Healthcare Benchmarks and Quality Improvement

The Newsletter of Best Practices

THOMSON AMERICAN HEALTH CONSULTANTS

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Tool sites offer quick way to bolster performance improvement

Knowledge sharing moves beyond organization to entire profession

If a single organization can benefit from sharing knowledge through an internal site (intranet), just imagine the possibilities when virtually the entire body of performance-improvement (PI) knowledge can be made available to any quality professional who wants it.

We're certainly not there yet, but a growing number of professionals are paving the way for such a future with the development of PI tools and other knowledge-sharing sites, many of which are available to the public free of charge. Their sponsors include health care institutions, systems, and public and private agencies.

"From an executive standpoint, I've been just blown away by the fact that there has been money lying on the ground, and no one wants to pick it up; no one *knows* about it," says **Duke Rohe**, performance improvement specialist at the M.D. Anderson Cancer Center in Houston. "On a personal note, I hate waste. It turns me off when an organization is wasting resources; we should always be honing ourselves to a better state. There is a wide range of tools available — from the really simplistic to the complex," he says.

"What we're trying to do is to be mentors as well as consultants," adds **Bob Skaggs**, MEd, academic consultant for the University of Texas Medical Branch in Galveston.

"Whenever we have a project with a department, we try to impart to them tools and methods they can use so they won't have to continually rely on us," he explains.

Key Points

- Many sites are made available free of charge to the public.
- Tools can empower departments to initiate their own performance improvement programs.
- Tools can vary from simple checklists to more complex processes.

"We hope that health care providers will use these tools to make their practice more responsive, to provide better quality health care, and to see if they are using the most up-to-date information," says **Jean Slutsky**, PA, MSPH, who oversees two of the three free web sites currently sponsored by the Agency for Healthcare Research and Quality (AHRQ) in Rockville, MD.

Why share knowledge through these vehicles? "We find sharing knowledge about best practices and improving quality to be a benefit for everyone; that's why we put our effort into this," she says.

These sites did not spring up full blown, but evolved over a period of years once the need was clearly seen.

"I had a pocket load of tools that I used before computers," recalls Rohe, describing his former "low-tech" tool-sharing approach. "I'd go to nursing areas and put stuff in their little mail bins. Then I'd go around and visit and see a little piece I had put in the bin pinned on their bulletin board. It made me feel good, and it pushed me along to add more value to the culture."

At the time computers became more popular, Rohe was working for the management-consulting firm Holland & Davis in Houston. All of the tools were still on paper, but it was there that he actually learned how to craft a tool. "I learned that anything that can speed you along to success is a tool," he says.

"If I can tailor it so staff do not have to read a whole book, it qualifies as a tool." That principle is borne out by the presence on his web site — "Duke's Performance Improvement Tools" (www.durationsoftware.com/duke_intro.htm, sponsored by Duration Software) — of a wide variety of tools, ranging from "Basic Improvement Tools," such as checklists, to "Featured Tools" such as Creative Problem-Solving or Finding Waste.

When Rohe came to M.D. Anderson in 1997, he was sold on the idea. "All the tools were by then pretty much computerized, but not organized," he recalls. "My boss's goal was to set up a tool site; that was my challenge."

Rohe organized the tools into categories that reflect how he thinks. "My categories might be different from yours," he concedes, noting that he selected broad categories such as customer service.

Skaggs' site is much newer, and grew out of the role of his department, which is responsible for planning and management systems. "We handle the planning operations for the institution, and we are also involved in operations improvement consulting internally," he explains.

How did he grow his site? "One of the things I did was ask Duke's permission to add some of his dissertations onto the web site," he notes. "In addition to tools, we have some larger documents — for example, we have a page about Baldrige. We have our own form of accelerated re-design methodology, and we provide a high-level overview of that."

AHRQ's first site (www.guideline.gov) went live in 1998. "When we started, we put out a call for guidelines," Slutsky says. Sixteen different organizations, including medical societies, health plans, hospitals, government agencies, and university systems, have contributed, she adds.

"The site now has about 1,000 evidence-based

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guidelines that are catalogued and updated weekly." The guidelines cover different care practices, and input is received from all over the world, Slutsky adds. "Guidelines that are no longer current are taken down."

AHRQ's two newest sites (just opened this month) are www.qualitymeasures.ahrq.gov, a site of quality measures that Slutsky also oversees, and http://webmm.ahrq.gov, which was developed to "educate health care providers about medical errors in a blame-free environment," she explains.

"We use the same mechanism to grow both [the guidelines and quality measures sites]. We sent out letters, and put a banner on the home page asking people to submit materials," Slutsky says.

The sites list criteria for submission. "For example, guidelines need to meet the Institute of Medicine definition; the submitting organization has to have done a systematic review of peer-reviewed literature; the guideline had to have been created under the auspices of an organization; and it cannot be more than 5 years old," she explains. The site gets about 1 million hits a week, she says.

The new quality measures site is designed to be compatible with the guidelines site. "For example, there are links back and forth, so if a measure is based on a guideline, you can go back to that guideline directly," Slutsky says. The quality measures site also has a resource page and a glossary with terms of quality measures. It also contains a section on "Using measures and selecting measures."

Web M&M, the web-based medical journal, showcases patient safety lessons from actual cases of medical errors. Five cases of medical errors and patient safety problems — one each in medicine, surgery/anesthesiology, OB/GYN, pediatrics, and other fields — will be posted, along with commentaries from distinguished experts and a forum for readers' comments.

Each month, one of the five cases will be expanded into an interactive learning module featuring readers' polls, quizzes, and other multimedia elements, and will offer continuing medical education credits.

Using the sites

Because the sites vary in nature, they are used differently by different audiences as well, although Rohe asserts that a common theme should be the development of a cultural expectation that the site *will* be used.

"We have mirror images of the site on the intranet and the Internet," he says. "Internally, any employee who comes to an M.D. Anderson orientation is told we have this tool site, and if you're into performance improvement, you can download more than 400 tools.

"The other aspect is that as we work in departments, when we lead, we lead with knowledge that there is this site available." It's a gradual process, Rohe concedes, noting that, "Not everyone is into improvement."

Nevertheless, he adds, "We are growing an expectation" to use the site. "Our view of leadership is that you're not just coming here to work, but to make things better," he says.

Staff are told about the site in one-on-one conversations, and new tools regularly are showcased in quarterly electronic newsletters. The bottom line, Rohe says, is "if you are in administration and you have a problem, I'd like to know if you went to the site first for a solution. That's how you nurture a culture."

Rohe has a distribution list of about 200 (a lot of them are internal), and he sends out at least one tool a week. "For the most part, they are crafted here," he says. "We are in a research-generating mode, and right now our big push is in customer service. Whenever we are stretched, we try to create something new."

