

# HEALTHCARE BENCHMARKS™

The Newsletter of Best Practices

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## New standards are set in quest to tame the art of bed control

*A year of work reaps remarkable rewards*

Continuity is the key to successful process improvement. That's lesson No. 1 from a group of children's hospitals looking for ways to improve bed control — the art of having beds ready for patients as needed and getting those patients quickly from one unit to another.

Sponsored by the National Association of Children's Hospital and Related Institutions (NACHRI) of Alexandria, VA, and MMP, a health care consulting firm from Bainbridge Island, WA, the meeting last May included 13 hospitals, 10 of which participated in a similar meeting in 2000.

"I think the biggest thing that struck me is that change is hard," says **Lynne Lostocco**, RN, MSN, NACHRI's field director of management information services. "Change is a slow process, and I think it behooves us to find ways to keep people excited and motivated."

In this work to improve bed control, there is no "end" to get to, Lostocco says, and if you find yourself achieving one step and calling it the ultimate goal, perhaps you are asking the wrong questions.

Even among the facilities that made the most dramatic improvements, Lostocco continues, many were able to take an idea from that second meeting that might push them further forward. "Sustaining change is a very hard thing. Maybe it's not a surprise, but it was evident at the second meeting."

Participants in the May meeting reflected different starting points for the work ahead. Some had attended the first meeting, while others were new. Even those ready and willing to jump on the bed-control bandwagon had problems because new members lacked the foundation established in the first meeting.

Overall, the second meeting trumpeted the successes of participants. Lostocco notes that the collegiality of the group was

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instrumental in that success. Despite each institution's unique set of problems in bed control, members participating in the project have been able to learn from each other, she says. "Networking provides its own opportunities."

"Over and over, hospitals contacted other members of the group to discuss processes, policies, and positions."

During the year, several issues became evident:

- the importance of having a patient placement and bed control plan in place;
- collecting data and posting improvements;
- making bed assignment a pull system, in which units pull patients from admitting rather than admitting pushing them into units;
- correlating staffing levels with changes in patient volumes (if late afternoon is busy, increase housekeeping staff at that time);
- consolidation of applicable admission/discharge/transfer policies into one understandable document;
- informing staff about the cost of admission delays;
- ensuring physicians write effective admission orders.

### ***Different folks, different strokes***

Different facilities had different approaches to those issues, and some certainly had more success than others. At Miami Children's Hospital, one of the toughest issues to tackle was wait times in the emergency room (ER) that resulted from trying to push patients into units. Patients who waited too long left without being seen.

According to **Maryann Henry**, RN, nursing administrative director of emergency/trauma services at the 268-bed hospital, the proportion of patients leaving without being seen was 7% to 8% at the facility last year, compared to a national norm of about 4% to 5%. Now, they have reduced it to 1% or less.

Wait time in the department overall was six to 12 hours, including five to six hours in the waiting room. "You used to have to wait up to a day for a bed," says Henry. Now that wait is 2.5 hours for urgent cases and 60-90 minutes for nonurgent

cases. "That's one of the lowest in the county."

Fixing the problem required dealing with congestion on the units, explains **Jill Tahmooressi**, RN, director of medical surgical services at Miami. "We implemented an automatic bed tracking system," Tahmooressi explains. "Originally, nursing would call environmental and leave a message. They would call back. Then they called admitting. It was just a game of phone tag to let someone know a bed is vacant and had to be cleaned for the next child."

The new system is automatically linked with the admission/discharge/transfer computer system. "If a child is discharged, nursing calls a special number and enters a code. This beeps the housekeeper on that floor, and she knows that bed is vacated. There is no direct telephone communication," she says.

If the nurse is busy and doesn't make the call, the system will automatically beep the housekeeper. Different codes let housekeeping know whether someone in the ER is waiting and they need to clean that bed next, or if it is a child due out of the operating room (OR) and a "regular clean" will suffice. "The housekeeper has a certain amount of time to respond, and if there is no response, then the system automatically calls a supervisor," Tahmooressi points out.

Goal benchmarks were established for each of the three types of requests: A stat request has to be cleaned within 40 minutes of a child vacating the bed; "clean next" calls require the job to be done within 45 minutes; and "regular clean" gives housekeeping an hour.

So far, the average is 59 minutes for stat, 83 minutes for the relatively new "clean next" option, and 59 minutes for regular clean. "I don't think everyone is really comfortable with the new option, and I think that will go down over time," she adds.

