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Predictive health: Could it be a new paradigm for quality?

Emory facility sees 'healthy' people in an attempt to avoid future disease

A new facility in Atlanta is turning the concept of "health care" upside down. Rather that treating sick patients, the health care professionals, called "partners," will see individuals, called "participants," who as far as they know are not sick at all.

Rather, they will conduct a series of surveys and tests to identify potential disease or existing chronic disease, and outline recommendations for either preventing or minimizing that disease. This approach, called "predictive health" by its proponents at Emory University's Predictive Health Institute, could represent a new paradigm for quality and may one day be an integral part of your hospital's offerings.

"We chose to call this predictive health [other terms in common use are 'personalized health' and 'prospective medicine'] because we talk about prediction vs. diagnosis, and health as opposed to disease," explains **Ken Brigham**, MD, associate vice president for predictive health at the Emory Health Science Center and director of the Emory/Georgia Tech Predictive Health Institute, which is overseeing the new Center for Health Discovery and Well-Being.

"Our approach is characterized by health, and by developing ways of measurement that are sensitive indicators of various early changes — or unhealth. The goal is to understand these processes

Key Points

- If successful, program will contribute to a reduction in hospital admissions.
- Initiative focuses on biometric measures thought to be predictive of disease.
- Proponents say that hospitals would benefit from ownership of predictive health centers.

and to develop new interventions to treat people before they become very sick."

Calling the individuals who are seen in the center participants "emphasizes strongly that this is a partnership," explains Brigham, as does calling the health care professional who follows them a partner. "The secret to getting people to implement healthy behaviors is engaging them in a partnership process, and to accept responsibility [for their own health]," he explains.

Affiliate with a hospital?

The new facility, which has just opened, is located in an office tower at Emory's Crawford Long Hospital, but at present is not part of Emory Healthcare. "We are calling it a center, not a clinic, to avoid some of the traditional language surrounding disease care," Brigham explains.

However, he says, "I do see it as being properly affiliated with hospitals. We are not under the illusion we will prevent everyone from getting sick — but we hope to minimize the incidence of disease and prevent as much as possible the need for traditional kinds of medical care."

He adds, though, in the process of defining health, his staff will no doubt identify people who need medical care and those people will be sent elsewhere for appropriate care — in this case, Crawford Long.

Down the road, Brigham hopes the center will help decrease admissions. "That's why hospitals should be thinking about actually owning something like this," he says.

Vive la difference

The center is even designed to look different from a traditional health care facility. "We worked closely with the architect, thinking carefully about what we'd want the experience of a healthy person encountering our system to be," says Brigham. The design is open, with a fountain in the entranceway, soft colors, and rounded walls. "The thought is that if healthy people encounter the system, it should be a pleasant experience for them — if not, they won't do it," Brigham explains.

When the participant arrives, he or she is given a series of screenings, including:

- SF-36 — quality of life;
- FACIT-Sp-Ex — spiritual/well-being;
- CAPS — typical week physical activity;
- Willett food frequency questionnaire;
- Perceived Stress Scale;
- Lunar iDXA Scanner — body composition;
- ultrasound — carotid intimal medial thickness;
- treadmill exercise fit test — estimated VO2 max;
- hematologic profile;
- metabolic profile;
- nutrition profile;
- glycomics array;
- T-cell telomere;
- DNA/genetic profile.

The first five are surveys administered on the center's web portal and designed by Georgia Tech. "The web-based series of validated questionnaires are completed on a computer tablet," explains Brigham. The iDXA scan, he continues, "is a very

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quick and sensitive measure of bone density and body composition." The ultrasound measurements include the thickness of the (carotid) artery in the neck, an indicator of artherocloseris, and the function of blood vessels in the arm, a surrogate for vascular function in general, says Brigham.

After the treadmill test, blood is drawn to determine a battery of measurements including routine tests such as cholesterol and sugar. However, adds Brigham, there are "some special tests of the four processes we believe define health and predict early deviations."

Four processes of discovery

While there is early evidence supporting the validity of measuring these processes, Brigham emphasizes that this is the "discovery" part of the clinic's activities. The processes are:

- inflammation;
- immune health (circulating immune cells in the blood);
- regenerative health (the capacity of the body to heal itself, determined by counting the number of circulating stem cells);
- measurements of oxidative stress.