Tool resources

There also is a place on the site to send Rohe a tool. "We've had the site up for a year," he reports. The actual setup of the site was handled by the IT department. "I just copied and pasted the tools," Rohe notes.

Skaggs recently used his tool resources when some new divisions were created as part of a reorganization of academic support services.

"We did not have an institutional research department before this," he notes. "We went through a process mapping session and then imparted the process mapping tools to the [new] group."

Another new initiative involves working with the newly formed academic resources division. "They've put together a library, media production services, and academic computing, and we created a new web site for them, which is intended to be a service access site," he explains.

Skaggs also is looking to put up an enterprise

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site (dealing with the change control process), which he says is "very unusual for a university." It's a good example of the initiatives his department will be involved in, he notes, "and we will have to develop tools along the way."

Skaggs says the tool site still is very much a work in progress. "We're trying to provide information on some fundamental tools, but we want to build a more robust tool site eventually. We want to empower others and provide a site they can go to for these resources."

He adds that PI categories probably will develop themselves as the specific tools are added. "The situation in the industry is that we have this rapid evolution into the use of IT to not only communicate, but to convey knowledge," he observes. "This involves using the web not only as a deployment mechanism but as a business tool itself."

Skaggs says that the main web site (www.utmb.edu/avpplanning) is available to the public free of charge, "and the tools will be, too."

Everyone will benefit

The widespread availability of such sites and tools will benefit a wide range of health care professionals, observers say.

"Any department that's going to be involved in process-improvement initiatives can benefit. For example, our department covers a broad spectrum, from strategic planning and decision making down to departmental re-engineering," Skaggs says.

"We see health care providers at every level being able to use these sites," Slutsky adds.

"*Any* organization can access and benefit from them," Rohe says. "From a profession standpoint, I am trying to hit all the organizations I know of. So far, the only national one that is now linked to our page is ASTD; they have a link on their home page."

Rohe says he also is talking with the Houston "point person" for the Association of Quality Participation. "He's talking about setting up a consortium," he explains. "Some people want to 'show and tell' their tools." Any professional group could do the same thing, he concludes.

[Editor's note: The web address for the UTMB Office for Planning and Management Systems is: www.utmb.edu/avpplanning. To access the methods section of the site, you can either go to the "Method and Tools" navigation link or use the direct address: www.utmb.edu/AVPPlanning/Methods/methodlinks.htm. The web address for the UTMB Web Developer's Share Group is: www.utmb.edu/webdevelopers. The web address for UTMB Academic Resources is: http://ar.utmb.edu/. The web address for UTMB Office of Institutional Analysis (the institutional research department Skaggs helped to design and implement) is: www.utmb.edu/ia/index.asp.] ■

'Making it personal' improves patient care

Personal histories increase patient satisfaction

Sheila Brune, RN, BS, CPHQ, CPUR, says the quality of direct patient care is the most important predictor of patient satisfaction. In the past few years, Brune, CMC director of Utilization Management/Living History Program at Great River Medical Center in West Burlington, IA, has proved her point emphatically with an innovative program inspired by her desire to create closer

Key Points

- Health care staff "deliver care to the heart and soul of the patient."
- Elderly, chronically ill patients targeted for the "Living History" program.
- Creating connections benefits caregivers as well as patients.

connections with patients.

The Living History program involves the creation of "a living, breathing chronicle of the patient's nonmedical history." The intent of the history is to empower caregivers to deliver care to the heart and soul of the patient, Brune says.

Brune first began thinking about the program about two years ago, when her CEO returned from a training session led by Quint Studer of The Studer Group. "What impacted me were two issues," she recalls. "The first was a question: Are you part of the problem or part of the solution? The second was the assertion that you'll be judged by the people you touch."

The task she decided to undertake didn't even fit her job description. "I was director of utilization management; people always said I was the 'dollars-and-days dame,'" she notes. "But at my heart, I am a nurse."

Brune was aware that often patients would be with the hospital for a long time, and then one day she would by chance read their obituaries.

"I realized that there was a lot more to those people than we had thought," she explains. "I wanted to explore how we could get that information *before* they died. I like telling patients that I want to know what they do when they're *not* here."

Why do it?

It's all well and good to be curious about a patient's personal history, by why is it important from a quality standpoint? Why is it important to "deliver care to the heart and soul of the patient?"

"There are lots of reasons," Brune says. "It makes the patient feel more valued — that you are thinking about them not as a number, but as a person. What people want most is to feel valued and to be listened to. Also, I believe if you improve the patient/caregiver relationship, not only does the patient feel better, but the caregiver does, too. It increases their satisfaction with their job."

She recalls comments from nurses like: "I can't believe what you did for me with this story. We found connections that went way back."

Brune cites a number of occasions where patients had actually worked with relatives of caregivers, and, in at least one case, a nurse found out much more about a relative who had passed away than she ever would have known had she not connected with the patient.

This is one of the three different ways in which caregivers are encouraged to build bridges with patients. They are:

- **Real Connections:** "I know your daughter."
- **Compassionate Connections:** "You have been through a lot in your life."
- **Scripted Connections:** "I see you like to do woodworking. What do you like to make?"

Getting started

Brune decided to build the program through story writers — special employees selected to get the patients' stories.

She also determined that, initially, stories would focus on chronically ill patients with diagnoses that caused multiple admissions — i.e., seriously ill, terminally ill, or very elderly patients, and/or patients on dialysis or in hospice care.

"We went through the DRGs and picked longer-stay, high-volume, high-risk patients, but now we go more on our gut," Brune says.

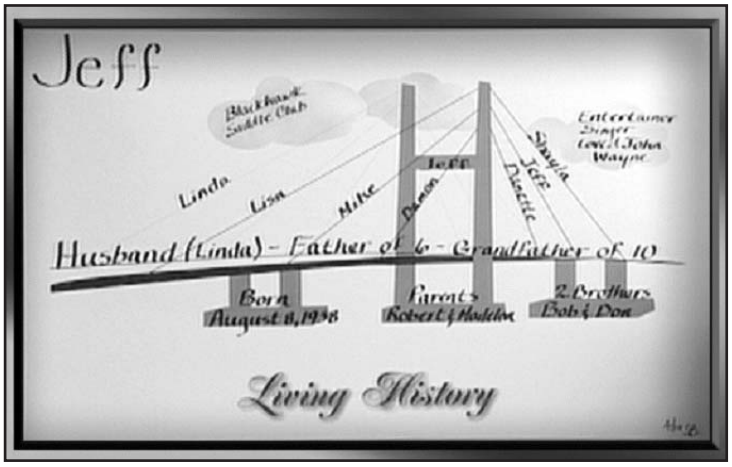
"Age is first, because the extreme elderly have fascinating stories. We also look at diagnoses — cancer, stroke/CVA, COPD, and CHF, as well as surgicals who will be here longer, like hips, knees, and colonoscopies. Now, we will also take referrals," she adds.