Another way the hospital improved, says Henry, was to fax reports to units rather than wait to give verbal reports. "Ten minutes after we fax the report, we send the patient up to the floor," says Henry. "No more waiting on hold."

If by chance the room isn't ready, the child is put into a clean treatment room while housekeeping

## **COMING IN FUTURE MONTHS**

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finishes. Or, says Tahmooressi, “if the bed isn’t there, we’ll settle the child in the room on a stretcher or in a wheelchair. The culture of ‘give us another hour’ just isn’t allowed any more.”

Getting the changes implemented required some selling, says Henry. “We had to sell it to operations, administrators, and nursing directors,” she notes. “But once we got their buy-in and provided inservices, they understood that this was about improving patient care, not making life difficult.”

Emphasizing that they are “here for the children” helps them accept the changes, Tahmooressi says. “And top administration support reinforces the message. They get praise for implementing and improving through what hasn’t been an easy program.”

### ***What’s in it for you?***

Henry agrees there are a number of reasons for facilities to care about bed control. “Every patient who leaves without being seen is revenue out the door,” she says. “We are a freestanding facility, so patients can go anywhere. Lots of hospitals are setting up pediatric ER units. And if those physicians practice at our hospital, they won’t want patients sitting in our waiting room. They want care started at once, so physician as well as patient satisfaction is at risk, too.”

The job isn’t over yet at Miami. The hospital is implementing a bed-management-peak census plan that includes four different stages, including the most critical, “code bed,” which means there are no vacancies at all. The stage will be disseminated daily to staff via e-mail, Tahmooressi explains. “A lot of people work in isolation and may not know we are having a bed crisis. This has a checklist defining what each person has to do and who is responsible for what.”

Henry says another new program will provide admitting nurses with appropriate training so they can start IVs, draw blood, or start patients on antibiotics as warranted. “That will get care started right away, even in the admitting department.”

**Laurie LaPenotiere**, RN, CEN, emergency department nurse manager and interim vice president of nursing at the 150-bed Children’s Hospital in San Antonio, says the facility was able to improve its bed control by concentrating on the communications issues.

“We had a bed-control plan. We instituted admission express and clinical admitting. We had

preadmissions testing and a discharge waiting area, but we still had wait times of up to 12 hours in the ER,” she says.

No one knew what was going on throughout the facility. “We had just a single bed-control person for a campus with 600 beds total and since so many of them were adult beds, they weren’t always aware of specific pediatric issues” such as not wanting a 2-month-old sharing a room with a 16-year-old.

The problem grew so great that often physicians would just send patients to the ER rather than send them through admitting. That cost money. “And there are five other hospitals within a mile of us, so patients would leave. We have great care, and we knew that. But we weren’t efficient.”

The answer to the problem lay in stitching together a lot of little pieces to what the hospital already had in place. “We instituted a patient-placement matrix that shows what kinds of patients go where. We included a query on surgery scheduling asking where the physicians wanted patients to go post-op. We started using taxi vouchers and a system shuttle bus to get patients home. And we gave a phone to bed-control personnel rather than just a pager. That way physicians could actually call someone. We not only had a discharge waiting area, but we started using it and publicizing it.”

### ***Improving communications***

The result is a 30% decrease in ER admissions. One year later, ER wait times are down from 225 minutes to 175 minutes. At the same time, overall patient volume has increased 25%.

“But we aren’t finished yet. We will be extrapolating our system to all 600 beds and are still looking at ways to improve communication,” says LaPenotiere. “It’s still hard to get in touch with charge nurses. Should we use pagers or cell phones? We are trying to experiment by having the nurses page bed control when discharges are pending. We are looking at our worksheets to see what beds are full, who is in them, and what patients are coming in. We hope to have a tele-tracking system at the end of this year that will tell us automatically what beds are available.”

The lessons learned by NACHRI members aren’t just applicable to children’s hospitals, Lostocco says. “Anyone can look at the issue and benchmark with peers,” she says. “Process flow is process flow, and it doesn’t really matter if you are talking about pediatric patients or adult

patients. There are only nuances, like the kind of bed you need." A neonatal patient whose outcome could turn quickly from good to bad has a parallel in the cardiac patient who also has critical timing issues attached to his or her recovery. "The time frames vary, but you can still learn from the information we have gleaned throughout this process."