"Such processes seem to underly a lot of disease," Brigham explains. "The individual will discover more about their health and we will discover more about human health."

"Part of the center's design is our discovery process," adds **Matthew Rivera**, RN, manager of the center, who has experience in disease management, staff training, evidence-based medicine, and benchmarking against national measures such as ORYX and HEDIS.

Longitudinal analysis to be done

"We will profile the participants, compare them to other population norms, and follow them longitudinally over time. We want to see whether or not meeting with health partners and getting them engaged in a health action plan will enable us to predict, based on the assessment, the kind of improvement we will make or not make."

Once the tests have been completed, Brigham continues, the participant goes into a private consultation room with the partner to receive a report that summarizes all available data. The partner will go over the results and help the participant design a health-related program that might include diet, exercise, stress reduction, and behavior changes. "They may even explore with each individual what kinds of things they are most likely to participate in that would be helpful — such as yoga programs," adds Brigham.

The health partner will stay in touch with the participant in agreed-upon intervals. Blood work will be available within 24 hours, and the participants will have secured web-based records and access with appropriate clearance. "That's also one method of communicating with the health partner," notes Brigham.

The health partners, he emphasizes, "are a new kind of health professional we are developing." They have at least a bachelor's degree, with a background in a health-related field, particularly exercise physiology or behavioral sciences, and are trained by the professional staff in the center, which includes a nutritionist, an exercise physiologist, and Brigham and Rivera.

Trend will grow

Rivera says the trend toward this sort of approach to health already is growing. "Other similar models are popping up at Duke and Ohio State, and several private companies are now doing full-body scans and health assessments," he says. "For our part, we are looking not only at physical health, but at mental health and social and environmental health as well."

This "absolutely" represents a paradigm shift in health care, he asserts, and "the benchmarks of evidence-based practices we develop will help other inpatient or outpatient facilities develop their own model similar to ours."

That's where the quality professional comes in, he observes. "One of our approaches, and part of our design, is looking at outcome measures," says Rivera. "The hospital quality manager would do that if their hospital were to set up a similar facility."

Brigham agrees. "There's absolutely a role for the quality professional in this," he asserts. "As this type of activity evolves, there will need to be a development of best practices and some sort of quality assurance program so initiatives are evidence-based and implemented appropriately."

Finally, he says, "hospitals ought to be thinking in this direction, because health care is shifting that way."

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Dramatic results achieved with MRSA initiative

Gains significant in light of disturbing JAMA *article*

The bad news: Methicillin-resistant *Staphylococcus aureus (*MRSA) is a more widespread public health threat than scientists had previously thought. The good news: An award-winning program at Evanston (IL) Northwestern Healthcare demonstrates that hospitals can achieve dramatic results in the reduction of MRSA.

First, the bad news. A paper in the Oct. 17, 2007, issue of *JAMA* estimates that 94,360 invasive MRSA infections occurred in the Unites States in 2005 and that they were associated with deaths in 18,650 cases.[1] In fact, according to an October report from the Centers for Disease Control and Prevention, it seems more people in the United States die from hospital-acquired MRSA than AIDS.

Most of the cases in the *JAMA* study, said the authors, were health care-associated, with 5,250 (58.4%) being community-onset infections, 2,389 (26.6%) hospital-onset infections, 1,234 (13.7%) community-associated infections, and 114 (1.3%) that could not be classified.

While the majority of invasive MRSA cases occurred outside of the hospital (58%), the *JAMA* authors wrote, they occurred among people with established risk factors for MRSA, such as a history of hospitalization in the past year.

Key Points

- Program achieves 60% reduction in MRSA in one year, 80% in bloodstream infections.
- All hospital patients are swabbed, infected patients are isolated.
- Education efforts continued even after program was launched.

(As if that wasn't worrisome enough, as this issue went to press, two MRSA-related deaths were reported in public schools, and at least one system closed down to allow time to thoroughly clean its facilities.)