In the beginning, however, she had to spread the word. "I just went out and talked to everyone, in every department," she recalls.

She started with the CEO, who said yes; then, the senior management team, who said, 'Make it happen,' then to the middle managers, and then to staff meetings.

"We also went out into the community, through TV and radio," Brune says.

"And we elicited people from each department to be story writers; almost every department was represented." This also helped involve employees who would not normally come in contact with



A Living History

Edward Luverne Hatcher

Edward Luverne Hatcher wants to be called Luverne. He was born September 26, 1925, 76 years ago, at home near Delta. Luverne's parents were Floyd and Blanche Wadsworth Hatcher. Luverne is the only child of Floyd and Blanche and he was the delight of his mother's life.

Luverne attended Indianapolis Country School and What Cheer High School, graduating in 1943.

On April 12, 1945, Luverne married Loretta Agnes Armstrong at St. Joseph's Catholic Church in What Cheer, Iowa.

Luverne and Loretta had two children. Ed was born September 10, 1946. He married Bev Arnaman. Ed and Bev live near Montezuma, Iowa. Sheila was born November 7, 1950. She married Sam Brune. Sheila and Sam live in West Point, Iowa. Luverne and Loretta have four grandchildren, Michael, Jason, Josh and Lorelle and one great-grandson, Kade.

Luverne farmed all his life. He retired at the age of 59 and rented his farm out to "the boys" - two young men who are the sons of his best friend. He then went to work for them doing farm work and driving the tractor. In 2000, he plowed 1200 acres for "the boys".

Luverne enjoyed collecting! Toys and tractors—he loves his vehicles and loves taking care of them. He rode a Honda Goldwing for years. He and Loretta traveled all over the country on it. Luverne has a toy model train set with three trains on different levels. He is an avid fan of NASCAR racing.

10/18/01

Luverne belongs to the Goldwing Riders Association. He is a member of St. Mary's Catholic Church in Oskaloosa, Iowa, and is a board member of the Indianapolis Cemetery and St. Joseph Cemetery and belongs to the Wa-Ke-Ma Motorcycle Club. He is a former member of the Lion's Club.

Farming, children, grandkids, his great-grandson, wife, friends and Cobie, his dog are the things he loves most in his life.

Luverne says he loves to eat out, be with friends, watch NASCAR races and ride his cycle. He enjoys yard work, his garden and the farm. His favorite pet is Cobie, a miniature Dachshund.

Luverne has an ornery streak. He used to love to play practical jokes and pranks on his friends, especially the two Kenny's - Gatton and Molyneux. Once the Kenny Molyneux family was the recipient of 12 farm cats courtesy of "Hatch". The story of their arrival at the Molyneux house was retold many times.

Luverne says he picked Loretta out the first day he saw her and said "That's the girl I want to marry".

Source: Great River Medical Center, West Burlington, IA.

patients. "Clinical information is not often shared with librarians," Brune notes.

In the beginning, Brune picked the story writers. "Now, I let them pick me," she says. If they show interest, their manager must sign off, because they spend an average of two hours on each assignment (the story writer's commitment is for one story a week.)

Once the selection has been approved, there is a one-day training session, facilitated by an educator, a social worker, a recreation therapist, a journalist/editorial review writer, and Brune. Following that, the assignments are made, and the story writers visit the patients, who tell their personal stories.

Interestingly, the profile of story writers has changed over the years. "We only have two of the original story writers left," Brune says.

"The people I first picked were outwardly, openly enthusiastic, and those criteria may not have worked; maybe they were just big talkers, but short on action. My best story writers have been the 'sleepers' — those people who quietly work every day," she explains.

The Living Histories are used and shared in a number of ways. They are presented as a visual depiction, known as a bridge poster (Milestone events and family facts are depicted, centered around a logo of a bridge), for the patient's room; the Living History itself is placed as the first item on the patient's chart. **(See the example of a Living History, at left, and a bridge poster, p. 41.)**

There is an absolute expectation that all of the patient's caregivers will read the history. "One of our deals with our CEO is 'non-negotiables,'" Brune explains. "We say things like, always wear your name tag, always lead people who are lost to the department they need, and *always* read the Living History."

The copy that is placed in the chart is put in a plastic sleeve protector. One copy is given to the patient — laminated if they request it. They then receive as many additional copies as they want. They also receive one Bridge Poster — laminated, again, upon request.

The stories also live on through Meditech, the facility's computerized record medical system. "I save the stories to a Word file and then enter them into the Meditech screen, so you have a record of the patient's story and who wrote it," Brune says.

To date, 1,700 stories have been written. "We need more story writers," she says, noting that care is changing and patient satisfaction is growing. The current Press, Ganey Associates satisfaction rate is over 90%, up considerably from two years ago.

"We have no reason to believe it will not continue to climb," she says.

Brune is eager to share her success story with other institutions.

"We have two hospitals starting their own programs [soon], and we probably have 20 out there who have placed phone calls, have come here or are planning to come to visit," she says, noting that the best way to contact her is via e-mail (sbrune@grhs.net). ■

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Safety concerns should not end with discharge

Preventing errors after patients return home

The transition from hospital to home is a potentially vulnerable period, and the medical community should explore ways to reduce adverse events during this transition, say the authors of a new study in the *Annals of Internal Medicine.*

The study looked at 400 consecutive patients discharged home from an urban teaching hospital in Canada. Researchers focused on adverse outcomes, which they defined as "either new or worsening symptoms, unanticipated visits to health care facilities for tests or treatment, or death."[1]

The study found that 76 patients had adverse events after discharge, which were defined by the authors as "an injury resulting from medical management rather than the underlying disease."[1]

The researchers included adverse events that happened in the hospital as well as after discharge, as long as the symptoms persisted until the patient went home. These adverse events were further broken down as follows:

- **Preventable adverse events (23):** Injuries that could have been avoided — judged to be the probable result of an error or a system design flaw.
- **Ameliorable adverse events (24):** Injuries whose severity could have been substantially reduced if different actions or procedures had been performed or followed.

"A preventable adverse event might involve a patient discharged on supplements with no monitoring of electrolytes," explains **Alan J. Forster**, MD, FRCPC, MSc, of the University of Ottawa and lead author of the study.

An ameliorable adverse event, he suggests, might involve sending home a patient on certain meds who experienced wheezing that persisted longer than normal, but who received inadequate monitoring.

Adverse drug events were the most common type of adverse event (66%), followed by procedure-related injuries (17%).

Key Points

- Simple strategies could help prevent a large number of errors.
- As many as one in four patients have adverse events after discharge.
- Drug events account for two-thirds of all adverse events.

Under-recognized problem

The study was undertaken, the authors write, because they suspected that adverse events after discharge was an underappreciated (and understudied) problem.