This isn't just a nursing issue, says LaPenotiere. "This includes everyone from physicians to housekeeping, and that makes it important to every hospital."

The key is to improve communication among all of those stakeholders and make it a primary focus, LaPenotiere continues. "You need a warrior to go forward and get it done. You have to change the paradigm to one where everyone recognizes you can do something better. And it's a gift you can give the patient: an easier transition to the hospital."

In an age where patients are referred to as customers and believe in their inevitable "rightness," finding ways to streamline their entrance

into the system is a way to make them happier from the start, Lostocco notes. The upshot is better patient satisfaction scores, more likelihood that a patient would return to your facility, and a potential competitive edge. "Fixing bed control really catches the public eye."

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## Cardiac study shows wide performance gaps

### *Treatment differs among high-volume hospitals*

Consumers have been told that finding a hospital that does a lot of the procedure they are about to have is a key to good treatment.

But a study by the Evanston, IL, health care consulting firm Solucient found that even among hospitals that do a lot of angioplasty or bypass grafts, there are significant gaps in outcomes and complication rates.

The annual 100 Top Cardiovascular Hospitals survey, released in July, found that if peer hospitals in the study achieved the same success as the best performers, they could cut procedure mortality rates by up to a quarter, cut costs per cardiology case by more than \$2,000, and cut postoperative mortality by up to 20%. (See chart, p. 101.)

"Volume has been shown to be a critical factor in determining which hospitals have better outcomes for certain procedures," explains **Jean Chenoweth**, executive director of the Solucient Institute. "But this analysis, which was restricted to hospitals with high volumes of cardiac patients, clearly indicates that volume alone does not ensure the best results, at least in terms of mortal-

ity, hemorrhage, and infection. This study is a call for action. The industry needs to provide consumers with a broader group of measures for describing best practices in all hospitals."

Among the most significant differences found between the winners and the nonwinners in the study are:

- When performing percutaneous transluminal coronary angioplasty (PTCA) or coronary artery bypass surgery (CABG), the rate of postoperative infection is an average 21% lower among all top hospitals, and an average 34% lower at top community hospitals.

- Heart attack patients have a 7% lower risk-adjusted mortality rate at top-performing hospitals. Among community hospitals, the rate is 11% lower.

- The use of stents during PTCA increased from 63% in last year's study to 79% this year.

The data used in the study comes from DRG data from Solucient and hospital databases, as well as Medicare Provider Analysis and Review (MedPar) data. They winners include 25 teaching hospitals with cardiovascular residency programs, 45 teaching hospitals without such programs, and 30 community hospitals.

In order to qualify for inclusion, there were volume criteria that had to be met. At least 100 reported Medicare cases of acute myocardial infarction (AMI), at least 125 reported Medicare

patients in the PTCA diagnostic group, and at least 125 reported Medicare CABG patients.

The hospitals that met those criteria were then analyzed according to the following measures:

- AMI patient mortality index;
- risk-adjusted CABG patient mortality;
- risk-adjusted PTCA patient mortality index;
- risk-adjusted post operative patient mortality index;
- combined risk-adjusted postoperative infection index (postoperative is defined by the presence of surgical discharge DRG), risk-adjusted postoperative hemorrhage index, and percentage of PTCA patients with CABG surgeries during the same admission;
- percentage of CABG patients with internal mammary artery use;
- severity-adjusted average length of stay;
- wage and severity-adjusted average cost.

One of the new additions to the 100 Top Hospitals this year is the 468-bed Robert Wood Johnson University Hospital in New Brunswick, NJ. According to **Clifton R. Lacy**, MD, senior vice president for medical affairs and chief of staff at the facility, being named is a big thrill to the facility, which has a stated goal of making its heart center one of the best in the nation.

“There are a lot of surveys and lists,” Lacy says. “What makes this valuable is that Solucient

is well-known, and its measures and methodology are recognized and well-respected. This isn't just a beauty contest.”

Not that he doesn't take great pride in being among a list that includes Massachusetts General, the Cleveland Clinic, and Baylor. “We are younger than they are, but that's whose company we want to be in. It's very satisfying to know our patients get the same care you can find in those places.”

Lacy says the reason why his facility made the list is “our attention to excellence from the top of the organization down. We use practice protocols; we benchmark against the best facilities anywhere.” But along with striving toward excellence, Lacy says he and his colleagues also understand there is “no perfect. We keep reevaluating and recognize that medicine is a moving target.”