Thankfully, there is much that hospital quality managers and staff leaders can do to limit the spread of MRSA, as demonstrated by Evanston Northwestern, which has been named a recipient of this year's John M. Eisenberg Patient Safety and Quality Award in recognition of the efforts of its MRSA Reduction Program Team.

The three-hospital system was able to reduce MRSA infection rates by 60% within the first year of the program.

A 'long path'

"It's been kind of a long path [to success]," notes **Lance Peterson**, MD, FIDSA, FASCP, epidemiologist and a founder of the MRSA program at Evanston Northwestern. "We noticed around 2002-2003 that there seemed to be more little pockets of MRSA in the hospital."

Evanston Northwestern had been conducting some pilot programs in its ICUs during 2003, Peterson explains, and that's how the spread was noticed. "In August 2004 we did what's called a point prevalence risk assessment; we swabbed every inpatient's nose in all three hospitals, and 8.5% of all patients had colonization — which was three times higher than what had been published before, so it looked like [the incidence of MRSA was] going up."

So, that month staff started to do admission surveillance in all ICUs. "That was the point at which we started to plan what to do next," Peterson shares. "I talked with the senior vice presidents of quality and nursing, and they agreed that if it looked like the carriage rate was high, we would do something about it."

When he saw just how high it was, Peterson decided to follow the model of the Northern Europeans and the Dutch, who had demonstrated success in this area. That model, he explains, entails universal surveillance and isolation. "Every patient who is admitted gets a swab, and if they test positive, they get isolation," he says, noting that this program began in August 2005.

There was no problem finding enough isolation beds, he continues. "You can actually put two MRSA-positive patients together," he explains. "Overall, our isolation rate only went

up 20% because we regularly isolate for other things as well."

Getting staff on board

Getting your staff to buy in to such a program "takes a fair amount of planning," says Peterson. "We had lots of talks with nursing and physician leadership, and sent out newsletters as well."

On the system's Intranet the staff posted information on MRSA that could be downloaded. "We even made a videotape of how to do the nose swab," says Peterson. In addition, he says, the ordering of tests and treatment was made easy with the use of the electronic medical record system. "It just takes a single click," says Peterson. "We made it as simple as possible."

After the program started, continuing presentations on MRSA were held. "After the first three months we started to look at outcomes and there was a very dramatic reduction almost immediately," notes Peterson. After the first year, not only was there a 60% reduction in MRSA infections, but there was also an 80% reduction in bloodstream infections. "Those rates are even lower now," he says.

Monitoring compliance

Compliance monitoring has been an important part of the program, says Peterson, and he is pleased with the participation rates. "It's the earliest thing we monitored," he says. "We started at 80%, and by the end of the first year it was 90% — our goal."

Here again, technology was a big help. "If somebody forgets to do a swab, a bright orange banner shows up on the [electronic] chart every time you log in, which says the MRSA test has not been done," Peterson says. "And it will not go away until it has been done."

In addition, he says, "we did over 1,500 chart audits to make sure that what we were measuring were actual infections." As for staff compliance, "we continue to do snapshots; once every month we look at randomly selected charts, moving around each month, and make sure the actual performance is what they tell us it is." Overall performance, he adds, can be monitored electronically simply by looking at the number of admissions and the number of tests that have been done.

Not surprisingly, Peterson says the biggest challenge has been "keeping hand hygiene [compliance] high enough." What happens when an individual staff member is found to regularly have poor compliance? "We have occasionally sat down with nurses and discussed infection control," he shares. "The focus of the discussion goes like this: 'You have been observed not following [proper procedures], and we wanted to make sure you do not have any questions or concerns.'"

Peterson says the involvement of leadership

AHRQ cites MRSA mortality figures

According to the latest News and Numbers from the Agency for Healthcare Research and Quality (AHRQ), one of every 20 of the roughly 368,600 patients treated in U.S. hospitals in 2005 for methicillin-resistant *Staphylococcus aureus* (MRSA) died. Most of those patients were elderly or low income.