Referring specifically to the Institute of Medicine report, *To Err is Human*, the researchers noted that it "may underestimate the overall safety problem, since injuries occurring after discharge were not included in the evaluation. Patients may be especially vulnerable to injuries during this period because they still may have functional impairments and because discontinuities may occur at the interface of acute and ambulatory care."[1]

They went on to point out, however, that few studies were available to estimate the extent of the problem.

"We speculated in our introduction that the problem could mainly be due to poor organization of care," Forster adds.

"But we did not want to blame a group of people or any one specialty. The fact that multiple physicians look after patients over time and in different places clearly makes communication of the care plan difficult, as well as the identification of responsibilities. In fact, it often makes patients quite confused over who makes which decisions," he says.

Seeking prevention

This did not prevent the authors from concluding, however, that many of the noted adverse events "could potentially have been prevented or ameliorated with simple strategies."[1]

They didn't stop with that observation, however. "For the preventable and ameliorable adverse events, we asked our researchers to identify ways they could be prevented and/or ameliorated," Forster notes.

Here are some of the general themes common to their recommendations:

- **Identifying unresolved issues at the time the patient leaves the hospital.**

It's important to conduct a very thorough assessment to determine what issues remain

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unresolved and need to be monitored, Forster says. "It may not be necessary for the patient to remain hospitalized, but there may still be questions that remain unanswered, so the patient should be monitored closely."

- **Patients must learn more about their meds.**

Patients must know their meds, their potential side effects, and what to do when problems arise. This education should take place before they leave the hospital. "Quite often, patients are in the hospital for a short time, but meds can change quite a lot," Forster says.

"When they leave, even though you may have spent some time teaching them about their meds, they often forget," he adds." There should be some system in place to make sure they have learned about their meds, and that they have access to help when they come across problems."

- **Improved recognition of monitoring responsibility.**

It must be very clear just who is responsible for the monitoring of the drugs, says Forster. "If a patient is sent home on an anticoagulant, who is responsible?" he poses. "Quite often, the hospital physician might assume it's the primary care doc, and vice versa."

Putting a system in place

In general, facilities need to have a better system for identifying general problems and for dealing with common questions and concerns, Forster says.

"There has to be an easy mechanism of communicating back to the hospital; maybe one phone number to call," he offers. "Maybe a callback from the ward, the nurse, or even the pharmacy might be useful."

Reference

1. Forster AJ, Murff HJ, Peterson JF, et al. The incidence and severity of adverse events affecting patients after discharge from the hospital. *Ann Intern Med* 2003; 138:161-167. ■

CPOE cuts time needed to deliver meds, X-rays

Turnaround times are reduced by as much as 64%

A new study suggests that hospitals may be able to significantly cut the time it takes to deliver medications to patients and complete X-rays and lab tests by using computerized physician order-entry (CPOE) systems.

The study, which recently appeared in the *Journal of the American Medical Informatics Association*, showed that computerized ordering also eliminated prescription drug errors that occurred when physicians' handwritten prescriptions were misread.

The study found that computerizing physician orders slashed medication turnaround times by 64%, cut turnaround times for X-rays and other radiology procedures by 43%, and reduced turnaround times for lab tests by 25%.

Overall, CPOE seems to be good for both patients and hospitals, says **Hagop Mekhjian**, MD, the study's lead author and chief medical officer for The Ohio State University's health system, in Columbus.

"We found that it enhances patient care by improving work flow and efficiency and by reducing transcription errors," Mekhjian notes, adding that the hospitals initially invested about $5 million in the program.

Even at that cost, however, introducing a CPOE system wasn't a real burden for Ohio State's health system, he contends. "There weren't any significant negative results, despite the major cultural change that stemmed from introducing this new technology. In many cases, work flow accuracy and efficiency were actually enhanced," he says.

Researchers compared turnaround times before and after the implementation of the CPOE

Key Points

- Computerized physician order-entry systems improve time to deliver medications and complete X-rays and lab tests.
- Medication turnaround times decreased from nearly 5½ hours to just under two hours.
- Little impact seen on hospital costs and lengths of stay.

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at Ohio State University hospitals. (The university has been using CPOE in some inpatient units for nearly three years.)

The data were collected from patient charts and also from watching physicians as they prepared written orders. After the CPOE was in place, the researchers gathered the same type of data electronically.

They tracked the amount of time physicians spent on rounds; how long it took to write an order; what time an order was written; and when the order made it to its intended destination, such as the pharmacy or the laboratory.

The researchers also measured three events:

- medication turnaround times (how long it took for a patient to receive a prescribed medication);
- the amount of time it took to complete a radiology procedure;
- how long it took for a laboratory to post-test results.

Medication turnaround times decreased from nearly 5½ hours to just under two hours; radiology procedure completion times dropped from slightly more than 7½ hours to four hours and 21 minutes; and laboratory result reporting times decreased from 31 minutes to 23 minutes.

"We didn't expect such significant changes," says Mekhjian.

When the CPOE was combined with another electronic system that completely eradicated all manual transcriptions, the researchers found that medication errors were eliminated.

"Total elimination of transcription leaves little room for errors associated with the interpretation and translation of doctors' orders," Mekhjian observes.

As many as 25% of reported medication errors arise from confusion over the similarity of drug names, according to the National Coordinating Council for Medication Error Reporting and Prevention.

"This is especially true when a doctor gives the orders verbally to a nurse or directly to the pharmacy," Mekhjian adds.

But the greatest advantage of CPOE, he says, is the way it can speed up patient care in many cases. Previous studies reported that up to one-third of all hospitalized patients experience some kind of delay in their care, with the average length of a delay being nearly three days.

"There can be delays in decision making while a physician waits for results, delays in scheduling diagnostic tests, and delays in discharge planning," Mekhjian explains.

"Entering an order into a computer can help alleviate many of these delays. It also serves as a check-and-balance system to doctors, such as reminding a physician if a prescription needs to be countersigned," he says.

While CPOE helped with order turnaround times, the study showed that it had little impact on hospital costs and stays. The length and cost of stay decreased in a few surgical areas, but overall results were not significant.

"Stay and cost are affected by a number of things beyond the scope of this study," Mekhjian explains.

Although the current study focused solely on inpatients, he says that Ohio State is looking into using the system in outpatient clinics.

"That's a priority for us," he notes. "The outpatient population is considerably different — there is greater diversity among patients' needs, and things move a lot faster." ■

New graduate standards limit residents' hours

Noncompliance to carry considerable consequences

The Chicago-based Accreditation Council for Graduate Medical Education's (ACGME) board of directors has approved final standards on resident duty hours. The new standards, approved Feb. 11, 2003, take effect July 1, 2003.

The new standards include provisions affecting the maximum number of resident duty hours per week, rest periods, and days free from resident duties.

They generally limit residents to a maximum of 80 duty hours per week, including in-house call, averaged over four weeks. Duty hours are defined as time spent on educational and clinical activities related to the residency program, including patient care, administrative duties related to patient care, and academic activities.