Chenoweth says he hopes that people will realize from this survey that although volume is a good indicator to look at, there is more to judging a facility than looking at the number of cases it handles for each diagnostic related group. “Even in material generated by groups that believe we should look closely at volume, they say outcomes data, when available, is a superior datum to look at,” she says. “But there are still areas of the country where employers look most closely at volume. And this study shows it's a mistake to judge solely on that. It is our belief that the study helps

Source: Solucient, Evanston, IL.

bring a little reason to the zest of people who are trying to guide consumers. Outcomes are the result of a variety of factors, and volume is just one of them.”

The other big story Chenoweth sees in this year’s data is that everyone is using stents. “In 1997/1998, top hospitals were using significantly more stents than their nonwinner counterparts,” she says. “This year there is almost no difference in their use. That has to be good for the patients.”

Those who look closely at this survey should note that next year it will be deeper, Chenoweth says. “We are adding some deeper, more clinical data elements,” she says. Because of the merger last year between HCIA-Sachs and HBS International to create Solucient, Chenoweth says there is more access to larger databases that will help Solucient determine how practices are changing. “We want to find a way to use public data integrated with some survey data or data we ask participants to submit separately so we can increase the real clinical content and look beyond administrative data.”

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For more on the survey, visit the 100 Top Hospitals web site at [www.100tophospitals.com](http://www.100tophospitals.com).] ■

## AHRQ unveils new children’s database

*Inpatient data cover common and rare procedures*

The Agency for Healthcare Research and Quality (AHRQ) in Rockville, MD, has launched the first database on the hospital inpatient care of America’s children.

The Kids’ Inpatient Database (KID) was developed to make national and regional estimates of children’s treatment, including surgery and other procedures, and for estimating treatment outcomes and hospital charges.

The database includes pediatric patients from

birth through age 18, regardless of whether they had insurance, public assistance, or were uninsured. The KID’s large sample size enables researchers to analyze hospital care and charges for common conditions in children, such as respiratory diseases and injuries, as well as rare conditions, such as congenital abnormalities. The power of the database also enhances the ability to study infrequently used procedures, such as bone marrow biopsy and organ transplantation.

**Lisa Simpson**, AHRQ deputy director, says, “Not only does the KID make it easier for researchers to obtain the data they need, but the size and power of the database enable them to study hospital care for even the rarest conditions by specific age groups of children.”

Until now, researchers had to obtain pediatric information from databases that covered all patients, regardless of age.

The KID contains information on about 1.9 million children’s hospital inpatient stays at more than 2,500 hospitals across the United States in 1997. Included is information on children’s principal and secondary diagnoses, tests, surgeries, and other procedures, length of stay, hospital charges, payment sources and type of hospital.

By going on-line to the AHRQ’s database, HCUPnet, ([www.hcupnet.ahrq.gov](http://www.hcupnet.ahrq.gov)) users can get some quick and easy data answers on a variety of issues, with a variety of characteristics. For instance, if you want to know about septicemia that isn’t labor related, you can find out how many children had it, and look at the information based on any characteristic you want — payer, income level, region, location, size of hospital, or age of patient.

**Anne Elixhauser**, PhD, senior research scientist at the AHRQ and one of the creators of the KID, says there has long been a gap in children’s health care data that is now being filled by the KID.

“We have 60% to 70% of all hospital discharges in our national inpatient sample, and we thought we could develop some specialized databases that would help others. So first, we started working on the KID.” The work began in late 1999 with a pilot project, she says. “We weren’t sure how feasible it was going to be. [Healthcare Cost and Utilization Project; HCUP] is a partnership between the states, the federal government, and the hospital industry.

“We get data from 24 states on all payers and all hospitals that we transform in to a uniform format.” The result is the national inpatient sample, which is available to users for \$160 per year.

## New state data now available from AHRQ

Along with the new children's inpatient database, the Agency for Healthcare Research and Quality (AHRQ) in Rockville, MD, has just released 1998 and 1999 data for State Inpatient Databases (SID) and State Ambulatory Surgery Databases (SASD). (See related story, p. 102.)

The SID contain information for every inpatient hospitalization in each participating state, while the SASD capture information on surgeries performed at hospital-affiliated ambulatory surgery sites. Some SASD include records from freestanding surgery centers as well. In addition, SID and SASD data have been translated into a uniform format to facilitate multistate analysis.