The death rate for hospitalized MRSA patients was higher than the 4% death rate for hospitalized tuberculosis patients. AHRQ also reports that:

- About 332 Medicare patients per 100,000 were hospitalized for MRSA compared to 184 Medicaid patients and 29 patients with private insurance. The rate for uninsured patients was 43 admissions per 100,000 people.
- Men were more likely to be hospitalized for MRSA (107 admissions per 100,000) than women (92 admissions).
- People in the South were 27% more likely (113 admissions per 100,000) to be hospitalized for MRSA than those in the Northeast and Midwest (89 admissions per 100,000 population). People in the West fell in between (96 admissions per 100,000).

This information is based on data in *Infections with Methicillin-Resistant Staphylococcus Aureus (MRSA) in U.S. Hospitals, 1993-2005*, Statistical Brief No. 35 (www.hcup-us.ahrq.gov/reports/statbriefs/sb35.pdf). The report uses statistics from the Nationwide Inpatient Sample, a database that represents inpatient stays in all short-term, non-federal hospitals. The data are drawn from hospitals that comprise 90% of all discharges in the United States and include all patients, regardless of insurance type, as well as the uninsured. ■

has been critical to the success of the program. "It really encourages the staff when leadership says this is the right thing to do," he concludes.

(Editor's note: Evanston Northwestern serves as a mentor system for the Institute for Healthcare Improvement, and can be contacted through the IHI for assistance in setting up your own MRSA program. In addition, the December issue of the Joint Commission's Journal on Quality and Safety *will include an article by Peterson on how to set up an MRSA program.)*

Reference

1. Klevens MR, Morrison MA, Nadle J, et. al. Invasive Methicillin-resistant *Staphylococcus aureus* infections in the United States. *JAMA* 2007; 298:1763-1771. ■

Color wristband program seeks to reduce errors

Initiative borrows from earlier programs

The Colorado Foundation for Medical Care (CFMC) and the Colorado Hospital Association (CHA) have partnered to initiate a statewide program that will standardize the colored wristbands worn by patients to indicate allergies, fall risk, and other potential threats to patient safety.

"We use red for an allergy, yellow for fall risk, purple for DNR [do not resuscitate], green for latex allergy, and pink for limited extremity," says **Crystal Berumen**, MSPH, project director, patient safety initiatives for the Greenwood Village-based CHA.

From Pennsylvania to Arizona…

The wristband concept originated in Pennsylvania, says Berumen, after a swing nurse had tried to put a bracelet on a patient to signify they had a limited extremity (staff were not supposed to use that arm). While the color yellow did mean limited extremity where she had previously worked, at the new facility it meant DNR; the patient arrested, and there was a near-miss.

Subsequently Arizona, which along with Colorado is part of the Western Alliance for Patient Safety (WRAPS), adopted a similar program, changing only the color for DNR from blue to purple. (The reason Arizona did this is in the majority of hospitals in the western region they use the term "code blue" to announce overhead that someone has had a cardiac arrest and needs resuscitation.)

"We and our QIO [CFMC] decided to look at the program last December, and we used the Arizona research and methodology," says Berumen. However, she adds, the Colorado program goes a step further than those in the other states.

"Those other two states said everyone should use a wristband," notes Berumen. "We said they did not necessarily have to use wristbands, but if they used a chart sticker or a placard outside the door they had to make sure the color corresponded with the wristband colors."

"Fundamentally, it's not all about the wristbands but the color — if they want to put a dot on someone's forehead that's up to them," adds **Donna Kusuda**, RN, MS, CPHQ, vice president, quality improvement & patient safety at HCA Continental Division in Denver. "That did soften the blow; a lot of people did not want to use all these different armbands."

Quality managers take the lead

Kusuda currently serves as the head of a statewide collaborative group of quality managers that was instrumental in formulating the Colorado program. "The Colorado Hospital Association of Quality Professionals is an informal networking organization that we formed about seven years ago because we are a rural state and a lot of quality directors were out there by themselves," she explains. "Since then we have become an advisory body for the CHA board."

The members share e-mails regularly, and meet at least quarterly.

In addition, says Berumen, a teleconferencing option is provided for those members who cannot travel to the meetings — which are usually four or

Key Points

- Colorado collaborative adapts existing program to fit the needs of staff and patients.
- Focus is less on the specific identifying device than on using the appropriate colors.
- Quality professionals develop the program and oversee hospital implementation.

five hours long. "I send out e-mails for quality directors pretty much on a daily basis," she adds.

