person in the population has an equal chance of being picked to receive a survey.

However, this can be difficult to accomplish because any number of factors can interfere with the randomness of the selection process. Suppose, for example, that you decide to survey a 20% sample of the 783 nurses working the hospital. You could list all of the nurses by their employee number and then select 156 of them. If you were to pick the first 156 and the list were in numerical order (low to high), the sample most likely would be biased. Because employee numbers are not assigned randomly, nurses from certain units or with certain hire dates would be excluded from the sample.

If you were to choose every fifth nurse on the list, the sample would then be random. The best method would be to list the employee numbers randomly and then select every fifth one. This procedure still might not yield a representative sample because there are fewer nurse managers than staff nurses. Thus, managers would be less likely to be represented in the sample than staff nurses.

To correct this problem, you must stratify the sample — in this example, the nurses could be stratified by position. This can be done by grouping the employee numbers into two lists (management and non-management) and picking 20 percent of the nurses from each list. You can stratify the survey population in any way that logically will reduce bias or make the sample more representative.

Construct instrument

Your goal is to construct a concise survey instrument that is easy to understand and one that will be consistently interpreted by everyone completing the survey. A typical survey has three basic parts: the cover letter, the items, and the scales. Careful planning is necessary to ensure each of these parts contributes to your well-designed survey.

The cover letter should be written clearly and simply, without the use of jargon and technical words. It should convey to the respondent at least three topics:

(a) why the survey is being conducted;

(b) what the benefit of the survey might be, especially with respect to the respondent;

(c) the guaranteed anonymity and security of responses.

Respondents also should be thanked for their participation. The cover letter should not be long; two to three paragraphs usually is adequate. The more the letter looks like a "real" letter, the better. The use of letterhead stationery is highly desirable, and, whenever possible, each letter should be signed individually. The more personalized attention the respondent perceives, the higher the response rate will be.

The items are the heart of the survey instrument. Writing the questionnaire items is the most important step of the survey process. Start by revisiting the objectives you defined in step 1. You'll want to translate these objectives into specific questions.

For example, if the objective of the survey is to determine how employees perceive the patient safety attitudes of senior leaders and management, questions such as the following might be included in the survey:

COMING IN FUTURE MONTHS

- Measure compliance for the toughest 2007 NPSGs
- Effective ways to involve patients in quality improvement
- What JCAHO is asking about emergency preparedness
- Organizations share feedback about the "full PPR" option
- Update on JCAHO's upcoming core measure sets

• Do senior managers at this hospital communicate to you that patient safety is a high priority?

• Does your immediate supervisor act on reported information related to unsafe situations to improve patient safety?

• Can staff in your department report adverse events and unsafe acts without fear of disciplinary action?

• Does this hospital effectively balance the need for safety and the need for productivity?

Be sure to avoid threatening the respondent with the survey questions. For example, if you were trying to measure the feelings of housekeeping staff about job security an agree/disagree item such as "less productive workers should be laid off first" probably would threaten many people. A person who is threatened will frequently fail to complete the survey. When an implicit threat is inevitable, reassurance of anonymity often helps.

Good item construction depends on commonsense writing skills. Avoid leading questions and try to phrase items objectively. Always use common rather than obscure terms, and strive for brevity and clarity.

Scaling refers to the range of answers offered the respondent. The most commonly used scale is the Likert scale, with five or seven multiple-choice alternatives such as "to a very great extent...to a moderate extent."

Other dimensions that are commonly used include "agree-disagree," "how much," "how often" (frequently-infrequently, never-always, once a day-once a year), "to what degree," and "how important." When actual frequency of behaviour is being measured, the "how often" or "never-always" sets are most relevant. When personal values or the rewards one wants from work are being examined, the "how important" scale might work best.

It frequently is helpful to word the survey questions so that the answers can be graded on a continuum rather than discretely.

For example, a scale that measures degrees of managerial control (high control, some control, little control, no control) results in a continuum; whereas on an instrument that identifies sources of managerial control (fear, threats, punishment, etc.), the items must be graded discretely or individually.

A continuum generally is indicated by the use of adjectives or adverbs (high-low, often-not often, moderate-very much), and discrete items generally are nouns or verbs (reward, punishment, does, does not).

The number of points on a scale usually is between five and nine, as this is the comfortable range of discrimination for most people. It is important to avoid restricting the range of responses to only two or three categories. A limitation such as this could result in meaningless survey results.

Once the survey instrument is complete, the next step is to pilot test it. Techniques for pilot testing, as well as reporting the results, are described in next month's column. ■

CE objectives

To earn continuing education (CE) credit for subscribing to *Hospital Peer Review*, CE participants should be able to:

- Identify a particular clinical, legal, or educational issue related to quality improvement and performance outcomes.
- Describe how the issue affects nurses, health care workers, hospitals, or the health care industry in general.
- Cite solutions to the problems associated with those issues based on guidelines from the Joint Commission on Accreditation of Healthcare Organizations or other authorities and/or based on independent recommendations from clinicians at individual institutions. ■