Both data sets contain a core set of clinical and nonclinical information that include principal and secondary diagnoses and procedures, patient demographics, total charges, length of stay, discharge status, and patients' expected payment source, such as Medicare, Medicaid, private insurance, and whether they were uninsured. SID and SASD also contain hospital identifiers that permit linkages to hospital-level and county-level databases. The data

files do not contain direct personal information about patients nor characteristics that might lead to the identification of patients.

The research resources are part of a family of databases and software tools developed as part of the Healthcare Cost and Utilization Project (HCUP), a federal-state-industry partnership sponsored by AHRQ for building a standardized multistate data system.

The first seven states to make their 1998 and 1999 SID data available for purchase through the AHRQ-sponsored HCUP Central Distributor are Arizona, Colorado, Iowa, Maryland, New York, Oregon, and Wisconsin. The first four states to make their 1998 and 1999 SASD data available for purchase through the same source are Colorado, Maryland, New York, and Wisconsin. Additional states are expected to make their SID and SASD files available through the HCUP Central Distributor by Sept. 30, 2001. As soon as their data become available, AHRQ will announce the availability on its web site at [www.ahrq.gov/data/hcup](http://www.ahrq.gov/data/hcup).

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Now AHRQ is breaking out the children's data from the overall data set. The data aren't perfect since not every state participates. But, she says, "even though we have fewer than half the states, we have more than half the discharges."

Elixhauser adds that AHRQ has a good geographic representation and that all the data are weighted. There is also an active effort to recruit more states, and it increases yearly. After all, she notes, there were only eight states in 1988.

Children aren't little adults, Elixhauser says, so looking at adult health care data and simply extrapolating them for children isn't appropriate. "There are also a lot of conditions that are child-specific, like childhood cancers and congenital anomalies that just aren't that common. We think the KID will allow for more analysis of children's hospital care than has been available in the past."

For now, the data are updated about every three years and is available in its entirety for \$220. Those interested in accessing it can contact the HCUP central distributor at (866) 556-4287 or e-mail at [hcup@s-3.com](mailto:hcup@s-3.com).

In the future, Elixhauser expects the data will include a variable that lists whether the patient was in a children's hospital or not. "Right now,

we have agreements with the states that we won't release hospital identifications, and in some cases, a state will have only one children's hospital. So we want to try to find a way to include that information without identifying the hospital."

She also anticipates that HCUP will be able to come up with some other specialized databases that hospitals could find useful. "Right now, we have no idea where we will go. Maybe specific conditions. We'd love to hear some ideas."

Those who wish to provide such guidance can e-mail the AHRQ at [hcup@ahrq.gov](mailto:hcup@ahrq.gov). ■

## Wireless strategy brings new life to telemedicine

*Telemetry is a service, not a unit, at CA hospital*

The aging patient population means one thing to most health care providers: more acute care patients that will require monitoring.

With overcrowded emergency departments, critical care units filled to capacity, and monitored

beds at a premium, management at Sutter Health in Sacramento, CA, felt it needed a new approach.

**Robert Slepín**, vice president of information systems and CIO at Sutter Health Central, says the system's outmoded patient monitoring system limited its ability to effectively care for patients.

"The old system, although suitable within a critical care setting, was only able to monitor patients on a single floor," says Slepín. It also had few features. For instance, the ability to store noteworthy changes in a patient's heart rhythm was limited to 10 events, and it could provide just two lead wires of data.

"We needed the ability to monitor more beds on our two-campus medical center in a cost-effective manner," he adds. "Sutter Health needed a system that would allow us to flexibly adjust our bed configuration to meet demand in peak census seasons. We were struggling to meet the demand for telemetry beds, so expansion at a reasonable cost was our primary business. Our vision was to turn telemetry into a service rather than a physical unit."

### ***Wireless technology: An alternative answer***

The answer to the needs of increased flexibility, expanded monitoring capacity, cost effectiveness, and high-quality care couldn't be met simply by replacing the old system with a newer model. So Sutter Health went looking for an alternative — a way to increase flexibility, expand monitoring capacity, and assure high-quality patient care, all without adding more costly critical care beds. These challenging objectives forced Sutter Health to consider a unique alternative: wireless telemedicine.