It was the quality directors, she continues, who initially looked at the project and decided on the colors. "They are also the ones who are implementing the program in the hospitals," she continues. "If they were not engaged and did not have positive opinions about the initiative going through it would have been harder to get buy-in."

How did the group get involved in the initiative? "The CFMC approached us as the hospital body that could perhaps make some decisions and help move the initiative forward," says Kusuda.

Three or four systems in the state were trying to do something similar already, she recalls, so she knew how difficult it would be to achieve consensus. "Just to do this within our system (of seven hospitals) was too narrow in focus," she adds. "When you have competing hospitals across the street using different colors, it does not make sense. Doctors, patients, and nurses go to all these places."

The first thing the group did was to conduct a survey "to see who was doing what and how far off we were," says Kusuda. A lot of time was spent discussing variations among hospitals, and why those variations existed.

"One of our roles was to go back to our constituents and get enough information and input so we could appropriately represent their hospital," says Kusuda. "For example, if we wanted DNR to be purple and theirs was blue, were they willing to change?" In the end, consensus was achieved more quickly than she had anticipated.

"Once they made the recommendation that this was the model they wanted to use, I presented it to the CHA board, and the CEOs of all 25 hospitals made formal recommendations that their facilities adopt it," says Berumen.

Rate of adoption varies

Berumen notes that while some hospitals have already implemented the new program, others are still in the process of adapting it to their unique needs.

"Most people will be on board by the first of the year," she predicts.

"We haven't heard a lot negatives from staff, but [there has been more from] leadership, given all they have on their plates," notes Kusuda. "One system has 16 hospitals that had just implemented a documentation system and wanted to 'settle down' for a while."

One of the more exciting aspects of the program for Berumen is that it will likely continue to expand. "We have received feedback from several hospitals that we should have a color for the bloodbank band," she notes. "I will get all [the quality directors] together on a conference call so they will be on the same page."

Interestingly, the state from which Colorado adapted the program — Arizona — is now waiting to hear what they recommended so they can follow Colorado's lead. "It's important to be aligned with the whole region because a lot of care crosses borders," explains Berumen.

Kusuda says the program will keep patients safer, and make it easier for staff and patients to go from one hospital to another.

There will no doubt be an evaluation of the program "once we get a substantive number of hospitals who have implemented it," she continues, "we'd measure any errors, as well as staff satisfaction, and whether it has been fully implemented."

(Editor's note: The Colorado partnership has released a customized wristband toolkit to all hospital quality directors and CEOs in Colorado. It is available at CFMC's web site: www.cha.com/images/stories/education/coloradotoolkitfinal.7.16.07.pdf. There is a also PowerPoint presentation quality managers can use to train staff, a competency form for staff education, and a patient brochure.)

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Program increases patient, family involvement

Patient safety initiative honors NPSG

Increased patient involvement in their own care is encouraged by The Joint Commission and other organizations as one of the keys to improv-

ing patient safety. In fact, "encouraging patients' active involvement in their own care" is one of the National Patient Safety Goals.

In recognition of the importance of such an approach, Community Health Network in Indianapolis has launched a new patient safety initiative, Call FIRST (Family-Initiated Rapid Screening Team), in all five of its hospitals.

As part of the program, patients and their family members are encouraged to make a phone call when there is a change in the patient's condition and they feel their concerns are not being addressed. A designated internal phone line has been established for the program at each facility.

When the number is called, a nursing supervisor or consult nurse will provide help within 15 minutes at the bedside to evaluate and stabilize the situation. The program is intended only for serious concerns in the change of a patient's condition. If there is confusion about the condition or treatment plan, Call FIRST also can assess the situation.

According to Community Health officials, the program is based on the "Condition H" program started by the University of Pittsburgh Medical Center in 2005.

A culture of safety

"One of the reasons we started the program was because we are changing our culture to a safety culture," explains **Eleanore Wilson,** RN, MA, BSN, vice president of nursing at Community Hospital North. "We want to be sure our patients are safe."

The Community Health version of the program was developed by its senior leaders and safety trainers, she says, and it was launched in September.