Key Points

- Provisions affect the maximum number of duty hours, rest periods, free days.
- Failure to comply means adverse actions, including loss of accreditation.
- Science of sleep is an emerging new area of medical knowledge.

"It's not that we haven't had any standards in the past; it's just that they have not been transparent to other stakeholders who perceived problems around sleep-deprived patient care," explains **Ingrid Philibert**, ACGME's director of field activities.

In the period of 2000 to 2001, she continues, "There arose a fair amount of interest in having some form of government standards similar to those in the airline, interstate trucking, maritime, and railroad industries."

While ACGME is not a government agency per se, these regulations will have quite a bit of teeth; residency programs that fail to comply with the standards risk adverse accreditation actions, including losing their ACGME accreditation.

"We are a voluntarily accrediting organization, but we do have quasi-regulatory power," Philibert notes. "For example, ACGME accreditation is required for a program to get reimbursement from CMS [the Centers for Medicare & Medicaid Services] for training residents. [A total of $8 billion is issued annually.] Even more powerful, ACGME accreditation is required for individuals who graduate from residencies to sit for board certification," she says. "So, if you were not accredited, you would have a very hard time finding residents who want to train in your program."

The science of sleep is an emerging area of knowledge, Philibert says. "We have better information now than ever before. As far back as 1971, there had been some field studies that looked at residents, and some of the issues related to sleep deprivation. The problem was the samples were relatively small, and there were varying results.

"It was not clear until the late 1980s, when there were much larger populations studied, that there was definitely a decrement in performance if people were sleep-deprived to the extent that residents are," she asserts. "We also learned that chronic sleep restriction (less than seven to eight hours a night) has an effect as well."

The recently passed standards are not entirely new, Philibert says. "Since the late 1980s, it was standard not to have call more than every third night, and to be free one day in seven," she notes.

"Internist programs have had limits of 80 hours per week since 1988. We carefully considered whether those standards would be appropriate for all specialties," she continues. (ACGME has 27 core specialties with varying duty hours.)

Of course, Philibert says, not every residency program requires more than 80 hours a week of duty as a general rule. "Some are much more comfortable. But there are programs where residents work more than 80 hours, and they will have to make changes." Those residencies tend to gather in surgical and procedural specialties, she adds. "In surgical, it tends to apply for almost the entirety of training," Philibert declares.

Once the standards become effective, assessments will begin to see if the programs are in compliance. "We have a total of 7,800 accredited programs, and we survey about 2,000 annually, so the interval ranges between one and five years," she says.

"The length [of time between assessments] will

ACGME Duty Hours Standards

Duty hours are defined as all clinical and academic activities related to the residency program:

- ✔ patient care (both inpatient and outpatient);
- ✔ administrative duties related to patient care;
- ✔ the provision for transfer of patient care;
- ✔ time spent in-house during call activities;
- ✔ scheduled academic activities such as conferences.

Duty hours do not include reading and preparation time spent away from the duty site.

Duty hours must be limited to 80 hours per week, averaged over a four-week period, inclusive of all in-house call activities.

Residents must be provided with one day in seven free from all educational and clinical responsibilities, averaged over a four-week period, inclusive of call.

One day is defined as one continuous 24-hour period free from all clinical, educational, and administrative activities.

Adequate time for rest and personal activities must be provided. This should consist of a 10-hour time period provided between all daily duty periods and after in-house call.

Source: Accreditation Council for Graduate Medical Education, Chicago.

Need More Information?

For more information, contact:

- **Ingrid Philibert,** Director of Field Activities, Accreditation Council for Graduate Medical Education, Chicago. Telephone: (312) 464-4948. Web site: www.acgme.org.

depend on the extent to which a program is out of compliance. If a program goes a little bit over, we'll give them a somewhat longer cycle to correct things — then we'll come back and re-survey. If the violations are more serious, we'll use a shorter cycle, see what the program is doing to fix things, and re-survey the residents. If there are 'pretty grave concerns,' ACGME will come back within a year," Philibert says.

Once most programs are brought into compliance, the reduction of sleep loss in residents will help boost quality, Philibert predicts. "There is fairly credible evidence that sleep deprivation has a negative effect on mood; you're grouchier, less professional, and less kind to patients. Beyond that, the incidence [of errors reported] is so rare we do not have good handle on it. But patient satisfaction will definitely be helped," she adds. ■

HospitalConnect web site gets a redesign

The Chicago-based American Hospital Association (AHA) has formally unveiled HospitalConnect, a web portal uniting 50 Internet sites from 22 organizations that serve health care providers. The prototype for HospitalConnect went live for fine-tuning and adjusting in July 2002. It was then redesigned to better serve a diverse audience and enable health leaders to better share ideas and innovations.

For example, the site now features an interactive hospital finder that enables users to find the closest hospitals to any address in the United States, and provides customizable headlines and a powerful search engine. The redesigned front page includes guides to the Health Insurance Portability and Accountability Act, disaster readiness, and other key issues. The portal contains information on best practices, research, educational materials, news, and products. The redesigned site can be found at www.hospitalconnect.com. ▼

AHRQ sponsors bioterror audio conferences

The Washington, DC-based Agency for Healthcare Research and Quality (AHRQ) in Rockville, MD, is sponsoring a series of five free web-assisted audio conferences for state, local, and health system policy-makers.

The goal of the audio conferences is to provide these officials with information about:

- federal efforts to ensure the rapid development of federal, state, and local capacity to address potential bioterrorism events;
- promising practices and strategies being developed and implemented at the state, local, and health system level to promote health system readiness;
- available methods and tools, developed through federally supported health services research efforts, that can be of assistance in developing systems capacity and enhancing readiness.

The conferences will be coordinated by AHRQ's User Liaison Program (ULP). The first conference, which was held Feb. 18, 2003, dealt with issues, strategies, and tools for addressing the smallpox

COMING IN FUTURE MONTHS

- ■ Using redundant systems to reduce or eliminate medical errors
- ■ New alliance will recognize hospitals for service and clinical excellence
- ■ Institutions join forces to coordinate disaster preparedness plans
- ■ Comparative performance data: Where to find them and how to use them
- ■ Infection control task force creates policies and procedures for 13-facility system

threat. The remaining four programs include:

- **Event 2:** Disaster Planning Drills and Assessing Readiness. Tuesday, April 15, 2003, 2 p.m. to 3:30 p.m., ET.
- **Event 3:** Surge Capacity Assessments and Regionalization Issues. Tuesday, June 17, 2003, 2 p.m. to 3:30 p.m., ET.
- **Event 4:** Topic to be determined. Tuesday, Oct. 21, 2003, 2 p.m. to 3:30 p.m., ET.
- **Event 5:** Topic to be determined. Tuesday, Dec. 16, 2003, 2 p.m. to 3:30 p.m., ET. ▼

HHS names new AHRQ director

Department of Health and Human Services Secretary Tommy Thompson announced that **Carolyn Clancy,** MD, has been appointed director of the department's Agency for Healthcare Research and Quality (AHRQ) in Rockville, MD. The agency is responsible for supporting research designed to improve the quality of health care, reduce its costs, improve patient safety, and detect medical errors.