Initially, Sutter was working with Hewlett Packard. **Debora Cale**, RN, nursing director at Sutter General Hospital, says it has a "great product, and it works well in the Intensive Care Unit (ICU) setting." But the products it offered didn't meet all of the goals. One of the department heads suggested Sutter look at the company VitalCom, which had an open network that would allow for expansion and contraction, as future needs warranted. The company, based in Tustin, CA, also offered wireless technology and collected real-time patient information from the monitoring devices Sutter already had, says Slepín.

With the wireless infrastructure technology and a new approach to monitoring, Sutter Health would be able to leverage both personnel and clinical expertise by providing monitoring services to

Sutter General Hospital from a central, mission control-style center located at Sutter Memorial Hospital, 2.5-miles away. According to Slepín, this allows Sutter to concentrate technical resources in one location and avoid hiring a separate, highly skilled and expensive staff. Not only was this attractive from a cost-benefit perspective, he notes, but an enterprisewide monitoring approach would allow Sutter to easily expand as its monitoring needs increased and provide standardized, high-quality monitoring care across the enterprise.

An evaluation team consisting of biomedical engineers, monitor technicians, nursing directors, and a physician reviewed VitalCom's proposal for a wireless infrastructure that would enable enterprisewide monitoring. But there was still skepticism among some physicians, says Cale, so two medical directors went on a field trip to an Arizona facility, where the system was already in use.

"This was unsafe, uncharted territory, according to the physicians," Cale says. "It was a challenge to convince the cardiologists that the quality of care would not be impacted with a multiple-unit monitoring approach."

Careful transition was critical, she notes, so Sutter used a multiphased approach to system implementation, going live on just one telemetry unit the first year. During the second year, it integrated another unit onto the system and established a mission-control style monitoring center, where certified technicians monitor all patients from a single location around the clock.

"We then did lots of auditing of data when we went live," Cale says. "We also met with the entire cardiology section prior to going live to let [the staff] know how we would implement and where they could bring concerns. We phased in slowly, so the buy-in got easier."

It was a big change in the care strategy, and a backup system was in place for critical situations. Cale explains that the safeguard included an arrhythmia phone and an enterprisewide paging system. By taking a systemwide monitoring approach, Sutter Health was able to expand monitoring services to 55 beds on multiple units.

In 1999, Sutter Health's monitoring needs again changed and, as expected, expanded. There was an increasing desire to move patients out of the ICU, but keep a constant watch on them via telemetry monitors while they recovered in other, less-expensive units. The VitalCom product in use, PatientNet, was expanded to an orthopedic telemetry unit at Sutter General Hospital to

accommodate this requirement.

Then in 2000, Sutter decided to use another VitalCom product, SiteLink, to link an off-site facility into the mission-control room at Sutter Memorial Hospital. This helped to avoid additional costs by using the same certified technicians in the mission-control center to monitor these new patients located miles away.

By this time, the clinical staff were already comfortable with the enterprise monitoring approach, so the transition to off-site monitoring was a smooth one. "Now we're seamlessly monitoring on other units and floors within the medical center and on units at the Sutter General campus two-and-a-half miles away," Cale says.

### ***The vision realized***

The cost over seven years has been a little more than \$2 million, including \$1.2 million for equipment. But there have been clear benefits as well. Using sophisticated wireless technology and an advanced telemedicine solution, Sutter can monitor up to 96 patients throughout the network from one location. Also, by centralizing monitoring functions, Sutter was able to double the number of monitored beds without adding additional monitoring technicians, saving the cost of eight technicians, or about \$160,000 per year.

From a quality perspective, because all monitoring care is provided from a single location by trained and certified technicians, Sutter has achieved a standardization of monitoring quality across the enterprise, and there is a 98% compliance rate on missed rhythms.

Patient safety and quality of care has been optimized with instant wireless transmissions of critical patient information, enabling care providers to receive data faster; resulting in quicker, more knowledgeable interventions. Within six months, the length of time for nurses to answer the arrhythmia phone dropped from seven to eight rings to 1.2 rings, resulting in quicker response time to critical patient events.

In addition, the expanded features and capabilities of the system — multilead viewing, storage of more rhythms, 24-hour disclosure and trending of significant events — give cardiologists a more complete picture of the patient's status, often enabling them to intervene earlier and improve the patient's outcome.

"We will consider the possibility of expanding PatientNet into other Sutter hospitals across the enterprise," says Slepín. "Also, we are excited

about the Internet access technology and plan to evaluate that option for our physicians."

Cale agrees. "Our ultimate goal is to be able to add other units in the medical center."