To help prepare staff for the program, discussions were held during regular staff meetings, and "team days" were held where staff education was provided. During these half-day sessions, Wilson discussed the purpose of the program, and how it would increase patient safety.

As for the patients and their families, there are several vehicles of communication. For example, there is written information provided at admission and Call FIRST signs have been posted in the patient areas to make patients and families aware of the initiative. The sign says: "Please ask us — we want your involvement." **(For more details, see box, this page.)** "It also explains that we are dedicated to creating an exceptional experience, and that we want the patients and families to be our partners in care," says Wilson.

"When a patient is admitted, we give them a brochure that talks about the program," adds Wilson. "When the nurse admits them, she also explains the program to the patient and lets them know it is available."

Key Points

- Patients, family members encouraged to make a phone call when there is a change in the patient's condition.
- Educational brochures, reminders throughout hospital help keep families, patients engaged.
- Staff education reviews the purpose of program, benefits to patient safety.

Informing patients about Call FIRST program

Signs are posted throughout the hospitals in the Community Health Network system in Indianapolis to remind patients about the Call FIRST program. Here are some excerpts:

As a partner we encourage you to do the following: Call First (Family Initiated Rapid Screening Team) at 1-7699 (Internal Extension)

- If there is a change in your condition and you feel your concerns are not being addressed. Your family members can also Call FIRST.
- If after speaking with a member of the health care team there is confusion about your condition or treatment plan.
- When you Call FIRST a member of the team will provide help within 15 minutes.
- Please do NOT call for routing questions or concerns. Your care manager can address those directly.

SPEAK UP to your care team

- If you have any questions at all about your care.
- If you are unsure about any of the medications given you.
- If your armband is not checked, or your name is not confirmed before you are given a medication or treatment.
- If you are unsure if your caregiver has clean hands. ■

The patient and family are told that if the patient does not feel they are being heard he or she should call the number, and that staff want to be sure a manager responds within 15 minutes. In the brochure itself the question, "When is Call FIRST appropriate?" is posed, and then answered as follows: "If there is a change in condition and you feel your concerns are not being addressed."

Early data positive

Since the program is so new, there are not yet much data available. However, Wilson says, the feedback from patients, families, and staff has been positive. "One of the hospitals received a call from a patient who was being discharged and did not feel they were ready to leave the hospital," she shares. "The manager went over the case and explained that it was time for the patient to go. In addition, she said if the patient felt she needed any additional help, such as home care, that it would be provided." In short, says Wilson, "All her questions were answered."

There are a number of situations in which the program can prove beneficial, says Wilson. "For example, there could be a case of a woman who has been with her husband for 20 years and knows he is not acting normal," she says. "The family members might recognize something that we don't."

Because of this added level of communication, she adds, "we feel family involvement will increase patient safety."

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Top hospitals record a 71% lower mortality rate

Study shows variations continue between regions

Patients who are treated at the nation's top-rated hospitals have on average a 71% lower chance of dying compared with the lowest-rated hospitals as reported in the 10th annual HealthGrades Hospital Quality in America Study. These outcomes were measured across the following procedures and conditions:

- atrial fibrillation;
- bowel obstruction;
- chronic obstructive pulmonary disease;
- coronary bypass surgery;
- coronary interventional procedures (angioplasty/stent);
- diabetic acidosis and coma;
- gastrointestinal bleed;
- gastrointestinal surgeries and procedures;
- heart attack;
- heart failure;
- pancreatitis;
- pneumonia;
- pulmonary embolism;
- resection/replacement of the abdominal aorta;
- respiratory failure;
- sepsis;
- stroke;
- valve replacement surgery.

The study examined patient outcomes at the nation's approximately 5,000 hospitals, covering more than 41 million Medicare hospitalization records from 2004 to 2006. It also found that if all hospitals performed at the level of hospitals rated with five stars by Golden, CO-based HealthGrades, 266,604 Medicare lives could potentially have been saved over the three years studied.

"This is the largest study we've done," says **Marigene Hartker**, MD, MBA, an Orlando, FL-based senior physician consultant and one of the study's authors. "One of the things that have come up repeatedly is that there is a wide variance in the [quality] differences between the hospitals we rate as five star and those we rate as one star." The 71% mortality differential, she adds, highlights that variance.