Clancy has served as acting director of AHRQ since March 2002 and will oversee the development of research that provides evidence-based information on various health care outcomes. ▼

Leapfrog Group to help hospitals with investments

A member of the steering committee of The Leapfrog Group, a Washington, DC-based patient safety organization, said the committee is developing plans to help hospitals recoup some of the money they invest in changes to meet Leapfrog recommendations.

Francois de Brantes, program leader for health care initiatives at GE Corporate Health Care, said the employer group recognizes that the cost of implementing Leapfrog recommendations can exceed what hospitals get from payers as a result of making those changes.

"Shame on us purchasers, and shame on this country, to have created a system where better quality costs hospitals money," said de Brantes, speaking in San Diego to the Healthcare Information and Management Systems Society.

Leapfrog has designed incentives to urge hospitals to implement computerized physician order entry systems and employ intensivists and evidence-based hospital referrals.

De Brantes said Leapfrog is developing a procedure to examine the cost of fulfilling these recommendations, forecast their fiscal impact, and help cover the difference, usually through direct payments by Leapfrog members or by telling insurers to redirect premium payments to the hospitals. ■

PATIENT SAFETY ALERT™
A quarterly supplement on best practices in safe patient care

Retained instruments: Rare error or safety concern?

Establish a strategy to make such errors less likely

A paper in the Jan. 16, 2003, *New England Journal of Medicine* has the safety community abuzz; are too many instruments and sponges being left inside patients after surgery?

The paper, widely regarded as the largest and most reliable to date on the subject, reported that such errors occur in approximately 1,500 out of 28 million patients each year. The research was conducted by staff at the Brigham and Women's Hospital in Boston.

The figure of 1,500 was projected from data in insurance records from about 800,000 operations in Massachusetts for 16 years ending in 2001. The researchers counted 61 forgotten pieces of surgical equipment in 54 patients, and calculated that this would translate into a national estimate of 1,500 cases yearly.

"First of all, I think the study was very well done," says **F. Dean Griffin,** MD, FACS, a practicing physician in Shreveport, LA, and chair of the patient safety / professional liability committee of the Chicago-based American College of Surgeons.

"The shortcoming is that all of the patients came from insurance company records, and only dealt with cases that became litigated. You and I know there are more patients [with similar experiences] that didn't sue."

Other observers also have suggested the real number may be higher because hospitals are not required to report such errors to public agencies.

This one shortcoming does not decrease the significance of the study, Griffin says. "It is one of many that come voluntarily from people in medicine that point out problems in quality, to educate our peers so we can do a better job."

Besides, he says, the exact number is not nearly as important as the fact that such errors are being made. "The thing is, one such error is one too many; having an exact number is not that important. We have to do a better job of controlling these errors."

Emergency department key

Perhaps one of the least surprising findings in the study was the fact that emergency department operations were nine times as likely to lead to such errors, given the press of time and the stressful nature of such procedures.

"Your goals may actually be in conflict with safety," notes **James A. Espinosa,** MD, FACEP, FAAFP, chairman of the emergency department at Overlook Hospital in Summit, NJ. "For example, you want to finish on time, so you might do a little less thorough exploration of the abdomen. At the same time, the nurse responsible for checking and counting instruments might be distracted."

Espinosa notes that a number of principles of human performance come into play with such errors. In addition to the aforementioned goal conflict with safety pressures, they include, among others, deviation from nominal work flow and poor coordination across silos. "The more complex the action, the more likely you are to have human performance problems," he notes. "The solution is to build in simplicity."

Complexity clearly is a key problem, adds **Tina Maund**, MS, RN, director of performance improvement at Overlook. "You have multiple technologies at work, very advanced kinds of physical technical procedures being applied, high levels of knowledge, and often high levels of experience being brought to the table," she notes.

"Carrying out a technical procedure at hand using instruments and applying learning and critical thinking [at the same time] is tough."

Griffin agrees. "Technology is growing so rapidly that what we're doing in medicine is increasingly dangerous," he says.

It's important when seeking to understand the causes of these errors that you look beyond the provider, asserts **Marilyn Sue Bogner**, PhD, head of the Institute for the Study of Human Error, LLC, in Bethesda, MD. "The paper examined what other factors there were [in addition to the providers]. That made me feel good," she says.

"We must take a systems approach to error," she continues. "In the context of care, a number of characteristics of defined systems provoke error on behalf of the care provider."

For example, the Boston researchers noted a higher degree of errors for patients with a higher body mass index (BMI). "People never consider the characteristics of the patient — we're always so busy looking at the provider," notes Bogner. "But with obese patients, you have to peel back several vertical inches of fat to get to the area you need to work on, and maybe your vision is obscured."

Even political, regulatory, and legal factors can work their effects down to the provider level, she adds.

Searching for solutions

Given these diverse pressures, how should one approach a strategy to reduce these errors? "First, you have to figure out why the errors happen," Bogner says. "Examine the characteristics of the situation, the patient, and other conditions. Then, what is it about the emergency department that contributes to these errors — time constraints or workloads?" Of course, you also need to talk to the care providers and ask them what the problems are. "Since people understandably don't want to admit to error, ask them about accidents that *almost* happened," she suggests.

"What was the circumstance: the type of surgery, time constraints, and so on? Had the surgeon had any rest, or were there back-to-back surgeries? What time of day was it performed?" Bogner asks.

From there, you can move to potential solutions, such as adjusting staffing or scheduling. Solutions become a bit more problematic if the error stems from the nature of the patient, but even there possible solutions exist. "The researchers talked about using X-rays," she notes. "Maybe that's not necessary for every patient, but you can target obese patients or make an extra special count on people who are larger than the run-of-the-mill patient."

This makes sense conceptually, Griffin says. "Consider the universal precautions we take, for example, in terms of AIDS or hepatitis. Originally, we thought we should treat those patients differently, but the facts are we treat everyone the same; we take the same maximal precaution with every case so as to not have to rely on patient confidentiality issues, and so on; we can just assume everyone has AIDS or hepatitis. In many ways, the universal precaution should apply to this issue; treat everybody maximally, even if the risk is lower. However, that may not be practical."

Since it may be impractical to X-ray the abdomen of every single emergency case after surgery, "you could maybe take a subset," Griffin suggests. However, he recalls a strategy employed by the Mayo Clinic that might be practical.

"In the operating room they built many years ago, there was an X-ray unit incorporated in the doorway, so as the patients were rolled out of the room, it automatically took a picture of them," he notes. "But it's not the standard of care [today]."