Down the road, Slepín plans to integrate information from the PatientNet system with their existing Eclýpsis Sunrise Clinical Manager clinical information system. "Our long-term vision is to build a comprehensive electronic medical record within each region. In the short run, the more data points we can offer our physicians at the point of care to support clinical decision making, the better."

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## **Hospital industry divided into the haves, have-nots**

*Financial analysis takes business school approach*

**I**f hospitals want to stay in business in the long term, they have to start looking at themselves the same way other businesses do: Maximize return on equity and stop looking at the relationship of income to revenue as the primary financial focus.

That's the message from **William Cleverley, PhD**, president and CEO of the Columbus, OH-based health care information consulting firm Cleverley Associates.

In a study of data from more than 4,000 hospitals over three years, Cleverley says he found that hospitals are in a great deal of financial trouble and that there are some that are very unlikely to survive. Those that will survive will be looking at issues and information that aren't usually considered important by the health care industry.

"This is different than what is out there because we try to interpret the data that are out there, not just report a bunch of numbers," he says. There are compilations of data put out by Solucient and

by United Healthcare, the Source Book and the CHIPS Almanac, respectively, but Cleverley says they are only financial and operating statistics. "We provide an extra step," he says.

In addition, he uses some data sets that aren't usually included in financial analyses of hospitals. For instance, looking at surgery percentages is rare, although surgery is more profitable. Average margin on Medicare discharges and revenue growth percentage year to year aren't shown. "In the retail sector, same store sales growth, revenue growth percentage, is a key driver," says Cleverley. "

But no one looks at that for health care. And they'll look at average charge per discharge, but not per Medicare discharge. They'd have to integrate databases to do that," he adds.

Cleverley also looked at different coding factors, such as the mix of chest pain, DRG 079, and angina, DRG 089. "If you have a lot of chest pain but not a lot of angina, you may have an issue with bad documentation," he says.

Similarly, long experience in health care has taught Cleverley to look at the highest of the supply costs, such as joints for replacement surgery and pacemakers. "If they are high there, likely, the facility is paying too much across the board."

There are key drivers that will show whether a facility is going to do well or not. Among them are market share, product mix, and market size. Not among them is cost. "High market share in high-performance hospitals does not produce lower unit costs for these hospitals," Cleverley writes in the report. "Many people have an intuitive belief that hospitals that perform better financially have lower costs. Our data suggest that this is not true. Better-performing hospitals do not have lower costs when compared to other hospitals."

For example, high performance hospitals' median cost per adjusted patient day wage is about the same as low performance hospitals for administration, higher for nursing, capital, and ancillary services. **(See chart, below, for the comparison.)**

What really drives performance, he says, is price. "And if price is the difference, why don't hospitals that aren't doing well raise their prices?" Cleverley asks. "We aren't able to answer that question. But even if you only have 10% of your products where you can raise prices, it can still make a difference. There are smaller indemnity players or expensive elective surgeries that are candidates for that. It can make a difference. And we can see in this report that the most successful hospitals are the ones that charge more."

Not that pricing is the only issue, Cleverley says in the report. "Successful hospital executives must understand all of the critical relationships that affect the financial performance of their hospitals, and they must be able to aggressively manage those relationships wherever and whenever possible."

The successes are the facilities whose management emphasizes the most profitable product lines and negotiates the smallest discounts on managed care contracts. "We can see from this that the better performers concentrate on higher margin product lines and code more aggressively," Cleverley says. "It makes good business sense."

*[For more information, contact:*

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## Median Cost per Adjusted Patient Day Wage Index Adjusted 1999

	High Performance	Low Performance
Administration	\$158.68	\$158.87
Nursing	\$137.03	\$123.11
Ancillary	\$369.60	\$315.45
Capital	\$94.55	\$90.74
Emergency Room and Outpatient	\$44.71	\$51.87
All Other	\$350.66	\$368.40

Source: Cleverley Associates, Columbus, OH.

# NEWS BRIEFS

## IHI holds national forum in Orlando

Health care leaders from around the world are expected to attend the 13th annual National Forum on Quality Improvement of Health Care, scheduled for Dec. 9-12 in Orlando, FL. Sponsored by the Institute for Healthcare Improvement (IHI), the forum will feature more than 100 sessions, special meetings, and workshops.

Plenary speakers for the event include the IHI president and CEO, **Donald Berwick**, MD, and **Mark Smith**, MD, MBA, president and CEO of the California Health Care Foundation.