This translates into uncertainty for the public, she continues. "When they walk into a hospital there's no surety of the quality they will get," she notes.

If you "drill down" to the state and local levels, Hartker continues, that variance continues. **(See box, p. 142.)** "What that means for us is that different states have different health care initiatives and that is reflected in their hospitals," says Hartker. In terms of national initiatives, she adds, "they may have been translated differently or perhaps in a different manner."

Three keys to quality

In offering an explanation for why some hospitals are outperforming others, Hartker notes there

are three key components to quality:

• Structure: For example, staffing ratios.

• Process: The different processes a facility puts in place, how it translates the core measures required by the Centers for Medicare and Medicaid Services (CMS), and whether it reviews outcomes such as mortality and complication rates. "I consult on processes with a number of hospitals, and what the best ones do is translate what is required by CMS into something that's practical and works within their hospital," says Hartker.

• Evaluation: Evaluating performance on those measures, says Hartker, is equally important.

The successful pursuit of quality benefited more than just the individual hospitals, notes Hartker. "What we saw is that at the state level, improvement occurred more rapidly in the states that had a higher concentration of top-performing hospitals," she says.

Where improvement is needed

According to the study, mortality rates at America's hospitals have improved 11.8% during 2004 to 2006, with the nation's top-rated hospitals improving at a faster rate (12.8%) than the lowest-rated hospitals (11.4%). Of the 18 procedures and conditions studied, those that saw the most improvement in mortality rates were pancreatitis (19.2%), pulmonary embolism (17.4%), and diabetic acidosis and coma (16.6%). Those with the smallest improvement were resection/replacement of the abdominal aorta (0.4%), coronary interventional procedures such as angioplasties and stents (0.8%), and treatment of heart attack (8.9%).

What accounts for the varying levels of success? "For [resection/replacement of the abdominal aorta and coronary interventional procedures such as angioplasties and stents] there aren't huge process measures that have been put in place, and not as much attention paid to them," Hartker observes. "For example, CMS is more focused on things like door-to-balloon time."

In other words, she continues, people are motivated by the attention being given to certain disease states and conditions by organizations such as CMS. The relative lack of improvement for heart attack seems to be the exception that proves the rule. "I have to admit that's a little surprising; I don't have a great theory to explain that," Hartker says.

(Editor's note: The full study, along with its

Key Points

- Pancreatitis, pulmonary embolism, and diabetic acidosis and coma see the greatest improvements in mortality rates.
- Structure, process, and evaluation cited as the keys to achieving high quality.
- Available process measures from national organizations seem to contribute to lower mortality rates.

HealthGrades study finds state-to-state variation

Here are some of the variations in risk-adjusted mortality at the state and regional levels, as cited in the 10th annual HealthGrades Hospital Quality in America Study:

• Across all procedures and conditions, the average number of states performing statistically significantly better than predicted was 14, while an average of 19 states performed statistically significantly worse than predicted.

• The region with the lowest overall risk-adjusted mortality was the East North Central Region (IL, IN, MI, OH, and WI) while the East South Central region (AL, KY, MS, and TN) had the highest mortality.

• The region with the most overall improvement for all procedures and conditions was the West South Central region (AR, LA, OK, and TX), where the risk-adjusted mortality dropped by 13.5%. The least improvement was seen in the Mountain region (AZ, CO, ID, MT, NE, NV, NM, UT, and WY), with a decline of 8.8%.

• The East North Central region (IL, IN, MI, OH, and WI), had the highest percentage of best-performing hospitals — those hospitals that are among the best 15% for risk-adjusted mortality overall — at 26%.

• Less than 7% of hospitals within the East South Central region (AL, KY, MS, and TN) and the New England region (CT, ME, MA, NH, RI, and VT) were top-performing hospitals. ■

methodology and state-by-state hospital quality statistics, can be found at www.healthgrades.com.)

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NEWS BRIEFS

More focus needed on quality for kids

New research findings that insured children in the United States get recommended medical care less than half of the time highlight the need for health reform to focus not only on increasing the number of insured, but also on improving the quality of care, according to the California HealthCare Foundation (CHCF), which co-founded the study, published in the *New England Journal of Medicine*.