Despite the admitted challenges of technology, "this may be an event where technology is an utterly necessary adjunct," Espinosa suggests. "The fact that in the paper the counts were right indicates we may be exploring the limits of human performance." He notes human reliability research that shows people can have difficulty even with a series of simple math questions. "Your mind 'sees' the right answer," he explains. "You can be asked to subtract six from eight, you write down three but you see two."

In some situations, he continues, there is just no substitute for technology. "It would be helpful if there were some way to have a detection system, where all the instruments were tagged in such a way that you could have one sweep of that patient," he suggests. "That would not be the end of the problem, but another way of measuring."

Griffin agrees. "I would hope there would be technology that would provide some type of implantable device in these instruments that would be detected with a probe, but nothing is being done to my knowledge," he says.

Without such a development, Espinosa suggests, the progress that can be made in reducing these errors will be limited.

"Human performance without computer or machine guidance tends to be in errors of parts per hundreds of thousands," he notes. "It's hard

to get past that unless you use very strong technology. So, 50 errors per million is five per 100,000 — it's actually astonishing they can get that low with human performance. To get to parts of tens of millions, you would need much more robust technology."

"Nonetheless," concludes Griffin. "You have to remember to always work toward perfection."

[For more information, contact:

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- ***James A. Espinosa**, MD, FACEP, FAAFP, Tina Maund, MS, RN, Linda K. Kosnik, RN, MSN, CS, Overlook Hospital, 99 Beauvoir Ave., P.O. Box 220, Summit, NJ 07902-0229. Telephone: (908) 522-5310.]* ■

Pfizer to bar code drugs to reduce dispensing errors

Codes can be read by bar code readers

New York City-based Pharma company Pfizer, Inc. will use a new bar code technology on its hospital unit-dose products in an effort to help reduce dispensing errors at hospitals and pharmacies nationwide. The bar code system — developed in accordance with the new Reduced Space Symbology standards established by the Uniform Code Council (UCC) in Lawrenceville, NJ — allows for each unit of product to be identified by its national drug code, its expiration date, and its lot number in machine and human readable format.

"It is going to improve patient safety, especially dispensing errors, and if we can do it, we should be doing it," says **Rich Hollander,** Pfizer's senior director of packaging services. While the UCC only recently introduced its standards, Pfizer has been working on the problem for two years. "The initial push came through our CEO's office," he recalls. "He asked, 'Why are we not doing something about bar coding — especially on unit doses?' We thought that was a pretty good question, so we began to research what hospitals were looking for, whether there were industry standards, and what we could do about it."

For years, some companies, Merck among them, had been using scanning technology for a single element — the national drug code. So Pfizer began investigating that area, but in talking to hospitals, they found "they couldn't tell us what they wanted," Hollander reports. "The fact was, with very few exceptions, most people were not scanning, but said it would help, and they would love to do it."

Pfizer's due diligence revealed there were no standards governing bar coding. "At the same time, looking at standard linear bar code symbologies, we realized they required a lot of 'real estate,'" he notes. "We would have had to retool our products, which would in turn have decreased production rates. We were willing to do this, but it would have taken a long time."

A couple of key events helped speed the process along. Organizations such as the Food and Drug Administration (FDA) and the National Coordinating Council for Medication Error Reporting and Prevention (NCC-MERP) joined forces to look at preventing dispensing errors, and in August 2002, came out with a white paper calling for bar codes, not only for the drug code, but for the expiration date and lot number (the latter would help with traceability and, if needed, recalls).

"Both [of the new elements] were highly controversial," Hollander says. "After all, opponents asked, how often would you need them?"

However, the paper received a lot of attention. Then, Tommy Thompson, secretary of the Department of Health and Human Services, made a trip to a Veterans Affairs (VA) hospital and saw how they were using bar codes to prevent dispensing errors.

Although that was being done through repackaging rather than on the original product containers, Thompson said it should be considered a benchmark. At his urging, the FDA published a requirement in the Dec. 12, 2002, *Federal Register*.

"Most of the industry was pushing back against this, and saying you did not need the other two elements," Hollander notes. "You didn't have the technologies available to do it, and the size of the packages was also an issue."

At about the same time, the UCC developed its new Reduced Space Symbology standards, calling for the NDC (National Drug Code) to be put on very small packages. "However, you still could not go small enough for 3 cc or 5 cc vaccine vials, or ampules," he says. "With packages that small, nobody knew of a linear symbology that worked."

Pfizer challenged itself to develop one package

configuration that would work without the need to retool product lines, and without compromising the already crowded real estate on the package. "We realized it may be some years before hospital systems can adapt to read them, but we developed a standard we feel will work in any hospital," says Hollander. "We also wanted make sure the human readable quality was just as good." Pfizer introduced its first lot just before the end of 2002. The codes can be read by conventionally available bar code readers. "We've had a lot of favorable comments from hospitals, congratulating us for leading in this effort," he says. "There have been no complaints to date about the human readable aspect."

No data are in yet on error reduction, but Hollander says the NCC-MERP web site (www.ncc-merp.org) contains studies on the VA experience. Pfizer plans to be imprinting on all its hospital unit dose packages by the end of 2003, and on other types of packaging as technology permits. "Ultimately, this system will help reduce dispensing errors, and make sure you are using the right product, at the right strength, for the right patient," he predicts.

[For more information, contact:

- ***Pfizer Inc.**, 235 E. 42nd St., New York, NY 10017. Telephone: (212) 733-2323.]* ■

AHRQ unveils web-based medical journal

Focus on medical errors in blame-free environment

The Agency for Healthcare Research and Quality (AHRQ) has launched a monthly peer-reviewed, web-based medical journal that showcases patient safety lessons drawn from actual cases of medical errors. Called *AHRQ WebM&M* (Morbidity and Mortality Rounds on the web), the web-based journal (webmm.ahrq.gov) was developed to educate health care providers about medical errors in a blame-free environment.

In hospitals across the country, clinicians routinely hold morbidity and mortality (M&M) conferences to discuss specific cases that raise issues regarding medical errors and quality improvement. Until now, there has been no comparable national or international forum to discuss and learn from medical errors. AHRQ saw the opportunity to use the web to host an ongoing national M&M conference aimed at improving patient safety by sharing information from anonymous cases.

"The AHRQ WebM&M web site offers the medical community a unique opportunity to learn about patient safety from the experiences of their colleagues across the country and around the world," says AHRQ director **Carolyn M. Clancy**, MD. "The anonymity safeguards will enable physicians to share their experiences without fear of reprisal. Their involvement will contribute to the education of other providers about how to prevent medical errors and improve patient safety."