At a special plenary session, attendees can watch the Pulitzer Prize-winning play "Wit," which explores the harshness of modern medicine and the importance of kindness in the face of terminal illness.

Another special feature is the Seventh International Scientific Symposium on Improving the Quality of Health Care. This event will present peer-reviewed papers followed by questions and debate from the audience.

Other Forum topics include: patient safety, patient satisfaction, technology, self-care, behavioral health, chronic care, and leadership.

Student discounts and CME credits are available. For registration information, contact IHI at (888) 320-6937 or visit [www.ihl.org](http://www.ihl.org). ▼

## Leapfrog Group launches hospital safety survey

More than 500 hospitals in six regions around the country have started work on a groundbreaking patient safety survey developed by The Business Roundtable's Leapfrog Group, in collaboration with the Medstat Group, a health information company based in Ann Arbor, MI.

Hospitals in Atlanta, California, east Tennessee, Minnesota, Seattle/Tacoma/Everett,

WA, and St. Louis are working on the voluntary, web-based survey.

Leapfrog says it is probably the first national effort to collect information from hospitals about their patient safety practices in three specific areas that are proven to save lives and prevent medical errors: computer physician order entry, intensive care unit physician staffing, and evidence-based hospital referral. Throughout the coming months, Leapfrog will be asking hospitals in additional regions to complete the 21-page survey.

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### Editorial Questions

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“This survey represents the first-ever opportunity for hospitals to report specific patient safety practices to their communities,” says **Susan Delbanco**, executive director of the Leapfrog Group.

Survey responses will be made available to Leapfrog Group members, their employees, as well as the general public later this fall. Leapfrog members will use the responses to recognize and reward providers that meet the standards, as well as educate and inform enrollees about patient safety and the importance of comparing provider performance.

Medstat developed the survey on behalf of the Leapfrog Group, for which it also provides other data collection, analysis, strategic planning, and support services.

Earlier research conducted for the Leapfrog Group by John Birkmeyer, et al, of Dartmouth Medical School, confirms that the three safety standards are critical to patient safety. “By following these standards, we could save as many as 58,300 lives and prevent as many as 522,000 serious medication errors each year,” says Delbanco. **(For more information about the Leapfrog Group, see *Healthcare Benchmarks*, April 2001, p. 44.)**

Visit the Leapfrog web site at [www.leapfroggroup.org](http://www.leapfroggroup.org). The survey can be viewed at [www.leapfrog.medstat.diamondbullet.com](http://www.leapfrog.medstat.diamondbullet.com). ▼

## Board approves staffing effectiveness standards

**F**rom the Joint Commission on Accreditation of Healthcare Organizations’ monthly newsletter:

The board of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has approved new staffing effectiveness standards for the *Comprehensive Accreditation Manual for Hospitals* that will be implemented in July 2002.

Incorporation of the new standards into the survey process is currently being pilot tested at more than 40 hospitals in the United States and one military hospital overseas. JCAHO will refine the survey process for inclusion of these standards based on the pilot test results that will be available in September.

To allow hospitals time to gain knowledge and experience with the new approach, a recommendation to “cap” the standards at a “3” until January 2003 will be considered by the

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Accreditation Committee this fall.

The new standards require hospitals to collect and analyze data on patient clinical and human resource screening indicators that are known to be sensitive to staffing effectiveness. The approach calls for hospitals to look at these indicators together, identify variations or trends that need in-depth analysis, and draw conclusions about staffing effectiveness based on this analysis.

By looking at these indicators together, hospitals will be better able to develop appropriate staffing plans. The new approach does not mandate staffing ratios, but instead ensures that hospitals are using objective, evidence-based methods to make sound decisions about staffing.

Under the new model, JCAHO will expect hospitals to draw upon both human resources and clinical outcome indicators, at least two from a list identified by JCAHO and at least two selected and defined by the hospital, based on its unique characteristics and patients served.

During the on-site survey, surveyors will review the hospital’s staffing plan, its actual staffing vs. the plan, its rationale for screening indicator selection, the data collected, the results of the organization’s analyses of the data, and actions taken on the basis of these analyses.

Draft standards were approved by the Standards and Survey Procedures Committee, and reviewed by the Hospital Professional and Technical Advisory Committee and by the American Hospital Association/ JCAHO Special Advisory Group. ■