"Health insurance alone doesn't guarantee good health," said **Mark D. Smith**, MD, MBA, president and CEO of CHCF. "Quality improvement supported by health information technology and public reporting of clinical data must be part of the health reform agenda."

Nearly all of the 1,500 children in the nationwide study had health insurance; yet the study concluded that doctors gave children the appropriate outpatient medical care only 47% of the time.

Study authors include researchers from the Seattle Children's Hospital Research Institute and Rand Corp. CHCF funded development and testing of the medical-record abstraction software used in the study. Other funders included the Robert Wood Johnson Foundation and the Centers for Medicare and Medicaid Services.

For more information, go to www.chcf.org. ▼

Leapfrog Group has two new quality awards

The Leapfrog Group has begun accepting applications for two new health care quality awards.

The Leapfrog Governance for Quality Award will be given to a hospital or health system whose board has most successfully mobilized the organization to improve the quality of patient care. The Leapfrog Patient-Centered Care Award will be awarded to the hospital or health system whose board has most successfully driven the creation of a partnership between patients and their caregivers.

The decisions will be announced Jan. 7, 2008. Winners will receive the awards at a Jan. 28 ceremony at the Leapfrog Conference on the Future of Hospital Governance: Quality at the Leading Edge in Los Angeles. ▼

PA hospital report: Quality is rising

The 2006 hospital performance report issued by the Pennsylvania Health Care Cost Containment Council showed a significant decline in mortality rates. **Carolyn F. Scanlan**, president and CEO of the Hospital & Healthsystem Association of Pennsylvania (HAP), noted a number of factors that should be considered when reviewing the findings, including issues surrounding chronic disease and readmission rates.

"The linkage between the decline in mortality rates and an increase in readmission rates

COMING IN FUTURE MONTHS

- Program helps children manage pain and reduce anxiety
- Half of Leapfrog hospitals won't bill for 'never events'
- AHA enhances eLearning for emergency cardiovascular care
- Hospital, insurer partner to improve health of an entire town

reflects the fact that the quality of care hospitals provide is saving more lives than ever," Scanlan said. "However, many of those surviving patients are the most chronically ill — and, therefore, most in need of continuing hospital care."

Scanlan emphasized that Pennsylvania's hospitals are active participants in a number of initiatives to improve patient care, reduce mortality and readmissions, identify and control infections, and coordinate care for patients with chronic conditions. They include the following:

• The Institute for Healthcare Improvement's 5 Million Lives Campaign, which has implemented 12 clinical interventions for patient care in southeastern Pennsylvania, under the auspices of the Health Care Improvement Foundation and in partnership with Independence Blue Cross and HAP's Delaware Valley Healthcare Council, which has focused on preventing infections and reducing medication errors

• In Southwestern Pennsylvania regional collaboration among hospitals, the Centers for Disease Control and Prevention, the VA Pittsburgh Healthcare System, and the National Healthcare Safety Network has focused on reducing infections.

• Quality Insights of Pennsylvania's programs to improve the care of acute myocardial infarctions and prevent surgical-site infections. ▼

IHI to host 'world's largest gathering'

The Institute for Healthcare Improvement (IHI) will host its 19th annual National Forum on Quality Improvement in Health Care on Dec. 12, 2007, at Orlando World Center Marriott Resort & Convention Center in Florida. The event, which IHI claims will be the largest gathering of health care leaders in the world, will focus this year on the "energy of many" — the results that occur when the health care improvement community comes together for one cause.

Among the health care delivery issues to be addressed at more than 100 workshops and presentations are:

• Engaging hospital boards in quality and safety reform;

• Developing better systems to handle high volumes in emergency rooms;

• Reducing hospital-acquired infections;

• Managing chronic conditions better;

• Redesigning medical surgery care to improve patient outcomes;

• Engaging patients and families at all levels of care.

In addition, attendees will have the opportunity to share results and learn about best practices from IHI's 5 Million Lives Campaign at the one-year milestone of the initiative.

For a copy of the the program agenda, visit www.ihi.org. ■

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