Every month, five selected cases of medical errors and patient safety problems — one each in medicine, surgery / anesthesiology, obstetrics-gynecology, pediatrics, and other fields, including psychiatry, emergency medicine, and radiology — will be posted along with commentaries from distinguished experts and a forum for readers' comments. Each month, one case will be expanded into an interactive learning module ("Spotlight Case") featuring readers' polls, quizzes, and other multimedia elements and offering continuing medical education credits. Cases are limited to near misses or those that involve no permanent harm.

The web site was developed for AHRQ under a contract to an editorial team at the University of California, San Francisco. The editorial team is led by Robert M. Wachter, MD, associate chairman of UCSF's Department of Medicine and chief of the medical service at UCSF Medical Center. The editorial board and advisory panels include many of the nation's experts in patient safety.

Lucian Leape, MD, a leading patient safety researcher and a member of the AHRQ WebM&M advisory panel, praises the new journal. "To make real progress in patient safety, we have to engage physicians and break down the shame and silence surrounding errors. By presenting real-life cases of medical errors along with dynamic, systems-oriented expert commentaries, AHRQ WebM&M is an ideal way for physicians to learn more about and ultimately improve patient safety."

In its inaugural issue, the web-based journal features cases on a mix-up involving two patients with the same last name in the same hospital room; a mistaken drug administration causing a patient to stop breathing unexpectedly; a procedural mishap requiring emergency vascular surgery; an infusion pump flying into a magnetic resonance imaging machine, narrowly missing a child; and a misdiagnosis of delusions in a man later found to have metastatic brain and spine cancer. ■

Healthcare Benchmarks and Quality Improvement
The Newsletter of Best Practices

Healthcare Benchmarks and Quality Improvement Reader Survey

In an effort to learn more about the professionals who read *Healthcare Benchmarks and Quality Improvement*, we are conducting this reader survey. The results will be used to enhance the content and format of *HBQI*.

Instructions: Mark the appropriate answers by circling your response. Please write in your answers to the open-ended questions in the space provided. Return the questionnaire in the enclosed postage-paid envelope. The deadline is June 1, 2003.

1. How would you rate your overall satisfaction with your job?
   A. very satisfied
   B. somewhat satisfied
   C. somewhat dissatisfied
   D. very dissatisfied

2. What are you most dissatisfied with in your job?
   A. staffing
   B. heavy workload
   C. low morale in your department or facility
   D. impact of cost-cutting on quality of care
   E. other (please specify)_____

3. What impact has the nursing shortage had on the quality of care in your field?
   A. significant impact
   B. moderate impact
   C. little impact
   D. no impact

4. Are the articles in *HBQI* newsletter written about issues of importance and concern to you?
   A. always
   B. most of the time
   C. some of the time
   D. rarely
   E. never

Questions 5-11 ask about coverage of various topics in *HBQI* newsletter. Please mark your answers in the following manner:

A. very useful **B. fairly useful** **C. not very useful** **D. not at all useful**

5.	data collection	A	B	C	D
6.	outcomes management	A	B	C	D
7.	sources of benchmark data	A	B	C	D
8.	quality improvement tools/processes	A	B	C	D
9.	JCAHO requirements	A	B	C	D
10.	patient safety issues	A	B	C	D
11.	information technology	A	B	C	D

12. Approximately how many workers are employed at your facility?
   A. fewer than 200
   B. 200-500
   C. 501-1,000
   D. 1,001-2,000
   E. more than 2,000

13. How large is your hospital?
    A. fewer than 100 beds
    B. 100-200 beds
    C. 201-300 beds
    D. 301-500 beds
    E. more than 500 beds

Please indicate all of the areas for which you are responsible in your facility or system by marking yes or no.

14. discharge planning yes no
15. utilization management yes no
16. corporate compliance yes no
17. risk management yes no
18. coding yes no
19. other (please specify) _____

20. Do you have Internet access at work? yes no

21. How much time do you spend accessing job-related information via on-line services (e-mail listservs, web sites, etc.)?
    A. 0 hours per week
    B. 1-5 hours per week
    C. 6-10 hours per week
    D. more than 11 hours per week

22. Would you prefer to receive your newsletter electronically by e-mail? yes no

SATISFACTION

23. How would you describe your satisfaction with your subscription to *Healthcare Benchmarks and Quality Improvement* newsletter?
    A. very satisfied
    B. somewhat satisfied
    C. somewhat dissatisfied
    D. very dissatisfied

Please rate your level of satisfaction with the following: Please mark your answers in the following manner.

A. excellent **B. good** **C. fair** **D. poor**

24.	quality of newsletter	A	B	C	D
25.	article selections	A	B	C	D
26.	timeliness	A	B	C	D
27.	length of newsletter	A	B	C	D
28.	overall value	A	B	C	D
29.	customer service	A	B	C	D

30. On average, how much time do you spend reading each issue of *HBQI*?
    A. less than 10 minutes
    B. 11-20 minutes
    C. 21-30 minutes
    D. 31-60 minutes
    E. more than an hour

31. On average, how many people read your copy of *HBQI*?
    A. 1-3
    B. 4-6
    C. 7-9
    D. 10-15
    E. 16 or more

32. On average, how many articles do you find useful in *HBQI* each month?
    A. none
    B. 1-2
    C. 3-4
    D. 5-6
    E. 7 or more

33. Do you plan to renew your subscription to *HBQI*?
    A. yes
    B. no

If no, why not?_____

ABOUT YOU:

34. What is your title? (please choose the title that most closely reflects your position and responsibilities):
    A. quality improvement manager
    B. quality improvement director
    C. data information/coordinator specialist
    D. outcomes management director
    E. other (please specify) _____

35. What is the highest degree that you hold?
    A. ADN (2-year)
    B. diploma (3-year)
    C. bachelor's degree
    D. master's degree
    E. PhD
    F. other (please specify)_____

36. How long have you been employed in health care quality?
    A 0-2 years
    B. 3-5 years
    C. 6-9 years
    D. 10-15 years
    E. 16 or more years

37. How long do you intend to remain in health care quality?
    A. 1-2 years
    B. 3-4 years
    C. 5-7 years
    D. 8-10 years
    E. indefinitely; have no plans to change

38. From where do you most frequently get your continuing education contact hours?
    A. hospital-provided
    B. travel off-site to live conferences
    C. subscription-based newsletters/journals
    D. outside-sponsored teleconferences
    E. other (please specify)_____

39. What are the most effective teaching methods used to train staff? _____

_____

_____

40. What, if any, outside vendors do you use for your training programs? _____

_____

_____

41. List the top three challenges you face in your job today:_____

_____

_____

_____

42. What do you like most about *HBQI* newsletter? _____

_____

_____

43. What do you like least about *HBQI* newsletter?_____

_____

_____

44. Has participating in this activity changed your clinical practice? yes no

If yes, how?_____

_____

45. What issues would you like to see addressed in *HBQI* newsletter?_____

_____

_____

CONTACT INFORMATION:

Name: _____ Facility: _____

Address: _____

Phone: _____ Fax: _____ E-mail: _____